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Cheyenne Metropolitan Area Safe Routes to School Plan

Submitted to:
Cheyenne MPO
2101 O'Neil Ave
Cheyenne WY 82007

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CHEYENNE METROPOLITAN PLANNING ORGANIZATION

ALTA PLANNING + DESIGN | SUMMIT ENGINEERING

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City of Cheyenne

Engineering Services Office
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Urban Planning Office

Laramie County School District #1

Traffic Safety Committee
Planning & Construction Department
Support Operations
K – 8 School Principals
Parent Teacher Organizations

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Planning & Development Department
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Metropolitan Planning Organization

Policy Committee
Technical Committee
Citizen's Advisory Committee

Wyoming Department of Transportation

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Concerned Citizens of the Cheyenne Metropolitan Area

Cheyenne Metropolitan Area Safe Routes to School and Pedestrian Plan Steering Committee

Cheyenne-Laramie County Cooperative GIS Program

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I. How to Use This Document

The Cheyenne Metropolitan Area Safe Routes to School Plan is organized into four main parts. The **introduction** provides an overview of Safe Routes to School programs and their benefits, stakeholders who should be involved in the program process, and a description of the public input process for this plan. The second section provides a review of **existing conditions and transportation barriers** to walking and bicycling to school. This section includes a detailed description of the 27 Cheyenne area schools targeted in this Safe Routes to School Plan. It provides important information needed for completing a WYDOT grant application. The third section provides **potential solutions** to existing transportation barriers. The final section provides **next steps** for implementing projects and programs to improve the safety, health, and wellness of students in the Cheyenne Metropolitan Area.

The document is to provide a basis for completing an application to apply for Safe Routes to School funding from the Federal Highway Administration (FHWA) and the Wyoming Department of Transportation (WYDOT). This document outlines the district's as well as the individuals' intentions to make travel to and from school more sustainable and safe by improving bicycle and pedestrian travel routes and by providing education, encouragement and enforcement efforts.

The information presented in this plan can be used to complete a Safe Routes to School grant application for infrastructure or non-infrastructure grant funds. At the end of the document, a glossary defines important terms relating to Safe Routes to School programs and associated transportation improvements.

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II. Introduction

City of Cheyenne

People in Cheyenne have been getting around by foot since the time of the City's founding in 1867. The original City plat features wide right-of-ways and enough room to accommodate first wagons, then streetcars and motorized traffic while maintaining a quality pedestrian travel environment. Cheyenne has remained dedicated to pedestrian travel over the last 150 years; the City has consistently followed national best practices, constructing sidewalks and curb ramps in the 1930s, 1940s, and 1950s prior to the Americans with Disabilities Act (ADA) that mandated equal accessibility for people of all abilities.

Today residents have access to great pedestrian amenities including a citywide system of shared use paths and Greenways, beautiful streetscapes, generous sidewalks in the downtown area, many pedestrian friendly intersections, and miles of roadways with existing sidewalks. Despite these early improvements, many opportunities to improve the current environment remain. These improvements include widening narrow sidewalks constructed prior to the implementation of ADA, retrofitting existing facilities to meet the needs of pedestrians with physical impairments, extending the Greenway system, and making intersections even more pedestrian friendly.

Over the years Cheyenne residents have remained dedicated to the ideals of personal health education for the next generation. Like many cities and counties across the country, the City of Cheyenne and Laramie County have witnessed a decrease in the number of children walking and biking to school and a subsequent increase in the levels of inactivity and childhood obesity. In pace with national trends, Cheyenne residents have expressed a deep concern over the health and wellbeing of the next generation.

The development of a district wide comprehensive Safe Routes to School Program is an expression of the care and concern parents, teachers, and decision makers feel about the next generation. Regular exercise has been shown to reduce childhood obesity, increase a person's ability to concentrate and reduce stress. Providing children with the opportunity to walk and ride to school allows them to develop awareness and understanding of the physical world, nurtures their ability to rely on themselves, and develops healthy lifelong exercise habits while having fun and meeting new friends.

This plan analyzes existing infrastructure, institutional, and programmatic barriers that hinder students from walking and biking to school and proposes practical solutions to these problems. These barriers include higher speed roadways such as Pershing Boulevard, and sidewalk gaps or missing facilities such as those in the area developing around Saddle Ridge Elementary. Programmatic barriers include a lack of fun and encouraging activities such as the organized walks and runs before school at Deming Elementary.

By developing a plan that provides the necessary information to complete a Wyoming Safe Routes to School Grant Application, parents, teachers, and decision makers associated with Laramie County School District #1 can quickly and easily apply for federal grant funding to complete infrastructure projects or provide additional encouragement and enforcement

activities designed to make Cheyenne's residents happier, healthier and more productive in the next 150 years.

What is Safe Routes to School?

Safe Routes to School (SR2S) refers to a variety of multi-disciplinary programs aimed at increasing the number of students walking and bicycling to and from school. Such programs and projects improve traffic safety and air quality around school areas through education, encouragement, increased law enforcement, and engineering measures. SR2S programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement agencies. Comprehensive SR2S programs are developed using five complementary strategies commonly referred to as the "Five E's":

Education – Educational programs teach students bicycle, pedestrian, and traffic safety skills as well as teaching drivers how to share the road safely.

Encouragement – Special events, clubs, contests, and ongoing activities encourage more walking, bicycling, or carpooling through fun activities and incentives.

Enforcement – Strategies designed to reduce drivers', bicyclists' and pedestrians' unsafe behavior encourage all road users to obey traffic laws and share the road.

Engineering – Design, implementation, and maintenance of signage, striping, and infrastructure improvements increase the safety of pedestrians, bicyclists, and motorists along school commute routes.

Evaluation – Evaluating the projects and programs is fundamental to assessing the successes of each of the "E's" above, helps to determine which programs were most effective, and helps to identify ways to improve programs.

Why is a Safe Routes to School Program Important?

Although most students in the United States walked or biked to school prior to the 1980's, the number of students walking or bicycling to school has sharply declined. Statistics show that 42 percent of students between five and 18 years of age walked or bicycled to school in 1969 (with 87 percent living within a mile of school).[1] In 2001, fewer than 16 percent of students walked or bicycled any distance to get to school. This decline is due to a number of factors, including urban growth patterns and school siting requirements that encourage school development in outlying areas, increased traffic, and parental concerns about safety. The situation is self-

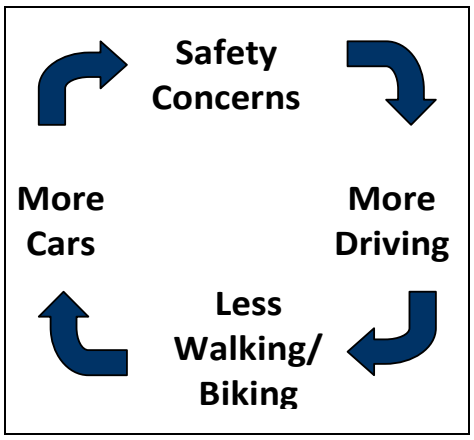


Figure 1. The downward spiral of safety concerns limiting walking and bicycling to school

[1] U.S. Centers for Disease Control and Prevention. *Barriers to Children Walking to or from School United States 2004*, Morbidity and Mortality Weekly Report September 30, 2005. Available: www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm. Accessed: December 28, 2007.

perpetuating: as more parents drive their children to school, there is increased traffic at the school site, resulting in more parents becoming concerned about traffic and driving their children to school (Figure 1).

According to a 2005 survey by the Center for Disease Control, parents whose children did not walk or bike to school cited the following barriers:

- Distance to school: 61.5 percent
- Traffic-related danger: 30.4 percent
- Weather: 18.6 percent
- Crime danger: 11.7 percent
- Prohibitive school policy: 6.0 percent
- Other reasons (not identified): 15.0 percent

A comprehensive SR2S program addresses the reasons for reductions in walking and biking through a multi-pronged approach. Such an approach uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors, and physical infrastructure that improve the walking and biking environment.

Benefits of a Safe Routes to School Program

SR2S programs directly benefit schoolchildren, parents, and teachers by creating a safer travel environment near schools and reducing motor vehicle congestion at school drop-off and pick-up zones. Students who choose to walk or bike to school are rewarded with the health benefits of a more active lifestyle, as well as responsibility, and independence that comes from being in charge of the way they travel. Students learn at an early age that walking and biking can be safe, enjoyable, and good for the environment. SR2S programs offer additional benefits to neighborhoods by helping slow traffic and by providing infrastructure improvements that facilitate walking and biking for everyone. Identifying and improving routes for students to safely walk and bicycle to school is one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution.

In addition to safety and traffic improvements, a Safe Routes to School program helps integrate physical activity into the everyday routine of school children. Since the mid 1970's the number of children who are overweight in the US has roughly tripled from five percent to almost 17 percent. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce health risks associated with being overweight. Children who walk or bike to school have an overall higher activity level than those who receive rides to school, even though the journey to school makes only a small contribution to activity levels.[2]

[2] Cooper A, Page A, Foster L, Qahwaji D. *Commuting to school: are children who walk more physically active*? American Journal of Preventive Medicine. 2003 November; 25(4):273-6.
Cooper A, Andersen L, Wederkopp N, Page A, Frosberg K. *Physical activity levels of children who walk, cycle, or are driven to school.* American Journal of Preventive Medicine, 2005 October; 29(3):179-184.

The Safe Routes to School Team

A SR2S Team should be convened to plan, coordinate, and implement the recommendations set forth in this document. The Team should include a diverse combination of individuals and groups who have a stake in improving safety and encouraging walking and bicycling to school. The Safe Routes to School Team should be composed of planners, engineers, law enforcement officers, local officials, school district staff and administrators, school faculty and staff, and/or stakeholders from the following agencies and groups:

- City of Cheyenne
- Laramie County
- Laramie County School District (LCSD) #1 District Office
- LCSD #1 School Safety Committee
- School staff
- School Parent Teacher Organizations
- Parents and students
- Other stakeholders, such as health organizations, bicycle/pedestrian advocates, or neighbors

Public Input Process

The existing conditions, barriers, recommendations, and potential solutions presented in this plan are the result of a detailed and cooperative data collection effort. This effort included on-the-ground fieldwork, interviews with City of Cheyenne, Laramie County, Cheyenne Metropolitan Planning Organization (MPO), LCSD #1 district staff and LCSD #1 Safety Committee, secondary data collection including existing plans and policies, student surveys, and two community workshops.

Approximately 20 participants attended the first community workshop, held on June 9, 2009 at the Cheyenne-Kiwanis Community House. Project staff held a second community workshop on October 22, 2009 at the same location. Attendees at the first workshop submitted oral and written comments regarding existing pedestrian issues near schools and offered suggestions for improvements. Participants of the second workshop reviewed and commented on draft recommendations. With the assistance of group facilitators, participants submitted comments on large-scale maps, flip charts, and questionnaires.

III. Existing Conditions and Transportation Barriers

This chapter of the Cheyenne Metropolitan Area Safe Routes to School Plan describes existing conditions and barriers to active transportation at the 24 elementary schools and three junior high schools included in this plan (shown on Map 1). The first section of this Chapter provides an overview of LCSD #1 student characteristics. Characteristics evaluated include student demographics, the school travel environment, and current student travel patterns based on in-class surveys administered in spring 2009. The chapter then describes existing LCSD #1 and other agency policies, procedures, programs, and regulations affecting the student walking and bicycling environment. A more detailed section follows, discussing institutional and infrastructure "barriers" that create challenging conditions for students who walk or bicycle or who wish to walk or bicycle to school. The discussion describes district-wide and school-specific barriers. The findings presented in this chapter, combined with additional input from City, County, MPO, and LCSD #1 staff, inform the recommendations developed for the Cheyenne Metropolitan Area Safe Routes to School Plan.

Students and Active Transportation Trends

The number of students participating in active transportation (walking and biking) has decreased steadily since the late 1960s. Nationally, the percentage of students who walked or biked to school decreased from 41 percent in 1969 to 13 percent in 2001,[3] and Cheyenne has experienced similar trends. Though the city reported a walk to school rate of about 16 percent and a bike to school rate of about 4 percent during a spring 2009 survey. As the number of students walking and biking to school decreases, the number of students suffering from diseases linked with reduced physical activity, such as obesity and upper respiratory diseases, has increased. While these findings do not indicate a direct correlation between decreased walking and cycling to school and deteriorating health, it is realistic to assume that regular non-motorized travel to and from school can contribute significantly to a child's health.

LCSD #1 School Demographics

As of June 2009, LCSD #1 had the following student enrollment:

- 7,025 elementary school students
- 2,761 junior high school students
- 2,833 senior high school students

[3] McDonald, N. (2007). *Active Transportation to School: Trends among U.S. Schoolchildren, 1969-2001*. American Journal of Preventative Medicine. 32(6) 509-516.

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Existing Sidewalk
Existing Shared Use Trail
Existing Greenway
Planned Greenway
School Under Focus
Other School
Park
Warren Air Force Base
Railroad
Waterway
Plan Study Area

Jessup Elementary
Davis Elementary
McCormick Junior High
Central High
Hobbs Elementary
Anderson Elementary
Buffalo Ridge Elementary
Dildine Elementary
Saddle Ridge Elementary
Deming Elementary
Miller Elementary
Carey Junior High
Pioneer Park Elementary
Henderson Elementary
Baggs Elementary
Alta Vista Elementary
Sunrise Elementary
Fairview Elementary
Lebhart Elementary
Bain Elementary
Freedom Elementary
Cole Elementary
Hebard Elementary
Goins Elementary
Johnson Junior High
South High School
Triumph High
Arp Elementary
Rossman Elementary
Afflerbach Elementary
Cheyenne Airport
WARREN A.F.B.
Pearson Lake
Lake Terry
Lions Park
Prairie Dog Creek
Clear Creek
Swan Reservoir
Crow Creek
Sun Valley Open Space
Clear Creek Park
Brimmer Park
Prairie View Golf Course
Powers Field
Cahill Park
Dutcher Field
Airport Golf Course
Saddle Ridge Park
North Cheyenne Community Park
Four Mile
Summit
Dell Range
Campstool
Happy Jack
Horizon
Otto
Crow Creek
I-80
I-25
U.S. 30
Missile
Converse
Powderhouse
Yellowstone
Central
Dry Creek Parkway
Whitney
Christensen
Greeley
Morrie
Parsley
Avenue C
Randall
Carey
20th
Warren
Pershing
East High
College
Lincolnway
12th
Campstool
Happy Jack
Freedom
Rossman
Afflerbach
Goins
Johnson
Arp
Cole
Hebard
Fairview
Lebhart
Bain
Sunrise
Dildine
Saddle Ridge
Baggs
Deming
Miller
Carey
Pioneer Park
Henderson
Alta Vista
Jessup
Davis
McCormick
Central High
Hobbs
Anderson
Buffalo Ridge

0 0.5 1 Miles

Map 1 - Schools Under Focus

Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: August 2010

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During the 2009-2010 school year, the School District reported that over three-quarters of the student body were with, with Hispanic students being the largest minority (see Figure 2).

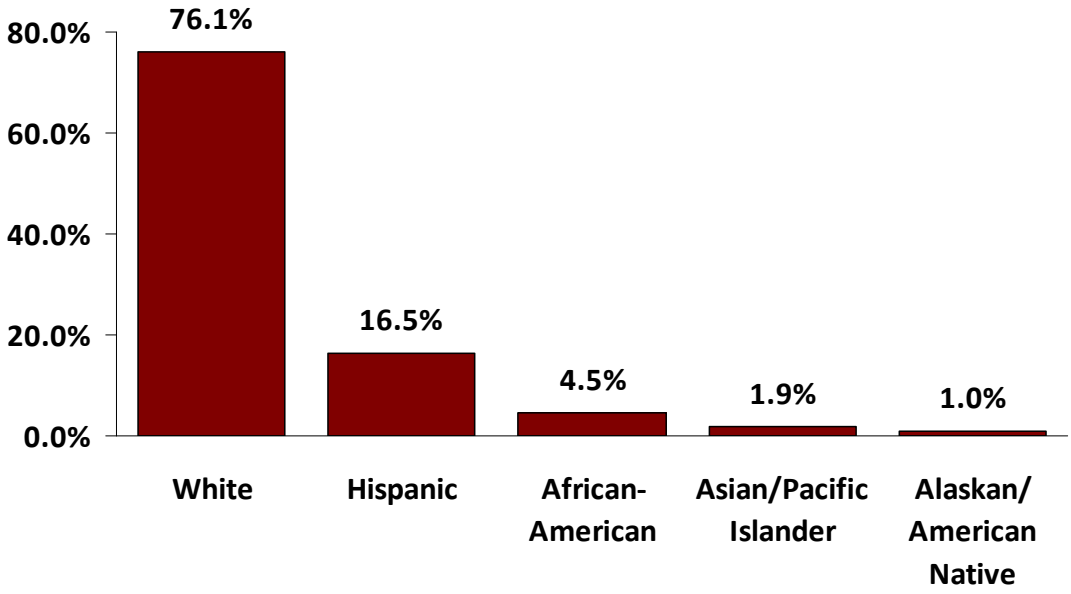


Figure 2. Demographic Distribution of Students in LCSD #1, 2009-2010 School Year

The school district reports that 37 percent of students receive free or reduced lunches, over 3 percent have limited English proficiency, and one-eighth are special education students.

Current School Travel Environment

This section summarizes current travel patterns of LCSD #1 students.

Current Travel Patterns

Kindergarten through eighth grade classrooms were asked to participate in the spring 2009 travel mode data collection project. The results from the 4,758 responses, shown in Figure 3, indicate how students travel to and from school. The in-classroom hand tally travel mode survey results are as follows:

- Walk - 16 percent
- Bike - 4 percent
- Bus - 27 percent
- Family Vehicle - 48 percent
- Carpool - 2 percent
- Transit (city bus) - 0 percent
- Other - 2 percent

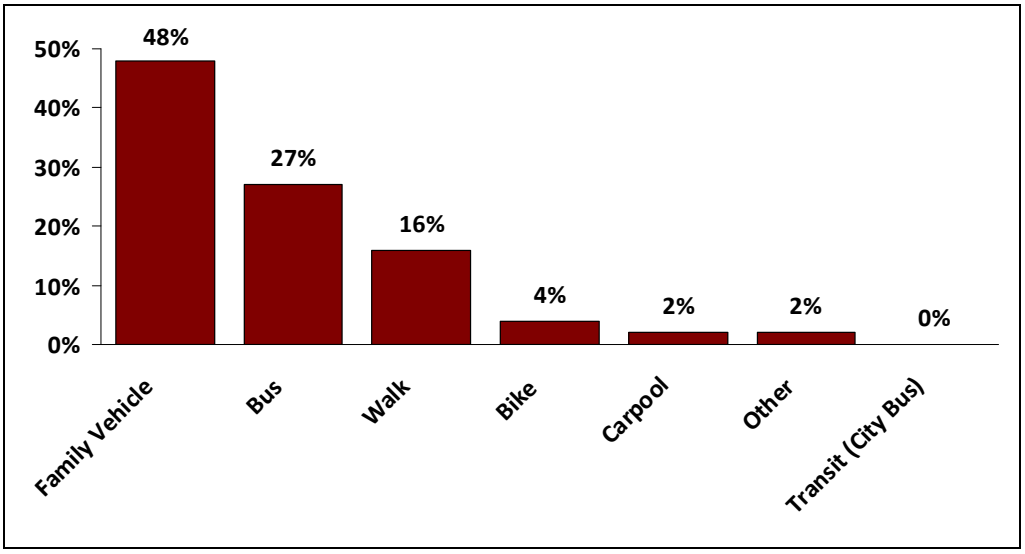


Figure 3. Current School Travel Modes of K-8 Students in LCSD #1, Based on 2009 Travel Mode Data Collection Project

Support During School Travel Times

Parents and volunteers support school staff during school travel times. Paddles displaying "Stop" and high-visibility vests are provided to parents and volunteers who help students cross the streets near schools. Elementary and junior high schools generally have personnel on site 30 minutes prior to and after school to assist in student travel.

Support from Law Enforcement

LCSD #1 and the Cheyenne Police Department currently have a Memorandum of Understanding regarding School Resource Officers (SRO's). Each secondary school has an assigned SRO to provide law enforcement support. Each SRO is also assigned to specific elementary schools where they provide support as necessary. The responsibilities of the SRO's include but are not limited to motor vehicle speed enforcement and student loading zone policy enforcement.

Arrival/Dismissal Procedures

Each of the 27 schools addressed in this Plan have unique arrival and dismissal procedures. There is no district-wide policy regarding student arrival and dismissal.

Parents and students at elementary schools are generally asked to wait until 30 minutes prior to the start of school to be on site. At newly constructed and renovated school sites, the main walking routes to student loading zones and bus loading zones are separated so that major traffic streams do not intersect. Students are taught which doors are open and where to line up at their school. These procedures are dependent on site variables and preferred staff protocols. At older schools within the LCSD system, bike parking areas are typically located inside school playground at the back of the school. Proximity to the main student

entrance varies with each school's site plan. Newly constructed and renovated schools place bike parking near the main building entrance.

School dismissal procedures are also site specific. Staff are assigned to monitor the parking lot, bus pick-up, and walking route exits for 15 to 30 minutes, depending on the site size and school population. Bused students congregate at a specific location on the playground and are supervised by school personnel until the last bus pick-up, usually prior to 4:00 PM.

In general, secondary schools assign staff members to supervise the parking lots. The high schools have security camera systems observing the parking lots. Bike parking is located near the main entrance of the building.

School Travel Policies

LCSD #1 addresses bicycle usage in its Elementary School and Junior High School Handbooks:

> *"Students who ride bicycles to school are not to ride them on the school grounds at any time during the school day. It is the student's responsibility to provide a chain and lock for the bicycle. The school/district is not responsible for lost, stolen or damaged personal items—all should have the student's name on them."*

The school district neither encourages nor discourages walking and cycling through any school district policies. There are currently no district-wide policies on pedestrian or bicycle safety, education, or promotion.

School Safety (or 'Hazard') Busing Policies

LCSD #1 addresses busing boundaries and hazard busing in their Board Policies Chapter V Supportive Services (Section 11):

> *"Following are the minimum distances for bus transportation according to area served. All stated distances are subject to change if walking would subject the students to crossing hazardous areas. The District Safety Committee shall be responsible for reviewing requests for transportation because of hazardous conditions and make recommendations to the Board. A set of criteria for establishing hazardous areas shall be developed by the Safety Committee and made part of administrative regulations.*
>
> - *Elementary - all students living outside a one and one-fourth (1 and 1/4) mile short-path walking distance of the school in their attendance area shall be eligible for transportation.*
> - *Junior high school - all students living outside a one and three-fourths (1 and 3/4) mile short-path walking distance of the school in their attendance area shall be eligible for transportation.*
> - *Senior high school - all students living outside a two and one-fourth (2 and 1/4) mile short-path walking distance of the school in their attendance area shall be eligible for transportation.*
> - *Students with disabilities - in the event that a student's disability is judged to be severe enough to interfere with participation in the regular student transportation program, the student shall receive specialized transportation to and from his home."*

Busing students who live outside of a reasonable walking distance is beneficial for congestion reduction; students should be encouraged to walk to the bus stop if they cannot walk or bicycle to school.

Existing Efforts that Promote Healthy and Active Student Activities

LCSD #1 existing programs and policies designed to promote healthy and active student lifestyles are described below.

School Safety Committee

LCSD #1 convenes a School Safety Committee monthly during the school year to address existing school safety concerns and potential solutions. The discussion includes pedestrian and bicycle safety concerns around each school. This group is composed of representatives from the City Engineering Services Office, Laramie County Public Works, WYDOT, Cheyenne Police Department, Laramie County Sheriff's Department, Cheyenne Metropolitan Planning Organization, and various departments within LCSD #1.

Safety Programs

The following are examples of safety programs and activities taking place at LCSD #1 schools:

- Suggested walking route maps are modified by individual school Parent Teacher Organizations, produced, and distributed to parents at the beginning of the school year during open house events. These maps are also included in parent handbooks distributed at registration and open house events. School staff members bring the routes to the attention of students during the first week of school.
- Open houses and parent nights are offered as a venue for addressing parents' safety concerns including traffic and travel safety.
- DARE (Drug Abuse Resistance Education) officers provide bicycle safety training recommendations.
- The schools have access to district-run Safe & Drug-Free Schools and Character Counts programs.

Wellness Policy

LCSD #1 addresses student wellness in their Board Policies Chapter VIII, Section 15 – Health and Safety of Students (Student Physical Activity, Nutrition and Wellness):

> *"Laramie County School District Number One will establish and utilize a Student Wellness Committee. The Nutrition Services Program Administrator and the Health, Physical Education, Safe and Drug Free Schools Coordinator will co-chair this committee.*
>
> *Physical education classes and physical activity opportunities will be available for all students.*
>
> *The District will provide opportunities for staff development on physical activities that will enhance student academic achievement in the classroom.*
>
> *Students (K-12) should strive to meet the 2005 Guidelines from NASPE:*
>
> - *Students should accumulate at least 60 minutes, and up to several hours, of age appropriate physical activity on all, or most days of the week.*
> - *Children should participate in several bouts of physical activity lasting 15 minutes or more each day.*

- *Children should participate each day in a variety of age-appropriate physical activities designed to achieve optimal health, wellness, fitness, and performance benefits.*
- *District will provide suggested methods of incorporating movement/activity into the classroom."*

Wellness Programs

To address the district wellness policy, LCSD #1 administers a number of programs that promote health and wellness among students. Examples of wellness programs at LCSD #1 schools include:

- Annual Walk-A-Thom Fundraiser at Dildine Elementary School
- Before school walking/running program at Deming Elementary School
- Walking program at Sunrise Elementary School

Barriers to Active Transportation

Non-infrastructure Barriers

While the built environment is often the primary reason why students do not walk or bike to school, many non-infrastructure characteristics act as obstacles for active transportation. For example, a school may have a complete sidewalk network with thorough pedestrian safety engineering efforts, but if an important education, enforcement, encouragement, or policy component is missing, the numbers of students walking or biking will be lower than if a comprehensive effort to encourage active transportation was enacted. The non-infrastructure barriers discussed in this memorandum include:

- Parental perceptions about walking and biking
- Enforcement of traffic violations in the school zone
- Time limitations of school administration, teachers, and parents
- In-school programs that encourage walking and biking
- City and District policies related to pedestrian and bicycle safety
- District programs that manage student arrival/dismissal
- District programs that educate and encourage walking and bicycling

Parental Perceptions about Walking and Biking	
Primarily Affects	• Potential pedestrians and cyclists
Characterized By	• Weather • Age of students • Quality time with students • Traffic • Distance • "Stranger danger"
Associated With or Challenges Created	• Parents decide if the student is ready or able to walk or bike • Critical mass of students walking or biking will lead to more parents allowing their children to walk and bike to school

The 246 teachers who participated in the 2009 Spring Student Travel Mode Survey and 27 participants of the June 2009 Cheyenne Metropolitan Area Safe Routes to School Plan and Pedestrian Plan Community Workshop identified reasons why more students are not walking and biking to school. Each parent or guardian has personal criteria they consider when determining whether or not an environment is considered safe or at what age their student is capable of walking and biking to school. Some of the barriers that parents cited as reasons why they do not allow their student to walk or bike are discussed below:

- **Weather** – Parents may feel as though the weather is too extreme for their student to walk or bike, especially during Cheyenne's very cold and windy winters. In addition, students may not have adequate cold weather or rain gear for their trip to school.
- **Age** – Children are smaller in stature than adults and therefore their visibility to motorists is reduced and their ability to see over obstacles in inhibited. Also, until the age of ten, children have a limited concept of road rules and why they need to exhibit safe behavior. Further, children have both limited cognitive ability and peripheral vision. These limitations increase the difficulty of accurately judging the speed of cars. Because of these and other limitations, parents are protective of their children and can be hesitant to allow them to walk or bike to school.
- **Convenience/Quality Time** – Many parents drop their children off at school on their way to work. Because parents and guardians are busy, they cite the convenience of being able to do "double duty" and take their students to school on the way to work. Further, parents often report feeling that the time in the car on the way to school is quality time with their children.
- **Traffic** – If the route to school is high-speed, high-volume, or without proper facilities, parents can be reluctant to allow students to walk or bike to school. Parents are often concerned that their student does not have a safe route that is separated from motor vehicle traffic.
- **Distance** – Even though physical activity is an important component of a healthy lifestyle, parents may feel as though the trip to school is too far. Alternately, parents

may choose to place their students in a non-neighborhood school and the distance to the school is beyond a walkable or bikeable distance.

- **Fear of Strangers/Abduction** – Parents express fear of strangers and abduction as a reason why they do not allow their children to walk or bike to school.

Time Limitations of School Administration, Teachers, and Parents	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• School administration may not have enough time to focus on policy that encourages walking and biking • Teachers may not have enough time to integrate walking and biking into their classrooms or to volunteer to be a "school champion" – someone who supports and sustains the walking and biking efforts • Parents may not have enough time to walk or bike with their students or to volunteer for events that encourage walking and biking
Associated With or Challenges Created	• Little adult coordination of activities that educate and encourage students to walk and bike to school

Today's school administrators, teachers, and parents are busy, and they may have limited time for volunteering. Busy schedules make it more difficult for parents to walk and bicycle with their children to school or volunteer for SR2S activities. Time constraints can include a lack of time for anything outside of the required curriculum. The result is that school administrators may not prioritize policy that encourages walking and biking to school. Further, teachers may not have the time to coordinate encouragement or education programs that promote active transportation. The result is a need for adult supervisors and coordinators for Safe Routes to School activities.

Enforcement of Traffic Violations in the School Zone	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• Speeding traffic • Motorists not yielding to pedestrians • Distracted drivers and unsafe motorist behavior
Associated With or Challenges Created	• Increased risk of conflicts for students who walk and bike • Can increase the risk of pedestrian and motorist crashes

Teachers surveyed in the planning process expressed concerns for the perceived lack of enforcement of traffic violations in School Zones and along suggested walking and biking routes to school. Police departments all over the country are facing reduced budgets and personnel. While a priority location for traffic enforcement, School Zones are numerous and resources must be spread thinly. Also, parents picking up or dropping off students cause much of the congestion near a school, and many of them may be violators of traffic laws in the School Zone. All of these factors contribute to inadequate enforcement of traffic

laws in the School Zone. Because of the lack of enforcement, parents may not feel as though students have a safe environment to walk or bike to school.

City and District Policies that affect Pedestrian and Bicycle Safety	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• Policy that does not specifically encourage walking and biking
Associated With or Challenges Created	• A transportation system where the motor vehicle is the primary focus

The Project Team reviewed the following documents in order to identify policies and guidelines pertaining to pedestrians and bicycles:

- *LCSD #1 School Transportation Policies*
- *PlanCheyenne: Cheyenne Area Transportation Master Plan*
- *2007 City of Cheyenne Road, Street & Site Planning Design Standards*
- *Cheyenne Municipal Code*
- *Laramie County Comprehensive Plan*

While many of these documents do not explicitly prohibit or encourage pedestrian and bicycle use in Cheyenne, they include specific policies and standards that affect the safety and experience of pedestrians and bicyclists.

LCSD #1 School Transportation Policies

There are currently no district-wide policies on pedestrian or bicycle safety, education, or promotion.

PlanCheyenne: Cheyenne Area Transportation Master Plan

The transportation component of *PlanCheyenne*, the *Cheyenne Area Transportation Master Plan*, recognizes the importance of addressing the safety and mobility needs of bicyclists and pedestrians. The plan assesses the needs of these road users and sets out a vision for creating a more balanced transportation system.

> ***Transportation Master Plan – Chapter 4: Needs Assessment – Bicycle Needs***
>
> *The bicycle is a healthy and viable alternative to the automobile for many trips. It can also play an important role in helping the city to reduce congestion, improve air quality, improve the overall health of Cheyenne Area citizens, and develop a more balanced transportation system. Cheyenne has recently indicated the importance of bicycle travel with the adoption of new bicycle-friendly street standards. These standards designate bike lanes on all roadways as they are built or re-built, where appropriate.*

The plan discusses the needs of bicyclists in the following categories: safety and convenience, connections to recreational paths and trails, connections between destinations, route options, signage, bicycle parking, intermodal connections, and ancillary facilities, and well as potential future demand.

> ***Transportation Master Plan – Chapter 4: Needs Assessment – Pedestrian Needs***
>
> *Walking is an essential part of daily activities, whether it is trips to work, shop, school, or play. Often pedestrian facilities are overlooked or merely added onto street improvement projects. To preserve and enhance*

the quality of life in the urbanized areas of Cheyenne, consistent maintenance of the existing pedestrian system and additional facilities are needed.

Cheyenne's new street standards require detached sidewalks on all new roadways.

Whereas it is not critical for routes to schools to be picturesque and visually captivating, students have basic pedestrian needs, including a safe and secure continuous sidewalk with safe street crossings and direct connections to neighborhoods. … Additionally, as new schools are built, walking routes should be established.

The pedestrian needs assessment emphasizes the need for pedestrian improvements in pedestrian districts, in mixed-use commercial activity centers, near schools, and along transit corridors.

Transportation Master Plan – Chapter 5: Transportation Vision Plan – Bicycle Vision Plan

As defined in the City's new street standards, all roadway improvements in the 2030 Roadway Vision Plan will include construction of separate bike facilities.

In addition to prioritizing separate bike facilities as part of all roadway improvements, the vision plan addresses connecting missing links, making system enhancements – including signage, parking, and ancillary facilities, and creating and distributing bicycle maps.

Transportation Master Plan – Chapter 5: Transportation Vision Plan – Pedestrian Vision Plan

As roadway facilities are improved and infill development occurs, improvements to the pedestrian facilities should be included in these efforts. Furthermore, as growth occurs in undeveloped areas, steps should be taken to ensure that development is planned to accommodate pedestrian travel.

This transportation plan does not propose installation of sidewalks throughout the City within all neighborhoods, as the pedestrian demand is not warranted and the cost for such installation would be high. Rather, this plan suggests that neighborhood self evaluations be proposed where specific connections between residential areas and important destinations, such as schools, parks, and commercial centers might warrant pedestrian improvements.

The Pedestrian Vision Plan emphasizes good pedestrian design and states that improvements are not needed in all areas. Sidewalks are prioritized where important connections exist, including links between neighborhoods and schools.

City of Cheyenne Road, Street & Site Planning Design Standards

The road and street design standards provide guidance on pedestrian amenities for sidewalks, internal circulation patterns in larger planned sites and pedestrian friendly intersection treatments.

Chapter 7—Site Planning

7.4 PEDESTRIAN FLOWS

Development plans ***should*** *include site amenities that enhance safety and convenience and promote walking or bicycling as alternative means of transportation. Site amenities may include bike racks, drinking fountains, canopies and benches.*

8.5 SITE DESIGNS GENERAL CONNECTIVITY REQUIREMENTS

Safe and convenient pedestrian access from the development site ***should*** *be provided to existing designated trails or Greenways located on or adjacent to the development site.*

On-site connections should be made at points necessary to provide direct pedestrian travel from the development to major pedestrian destinations located within the adjacent neighborhood(s), including but not limited to parks, schools, commercial districts, and transit stops.

8.7 PEDESTRIAN CROSSINGS AT HIGH-USE PEDESTRIAN AREAS

The greater the number of lanes that a pedestrian must cross, the greater is the pedestrian's exposure to vehicles. In addition, wider streets tend to carry higher volumes of traffic and higher-speeds. Intersections crossing multiple lanes require pedestrian enhancements. If it is determined that the traffic demand warrants additional through or turn lanes, then pedestrian mobility ***should*** *be evaluated to determine whether additional pedestrian enhancements* ***should*** *be required to offset the traffic impacts on the pedestrian. The following are key intersection street crossing design elements that should be considered in the guidelines for designing intersections.*

Mid-block crossings should be provided where there is an existing or potential pedestrian demand to cross at higher volume roadways or streets where crossings are greater than 800 feet. Ideally, these crossings should be accommodated with a refuge island. Center crossing islands allow the pedestrian to deal with only one direction of traffic at a time and enable them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street.

These policies are intended to enhance the safety and convenience of walking and bicycling.

Chapter 8—Sidewalks

8.1 PREFACE

Sidewalks are integral to the transportation system. Sidewalks shall at least be provided along all streets used for pedestrian access to schools, parks, and shopping areas.

8.2 RESPONSIBILITIES

The builder on the lot is responsible for sidewalk construction. Where sidewalks are not directly related to a lot, the construction of sidewalks is the responsibility of the developer. A certificate of occupancy will not be issued until sidewalks required by the approved site plan are constructed and approved.

The 2007 *City of Cheyenne Road, Street & Site Planning Design Standards* prioritizes sidewalks as integral to the transportation system. The language indicates that sidewalks "shall at least be provided along all streets used for pedestrian access to schools, parks, and shopping areas." Further, the standards indicate that sidewalks "shall be provided for any portion of a site which abuts a roadway." Because sidewalks are constructed concurrently with site development, there is the potential for gaps in the sidewalk network. Sidewalk maintenance is the responsibility of the adjacent property owner, which can lead to variations in sidewalk quality and upkeep.

Chapter 11—Construction Zones

11.1 PREFACE

This Chapter establishes the minimum standards to be used for the protection of the public and of workers during periods when repair or construction necessitates the partial or complete closure of public streets.

Construction or repairs in the street often create hazardous conditions, which can result in traffic accidents if proper precautions are not taken. Good traffic control around work hazards in the street are deterrents to such accidents.

The average motorist understands standard traffic-control practices presented in the Manual on Uniform Traffic Control Devices (MUTCD). Control of traffic in construction areas should utilize and be based on

the MUTCD. When situations of unusual difficulty are anticipated, the City Engineer or the Director of Public Works should be consulted before construction begins.

Because design standards specify that control of traffic in construction areas should be based on the *MUTCD*, the needs and control of pedestrians and bicyclists should be addressed in construction projects. The *Road, Street & Site Planning Design Standards* document does not explicitly address the needs and control of pedestrians and bicyclists with respect to construction projects.

The standards described above are in agreement with the *2002 Laramie County Road, Street, and Site Planning Design Standards*.

Cheyenne Municipal Code - Chapter 10.80 BICYCLES

The Cheyenne Municipal Code bans bicycling on sidewalks within business districts and requires licenses. The municipal code does not address pedestrian behavior.

10.80.060 Riding on sidewalks

A. No person shall ride a bicycle upon a sidewalk within a business district.

B. Whenever any person is riding a bicycle upon a sidewalk, such person shall yield the right-of-way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian. (2001 In-house code § 28-229)

Municipal code 10.80.060 addresses bicyclist behavior but does not make any special considerations with respect to younger bicyclists. Young bicyclists are more likely to ride on sidewalks for safety and may be specifically directed by their parents, teachers, and other adults to ride only on the sidewalk.

10.80.090 License required

No person who resides within this city shall ride or propel a bicycle on any street or upon any public path set aside for the exclusive use of bicycles unless such bicycle has been licensed and a license plate is attached thereto as provided under this chapter. (2001 In-house code § 28-237)

Municipal code 10.80.090 requires bikes to have licenses. Requiring a license can be a disincentive for bicycle use by children because of licensing fees and necessary paperwork.

Laramie County Comprehensive Plan

The Laramie County Comprehensive Plan addresses bicyclists and pedestrians in its Transportation Goals and Policies:

7.3 Transportation Goals and Policies

GOAL: To provide and maintain a convenient, safe and cost-effective transportation network throughout the County.

Policy 1

Promote and maintain an efficient and convenient transportation network including streets, roads, bike and pedestrian ways, and transit where appropriate.

Policy 8

Ensure that streets in residential areas are designed to discourage "through traffic" but allow sufficient connections with adjacent neighborhoods and with the regional road system.

These policies prioritize efficient movement and connectivity for all modes. Discouraging "through traffic" in residential areas can reduce auto traffic and improve safety for pedestrians and bicyclists.

District Programs that Manage Student Arrival/Dismissal	
Primarily Affects	• Existing and potential motorists, pedestrians and cyclists
Characterized By	• Lack of district programs that manage commotion that surrounds the beginning and end of the school day
Associated With or Challenges Created	• Miscommunication and chaos during the arrival/dismissal periods of the school day • Students can be endangered by chaos and driver behavior during arrival/dismissal, which may reduce walking and bicycling rates

LCSD #1 does not currently have any district-wide initiatives that manage safe student arrival and dismissal from school. Examples of programs in reduce congestion surrounding the school during these high traffic periods include:

- Student and parent safety patrol (to help students cross the street)
- Walking School Buses
- Bike Trains
- Neighborhood Watch programs
- Valet/escort services (to help students being dropped off cross the street)

These programs would encourage students to walk and bike more often to school and reduce congestion around the school during high traffic periods.

District Programs that Educate and Encourage Walking and Bicycling	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• Lack of district programs that educate students about safe pedestrian and bicycle behavior • Lack of district programs that encourage walking and biking to school
Associated With or Challenges Created	• A transportation system where the motor vehicle is the primary focus

LCSD #1 does not currently have any district-wide programs in place to educate students about pedestrian or bicycle safety. Safety education programs have been successfully implemented as components of Safe Routes to School programs across the country. Pedestrian education discusses why people walk, identifies the safest crossing locations, and considers why and how to communicate with motor vehicle drivers. Bicycle safety education may include in-classroom and on-bike training, in which students learn the rules of the road and other skills training.

Encouragement programs help create an environment where walking and bicycling to school is a fun and accepted form of transportation. Encouragement programs can include walking school buses, bike trains, Walk and Bike to School days, Walk across Cheyenne, or friendly competitions such as the Golden Sneaker Award.

Infrastructure Barriers

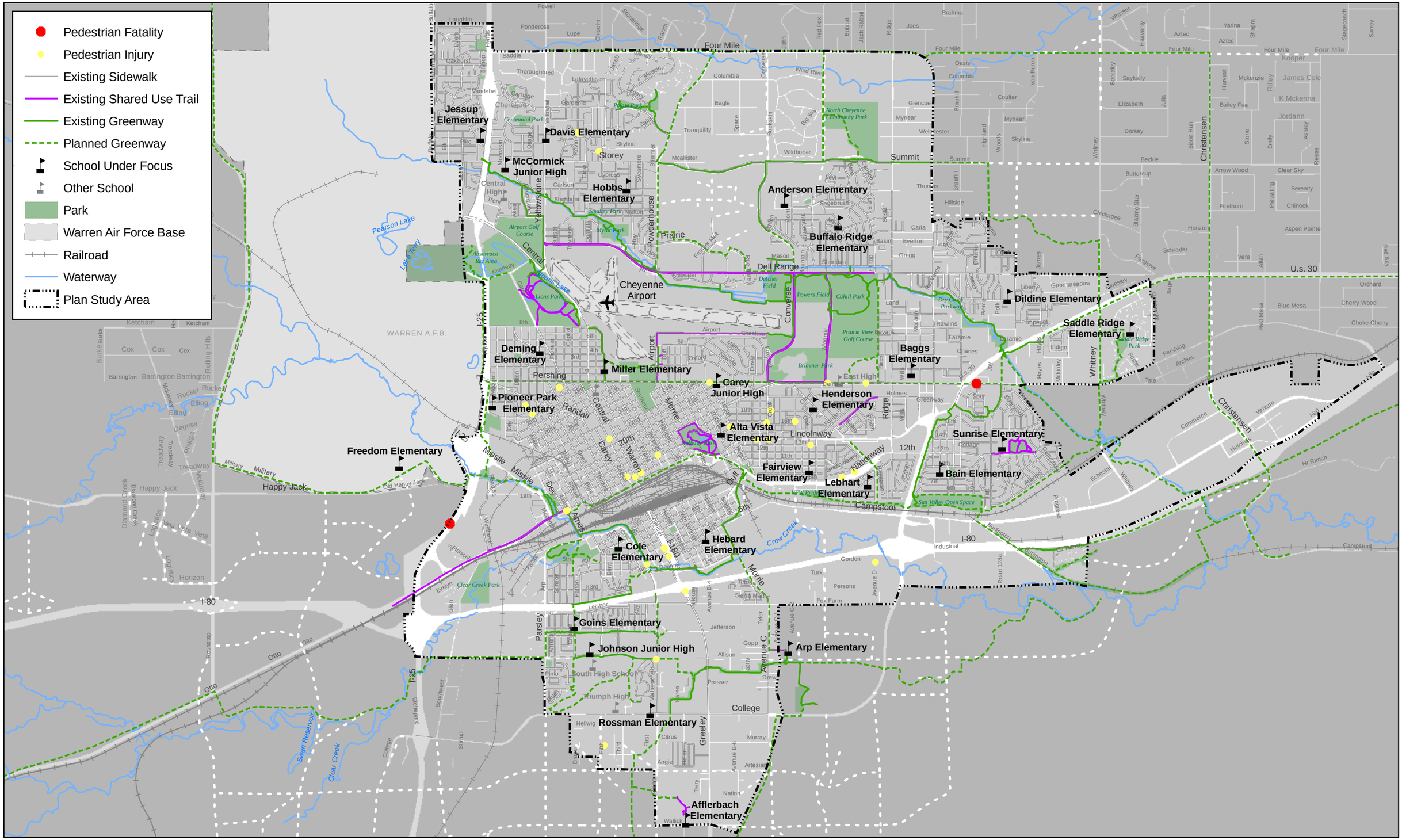
This section describes physical infrastructure barriers observed in LCSD #1. These barriers may be overcome or reduced through modifications to the physical environment (e.g., additions of signage, channelization of pedestrian traffic to mid-block crossings, or modification of pick-up and drop-off zones). This section defines the specific types of barriers and then presents an analysis of barriers affecting each of the 27 schools under focus.

The physical barriers discussed in the subsequent pages are defined based on the following categories:

- Traffic Crashes within Two Miles of the School Over the Last Three Years
- Missing or Substandard Walkways (Sidewalks and Paths)
- Lack of Safe Bike Routes to School
- Unsafe Street Crossings and Intersections
- A Major Roadway or Expressway Divides the School from Residential Areas
- Lack of Accessibility
- Distance to School is Too Far
- Bike Parking at School is Missing, Insufficient or Non-Secure
- Dangerous Driving and Speeding on Streets
- Drop-off and Pick-up Process Creates Congestion and Unsafe Behaviors

Traffic Crashes within Two Miles of the School over the Last Three Years	
Primarily Affects	• Existing and potential cyclists and pedestrians • Motorists
Characterized By	• One or more fatal crashes within two miles of the school • Three or more non-fatal crashes within two miles of the school • Two or more crashes in the same location within two miles of the school
Associated With or Challenges Created	• Unsafe walking conditions • Problematic intersections or crossings • Parents do not encourage walking or biking due to traffic safety concerns

Traffic crashes (Map 2) usually occur at intersections, and several crashes often occur along the same street. Crashes involving pedestrians indicate locations where intersections, crossings, or other traffic conditions do not adequately provide for pedestrians or bicyclists. Children are particularly vulnerable at problem locations because they tend to make erratic or sudden movements and may dart across a street without ensuring their own safety.



Map 2 - Pedestrian Related Crashes (2005 - 2007)

Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: August 2010

0 0.5 1 Miles

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Areas where crashes have occurred can benefit from traffic calming or other treatments that clearly define pedestrian space to cross and provide good visibility and allow adequate time for the pedestrian to cross.

Certain caveats should be clearly understood when interpreting crash data. First, bicycle and pedestrian crashes are generally considered to be significantly under-reported worldwide, particularly for crashes that do not result in serious injury. In Cheyenne, crashes that resulted in less than $1,000 worth of damage were not reported (changed from $500 in July 1999). In general, many crashes involving pedestrians or bicyclists do not result in significant monetary damage, due to the lower vehicular costs and slower speeds that result in less traumatic crashes. Therefore, if a school area did not experience a crash over these three years it is incorrect to infer that people are not bicycling or walking or that there are no hazards at the school. Second, in absence of bicycle, pedestrian, and vehicle counts, there is no way to measure "exposure" to crashes. For example, consider two streets that experienced the same number of crashes but different levels of walking. The street with significant foot traffic is likely to be less dangerous than the street that experienced the same number of crashes despite having less pedestrian traffic.

Missing or Substandard Walkways (Sidewalks and Paths)	
Primarily Affects	• Existing and Potential Pedestrians
Characterized By	• Missing walkway • Insufficient width (generally defined as less than five feet of clear space) • Sidewalks attached adjacent to arterials • Poor surface conditions (e.g., cracking, crumbling, or heaving) • Narrow sidewalks with rollover curbs that serve as splash guards or parking space • Insufficient drainage (e.g., walkways collect water during storm events, ponding water can freeze and create a slippery surface) • Construction activity
Associated With or Challenges Created	• Challenging travel conditions, especially for pedestrians with physical disabilities • Deters walking by reducing the attractiveness, comfort and usability of facilities • Can increase the risk of pedestrian and motorist crashes as pedestrians detour around walkway gaps or travel in the roadway itself • Lower levels of walking activity

Walkways most commonly consist of sidewalks and shared use paths, described below.

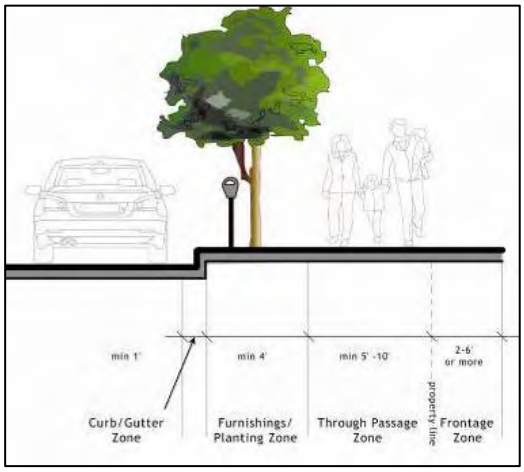


Figure 4. Zones in the sidewalk corridor

Sidewalks are typically concrete and separated from the roadway by a curb and gutter. Sidewalks are a common application in urban and suburban environments, but are less common in rural areas and environments where objections to the "urban" aesthetic of sidewalks often arise. In more rural areas pedestrian travel commonly occurs along the shoulder of the roadway, or on sidewalks or asphalt paths adjacent to the roadway.

The Through Passage Zone is the sidewalk area intended for pedestrian travel (shown in Figure 4). This zone should be entirely free of permanent and temporary objects. Sidewalks should be at least five feet wide, with a minimum of four feet in constrained areas (not recommended within one mile of a school). In areas with significant pedestrian traffic such as downtown Cheyenne, sidewalks should be at least six feet wide.



Figure 5. Cheyenne's Greenway system contributes to a complete and cohesive pedestrian system in many areas

This width enables two pedestrians (including wheelchair users) to walk side-by-side or to pass each other comfortably and allows two pedestrians to pass a third pedestrian without leaving the sidewalk.

Alternatives to sidewalks in rural areas include pedestrian paths separated from the roadway by a borrow ditch (to serve drainage purposes) or traffic-calming measures on low-volume streets where pedestrians share the road with motorists. Shared use paths (also referred to as multi-use paths, sidepaths or Greenways) are often viewed as recreational facilities, but they can also serve an important function as a walking and bicycling corridor to school (Figure 5). Shared use paths serve both bicyclists and pedestrians and generally provide additional width over a standard sidewalk or pedestrian path. These facilities may be constructed adjacent to roads, through parks or open space areas, along creeks, or along linear corridors such as abandoned railroad lines.

Regardless of type, walkways constructed adjacent to roadways should have some type of vertical (e.g., curb or barrier) or horizontal (e.g., landscaped strip) buffer separating the path area from adjacent travel lanes. Shared use paths should have a minimum width of eight feet (if serving as a multi-use facility) or five feet if serving pedestrians only. Regional trails that accommodate significant non-motorized traffic and several user types (e.g., walking, bicycling, running, in-line skating, dog walking, etc.) should be at least 10 feet in width.

A complete and accessible sidewalk network is an important part of enabling students to walk and bike to school (Figure 6). The sidewalk becomes an essential component of the

trip to school if a student's route is on a high-volume or fast-moving roadway. Teachers who participated in the planning process expressed concern about the impact of sidewalk obstructions on students' safety.

If a walkway is obstructed by overgrown vegetation or snow and ice, it becomes hazardous for students to walk on the sidewalk. People in wheelchairs are affected by even minor obstructions on a sidewalk (Figure 7). If the sidewalk is blocked, students may then be forced to walk in the road, increasing their chances of being involved in a crash with motor vehicle traffic. Many young students also ride bicycles on sidewalks instead of on a road or trail. Access to bicycling may also be affected if physical obstructions encroach on the usable area of the sidewalk. In Cheyenne, adjacent property owners are responsible for keeping sidewalks clear of vegetation, snow and ice.

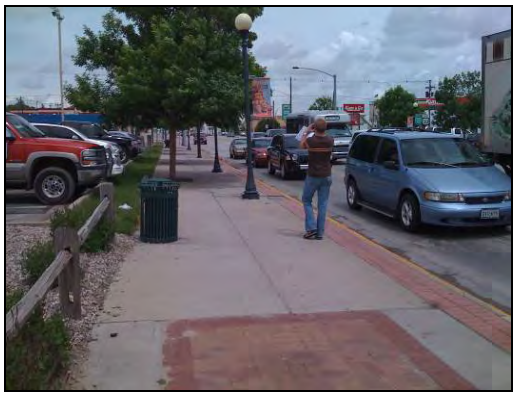


Figure 6. A well-designed sidewalk provides sufficient pedestrian space, and amenities such as street trees, lights, trash cans, and a planter zone



Figure 7. Overgrown vegetation impedes pedestrian travel on sidewalks

Participants of the June 2009 Cheyenne Metropolitan Area Safe Routes to School Plan and Pedestrian Plan Community Workshop communicated that proper sidewalk maintenance was a way to encourage more walking and biking.

Lack of Safe Bike Routes to School	
Primarily Affects	• Existing and potential bicyclists
Characterized By	• Missing walkway or bikeway • Higher-speed and volume streets without dedicated bicycle facilities (more than 25 mph or 3,000 ADT) shown on Maps 3 and 4 • Insufficient width of shared facility (e.g., narrower than 5 foot minimum sidewalk width where cyclists sharing with pedestrians or 10 foot minimum shared use path width) • Poor surface conditions (e.g., cracking, crumbling, or heaving) • Insufficient drainage (e.g., walkways collect water during storm events and create pudding or pounding while freezing conditions can create slippery surfaces) • Low visibility
Associated With or Challenges Created	• Challenging travel conditions, especially for less experienced cyclists and children • Increased risk of bicycle and motor vehicle crashes • Increased risk of bicycle and pedestrian conflicts • Lower levels of bicycling activity

Many children under the age of 16 are unfamiliar with operating any type of vehicle on a road and may be nervous about riding in a street with cars. Many younger children use sidewalks for riding to schools or parks, which is acceptable in areas where pedestrian volumes are low and driveway visibility is high. Where on-street parking and/or landscaping obscures drivers' visibility, sidewalk riders may be exposed to a higher incidence of crashes. Sidewalk riding also increases conflicts with pedestrians.

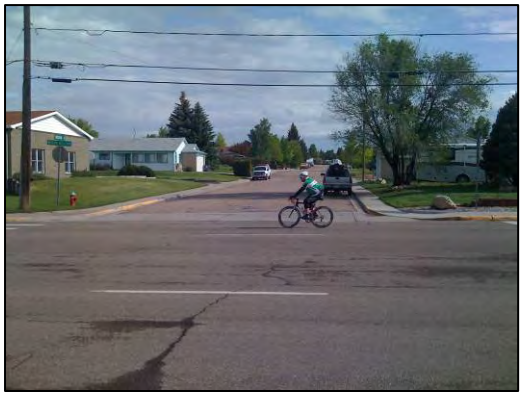


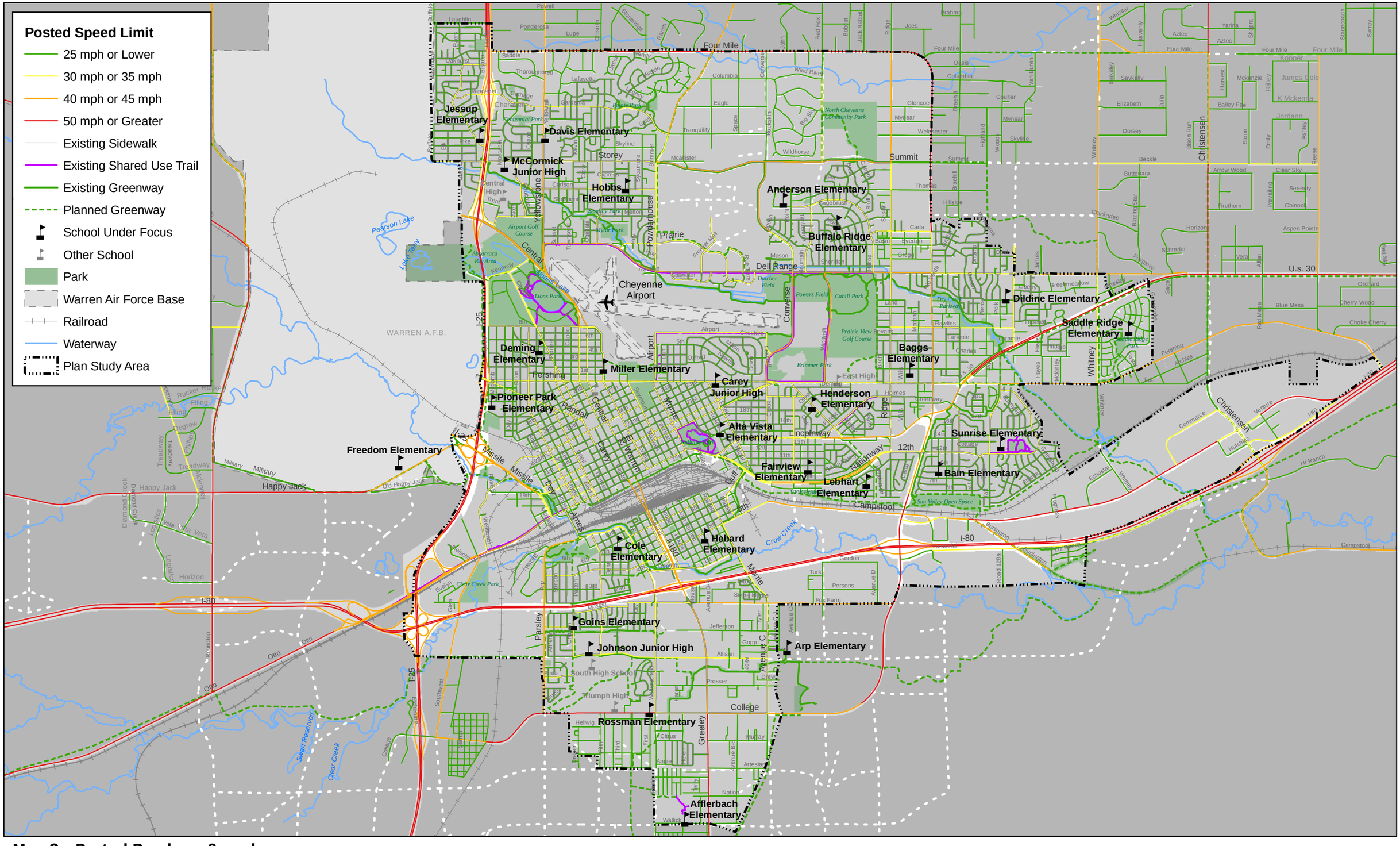
Figure 8. Younger bicyclists benefit from low traffic speeds and volumes

Older children (12 years or older) who consistently ride at speeds over ten miles per hour should be directed to ride on-street wherever possible. On-street bicycle facilities appropriate for younger or inexperienced bicyclists include Bicycle Boulevards or bike routes on low-speed and low-volume streets (Figure 8). Streets should be clearly marked such that drivers are aware of bicyclists in the roadway, and protected crossings of larger roadways (e.g., arterials) should be provided. Children often ride the wrong way on-street in Cheyenne, indicating the need for safety education. This

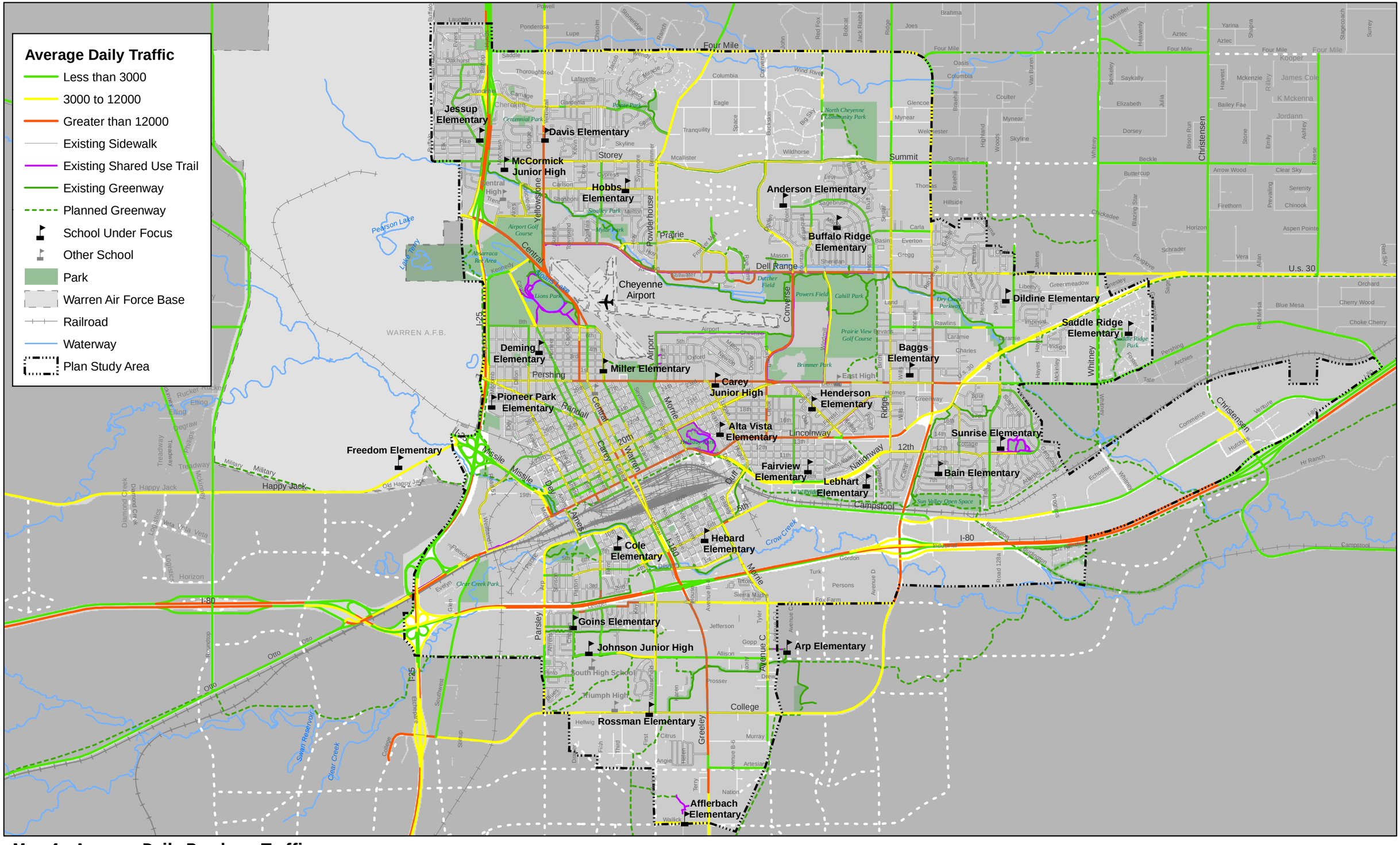
behavior can lead to conflicts with drivers as well as encouraging unsafe bicycling habits later in life.

Student bicyclists will benefit from route markers, bike paths, bike lanes on low-speed streets, neighborhood routes, traffic calming, wider curb lanes, and educational programs. Casual bicyclists will also benefit from marked routes that lead to parks, schools, shopping areas, and other destinations. To encourage youth to ride, routes must not have substantial auto traffic volumes or speeds, and otherwise be safe enough for parents to allow youth to ride. An appropriate treatment is Bicycle Boulevards, which are lower speed and volume streets that are enhanced to promote bicycle travel through applications such as traffic calming and pavement markings are appropriate treatments at these locations.

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Posted Speed Limit
25 mph or Lower
30 mph or 35 mph
40 mph or 45 mph
50 mph or Greater
Existing Sidewalk
Existing Shared Use Trail
Existing Greenway
Planned Greenway
School Under Focus
Other School
Park
Warren Air Force Base
Railroad
Waterway
Plan Study Area
Jessup Elementary
Davis Elementary
McCormick Junior High
Hobbs Elementary
Anderson Elementary
Buffalo Ridge Elementary
Dildine Elementary
Saddle Ridge Elementary
Baggs Elementary
Deming Elementary
Miller Elementary
Carey Junior High
Pioneer Park Elementary
Henderson Elementary
Alta Vista Elementary
Sunrise Elementary
Fairview Elementary
Lebhart Elementary
Bain Elementary
Freedom Elementary
Cole Elementary
Hebard Elementary
Goins Elementary
Johnson Junior High
Arp Elementary
Rossman Elementary
Afflerbach Elementary
Cheyenne Airport
WARREN A.F.B.
Four Mile
Summit
Dell Range
Prairie
Storey
Central High
Powderhouse
Converse
Airport
Lincolnway
12th
East High
South High School
Triumph High
College
Greeley
Pershing
Whitney
Christensen
U.s. 30
I-25
I-80
Pearson Lake
Lake Terry
Crow Creek
Clear Creek
Swan Reservoir
Happy Jack
Otto
Horizon
Missile
Yellowstone
Central
Dell Range
Converse
Airport
Whitney
Christensen
Pershing
College
Greeley
Parsley
Avenue C
Missile
Happy Jack
Otto
Horizon
I-80
I-25
U.s. 30
Crow Creek
Clear Creek
Swan Reservoir
Map 3 - Posted Roadway Speed
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: August 2010
0
0.5
1
Miles

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Map 4 - Average Daily Roadway Traffic

Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: August 2010

0 0.5 1 Miles

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Unsafe Street Crossings and Intersections	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• Poor visibility • Higher-speed/volume roads • Insufficient or missing pedestrian crossing infrastructure (e.g., faded crosswalks, missing pedestrian signage) • Lack of accessibility provisions
Associated With or Challenges Created	• Discomfort during pedestrian or bicycle crossing • Increased risk of crashes and 'near misses'

Increasing the visibility of pedestrians and bicyclists at intersections and crossings is particularly crucial to student safety. Where drivers cannot see pedestrians or crossing treatments, they may not slow down to take a turn or to yield to a pedestrian in a walkway (see Figure 9). Younger students may run into traffic or otherwise disobey traffic control devices if they are not clear. Treatments specific to school routes should have high visibility crosswalks with pedestrian push buttons at signalized intersections (Figure 10). These can include in-pavement flashers, signage, warning flashers, and other treatments. Street corners should have ADA-accessible curb ramps.



Figure 9. Faded crosswalks can be hazardous to pedestrians

School crosswalks denote the preferred location for children to cross the street. Crosswalks should be marked:

- At all intersections on established routes to school
- Where there is substantial conflict between motorists, bicyclists, and pedestrian movements
- Where students are encouraged to cross between intersections, or
- Where students would not otherwise recognize the proper place to cross



Figure 10. Well-marked crosswalk with pedestrian push-button

The SLOW SCHOOL XING marking is commonly used in advance of uncontrolled school crosswalks. The MUTCD and the *WYDOT Pedestrian and School Traffic Control Manual* provide guidance on the use of crosswalks as well as stop lines, yield lines, curb markings, and other symbol markings.

Because pedestrians tend to follow the most direct route to their destinations, substantial demand for mid-block crossings may exist. Pedestrians are generally unwilling to walk more than 500 feet between intersections. By channeling pedestrians to a preferred crossing location, mid-block crosswalks can enhance pedestrian safety. Locations where a large number of pedestrians currently cross without a marked crossing especially benefit from a mid-block crossing treatment.

Appropriate locations for midblock crossings should be carefully selected, especially on multi-lane (four or more lanes) roads with heavy traffic volumes (generally greater than 12,000 ADT). Mid-block crossings can include pedestrian refuge islands, which allow a two-stage crossing. Pedestrian refuge islands minimize pedestrian exposure at crossing by shortening the crossing distance and increasing the number of available gaps for crossing. Refuge islands also allow pedestrians to make a crossing in multiple stages by focusing on one direction of traffic at a time.

It is important to note that improper maintenance of sidewalks, crosswalks, and signals can be a hazard to those using the facilities. Because of the smaller percentage of users (in comparison to motorists), it is possible for the maintenance of these facilities to be less of a priority when a municipality is faced with restricted funds.

Cracked and broken sidewalks, faded pavement markings, and improperly timed signals that do not give pedestrians adequate crossing time are examples of improperly maintained infrastructure. Improperly maintained facilities can be particular barrier to students walking a biking to school. Participants of the June 2009 Cheyenne Metropolitan Area Safe Routes to School Plan and Pedestrian Plan Community Workshop communicated that proper maintenance of signals and crosswalks was a way to encourage more walking and biking.

A Major Roadway or Expressway Divides the School from Residential Areas	
Primarily Affects	• Existing and potential pedestrians and cyclists
Characterized By	• Presence of high-speed, multi-lane, or limited-access road bisecting the school enrollment boundaries
Associated With or Challenges Created	• May require significant out-of-direction travel to reach a safe crossing • Significant reduction or complete elimination of bicycle and pedestrian travel from the residential area • Increased risk of motor vehicle/pedestrian/cyclist collisions

Many barriers to walking or cycling to school in LCSD #1 have already been minimized by school catchment areas that are defined by large physical boundaries such as highways (e.g., Saddle Ridge Elementary) or by pairing elementary schools and busing children from one school to the other (e.g., Lebhart and Fairview Elementary Schools). Where this is not already the case, this type of catchment policy should be encouraged.



Figure 11. Bicycle/pedestrian overcrossing of I-180

Major roadways can be challenging for students to cross because of high speeds and motor vehicle volumes, few gaps in traffic, barriers (e.g., median barriers that make crossing physically impossible) and longer blocks between protected crossings. Nationway, I-180 and Greeley Highway are examples of major streets that act as barriers to walking or cycling.

Even where protected crossings exist, cyclists and pedestrians will likely have long wait times that interrupt their travel. These longer wait times could encourage younger students or those running late to disobey traffic guides, particularly where the guides are not clear. Grade-separated crossings can create safer crossing conditions but incur larger construction and maintenance costs. Grade-separated crossings (Figure 11) can also require significant out-of-direction travel, which can be a deterrent to walking and cycling to school.

Lack of Accessibility	
Primarily Affects	• Students with disabilities, younger students
Characterized By	• Walkways without smooth travel surfaces • Walkways less than five feet wide • Walkways lacking curb ramps at corners • Walkways with a significant slope • Driveways or curb ramps with a significant vertical travel distance (e.g., a driveway with a three inch lip would create a significant vertical challenge to a pedestrian with a physical impairment)
Associated With or Challenges Created	• An area may be completely inaccessible, dependant on the accessibility limits and level of impairment among users

People with mobility impairments range from those who use wheelchairs, crutches, canes, orthotics, and prosthetic devices, to those who have difficulty when walking long distances, on non-level surfaces, or on steep grades. Curb ramps are particularly important to people with mobility impairments (Figure 12). Prosthesis users often move slowly and can have difficulty with steep grades or cross slopes.



Figure 12. Curb ramps with steep grades, and/or poor maintenance can render a sidewalk inaccessible to a pedestrian in a wheelchair

Children and many older adults may not suffer from mobility impairments, but should be given additional consideration based on their level of mental and physical capacity.

Design treatments that increase accessibility include curb ramps, slower motor vehicle travel speeds, a network of complete sidewalks and walkways, longer crossing times at signals, and enhanced signing to increase driver awareness.

Distance to School is Too Far	
Primarily Affects	• Existing and potential pedestrians and cyclists, particularly younger children.
Characterized By	• Schools with large 'student catchment' areas (e.g., areas larger than students will generally walk to school) • Magnet schools
Associated With or Challenges Created	• Decreased number of students walking or bicycling to school • Fewer younger children walking or bicycling to school • Increased potential for younger children to walk or bike without adequate parent supervision

Distance is an important factor in school travel decisions; several surveys have found that parents most frequently attributed their reluctance to allow their students to walk or bike to the distance they live from the school.[4] Several studies have found that the proportion of students who walk and bike to school decreases significantly for children who live further than one mile from school.

[4] Dellinger, A. M. & Staunton, C. E. (2002). *Barriers to children walking and bicycling to school: United States 1999*. Morbidity and Mortality Weekly, 51(32), 701-704.

Bike Parking at School is Missing, Insufficient or Non-secure	
Primarily Affects	• Existing and potential cyclists
Characterized By	• Insufficient number of bike racks • Poor rack placement (e.g., far from building entrances) • Poor quality or poorly designed racks that increase the potential of damage to the bicycle (e.g., "wheel bender" racks)
Associated With or Challenges Created	• Increased risk of vandalism or theft • Increased risk of bicycle damage • Exposure to weather, which can cause rusting or other related wear • Less cycling activity

Providing secure and convenient bicycle parking is one way to help encourage more bicycling to school among children. Attributes of good bike parking include:

- Protection from vandalism/theft
- Protection from damage to the bicycle
- Protection from weather
- Convenient to destination

While almost all schools in Cheyenne provide bicycle parking, many racks do not securely hold bicycles and can be difficult to use (Figure 13).



Figure 13. 'Wheel bender' bike rack at Carey Junior High School

Described below, several factors should be considered when determining bicycle parking needs:

- **Amount:** A sufficient amount of parking must be made available so that bicycles are not crowded.
- **Location:** The location must be convenient to the end destination, near main building entrances. An appropriate location for the parking site should be identified.
- **Type of device**: Many schools use "wheel bender" type racks, which only support the bicycle by the wheel and can damage the bicycle. The preferred bike rack design should keep the bike upright by supporting the frame, allow the bike to be locked by the frame, and facilitate securing one or both. (see Figure 14).



Figure 14. 'Wave Rack' bicycle parking at Johnson Junior High School

- **Monitoring:** A monitor could provide an additional level of security at the bike parking area. Another option would be to place bike parking in a visible location near school administrative offices or where a school staff member is present.

Dangerous Driving and Speeding on Streets	
Target	• Speeding and inattentive or erratic motorists
Characterized By	• Presence of collector or arterial streets (e.g., streets designed for higher motor vehicle speeds and volumes) • Neighborhood streets with excessive width • Posted speeds greater than 25 mph • Lack of traffic calming devices
Associated With or Challenges Created	• Increased risk of traffic crashes involving pedestrians or bicyclists • Reduced walking and biking due to traffic safety concerns

Dangerous driving and speeding can lead to increased risk of collisions involving pedestrians and bicyclists. Speeding motorists may not see a pedestrian in time to stop to allow him to cross the street (see Figure 15). Other erratic driving behavior (e.g., eating, talking, or text messaging) can increase the risk for pedestrians. This is particularly true at intersections or where bicycle or pedestrian facilities are not adequate (e.g., if the sidewalk is blocked or does not exist, pedestrians may walk in the roadway).



Figure 15. Flashing warning lights and signage can remind drivers to watch for pedestrians and bicyclists in School Zones

Drop-Off and Pick-Up Process Creates Congestion and Unsafe Behaviors	
Primarily Affects	• Existing and potential pedestrians and cyclists, motorists, buses and the general public
Characterized By	• Significant traffic during peak times • Considerable cross-traffic, stopping and pulling over • Distracted drivers due to other vehicles and student pedestrian traffic
Associated With or Challenges Created	• Can increase the risk of pedestrian and motorist crashes • Roadway and sidewalk congestion • Reduced air quality

The majority of students in Cheyenne are driven or bussed to school. This creates substantial traffic congestion during drop-off and pick-up times. Drivers may move erratically as they find parking, and can be distracted by other vehicles and heavy pedestrian traffic. Schools should have well laid out student loading zones with clear crossing locations for students who walk, bike or are dropped-off farther away from school (Figure 16). Some schools in Cheyenne may consider designating a drop-off/pick-up area that is not directly in front of school to minimize traffic congestion and to increase the comfort and safety for students walking to the school. Newly constructed or reconstructed schools in Cheyenne generally separate student and bus loading zones to create an efficient one-way flow for both parent vehicles and buses.



Figure 16. Signage directing student drop-off and pick-up can increase safety of students walking to school

Infrastructure Barriers Common at LCSD#1 Schools

While each school under focus faces infrastructure challenges unique to its location, several patterns emerged through the examination of existing conditions at each school under focus (Table 1). Common barriers include:

- **Bicycle parking.** Many schools have 'wheel bender' bicycle racks. This type of parking increases the potential risk of damage to bicycles as only the wheel is supported. Damage to the frame or wheel can occur if significant force or pressure is applied to the frame of the bike.
- **Lights on flashing beacons are difficult to see.** In many instances the amber colored flashing beacons used to alert motorists of crosswalks and School Zones are difficult to see in bright sunlight.
- **Walkways are not accessible.** Most sidewalks immediately surrounding school buildings meet ADA width requirements that recommend five feet of clear space.

However, most sidewalks or walkways in neighborhoods surrounding the schools are narrower and present challenges for people with mobility impairments.

- **Crashes within two miles of schools.** Most schools surveyed experienced reported pedestrian related crashes between 2005 and 2007 but in many instance the crashes did not occur within one-half mile of the school. Research has shown that students living within one-half mile of school are more likely to walk or bicycle so crashes occurring further than one-half mile from the school are less likely to involve students traveling to and from school.
- **School Zone Warning signs are absent from bus and student loading zones.** The *Wyoming Department of Transportation Pedestrian and School Traffic Control Manual* protocol dictates that school areas abutting the road shall have advance warning signs posted in these areas.
- **School Zones are not defined.** No specific delineation of school zones exists, resulting in zones of different sizes around the district. This inconsistency can lead to confusion for motorists and law enforcement officials traveling through multiple areas, especially if school zone signs are not posted.

Table 1 summarizes engineering/infrastructure barriers observed at each school under focus, while the remainder of this document discusses details of school-specific conditions. These findings are based on field observations, feedback from the public, and discussions with the City of Cheyenne, Cheyenne Metropolitan Planning Organization and LCSD #1 staff. Each school summary contains a map showing the school, a one-half mile analysis boundary and depiction of existing conditions within the area. The one-half mile analysis boundary was selected based on the assumption that children are more likely to walk and bicycle within this area. Focusing improvements near schools will have the greatest chance of positively affecting the behavior of the greatest number of students.

Table 1. Summary of Infrastructure Barriers Observed at Schools Under Focus

SCHOOL	Crashes within 2 Miles of School	Missing Walkways	No Safe Place to Bicycle	Difficult Crossings	Major Expressways/ Arterials	Walkways are Not Accessible	Distances to School Too Far	Missing or Insufficient Bicycle Parking	Dangerous Driving Speeds At Schools	Drop-off/ Pick-up Creates Congestion[5]
Afflerbach Elementary	x	x	x		x	x	x	x		X
Alta Vista Elementary	x	x	x			x	x	x	x	X
Anderson Elementary	x	x		x	x	x	x	x	x	X
Arp Elementary	x	x	x		x		x		x	X
Baggs Elementary	x	x		x	x	x	x		x	
Bain Elementary	x	x				x	x	x	x	X
Buffalo Ridge Elementary	x	x				x		x	x	X
Carey Junior High	x	x		x	x		x		x	
Cole Elementary	x	x		x		x	x	x	x	X
Davis Elementary	x	x	x	x	x	x	x	x	x	X
Deming Elementary	x	x			x	x	x	x	x	
Dildine Elementary	x	x		x	x	x	x	x	x	X
Fairview Elementary	x	x	x			x		x		X
Freedom Elementary	x	x	x				x			
Goins Elementary	x	x			x	x	x	x	x	
Hebard Elementary	x	x	x	x		x	x	x	x	
Henderson Elementary	x	x		x		x		x	x	
Hobbs Elementary	x	x			x	x	x	x	x	X
Jessup Elementary	x	x		x	x		x	x	x	X
Johnson Junior High	x	x		x	x		x	x	x	X
Lebhart Elementary	x	x	x		x		x		x	
McCormick Junior High	x	x		x				x		X
Miller Elementary	x			x	x	x	x	x	x	
Pioneer Park Elementary	x					x	x	x	x	
Rossman Elementary	x	x	x	x	x	x	x	x	x	
Saddle Ridge Elementary					x		x		x	
Sunrise Elementary	x	x				x				X

Afflerbach Elementary	
Existing Walking Environment	• An existing shared use trail provides access from neighborhoods north of the school. W Wallick Road has a sidewalk leading to Greeley Highway, which lacks sidewalks but has unpaved shoulders where pedestrians walk. Students that live east of Greeley Highway are bussed to the school, minimizing the number of students walking along this roadway.
Existing Bicycling Environment	• An existing shared use trail provides access from neighborhoods north of the school. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[6]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 2 • Crashes within the school catchment boundary: 0
Dangerous Driving Speeds Around Schools	• Greeley Highway has posted travel speeds of 55 mph. Students living east of the roadway are bussed to school, but the road still presents a danger for students walking in this vicinity.
Missing or Insufficient Walkways	• W Wallick Road has sidewalks in the vicinity of the school, and the north side sidewalk continues to Greeley Highway. No other streets within one-half mile of the school have sidewalks.
No Safe Place to Ride a Bicycle	• While the school is connected to neighborhoods to the north and east via an existing shared use trail, few other safe ways provide bicycle access to the school.
Drop-off/ Pick-up Creates Congestion	• Student and bus loading is accomplished through a single loop with buses using the inner area and parents using the outer. The key point of congestion is the driveway.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided. The number of spaces may not be sufficient for the number of students who might ride to school.

[6] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: The school is connected to neighborhoods to the north and east by a shared use path (Figure 17), which provides a safe and comfortable walking and bicycling environment. However, many residential streets completely lack sidewalks or formalized bicycling facilities, which can be necessary to facilitate younger children safely traveling through the neighborhood.



Figure 17. Students utilizing the greenway system may encounter pathway flooding during the rainy season

The school district routinely instructs students living east of Greeley Highway to use the bus rather than risk a twice-daily crossing.

The student drop-off and pick-up area is a single loop, with the inside lane dedicated to buses and the outside for parents. There is typically congestion from parents dropping students off or picking them up, which blocks the buses from entering the area. The Principal also reports that parents often park in the crosswalk on W Wallick Road, blocking them from student access.

While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
GRAPE ST
CITRUS ST
PLUM ST
BLOSSOM CT
APPLE ST
ANGIE ST
FACTOR LN
WILLIAMS ST
WALKER LN
WEBSTER LN
MCINTIRE LN
W NATION RD
E NATION RD
MURRAY RD
ARTESIAN RD
BERNICE DR
W WALLICK RD
E WALLICK RD
HIAWATHA RD
TIFFANY BROOK RD
SOUTH FORK RD
DALLAS RD
JULIANNA RD
PLEASANT VALLEY TRL
LITTLE VALLEY TRL
HIGH SIDE TRL
SECRET VALLEY TRL
LONESOME VALLEY TRL
PONTILLO DR
Afflerbach Elementary
S FOURTH AVE
S THIRD AVE
PARK AVE
S SECOND AVE
S FIRST AVE
DIVISION AVE
MILATZO AVE
ROOKS AVE
NEAL AVE
PINE AVE
HELEN AVE
STEVE AVE
S AVENUE B-6
MARY WAY
RED CIR
PERRI CIR
PLUTO AVE
NEPTUNE AVE
SATURN AVE
JUPITER AVE
VENUS AVE
MARS AVE
TERRY RD
MAIZE AVE
AVENUE B-2
S GREELEY HWY
Afflerbach Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Alta Vista Elementary	
Existing Walking Environment	• Most streets within a half-mile of the school have sidewalks. Several shared use paths provide routes through Holliday Park, connecting to existing sidewalks in the neighborhood. Advance School Warning signs are provided at the Logan Avenue crossing.
Existing Bicycling Environment	• The shared use paths through Holliday Park provide bicycling routes for students. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[7]	• Crashes within one-half mile of the school: 6 • Crashes within two miles of the school: 28 • Crashes within the school catchment boundary: 7
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include E. 19th Street, Logan Avenue, E. 20th Street, Lincolnway and Evans Avenue.
Missing or Insufficient Walkways	• Most sidewalks are less than five feet wide, making it difficult for groups of students or parents and their children to walk side by side.
No Safe Place to Ride a Bicycle	• There are no paths or greenways in neighborhoods to the east of the school.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the eastern side of the school, near the parking lot and playground. The number of spaces may be insufficient for the number of students who ride to school.
Drop-off/ Pick-up Creates Congestion	• A formalized student load zone was recently created on Rollins Avenue but parents who drive still use the access on 16th Street, which can interfere with bus traffic.
Walkways are Not Accessible	• Walkways in the surrounding neighborhood are complete, but may not meet current ADA width standards. Older curb ramps may require reconstruction to meet current ADA standards.

Discussion: Students walking or bicycling to Alta Vista Elementary face varying conditions depending on where they live in relation to the school. Students living to the east of the school will travel on sidewalks. However, the sidewalks are mostly narrower than five feet wide.

When reaching the school, students coming from the east must cross Logan Avenue, a busy collector with posted speeds of 30 mph. Crossing Logan Avenue is the primary challenge for students walking or bicycling to Alta Vista Elementary. Logan Avenue has few protected crossings

[7] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

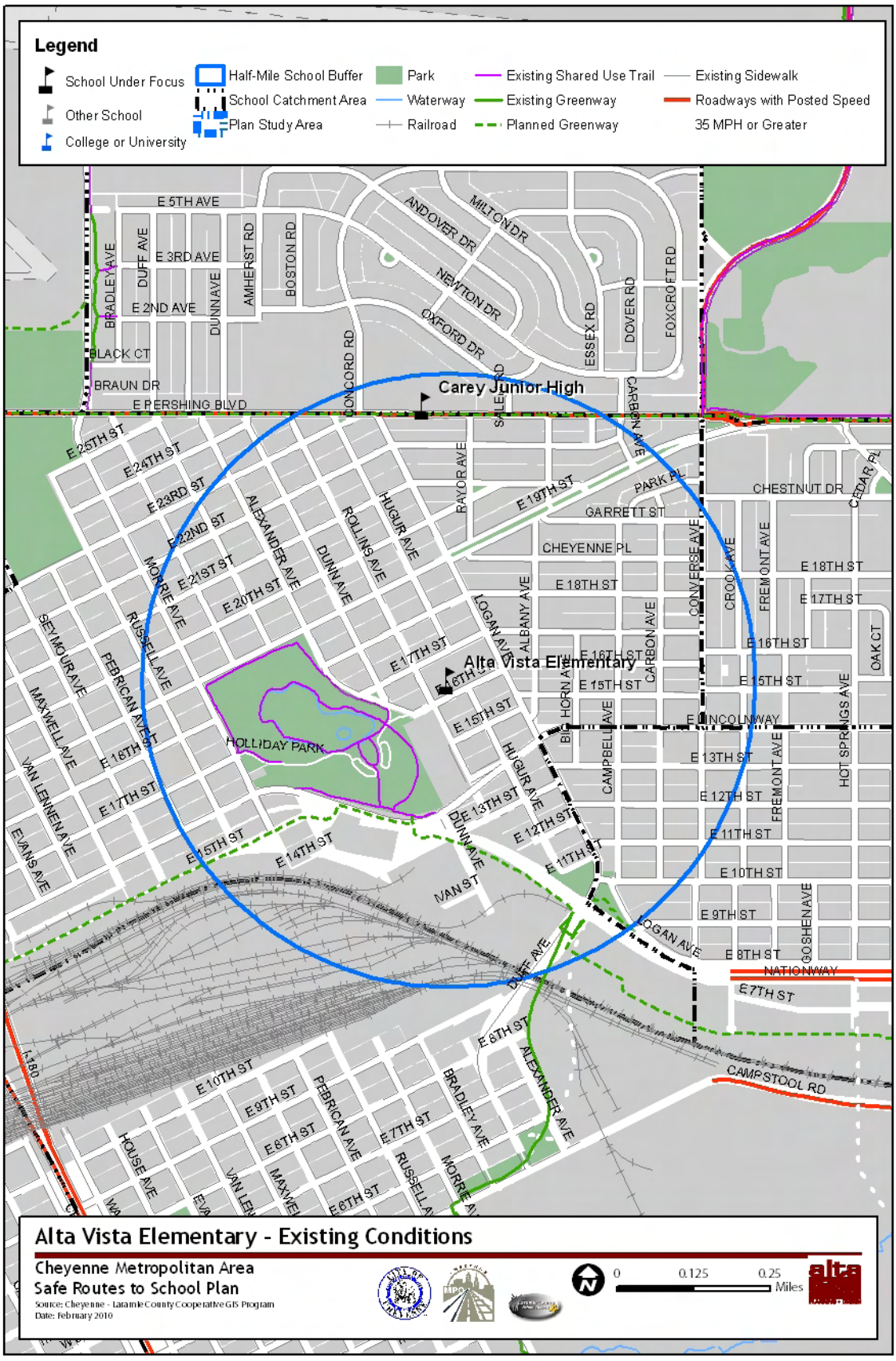
along this segment; a marked crossing is provided at 16th Street and at the signalized intersection at 18th Street, but most students walk to the north of the crosswalk on 16th Street. Many students cross wherever they can find a gap in traffic. A nearby daycare on the east side of Logan Avenue meets students on campus and crosses at 17th Street.

From the west, students experience better walking conditions, with typically wider sidewalks and no crossings of larger streets. Students coming from the west may use the shared use paths through Holliday Park (Figure 18) for part of their trip. Several low speed and low volume neighborhood streets near the school are suitable for bicycling. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.



Figure 18. Students can use sidewalks or shared use paths through Holliday Park to avoid traveling to Alta Vista Elementary on higher-speed streets

Advance School Warning signs exist on the Logan Avenue, but student load zones and bus loading zones fronting the street lack appropriate signage. Parents often park in the fire zone and use the 16th Street access road, blocking those routes for students.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Carey Junior High
Alta Vista Elementary
HOLLIDAY PARK
E 5TH AVE
E 3RD AVE
E 2ND AVE
BLACK CT
BRAUN DR
E PERSHING BLVD
ANDOVER DR
MILTON DR
NEWTON DR
OXFORD DR
BRADLEY AVE
DUFF AVE
AMHERST RD
BOSTON RD
DUNN AVE
CONCORD RD
ESSEX RD
DOVER RD
FOXCROFT RD
SALEM RD
CARBON AVE
E 25TH ST
E 24TH ST
E 23RD ST
E 22ND ST
E 21ST ST
E 20TH ST
E 19TH ST
E 18TH ST
E 17TH ST
E 16TH ST
E 15TH ST
E 14TH ST
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
ALEXANDER AVE
ROLLINS AVE
HUGUR AVE
RAYOR AVE
PARK PL
GARRETT ST
CHEYENNE PL
CHESTNUT DR
CEDAR PL
CONVERSE AVE
CROOK AVE
FREMONT AVE
OAK CT
ALBANY AVE
LOGAN AVE
CAMPBELL AVE
BIG HORN AVE
E LINCOLN WAY
HOT SPRINGS AVE
GOSHEN AVE
NATIONWAY
CAMPSTOOL RD
MORRIE AVE
RUSSELL AVE
PEBRICAN AVE
SEYMOUR AVE
MAXWELL AVE
VAN LENNEN AVE
EVANS AVE
VAN ST
HOUSE AVE
I-80
Alta Vista Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
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Miles
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Anderson Elementary	
Existing Walking Environment	• The residential neighborhood to the south and east of the school has sidewalks on both sides of most streets.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[8]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 6 • Crashes within the school catchment boundary: 0
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Converse Avenue south of Ogden Road, Mountain Road and Plain View Road.
Major Expressways or Arterials Present	• Converse Avenue creates a north/south crossing barrier separating residential land west of this roadway from the school. • Storey Boulevard creates an east/west crossing barrier separating residential land north of this roadway from the school.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the west side of the school, near the main entrance. The number of spaces may not be sufficient for the number of students who might ride to school.
Drop-off/ Pick-up Creates Congestion	• Drop-off creates more significant congestion than pick-up due to space constraints within the student load zone and the shorter time window.
Missing or Insufficient Walkways	• The residential neighborhood to the south and east of the school has sidewalks on both sides of most streets. However, nearly all of these sidewalks are less than five feet wide, impeding walking side by side.
Difficult Crossings	• Storey Boulevard and Converse Avenue are high-speed streets that pose obstacles to students walking and biking to school from the north and west.

[8] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Anderson Elementary students who walk to school from the south and east have sidewalks available on both sides of most streets. However, with the exception of sidewalks in the immediate vicinity of the school (Figure 19), nearly all of these sidewalks are narrow, impeding students' ability to walk side by side with their parents or with other children. The parking lot access lane also lacks pedestrian crossing treatments.

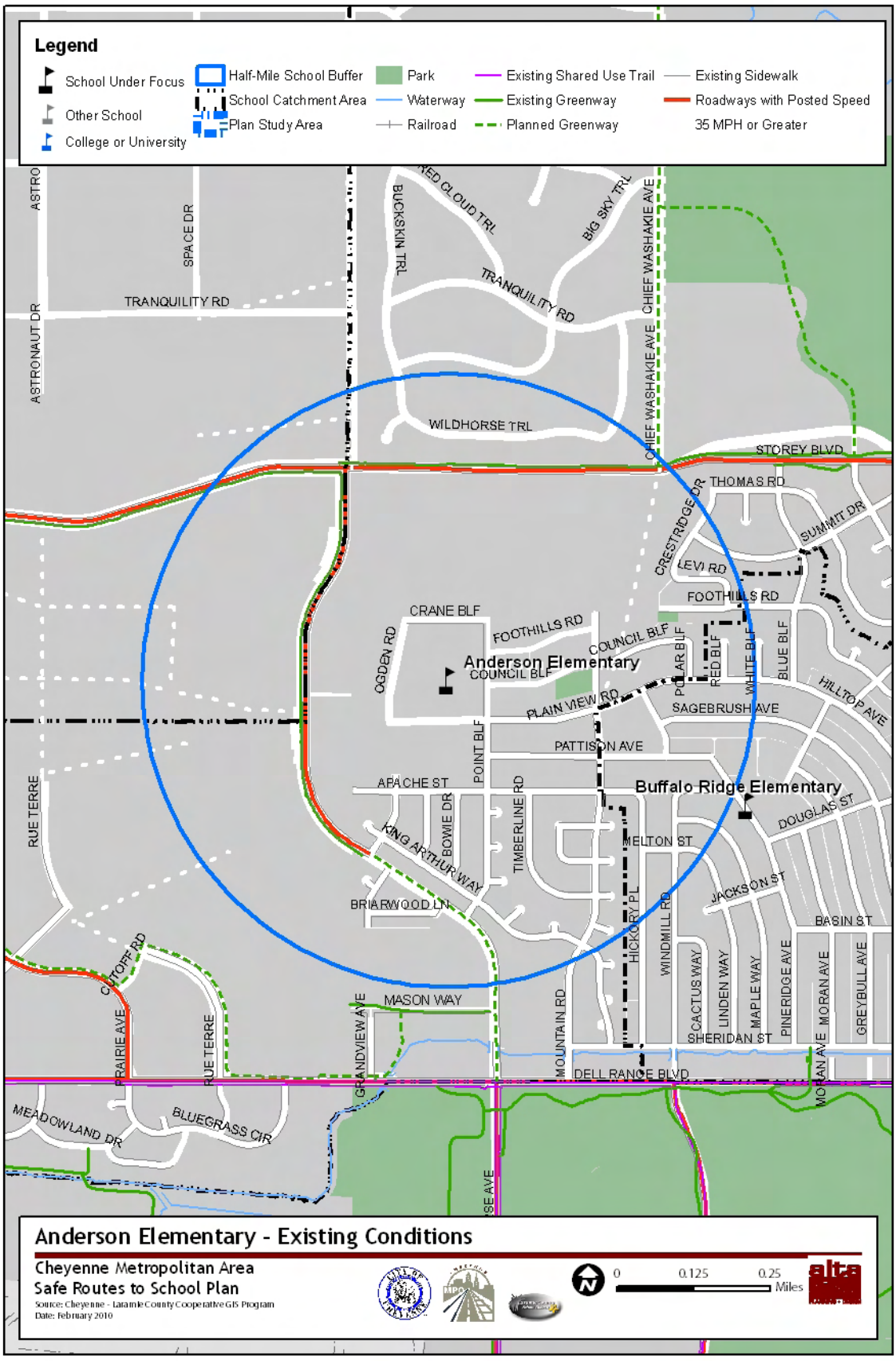
Several low-speed and low-volume neighborhood streets near the school are suitable for bicycling. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.



Figure 19. 'Wheel bender' bicycle parking at Anderson Elementary

Most residential development within the school catchment area is currently to the south and east and is characterized by the good pedestrian access described above. Students face significant challenges when crossing Storey Boulevard and Converse Avenue. The school's catchment area currently includes the Pointe Neighborhood, which is located several miles northwest of the school. This is a redistricting issue that may be resolved by the construction of a new elementary school that would serve the north portion of the Cheyenne's urbanized area.

According to the school's Principal, the largest challenge inhibiting students from walking to school is the undeveloped land surrounding the school. There are few 'eyes on the street' through the area, leading to concerns about stranger danger. This is particularly problematic when students coming from the north take the shortest route through the area, under the Storey Boulevard underpass.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
ASTRO
SPACE DR
TRANQUILITY RD
ASTRONAUT DR
BUCKSKIN TRL
RED CLOUD TRL
BIG SKY TRL
CHIEF WASHAKIE AVE
WILDHORSE TRL
STOREY BLVD
THOMAS RD
CRESTRIDGE DR
SUMMIT DR
LEVI RD
FOOTHILLS RD
CRANE BLF
OGDEN RD
COUNCIL BLF
Anderson Elementary
POLAR BLF
RED BLF
WHITE BLF
BLUE BLF
HILLTOP AVE
PLAIN VIEW RD
SAGEBRUSH AVE
PATTISON AVE
POINT BLF
APACHE ST
Buffalo Ridge Elementary
DOUGLAS ST
RUE TERRE
BOWIE DR
TIMBERLINE RD
KING ARTHUR WAY
MELTON ST
BRIARWOOD LN
JACKSON ST
BASIN ST
HICKORY PL
WINDMILL RD
CACTUS WAY
LINDEN WAY
MAPLE WAY
PINERIDGE AVE
MORAN AVE
GREYBULL AVE
CUTOFF RD
PRAIRIE AVE
MASON WAY
GRANDVIEW AVE
MOUNTAIN RD
SHERIDAN ST
DELL RANGE BLVD
MEADOWLAND DR
BLUEGRASS CIR
Anderson Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
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Miles
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Arp Elementary	
Existing Walking Environment	• Few roads in the area of Arp Elementary have sidewalks to accommodate pedestrian travel. A Greenway connects directly to the school, but does not provide many neighborhood routes.
Existing Bicycling Environment	• The existing shared use path connects to the school but does not connect directly to many neighborhood roadways. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[9]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 13 • Crashes within the school catchment boundary: 2
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph such as Avenue C may act as barriers to younger children. • East Fox Farm Road has a posted speed limit of 40 mph. • College Drive has a posted speed limit of 40 mph.
Major Expressways or Arterials Present	• Fox Farm Road creates a north/south crossing barrier separating residential land north of this roadway from the school. • S. College Drive creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Walkways	• There are many roadways in this area that do not have sidewalks.
Drop-off/ Pick-up Creates Congestion	• Student loading is a challenge as there is only one roadway in and out of the school. Parents who drive tend to drop students wherever they can find space and typically ignore designated zones.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the west side of the school, near the main entrance. The number of spaces may not be sufficient for the number of students who might ride to school.
No Safe Place to Ride a Bicycle	• Although a Greenway connects directly to the school, the trail does not connect to many residential areas in the school catchment area, meaning that few students are likely to be able to use the Greenway to get to school. The unincorporated area surrounding the school has limited roadway connectivity, which further exacerbates problem.
Difficult Crossings	• Fox Farm Road creates a north/south crossing barrier separating residential land north of this roadway from the school.

[9] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: All students walking or biking to Arp Elementary use Reiner Court. Parents park along the walkway on the street, forcing pedestrians to walk in the roadway. In addition, cars and buses tend to park in the crosswalks on school property. Parents drop students off where it is convenient to them, rather than at the designated area, creating confusing traffic patterns.

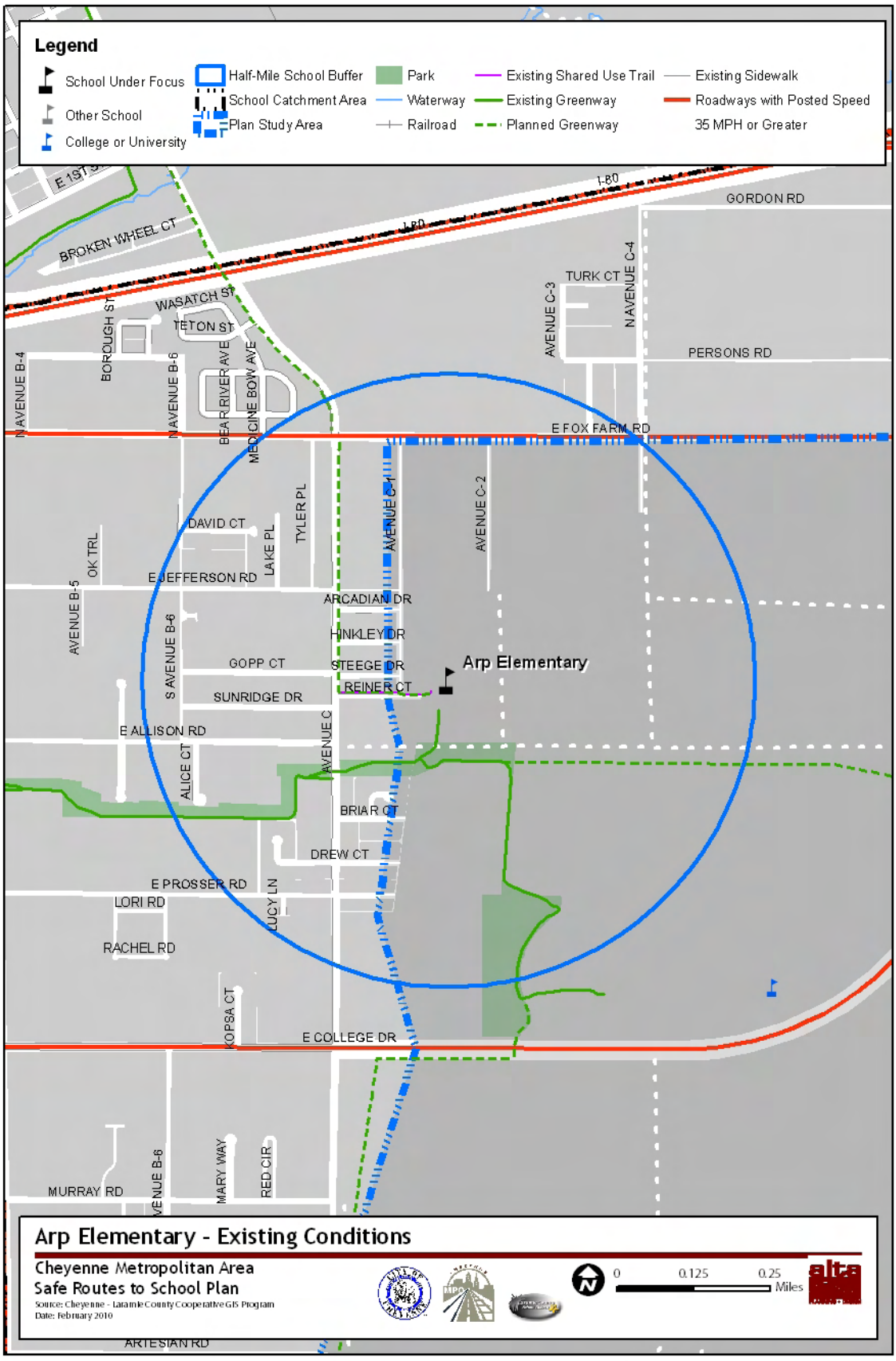
Surrounding neighborhoods have few sidewalks. Fox Farm Road is particularly challenging, due to lack of sidewalks and conflicts with adjacent traffic on the shoulders.

While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles (Figure 20).



Figure 20. 'Wheel bender' style bicycle parking at Arp Elementary

Many students in the school catchment area live further than a half mile away, increasing the difficulty of walking or biking to school. Fox Farm Road and College Drive are challenging crossings for students walking and biking, with posted speed limits of 40 mph. The school may be rebuilt adjacent to the existing building within the next five years.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
I-80
GORDON RD
BROKEN WHEEL CT
WASATCH ST
TETON ST
BOROUGH ST
TURK CT
AVENUE C-3
AVENUE C-4
PERSONS RD
AVENUE B-4
AVENUE B-6
BEAR RIVER AVE
MEDICINE BOW AVE
E FOX FARM RD
DAVID CT
TYLER PL
LAKE PL
AVENUE C-1
AVENUE C-2
OK TRL
E JEFFERSON RD
AVENUE B-5
ARCADIAN DR
HINKLEY DR
S AVENUE B-6
GOPP CT
STEEGE DR
Arp Elementary
REINER CT
SUNRIDGE DR
E ALLISON RD
AVENUE C
ALICE CT
BRIAR CT
DREW CT
E PROSSER RD
LORI RD
LUCY LN
RACHEL RD
KOPSA CT
E COLLEGE DR
MURRAY RD
MARY WAY
RED CIR
ARTESIAN RD
Arp Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Baggs Elementary	
Existing Walking Environment	• Most streets in the area of Baggs Elementary have sidewalks. Most of these sidewalks are less than five feet wide.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[10]	• Crashes within one-half mile of the school: 1 • Crashes within two miles of the school: 14, including 1 fatality • Crashes within the school catchment boundary: 1 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Rawlins Street and Ridge Road south of Cheyenne Street. • Pershing Boulevard and Ridge Road north of Cheyenne Street have posted speed limits of 35 mph. • N. College Drive and Dell Range Boulevard have posted speed limits of 40 mph.
Major Expressways or Arterials Present	• Pershing Boulevard creates a north/south crossing barrier separating residential land south of this roadway from the school. • N. College Drive creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Walkways	• There many roads in the area are without sidewalks, and most of the sidewalks in place are less than five feet wide. • McCann and Wills are unpaved and lacking sidewalks in the school area.
Walkways are Not Accessible	• Walkways in the neighborhood are complete, but may not meet ADA width standards. Many corners have curb ramps but the slopes may exceed current ADA standards.
Difficult Crossings	• Pershing Boulevard and N. College Drive present obstacles to students walking and biking to school.

Discussion: Accessibility at the immediate school site of Baggs Elementary is excellent (Figure 21). A high-visibility crosswalk increases crossing safety to the school to the property, while wide sidewalks accommodate side-by-side walking. New separated areas for buses and parent drop-off are well-designed and have helped improve safety for students.

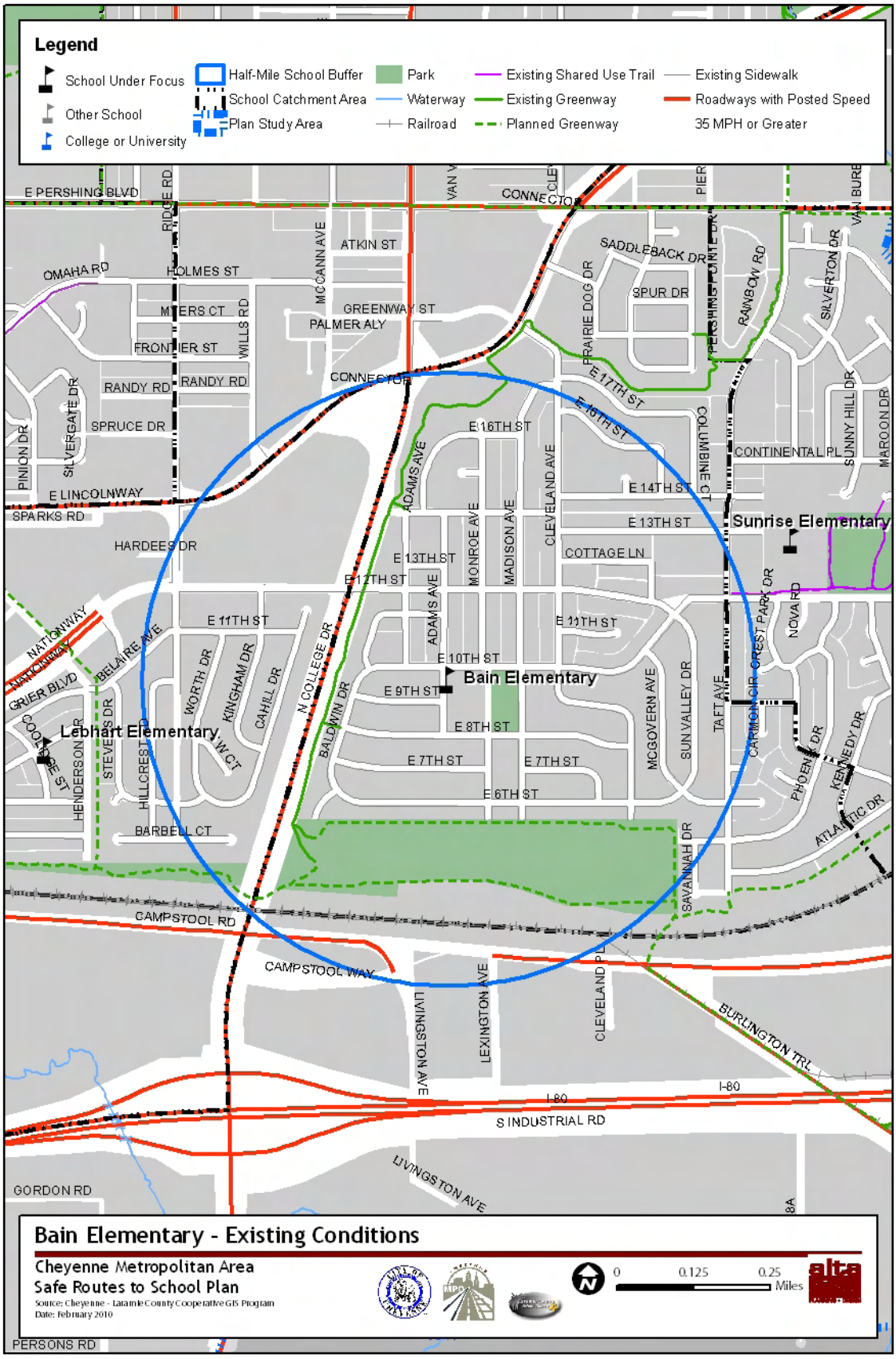
[10] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

However, curb ramps with steep grades and cross slopes throughout the neighborhood create travel challenges for people with physical disabilities. In addition, higher-speed roadways in the area have incomplete or narrow sidewalks.

There are several difficult crossings and major arterial roadways located within close proximity to the school. N. College Drive and Pershing Boulevard are designated walking routes, but the crossing is quite difficult. The Principal reports that students do not often cross Pershing Boulevard or N. College Drive. Students from the mobile homes to the south carpool to school, while younger students going to the childcare center west of Ridge Road use a shuttle.



Figure 21. Baggs Elementary School has a pedestrian friendly environment that includes wide sidewalks, crosswalks, and curb ramps.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Sunrise Elementary
Bain Elementary
Lebhart Elementary
E PERSHING BLVD
OMAHA RD
HOLMES ST
ATKIN ST
GREENWAY ST
PALMER ALY
FRONTIER ST
MYERS CT
RANDY RD
SPRUCE DR
E LINCOLNWAY
SPARKS RD
HARDEES DR
CONNECTOR
SADDLEBACK DR
SPUR DR
PRAIRIE DOG DR
E 17TH ST
E 16TH ST
E 14TH ST
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
CONTINENTAL PL
COTTAGE LN
NOVA RD
GRIER BLVD
BARBELL CT
CAMPSTOOL RD
CAMPSTOOL WAY
S INDUSTRIAL RD
I-80
GORDON RD
PERSONS RD
LIVINGSTON AVE
BURLINGTON TRL
Bain Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Bain Elementary	
Existing Walking Environment	• There is a complete network of sidewalks on streets in the surrounding neighborhood, although not all have sufficient width or accessibility.
Existing Bicycling Environment	• Most residential streets near the school have low automobile speeds and volumes, providing a safe cycling experience.
Reported Crashes[11]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 13, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• The catchment area for Bain Elementary contains predominantly low speed and low volume residential streets. 12th Street and Cleveland are the two streets with speed limits of 30 mph in the catchment area.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the southern side of the school on the playground. The number of spaces may not be sufficient for the number of students who might ride to school.
Drop-off/ Pick-up Creates Congestion	• Student loading and unloading is chaotic as there is no designated pick-up/drop-off zone at this time. Parents utilizing Adams Avenue are not always respectful of other roadway users.
Walkways are Not Accessible	• Walkways in the surrounding neighborhood are complete, but do not meet current ADA width standards. Many corners have older curb ramps that may have a maximum running slope of 8% or greater as well as a side slope that may be 2% or greater. Curb ramps with this running slope and side slope do not meet current ADA standards.
Missing or Insufficient Walkways	• The area around Bain Elementary has a complete sidewalk network, but nearly all sidewalks are less than five feet wide.

[11] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Students traveling to Bain Elementary from the neighborhood south of the school experience fairly comfortable walking and cycling conditions, while students living to the north face greater challenges including sidewalk fragmentation and narrower sidewalks. Although the area has a relatively complete sidewalk network, most sidewalks in the area are less than five feet wide.

Students biking to school are able to use several bicycle lanes on 12th Street (Figure 22) and a shared use path along N College Drive. A number of lower traffic neighborhood streets surrounding the school provide good cycling connections. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.

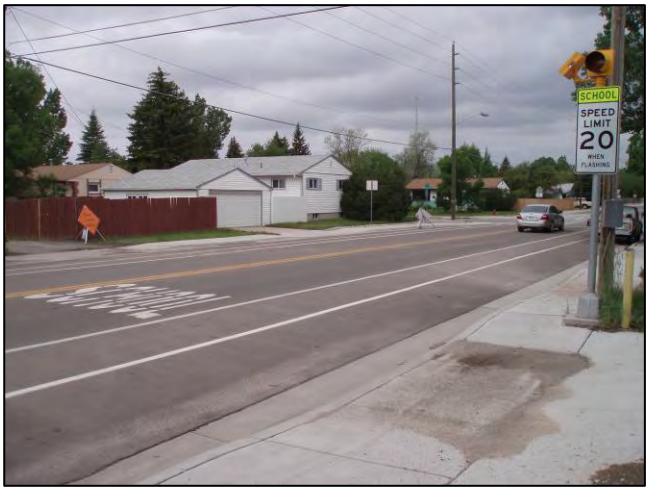
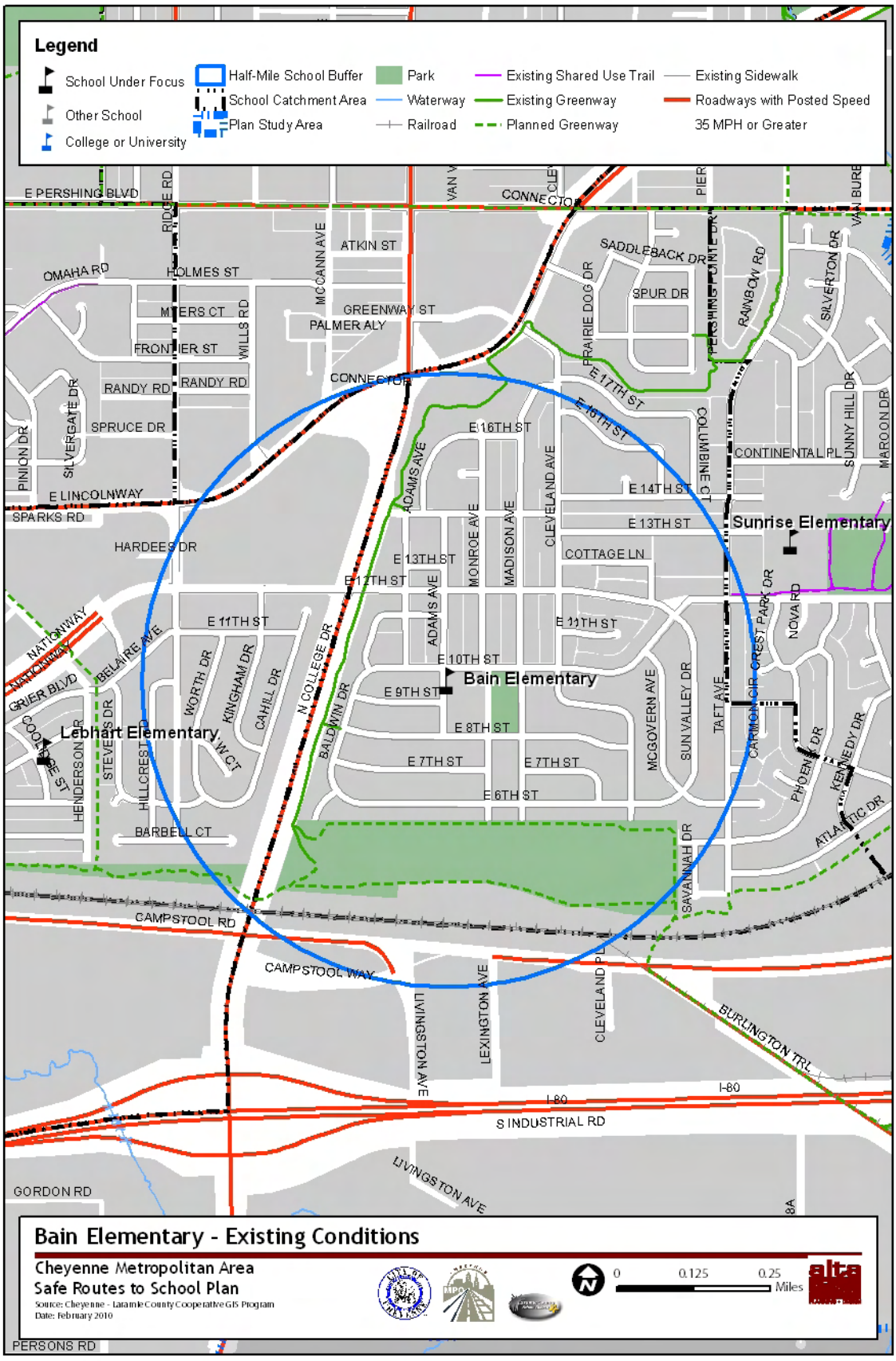


Figure 22. Bike lanes, School Zone warning sings and pavement markings increase the safety of students using 12th Street to access Bain Elementary

The intersection of E Monroe Avenue and 12th Street was improved several years ago with curb extensions and other transportation enhancements, although it is still considered the largest issue for pedestrians and bicyclists accessing school. Strong community support exists for the addition of additional pedestrian enhancements at this location (e.g., flashing pedestrian beacons, or a pedestrian half signal). The area west of the school bounded by 10th Avenue on the north, Baldwin Drive on the west and 6th Street on the south is poorly lit, which can contribute to challenging travel conditions for students on their way to or from school.

Loading zones on the north side of the school are marked with Advance School Warning signs, but signage is not present near the student loading zone or bus loading zone on the west or south sides of the school. Substantial traffic on Adams Avenue is exacerbated by parents not yielding to pedestrians in the area, which could be mitigated by additional signage or advance warning.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Sunrise Elementary
Bain Elementary
Lebhart Elementary
E PERSHING BLVD
OMAHA RD
HOLMES ST
ATKIN ST
GREENWAY ST
PALMER ALY
FRONTIER ST
RANDY RD
SPRUCE DR
E LINCOLNWAY
SPARKS RD
HARDEES DR
CONNECTOR
SADDLEBACK DR
SPUR DR
PRAIRIE DOG DR
E 17TH ST
E 16TH ST
E 14TH ST
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
CONTINENTAL PL
COTTAGE LN
BARBELL CT
CAMPSTOOL RD
CAMPSTOOL WAY
S INDUSTRIAL RD
I-80
GORDON RD
PERSONS RD
0
0.125
0.25
Miles
Bain Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010

Buffalo Ridge Elementary	
Existing Walking Environment	• A relatively complete sidewalk network exists near Buffalo Ridge Elementary, and few major streets impede pedestrian or bicycle travel.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[12]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 7, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Jackson Street and Hilltop Avenue.
Drop-off/ Pick-up Creates Congestion	• As the student load zone is not formally marked at this time, parents tend to drop students off wherever they can find access to the curb.
Missing or Insufficient Walkways	• The area around Buffalo Ridge Elementary has a complete sidewalk network, but nearly all sidewalks are less than five feet wide.

[12] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Students walking and biking to Buffalo Ridge Elementary have a pleasant journey despite the presence of some barriers. Although the area has a relatively complete sidewalk network, most sidewalks in the area are less than five feet wide (Figure 23). Parents have not commented that walking or biking is a major concern during the principal's two years at this school.

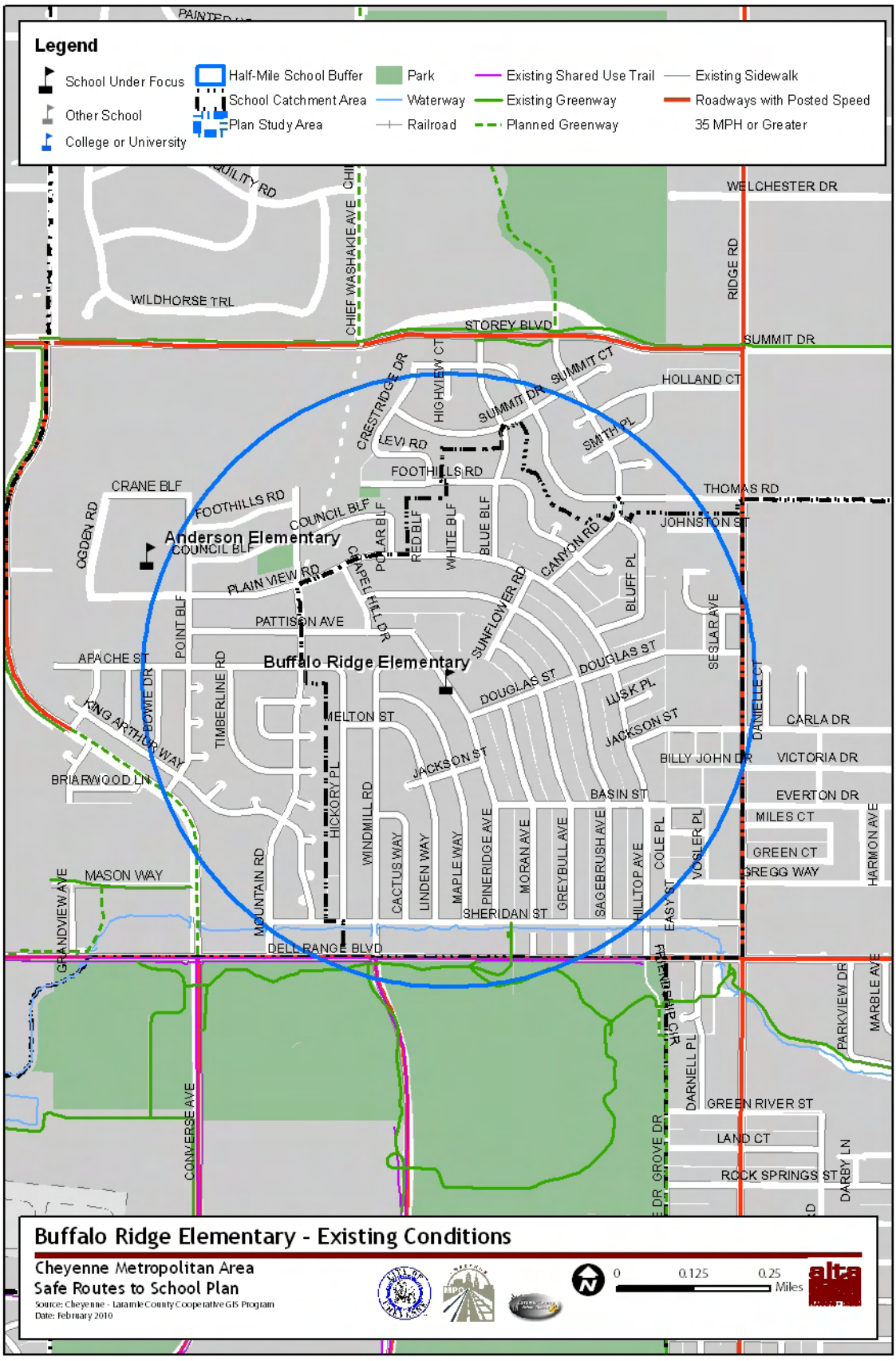


Figure 23. Narrow sidewalks near Buffalo Ridge Elementary

A number of lower traffic neighborhood streets surrounding the school serve as comfortable bicycle connections.

An informal pick-up/drop-off area exists in the alley along the school's northeast side. There is substantial traffic in the school loading area, and bicyclists have to ride in the travel lane to avoid parked cars. A new parking lot is under construction across the alley near the northwest corner of the school, and a new bus turnout is under construction on the southwest corner of the school. No markings currently designate a drop-off or pick-up location, although these modifications will likely alter pick-up and drop-off circulation patterns when the new school session begins.[13] The principal reported that recently, school safety was dramatically improved by the closure of an alley north of the school.

[13] At the time of the Project Team's visit school was not in session, so observation of the affect of these new facilities was not possible.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Anderson Elementary
Buffalo Ridge Elementary
WELCHESTER DR
RIDGE RD
WILDHORSE TRL
CHIEF WASHAKIE AVE
STOREY BLVD
SUMMIT DR
HOLLAND CT
SUMMIT CT
HIGHVIEW CT
CRESTRIDGE DR
LEVI RD
SMITH PL
FOOTHILLS RD
CRANE BLF
OGDEN RD
COUNCIL BLF
THOMAS RD
JOHNSTON ST
CANYON RD
PLAIN VIEW RD
CHAPEL HILL DR
POLAR BLF
RED BLF
WHITE BLF
BLUE BLF
BLUFF PL
SUNFLOWER RD
SESLAR AVE
POINT BLF
PATTISON AVE
APACHE ST
BOWIE DR
TIMBERLINE RD
KING ARTHUR WAY
MELTON ST
DOUGLAS ST
LUSK PL
JACKSON ST
DANIELLE CT
CARLA DR
BILLY JOHN DR
VICTORIA DR
BRIARWOOD LN
HICKORY PL
WINDMILL RD
BASIN ST
EVERTON DR
MILES CT
GREEN CT
GREGG WAY
HARMON AVE
MASON WAY
MOUNTAIN RD
CACTUS WAY
LINDEN WAY
MAPLE WAY
PINERIDGE AVE
MORAN AVE
GREYBULL AVE
SAGEBRUSH AVE
HILLTOP AVE
COLE PL
VOGLER PL
EASY ST
SHERIDAN ST
GRANDVIEW AVE
DELL RANGE BLVD
CONVERSE AVE
PARKVIEW DR
MARBLE AVE
DARNELL PL
GREEN RIVER ST
LAND CT
ROCK SPRINGS ST
DARBY LN
GROVE DR
Buffalo Ridge Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Carey Junior High School[14]	
Existing Walking Environment	• A relatively complete sidewalk network exists near Carey Junior High.
Existing Bicycling Environment	• A relatively large proportion of students bicycle to school. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[15]	• Crashes within one-half mile of the school: 2 • Crashes within two miles of the school: 27 • Crashes within the school catchment boundary: 13
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Pershing Boulevard and Ridge Road have posted speed limits of 35 mph. • Converse Avenue, Windmill Road, N. College Drive, Dell Range Boulevard, and Storey Boulevard have posted speed limits of 40 mph. as well as portions of Nationway and Lincolnway. • U.S. 30 has a posted speed limit of 55 mph.
Major Expressways or Arterials Present	• Roads that create potential north/south crossing barriers include Pershing Boulevard, U.S. 30, Nationway, Lincolnway, Dell Range Boulevard and Storey Boulevard. • Roads that create potential east/west crossing barriers include Converse Avenue, Windmill Road, Ridge Road, and N. College Drive.
Missing or Insufficient Walkways	• The area around Carey Junior High has a complete sidewalk network, but most of the sidewalks are less than five feet wide.
Missing or Insufficient Bicycle Parking	• Covered 'wheel bender' bicycle parking exists on the north and east side of the school.
Difficult Crossings	• Pershing Boulevard presents a difficult, high-speed crossing with the exception of the pedestrian signal directly adjacent to the school.

[14] A significant portion of this school's catchment area is outside the Study Area of this Safe Routes to School Plan.
[15] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

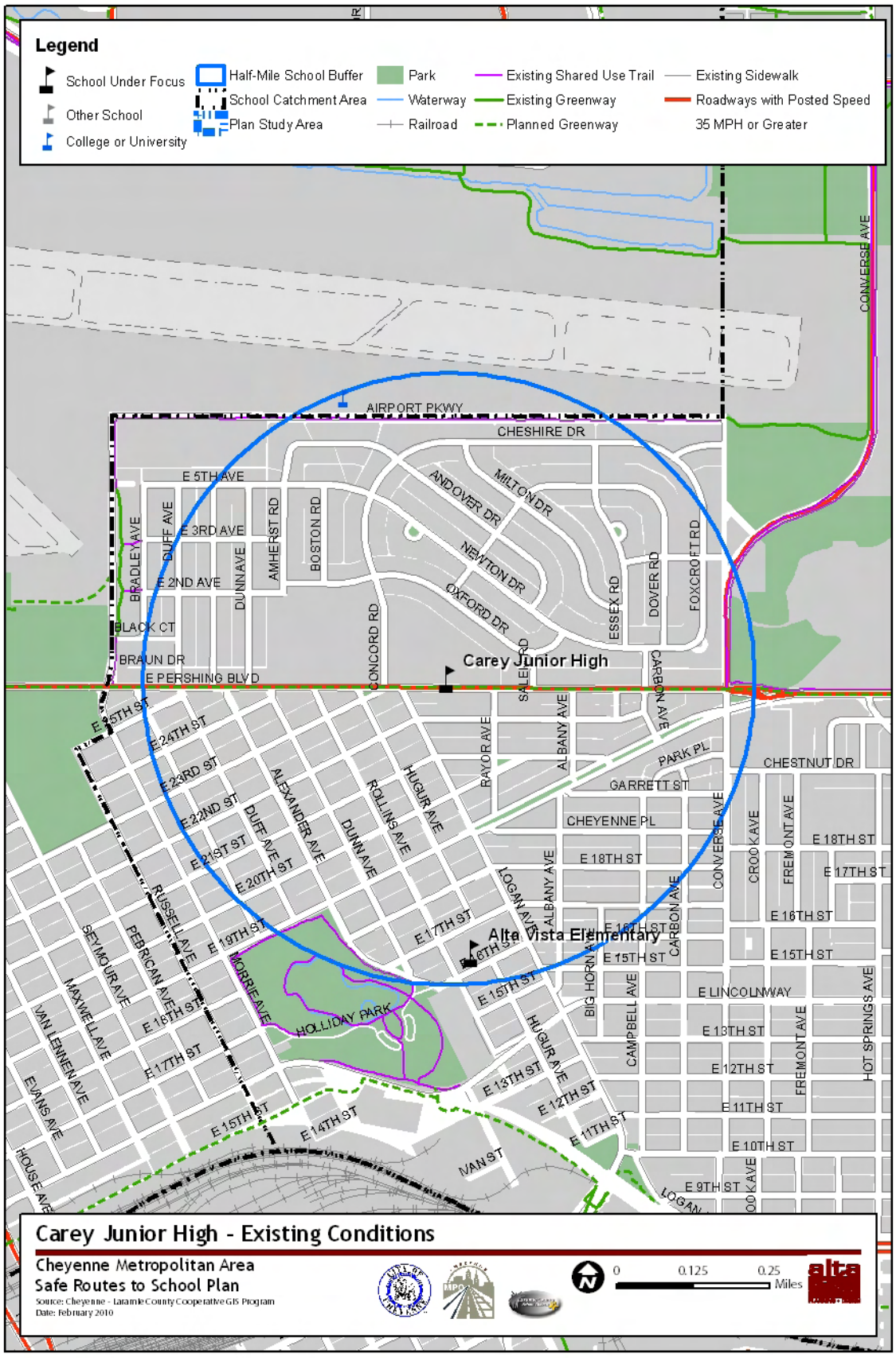
Discussion: Students walking or bicycling to Carey Junior High face significant challenges from street crossings. Pershing Boulevard is a high-speed road directly adjacent to the school (Figure 24). Students frequently travel along Pershing Boulevard to after-school activities to the east, near Prairie View Golf Course. Students also frequently cross Pershing Boulevard at uncontrolled locations where there are gaps in traffic, creating potential pedestrian/motor vehicle conflicts.



Figure 24. Warning signs, pavement markings and pedestrian actuated signals aid pedestrian crossings of Pershing Boulevard

Dangerous intersections on Pershing are at Concord Road and Rayor Avenue; signalization at the latter may be less effective due to the infrequency of the signal change. A flashing "strobe" light may improve the crossing.

The bicycle parking is covered to protect students' bicycles from the weather, but it is categorized as 'wheel bender' and can cause damage to bicycles. Low speed, low volume roadways near the school provide good connections for students riding to school.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
AIRPORT PKWY
CHESHIRE DR
E 5TH AVE
E 3RD AVE
E 2ND AVE
BLACK CT
BRAUN DR
E PERSHING BLVD
ANDOVER DR
MILTON DR
NEWTON DR
OXFORD DR
BRADLEY AVE
DUFF AVE
DUNN AVE
AMHERST RD
BOSTON RD
CONCORD RD
SALEM RD
ESSEX RD
DOVER RD
FOXCROFT RD
CARBON AVE
CONVERSE AVE
Carey Junior High
E 25TH ST
E 24TH ST
E 23RD ST
E 22ND ST
E 21ST ST
E 20TH ST
E 19TH ST
E 18TH ST
E 17TH ST
E 16TH ST
E 15TH ST
E 14TH ST
ALEXANDER AVE
ROLLINS AVE
HUGUR AVE
RAYOR AVE
ALBANY AVE
LOGAN AVE
PARK PL
GARRETT ST
CHEYENNE PL
CHESTNUT DR
CROOK AVE
FREMONT AVE
E 17TH ST
E 16TH ST
E 15TH ST
E LINCOLNWAY
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
HOT SPRINGS AVE
BIG HORN AVE
CAMPBELL AVE
RUSSELL AVE
PEBRICAN AVE
SEYMOUR AVE
MAXWELL AVE
VAN LENNEN AVE
EVANS AVE
HOUSE AVE
MORRIE AVE
HOLLIDAY PARK
IVAN ST
Alta Vista Elementary
Carey Junior High - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Cole Elementary	
Existing Walking Environment	• While several high-speed roadways limit connectivity to Cole Elementary, a pedestrian overpass provides safe access over I-80. Sidewalks are provided on most streets throughout the area.
Existing Bicycling Environment	• Many neighborhood streets near the school with lower traffic speeds and volumes also create suitable cycling connections
Reported Crashes[16]	• Crashes within one-half mile of the school: 4 • Crashes within two miles of the school: 26, including 1 fatality • Crashes within the school catchment boundary: 4 • The reported fatality crash occurred along I-80, in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• The school catchment area includes a number of residences that require students to walk or bike more than a half-mile to reach school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include 7th Street, Deming Drive, 9th Street, 5th Street, and Central Avenue. • Southwest Drive has a posted speed limit of 40 mph.
Missing or Insufficient Bicycle Parking	• Bicycle parking is difficult to find or does not exist.
Walkways are Not Accessible	• Walkways in the immediate vicinity of the school are five feet wide, but most sidewalks in the surrounding area do not meet current ADA width standards. Many curbs have older ramps that may not meet current ADA standards.
Drop-off/ Pick-up Creates Congestion	• Traffic through the student loading zone is typically fast and creates congestion due to vehicle volumes. Parents typically stop in the middle of the roadway, which exacerbates congestion.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but there are still missing links. Many of the sidewalks are less than five feet wide.
Difficult Crossings	• There are many difficult crossings in the area including I-80 and nearby UP rail yards.

[16] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: There are sidewalks available on most of the streets in the area. However, the network is incomplete and most sidewalks are narrow, less than five feet wide due to the period during which they were constructed. In many places, sidewalks are in poor condition and damaged curbs are common.

Students walking or bicycling to Cole Elementary face challenges due to the high-speed roads and difficult crossings that characterize the area around the school. Although few students attending Cole Elementary live outside these barriers, the school is isolated by the rail yard to the north, Greeley Highway to the east, and I-80 to the south, though a pedestrian overpass improves accessibility (Figure 25).

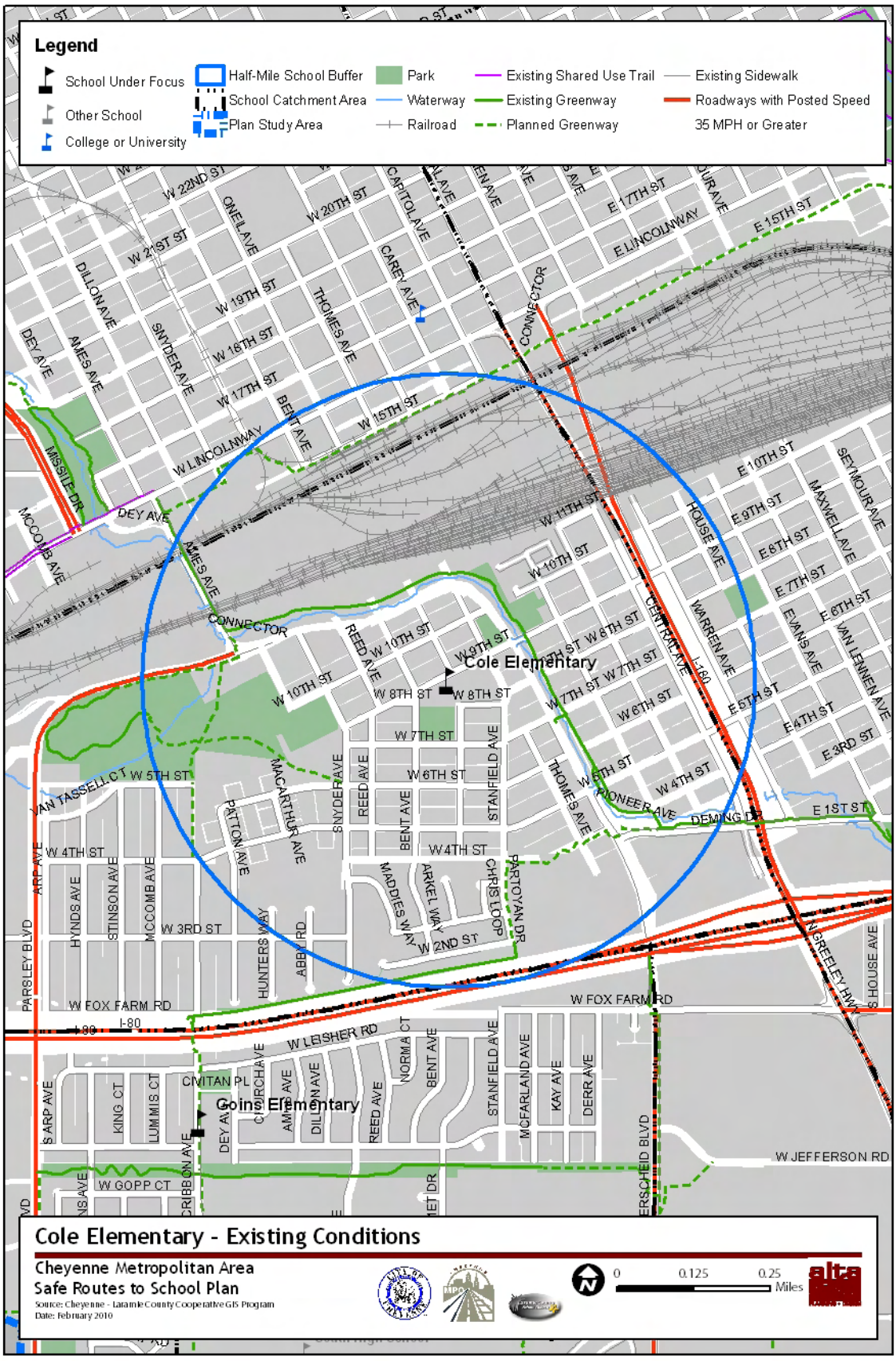


Figure 25. Pedestrian overpass of I-180 improves pedestrian accessibility to Cole Elementary

Ongoing construction at Deming Drive and 9th Street complicates pedestrian access, and students are encouraged to avoid the intersection. Two students were in a crash on 9th Street in spring of 2009.

Many neighborhood streets near the school with lower traffic speeds and volumes create suitable cycling connections. Children riding to school face an increased potential of bicycle damage or loss due to the lack of formal bicycle parking racks. It is likely this school will be relocated in the next five to ten years.

Officially, student loading occurs on the south side of the school, where automobile speeds, congestion, and stopping in the center of the road create unsafe conditions for pedestrians and bicyclists. Parents drive in both directions on the one-way alley south of the school, creating further congestion. Another challenge is the informal drop-off occurring on the north side of the school on 9th Street and O'Neil Avenue. Children unloading on O'Neil Avenue and the north side of 9th Street are exposed to higher-speed traffic. Students walk across both sides of O'Neil Avenue due to the lack of crossing guard or marked crosswalk. Crosswalks or crossing guards are not present on this side of the school. Advance School Warning signs are posted at the crosswalk at Thomas Avenue, but are missing from the school loading zone at Bent Avenue.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Cole Elementary
Goins Elementary
W 22ND ST
W 21ST ST
W 20TH ST
W 19TH ST
W 18TH ST
W 17TH ST
W 15TH ST
W 11TH ST
W 10TH ST
W 9TH ST
W 8TH ST
W 7TH ST
W 6TH ST
W 5TH ST
W 4TH ST
W 3RD ST
W 2ND ST
E 17TH ST
E 15TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
E 5TH ST
E 4TH ST
E 3RD ST
E 1ST ST
E LINCOLNWAY
W LINCOLNWAY
DEY AVE
AMES AVE
SNYDER AVE
DILLON AVE
ONEIL AVE
CAPITOL AVE
CAREY AVE
THOMES AVE
BENT AVE
REED AVE
STANFIELD AVE
MACARTHUR AVE
PATTON AVE
ARKEL WAY
CHRIS LOOP
PARTOYAN DR
MADDIES WAY
HUNTERS WAY
ABBY RD
VAN TASSELL CT
ARP AVE
HYNDS AVE
STINSON AVE
MCCOMB AVE
PARSLEY BLVD
MISSILE DR
CONNECTOR
CENTRAL AVE
HOUSE AVE
WARREN AVE
MAXWELL AVE
SEYMOUR AVE
EVANS AVE
VAN LENNEN AVE
S HOUSE AVE
N GREELEY HWY
PIONEER AVE
DEMING DR
I-80
W FOX FARM RD
W LEISHER RD
CIVITAN PL
KING CT
LUMMIS CT
CIRCH AVE
NORMA CT
KAY AVE
DERR AVE
MCFARLAND AVE
W JEFFERSON RD
W GOPP CT
Cole Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Davis Elementary	
Existing Walking Environment	• Most streets in the area of Davis Elementary have complete sidewalks. Crosswalks at Montclair Drive and Yellowstone Road assist crossings.
Existing Bicycling Environment	• Residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[17]	• Crashes within one-half mile of the school: 2 • Crashes within two miles of the school: 2 • Crashes within the school catchment boundary: 2
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Vandehei Avenue, Storey Boulevard, Western Hills Boulevard, and Education Drive. • Yellowstone Road has a posted speed limit of 40 mph.
Major Expressways or Arterials Present	• Yellowstone Road creates an east/west crossing barrier separating residential land west of this roadway from the school.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but there are still missing links. Many of the sidewalks are less than five feet wide.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the east side of the school, near the parking lot.
Drop-off/ Pick-up Creates Congestion	• Parents do not always utilize the designated student load zone on the south side of Davis Elementary and instead park and wait for students in the no parking area along Montclair Drive.
Difficult Crossings	• Yellowstone Road is an obstacle for students walking to the school from the west.

[17] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Sidewalks exist throughout the area, although several of them are narrow and some sidewalk connections are missing. The City Engineer is considering moving the crosswalk along the west side of the school from its current mid-block locations to align with the intersection of Yellowstone Road and Montclair Drive.



Figure 26. Pavement Markings and Advance School Warning Signs on Montclair Drive

Yellowstone Road, an arterial with a posted speed limit of 40 mph, bisects the school's catchment area and creates significant access challenges. Crosswalks near the school include pedestrian actuated signals in some locations. Some of these crosswalks are currently faded and difficult to see, although the crossing at Yellowstone Road is in good condition and frequently used. Many students who live west of Davis Elementary are driven to the Quest parking lot south of the school and walk the remaining distance to the school.

Neighborhood streets with lower speed and traffic volumes provide suitable bicycle connections. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.

School zone pavement markings, signs and high visibility crosswalks are located on Montclair Drive (Figure 26), but Advance School Warning signs are not present near the student loading zone on the south side of the school. Children living east of the school have an easier time reaching the school by foot or bicycle as they do not have to cross Yellowstone Road.

The school Principal and teachers are trying to establish no parking zones on Montclair Drive, or to prohibit U-turns on Yellowstone Road. The Principal would also like to use in-street signage to supplement crossing guards on Montclair Drive. A crosswalk at Gardenia Drive and Bomar Drive would benefit students northeast of the school.

Deming Elementary (Grades K-2) and Miller Elementary (Grades 3-6)	
Existing Walking Environment	• Sidewalks are mostly present near the schools, except to the southeast.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[18]	• Crashes within one-half mile of the schools: 1 • Crashes within two miles of the schools: 26 • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along I-25, in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with speed limits of 30 mph are barriers for younger children. Roads include Snyder Avenue, Pioneer Avenue, Carey Avenue, Central Avenue, Warren Avenue, and Evans Avenue. • Pershing Boulevard has a speed limit of 35 mph.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the southeast side of Deming Elementary near the front entrance and on the east side of Miller Elementary in the playground. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• Walkways are complete, but do not meet ADA width standards. Many corners have curb ramps that may not meet current ADA standards due to their age.
Missing or Insufficient Walkways	• Pershing Boulevard creates a north/south crossing barrier for Miller Elementary students, separating neighborhoods from the school.
Difficult Crossings	• Students traveling to Miller Elementary from the south must cross Pershing Boulevard, which is five lanes wide with higher traffic speeds.

[18] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Sidewalks are mostly present near Deming and Miller Elementary schools. Several of these are less than five feet wide due to the period during which they were constructed (Figure 28). This condition is present primarily in the blocks near the school and west of Evans Street.



Figure 28. Narrow sidewalks without curb ramps characterize the area around Deming Elementary

Many neighborhood streets with lower speeds and volumes provide good bicycle connections to both schools. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.

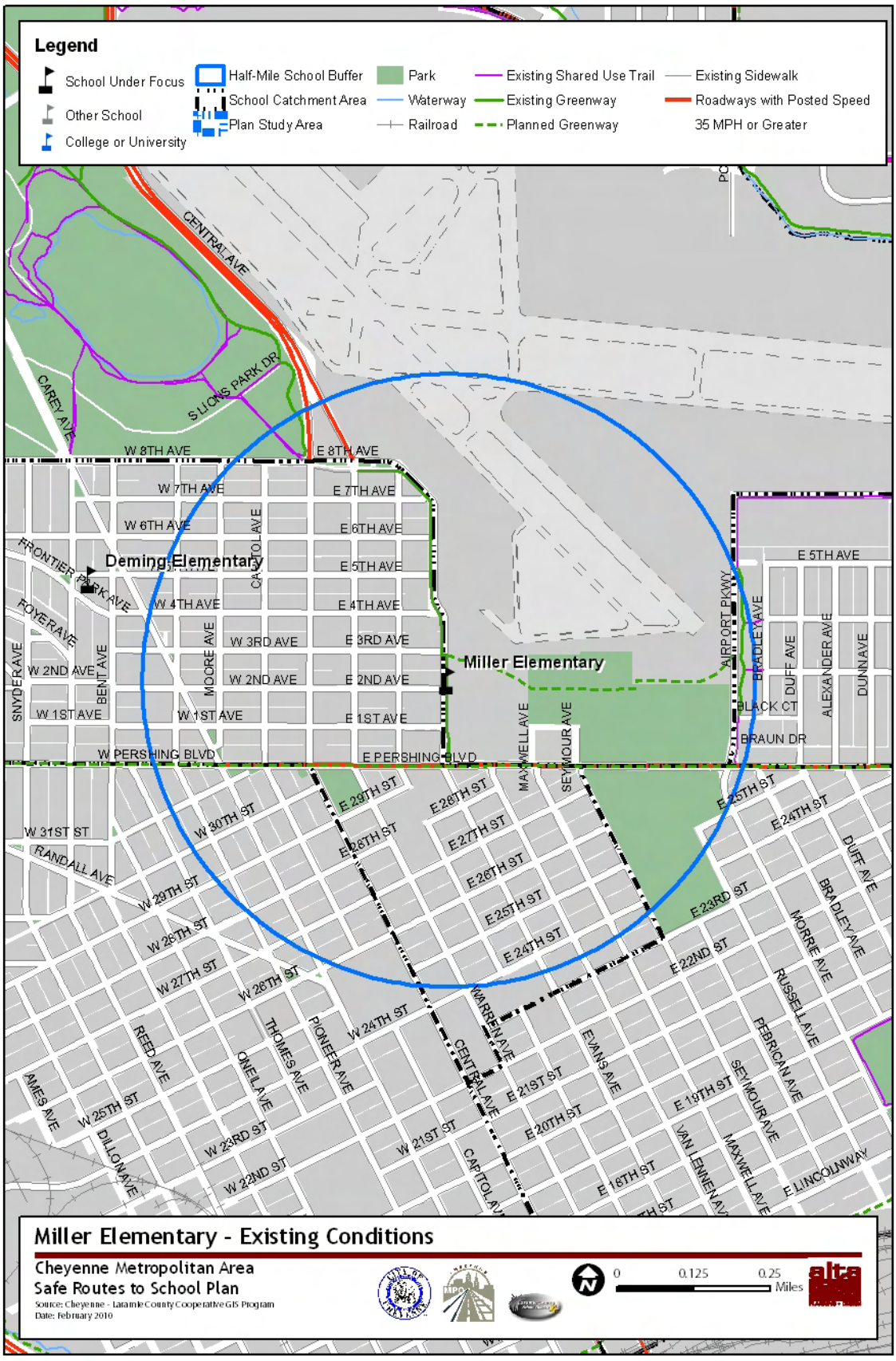
For students walking and biking from the southeast, high vehicle speeds on Pershing Boulevard present a crossing barrier. Median islands at West 5th Avenue and Carey Avenue as well as West 5th Avenue and Frontier Park Avenue may create confusing crossings and increase the likelihood of pedestrian/motor vehicle conflicts. Advance School Warning signs are not present in existing student and bus loading zones.



Figure 27. A school crossing near Miller Elementary School has a stop line for southbound vehicles, enhancing pedestrian safety and comfort

Students still frequently cross at a former crosswalk on the north leg of 2nd Avenue and Evans Avenue, rather than going one block north to the crosswalk at 3rd Avenue. Crosswalks near Deming Elementary generally include advance stop lines. While stop bars are optional, they can enhance the effectiveness of crosswalks by providing additional visual cues to motorists (see Figure 27). Warning zone signs posted near Miller Elementary advise motorists approaching from the south that they are entering a school zone. School zone pavement markings were not observed by the Project Team.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
HOBBS AVE
KENNEDY RD
LIONS PARK DR
STINNETT RD
CATTLE DR
COWBOY WALK
CAREY AVE
VOLUNTEER AVE
CENTRAL AVE
HYNDS BLVD
S LIONS PARK DR
W 8TH AVE
E 8TH AVE
W 7TH AVE
E 7TH AVE
W 6TH AVE
E 6TH AVE
FRONTIER PARK AVE
Deming Elementary
CAPITOL AVE
E 5TH AVE
COUNTRY CLUB AVE
FOYER AVE
W 4TH AVE
E 4TH AVE
W 3RD AVE
E 3RD AVE
MCCOMB AVE
W 2ND AVE
SNYDER AVE
BENT AVE
MOORE AVE
E 2ND AVE
Miller Elementary
W 1ST AVE
E 1ST AVE
W PERSHING BLVD
E PERSHING BLVD
MAXWELL AVE
W 32ND ST
DILLON AVE
W 31ST ST
E 29TH ST
E 28TH ST
W 30TH ST
E 26TH ST
E 27TH ST
RANDALL AVE
Pioneer Park Elementary
CRIBBON AVE
AMES ST
RICHARDSON CT
DEY AVE
W 29TH ST
THOMES AVE
CENTRAL AVE
WARREN AVE
HOUSE AVE
TALBOT CT
W 26TH ST
W 27TH ST
PIONEER AVE
E 24TH ST
DODGE CT
E 23RD ST
W 28TH ST
REED AVE
W 25TH ST
E 22ND ST
W 24TH ST
I-25
Deming Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
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Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Deming Elementary
Miller Elementary
CENTRAL AVE
CAREY AVE
S LIONS PARK DR
W 8TH AVE
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W 7TH AVE
E 7TH AVE
W 6TH AVE
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E 5TH AVE
W 4TH AVE
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W 3RD AVE
E 3RD AVE
W 2ND AVE
E 2ND AVE
W 1ST AVE
E 1ST AVE
W PERSHING BLVD
E PERSHING BLVD
FRONTIER PARK AVE
FOYER AVE
SNYDER AVE
BENT AVE
MOORE AVE
CAPITOL AVE
AIRPORT PKWY
BRADLEY AVE
DUFF AVE
ALEXANDER AVE
DUNN AVE
BLACK CT
BRAUN DR
MAXWELL AVE
SEYMOUR AVE
W 31ST ST
RANDALL AVE
W 30TH ST
W 29TH ST
W 28TH ST
W 27TH ST
W 26TH ST
W 25TH ST
W 24TH ST
W 23RD ST
W 22ND ST
W 21ST ST
E 29TH ST
E 28TH ST
E 27TH ST
E 26TH ST
E 25TH ST
E 24TH ST
E 23RD ST
E 22ND ST
E 21ST ST
E 20TH ST
E 19TH ST
E 16TH ST
E LINCOLNWAY
REED AVE
AMES AVE
DILLON AVE
THOMES AVE
ONEIL AVE
PIONEER AVE
WARREN AVE
EVANS AVE
REBECAN AVE
RUSSELL AVE
MORRIE AVE
VAN LENNEN AVE
Miller Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
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0.125
0.25
Miles

Dildine Elementary	
Existing Walking Environment	• Most streets at Dildine Elementary have complete sidewalks with curb ramps at intersections. Dell Range has a flashing School Zone beacon.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[19]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 3, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph, such as Van Buren Avenue, may act as barriers to younger children. • Dell Range Boulevard has a posted speed limit of 45 mph.
Major Expressways or Arterials Present	• Dell Range Boulevard creates a north/south crossing barrier separating residential land north of the roadway from the school. • Van Buren Avenue creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the southeast side of the school on the playground. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• Most walkways in the area do not meet current ADA width standards. Curb ramps generally meet existing standards for running slope and side slope, but poor maintenance challenges access in many locations.
Drop-off/ Pick-up Creates Congestion	• Students are typically picked up in the horseshoe area north of the parking lot rather than the designated area to the along Polk Avenue.
Missing or Insufficient Walkways	• The sidewalk network in the area is largely incomplete, and most existing sidewalks are less than five feet wide.
Difficult Crossings	• Dell Range Boulevard presents a barrier for students traveling to the school from the north. • Van Buren Avenue presents a barrier for students traveling to the school from the east.

[19] Crash data between 2005 and 2007 only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

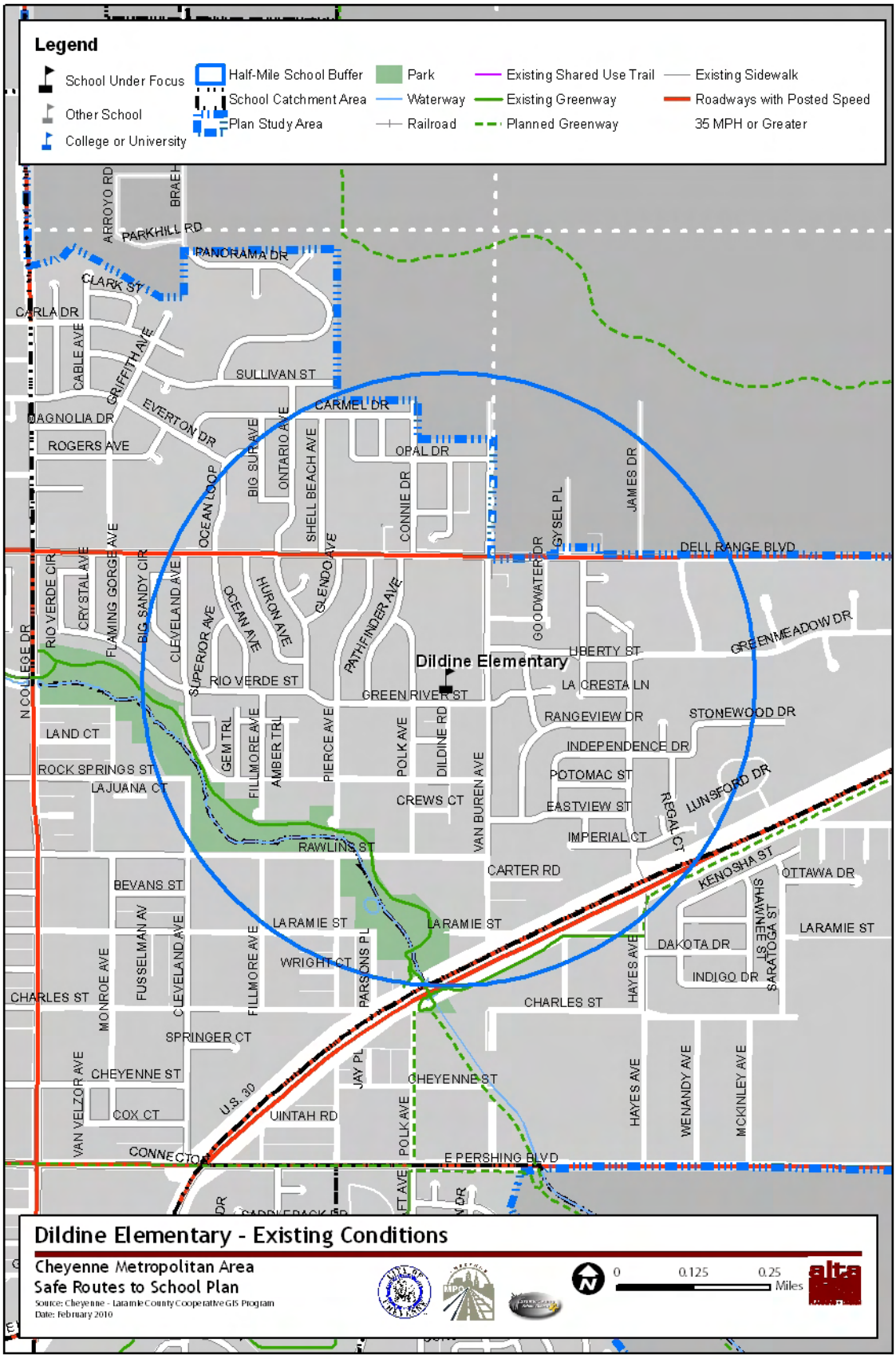
Discussion: Students living east of Van Buren Avenue and north of Dell Range Boulevard may face significant challenges from high-speed roads and difficult crossings that characterize the area. Many sidewalks in the area are narrow, and some sidewalk connections are missing. Curb ramps exist in many locations but lack of maintenance can render them unusable or create hazardous travel conditions (Figure 29).

Students bicycling to school can use the greenway located to the southwest of the school. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.



Figure 29. Some curb ramps near Dildine Elementary School are in poor condition

The school's large student body (about 600 students) creates significant pick-up and drop-off congestion and competition for sidewalk space in the designated loading zones. A flashing school light is provided on Dell Range Boulevard, but not on Van Buren Avenue, resulting in faster speeds immediately by the school. In addition, the pick-up and drop-off area can be chaotic, due to students running across the parking lot to access the student loading area. School buses queue on Dildine Road south of the school, which lacks sidewalks and other pedestrian treatments. In the future, this congestion will likely increase, as the school serves the growing semi-rural area to the northeast and most of these students do not live within walking distance of the school.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Dildine Elementary
ARROYO RD
BRAE H
PARKHILL RD
PANORAMA DR
CLARK ST
CARLA DR
CABLE AVE
GRIFFITH AVE
SULLIVAN ST
MAGNOLIA DR
EVERTON DR
ROGERS AVE
CARMEL DR
OPAL DR
OCEAN LOOP
BIG SUR AVE
ONTARIO AVE
SHELL BEACH AVE
CONNIE DR
JAMES DR
GYSEL PL
DELL RANGE BLVD
GOODWATER DR
N COLLEGE DR
RIO VERDE CIR
CRYSTAL AVE
FLAMING GORGE AVE
BIG SANDY CIR
CLEVELAND AVE
SUPERIOR AVE
OCEAN AVE
HURON AVE
GLENDO AVE
PATHFINDER AVE
RIO VERDE ST
GREEN RIVER ST
LIBERTY ST
LA CRESTA LN
GREENMEADOW DR
RANGEVIEW DR
STONEWOOD DR
INDEPENDENCE DR
POTOMAC ST
EASTVIEW ST
IMPERIAL CT
REGAL CT
LUNSFORD DR
LAND CT
ROCK SPRINGS ST
LAJUANA CT
GEM TRL
FILLMORE AVE
AMBER TRL
PIERCE AVE
POLK AVE
DILDINE RD
VAN BUREN AVE
CREWS CT
RAWLINS ST
CARTER RD
KENOSHA ST
OTTAWA DR
SHAWNEE ST
SARATOGA ST
BEVANS ST
FUSSELMAN AV
CLEVELAND AVE
LARAMIE ST
WRIGHT CT
PARSONS PL
FILLMORE AVE
DAKOTA DR
INDIGO DR
HAYES AVE
CHARLES ST
MONROE AVE
SPRINGER CT
CHEYENNE ST
JAY PL
U.S. 30
UINTAH RD
COX CT
VAN VELZOR AVE
CONNECTOR
E PERSHING BLVD
WENANDY AVE
MCKINLEY AVE
Dildine Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Fairview Elementary (Grades K-2) and Lebhart Elementary (Grades 3-6)	
Existing Walking Environment	• The sidewalk network near Fairview Elementary is generally good, and access to the school grounds is adequate.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[20]	• Crashes within one-half mile of the schools: 5 • Crashes within two miles of the schools: 24, including 1 fatality • Crashes within the school catchment boundary: 5 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Roads with speed limits of 30 mph act as barriers to younger children. These roads include Hot Springs Avenue, Ridge Road north of 12th Street, Nationway east of Mulberry Avenue and west of Crook Avenue. • Lincolnway has a posted speed limit of 40 mph.
Major Expressways or Arterials Present	• Nationway/Lincolnway creates a north/south crossing barrier. Children are bussed between the schools to minimize challenging roadway crossings.
Missing or Insufficient Bicycle Parking	• 'Wheel bender' bicycle parking is provided at Fairview Elementary on the eastern side of the school and on the southern side of Lebhart Elementary, both on the playground. The number of spaces may not be sufficient for the number of students who might ride to the schools.
Walkways are Not Accessible	• Walkways in the surrounding neighborhood are complete, but do not meet current ADA width standards.
Drop-off/ Pick-up Creates Congestion	• Many parents pick students up in the bus loading zone rather than the student loading zone. Double parking in the student load zone increases the number of potential conflicts.
Missing or Insufficient Walkways	• The sidewalk network in the area has some missing links and many of the sidewalks near the school are less than five feet wide. Sidewalks are old and crumbling in many locations.
No Safe Place to Ride a Bicycle	• Nationway acts as a barrier to bicycle and pedestrian trips.

[20] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: The sidewalk network around Lebhart Elementary is generally good, and access to the Fairview school grounds is adequate (Figure 30). However, sidewalks are often narrow and the network is incomplete. Limited connectivity leads to long routes. Where sidewalks exist, many are deteriorating, producing uneven walkways.

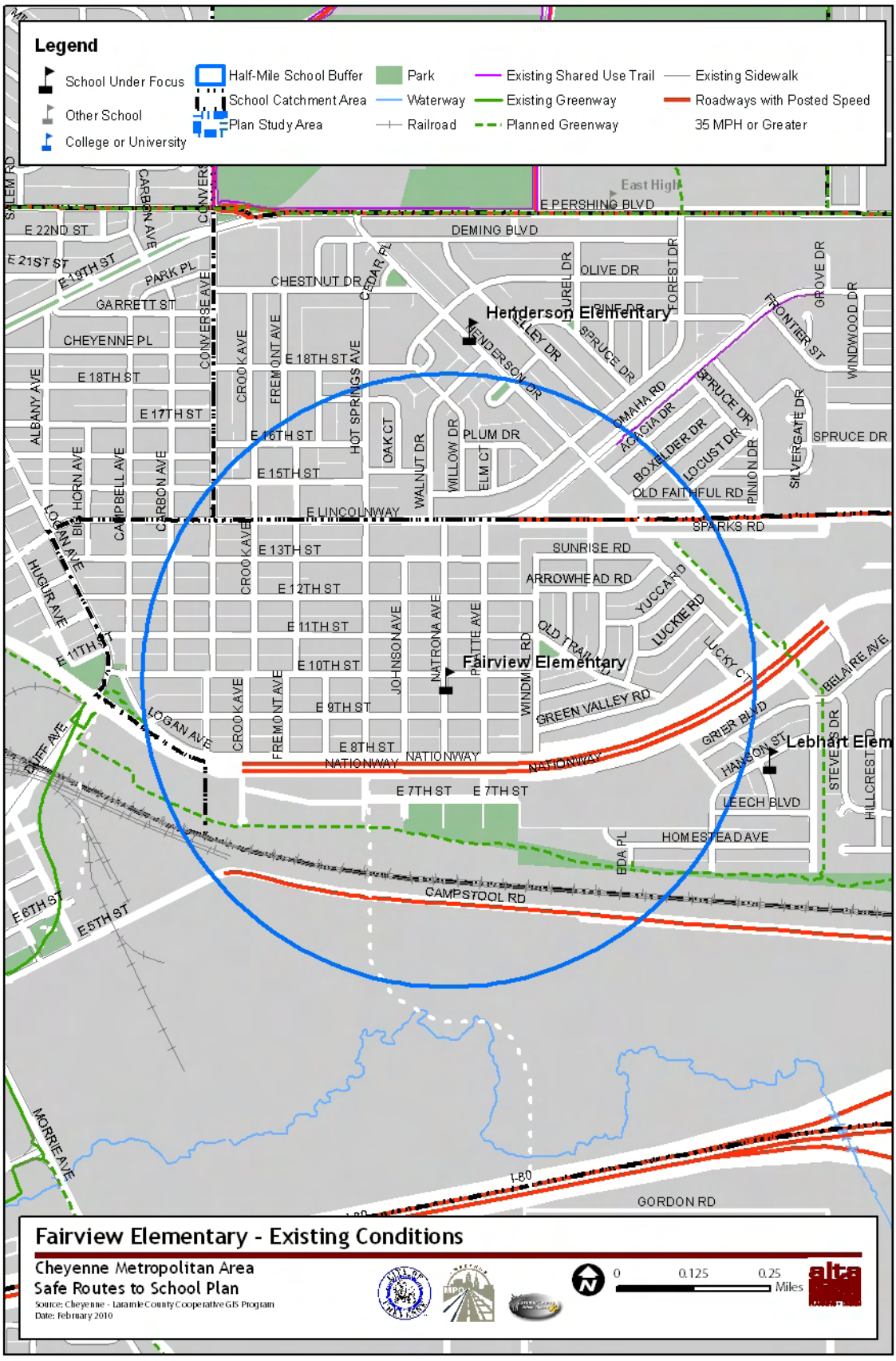


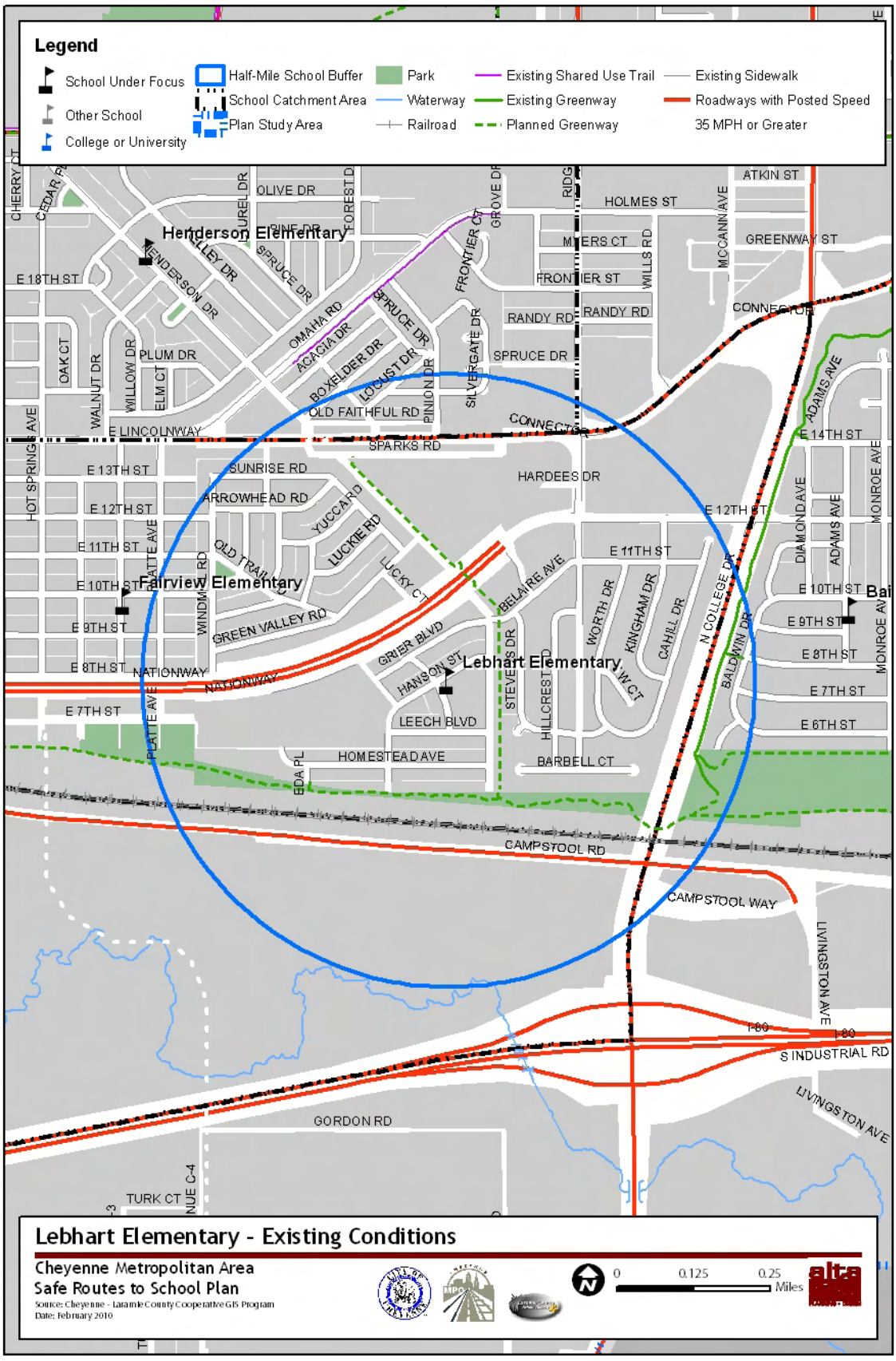
Figure 30. Access to the school grounds at Fairview Elementary is generally adequate

Difficult crossings are minimized as students are bused across Nationaway to the school appropriate for their grade.

Neighborhood streets around the school are suitable for bicycle riding. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.

In the afternoon, parents park in the bus loading zone or double-park, requiring students to cross traffic. Parents have lobbied to have a crosswalk painted across Henderson at the bridge that crosses the drainage. The crosswalk on the west side of Lebhart Elementary is signed with Advance School Warning signs, while the student loading and bus zones lack signage.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Henderson Elementary
Fairview Elementary
Lebhart Elem
E PERSHING BLVD
DEMING BLVD
E 22ND ST
E 21ST ST
E 19TH ST
PARK PL
GARRETT ST
CHEYENNE PL
E 18TH ST
E 17TH ST
E 16TH ST
E 15TH ST
E LINCOLNWAY
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
E 5TH ST
CHESTNUT DR
OLIVE DR
PINE DR
SPRUCE DR
PLUM DR
OLD FAITHFUL RD
SPARKS RD
SUNRISE RD
ARROWHEAD RD
GREEN VALLEY RD
NATIONWAY
LEECH BLVD
HOMESTEAD AVE
CAMPSTOOL RD
GORDON RD
I-80
LOGAN AVE
CROOK AVE
FREMONT AVE
CONVERSE AVE
CARBON AVE
CAMPBELL AVE
HORN AVE
ALBANY AVE
HUGUR AVE
CLIFF AVE
MORRIE AVE
HOT SPRINGS AVE
WALNUT DR
WILLOW DR
OAK CT
ELM CT
JOHNSON AVE
NATRONA AVE
PIONEER AVE
WINDMILL RD
OLD TRAIL RD
YUCCA RD
LUCKIE RD
LUCKY CT
GRIER BLVD
HANSON ST
BELAIRE AVE
STEVENS DR
HILLCREST RD
EDA PL
OMAHA RD
ACACIA DR
BOXELDER DR
LOCUST DR
PINION DR
SILVERGATE DR
FRONTIER ST
GROVE DR
WINDWOOD DR
LAUREL DR
FOREST DR
HENDERSON DR
VALLEY DR
Fairview Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
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Miles


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Henderson Elementary
Fairview Elementary
Lebhart Elementary
E 18TH ST
E 14TH ST
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
E LINCOLNWAY
NATIONWAY
CONNECTOR
SPARKS RD
SUNRISE RD
ARROWHEAD RD
HARDEES DR
GREEN VALLEY RD
GRIER BLVD
LEECH BLVD
HOMESTEAD AVE
BARBELL CT
CAMPSTOOL RD
CAMPSTOOL WAY
S INDUSTRIAL RD
GORDON RD
TURK CT
LIVINGSTON AVE
I-80
HOLMES ST
ATKIN ST
GREENWAY ST
FRONTIER ST
RANDY RD
SPRUCE DR
OLIVE DR
PINE DR
OMAHA RD
ACACIA DR
BOXELDER DR
LOCUST DR
OLD FAITHFUL RD
PLUM DR
OAK CT
WALNUT DR
WILLOW DR
ELM CT
HOT SPRINGS AVE
PLATTE AVE
WINDMILL RD
OLD TRAIL RD
YUCCA RD
LUCKIE RD
LUCKY CT
BELAIRE AVE
WORTH DR
KINGHAM DR
CAHILL DR
N COLLEGE DR
BALDWIN DR
DIAMOND AVE
ADAMS AVE
MONROE AVE
HILLCREST DR
STEVENS DR
HANSON ST
EDA PL
MCCANN AVE
WILLS RD
SILVERGATE DR
PINION DR
FRONTIER CT
GROVE DR
LAUREL DR
FOREST DR
CHERRY CT
CEDAR PL
HENDERSON DR
KELLEY DR
Lebhart Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
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Date: February 2010
0
0.125
0.25
Miles

Freedom Elementary[21]	
Existing Walking Environment	• The sidewalks around the immediate vicinity of the school meet current ADA standards.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students. Wave racks are provided for students bicycling to school.
Reported Crashes[22]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 7, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along I-25, in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• Many students travel from Warren Air Force Base, immediately north of the school. The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Missing or Insufficient Walkways	• Walkways are not present along Happy Jack Road.
No Safe Place to Ride a Bicycle	• Happy Jack Road carries a great deal of freight and bus traffic. This roadway creates challenging traveling conditions for cyclists of all ages.

[21] This analysis is limited to the publicly accessible areas south of the Warren Air Force Base Boundary.
[22] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

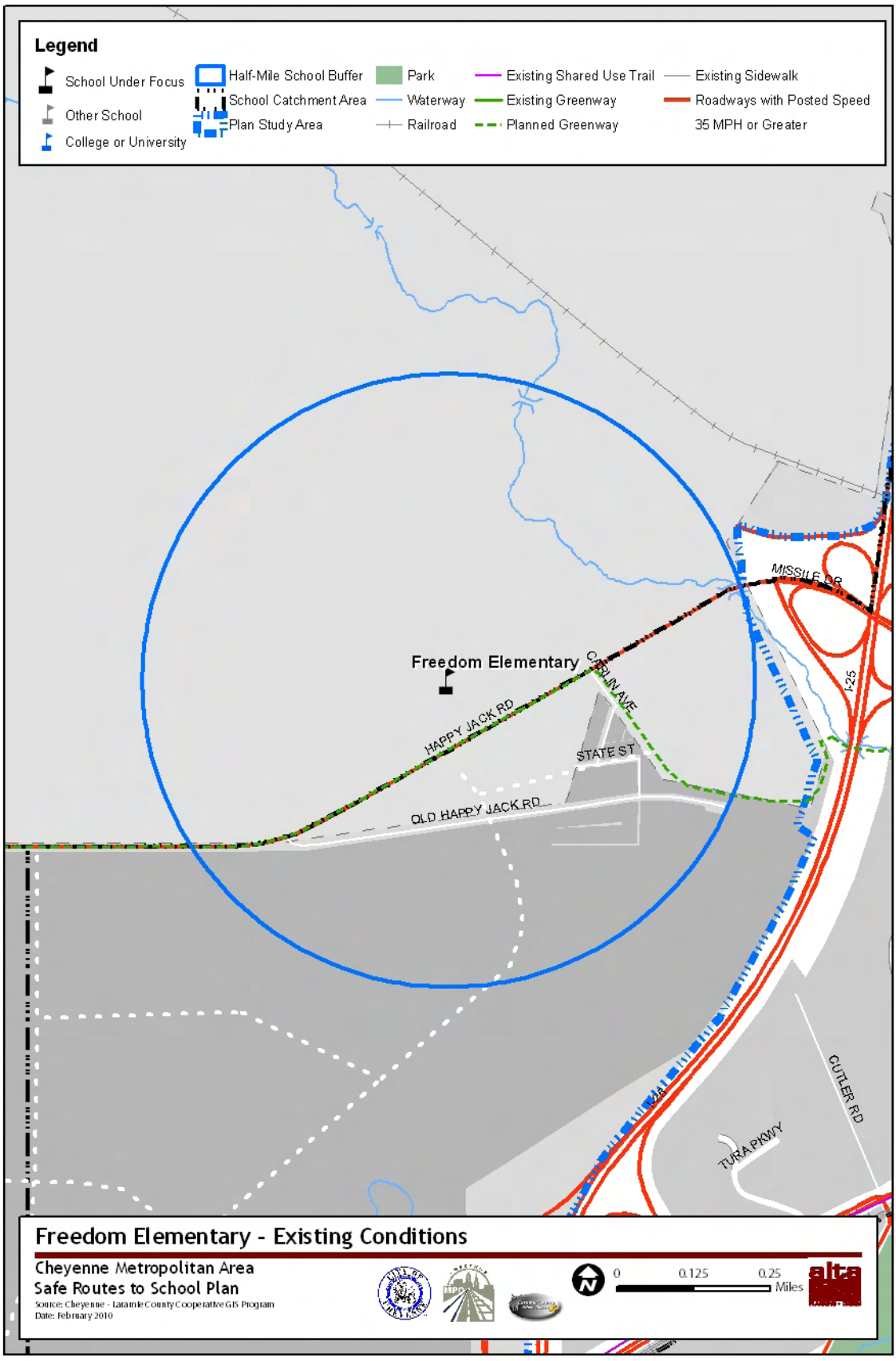
Discussion: Traffic safety on Warren Air Force Base is excellent, and the sidewalks around the immediate vicinity of the school meet current ADA standards (Figure 31).



Figure 31. Freedom Elementary has an accessible pedestrian campus and high quality bicycle parking

Students from Carlin Heights, northwest of Freedom Elementary, have existing sidewalks to walk on, although the gate into the base requires students to wait for access. However, high-speed roads and difficult crossings characterize the area outside the base, and few students arrive from off base by foot or car.

The City of Cheyenne does not have jurisdiction over roadways or pedestrian facilities on the Air Force Base – the Civil Engineering Squadron addresses any infrastructure deficiencies on the base. Happy Jack Road and Old Happy Jack Road carry heavy truck traffic due to the location of the nearby City Shop and Laramie County School District Bus Barn. There are no marked crossings within the base, and double-parking by the school entrance can be an issue. Students that do bicycle to school will find adequate wave-rack style parking.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Freedom Elementary
HAPPY JACK RD
OLD HAPPY JACK RD
CARLIN AVE
STATE ST
MISSILE DR
I-25
CUTLER RD
TURA PKWY
Freedom Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Goins Elementary	
Existing Walking Environment	• The sidewalk network in the area is complete.
Existing Bicycling Environment	• Residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[23]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 16, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along I-80, in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Cribbon Avenue, Jefferson Road, Snyder Avenue, Leisher Road, Fox Farm Road, and Allison Road. • Parsley Boulevard has a posted speed limit of 40 mph.
Major Expressways or Arterials Present	• Parsley Boulevard creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the east side of the school. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• Walkways in the immediate vicinity of the school are five feet wide, but most sidewalks in the surrounding area do not meet current ADA width standards. Many curb ramps in the school's immediate vicinity may not meet current standards due to the period during which they were constructed.
Missing or Insufficient Walkways	• The sidewalk network in the area has some missing links and several of the sidewalks near the school are less than five feet wide.

[23] Crash data between 2005 and 2007 only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: The sidewalk network in the area of Goins Elementary is complete, but most nearby sidewalks are less than five feet wide and walking routes are restricted by limited connectivity in the street network. There are local roadways available for students traveling to school by bicycle, as well as several Greenways and shared use paths. Students that do ride to school face the increased potential of bicycle damage if they use the designated bicycle parking.

Advance School Warning signs are posted near crosswalks on Cribbon Avenue in both directions and northbound only on Dey Avenue. The school bus and student loading zones lack advance warning signage (Figure 32).

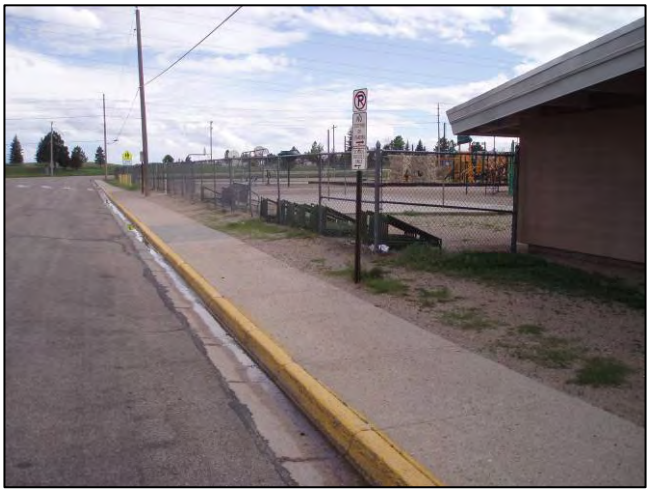
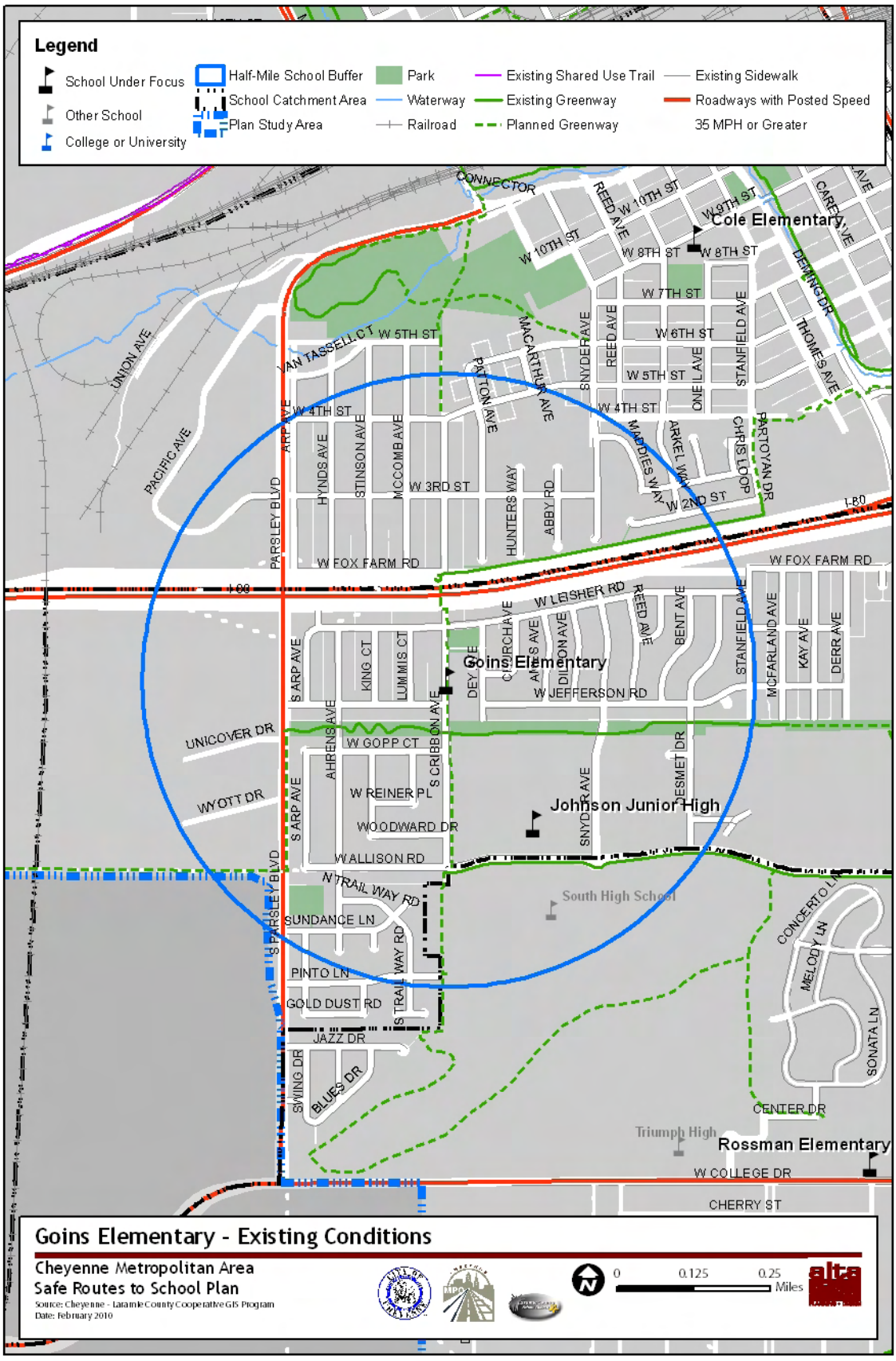


Figure 32: The school bus and student load zones at Goins Elementary lack Advance Warning signage

Goins Elementary will expand by a building in 2011 will and construct a new schoolyard in place of Civitan Park. The new school is expected to alleviate safety concerns on campus, where a student was confronted last year in one of the mobile classrooms by a McCormick student. Parents have expressed desire for a flashing light on Cribbon Avenue (and potentially Dey Avenue), where traffic is heavy and fast and the presence of crossing guards is sporadic. Teachers keep an eye on the playground and bus areas during pick-up and drop-off.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Cole Elementary
Goins Elementary
Johnson Junior High
South High School
Triumph High
Rossman Elementary
W 10TH ST
W 9TH ST
W 8TH ST
W 7TH ST
W 6TH ST
W 5TH ST
W 4TH ST
W 3RD ST
W 2ND ST
W FOX FARM RD
W LEISHER RD
W JEFFERSON RD
W GOPP CT
W REINER PL
WOODWARD DR
W ALLISON RD
N TRAIL WAY RD
S TRAIL WAY RD
SUNDANCE LN
PINTO LN
GOLD DUST RD
JAZZ DR
SWING DR
BLUES DR
CONCERTO LN
MELODY LN
SONATA LN
CENTER DR
W COLLEGE DR
CHERRY ST
CONNECTOR
REED AVE
CARET AVE
DEMING DR
THOMAS AVE
STANFIELD AVE
SNYDER AVE
PATTON AVE
MACARTHUR AVE
ONEIL AVE
UNION AVE
VAN TASSELL CT
PACIFIC AVE
ARP AVE
HYNDS AVE
STINSON AVE
MCCOMB AVE
PARSLEY BLVD
HUNTERS WAY
ABBY RD
MARDIES WAY
ARKEL WAY
CHRIS LOOP
PATRIOT DR
I-80
CHURCH AVE
ANDS AVE
DILLON AVE
BENT AVE
MCFARLAND AVE
KAY AVE
DERR AVE
DEY AVE
KING CT
LUMMIS CT
S CRIBBON AVE
AHRENS AVE
UNICOVER DR
WYOTT DR
DESMET DR
SNYDER AVE
Goins Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Hebard Elementary	
Existing Walking Environment	• The majority of streets around Hebard Elementary have sidewalks. However, the sidewalk network south of the school is fragmented and some walkways are narrow.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[24]	• Crashes within one-half mile of the school: 3 • Crashes within two miles of the school: 27 • Crashes within the school catchment boundary: 0
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Morrie Avenue, Duff Avenue, 9th Street, 5th Street and 1st Street. • Campstool Road has a posted speed limit of 40 mph.
Missing or Insufficient Bicycle Parking	• Bicycle parking is either difficult to find or does not exist.
Walkways are Not Accessible	• Walkways in the immediate vicinity of the school are five feet wide, but most sidewalks in the surrounding area do not meet current ADA width standards. Most curb ramps in the school's immediate vicinity do meet current ADA standards for running slope or side slope.
Missing or Insufficient Walkways	• Approximately half of the sidewalks in the area are less than five feet wide, and there are several missing links in the sidewalk network.
Difficult Crossings	• Fifth Street and Morrie Avenue are challenging to cross.

[24] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Sidewalks in the area vary in width, and some sidewalk connections are missing. Sidewalks north of the school are generally five feet wide, while some sidewalks south of the school are narrower (Figure 33). This is due in part to the period when they were constructed.

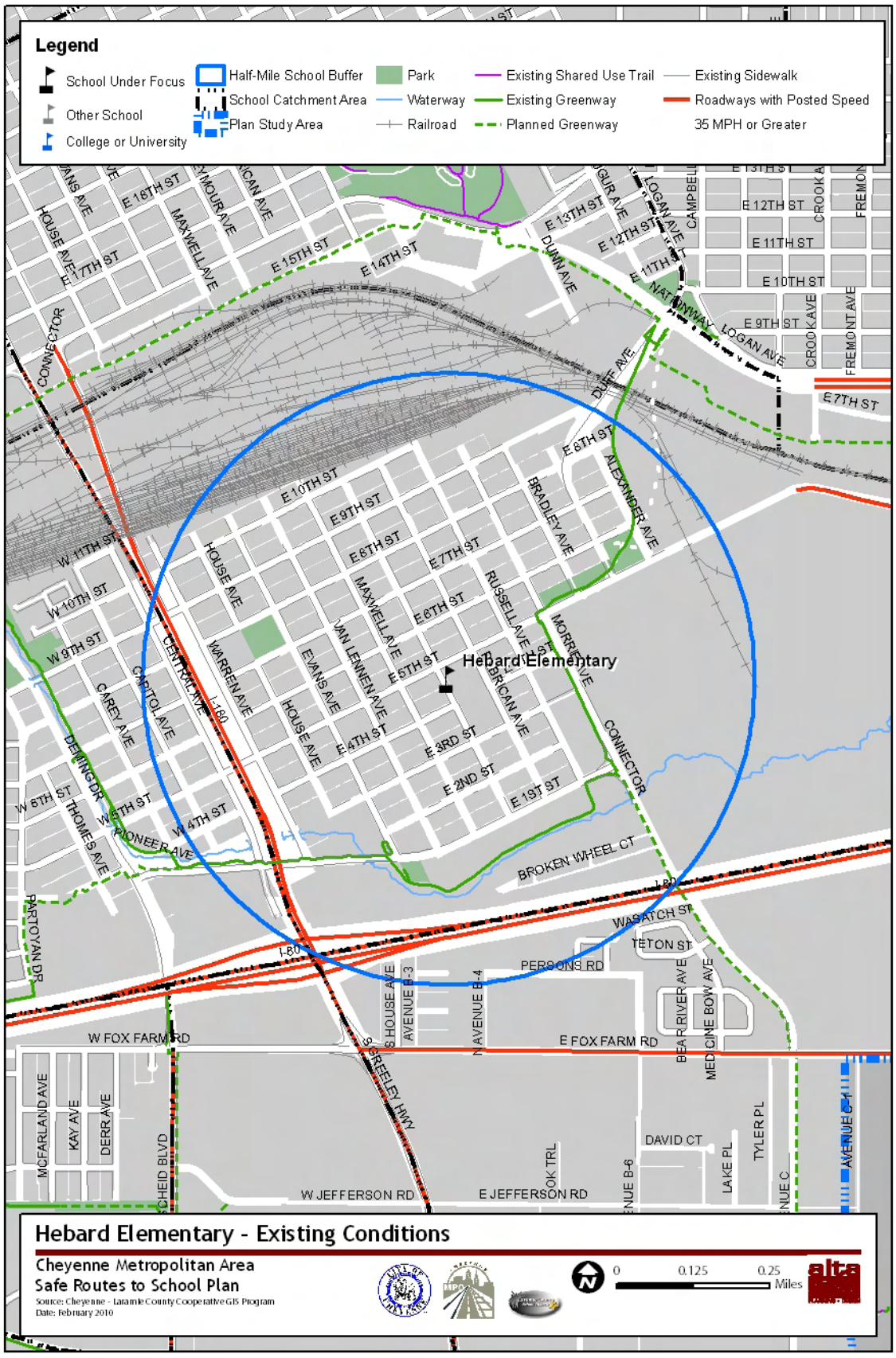
While several difficult crossings are nearby, they are outside of the bounds of the schools' catchment area, and students do not need to cross I-80, Greeley Highway, Campstool Road, or the rail yard to access the school. The major barriers to walking and bicycling to Hebard Elementary are 5th Street and Morrie Avenue.

Fifth Street is very busy, and the crossing is particularly hazardous. Morrie Avenue is also quite busy, although the Norris Viaduct Greenway opening may help mitigate unsafe conditions.

Advance School Warning signs are posted on 3rd Street, though the student and bus loading zones abutting the roadway lack this signage.



Figure 33. An incomplete sidewalk network can increase the challenge of walking to school


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Hebard Elementary
E 16TH ST
E 15TH ST
E 14TH ST
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 7TH ST
E 6TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
E 6TH ST
E 5TH ST
E 4TH ST
E 3RD ST
E 2ND ST
E 1ST ST
W 11TH ST
W 10TH ST
W 9TH ST
W 8TH ST
W 6TH ST
W 4TH ST
HOUSE AVE
MAXWELL AVE
WARREN AVE
CENTRAL AVE
CAPITOL AVE
CAREY AVE
DENNIGER
THOMAS AVE
PIONEER AVE
EVANS AVE
VAN LENNEN AVE
BRADLEY AVE
ALEXANDER AVE
RUSSELL AVE
MORRIS AVE
BRICAN AVE
CONNECTOR
DUNN AVE
DUFF AVE
LOGAN AVE
NATIONAL WAY
CROOK AVE
FREMONT AVE
CAMPBELL
I-80
BROKEN WHEEL CT
WASATCH ST
TETON ST
PERSONS RD
W FOX FARM RD
E FOX FARM RD
S HOUSE AVE
AVENUE B-3
N AVENUE B-4
BEAR RIVER AVE
MEDICINE BOW AVE
S GREELEY HWY
MCFARLAND AVE
KAY AVE
DERR AVE
DAVID CT
TYLER PL
LAKE PL
W JEFFERSON RD
E JEFFERSON RD
Hebard Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Henderson Elementary	
Existing Walking Environment	• Sidewalks in the area are narrow, but the network is fairly complete.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience.
Reported Crashes[25]	• Crashes within one-half mile of the school: 5 • Crashes within two miles of the school: 22, including 1 fatality • Crashes within the school catchment boundary: 2 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Hot Springs Avenue, Henderson Drive, Omaha Road, and Chestnut Drive. Students who live northwest of the school may also have to travel on Pershing (speed limit of 35 mph) or 19th Street (speed limit of 30 mph).
Missing or Insufficient Walkways	• The sidewalk network is relatively complete, but most sidewalks in the area are less than five feet wide. The sidewalk is completely missing from the west side of Kelly Drive between Spruce Drive and Olive Drive on the northeast corner of the school property.
Difficult Crossings	• Pershing Boulevard is a challenging crossing for students biking or walking to the school from the north and south.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the northeast side of the school near the parking lot. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• Walkways in the immediate vicinity of the school are five feet wide, but most sidewalks in the surrounding area do not meet current ADA width standards. Many corners have curb ramps that may not meet current ADA standards due to their age.

[25] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

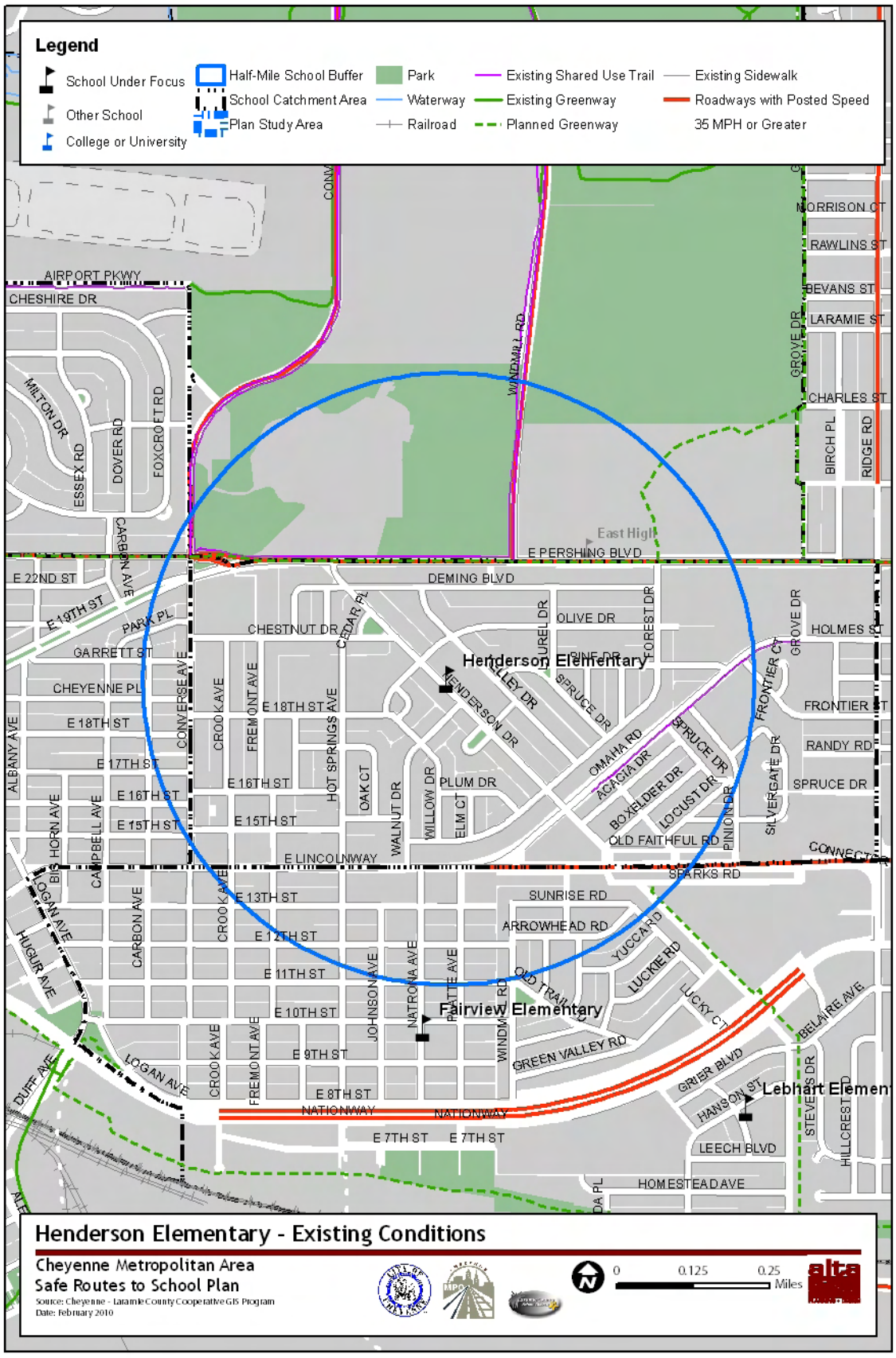
Discussion: Students walking to Henderson Elementary experience a generally good pedestrian environment, but they may face several challenges. The sidewalk network is fairly complete but some sidewalks are narrow.

While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles. Low speed and low volume neighborhood streets that are suitable for bicycling provide connections to the school.

Sidewalks in the area are narrow, and some sidewalk connections are missing. The mid-block crossing of Henderson Drive at the school's main entrance does not have curb ramps (Figure 34). Advance School Warning signs are missing from roadside bus and student loading zones.



Figure 34. The mid-block crossing of Henderson Avenue lacks curb ramps, creating accessibility challenges for pedestrians with physical disabilities


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Henderson Elementary
Fairview Elementary
Lebhart Elemen
AIRPORT PKWY
CHESHIRE DR
E PERSHING BLVD
DEMING BLVD
E 22ND ST
E 19TH ST
GARRETT ST
CHEYENNE PL
E 18TH ST
E 17TH ST
E 16TH ST
E 15TH ST
E LINCOLNWAY
E 13TH ST
E 12TH ST
E 11TH ST
E 10TH ST
E 9TH ST
E 8TH ST
E 7TH ST
NATIONWAY
CHESTNUT DR
OLIVE DR
PINE DR
PLUM DR
SUNRISE RD
ARROWHEAD RD
SPARKS RD
OLD FAITHFUL RD
GREEN VALLEY RD
LEECH BLVD
HOMESTEAD AVE
HOLMES ST
FRONTIER ST
RANDY RD
SPRUCE DR
CONNECTOR
NORRISON CT
RAWLINS ST
BEVANS ST
LARAMIE ST
CHARLES ST
GROVE DR
WINDMILL RD
CARBON AVE
DOVER RD
FOXCROFT RD
ESSEX RD
MILTON DR
BIRCH PL
RIDGE RD
PARK PL
CEDAR PL
LAUREL DR
FOREST DR
HENDERSON DR
VALLEY DR
FRONTIER CT
OMAHA RD
ACACIA DR
BOXELDER DR
LOCUST DR
PINION DR
SILVERGATE DR
ALBANY AVE
CONVERSE AVE
CROOK AVE
FREMONT AVE
HOT SPRINGS AVE
OAK CT
WALNUT DR
WILLOW DR
ELM CT
CAMPBELL AVE
BIG HORN AVE
LOGAN AVE
HUGUR AVE
DUFF AVE
JOHNSON AVE
NATRONA AVE
PATTEE AVE
OLD TRAIL RD
YUCCA RD
LUCKIE RD
LUCKY CT
BELAIRE AVE
GRIER BLVD
HANSON ST
STEVENS DR
HILLCREST RD
Henderson Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Hobbs Elementary	
Existing Walking Environment	• The sidewalk network in the area is generally complete, although most sidewalks are less than five feet wide.
Existing Bicycling Environment	• The Weaver Road Greenway passes near the school. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[26]	• Crashes within one-half mile of the school: 1 • Crashes within two miles of the school: 4 • Crashes within the school catchment boundary: 0
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. High-speed streets within a mile of Hobbs Elementary include Carlson Street, Weaver Road, and Seminoe Road. • Storey Boulevard has a posted speed limit of 40 mph. • Powderhouse Road has a posted speed limit of 35 mph. • Four Mile Road has a posted speed limit of 50 mph.
Major Expressways or Arterials Present	• Storey Boulevard creates a north/south crossing barrier separating residential land north of this roadway from the school. • Powderhouse Road creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Walkways	• The sidewalk network in the area has some missing links and many of the sidewalks near the school are less than five feet wide.
Walkways are Not Accessible	• Narrow sidewalks do not meet current ADA width standards.
Drop-off/ Pick-up Creates Congestion	• The volume of parents dropping students off creates conflict. Only 200 of the 500 students are bussed. The heavy vehicle traffic increases the risk of collisions.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the southwest side of the schoolyard. The number of spaces may not be sufficient for the number of students who might ride to school.
Difficult Crossings	• Storey Boulevard creates a barrier for students walking and biking to school.

[26] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Several high-speed roads restrict bicycle and pedestrian access to Hobbs Elementary. The main entrance to the school is on the middle side of the building on the north side. The sidewalk network in the area is incomplete and most sidewalks are less than five feet wide (Figure 35). Of the 500 students who attend the school, 200 are bussed.

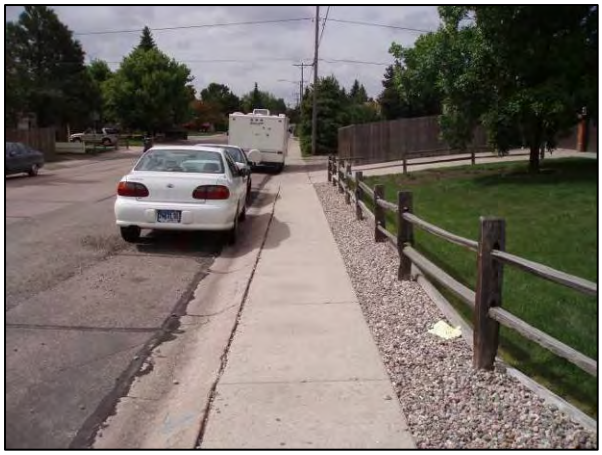
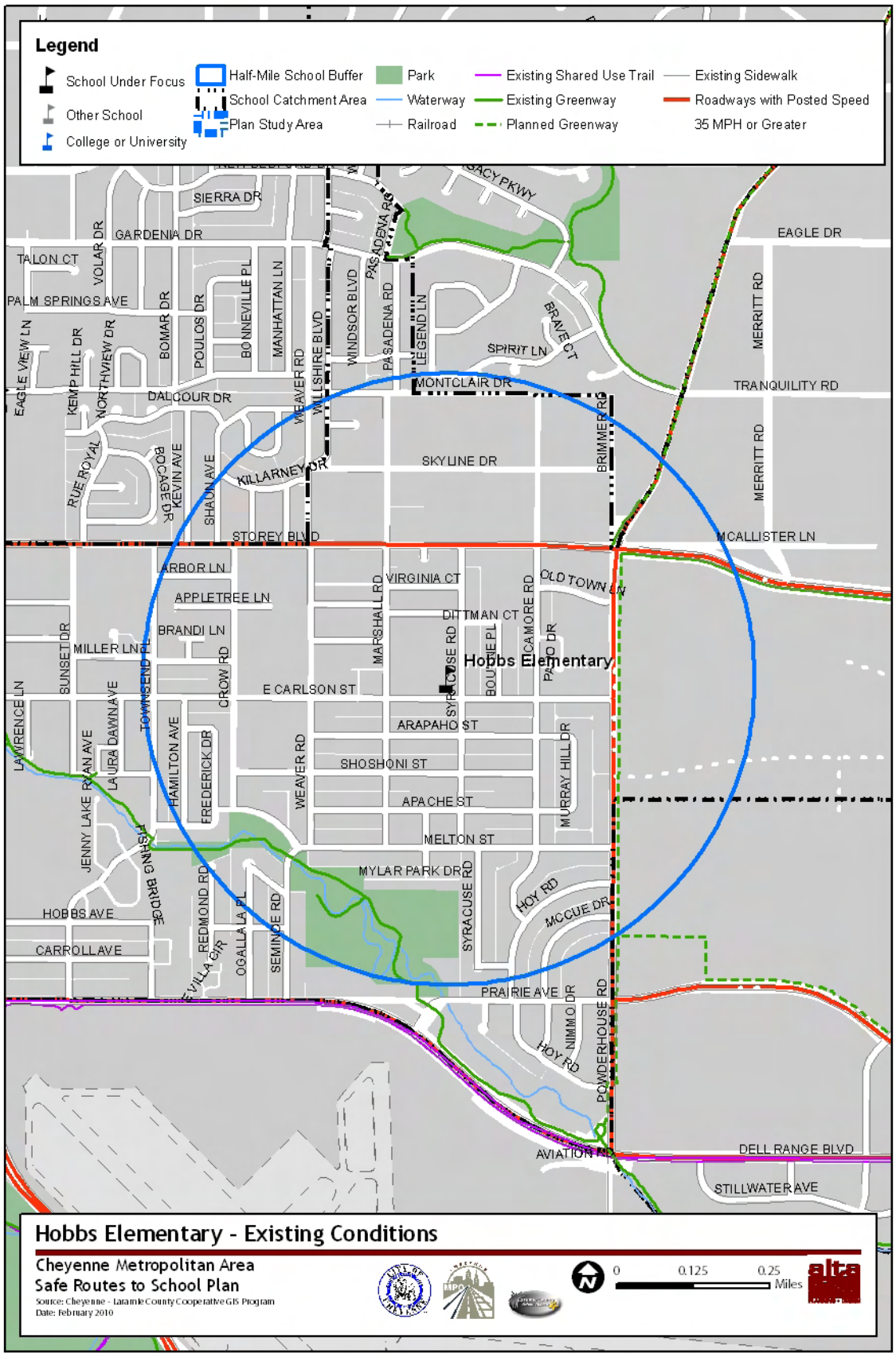


Figure 35. Narrow sidewalks near Hobbs Elementary

There are opportunities for children to use lower speed and volume neighborhood streets to access the school from the areas directly adjacent to the school via bicycle. Children bicycling to school may have difficulties parking their bicycle due to missing or difficult to find bicycle parking.

The parent drop-off area is quite congested, particularly by parents who park on Marshall Road and Carlson Street. There have been several near-crashes between cars, pedestrians and buses. One student was hit on Carlson Street by a slow moving car that slid into the student. The school has hired people to manage the traffic during school start and release times.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Hobbs Elementary
SIERRA DR
GARDENIA DR
TALON CT
PALM SPRINGS AVE
EAGLE VIEW LN
KEMP HILL DR
NORTHVIEW DR
BOMAR DR
POULOS DR
BONNEVILLE PL
MANHATTAN LN
WILLSHIRE BLVD
WINDSOR BLVD
PASADENA RD
LEGEND LN
SPIRIT LN
BRAVE CT
EAGLE DR
MERRITT RD
TRANQUILITY RD
DALCOUR DR
WEAVER RD
MONTCLAIR DR
BRIMMER RD
SKYLINE DR
KILLARNEY DR
RUE ROYAL
ROCAGE DR
KEVIN AVE
SHAUN AVE
STOREY BLVD
MCALLISTER LN
ARBOR LN
APPLETREE LN
BRANDI LN
MILLER LN
SUNSET DR
TOWNSEND PL
CROW RD
MARSHALL RD
VIRGINIA CT
OLD TOWN LN
DITTMAN CT
SYRACUSE RD
BOURNE PL
CAMORE RD
PAO DR
E CARLSON ST
ARAPAHO ST
SHOSHONI ST
APACHE ST
MELTON ST
MYLAR PARK DR
LAWRENCE LN
JENNY LAKE RYAN AVE
LAURA DAWN AVE
HAMILTON AVE
FREDERICK DR
WEAVER RD
MURRAY HILL DR
HOBBS AVE
CARROLL AVE
REDMOND RD
OGALLALA PL
SEMINOE RD
SYRACUSE RD
HOY RD
MCCUE DR
PRAIRIE AVE
NIMMO DR
POWDERHOUSE RD
AVIATION RD
DELL RANGE BLVD
STILLWATER AVE
Hobbs Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Jessup Elementary[27]	
Existing Walking Environment	• Most sidewalks are narrow and some sidewalk connections are missing.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[28]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 2 • Crashes within the school catchment boundary: 0
Distances to School are Too Far	• The school catchment area includes a number of residences that would require a student to walk or bike more than one-half mile to reach the school. Research suggests that students living within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Evers Boulevard, Oakhurst Drive, and Vandehei Avenue. • Bishop Boulevard has a posted speed limit of 45 mph. • I-25 has a posted speed limit of 65 mph and barriers to restrict access.
Major Expressways or Arterials Present	• Bishop Boulevard creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but many sidewalks near the school are less than five feet wide.
Drop-off/ Pick-up Creates Congestion	• The student load zone is congested due to limited space on Evers Boulevard.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the southwest side of the school near the front entrance. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• The front entrance of the school is not accessible to individuals with physical disabilities. Curb ramps that are present are often cracked and do not meet current ADA standards.

[27] A significant portion of this school's catchment area is outside of the pedestrian plan study area. For the purpose of this plan, only the area within the pedestrian plan study area was considered.
[28] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Conditions for walking and bicycling to Jessup Elementary vary significantly, depending on where students live. Students living to the east of I-25 face more challenging travel conditions than those living on the west side. Most sidewalks in both areas are narrow and some connections are missing. Generally, curb ramps do not meet current ADA standards for running or side slope.

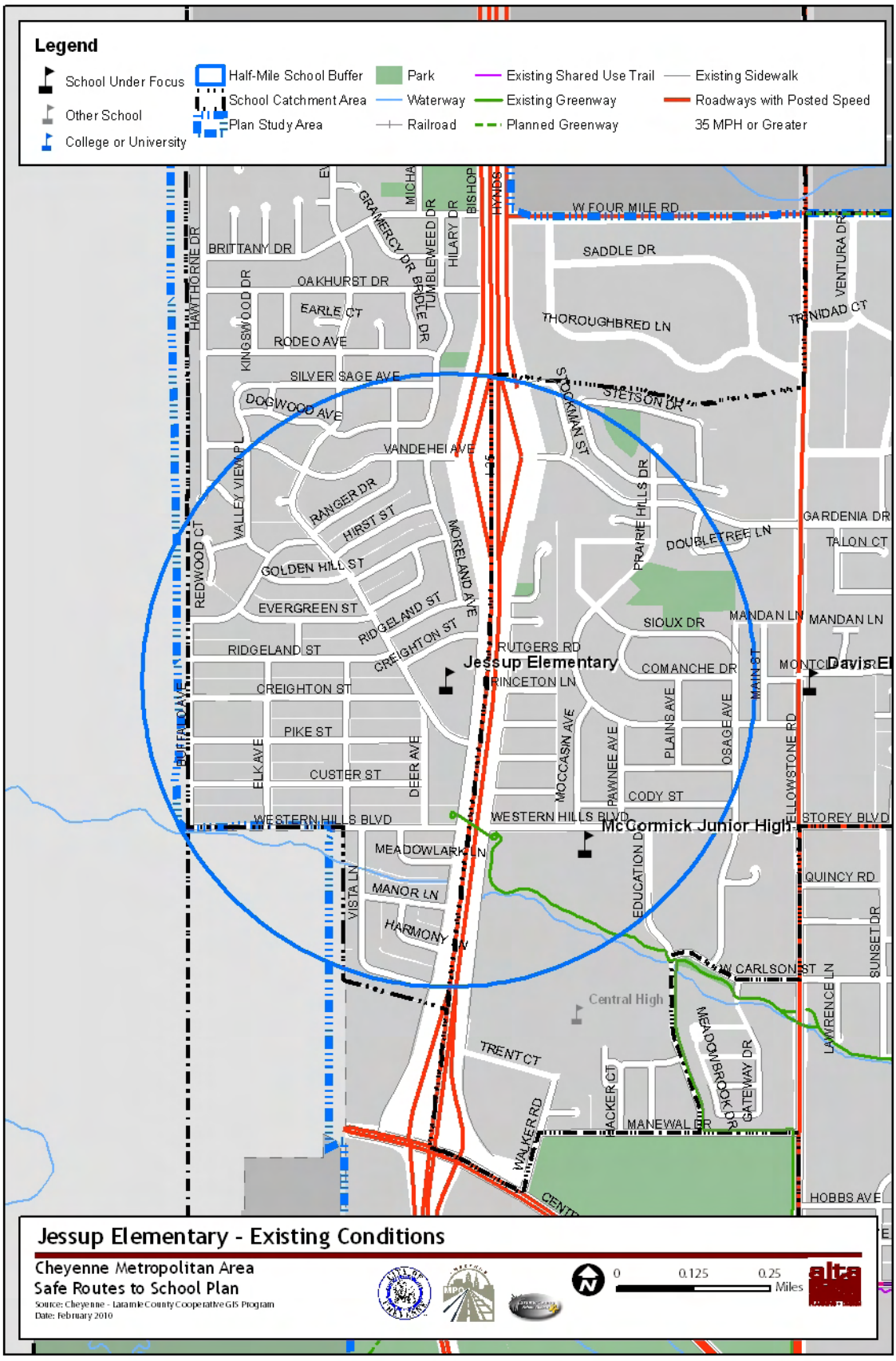
The lack of sidewalks on Bishop Boulevard north of the school is the largest impediment to walking and biking. As the most direct route, Bishop Boulevard receives substantial walking traffic, particularly from students coming from the residential area north of Vandehei Avenue. The shoulder is narrow to nonexistent, while the shoulder drops off steeply. The Principal would like to install another crosswalk with an advance warning beacon on the southern end of the school grounds, as many students travel from the residential area to the south. The intersection of Vandehei Avenue and Evers Boulevard is also busy, as motorists do not always look for pedestrians before proceeding on Vandehei Avenue.

A trail or signage directing cyclists and pedestrians to lower traffic routes could increase safety for students living north of the school. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles (Figure 36).

The main entrance to the school is on Bishop Boulevard. The lack of parking on Bishop Boulevard increases congestion at the drop off on Evers Boulevard. Physically disabled individuals encounter accessibility difficulties when trying to enter the school via the front entrance. The school is scheduled for rebuilding in three years, which could result in an improved loading area.



Figure 36. Wheel bender style bicycle parking located near the front entrance to Jessup Elementary


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
W FOUR MILE RD
SADDLE DR
THOROUGHBRED LN
TRINIDAD CT
VENTURA DR
STETSON DR
BRITTANY DR
OAKHURST DR
EARLE CT
RODEO AVE
SILVER SAGE AVE
DOGWOOD AVE
VANDEHEI AVE
RANGER DR
HIRST ST
GOLDEN HILL ST
EVERGREEN ST
RIDGELAND ST
CREIGHTON ST
RUTGERS RD
PRINCETON LN
Jessup Elementary
COMANCHE DR
SIOUX DR
MANDAN LN
DOUBLETREE LN
GARDENIA DR
TALON CT
PRAIRIE HILLS DR
MORELAND AVE
STOCKMAN ST
I-25
HAWTHORNE DR
KINGSWOOD DR
VALLEY VIEW PL
REDWOOD CT
BUFFALO AVE
ELK AVE
PIKE ST
CUSTER ST
DEER AVE
WESTERN HILLS BLVD
MEADOWLARK LN
MANOR LN
HARMONY LN
VISTA LN
MOCCASIN AVE
PAWNEE AVE
PLAINS AVE
OSAGE AVE
MAIN ST
CODY ST
McCormick Junior High
EDUCATION DR
YELLOWSTONE RD
STOREY BLVD
QUINCY RD
SUNSET DR
W CARLSON ST
LAWRENCE LN
Central High
TRENT CT
MEADOWBROOK DR
GATEWAY DR
MANEWAL DR
WALKER RD
HOBBS AVE
Jessup Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Johnson Junior High[29]	
Existing Walking Environment	• Most streets near Johnson Junior High school have complete sidewalks.
Existing Bicycling Environment	• The Allison Road Greenway and a shared use path along I-80 provide bicycle connections to the school. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[30]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 15, including 1 fatality • Crashes within the school catchment boundary: 8 • The reported fatality crash occurred along I-80, in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• College Drive, Fox Farm Road, Parsley Boulevard, Greeley Highway, and Walterscheid Boulevard have posted speed limits of 40 mph or greater. • I-80 has a posted speed limit of 60 mph or greater.
Major Expressways or Arterials Present	• College Drive creates a crossing barrier separating residential land north and east of this roadway from the school. • Fox Farm Road creates a north/south crossing barrier separating residential land north of this roadway from the school. • I-80 creates a north/south crossing barrier separating residential land north this roadway from the school. • Greeley Highway creates an east/west crossing barrier separating residential land east of this roadway from the school.
Drop-off/ Pick-up Creates Congestion	• Student loading can be problematic due to the volume of students and limited space in the student load zone.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but many of the sidewalks near the school are less than five feet wide.
Difficult Crossings	• There are higher-speed roads on all four sides of the school, with limited intersections at which to cross on bicycle or on foot.

[29] A significant portion of this school's catchment area is outside of the pedestrian plan study area. For the purpose of this plan, only the area within the pedestrian plan study area was considered.
[30] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Traffic safety has not been identified as an issue for parents of students at Johnson Junior High. Challenges for walking or bicycling include a less well-connected street grid, narrow sidewalks and a number of major expressways and arterials bisecting the school catchment area. Many students travel to the school from more than one-half mile away, which discourages walking and biking trips.

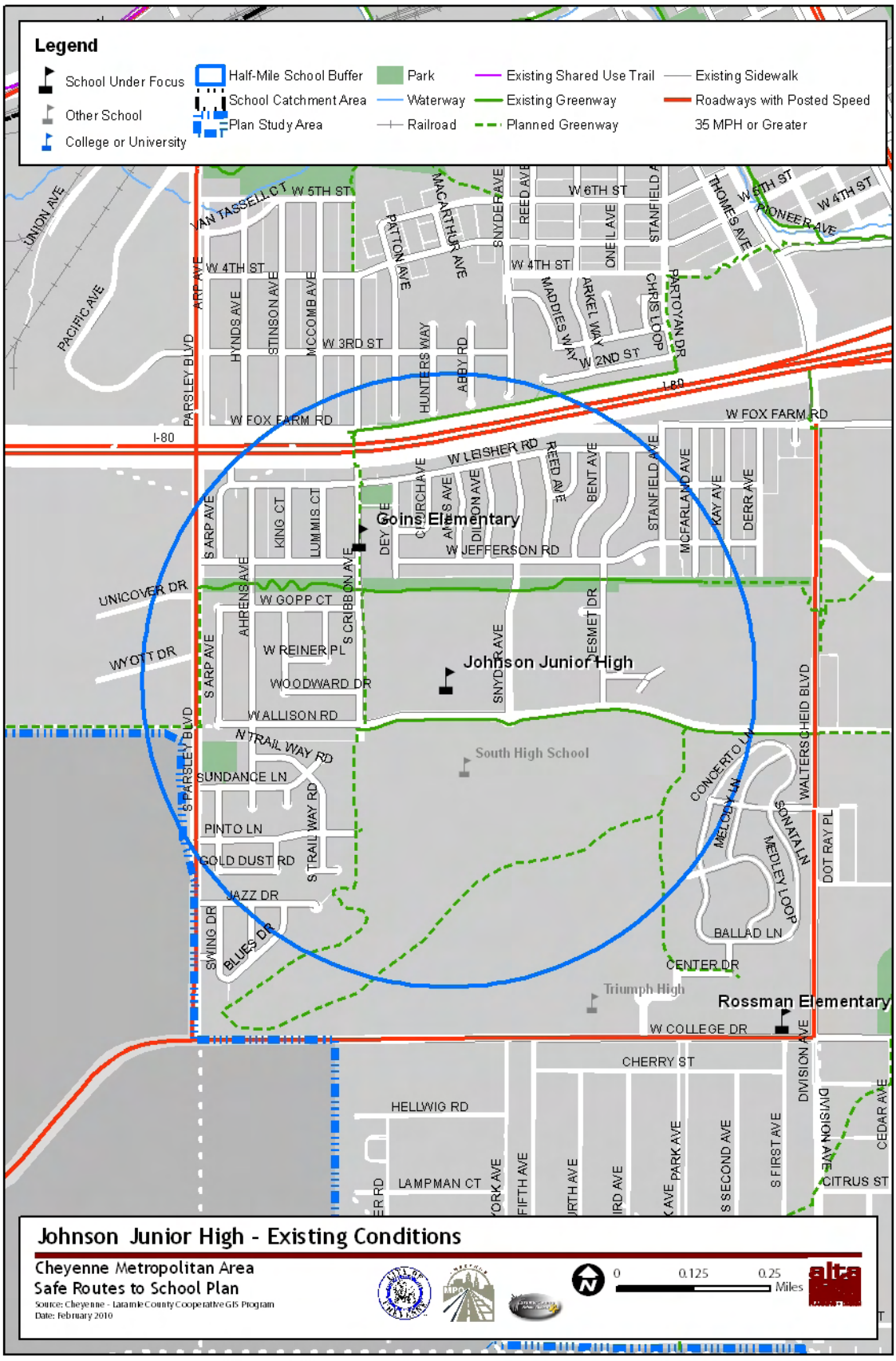


Figure 37. Greenways create safe and comfortable pedestrian walkways with few points of motor vehicle conflict

Accessing College Drive and points south is difficult and often forces students to walk on the shoulder of busy roadways. Because there is no direct route to Johnson, car traffic pinches at Jefferson (near Goins Elementary) and where Fox Farm Road turns into Leisher Road. A priority for the future is to create a safe passage from the I-80 overpass to the school along Cribbon Avenue.

There are several pathways in the area, including a Greenway (Figure 37) and a shared use path along I-80 that includes a bicycle/pedestrian overcrossing of the freeway. Additionally, a number of lower speed and volume local streets are suitable for bicycling.

The sidewalk network is nearly complete, though walking routes from several neighborhoods are long due to low roadway connectivity. With the opening of South High School, traffic through the area is anticipated to triple.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Goins Elementary
Johnson Junior High
South High School
Triumph High
Rossman Elementary
W 5TH ST
W 4TH ST
W 3RD ST
W 2ND ST
W 6TH ST
W FOX FARM RD
I-80
W LEISHER RD
W JEFFERSON RD
W GOPP CT
W REINER PL
WOODWARD DR
W ALLISON RD
N TRAIL WAY RD
S TRAIL WAY RD
SUNDANCE LN
PINTO LN
GOLD DUST RD
JAZZ DR
SWING DR
BLUES DR
BALLAD LN
CENTER DR
W COLLEGE DR
CHERRY ST
HELLWIG RD
LAMPMAN CT
CITRUS ST
CEDAR AVE
UNICOVER DR
WYOTT DR
S ARP AVE
S PARSLEY BLVD
WALTERSCHEID BLVD
DIVISION AVE
S FIRST AVE
S SECOND AVE
PARK AVE
FIFTH AVE
S CRIBBON AVE
STANFIELD AVE
REED AVE
SNYDER AVE
MACARTHUR AVE
PATTON AVE
ONEIL AVE
THOMAS AVE
PIONEER AVE
VAN TASSELL CT
UNION AVE
PACIFIC AVE
HYNDS AVE
STINSON AVE
MCCOMB AVE
HUNTERS WAY
ABBY RD
MADDIES WAY
ARKELWAY
CHRISLOOP
PARTOVAN DR
BENT AVE
DILLON AVE
CHURCH AVE
MCFARLAND AVE
KAY AVE
DERR AVE
DEY DR
KING CT
LUMMIS CT
AHRENS AVE
ESMET DR
CONCERTO LN
MELODY LN
SONATA LN
MEDLEY LOOP
DOT RAY PL
Johnson Junior High - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

McCormick Junior High[31]	
Existing Walking Environment	• Sidewalks directly adjacent to the school are wider than five feet, and most streets in the area provide sidewalks. A pedestrian overcrossing facilitates access over I-25, although it is not ADA-accessible.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[32]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 2 • Crashes within the school catchment boundary: 13
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Bishop Boulevard has a posted speed limit of 45 mph or greater. • Central Avenue, Dell Range Boulevard, and Yellowstone Road have posted speed limits of 40 mph. • I-25 has a posted speed limit of 65 mph or greater. • Pershing Boulevard, and Storey Boulevard, have posted speed limits of 35 mph or greater.
Major Expressways or Arterials Present	• Pershing Boulevard creates a north/south crossing barrier separating residential land south of this roadway from the school. • I-25 creates an east/west crossing barrier separating residential land west of this roadway from the school. • Yellowstone Road creates an east/west crossing barrier separating residential land east of this roadway from the school. • Storey Boulevard creates a north/south crossing barrier separating residential land north of this arterial from the school.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but many of the sidewalks near the school are less than five feet wide.
Drop-off/ Pick-up Creates Congestion	• The length student load zone does not provide adequate space for drop-off and pick-up based on the number of students attending the school.
Missing or Insufficient Bicycle Parking	• 'Wheel bender' bicycle parking is provided on the north side of the school. The number of spaces may not be sufficient for all students who may ride to school.
Difficult Crossings	• Yellowstone Road

[31] A significant portion of this school's catchment area is outside of the pedestrian plan study area. For the purpose of this plan, only the area within the pedestrian plan study area was considered.

[32] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Sidewalks adjacent to McCormick Junior High are wider than five feet, providing good access to the school. However, sidewalks in surrounding areas are narrow.

School Zone pavement markings exist, but are faded and difficult to see. The parent drive-through lane is challenging for all users, particularly as there is only is one drop-off space for 1,200 students. The Police Department has sent an officer at release time nearly every day to monitor the situation. In addition, the School Resource Officer has been present in an unmarked vehicle.

The crossing at Yellowstone Road is considered a challenging aspect of walking or biking from the east and west. With a posted speed limit of 40 mph, the street has marked crosswalks, which students do not always use. The crossing of I-25 is made easier by a pedestrian overcrossing; though accessing the facility is difficult for physically impaired pedestrians due to missing curb ramps on the south side of the facility. Another concern is Education Drive, particularly for students leaving athletic practice after school at the same time as Central High School releases its students. With strong parent involvement, the City installed a crosswalk at Education Drive and Western Hills Boulevard, which has improved the situation

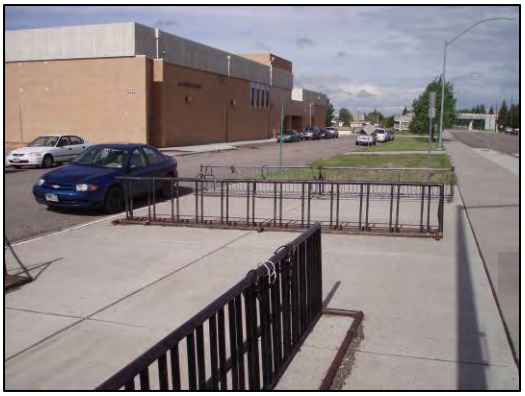
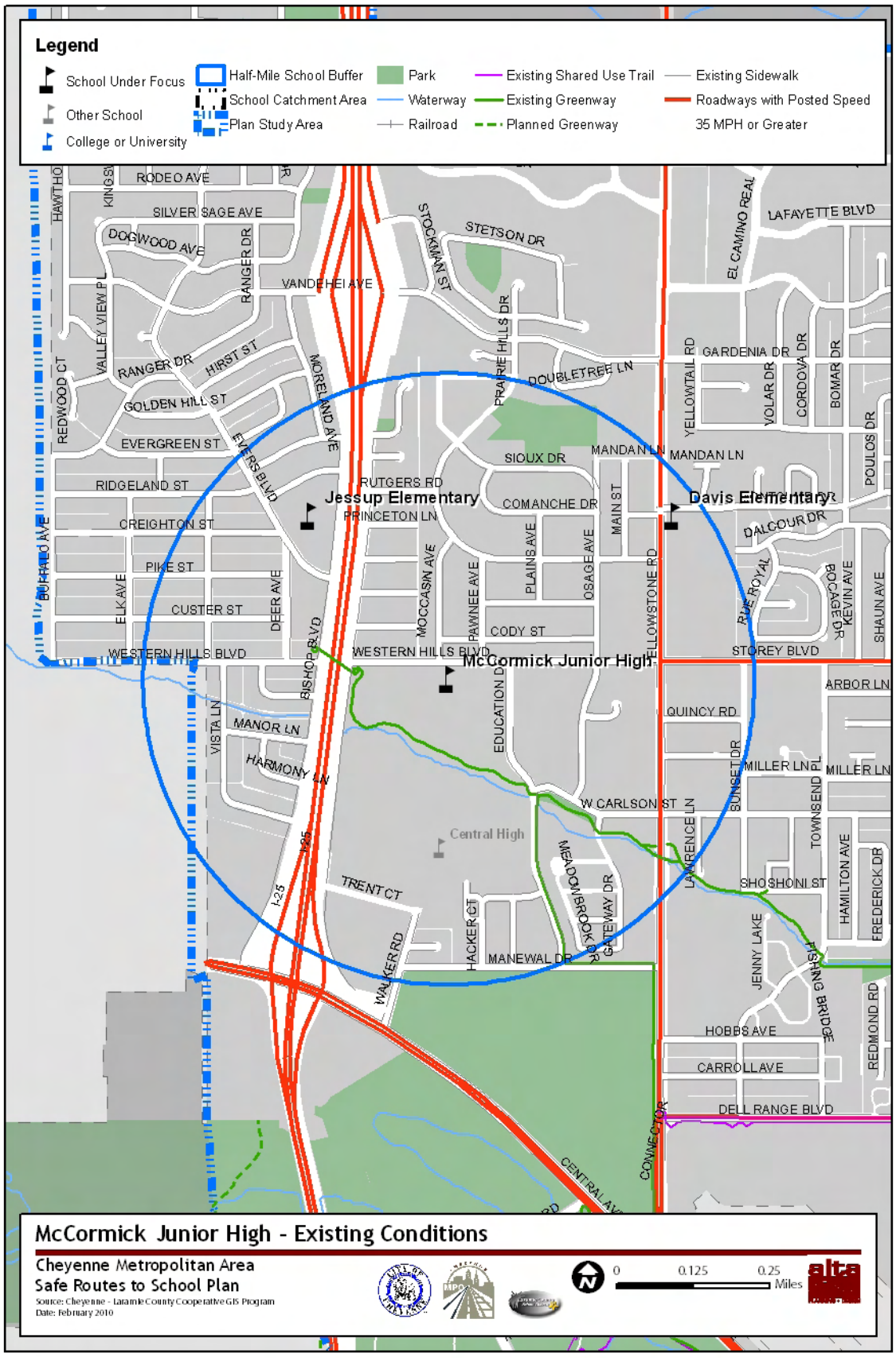


Figure 38. 'Wheel Bender' bicycle parking at Johnson Junior High

Students walking or biking to the school from the north or south do not have as difficult crossings, but they are a small minority of the residences in the school catchment area. While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles (Figure 38).


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Jessup Elementary
Davis Elementary
McCormick Junior High
Central High
RODEO AVE
SILVER SAGE AVE
DOGWOOD AVE
VANDEHEI AVE
STETSON DR
LAFAYETTE BLVD
EL CAMINO REAL
GARDENIA DR
DOUBLETREE LN
SIOUX DR
MANDAN LN
RUTGERS RD
PRINCETON LN
COMANCHE DR
DALCOUR DR
RUE ROYAL
STOREY BLVD
EVERGREEN ST
RIDGELAND ST
CREIGHTON ST
PIKE ST
CUSTER ST
CODY ST
WESTERN HILLS BLVD
QUINCY RD
ARBOR LN
MILLER LN
W CARLSON ST
SHOSHONI ST
TRENT CT
MANEWAL DR
HOBBS AVE
CARROLL AVE
DELL RANGE BLVD
MANOR LN
HARMONY LN
I-25
0
0.125
0.25
Miles
McCormick Junior High - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010

Pioneer Park Elementary[33]	
Existing Walking Environment	• The sidewalk network in the area is complete, and most sidewalks are wider than five feet.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[34]	• Crashes within one-half mile of the school: 2 • Crashes within two miles of the school: 12, including 1 fatality • Crashes within the school catchment boundary: 6 • The reported fatality crash occurred along I-25 in July 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and clear with dry roadways.
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Snyder Avenue, Randall Avenue, and 24th Street.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the east side of the school on the playground. The number of spaces may not be sufficient for the number of students who might ride to school.
Walkways are Not Accessible	• Walkways in the surrounding neighborhood are generally complete, but some do not meet current ADA width standards. Many corners have older curb ramps that do not meet current ADA standards due to their age.

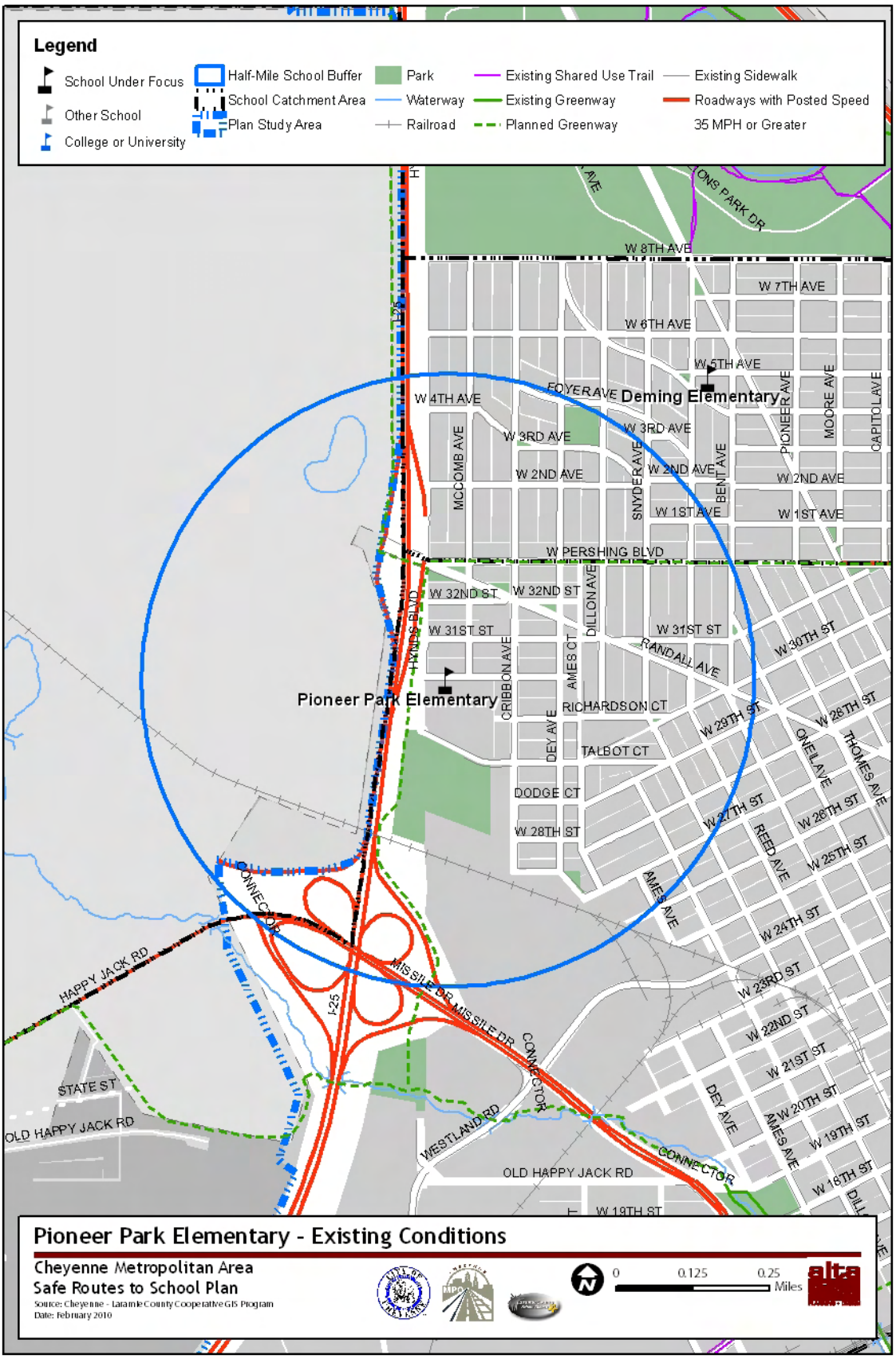
[33] A significant portion of this school's catchment area is outside of the pedestrian plan study area. For the purpose of this plan, only the area within the pedestrian plan study area was considered.
[34] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Students walking or bicycling to Pioneer Park Elementary have a relatively easy time within one-half mile of the school. The sidewalk network in the area is complete, and most sidewalks are wider than five feet with a few exceptions (e.g., portions of Cribbon Avenue and Cosgriff Court west of McComb Avenue; Figure 39).

Students riding to school may experience a greater risk of bicycle damage if they choose to utilize the parking provided. While I-25 is nearby to the west, the school catchment area lies only to the east of the freeway, meaning no students need to cross the freeway to get to the school. No other higher-speed streets exist in either a one-half mile radius of the school or within the school catchment area.



Figure 39. Varying sidewalk widths near Pioneer Park Elementary


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Deming Elementary
Pioneer Park Elementary
W 8TH AVE
W 7TH AVE
W 6TH AVE
W 5TH AVE
W 4TH AVE
W 3RD AVE
W 2ND AVE
W 1ST AVE
W PERSHING BLVD
W 32ND ST
W 31ST ST
W 30TH ST
W 29TH ST
W 28TH ST
W 27TH ST
W 26TH ST
W 25TH ST
W 24TH ST
W 23RD ST
W 22ND ST
W 21ST ST
W 20TH ST
W 19TH ST
W 18TH ST
FOYER AVE
MCCOMB AVE
SNYDER AVE
BENT AVE
PIONEER AVE
MOORE AVE
CAPITOL AVE
DILLON AVE
AMES CT
RANDALL AVE
KINGS BLVD
CRIBBON AVE
DEY AVE
RICHARDSON CT
TALBOT CT
DODGE CT
ONEIL AVE
THOMES AVE
REED AVE
AMES AVE
I-25
CONNECTOR
MISSILE DR
HAPPY JACK RD
STATE ST
OLD HAPPY JACK RD
WESTLAND RD
Pioneer Park Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Rossman Elementary[35]	
Existing Walking Environment	• The sidewalk network is generally complete in the direct vicinity of Rossman Elementary and less complete in the neighborhood south of College Drive. The signalized intersection of Walterscheid Boulevard and College Drive provides a safe pedestrian crossing opportunity.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[36]	• Crashes within one-half mile of the school: 1 • Crashes within two miles of the school: 9 • Crashes within the school catchment boundary: 2
Distances to School are Too Far	• Some students live further than a half-mile from the school. Research suggests that students within one-half mile of their school are more likely to walk or bike to the school with greater frequency.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Allison Road, College Drive east of Division Avenue and west of Greeley Highway. • College Drive west of Division Avenue has a posted speed limit of 50 mph. • Walterscheid Boulevard north of College Drive has a posted speed limit of 35 mph.
Major Expressways or Arterials Present	• College Drive creates a north/south crossing barrier separating residential land south of this roadway from the school. • Walterscheid Boulevard creates an east/west crossing barrier separating residential land east of this roadway from the school.
Missing or Insufficient Walkways	• Sidewalks generally do not exist on roadways south of College Drive.
Missing or Insufficient Bicycle Parking	• Basic 'wheel bender' bicycle parking is provided on the south side of the school, on the playground. The number of spaces may not be sufficient for the number of students who might ride to school. New bike racks will likely be installed once the school is rebuilt.
Walkways are Not Accessible	• Unpaved walkways around the school are difficult for people with physical impairments.
No Safe Place to Ride a Bicycle	• College Drive and Walterschied Boulevard provide direct connections to the school but high posted speeds make these roadways a barrier for young cyclists.
Difficult Crossings	• College Drive and Walterscheid Boulevard are both higher-speed roads that pose obstacles to students walking or biking to school.

[35] This school is currently under construction and will be rebuilt in its current location

[36] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Two higher-speed streets, W College Drive and Walterscheid Boulevard, are directly adjacent to Rossman Elementary on the south and east. These streets create barriers for students walking and bicycling to school. Because of the residential pattern in the school catchment area, few students can take a route to school that avoids these barriers.

The signalized intersection of Walterscheid Boulevard and College Drive provides a safe pedestrian crossing opportunity (Figure 40). School Zone signs are not present on College Drive though warning signs exist along Walterscheid Boulevard. There is no adequate direct sidewalk between the school and neighborhood to the north. The Walterscheid Boulevard sidewalk ends at the school boundary.

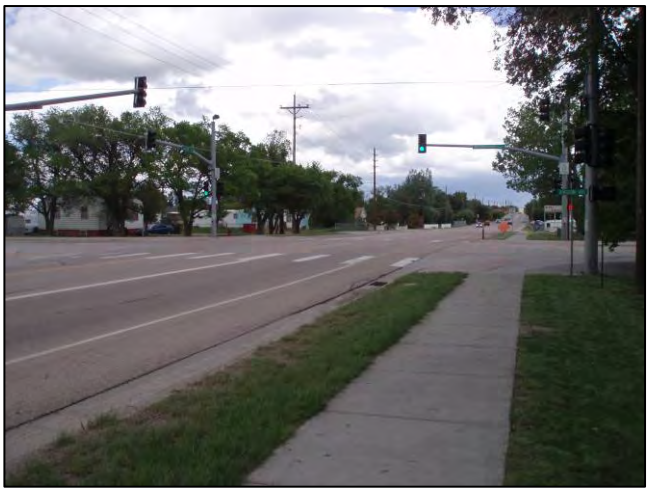
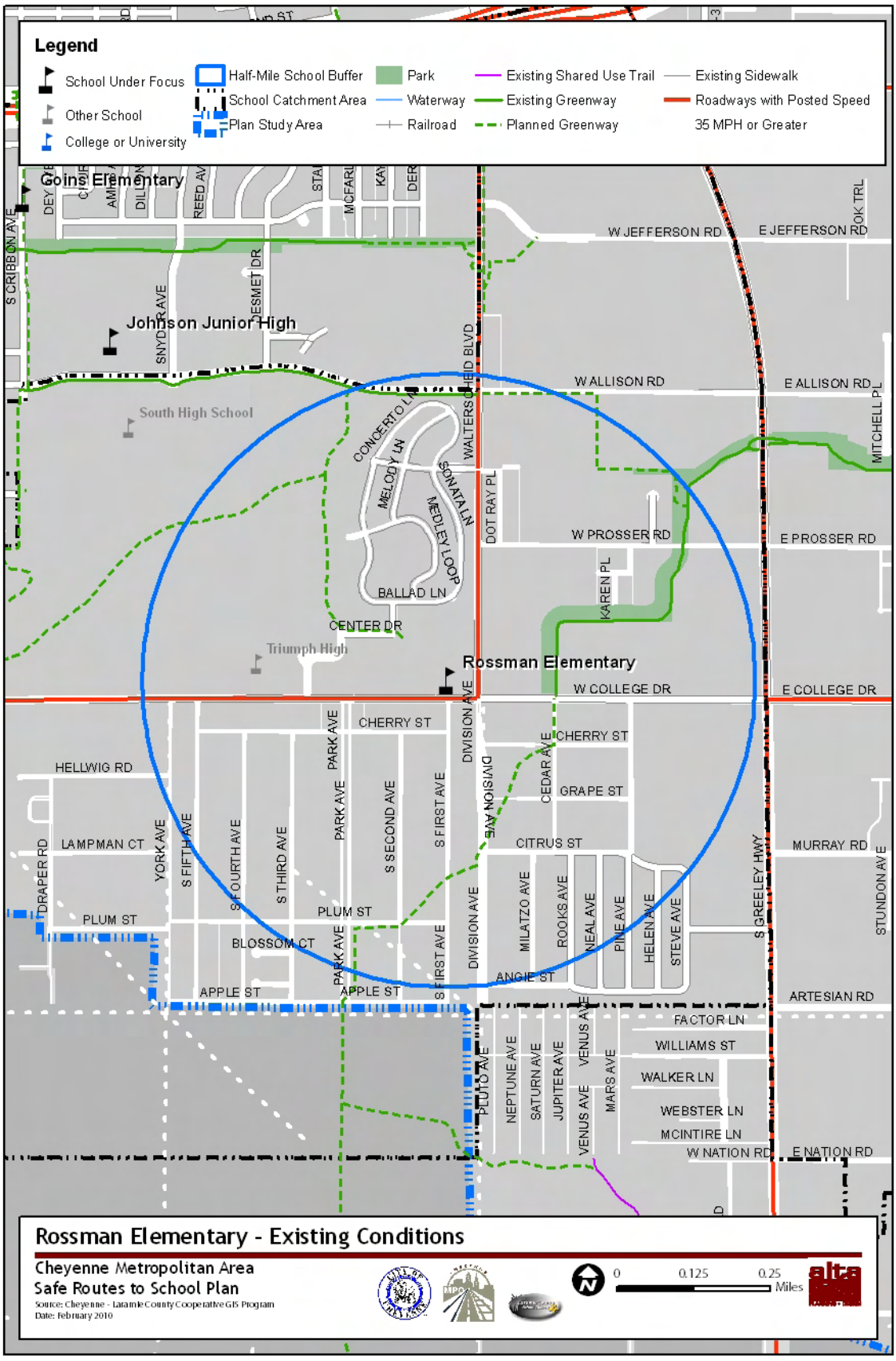


Figure 40. The signalized intersection of College Drive and Walterscheid Boulevard increases crossing safety

While beneficial for locking bicycles during the day, the 'wheel bender' style of bike racks currently provided can damage students' bicycles.

Rossman Elementary is now twice its previous size, having incorporated students who previously attended Afflerbach Elementary.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Goins Elementary
Johnson Junior High
South High School
Triumph High
Rossman Elementary
W JEFFERSON RD
E JEFFERSON RD
W ALLISON RD
E ALLISON RD
W PROSSER RD
E PROSSER RD
W COLLEGE DR
E COLLEGE DR
CHERRY ST
HELLWIG RD
LAMPMAN CT
PLUM ST
BLOSSOM CT
APPLE ST
CITRUS ST
GRAPE ST
ANGIE ST
FACTOR LN
WILLIAMS ST
WALKER LN
WEBSTER LN
MCINTIRE LN
W NATION RD
E NATION RD
ARTESIAN RD
MURRAY RD
BALLAD LN
CENTER DR
CONCERTO LN
MELODY LN
SONATA LN
MEDLEY LOOP
DOT RAY PL
KAREN PL
MITCHELL PL
DESMET DR
SNYDER AVE
WALTERSCHEID BLVD
DIVISION AVE
PARK AVE
S FIRST AVE
S SECOND AVE
S THIRD AVE
S FOURTH AVE
S FIFTH AVE
YORK AVE
DRAPER RD
CEDAR AVE
MILATZO AVE
ROOKS AVE
NEAL AVE
PINE AVE
HELEN AVE
STEVE AVE
S GREELEY HWY
STUNDON AVE
PLUTO AVE
NEPTUNE AVE
SATURN AVE
JUPITER AVE
VENUS AVE
MARS AVE
Rossman Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Saddle Ridge Elementary[37]	
Existing Walking Environment	• The sidewalk network around Saddle Ridge Elementary will be completed as the surrounding roadways are developed and housing is constructed.
Existing Bicycling Environment	• Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[38]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 0 • Crashes within the school catchment boundary: 0
Distances to School Too Far	• The school catchment area includes a large rural area where students are bussed. The travel distance to school for these children is general greater than one-half mile.
Dangerous Driving Speeds Around Schools	• U.S. 30 is a high-speed roadway near Saddle Ridge. Right now U.S. 30 is the boundary of the catchment area and crossing hazards are minimal.
Major Expressways or Arterials Present	• U.S. 30 has a posted speed limit of 55 miles per hour.

Discussion: Saddle Ridge Elementary accommodates students through an ADA compliant pedestrian environment and wave racks near the school entrance for bicycle parking (Figure 41). Student pick-up and drop-off is separated from the bus loop, minimizing conflicts during the morning and evening rush.



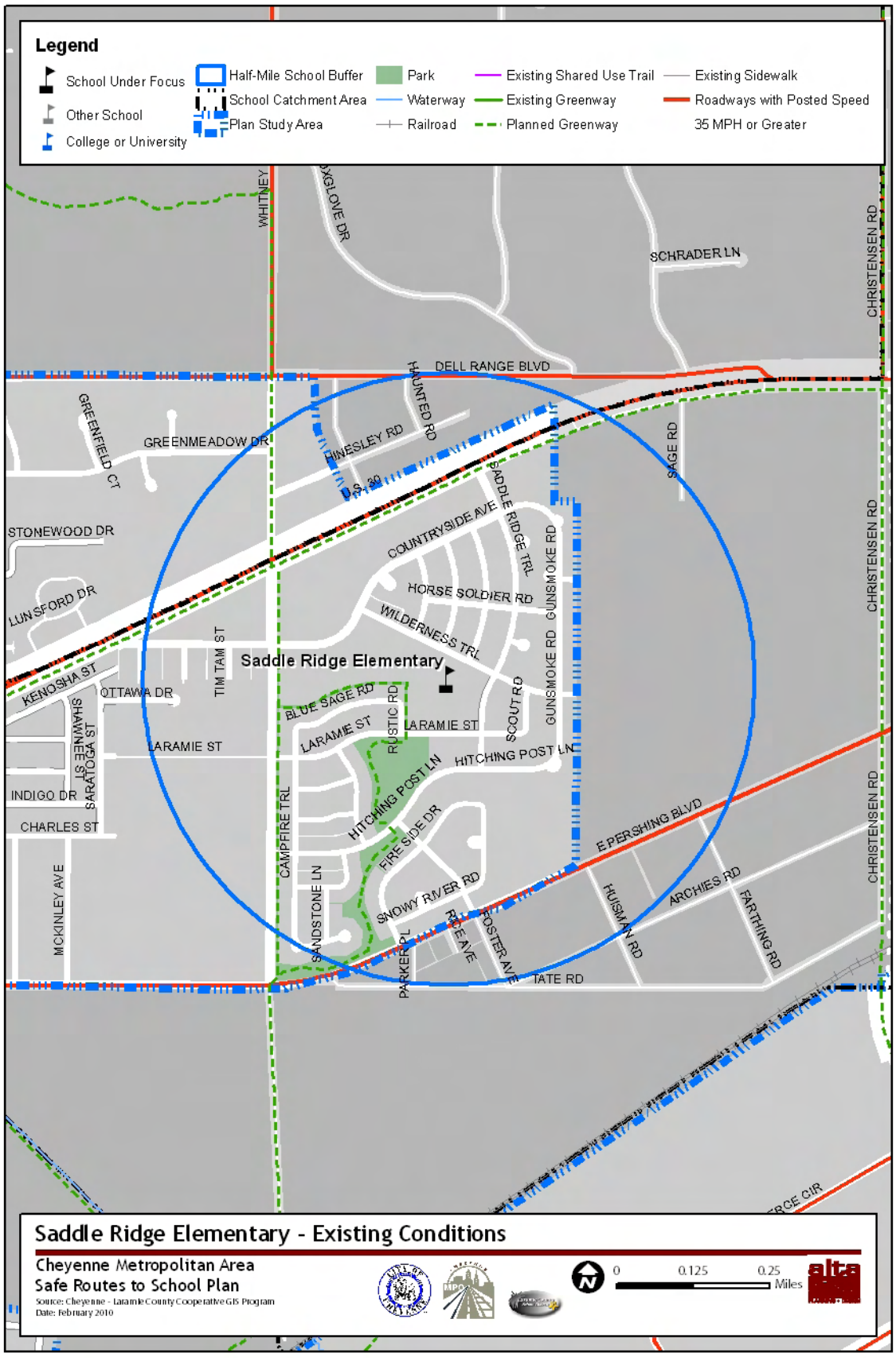
Figure 41. Saddle Ridge Elementary has an excellent pedestrian and bicycle environment on campus

New construction around Saddle Ridge Elementary will gradually fill-in sidewalks in the subdivision (currently only a few houses have been built). The only higher speed roadway in the area is U.S. 30; currently this roadway serves as the school catchment boundary, minimizing any potential crossing conflicts.

Saddle Ridge Elementary serves many students in the surrounding rural area. Many of these students live more than one half mile away from the elementary school and will likely not walk due to the trip length.

[37] This school is currently under construction and will be rebuilt in its current location

[38] Crash data between 2005 and 2007 was only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Saddle Ridge Elementary
DELL RANGE BLVD
SCHRADER LN
CHRISTENSEN RD
WHITNEY
FOXGLOVE DR
HAUNTED RD
HINESLEY RD
GREENMEADOW DR
GREENFIELD CT
U.S. 30
SAGE RD
STONEWOOD DR
COUNTRYSIDE AVE
SADDLE RIDGE TRL
GUNSMOKE RD
HORSE SOLDIER RD
WILDERNESS TRL
LUNSFORD DR
KENOSHA ST
OTTAWA DR
TIM TAM ST
BLUE SAGE RD
RUSTIC RD
LARAMIE ST
SCOUT RD
SHAWNEE ST
SARATOGA ST
INDIGO DR
CHARLES ST
HITCHING POST LN
CAMPFIRE TRL
FIRE SIDE DR
E PERSHING BLVD
MCKINLEY AVE
SANDSTONE LN
SNOWY RIVER RD
PARKER PL
ROOSTER AVE
TATE RD
HUSMAN RD
ARCHIES RD
FARTHING RD
Saddle Ridge Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
0
0.125
0.25
Miles

Sunrise Elementary	
Existing Walking Environment	• Recently constructed sidewalks within the immediate vicinity of the school offer good pedestrian accessibility, while the surrounding sidewalk network is relatively complete.
Existing Bicycling Environment	• A Greenway to the northeast and a shared use path in the park to the east provide safe off-street cycling connections. Most residential streets in the area have low automobile speeds and volumes, providing a safe cycling experience for students.
Reported Crashes[39]	• Crashes within one-half mile of the school: 0 • Crashes within two miles of the school: 9, including 1 fatality • Crashes within the school catchment boundary: 0 • The reported fatality crash occurred along Pershing Boulevard, just east of U.S. 30 in February 2005. A pedestrian was hit while traveling along the roadway shoulder. Conditions were dark and snowy.
Dangerous Driving Speeds Around Schools	• Higher-speed roads with posted speed limits of 30 mph may act as barriers to younger children. These roads include Meadow Drive, Taft Avenue and East 12th Street.
Drop-off/ Pick-up Creates Congestion	• Parents always attempt to park as close to the school as possible during the afternoon pick-up. Modifications made prior to the beginning of the 2009/2010 school year may help to alleviate some congestion.
Walkways are Not Accessible	• Sidewalks are generally complete, but several do not meet current ADA width standards. Many corners have older curb ramps that do not meet current ADA standards.
Missing or Insufficient Walkways	• The sidewalk network in the area is nearly complete, but many of the sidewalks near the school are less than five feet wide.

[39] Crash data between 2005 and 2007 only available within the City of Cheyenne political boundary and the area defined as the study area for the "Cheyenne Metropolitan Area Pedestrian Plan" (blue dashed boundary)

Discussion: Recently constructed sidewalks within the immediate vicinity of the school offer good pedestrian accessibility (Figure 42). Sidewalks further from the school are narrow in some locations and could increase the challenge students walking or biking to school.

Pershing Pointe houses numerous students who have to cross Taft Avenue to get to Sunrise Elementary. This crossing is particularly challenging due to high speeds and traffic volumes.

There are no higher-speed streets or difficult crossings in the area within the area. A Greenway to the northeast and a shared use path in the park to the east also provide cycling routes. Children that bicycle to school can park their bikes near the front entrance of the school.



Figure 42. Sunrise Elementary offers 'wave rack' style bicycle parking and excellent ADA accommodation on school grounds

Morning drop-off is relatively manageable because of staggered arrival times. However, the afternoon pick-up is very congested from 3:15 to 3:30 p.m. Parents attempt to park as close to the school entrance as possible. In 2009, the school re-signed the loop for pick-up and drop-off, restriped the crosswalks, and posted a 5 mph speed limit sign in the parking lot. It is undetermined what effects on traffic patterns, safety, and congestion these measures will have.


Legend
School Under Focus
Other School
College or University
Half-Mile School Buffer
School Catchment Area
Plan Study Area
Park
Waterway
Railroad
Existing Shared Use Trail
Existing Greenway
Planned Greenway
Existing Sidewalk
Roadways with Posted Speed
35 MPH or Greater
Sunrise Elementary
Bain Elementary
CHARLES ST
SUNNY PL
SPRINGER CT
CHEYENNE ST
COX CT
UINTAH RD
E PERSHING BLVD
ATKIN ST
GREENWAY ST
SADDLEBACK DR
SPUR DR
PRAIRIE DOG DR
FOXEN CT
SUNNY HILL DR
MEADOW DR
E 17TH ST
E 16TH ST
E 14TH ST
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CLEVELAND AVE
DIAMOND AVE
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MAROON DR
CREST PARK DR
NOVA RD
TAFT AVE
CARMON CIR
PHOENIX DR
MIAMI CIR
ATLANTIC DR
KENNEDY DR
COLONIAL DR
MORNINGSIDE DR
GETTYSBURG DR
MCGOVERN AVE
SUN VALLEY DR
SAVANNAH DR
CAMPSTOOL RD
PROGRESS DR
BURLINGTON TRL
CLEVELAND PL
LEXINGTON AVE
VAN BUREN AVE
JAY PL
POLK AVE
HAYES AVE
WENANDY AVE
MCKINLEY AVE
RAINBOW RD
Sunrise Elementary - Existing Conditions
Cheyenne Metropolitan Area
Safe Routes to School Plan
Source: Cheyenne - Laramie County Cooperative GIS Program
Date: February 2010
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IV. Solutions

The following chapter describes district-wide and school-specific solutions to improve and encourage walking and bicycling for students in the Cheyenne Metropolitan Area. These recommended solutions were informed by a detailed public input process, data collection activities, and direct consultation with a number of stakeholder groups, including the City of Cheyenne, the Cheyenne Metropolitan Planning Organization, Laramie County School District (LCSD) #1, and school principals. The discussion organizes the proposed non-infrastructure related solutions into the following categories:

- Education Solutions
- Encouragement Solutions
- Policy and Enforcement Solutions
- Evaluation Solutions

Following the district-wide discussion of non-infrastructure related solutions, the plan outlines engineering tools that can help improve the walking and biking environment around each school. The final section of this chapter provides a summary of proposed infrastructure improvements and a planning level cost opinion for the 24 elementary schools and 3 junior high schools under focus in this Plan.

Education Solutions

The term "Safe Routes to School" refers to a variety of multi-disciplinary programs aimed at increasing the number of students walking and bicycling to school. Education programs are an essential component of a Safe Routes to School program. Education programs generally include outreach to students, parents or guardians, and motorists. Students are taught bicycle, pedestrian, and traffic safety skills. Parents, guardians and motorists receive information on transportation options and driving safely near schools.

The potential solutions presented here are organized by short-term, medium-term, and long-term recommendations. Each program has value, but some programs are easier to implement than others or need an existing network of interested parents and volunteers that are more readily available after the establishment of a SR2S program.

Short-Term Solutions: Programs That Should Be Implemented First

Safety Education

Pedestrian and bicycle safety education teaches children to understand traffic safety behaviors, laws and rules. Pedestrian safety education teaches children basic traffic safety rules, sign identification, and crossing decision-making tools. Pedestrian training is typically recommended for first- and second-graders, and teaches basic lessons such as "look left, right, and left again," "walk with your approved walking buddy," "stop, look, and listen," and "lean and peek around obstacles before crossing the street." Trained safety professionals can administer pedestrian safety in the classroom or gym class. Classroom teachers may use established pedestrian safety curriculum such as the Bicycle Transportation Alliance's curriculum (www.bta4bikes.org/at_work/pedsafetyeducation.php), WalkSafe (www.walksafe.us), the *Teaching Children to Walk Safely as They Grow and Develop* guide for

parents and caregivers (www.saferoutesinfo.org/guide/graduated_walking/index.cfm), and Livable Streets Education (http://streetseducation.org/curriculum).

Bicycle safety training is normally appropriate beginning in or after the third grade and helps children understand that they have the same responsibilities as motorists to obey traffic laws. The League of American Bicyclists offers an extensive bicycle safety curriculum called Kids II. This seven-hour class is aimed at 5th and 6th grade students and teaches necessary bicycle riding skills and how to pick safe bicycling routes. The curriculum is designed to have a League Certified Instructor (LCI) teach the class.

Medium-Term Solutions: Programs That Should Be Implemented Second

Bicycle Rodeos

Bicycle Rodeos are family-friendly events that incorporate a bicycle safety check, helmet fitting, instruction about the rules of the road, and an obstacle course. Rodeos also provide an opportunity to check children's bikes and instruct them on proper helmet use. Adult volunteers can administer rodeos, or they may be offered through the local Police or Fire Department. In order to increase participation, bicycles rodeos can be incorporated into health fairs, back to school events, and Walk and Bike to School days.

School Zone Traffic Safety Campaign

A School Zone Traffic Safety Campaign creates awareness of students walking and bicycling to school. A safety campaign is an effective way to reach the general public and encourage drivers to slow down and look for students walking and biking to school.

A School Zone Traffic Safety Campaign uses signs and banners located near schools (for example, in windows of businesses, yards of people's homes, and print publications) to remind drivers to slow down and be careful in school zones. This campaign can be kicked off at the start of each school year or in conjunction with special events such as Walk and Bike to School Month (October).

Banners and signs can be effective tools to remind motorists about traffic safety in school zones. Large banners can be hung over or along roadways near schools with readable letters cautioning traffic to slow down, stop at stop signs, or watch for students in crosswalks with catch phrases such as:

- "Drive 25, Keep Kids Alive"
- "Give Our Kids a Brake"

Long-Term Solutions: Implemented After Short- And Medium-Term Programs

Bus Safety Campaign

Many schools use buses to transport students who live too far away to walk to school. School buses are large and restrict sight lines for drivers and pedestrians. It is often difficult for drivers and students to see each other around school buses. Schools can implement a bus safety campaign that reminds students and their parents about the importance of walking and riding cautiously around

buses and to wave and communicate to the bus driver. The campaign can include flyers, letters sent home, newsletter articles, posters, and announcements for parents and students.

Encouragement Solutions

Encouragement programs focus on making walking and bicyling fun while increasing public awareness of the benefits of walking and biking to school. Encouragment events and activities help increase the number of students walking and biking to school. The activities often include a variety of special events and contests, outreach campaigns, and presentations to school and community groups. Encouragement programs can be used to educate parents, school personnel, students, and the community about the health and safety benefits of a successful Safe Routes to School program.

Encouragment programs do not need much funding, but their success depends on a school champion or group of volunteers for sustained support. The solutions in the encouragement section are organized by short-term, medium-term, and long-term recommendations.

Short-Term Solutions: Programs That Should Be Implemented First

Suggested Route to School Maps

Suggested Route to School maps show stop signs, signals, crosswalks, sidewalks, trails, overcrossings (or pedestrian bridges), and crossing guard locations around a school. These can be used by families to identify the best way to walk or bike to school.

LCSD #1 currently produces "Suggested Walking Routes" maps for elementary schools (). These maps should continue to be produced and distributed with regular updates. LCSD #1 and the Cheyenne MPO should also seek feedback on the routes from parents at the school.



Figure 43: A suggested route map shows safe walking and bicycling routes and other helpful transportation information

Walk and Bike to School Day/Week/Month

Walk and Bike to School Day/Week/Month are special events encouraging students to try walking or bicycling to school. The most well-known of these is International Walk to School Day, a major annual event in October that attracts millions of participants in over 30 countries. LCSD #1 has participated in these activities, but there remains room for expansion of the events and exposure for students.

Walk and Bike to School Days can be held yearly, monthly, or even weekly, depending on the level of support and participation from students, parents, and school and local officials. Some schools organize more frequent days – such as weekly Walking/Wheeling Wednesdays or Walk and Roll Fridays – to give people an opportunity to enjoy the event on a regular basis. Parents and other volunteers accompany the students, and staging areas can be designated along the route to school where groups can gather and walk or bike together. These events can be promoted through press

releases, articles in school newsletters, and posters and flyers for students to take home and circulate around the community.

Medium-Term Solutions: Programs That Should Be Implemented Second

Walking School Buses

Parents and guardians often cite distrust of strangers and the dangers of traffic as reasons why they do not allow their children to walk to school. Walking School Buses are a way to make sure that children have adult supervision as they walk to school. Walking School Buses are formed when a group of children walk together to school and are accompanied by one or two adults (usually parents or guardians of the children on the "bus"). As the walking school bus continues on the route to school, it picks students at designated meeting locations.

Walking school buses can be informal arrangements between neighbors with children attending the same school or official school-wide endeavours with trained volunteers and structured meeting points with a pick-up timetable[40].

Stop and Walk

This year-round campaign is designed to encourage parents who drive their children to school to stop several blocks from school, and walk the rest of the way. Not all students are able to walk or bike to school. They may live too far away from school to walk or their route to school be include hazardous traffic situations such as a major arterial road. This type of campaign is used to allow students who are unable to walk or bike to school a chance to participate in school walking programs. It also helps reduce traffic congestion within the school's immediate vicinity. The program can be included as a part of other encouragment activities such as the Golden Sneaker Award, Walk Across Wyoming, and the Mileage Club.

Long-Term Solutions: Implemented After Short- And Medium-Term Programs

Friendly Walking/Biking Competitions (Incentive Programs)

Contests and incentive programs reward students by tracking the number of times they walk, bike, carpool, or take transit to school. Contests can be individual, classroom competition, or interschool competitions. Local businesses may be willing to provide incentive prizes for these activities. Students and classrooms with the highest percentage of students walking, biking, or carpooling compete for prizes and "bragging rights." Small incentives such as shoelaces, stickers, and bike helmets can be used to increase participation. It can also be effective to

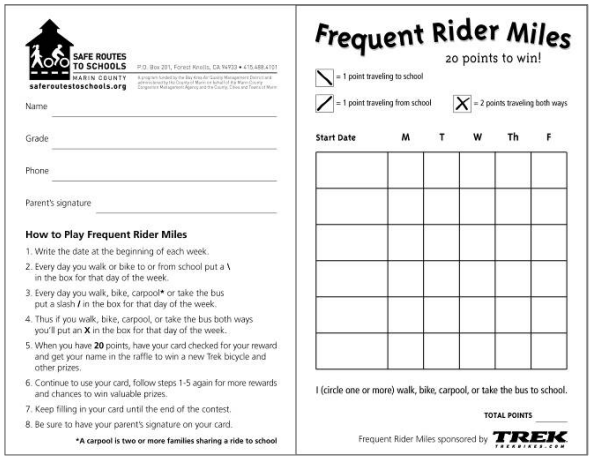


Figure 44: Example of a mileage club tally card

[40] Many walking school bus resources are available online, such as WalkingSchoolBus.org (www.walkingschoolbus.org) and the National Center for Safe Routes to School's Walking School Bus guide: www.saferoutesinfo.org/guide/walking_school_bus/index.cfm.

allow different grades and schools (high school vs. grade school vs. junior high school) to compete against each other in a mobility challenge.

Examples of Walking and Biking Competitions include:

On-campus walking clubs (mileage clubs) - Children are issued tally cards () to keep track of "points" for each time they walk, bike, bus or carpool to or from school. When they accrue a specified number of points, they earn a small prize and are entered in a raffle for a larger prize. At the end of the school year, there is a drawing for major prizes.

Pollution Punchcard - This year-round program is designed to encourage school children and their families to consider other options for getting to school such as biking, walking, carpooling, and public transportation. Every time a student walks, bikes, or carpools to school, a parent volunteer or school representative stamps the card. Students then receive a reward when the punch card is complete.

Walk and Bike Challenge Week/Month - This month-long encouragement event is generally held in conjunction with National Bike Month in May or with the state's annual bike celebration, such as Wyoming's Bike to Work Week in June. Students are asked to record the number of times they walk and bike during the program. The results are tallied and competing schools or classrooms compare results. Students who are unable to walk or bike to school can participate by either walking during a lunch or gym period, or by getting dropped off further away from the school and walking with their parents the last several blocks.

Golden Sneaker Award - Each class keeps track of the number of times the students walk, bike, carpool or take the bus to school and compiles these figures monthly. The class that has the most participation gets the Golden Sneaker Award. (The award can be created by taking a sneaker, mounting it to a board like a trophy, and spray painting it gold.)

Walk Across America/Wyoming - This is a year-round program designed to encourage school children to track the number of miles they walk throughout the year. Students will be taught how to track their own mileage and will also learn about places in the United States on their way. Teacher or volunteer support is necessary.

Each of these programs can use incentives to increase participation and reward the students for their efforts. Examples of incentives include:

- Shoelaces
- Pedometers
- Reflective zipper pulls
- Bicycle helmets
- Raffle tickets for a bicycle from a local bike shop
- Early dismissal
- Extra recess time
- Pizza parties

Back-to-School Blitz

Families typically set transportation habits during the first few weeks of the school year and many families are not aware of the many transportation options available to them. Because of this, most families will develop the habit of driving to school. A "Back to School Blitz" can be used at the beginning of the school year to promote walking, bicycling, transit, and carpooling as school transportation options.

The "Back to School Blitz" includes many of the other programs in this toolkit, including Suggested Route Maps, articles in school newsletters, and enforcement activity. Additional elements include:

A packet given to each family containing information about school transportation options, including:

- Cover letter signed by the principal encouraging parents to create transportation habits with students that promote physical activity, reduce congestion, increase school safety, and improve air quality
- School transportation maps (Figure 46) or suggested routes to school maps that include bicycling and walking routes, transit and school bus stops, drop-off and parking areas, and bike parking locations
- Pledge forms about not driving alone to school; entries go in raffle for a prize donated by local businesses

In addition to the packet, the following strategies can be included:

- Table at back-to-school night with materials and trained volunteers who can answer questions about transportation issues
- Article in first school newsletter about transportation options and resources
- Enforcement activities
- Strict enforcement of school parking policies during first month of school and throughout the year if possible

Bike Trains

A bicycle train is very similar to a walking school bus. Groups of students accompanied by adults can bicycle together on a pre-planned route to school. Routes can originate from a particular neighborhood or, in order to include children who live too far to bicycle, begin from a park, parking lot, or other meeting place. They may operate daily, weekly or monthly. Bike trains help address parents' concerns about traffic and personal safety while providing a chance for parents and children to socialize and be active.

Locally-Sponsored Bicycle and Walking Events

The State of Wyoming, Laramie County, and the City of Cheyenne sponsor a number of events that encourage residents to get out and get active. Such events include the Wyoming Fitness Council's Health and Fitness Day, Wyoming marathon races, and walks, runs, and rides for charity. Schools are encouraged to structure their encouragement activities around such special events. For example, over the course of a week, students could walk the distance of a marathon as part of a Walking across Wyoming program.

Policy and Enforcement Solutions

School and district policies can focus on methods to ensure that vehicle traffic, busing and transit, and walking and bicycling to school are conducted in the safest and most efficient way possible. Many of the identified policies focus on vehicle pick-up and drop-off activities. Implementing policies can often be very low cost, although they may involve a greater outlay of staff resources, and new procedures may take some time to gain acceptance.

Enforcement tools are aimed at ensuring compliance with traffic and parking laws in school zones. Enforcement activities help to reduce common poor driving behavior, such as speeding, failing to yield to pedestrians, turning illegally, parking illegally, and other violations. Enforcement strategies, in conjunction with education efforts, are intended to clearly demonstrate what is expected of motorists and to hold them accountable for the consequences of their actions. While most enforcement is the responsibility of police and other law enforcement, there are numerous complementary strategies that can be undertaken by school officials, crossing guards, parents, and volunteers.

The policy and enforcement solutions in this section are organized by short-term, medium-term, and long-term recommendations.

Short-Term Solutions: Programs That Should Be Implemented First

Dedicated Bus Zones

Establishing separate areas for vehicular and bus traffic can help improve traffic flows in the pick-up/drop-off area. Conflicts often occur when private vehicles and buses arrive at the same time and in the same location. Separating traffic often necessitates establishing an off-street bus zone, dedicated solely to buses. Private vehicles should not be allowed to load/unload in the bus zone. Bus zones need to be large enough to accommodate all buses that might be parking there at one time.

Most schools within LCSD #1 currently have dedicated bus zones. It is suggested that this policy be continued and expanded to include all schools with high numbers of bussed students.

Staggered Bell Times

Staggered bell times can help to disperse the traffic peak at schools with a large student population or when two or more schools are in close proximity to one another. For a single school application, students' start and end time should be grouped by grade levels. The start times of these groups should be at least 15 minutes apart. This allows motorists from the first group to leave the school or be completely out of the area by the time the second group arrives. With multiple schools, staggering bell times can be coordinated among two or more schools to ensure that numbers of motorists do not strain the transportation system.

Some schools within LCSD #1 currently have staggered bell times to alleviate busing constraints. It is suggested that this policy be continued and expanded to more schools, including elementary and junior high schools and schools with larger populations.

Parent Drop-off/Pick-up Operations

Creation of a parent drop-off/pick-up "loop" can help maximize capacity and safety and minimize delay in drop-off and pick-up operations. The loop can be either a dedicated lane just for pick-

up/drop-off or a portion of the larger parking lot that has been marked with cones to serve as the pick-up/drop-off loop. Having supervisors present can help ensure that loading/unloading moves forward smoothly, efficiently, and safely.

Some schools within LCSD #1 currently have drop-off/pick-up loops. LCSD #1 should work with schools and local jurisdictions to maintain this policy and expand it to include schools where pick-up and drop-off creates significant congestion due to the configuration of existing facilities.

School Safety Committee

Currently LCSD #1 has a School Safety Committee. This group is made up of representatives from the City Engineer's Office, Laramie County Public Works, WYDOT, Cheyenne Police Department, Laramie County Sheriff's Department, the Cheyenne MPO, and various departments within LCSD #1, including Planning and Transportation. This group meets monthly during the school year to discuss safety concerns that have arisen at the various schools and what measures can be taken to address them. Pedestrian and bicycle concerns are some of the most common topics of discussion.

It is suggested that LCSD #1 continue to utilize School Safety Committee as a means to coordinate school safety initiatives.

School Safety Patrols and Crossing Guards

School safety patrols are trained student volunteers responsible for enforcing drop-off and pick-up procedures. Student safety patrols may also assist with street crossings; they do not stop vehicular traffic, but rather look for openings and then direct students to cross. According to the National Safe Routes Clearinghouse, "student safety patrols [increase] safety for students and traffic flow efficiency for parents. Having a student safety patrol program at a school requires approval by the school and a committed teacher or parent volunteer to coordinate the student trainings and patrols."

Crossing guards are trained adults, paid or volunteer, who are legally empowered to stop traffic to assist students with crossing the street.

Currently some Cheyenne schools have parents and volunteers who support school staff during arrival and dismissal time. It is suggested that LCSD #1 continue to utilize parents and volunteers as support for arrival and dismissal but expand the program to create an official school safety patrol that includes parents, adult volunteers, and students.

Crosswalk Enforcement Actions

In a crosswalk enforcement action, the local police department targets motorists who fail to yield to pedestrians in a school crosswalk. A plain-clothes "decoy" police officer ventures into a crosswalk or crossing guard-monitored location, and motorists who do not yield are given a citation by a second officer stationed nearby. The police department or school district may alert the media to "crosswalk stings" to increase public awareness of the issue of crosswalk safety, and news cameras may accompany the police officers to report on the enforcement action.

It is suggested that LCSD #1 request SRO's to hold crosswalk enforcement actions at high priority locations.

School Parking Lot "Citations"

If on-site parking problems exist at a school, such as parents leaving vehicles unattended in loading zones, school staff may issue parking lot "citations" to educate parents about appropriate parking

locations. These "citations" are actually warnings designed to look like police tickets and are intended to educate parents about how parking in improper zones can create safety hazards or disrupt traffic flow for other parents during the pick-up/drop-off period.

Other informal enforcement programs include posting "cell free zone" signs in the school parking lot where parents are asked not to use cell phones while driving during drop-off and pick-up. Drop-off and pick-up procedures can be sent home with students at the beginning of the year and after returning from school vacations.

It is suggested that LCSD #1 request that SROs issue parking lot citations after initial warnings have been issued.

Radar Trailer

Speed radar trailers can be used to enforce speed limit violations in known speeding problem areas. In areas with speeding problems, police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. The Cheyenne Police Department currently uses speed radar trailers throughout the city.

Speed radar trailers can be used as both an educational and enforcement tool. By itself an unmanned trailer effectively educates motorists about their current speed compared to the speed limit. As an alternative enforcement measure, the police department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit. Because they can be easily moved, radar trailers are often deployed on streets where local residents have complained about speeding problems. If frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and the strategy can lose its benefits. For that reason, radar trailers should be moved frequently.

Medium-Term Solutions: Programs That Should Be Implemented Second

Valet Drop-off

Valet drop-off is a technique to improve traffic flow within the drop-off and pick-up loop by assisting students into and out of vehicles. A "valet" is present at the pick-up/drop-off area to open car doors and assist students into and out of arriving vehicles, thereby improving traffic flow. The valet system eliminates the need for parents to get out of the vehicle to open the door for a child and remove bags or other items. The valet system is typically staffed by school staff or parent volunteers, who can quickly and efficiently move children into and out of vehicles and hold onto backpacks, umbrellas, and other items. Some schools use older grade students as valets, for example having 5th or 6th graders help younger students. However, student volunteers must get out of class early to prepare for pick-up. A valet system should be implemented at least for non-winter months.

A supplement to the valet system is a nameplate in the vehicle window that identifies what student needs to be picked up. This allows the valet to find students and bring them to arriving vehicles.

Platooning Drop-off/Pick-up System

In a platooning system, all vehicles are unloaded/loaded simultaneously, then proceed to the exit. If a vehicle unloads or loads more efficiently than the vehicle in front of it, the rear vehicle must wait for the lead vehicle to finish the unloading/loading, then follow it out of the loop. This tool is best used to control the inclination to always drop-off and pick-up students directly in front of the

school. Often additional curb loading is available downstream of the school and is severely underutilized, creating excess congestion and delay prior to entering the lot. At least two monitors are needed to effectively operate the vehicle platoon – one at the loop entrance to direct the maximum number of vehicles into the lot for a single cycle, and a second to ensure that the lead vehicle proceeds to the front-most loading stall. In some cases, drop-off/pick-up policies and procedures will need to be altered to allow this.

Neighborhood Speed Watch

In areas where speeding problems have been identified by residents, a Neighborhood Speed Watch can be used to warn motorists that they are exceeding the speed limit. A radar unit is loaned out to a designated neighborhood representative to record speed information about vehicles. The person operating the radar unit must record information, such as make, model, and license number of offending vehicles. This information is sent to the local law enforcement agency, which then sends a letter to the registered vehicle owner, informing them that the vehicle was seen on a specific street exceeding the legal speed limit. Letters are typically sent out to those driving at least five miles per hour over the speed limit. Although not a formal citation, the letter explains that local residents are concerned about safety for their families and encourages the motorist to drive within the speed limit.

Neighbors can be indentfied through outreach, such as a letter or flyers. Yard signs can also be incorporated into the speed watch program. Participating neighbors post signs stating that children live in the neighborhood and it is necessary to slow down for their safety.

Speed Feedback Sign

A permanent speed radar sign can be used to display approaching vehicle speeds and speed limits on roadways near a school. The unit is a fixed speed limit sign with a built-in radar display unit that operates similar to a radar trailer.

Studies suggest that speed feedback signs are highly effective in slowing traffic, particularly near school zones, on residential streets, and around playgrounds[41]. Results also suggest that the effect is long-lasting. In an interview conducted by the same organization traffic engineers and other safety professionals ranked driver feedback signs as the most effective traffic calming method for school zones.

In order to maximize effectiveness for school settings, the radar display unit should be set to only activate during school commute hours. Roadways approaching the school site are the most appropriate location to display speeds, instead of streets along the school frontage that will likely have lower speeds due to pick-up/drop-off traffic.

Evaluation Solutions

Evaluation of the Safe Routes to School program is important to understand the effectiveness of the program, identify improvements that are needed, and ensure that the program can continue in the long-term. Evaluation can measure shift in travel behavior, changes in attitudes toward biking and walking, awareness of the Safe Routes to School program, grant money received, and projects completed.

[41] http://www.stopspeeders.org/options.htm#Radar

The solutions in the evaluation section are organized by short-term, medium-term, and long-term recommendations.

Short-Term Solutions: Programs That Should Be Implemented First

School Site Audit

A School Site Audit, sometimes called a walking audit or walkabout, is an evaluation of pedestrian and bicycling conditions around the school. Typically school site audits are conducted by the local school group or task force on foot and should be conducted during regular school session and times of travel by walking the routes that students use to get to school. A site audit may also be conducted on bicycle in order to better evaluate bicycling conditions.

The goal of a site audit is to document conditions that may discourage walking and bicycling to school and to identify solutions to improve those conditions. The audit should involve an assessment of the built environment around a school (e.g., streets, sidewalks, pathways, crosswalks and intersections, bike routes, traffic controls), drop-off and pick-up operations (e.g., presence of designated loading areas), as well as behaviors of students, parents, and motorists that could contribute to unsafe conditions for bicyclists or pedestrians (e.g., speeding, jaywalking, failure to yield to pedestrians).

A School Site Audit checklist form sample asks for detailed information including:

- Student Drop-Off and Pick-Up Areas;
- Bus Loading Zones;
- Sidewalks and Bicycle Routes;
- Intersections Near the School Property;
- Sight Distance; and
- Traffic Signs, Speed Controls and Pavement Markings

The local school task force can use the School Site Audit checklist as a basis for conducting their walkabout[42]. Along with the checklist, an aerial map of the school area is helpful for the site audit. Aerial photos can be marked up with identified issues and suggested improvements.

Existing conditions maps can be extracted from this report to serve as a starting point for each school site audit.

Perform Annual Hand Tally and Parent Surveys

Since 2005, the federal Safe Routes to School program has set aside federal funding to help states, cities, towns, and schools increase the number of students walking and biking to school. One requirement of receiving this money is that all schools must perform hand tallies and parent surveys to track the effectiveness of the various programs across the country.

The Wyoming Department of Transportation (WYDOT) currently requires Safe Routes to School grantees to submit program evaluations semi-annually. The WYDOT requires data to be gathered using the National Center for Safe Routes to School Student In-Class Travel Tally and Parent Survey[43].

[42] http://www.saferoutes.ky.gov/Evaluation&Data_Collection/School_Site_Audit.pdf

[43] The National Center for Safe Routes to School provides the appropriate forms and related resources, including an online parent survey option: www.saferoutesinfo.org/guide/evaluation/index.cfm.

Medium-Term Solutions: Implemented After Short-Term Programs

Program Evaluation

There are many different education, encouragement, and enforcement programs that can be implemented to help increase the number of students walking and biking to school. Not every program is the correct fit for every school. It is important to evaluate programs in the context of the school environment prior to deciding what would be a good choice for a school. Once programs have been implemented, it is necessary determine whether or not it was a good choice for the school and what about the program worked and what did not work quite as well. Below are some suggested steps for proceeding with the program evaluation process.

Program evaluation can be administered by following these steps:

- Survey local traffic conditions and issues (much of this information can be found from the School Site Audit)
- Identify methods to implement programs
- Determine success benchmarks to evaluate the effectiveness of the program efforts
- Interview program administrators (teachers, volunteers) and participants (students) to discuss what worked and what did not

Engineering Tools

The environment near the school is often a deciding factor when a parent or guardian decides whether or not to let their child walk or bicycle to school. There are many engineering improvements that help improve pedestrian and bicyclist safety and comfort near schools (Figure 45). The engineering improvements encourage motorists to reduce speeds, increase visibility of students walking and biking, and make it easier for students to cross the street. While some engineering efforts may require a larger financial commitment, many tools are very cost effective. The City of Cheyenne's Public Works Department or contractors are responsible for constructing engineering improvements. The following engineering improvements should be considered for appropriateness and potential impact at each school. This document contains a basic description of the treatment and discusses several situations where it can improve the bicycle and pedestrian travel environment around schools. Detailed information on design and placement standards are contained in three documents. The 2009 *MUTCD*[44], 2003 WYDOT *Pedestrian and School Traffic Control Manual* (PSTCM), the 2007 *Road, Street and Site Planning Design Standards (*RSSPDS*),* Cheyenne's *Neighborhood Traffic Management Program Manual (*NTMP*),* and the 2010 *Cheyenne Metropolitan Area Pedestrian Plan (*CMAPP*).*



Figure 45. Example of a pedestrian refuge island

[44] Modifications mandated by the 2009 updated to the MUTCD are noted where applicable throughout the discussion of engineering tools.

Medians and Pedestrian Refuge Islands

Medians and pedestrian refuge islands are located at an intersection or in the middle of a block. Medians are curbed areas in the center of the roadway that reduce the roadway width and may reduce the speed of traffic. Pedestrian refuge islands (Figure 45) are medians with a cut-out ("refuge") for pedestrians. Pedestrian refuge islands are often used with a marked crosswalk and are at least four-feet wide. They improve pedestrian safety by creating a curb-protected location in the middle of the street. This allows the pedestrian to cross one direction of traffic at a time. These are best used on higher volume streets in conjunction with visibility crosswalks and signs.

In Cheyenne, median islands are allowed on local, collector and arterial roadways. More detail on medians and pedestrian refuge islands can be found in the NTMP and CMAPP.



Figure 46. Example of a speed table

Speed Tables, Speed Bumps and Speed Cushions

Speed tables (Figure 46), bumps and cushions slow vehicles by forcing them to travel over a raised surface (they are also known as "vertical deflection"). Speed tables are longer and wider than speed bumps. They are generally used on lower volume streets and may not be permitted or advised on larger or higher-volume streets. Speed bumps are included in Cheyenne's NTMP but are only in use at one location – on 16th Street near Alta Vista Elementary. Speed bumps can cause challenges during winter maintenance and should be designed and marked for easy recognition by snow plowing personnel. Additional design guidance on these devices is available in the CMAPP.



Figure 48. Paired chicanes create a pinch point that narrows roadway width and slows traffic

Chicanes

Chicanes (Figure **47**) consist of multiple extensions or roadside islands that create a serpentine path for autos. Motorists must reduce speed in order to effectively maneuver around the in-street barriers. Chicanes are mainly used on local streets near a school site. Chicanes can cause challenges during winter maintenance and should be designed and well marked for easy recognition by snow plowing personnel. Cheyenne allows chicanes on local and collector streets. More information on this treatment can be found in the CMAPP and NTMP.



Figure 47. Example of a Chicane

Pinch Points

Pinch points are very similar to chicanes. Chicanes are offset curb extensions, while pinch points are paired curb extensions or roadside islands used create a single auto lane. Pinch points slow traffic by reducing the width of the street. Pinch points are typically used on neighborhood streets. These devices would be appropriate for use on local and collector streets. More information is available in the CMAPP.

Traffic Circles

Traffic circles are in-street speed reduction devices found at residential intersections (Figure 49). They slow traffic by creating a "pinch point" for motorists, while turning vehicles must slow to make a sharper turn. Traffic circles can be used to visually enhance the street by incorporating plants or public art. Cheyenne allows traffic circles on local and collector streets. Additional information on this treatment is contained in the CMAPP and NTMP.



Figure 49. Traffic circles are one method of creating a pinch point

Single Lane Roundabouts

Roundabouts can be used at intersections as an alternative to stop signs or signals. They reduce the speed of traffic while maintaining traffic flow through an intersection. They can be used on low and high traffic volume roads. Roundabouts generally improve crossing conditions for pedestrians but can increase the difficulty of bicycling. It may be beneficial to carefully consider the impact that a roundabout will have on a school cycling route before completing the installation. More information on roundabouts is contained in the RSSPDS and CMAPP.

Reduced Corner/Turning Radius



Figure 50. Example of a reduced corner/turning radius

Reducing the turning radius for right-hand turns means creating a tighter turning angle for the motorist (Figure 50). This reduces the speed at which a motorist can make a right turn. It also improves the visibility of the pedestrian to the motorists and increases the sight distance of the pedestrian. Detailed discussions of corner radii are available in the CMAPP and RSSPDS. While reducing the radii is appropriate in some locations, it can impact motor vehicle traffic by reducing the turning speed and throughput of the intersection.

School Area Signage (Includes High-Visibility Signs)

The 2009 MUTCD and the PSTCM provide guidance on the use of school area signs and markings (Figure 51). Key signs include the School Crosswalk Warning, School Speed Limit and School Advance Warning Assembly. The 2009 MUTCD stipulates that all new installations or retrofit school signs shall be high visibility signs.



Figure 51. High visibility signage

Pavement Markings

Pavement markings (Figure 52) have important functions in a proper scheme of school area traffic control. In some cases, they are used to supplement the regulations or warnings provided by devices such as traffic signs or signals. In other instances, they are used alone and produce results that cannot be obtained by use of any other device.

Pavement markings can also serve as an effective means of conveying certain regulations, guidance, and warnings that could not otherwise be made clearly understandable. Pavement markings have limitations – they might not be clearly visible when wet or covered in snow, and might not be durable when subjected to heavy traffic. The "SCHOOL" marking, used in advance of uncontrolled crosswalks, is the most important school-specific pavement marking. The MUTCD, CMAPP and PSTCM also provide guidance on the use of stop lines, yield lines, curb markings, and other symbol markings.



Figure 52. School pavement markings

Sidewalks

Sidewalks create a designated space for pedestrians, as well as bicyclists, who are legally allowed to ride on sidewalks outside the central business district of Cheyenne. A complete sidewalk network is an important component of the transportation system for students. An incomplete sidewalk network, narrow sidewalks, or sidewalks in disrepair are a hazard for students walking and biking and may force students to walk in the roadway. The CMAPP provides a comprehensive discussion of sidewalk related design issues while the RSSPDS details sidewalk and tree lawn widths and provides additional guidance on design features .



Figure 53. Physical separation from the roadway increases the comfort of the pedestrian environment

Trails and Greenways

Trails, pathways, and greenways are often viewed as recreational facilities, but they can serve an important function as walking and bicycling corridors to school. Multi-use pathways and Greenways are designed to serve both bicyclists and pedestrians and provide additional width over a standard sidewalk (Figure 54). Pathways may be constructed adjacent to roads, through parks or open space areas, along creeks, or along linear corridors, such as abandoned railroad lines. Regardless of the type, pathways constructed next to the road should have some type of buffer to separate the path area from the adjacent travel lane.



Figure 54. Cheyenne's Greenway system provides safe and comfortable travel routes to many schools

Greenways in Cheyenne are maintained by the Parks Department and during snow are generally plowed before streets or sidewalks are cleared of snow. This provides an important connection for student travel. Generally, Cheyenne's Greenways are 10 – 12 feet wide paved multi-use facilities. Design details can be found in the CMAPP and the *Cheyenne Greenway Development Plan.*

Curb Extensions/Bulbouts

Curb extensions (sometimes called curb bulbs or bulbouts), such as those on Capitol Avenue in Cheyenne, have many benefits for pedestrians (Figure 55). They shorten the street crossing distance, provide additional pedestrian space at corners, allow pedestrians to see and be seen before entering the crosswalk, and simplify the placement of curb ramps. Cheyenne allows curb extensions on local, collector and arterial roadways. Design details are available in the NTMP and CMAPP.



Figure 55. Curb extensions reduce the required crossing distance at some designated school crossings

High-Visibility Crosswalk Striping

High-visibility striping makes crosswalks more noticable to motorists. Several different crosswalk striping patterns can be used – the most common types of crosswalk striping patterns are shown in Figure 56. The standard crosswalk striping pattern consists of two parallel lines, called the "transverse" or "standard" pattern. A number of "high-visibility" patterns are also in use, such as the ladder, zebra and continental patterns, which add bars for increased visibility.

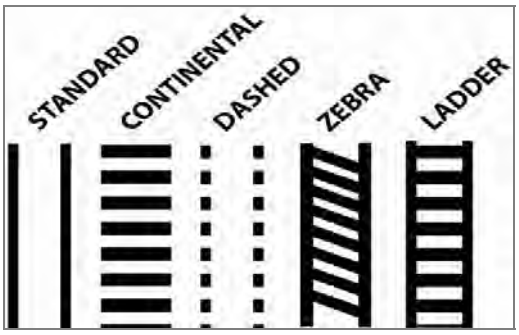


Figure 56. Crosswalk striping examples

Currently, Cheyenne uses continental style crosswalk markings at all crosswalks located outside of the

downtown core. Crosswalks are restriped annually, in late spring.More information on crosswalk striping standards and accompanying signage is available in the CMAPP, the MUTCD and the PCTCM.

Pedestrian Countdown Signals

Pedestrian countdown signals (Figure 57), like those installed along principal such as Pershing Boulevard and Capitol Avenue give pedestrians information about how much time they have left to cross the street. Children are still learning the skills needed to be safe pedestrians. Without proper information, a flashing hand can confuse some child pedestrians, causing them to run in the crosswalk in order to complete the crossing before the signal changes. Countdown signals help children make decisions about whether or not to enter the crosswalk by telling them how much time they left have to cross the street. The 2009 MUTCD requires pedestrian countdown signals at all actuated crossings where the change interval is greater than seven seconds.



Figure 57. Countdown signals help pedestrians gauge how much time remains in the walk cycle.

Leading Pedestrian Interval

A Leading Pedestrian Interval (LPI) is an option that can be added to a traffic signal. An LPI activates the walk signal prior to releasing parallel vehicle traffic, particularly those attempting to make right or left turns. The 2009 MUTCD states that an LPI, if used, shall be at least 3 seconds in length.

Pedestrian-Only (Hybrid) Signals

One type of pedestrian-only signal is called a HAWK (High-intensity Activated crossWalk). It can be used at mid-block crossings with high pedestrian volumes or at intersections that do not already have a traffic signal. Pedestrians use a push button to activate the warning signal and motorists receive a flashing red light and then a solid red light. When motorists have a solid red light, pedestrians then see a white "walk" indication, letting them know they are allowed to cross the street (Figure 58). After pedestrians have finished crossing the street, motorists then receive a flashing red light that lets them know that they may proceed when it is safe to do so. The 2009 MUTCD contains placement guidance and warrants for HAWK signals.



Figure 58. HAWK signals, such as this one located in West Bloomfield Twp, Michigan) can improve crossing conditions at locations where a full signal is not needed

Stop Lines

Stop lines (Figure 59) are solid white painted lines several feet in advance of a crosswalk. Stop lines provide motorists with a visual cue indicating that they should stop behind the line. Stop bars are an optional addition to "Yield When Occupied" crosswalks in Cheyenne and should be installed at locations where extra visibility is needed, or at locations where motorists frequently fail to stop for pedestrians. Additional design guidance is available in the CMAPP and PSTCM. It should be noted that the 2009 MUTCD requires the use of a R1-5A series sign in when used with stop lines.



Figure 59. Stop lines, or yield lines provide guidance for motorists about the desired stop location when a crosswalk is occupied.

Bike lanes

Bike lanes (Figure 60) are a striped portion of the road that forms an area specifically for bicyclists. Bike lanes increase the visibility of bicycles to motorists by giving them a designated space on the road. Bike lanes are better suited for older and more experienced children who have learned the skills needed for bicycle handling, avoiding road hazards and following the rules of the road. Bike lane signing and marking design details are available in the 1999 AASHTO *Guide for the Development of Bicycle Facilities*.



Figure 60. Bike lanes delineate roadway space dedicated to cyclists.

Secure Bicycle Parking

Providing a secure and convenient location for bicycle parking is one way to help encourage more children to bicycle to school. Good bike parking is conveniently located (near the school entrance, for example), and protects bicycles from vandalism/theft, damage, and weather (Figure 61).

Short-term bicycle parking facilities include racks that permit the locking of the bicycle frame and at least one wheel to the rack and support the bicycle in a stable position without damage to wheels, frame or components.

Long-term bicycle parking facilities are intended to provide secure long-term bicycle storage. Long-term facilities protect the entire bicycle and its components and accessories against theft and against inclement weather, including snow and wind-driven rain.



Figure 61. Bike parking located near a building entrance can provide secure and safe bicycle parking for students.

Loop Detectors for Bikes

Where minor streets intersect major roads at signalized intersections, devices that detect cars (loop detectors or video detectors) on the minor approach do not always detect smaller objects, like bicycles. These devices can be calibrated to detect bicyclists as well as vehicles.

Loop detectors are used at intersections that are actuated by the presence of a vehicle in the roadway and allow for a bicycle to "trip" the signal and receive a green light. When cyclists position themselves over a loop detector, the detector uses a magnetic field to detect the metal in a bicycle. Video detectors are mounted on a traffic signal and detect bicycles over a larger area. Additional information on Loop Detectors is available in the 2009 MUTCD.

Human-Scale Lighting

Safe sidewalks are essential components of good pedestrian environments, and well-lit environments convey a feeling of comfort and safety, particularly at night (Figure 62). Lighting should illuminate the sidewalk and roadway crossings to increase pedestrian visibility. Lighting is also an important element for multi-use pathways, at underpasses and at other isolated locations. Lights should be low enough to the street to increase pedestrian visiblity to road users and light their walking path. Additional details are available in the CMAPP and RSSPDS.

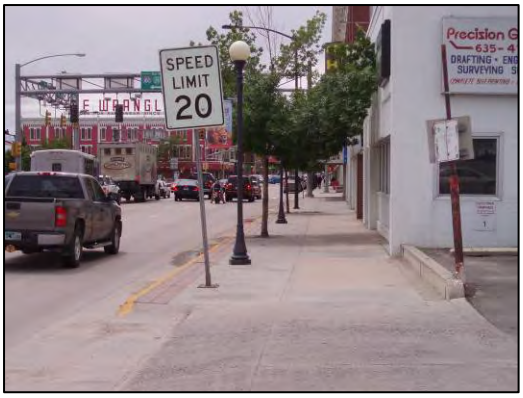


Figure 62. Human scale lighting helps delineate pedestrian friendly environments by illuminating the sidewalk.

Grade-Separated Crossings

Occasionally, it may be necessary to raise or lower a pedestrian crossing above or below the street level (Figure 63). Due to their high cost, grade-separated crossings should only be considered when there are no safe and convenient alternative routes, such as at freeways, major highways, railways or waterways. Even in these cases, pedestrian-only grade-separated crossings should be built only after careful consideration. Those that require significant elevation change or require substantial out-of-direction travel may not be fully utilized. Grade-separated crossings may also feel unsafe because pedestrians are isolated from others. Additional details are available in the CMAPP.



Figure 63. Grade separated crossings can provide connectivity over limited access roadways.

ADA Intersection Retrofit

Because of the time period when many neighborhoods in Cheyenne were constructed, the pedestrian environment does not always meet current specifications of the Americans with Disabilities Act (ADA). As intersections are reconstructed, the City is updating corners to meet current ADA standards[45]. Additionally, Cheyenne currently has funding set aside to make annual

[45] http://www.access-board.gov/adaag/html/adaag.htm#4.7

ADA improvements at about 25 intersections. A localized and comprehensive ADA intersection retrofit along school walking routes could make it easier for physically impaired adults and children to reach school. Additional design guidance is available in the CMAPP.

Sidewalk Widening

Because of the time period when many neighborhoods in Cheyenne were constructed, the pedestrian environment does not always meet the current ADA specifications. In many neighborhoods, existing sidewalks provide less than the five feet clear space recommended by ADA. However, narrow sidewalks still provide most pedestrians with safe access to and from school. The City plans to widen sidewalks throughout the city as new construction and reconstruction of existing facilities occurs. In the meantime, several schools in Cheyenne may benefit from sidewalk widening in areas of high pedestrian traffic near schools and along designated pedestrian routes. The City does have the authority to require residents to construct or repair sidewalks that front on their property, though this measure is rarely used.

Wayfinding Signage

Many schools in Cheyenne could benefit from the installation of wayfinding signage (Figure 64). This signage can help create the feeling of a "safe travel district" and create a unique identity around each school. These signs can help guide visitors along the preferred travel routes and provide additional reminders to motorists that they are near a school. Finally, wayfinding signs posted along greenways will help users determine the direction to each school connected to the system. Additional wayfinding signage recommendations are available in the 2009 MUTCD and the CMAPP.

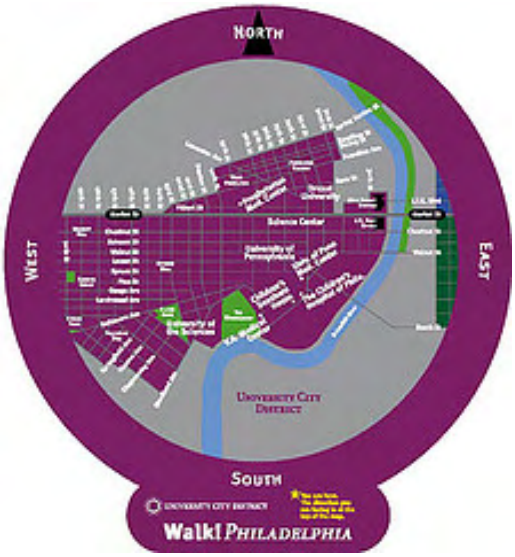


Figure 64. Wayfinding signage, such as this example from Philadelphia can help direct pedestrians to nearby schools and parks.

Cost Opinions

Table 2 summarizes planning-level cost opinions for the recommended Safe Routes to School infrastructure projects. While Table 2 shows the packaged cost for the complete suite of improvements recommended for each school, a detailed summary of the improvements and the associated costs are found in Appendix B.

Table 2. Preliminary School Improvement Cost Opinions

School	Cost Opinion
Afflerbach	$29,000
Alta Vista	$24,000
Anderson	$49,000
Arp	$348,000
Baggs	$126,000
Bain	$15,000
Buffalo Ridge	$56,000
Carey	$1,800
Cole	$91,000
Davis	$62,000
Deming	$10,000
Dildine	$173,000
Fairview	$24,000
Freedom	$3,200
Goins	$124,000
Hebard	$5,800
Henderson	$41,000
Hobbs	$46,000
Jessup	$66,000
Johnson	$143,000
Lebhart	$107,000
McCormick	$7,000
Miller	$15,000
Pioneer Park	$38,000
Rossman	$355,000
Saddle Ridge	$58,000
Sunrise	$6,300

Engineering Summary Solution Maps

The maps included in this section depict improvements in the following categories:

Intersection Improvements/Crosswalk Improvements. Intersection improvements are noted with a star on the map. Details of many intersection improvements are annotated on the map. Improvements called out by this plan may include adding pedestrian count down signals, striping a crosswalk, or adding curb ramps. If intersection improvements have not been specified, they should be detailed through a field visit and consultation with a City Engineer. A specific intersection improvement that is not called out in this plan is the retrofit of curb ramps to include truncated domes (tactile warning strips). The City of Cheyenne began installation of these devices in 2009; it is assumed that curb ramps do not have truncated domes unless explicitly called out in this plan.

Traffic Calming Improvements. Several streets around schools could benefit from traffic calming. Potential treatments are discussed in the "Engineering Tools" portion of this report as well as the Cheyenne *Neighborhood Traffic Management Program Manual*. Traffic calming improvements suggested at are generally targeted to improve student load/unload zones where parents park on the opposite side of the street and children may cross midblock, and locations where vehicles slow down at school zone signs but accelerate before leaving the school zone. Additional details on traffic calming improvements and their use in Cheyenne can be found in the City's *Neighborhood Traffic Management Program manual*. A field review and engineering review determine the type and installation details of any traffic devices.

Curb Extension Improvements. Several crosswalks already in place could benefit from curb extensions, which would increase the visibility of pedestrians, provide traffic calming along streets near schools, and shorten crossing distances for pedestrians. Curb extensions have been proposed on roadways where students would benefit from narrow crossings or in locations where higher speed traffic was noted as a concern by staff, the public, or the project team. Curb extensions should be installed in a manner that complies with the guidelines set for in Cheyenne's *Neighborhood Traffic Management Program* manual.

Bus Zone/Parent Drop-Off Zone Modification or Improvements. Improvements or modifications can include installation of zone notification signs (e.g., bus loading zone and no standing or stopping signs), or modifications to procedures (e.g., addition of an off-site pick-up/drop-off location, designation of one way approach and traffic flow by providing instructions to parents via maps and hand-outs).

A number of schools in Cheyenne are currently under construction, or will be reconstructed within the next five to ten years. The City should continue the current design practice, which creates a separate bus and student load areas off the roadway when space allows. This practice can reduce the conflicts between parents picking up children, school buses, and through motor vehicle traffic. When separation and creation of off-street bus and student load zones is not possible, the on-street bus zones and student load zones should be designated on separate sides of the school. When possible, student load zones should be placed on streets with lower speed limits and both parents and students should receive instruction that crossing mid-block through these pick-up and drop-off zones can create additional safety hazards for all roadway users.

Priority Sidewalk Infill. Priority sidewalk infill refers to a portion of a missing sidewalk that should be prioritized for construction to create a complete sidewalk near a school or along a designated school walking route. Priority infill is shown primarily along existing recommended pedestrian walk

routes. In some cases priority sidewalk infill was designated in bus zones or student load zones immediately surrounding the school.

Priority Greenway Connection. Priority greenway connections refer to a portion of greenway that would provide a safe connection to the school and should be prioritized. These connections are suggested walking routes, or close a critical gap that students can use as a pedestrian walking route.

Bicycle Parking Upgrade or Installation. Existing "wheel bender" racks should be replaced with staple racks or other types of bicycle racks that provide support for the tire and bike frame. Additional or existing racks can be placed in a covered, secure location to maximize the protection from whether and minimize the chances of theft or vandalism.

Sign Upgrade or Installation A proposed sign upgrade or improvement is denoted by an orange triangle. The details of the proposed sign upgrade are annotated on the map. Typical reasons for sign upgrade or installation include a missing sign (e.g., School Zone or STOP sign), an existing sign that is damaged or faded, or an existing sign that does not comply with MUTCD standards. It should be noted that all new or retrofit school crossing assemblies at all "yield when occupied" or "stop when occupied" crosswalks should include an R1-5 series sign located at the stop line or yield line to comply with the 2009 edition of the MUTCD. Crosswalk warning assemblies also require a W16-7P arrow placard.

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

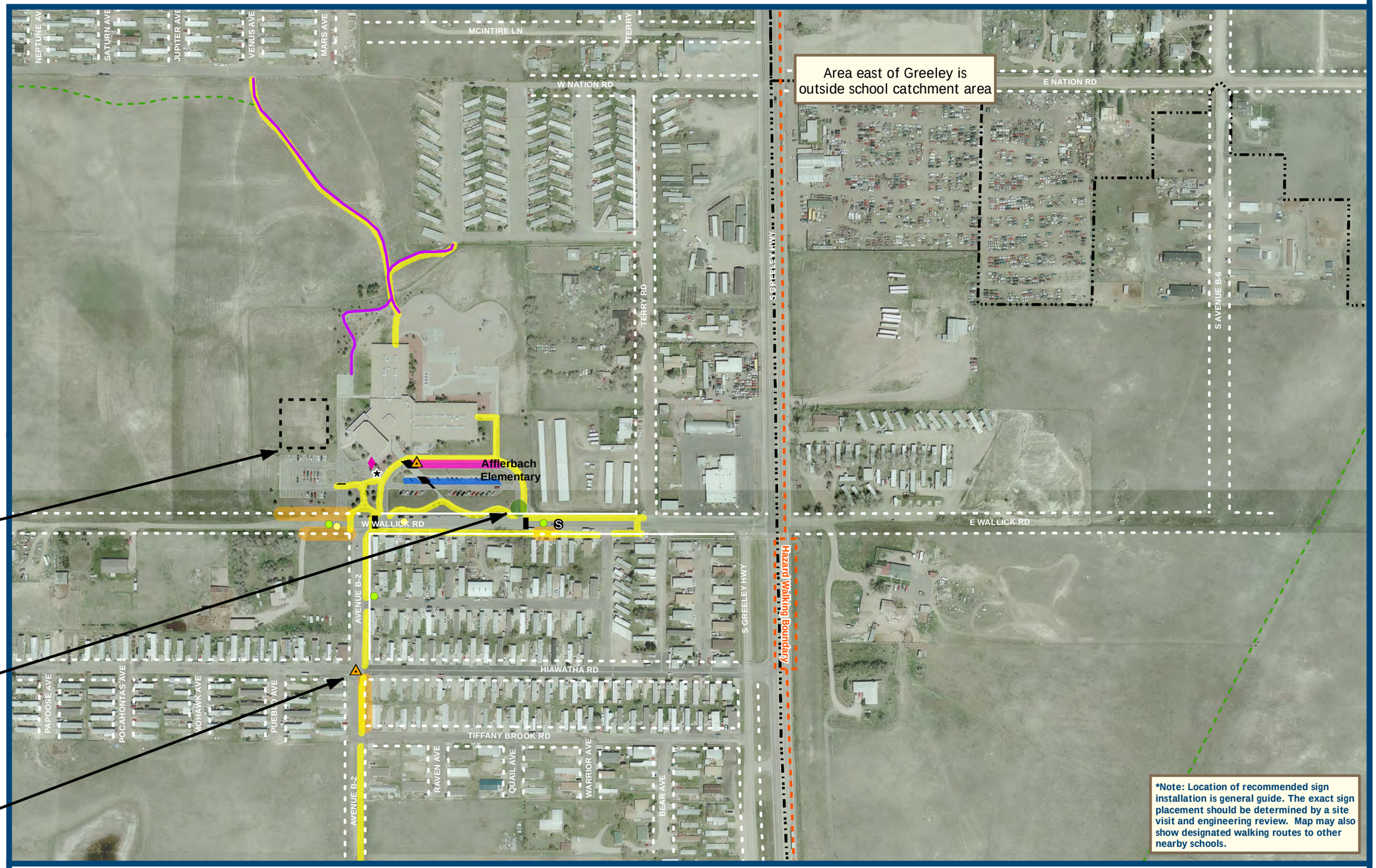
Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Staff lot could be expanded to the north to reduce potential conflicts during load times.

Consider constructing additional driveway on Wallick Avenue to create flow path through current staff parking lot. Move student load zone to this location. May require staff policy that prohibits parking in this lot during pick-up and drop-off times.

Add "All Way" placards to existing stop signs



MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Afflerbach Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

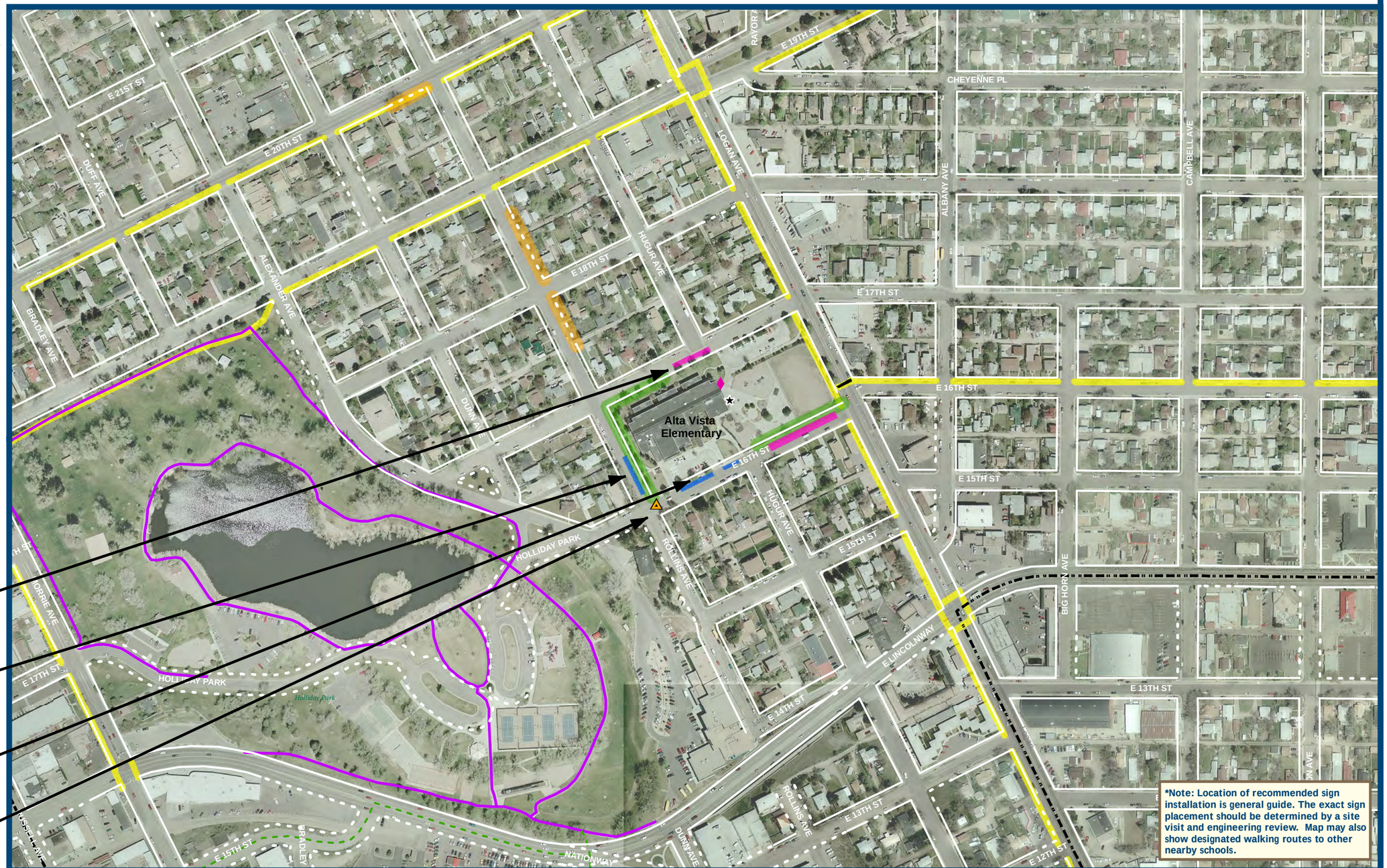
The intersection of 18th Street and Morrie (not shown; to west of map extent) lacks a curb cut on the park side

Bus zone on 17th Street is for special needs students

Consider removing bus zone from south and west sides of building to improve traffic flow for all vehicles

Existing speed hump on 16th Street - add markings to enhance visibility

Add student loading zone signs



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign



School Speed Assembly


Crosswalk Warning Assembly

0 250 500
Feet

Alta Vista Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Student load zone improvements: add new load zone on Crane, designate specific areas by grade or classroom

Install Crosswalk Warning Assembly sign and School Speed Assembly sign

Install Crosswalk Warning Assembly sign



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Anderson Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

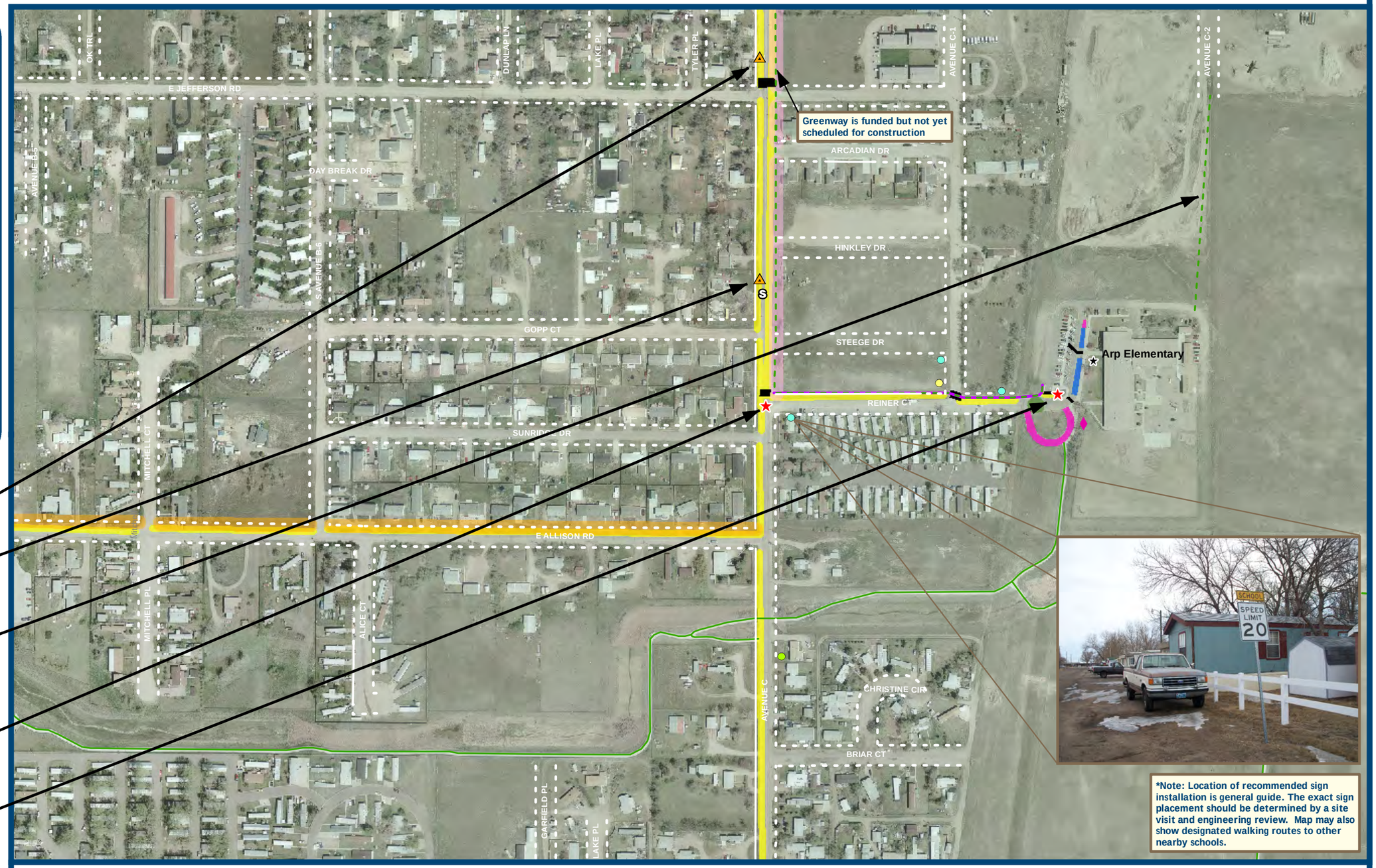
Add Crosswalk Warning Assembly sign

Add School Zone sign

Connection between the school and Ave. C-2 is desirable. Would require property acquisition or easement.

Add ADA compliant curb ramp on west side of crossing

Add ADA compliant curb ramps



MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

0 250 500
Feet

Arp Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

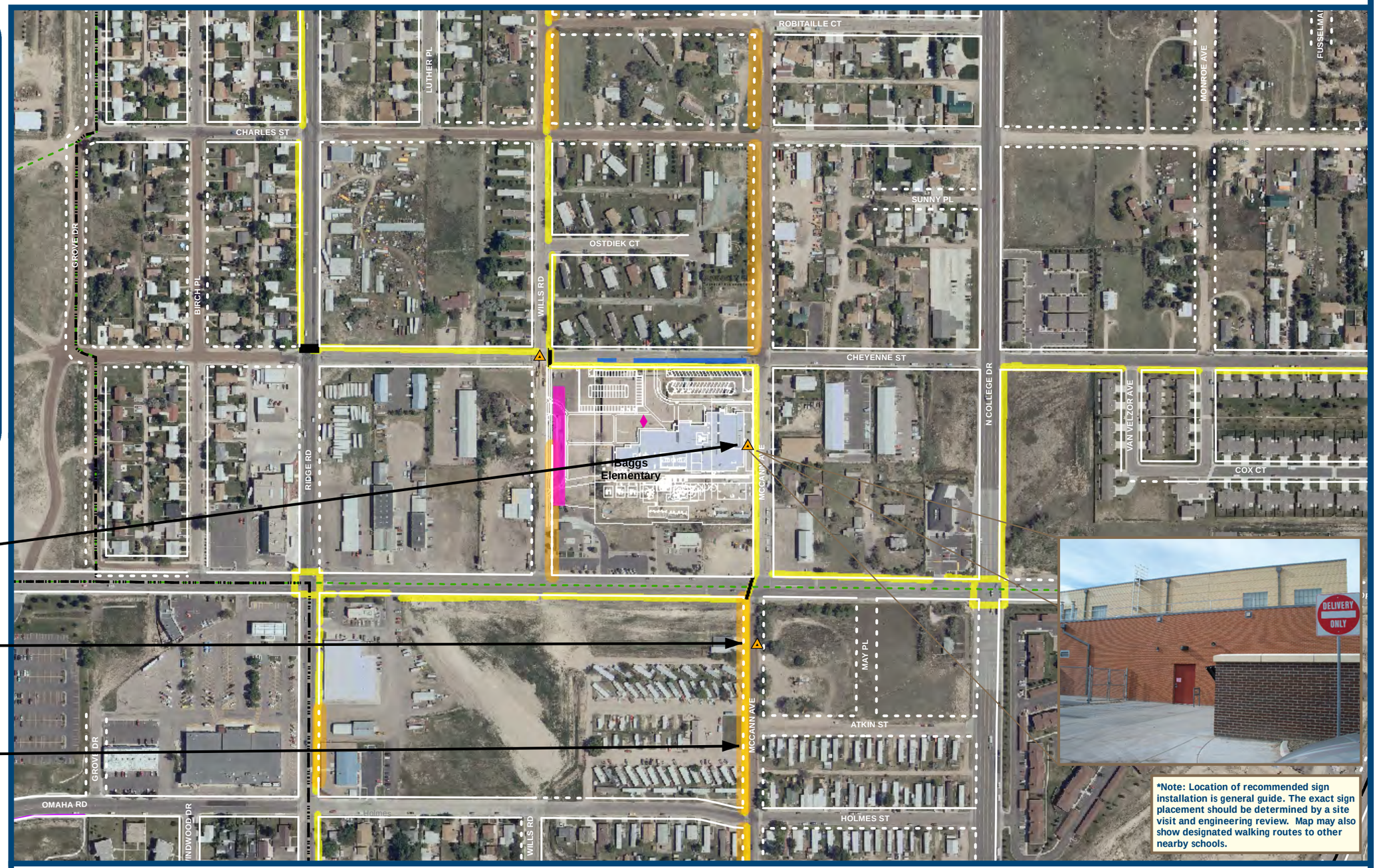
Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Replace non-MUTCD compliant "Delivery Only" sign

Install School Zone sign

McCann is unpaved from Pershing to Holmes. Priority infill extends to Lincolnway.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Baggs Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
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- Priority Sidewalk Infill

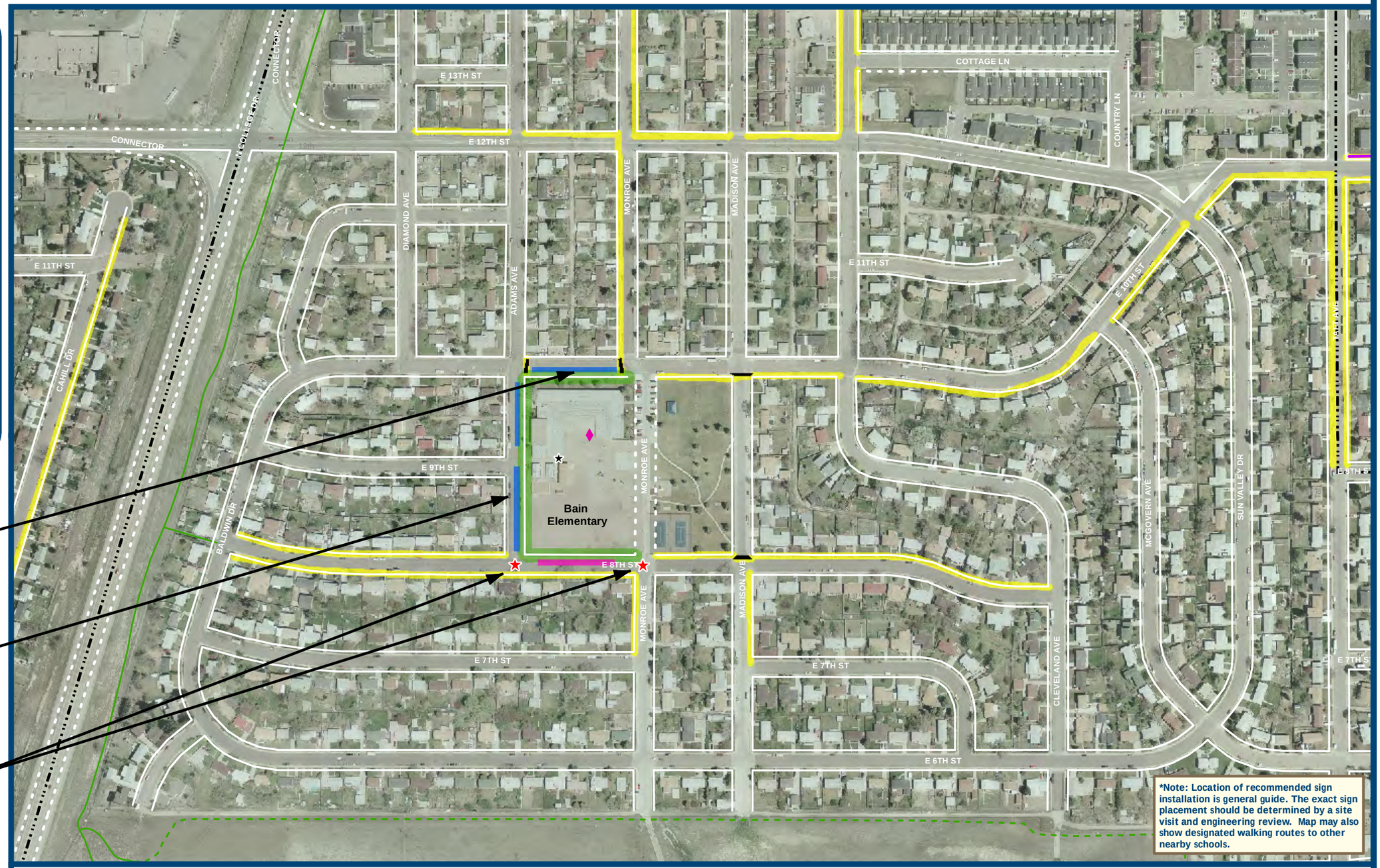
Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Move bus loading zone from 8th Street to 10th Street. Consider moving student load zone as necessary.

Student load zone improvements: add signage, assign students to north or south zone by grade or class

Evaluate and determine need for installation of stop signs and crosswalks at 8th and Monroe and 8th and Adams



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Bain Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

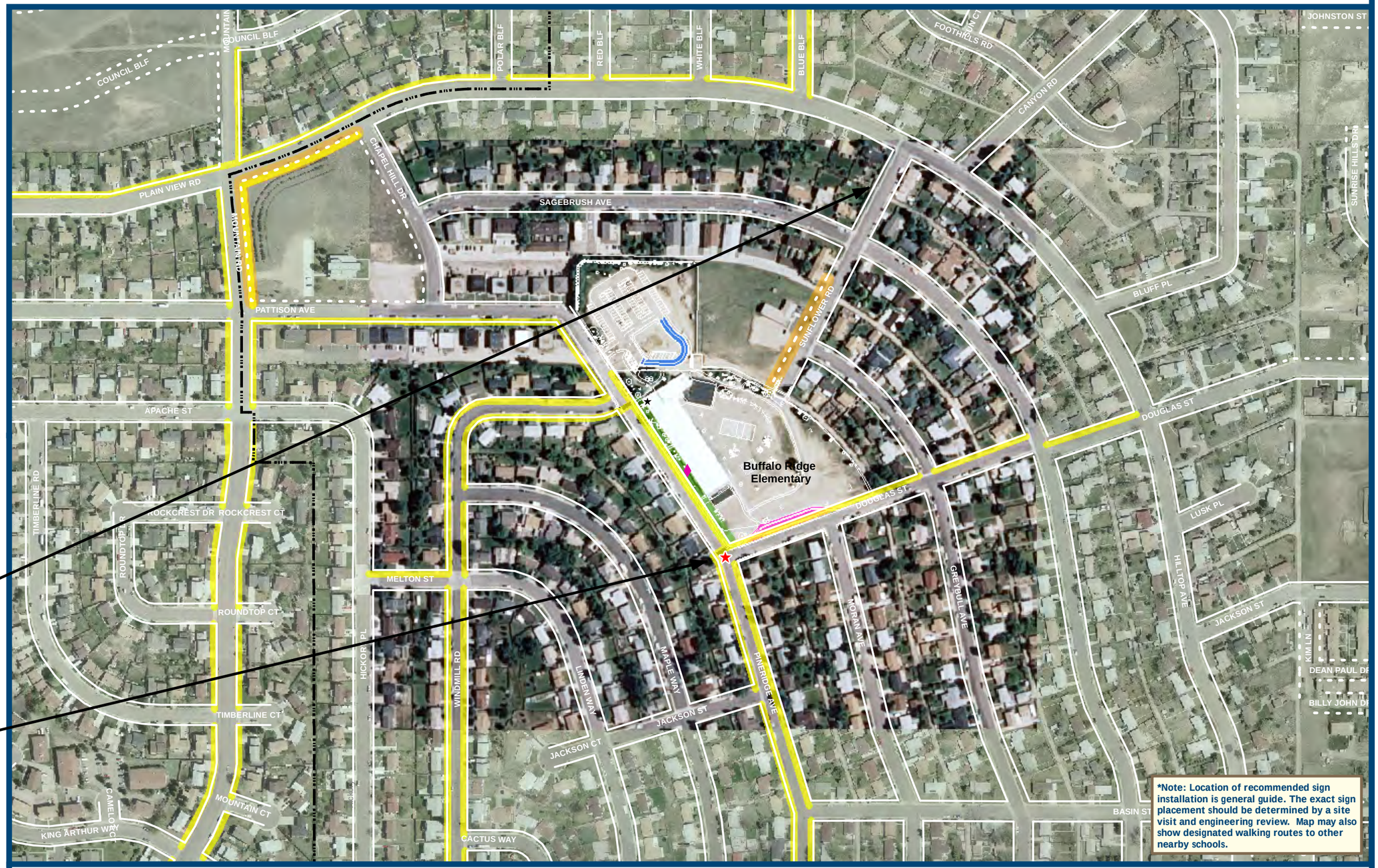
Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Evaluate walking route along Sunflower and possible crossing at Plainview

Add ADA compliant curb ramps and relocate crosswalk



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Buffalo Ridge Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

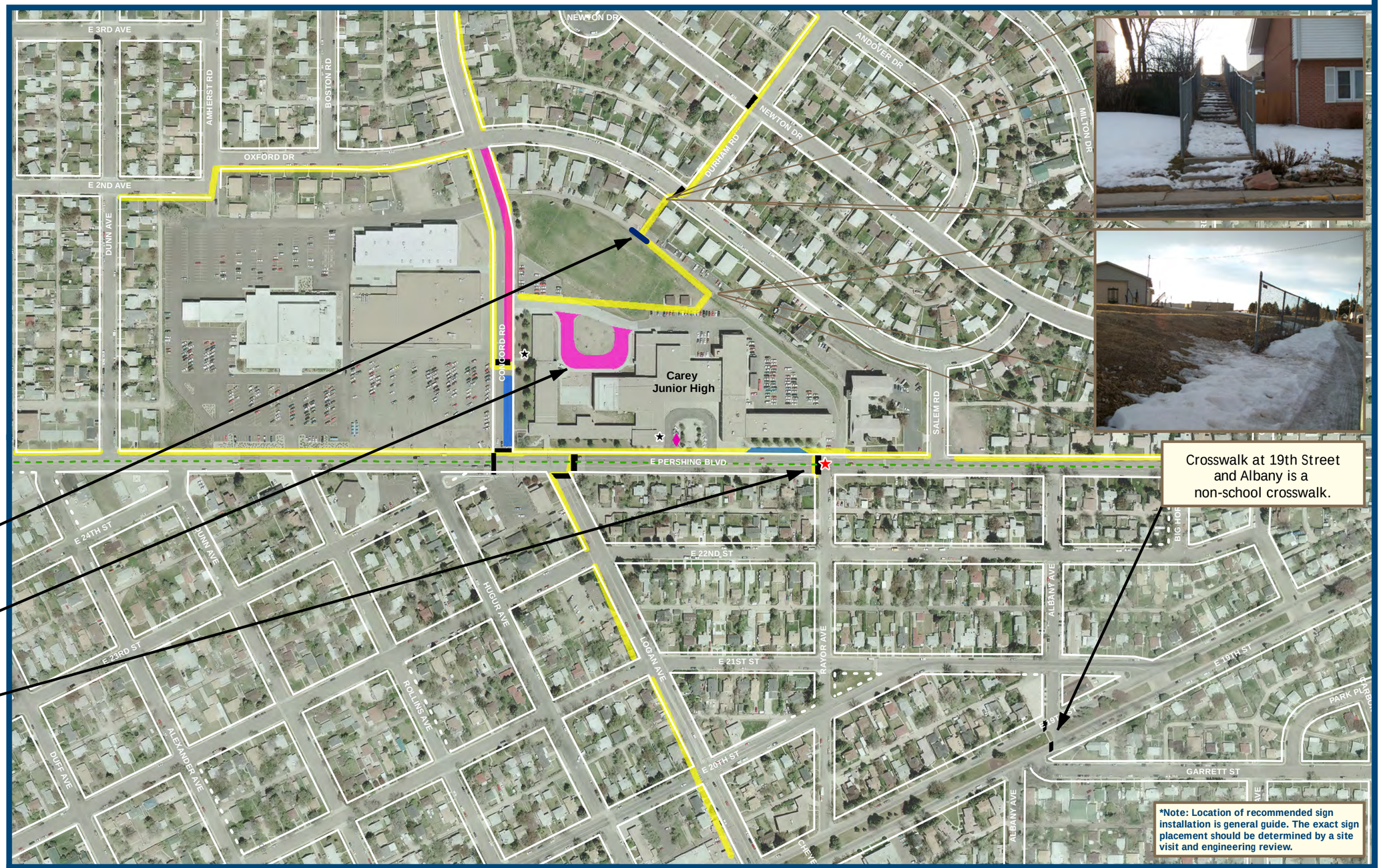
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POTENTIAL SCHOOL AREA IMPROVEMENTS

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- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*(JHS)
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk



Crosswalk at 19th Street and Albany is a non-school crosswalk.

Create opening in fence to improve student access from Durham Road

Remove old parking signs near bus loading zone

Synchronize signal controller at Rayor with signal at Logan

Carey Junior High campus will be relocated to East High School in the next 5 to 7 years

*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review.

MUTCD Signage

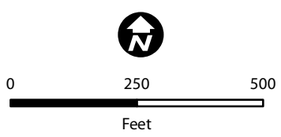


School Zone Sign



School Speed Assembly


Crosswalk Warning Assembly



Carey Junior High School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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Existing School Facilities
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- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

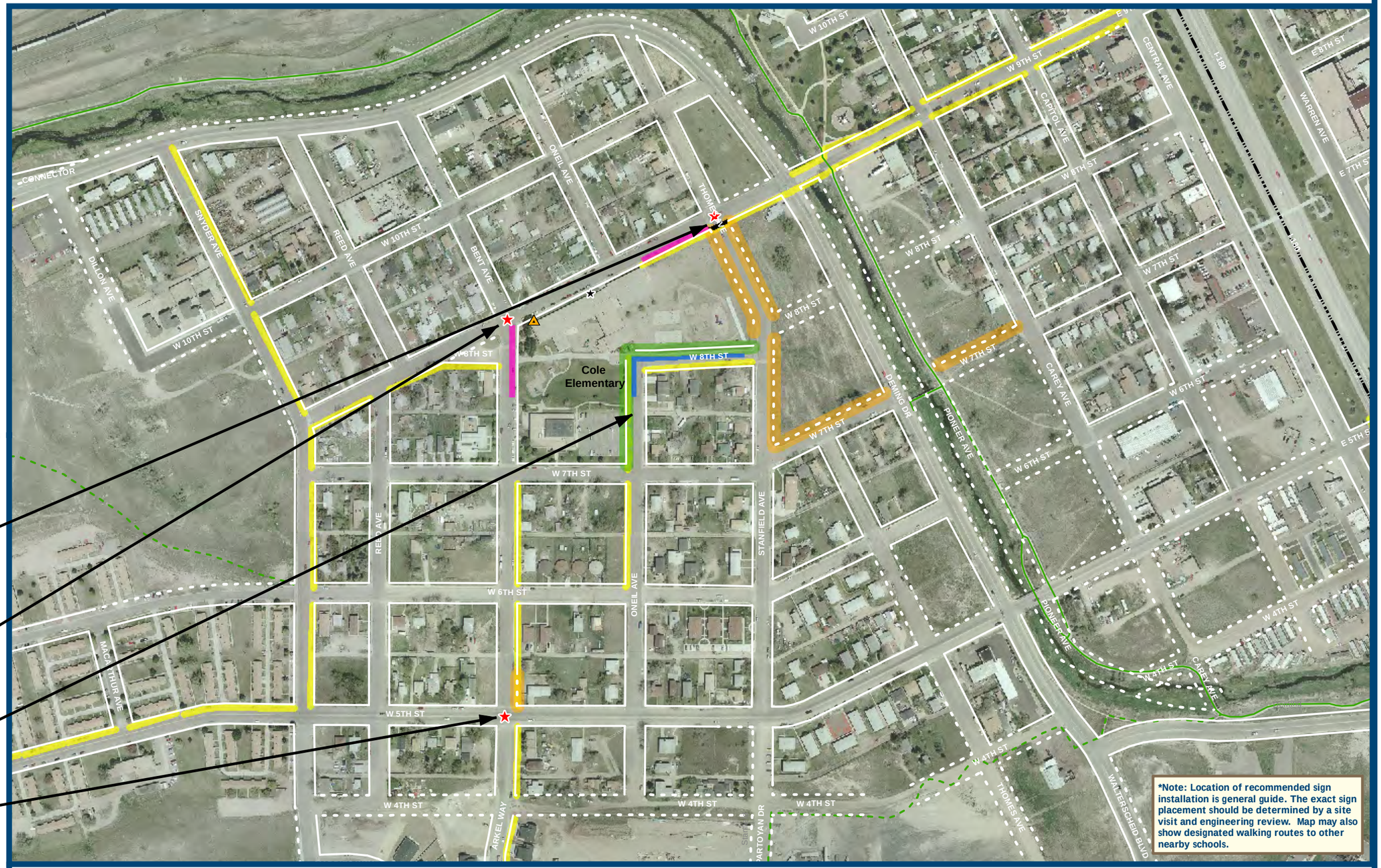
Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Add curb cut on southeast corner of intersection to connect to existing crosswalk across Stanfield

Intersection improvements: curb cuts needed on all corners except southeast

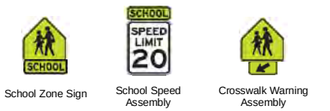
Note: Evaluate one way traffic on 8th and O'Neil

Intersection improvements



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Cole Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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Other Existing and Proposed Pedestrian Facilities
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- Existing Sidewalk
- Missing Sidewalk

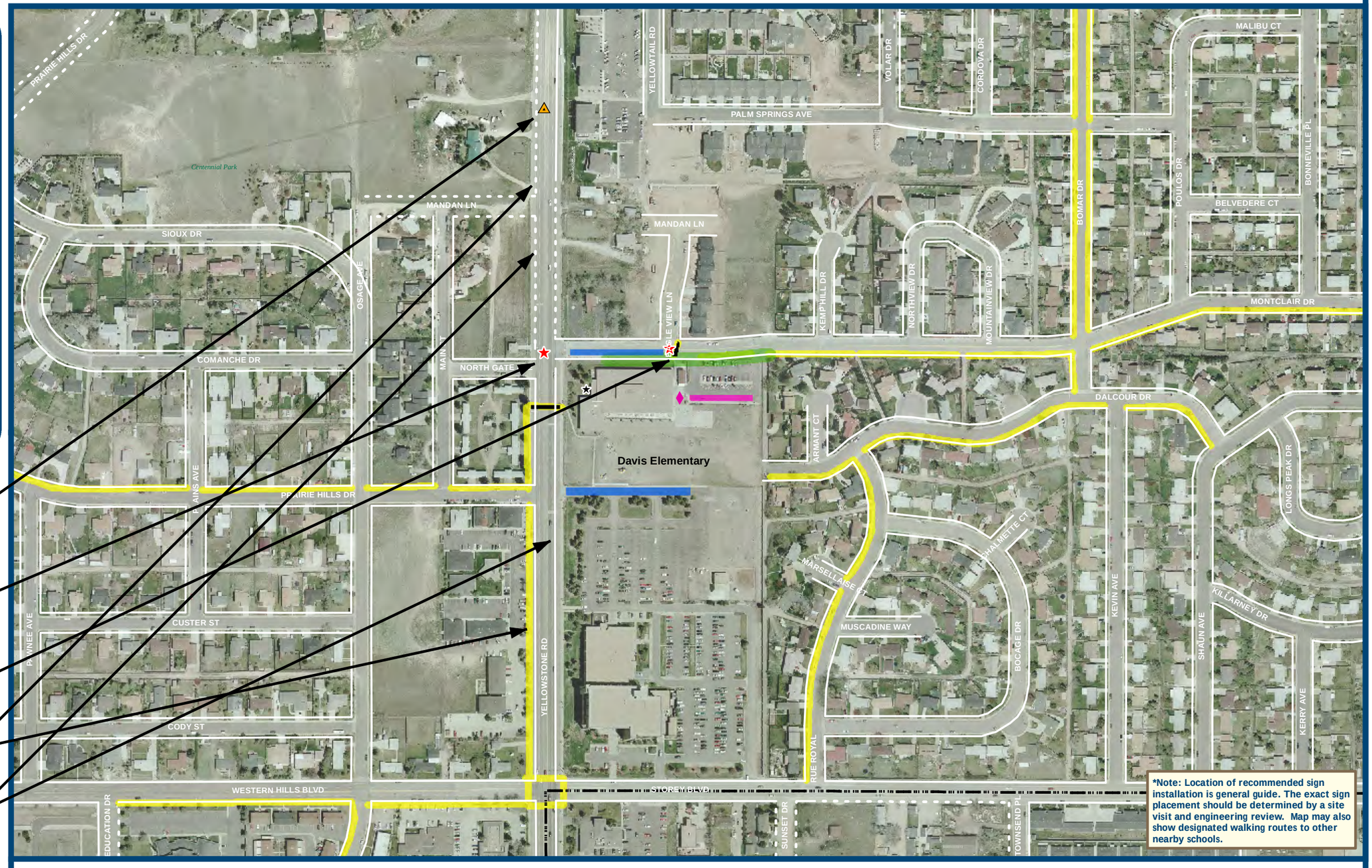
Replace non-MUTCD compliant "Signal Ahead" sign with compliant version

Signalized intersection at Yellowstone and Montclair; remove existing midblock crosswalk on Yellowstone

Install stop bar before crossing

Existing School Speed Assembly signs (30 MPH)

Existing School Speed Assembly signs



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Davis Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- G — Install Curb Extensions
- ^ — Intersection Improvements
- ^ — Install or Upgrade Bike Parking
- # — Sign Improvements*
- S — Install "School" Pavement Stencil
- (— Improve Existing Crosswalk Warning Assembly Sign
- (— Improve Existing School Speed Assembly Sign
- (— Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- X — Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

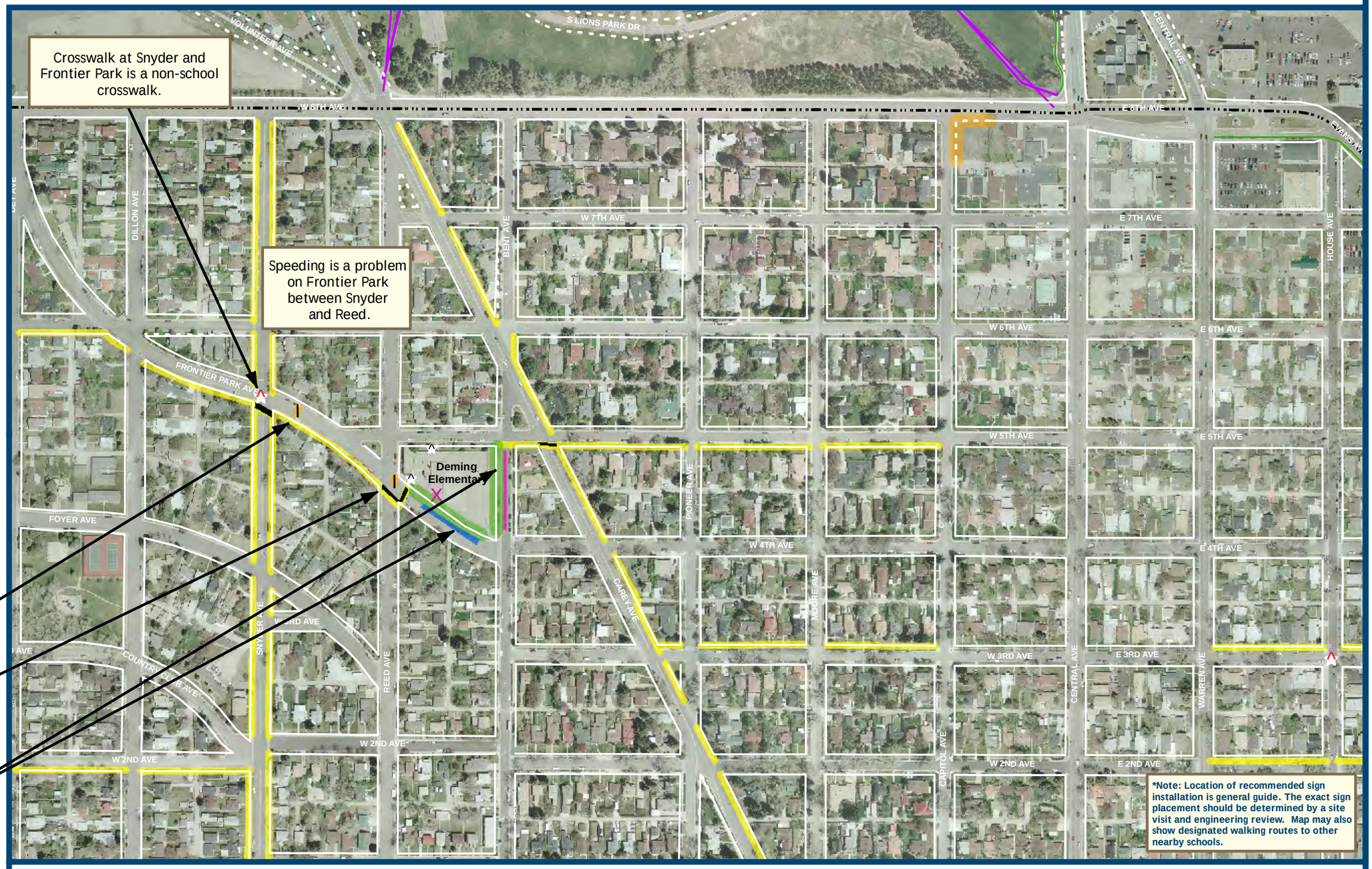
Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Deming Elementary has students in grades K-3. It is paired with Miller Elementary, which has students grades 4-6.

Install School Zone signs

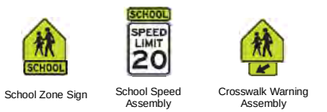
Install Crosswalk Warning Assembly signs at Frontier Park crosswalks

Relocate bus zone to Frontier Park and move student load zone to 5th Avenue to ease congestion at southeast corner of school



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500 Feet

Deming Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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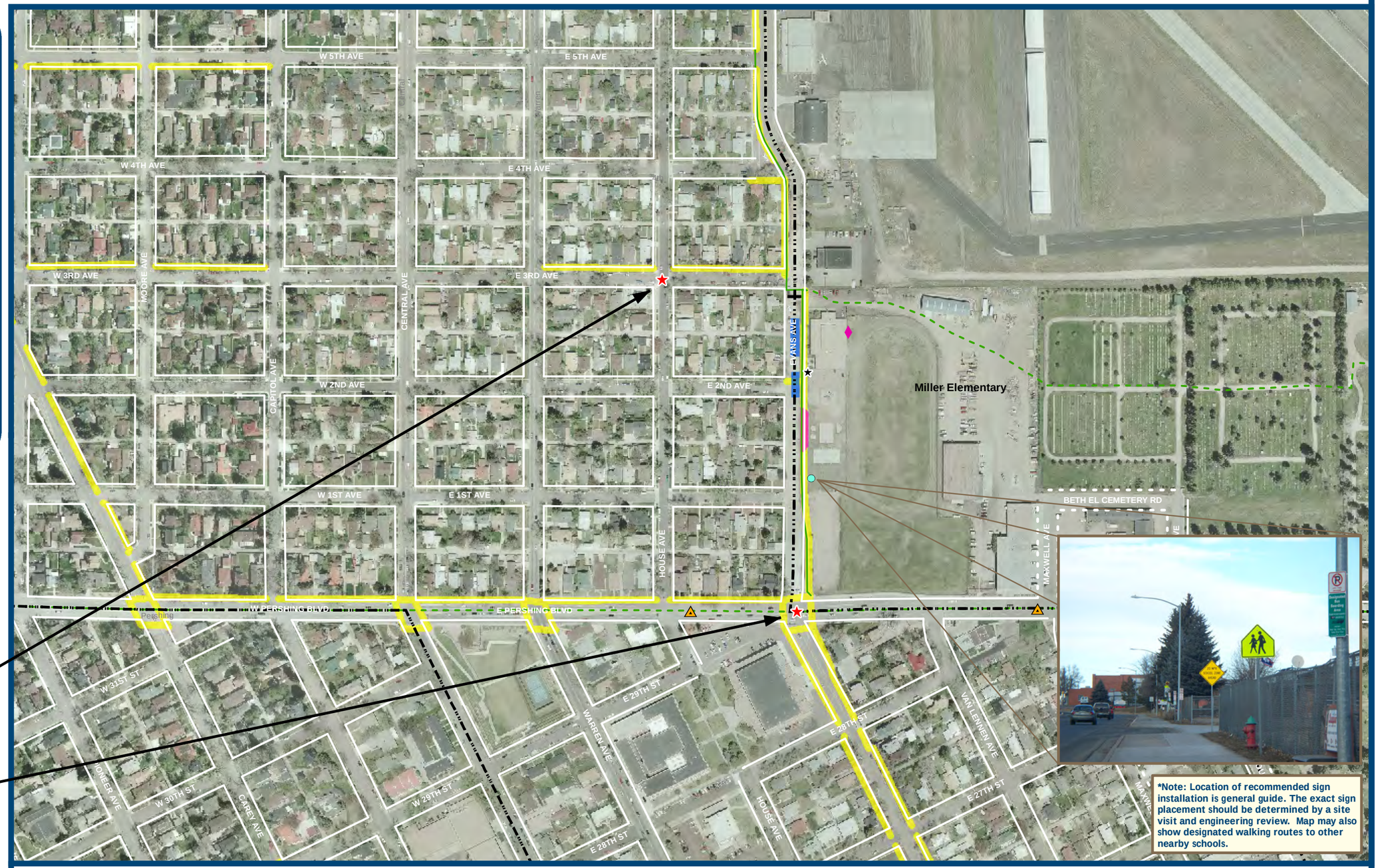
Existing School Facilities
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- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Miller Elementary has students in grades 4-6. It is paired with Deming Elementary, which has students in grades K-3.

Add stop control to intersection at House and 3rd Avenue

Add pedestrian countdown indicator to signals at inter-section of Evans and Pershing



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Miller Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

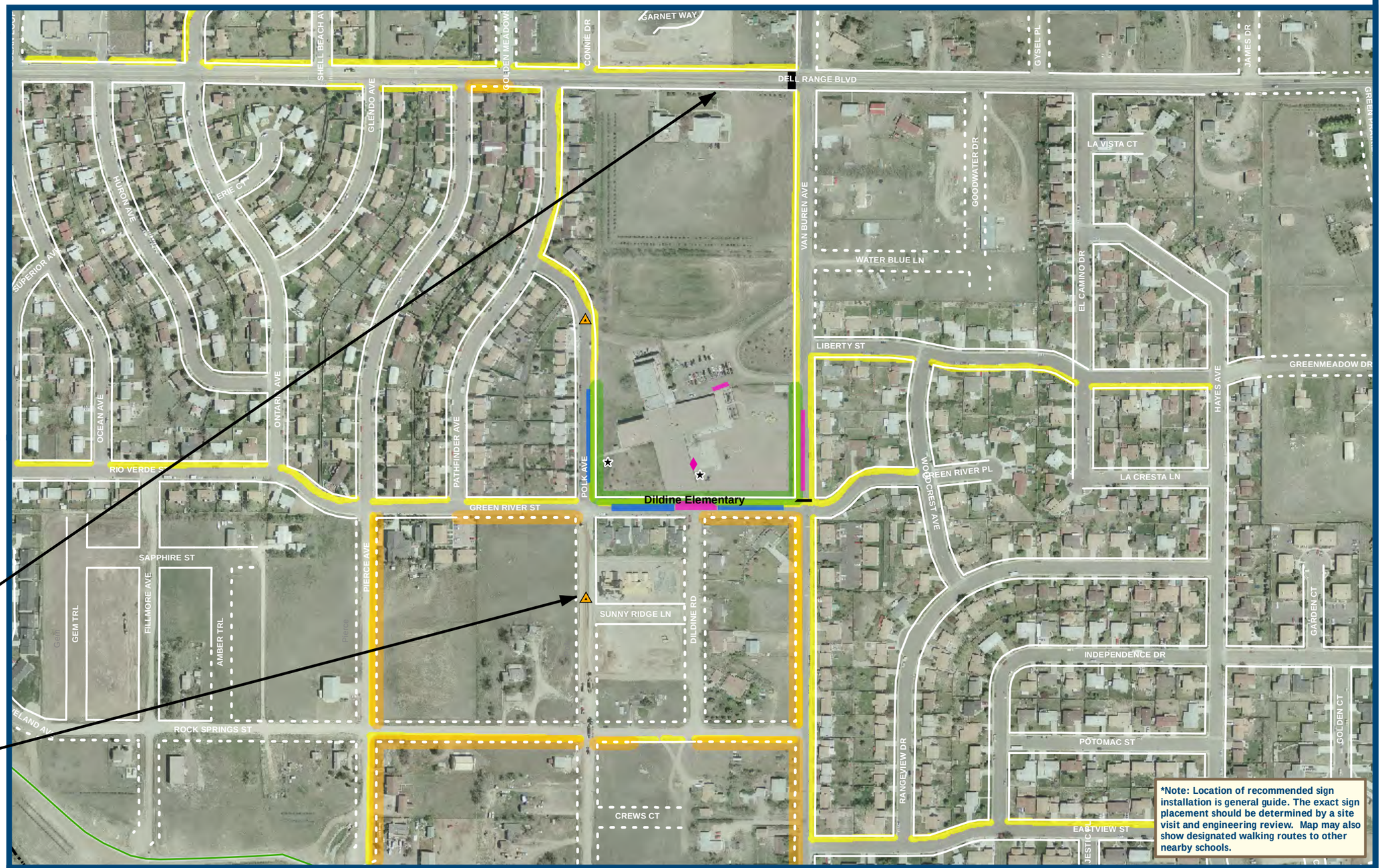
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Existing School Facilities
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- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Remove redundant School Zone sign on Dell Range, east of existing School Zone sign with flashing beacon near Connie

Install School Zone signs



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Dildine Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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- Designated School Walking Route*
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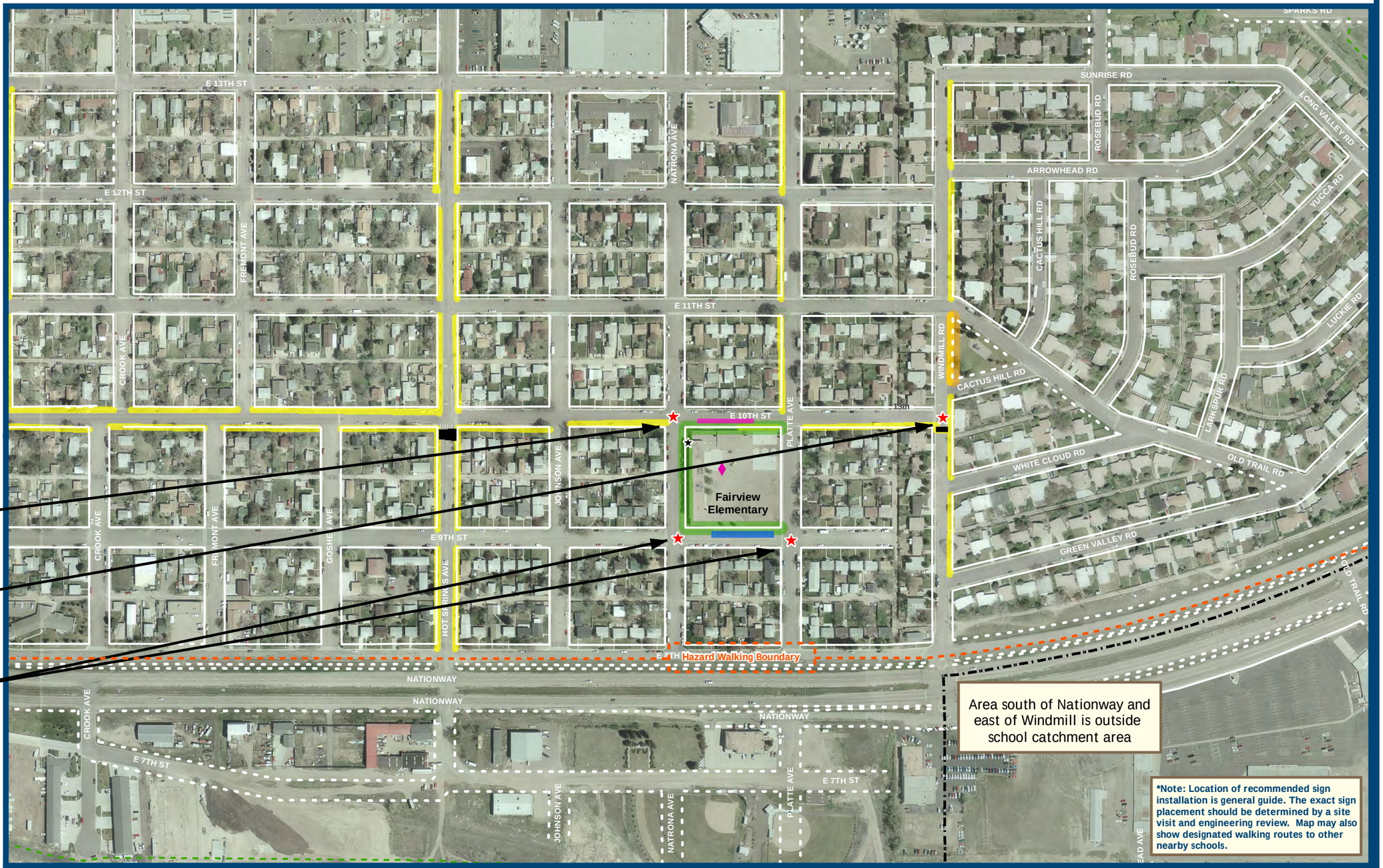
Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Install ADA compliant curb ramp on southeast corner

Install ADA compliant curb ramp on east side of crosswalk

Install ADA compliant curb ramps on crossing approaches proximate to school

Fairview Elementary has students in grades K-2. It is paired with Lebhart Elementary, which has students in grades 3-6.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Fairview Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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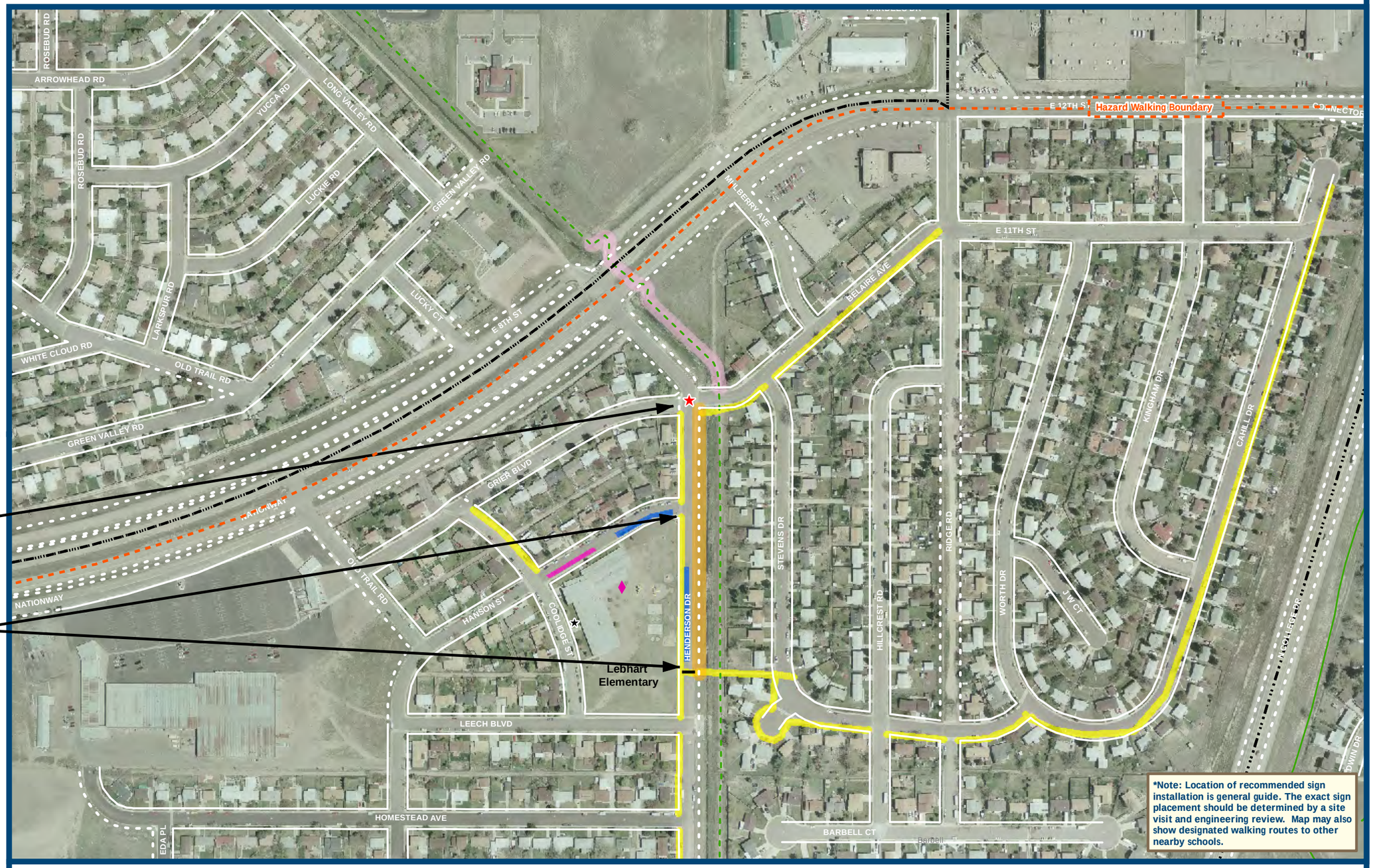
Existing School Facilities
- Existing Bike Parking
- Bus Zone
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- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Install crosswalk

Consider relocating crosswalk to Hanson Street once the sidewalk along the east side of Henderson Drive has been installed.

Lebhart Elementary has students in grades 3-6. It is paired with Fairview Elementary, which has students in grades K-2.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Lebhart Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Freedom Elementary is located on Air Force property. Laramie County School District #1 has only a minimal ability to make changes. The gate between the school and base is locked at all times except school start and dismissal. Only Air Force base personnel have keys to the gate. Children on base not in the nearby residential area are bussed to the interior gate. Children off base are bussed to the front door.

Flip "One Way" sign to correspond to driveway entry

Remove faded parking stall paint from no parking zone. Retouch red curb paint.

Install stop sign



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign



School Speed Assembly


Crosswalk Warning Assembly

0 250 500
Feet

Freedom Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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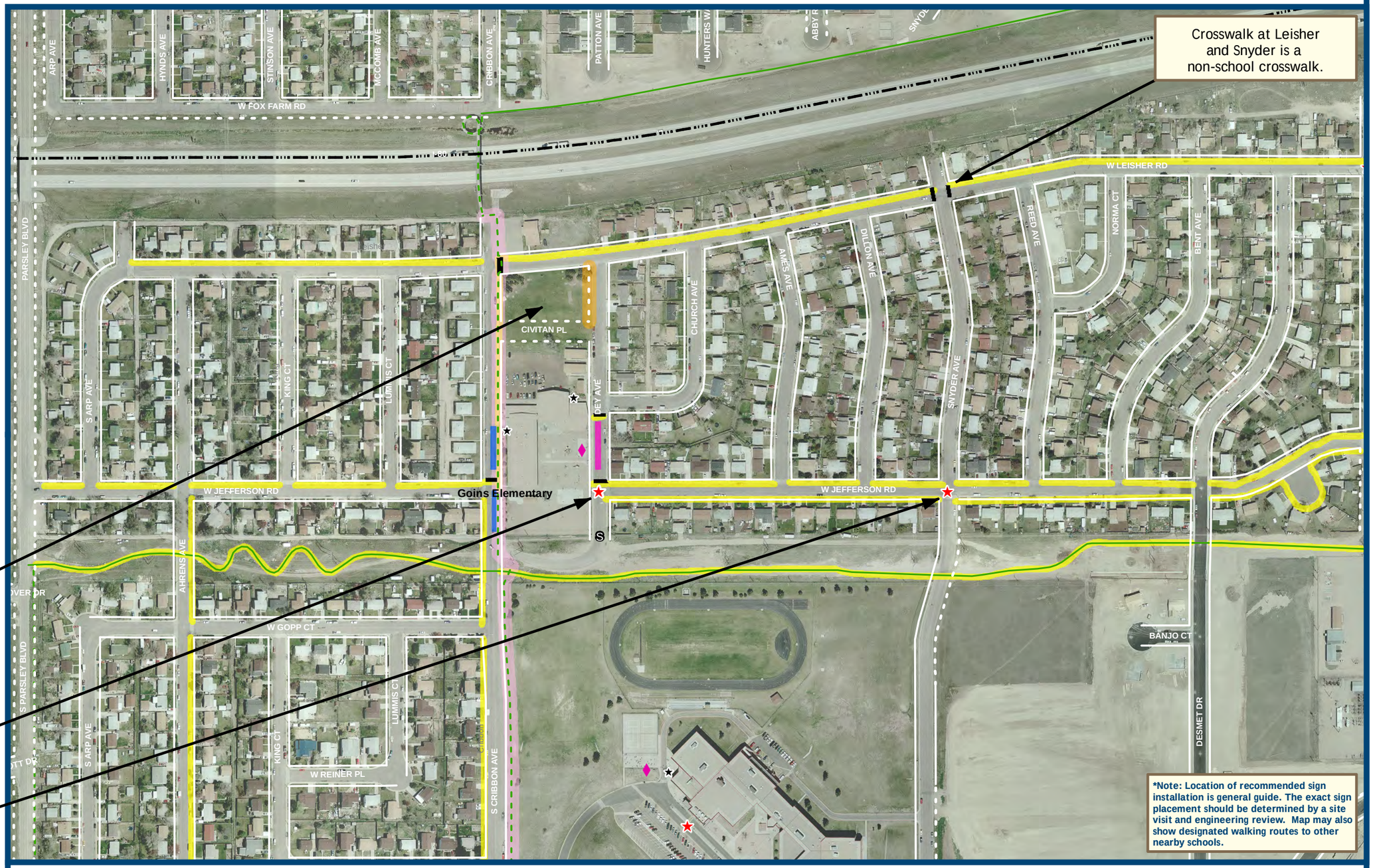
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- Student Load Zone
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- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Next year, Goins Elementary will be rebuilt as a two story building in what is currently Civitan Park. A school yard and parking lot will be located to the south. Note: Traffic issues relating to Jefferson Junior High School should be addressed during the site plan review for the new Goins Elementary School building.

Install ADA compliant curb ramp on west side of crosswalk

Install ADA compliant curb ramps at intersection of Jefferson and Snyder



MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Goins Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Install pedestrian countdown signal at 5th and Morrie



MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Hebard Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

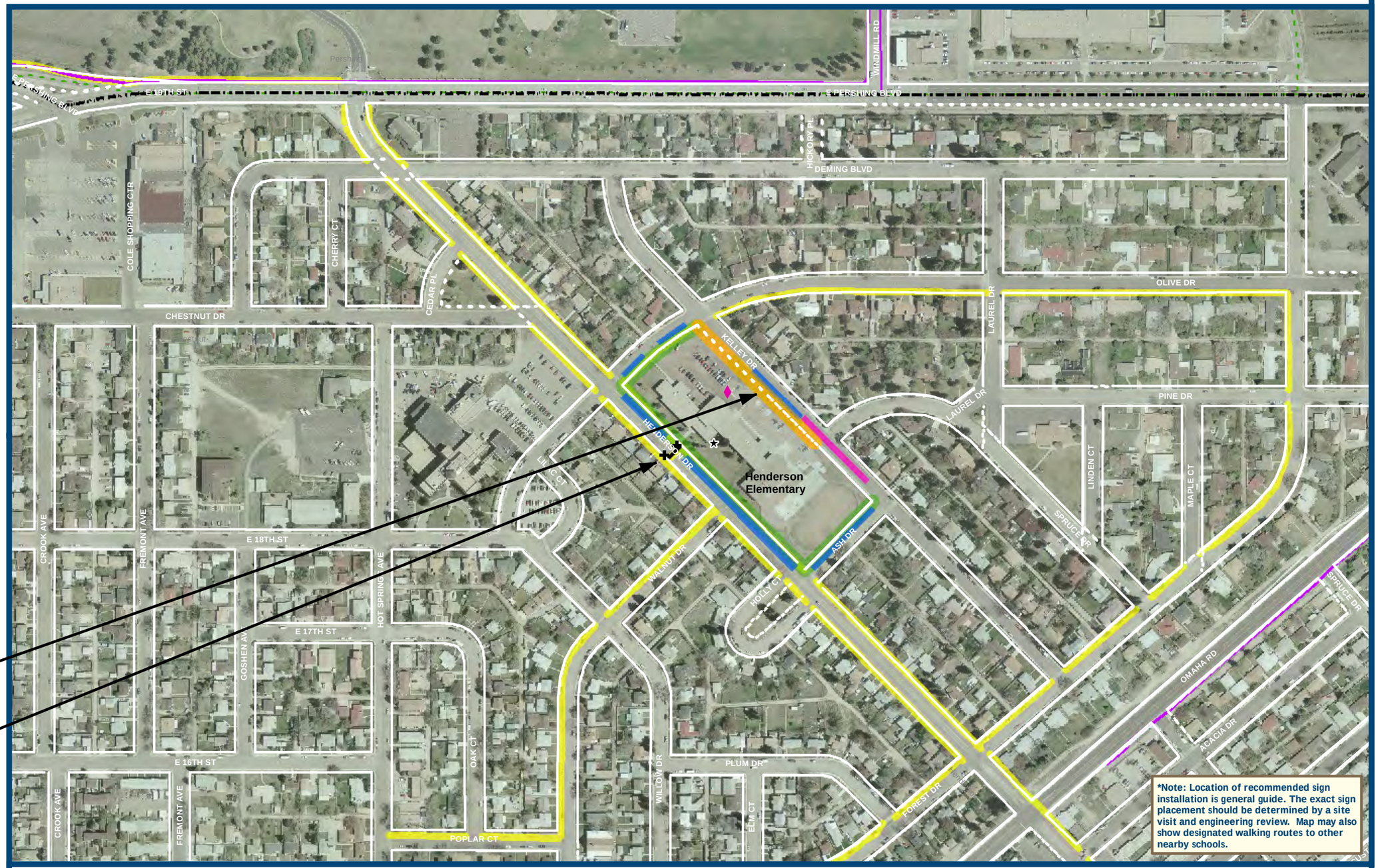
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POTENTIAL SCHOOL AREA IMPROVEMENTS

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- Priority Sidewalk Infill

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- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk



Bus zone/student load zone improvements: remove parent drop-off zone to reduce school bus conflicts

Consider curb extensions or or pedestrian refuge island to reduce required crossing distance

***Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.**

MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Henderson Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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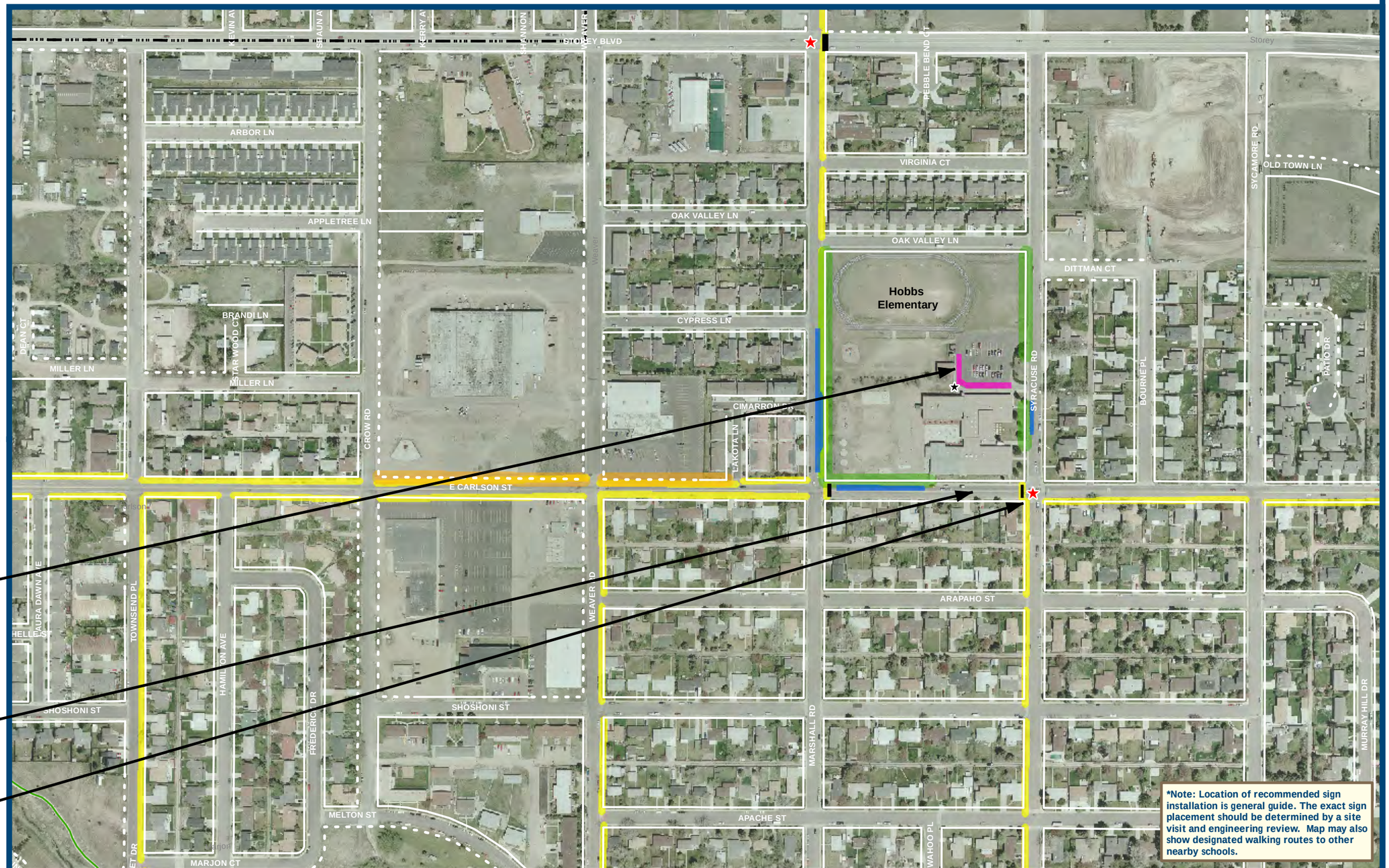
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- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Bus zone/student load zone improvements: move bus zone to Syracuse and parent drop-off area to parking lot. The principal of Hobbs Elementary recommends monitoring the school yard west of the school building for students who take the bus.

"No U-turn" signs exist on Carlson.

Restripe crosswalk to align with existing curb ramps.



MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Hobbs Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

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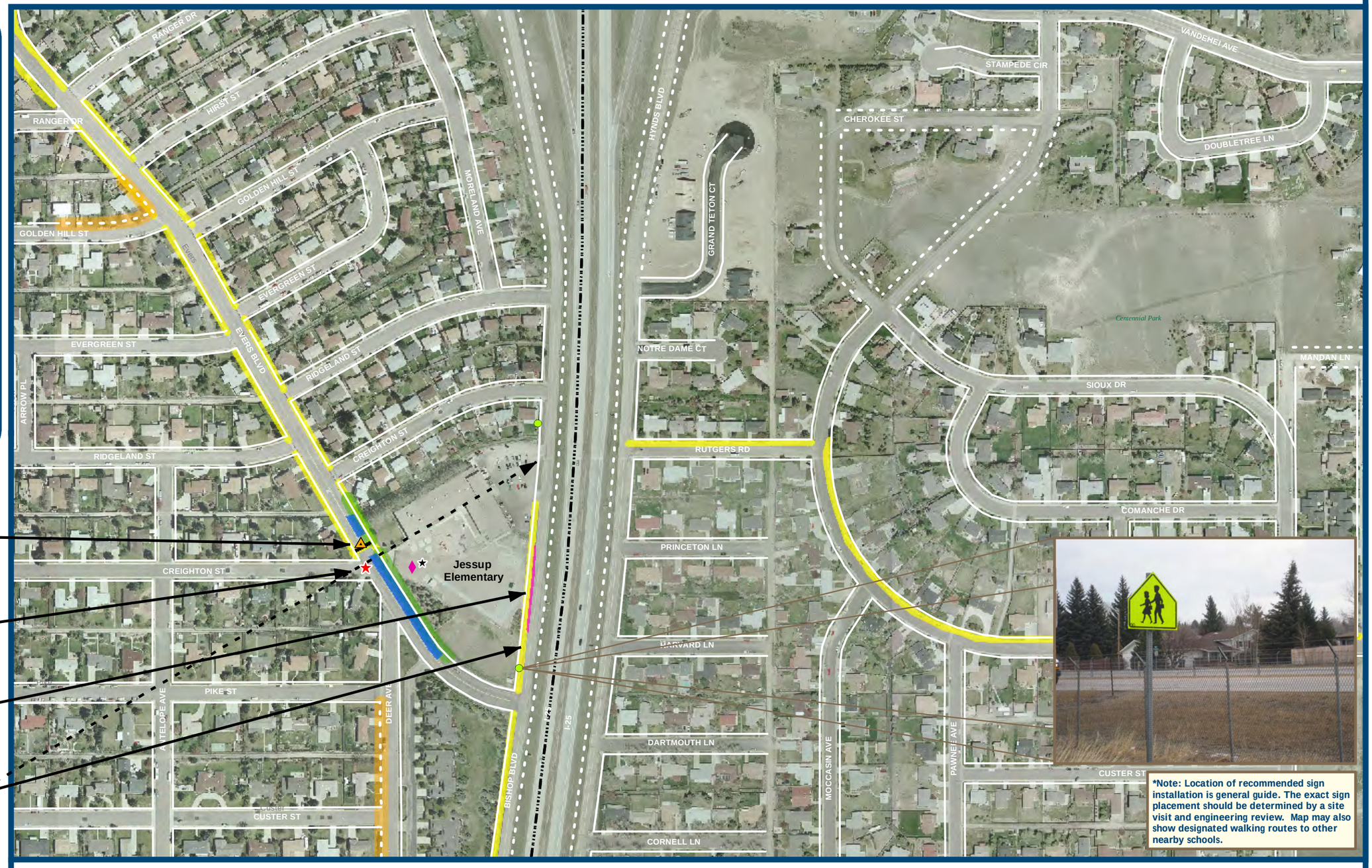
Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Move sign to stop bar, add "Stop when occupied" sign to crosswalk

Intersection improvements

Extend sidewalk cut-out to accomodate traffic from multiple school buses

"No U-turn" signs exist on Bishop.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage

School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Jessup Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- G — Install Curb Extensions
- ^ — Intersection Improvements
- ^ — Install or Upgrade Bike Parking
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- S — Install "School" Pavement Stencil
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- Priority Sidewalk Infill

Existing School Facilities
- X — Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*(JHS)
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review.

These recommended improvements include 300' of priority sidewalk infill between Allision Road and Concerto Lane that is not shown on this map.

Install ADA compliant curb ramp on north side of crosswalk



MUTCD Signage



School Zone Sign



School Speed Assembly


Crosswalk Warning Assembly

0 250 500
Feet

Johnson Junior High School
Cheyenne Metropolitan Area Safe Routes to School Plan

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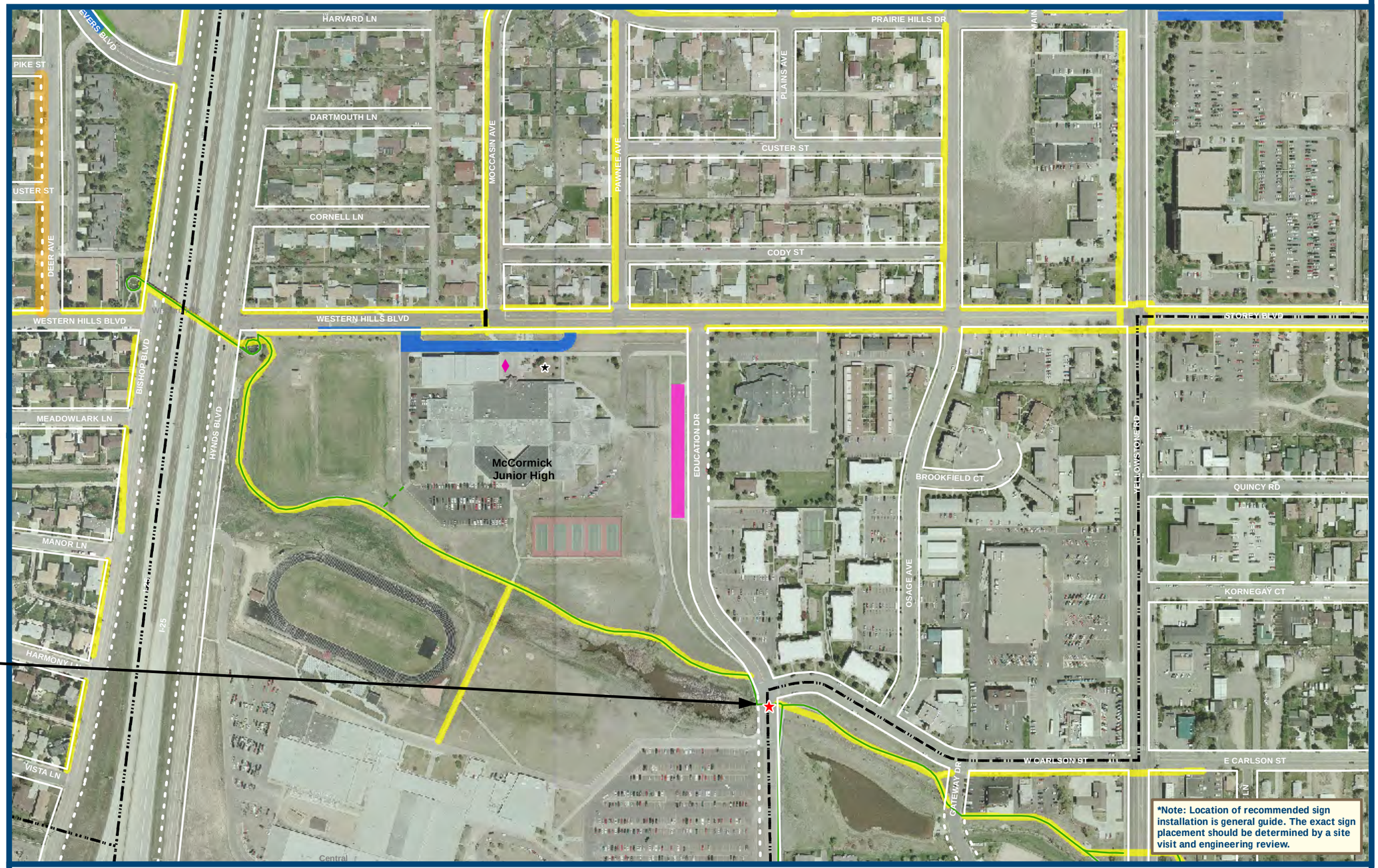
POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route* (JHS)
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Consider upgrading greenway crosswalk to a trail crossing in accordance with the MUTCD.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

McCormick Junior High School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

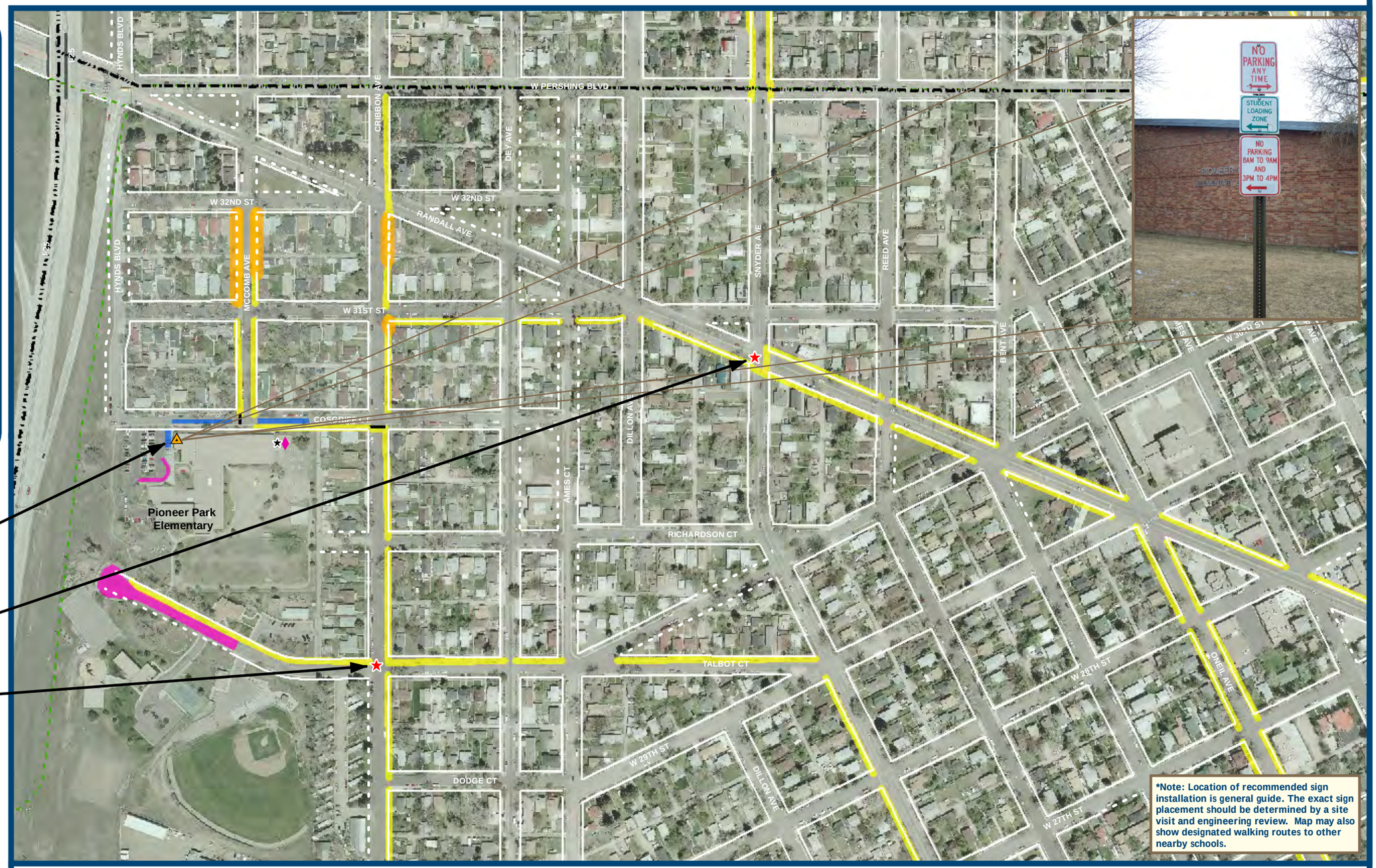
Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Modify parking signs to correct conflicting messages

Intersection improvements

Intersection improvements

Note: Pioneer Park is home to the Trailblazers magnet program.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Pioneer Park Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

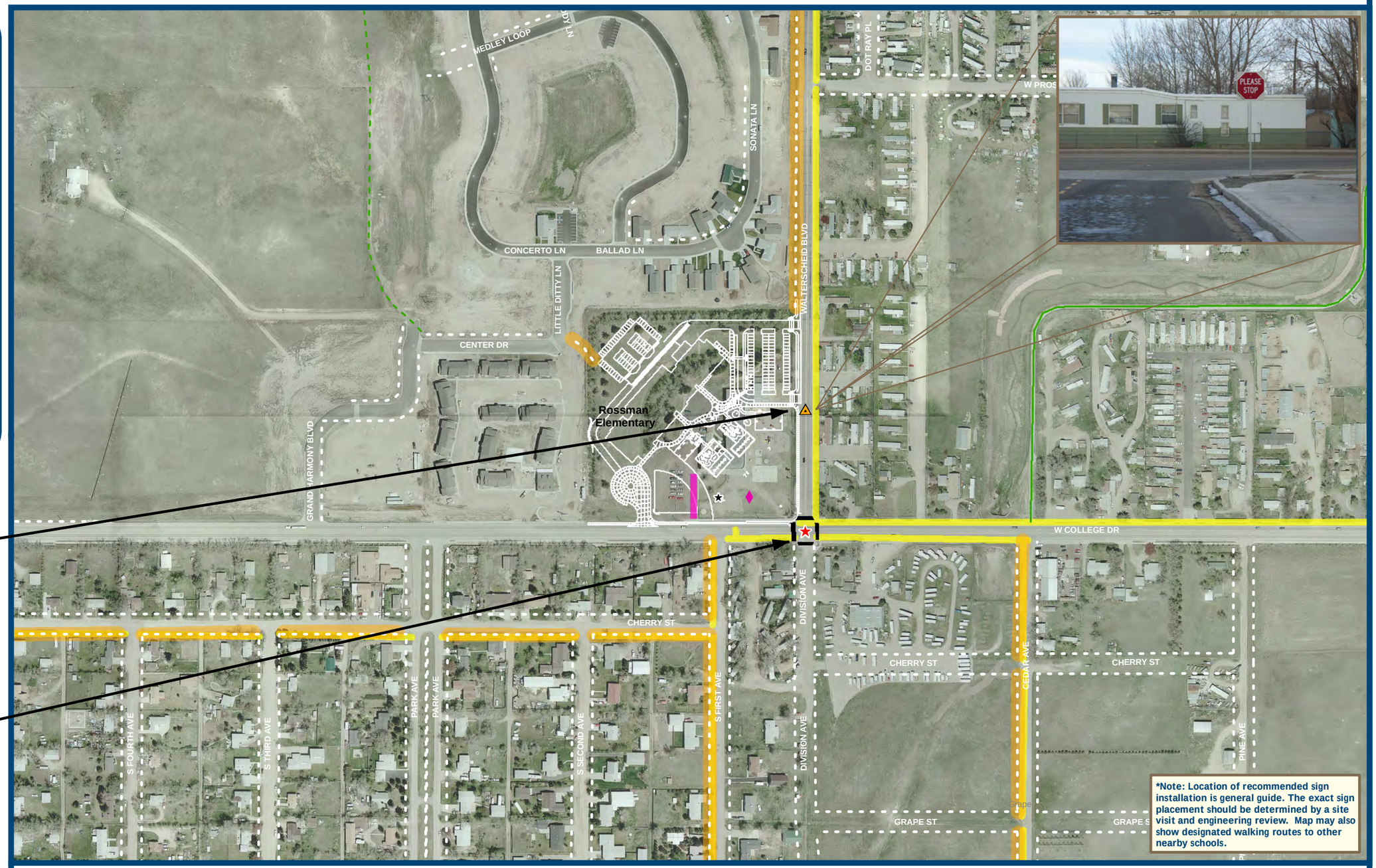
Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Replace non-MUTCD compliant stop sign at parking lot driveway to Walterscheid.

Consider installing pedestrian countdown signal indicators. Countdown signal timing must be incorporated with the larger highway corridor when implemented on state highways. Pedestrian countdown indicators at College and Walterscheid must be coordinated with signal timing at College and S. Greeley Highway. Engineering review necessary.



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign | School Speed Assembly | Crosswalk Warning Assembly

0 250 500
Feet

Rossman Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- Install Curb Extensions
- Intersection Improvements
- Install or Upgrade Bike Parking
- Sign Improvements*
- Install "School" Pavement Stencil
- Improve Existing Crosswalk Warning Assembly Sign
- Improve Existing School Speed Assembly Sign
- Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk

Note: US 30 should be a permanent barrier to students walking to school. LCSD #1' long-range plan should be to use US 30 as (preferably) a district boundary or a bussing barrier.

Until Countryside Avenue is constructed, school buses must make unprotected left turn at Saddle Ridge and US 30. Future improvements will likely include a traffic signal at Whitney Road and US 30. When the signal is built, buses will enter US 30 from Whitney Road.

Intersection improvements



MUTCD Signage

School Zone Sign

School Speed Assembly

Crosswalk Warning Assembly

0 250 500
Feet

Saddle Ridge Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

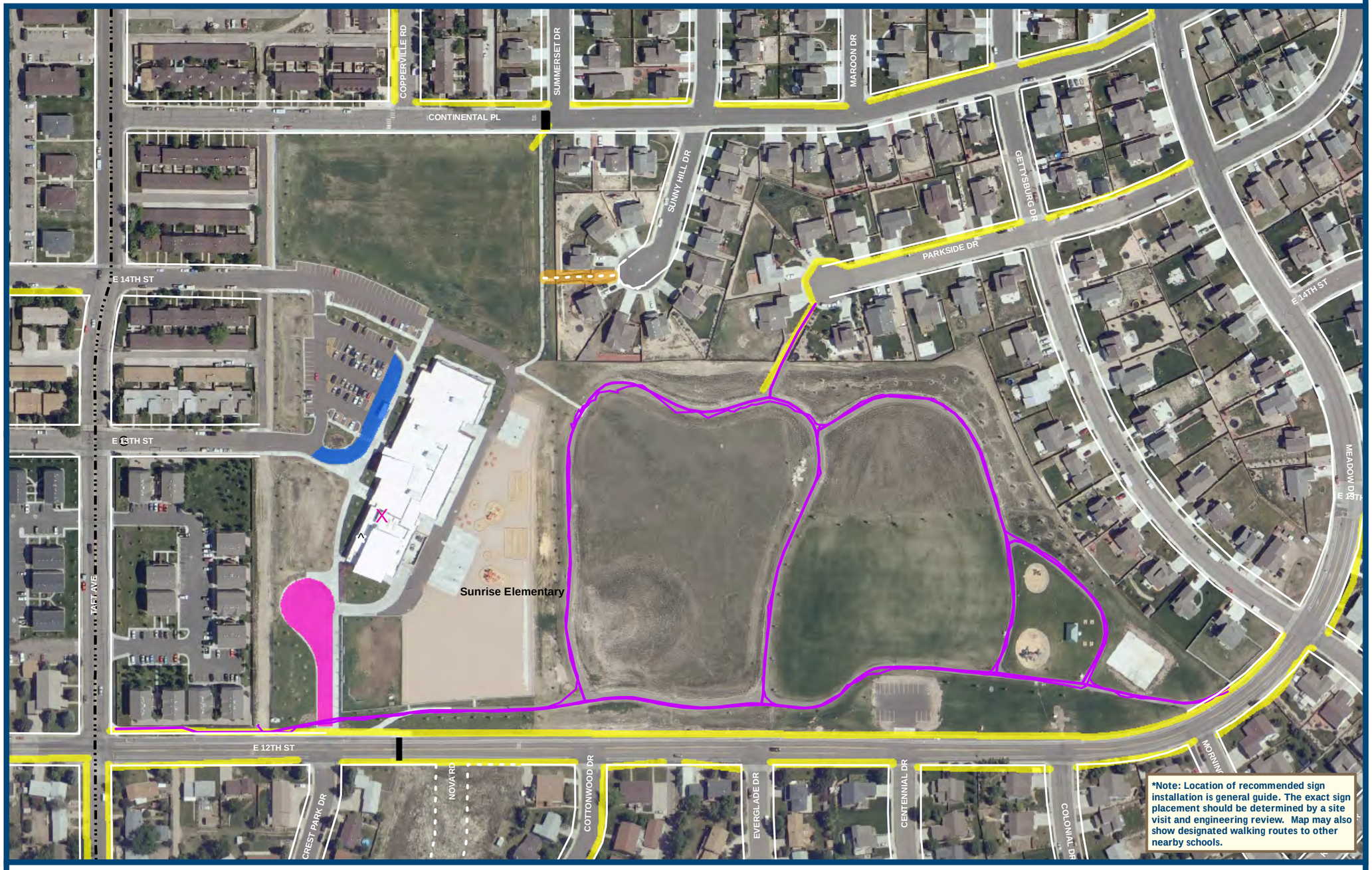
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POTENTIAL SCHOOL AREA IMPROVEMENTS

Proposed Priority Improvements
- G — Install Curb Extensions
- ^ — Intersection Improvements
- ^ — Install or Upgrade Bike Parking
- # — Sign Improvements*
- S — Install "School" Pavement Stencil
- (— Improve Existing Crosswalk Warning Assembly Sign
- (— Improve Existing School Speed Assembly Sign
- (— Improve Existing School Zone Sign
- Improve Bus/Parent Loading /Unloading Zone
- Install Traffic Calming
- Priority Greenway Connection
- Priority Sidewalk Infill

Existing School Facilities
- X — Existing Bike Parking
- Bus Zone
- Exising School Crosswalk
- Student Load Zone
- Designated School Walking Route*
- School Catchment Area

Other Existing and Proposed Pedestrian Facilities
- Planned Greenway
- Existing Greenway
- Existing Shared Use Trail
- Existing Sidewalk
- Missing Sidewalk



*Note: Location of recommended sign installation is general guide. The exact sign placement should be determined by a site visit and engineering review. Map may also show designated walking routes to other nearby schools.

MUTCD Signage



School Zone Sign



School Speed Assembly


Crosswalk Warning Assembly

0 250 500
Feet

Sunrise Elementary School
Cheyenne Metropolitan Area Safe Routes to School Plan

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V. Action Plan

The following action plan is designed to guide the Safe Routes to School Team and all of the associated agencies and schools in implementing the recommended strategies.

Next Steps

With this Safe Routes to School Plan as a starting point and guide, there are a number of immediate steps that can be taken to launch the Cheyenne Metropolitan Area SR2S program. First, a Safe Routes to School Team should be convened to prioritize goals, assign responsibilities, and implement the Plan. Additional funding opportunities should also be sought out, such as local foundation grants, business sponsorships, and in-kind donations from parents, individual schools, and the district. A kick-off event or ceremony can help to launch the program publicly to engage parents, students, and the general community.

Convene a Safe Routes to School Team

A Safe Routes to School Team should plan, coordinate, and implement the recommendations set forth in this document. Not only does a Team need to be designated for completing the *School Travel Team*, a Safe Routes to School Team can prioritize specific goals for the Safe Routes to School program and distribute the responsibility of coordinating and implementing recommendations in this plan.

The Team should include a diverse combination of individuals and groups with a vested interest in improving safety and encouraging walking and bicycling to school. The Safe Routes to School Team should be composed of planners, engineers, law enforcement officers, local officials, school district staff and administrators, school faculty and staff, and/or stakeholders from the following agencies and groups:

- The City of Cheyenne
- Laramie County
- LCSD #1 District Office
- LCSD #1 School Safety Committee
- School staff
- School PTOs
- Parents and students
- Other stakeholders, such as health organizations, bicycle/pedestrian advocates, or neighbors

Apply for Safe Routes to School Funding

WYDOT's Safe Routes to School funding program provides funding for both non-infrastructure projects and infrastructure projects. Non-Infrastructure funds are designated for implementing Safe Routes to School plans and programs at schools or within school districts. Infrastructure funds are intended for implementing infrastructure improvements within a two-mile radius of target schools.

For more information on federal funding through WYDOT, contact the Wyoming Safe Routes to School Coordinator:

Sara Janes
Safe Routes to School Coordinator
Systems Planning, Wyoming Department of Transportation
5300 Bishop Boulevard, Cheyenne, WY 82009-3340
Phone: (307) 777-3938
Email: sara.janes@dot.state.wy.us

Seek out Additional Funding Sources

Many Safe Routes to School programs gather funding from a variety of sources, including state and federal Safe Routes to School funds, other grant programs, local sponsorships, PTAs or PTOs, and in-kind donations. Organizations with similar goals or ideals, such as public health, public safety, and/or walking/bicycling advocacy groups may also have resources available.

Host a Kick-off Event or Ceremony

A kick-off event, such as International Walk and Bike to School Day, or a ground-breaking ceremony for an infrastructure project, can raise awareness and build support for the Safe Routes to School program. This can connect the SR2S Team to newly-identified funding sources as well as parents, school staff and faculty who are interested in joining the effort. A public event can also draw the attention of local media, who can inform and engage the community at large.

Summary of Recommended Non-Infrastructure Improvements

Table 3 summarizes the proposed Safe Routes to School non-infrastructure solutions, including the likely impact of each program, a recommended implementation timeline, and the suggested responsible parties.

Table 3. Non-Infrastructure Implementation Matrix, Cheyenne Metropolitan Area Safe Routes to School Plan

	STRATEGY	LIKELY IMPACT					TIMEFRAME	RESPONSIBLE PARTIES
		Adult Time Limitations	School Zone Traffic Enforcement	Pedestrian and Bicycle Safety Policies	Student Arrival/ Dismissal Procedures	District Walking/ Bicycling Programs		
Education	Safety Education	⊙	⊙	○	○	●	Short-term	SR2S Team
	Bicycle Rodeos	⊙	○	○	○	●	Medium-term	SR2S Team
	School Zone Traffic Safety Campaign	⊙	⊙	⊙	●	⊙	Medium-term	SR2S Team, Local law enforcement
	Bus Safety Campaign	⊙	○	⊙	⊙	○	Long-term	SR2S Team
Encouragement	Suggested Route to School Maps	⊙	○	⊙	⊙	⊙	Continue and expand this program in the short-term	Local government agencies, LCSD #1
	Walk and Bike to School Event	○	○	○	⊙	●	Continue and expand this program in the short-term	SR2S Team, Individual schools, LCSD #1
	Walking School Buses	●	○	○	⊙	●	Medium-term	SR2S Team, Individual schools, LCSD #1
	Stop and Walk	●	○	○	⊙	⊙	Medium-term	SR2S Team, Individual schools
	Friendly Walking/ Biking Competitions	○	○	○	⊙	●	Long-term	SR2S Team, Individual schools
	Back-to-School Blitz	●	⊙	○	⊙	⊙	Long-term	SR2S Team, LCSD #1, Individual schools
	Bike Trains	●	○	○	⊙	●	Long-term	SR2S Team, Individual schools
	Locally Sponsored Walking and Bicycling Events	⊙	○	○	○	⊙	Long-term	SR2S Team, LCSD #1, Individual schools, Local government agencies
Evaluation	School Site Audit	○	○	●	●	○	Short-term	SR2S Team, LCSD #1, Individual schools
	Program Evaluation	○	○	●	○	●	Long-term	SR2S Team, Individual schools
	Perform Annual Hand Tallies and Parent Surveys	○	⊙	●	⊙	⊙	Short-term	SR2S Team, Individual schools

Policy and Enforcement	Dedicated Bus Zones	⊙	⊙	●	●	○	Continue and expand this policy in the short-term	Individual schools, LCSD #1, Local government agencies
	Staggered Bell Times	⊙	⊙	●	●	○	Continue and expand this policy in the short-term	SR2S Team, Individual schools, LCSD #1
	Parent Drop-off/Pick-up Operations	○	⊙	●	●	○	Short-term	SR2S Team, Individual schools
	School Safety Committee	⊙	⊙	●	●	●	Continue this policy	Local government agencies, LCSD #1, SR2S Team
	School Safety Patrols and Crossing Guards	●	●	●	●	⊙	Continue and expand this program in the short-term	SR2S Team, LCSD #1, Individual schools
	Crosswalk Enforcement Activities	●	●	○	○	⊙	Short-term	SR2S Team, Local law enforcement, Individual schools
	School Parking Lot "Citations"	○	●	○	○	○	Short-term	SR2S Team, Local law enforcement, Individual schools
	Radar Trailer	⊙	⊙	○	○	○	Short-term	SR2S Team, Local law enforcement
	Valet Drop-off	⊙	⊙	●	●	○	Medium-term	SR2S Team, Individual schools
	Platooning Drop-off/Pick-up System	⊙	⊙	●	●	○	Medium-term	SR2S Team, Individual schools, Local government agencies
	Neighborhood Speed Watch	⊙	●	○	○	○	Medium-term	SR2S Team, Local law enforcement, Individual schools, Community partners
	Speed Feedback Sign	⊙	⊙	○	○	○	Medium-term	SR2S Team, Local law enforcement, Individual schools

Likely Impact Key	
Low impact or behavior change	○
Medium impact on behavior change	⊙
High impact on behavior change	●

Appendix A: Glossary

Active Transportation – Traveling to work or school in a self-powered manner, such as walking or bicycling, an important concept linking transportation and healthy living. Also referred to as "active travel" or "physically active transportation" or sometimes "active commute."

Bicycle Boulevard – Low traffic streets that prioritize bicycle traffic. Cars and bicycles share the roadway on most Bicycle Boulevards, and because motorists expect to see bicyclists, they are more likely to travel with caution. Bicycle Boulevards are less costly than paths or trails.

Bike Train – A group of students who bike to school together with at least one parent or other adult. A bike train can be as informal as few parents getting together to bike with their children or as organized as a school- or district-wide campaign to coordinate routes by neighborhood.

Golden Sneaker Award – A trophy, usually a sneaker spray-painted gold, that is given to the classroom with the most students walking and bicycling. In Marin County, CA, the trophy is awarded to a different classroom each month and miles walked and biked during non-school activities are also tallied.

Hazard Busing – The use of school buses to transport children short distances from home to school to avoid unsafe road crossings, lack of sidewalks, and other hazards.

In-pavement Flasher (IPF) – A device mounted in the street pavement adjacent to crosswalk markings designed to alert motorists of pedestrians. The device's default state is unlit, but it emits a flashing yellow light while the pedestrian crossing is in use.

Overcrossing – A bridge or span designed for pedestrians and/or bicyclists. These bridges generally span freeways, high traffic streets, or other difficult to cross obstacles.

Pedestrian Refuge Island – Areas within an intersection or between traffic lanes, often at a higher grade, where pedestrians may safely wait until vehicular traffic clears.

School Champion – An individual or group identified to sustain walking and bicycling programs or encouragement efforts at a school. This could be a parent, local volunteer, faculty or staff member, or an active student group.

Walking School Bus – A group of students walking to school together with at least one parent or other adult. A walking school bus can be as informal as few parents getting together to walk with their children or as organized as a school- or district-wide campaign to coordinate "buses" by neighborhood. Generally, the "bus" stops at designated locations where children can join at pre-arranged times.

Warning Flashers – Flashing beacons warning motorists that pedestrians are crossing the roadway.

Appendix B: Detailed Cost Opinion

School	Priority Greenway Connection[8]	Priority Sidewalk Infill[2,9]	Bus Loading/Parent Drop-Off Zone Improvements[1]	Sign Installation or Replacement[10]	"School" Pavement Marking Stencil	Secure, Covered Bike Parking	Intersection Improvements[7]							Subtotal	Engineering /Design	Construction Mangement	Mobilization	Contingency
							Intersection Improvements, General[5]	Curb Ramp with Tactile Warning Strip[11]	Stop Bar Installation (preformed thermoplastic)	High-Visibility Crosswalks (preformed thermal plastic)	Curb Extensions	Pedestrian Countdown Signal[4]	Pedestrian Signal[3]					
Cost	$70	$30	$1,000	$300	$250	$600	$3,890	$1,500	$225	$30	$6,000	$2,400	$40,000					
Unit	LF	LF	Y=1/N=0	EA	EA	EA	EA	EA	EA	LF	EA	EA INT	EA		7%	9%	10%	20%
Afflerbach	0	520	1	7	1	1	0	0	0	0	0	0	0	$19,550	$1,369	$1,760	$1,955	$3,910
Alta Vista	0	490	1	1	0	1	0	0	0	0	0	0	0	$16,600	$1,162	$1,494	$1,660	$3,320
Anderson	442	0	1	2	1	1	0	0	0	0	0	0	0	$33,390	$2,337	$3,005	$3,339	$6,678
Arp	2,066	2,743	1	7	2	1	0	5	0	0	0	0	0	$238,610	$16,703	$21,475	$23,861	$47,722
Baggs	0	2,856	0	3	0	0	0	0	0	0	0	0	0	$86,580	$6,061	$7,792	$8,658	$17,316
Bain	0	0	1	6	0	1	0	0	0	240	0	0	0	$10,600	$742	$954	$1,060	$2,120
Buffalo Ridge	0	1,091	1	0	0	1	0	2	0	42	0	0	0	$38,590	$2,701	$3,473	$3,859	$7,718
Carey	0	0	0	0	0	2	0	0	0	0	0	0	0	$1,200	$84	$108	$120	$240
Cole	0	1,675	1	1	0	1	1	4	0	0	0	0	0	$62,040	$4,343	$5,584	$6,204	$12,408
Davis	0	0	1	1	0	1	0	0	1	0	0	0	1	$42,125	$2,949	$3,791	$4,213	$8,425
Deming	0	0	1	2	0	2	1	0	0	0	0	0	0	$6,690	$468	$602	$669	$1,338
Dildine	0	3,859	1	2	0	2	0	0	0	0	0	0	0	$118,570	$8,300	$10,671	$11,857	$23,714
Fairview	0	186	1	0	0	1	0	6	0	0	0	0	0	$16,180	$1,133	$1,456	$1,618	$3,236
Freedom	0	0	1	2	0	1	0	0	0	0	0	0	0	$2,200	$154	$198	$220	$440
Goins	1,012	164	0	0	1	2	0	5	0	0	0	0	0	$84,710	$5,930	$7,624	$8,471	$16,942
Hebard	0	0	1	0	0	1	0	0	0	0	0	1	0	$4,000	$280	$360	$400	$800
Henderson	0	493	1	0	0	1	0	0	0	0	2	0	0	$28,390	$1,987	$2,555	$2,839	$5,678
Hobbs	0	966	1	0	0	1	0	0	0	40	0	0	0	$31,780	$2,225	$2,860	$3,178	$6,356
Jessup[6]	0	1,082	1	4	0	1	1	0	0	0	1	0	0	$45,150	$3,161	$4,064	$4,515	$9,030
Johnson	1,334	64	0	0	0	2	0	1	0	0	0	0	0	$98,000	$6,860	$8,820	$9,800	$19,600
Lebhart	665	791	0	0	0	1	0	0	0	78	0	0	0	$73,220	$5,125	$6,590	$7,322	$14,644
McCormick	0	0	0	1	0	1	1	0	0	0	0	0	0	$4,790	$335	$431	$479	$958
Miller	0	215	0	3	0	1	0	0	0	0	0	1	0	$10,350	$725	$932	$1,035	$2,070
Pioneer Park	0	582	0	1	0	1	2	0	0	0	0	0	0	$26,140	$1,830	$2,353	$2,614	$5,228
Rossman	0	8,003	0	1	0	1	0	0	0	0	0	1	0	$243,390	$17,037	$21,905	$24,339	$48,678
Saddle Ridge	0	919	0	7	0	0	1	0	0	0	1	0	0	$39,560	$2,769	$3,560	$3,956	$7,912
Sunrise	0	124	0	0	0	1	0	0	0	0	0	0	0	$4,320	$302	$389	$432	$864

[1] *Assumes basic cost for signs, materials (e.g., paint) that may be necessary to make modifications*

[2] *Assumes 5 foot sidewalk width with new curb and gutter*

[3] *Assumes pedestrian hybrid signal as proposed in the 2009 MUTCD Update*

[4] *Assumes 8 pedestrian signal indicators per intersection*

[5] *Assumes full cost of improvements depicted in Figures 12 - 15 of the WYDOT Pedestrian and School Traffic Control Manual*

[6] *Extension of school bus pull-out at Jessup Elementary is dependent on further enginnering review pending finalized extent and design.*

[7] *Any signal timing modifications proposed in this plan are not included in cost estimates*

[8] *Same as "10' Greenway Construction" improvement in Pedestrian Plan cost estimates*

[9] *Same as "Sidewalk Infill - 5' Wide, including Curb & Gutter" improvement in Pedestrian Plan cost estimates*

[10] *Same as "Warning Sign" improvement in Pedestrian Plan cost estimates*

[11] *Same as "Remove & Replace Curb Cut w/ADA Ramp" improvement in Pedestrian Plan cost estimates*


PlanCheyenne