ACKNOWLEDGEMENTS

Numerous stakeholders collaborated in the development of this Action Plan. Their creativity, energy, and commitment were the driving forces behind this planning effort.

Project Team

Scott Bohemier, Western Nevada Safe Routes to School Program
Matt Bradley, Nevada Department of Transportation
Jon Erb, Douglas County
Pamela Hill-Gilmartin, Douglas County School District
Rebecca Kapuler, Nevada Department of Transportation
Christopher Martinovich, Carson Area Metropolitan Planning Organization
Katinka Rauch, Nevada Department of Transportation
Jason Reid, Douglas County School District
Erica Roselius, Western Nevada Safe Routes to School Program
Blaine Spires, Douglas County School District
Marc Walling, Douglas County School District

Consultant Team

Ellie Agnew, Parametrix
Amir Almotahari, Parametrix
Loren Chilson, Headway Transportation
Amy Cummings, Parametrix
Alex DuVall, Toole Design
Jeff Hale, Parametrix
Jackie Kuechenmeister, Parametrix
Eric Nielsen, Parametrix
Kai Tohinaka, Parametrix
Zoe Turner-Yovanovitch, Toole Design
Jennifer Valentine, Parametrix

TABLE OF CONTENTS

1 – INTRODUCTION 1
What is the Safe Routes to School (SRTS) Program? 2
SRTS in Douglas County 2
Plan Development 3
Purpose and Goals 3
Implementation Framework 3
2 – ENGAGEMENT 5
Community Engagement 6
School and Stakeholder Engagement 10
3 – EXISTING CONDITIONS 11
Overview 12
School Age Population Density 14
Safety Conditions 18
Transportation Needs 22
Equity Analysis 24
4 – COLLABORATIVE SOLUTIONS 30
Development of Recommendations 31
Funding Eligibility 40
Safety Education Programming 43

Exhibits

Exhibit 1: Douglas County Schools 13
Exhibit 2: School Age Population Density by Census Block, 2020 15
Exhibit 3: Jacks Valley and Piñon Hills Elementary Schools: School Age Population Density by Census Block, 2020 16
Exhibit 4: Douglas High, Minden Elementary, Carson Valley Middle, and Gardnerville Elementary Schools: School Age Population Density by Census Block, 2020 16
Exhibit 5: C.C. Meneley Elementary, Pau W Lu Middle, and Scarselli Elementary Schools: School Age Population Density by Census Block, 2020 17

Exhibit 6: Zephyr Cove Elementary and George Whittell Schools: School Age Population Density by Census Block, 2020 17
Exhibit 7: Crash Densities Within 2 Miles of Douglas County Schools 18
Exhibit 8: Impact of Speed on Pedestrian Crash Outcomes 19
Exhibit 9: Fatal and Sever Injury Crash Densities Within 2 Miles of Douglas County Schools 20
Exhibit 10: Crashes Involving Pedestrians or Cyclists Within 2 Miles of Douglas County Schools 21
Exhibit 11: Poverty Rate 26
Exhibit 12: Non-English-Speaking Households 28
Exhibit 13: Zero Vehicle Households 29

Tables

Table 1: Summary of Crash Types 19
Table 2: Demographic Characteristics Surrounding Each School 25
Table 3: Study Area Race and Ethnicity 27
Table 4: Proposed Concepts 36
Table 5: SRTS Funding Sources 41

Appendices

APPENDICES – ACTION PLAN
Appendix A – C.C. Meneley Elementary School
Appendix B – Carson Valley Middle School
Appendix C – Douglas High School
Appendix D – Gardnerville Elementary School
Appendix E – Jacks Valley Elementary School
Appendix F – Minden Elementary School
Appendix G – Pau-Wa-Lu Middle School and Scarselli Elementary School
Appendix H – Piñon Hills Elementary School
Appendix I – Zephyr Cove Elementary School and George Whittell High School
Appendix J – Online Survey Results

1 – INTRODUCTION

What is the Safe Routes to School (SRTS) Program?

Safe Routes to School (SRTS) is an approach that promotes walking and bicycling to school through infrastructure improvements, enforcement, tools, safety education, and various types of incentives. This approach is often described as the "6 Es of Safe Routes to School." The 6 Es are engagement, equity, engineering, encouragement, education, and evaluation. Each factor is described in more detail below:

Engagement: SRTS initiatives often begin with outreach to students, families, teachers, and school leaders to better understand the issues and opportunities surrounding each school. Ongoing engagement opportunities should be built into the program structure.

Education: These efforts provide students and other community members with the skills to walk and bicycle safely; educate them about the benefits of walking and bicycling; and teach them about the range of transportation choices available to them. Education programs can also teach driver safety.

Encouragement: These programs generate enthusiasm and help increase walking and bicycling through events, activities, and programs.

Engineering: These solutions focus on improving the physical environment for walking and bicycling – making them safer, more comfortable, and more convenient. Engineering solutions may include crossings, sidewalks, trails, bike lanes, bike parking, and traffic calming devices, among others.

Equity: SRTS initiatives should benefit and be designed for all demographic groups, including low-income and minority students, students with disabilities, and others.

Evaluation: Evaluation brings SRTS programs full circle by assessing the relative success of various approaches and identifying opportunities to improve their effectiveness.

This comprehensive approach has proven more effective at increasing physical activity and reducing injuries than efforts focusing on a single strategy.

SRTS in Douglas County

The Western Nevada Safe Routes to School (WNSRTS) program assists schools in Carson City and Douglas, Lyon, and Storey Counties in promoting safe walking, biking, and rolling for students traveling to and from school. This study is focused on SRTS for the eleven public schools in Douglas County, including its seven elementary schools, two middle schools, and two high schools.

Although there are a number of common issues among the schools, each school also has its own unique challenges and opportunities. Some schools are located near major arterials or highways, requiring students to navigate high-speed, high-volume roadways in order to walk or bicycle to school. Other campuses are located on quieter streets, but may be lacking sidewalks, crosswalks, and other pedestrian and bicycle infrastructure.

The aim of this plan is outlining and prioritizing the needs surrounding each school campus. Some of these projects may be implemented right away, while others could be longer-term goals. Implementation timeline will depend on cost, construction complexity, roadway ownership, community support, and other factors. However, documenting these needs in a single location is an important first step in creating change across the County.

Plan Development

The Western Nevada Safe Routes to School Program is developing this plan in partnership with Douglas County, the Douglas County School District, the Carson Area Metropolitan Planning Organization (CAMPO), and the Nevada Department of Transportation (NDOT). The outcome of this plan is a list of recommended concepts to improve student transportation safety that can be implemented by partner agencies. The projects may have different lead agencies for implementation, depending on location and available funding. For example, projects located on school property may be implemented by the Douglas County School District and improvements on county roads may be implemented by Douglas County.

The plan was developed with input from students, teachers, parents, school leadership, and members of the community. These stakeholders provided valuable information about the conditions surrounding each school campus, while other members of the community shared insights about big picture issues about school travel across Douglas County.

Section 2 describes the plan's community and stakeholder engagement processes in detail, including meetings, events, and virtual involvement opportunities.

Purpose and Goals

The purpose of this plan is to increase both the safety and the number of students walking and biking to school. Transportation safety is the highest priority of the WNSRTS program and the partner agencies. Identifying the infrastructure that would allow students to have safe mobility options to travel to school is the focus of this plan. In addition to the importance of traffic safety, providing active transportation options helps improve health outcomes, provides an affordable mobility choice, reduces traffic congestion, and can help improve academic performance.

Implementation Framework

Funding: The lack of funding limits the ability of local and state agencies to implement recommended improvements. Part of the purpose of this plan is to identify grants and other potential revenue sources to support the partner agencies in advancing these concepts to construction. The Bipartisan Infrastructure Law created or expanded federal grants that are targeted toward safety and active transportation, including the Safe Streets for All, Transportation Alternatives Set Aside, and Rebuilding American Infrastructure with Sustainability

and Equity (RAISE) grants. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

Multiple Agency Partners: The needs identified in this study are located on a combination of school, county, and state facilities. Implementation of these investments will involve continued coordination of multiple entities. The WNSRTS program can support facilitation of this ongoing partnership. It should be recognized that each agency manages unique planning, programming, and budgeting processes. With any transportation investment, it may take time to incorporate new project concepts into short- and long-range infrastructure plans.

As an example, the Jacks Valley Road area is included in the CAMPO service aera. CAMPO develops a 20-year long-range plan and 4-year transportation improvement program (TIP) that are updated at regular intervals. Prior to allocating funding for new projects, CAMPO must follow the approved procedures for addressing regional transportation needs and allocating resources for project development and implementation. Similarly, NDOT initiates the consideration of new projects through the One Nevada transportation planning process. This data-driven framework allows NDOT to consider statewide transportation needs and solutions. Projects must be included in the One Nevada analysis and amended into the 4-year Statewide Transportation Improvement Program, following approved procedures, prior to implementation. In addition, results of this study will be shared with NDOT for reference in the US 395 Corridor Plan.

2 – ENGAGEMENT

Engagement with community members and agency partners has been a critical component of the development of this Action Plan. Outreach opportunities were offered throughout the duration of the study to ensure an inclusive and transparent process.

Community Engagement

Key outreach and engagement opportunities included in-person and virtual public events. A project website was created and maintained throughout the duration of the project to supplement the information provided on the WNSRTS web page. Additional information about each of these events and tools is provided below.

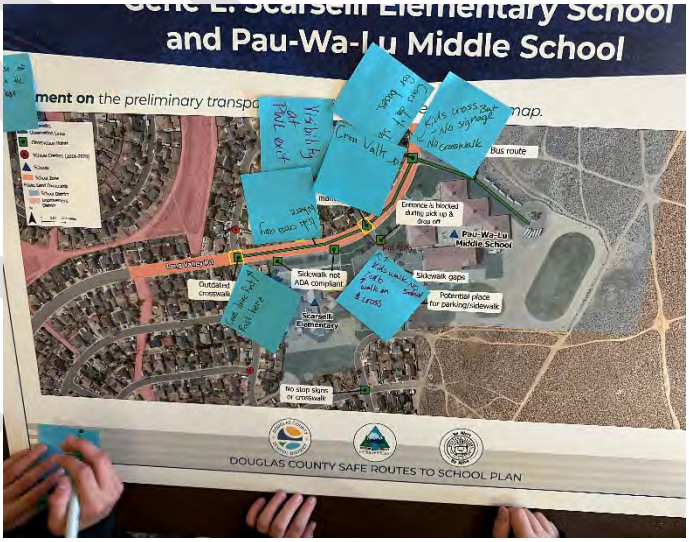
In-Person Public Meeting: The study team held an in-person public meeting on May 4, 2023. The meeting was held from 4 to 7 p.m. at the Douglas County Community and Senior Center. The meeting was an open house format, featuring a series of informative display boards about the SRTS program and conditions at each school. The project team was able to talk individually with parents, school staff, and students.

The meeting was advertised via a flyer, press release, and WNSRTS and partner agency social media accounts; distributed by schools through email; and highlighted on the project web page.

The meeting showcased student art prepared in partnership with the WNSRTS program. Students were invited to create posters describing what they like about walking and biking to school. A few examples are provided on the following page.

Student Art about Walking and Bicycling to School

Participants indicated concerns about the safety of walking and biking to school, noting the lack of sidewalks and bicycle lanes. Parents identified high vehicle travel speeds and the lack of infrastructure as barriers that prevent them from allowing students to walk or bike to school. Specific improvements were recommended, including bicycle lanes near Gene Scarselli Elementary School and multiuse paths near Piñon Hills Elementary School.



Virtual Public Meeting: A virtual public meeting was available between May 1 and June 23, 2023. Meeting materials included informative display boards, a guided PowerPoint presentation, an online survey, and an interactive comment map. All meeting materials were also provided in Spanish.

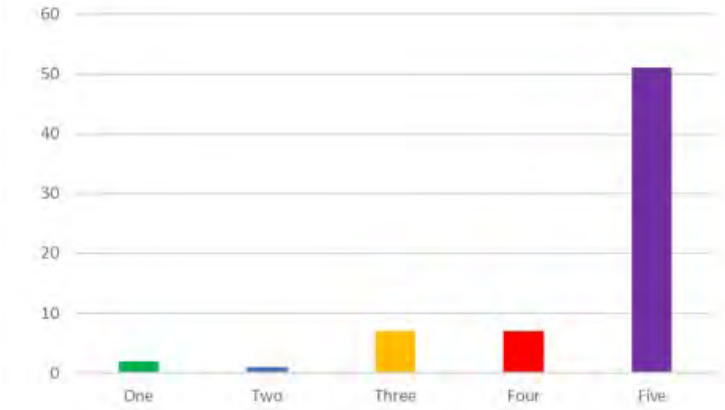
The online survey included several general questions for all respondents, followed by a customized series of questions specifically tailored to parents, students, teachers, and residents, respectively. The survey asked respondents to weigh in on the importance of providing safe walking and bicycling opportunities for students, as well as the most important factors related to school safety. Parents and students were also asked questions about their commuting patterns and the walking and bicycling conditions surrounding their school(s).

A total of 68 responses to the online survey was received. The majority of respondents (93%) were parents or guardians of Douglas County public school students. Over two-thirds of the parent or guardian respondents had a child who attended a single school – Piñon Hills Elementary. The remaining responses were distributed among several other schools.

Respondents were asked how important it was to them that students be able to walk and bicycle to school safely. The average response was 4.6 out of 5. They were then asked how important it was that public agencies invest in walking and bicycling infrastructure for students. The average response was 4.5 out of 5, signaling the importance of this issue to parents.

How important is it to you that public agencies invest in walking and biking facilities to improve access to schools?

(On a scale of 1–5) with 1 being the lowest and 5 being the highest)

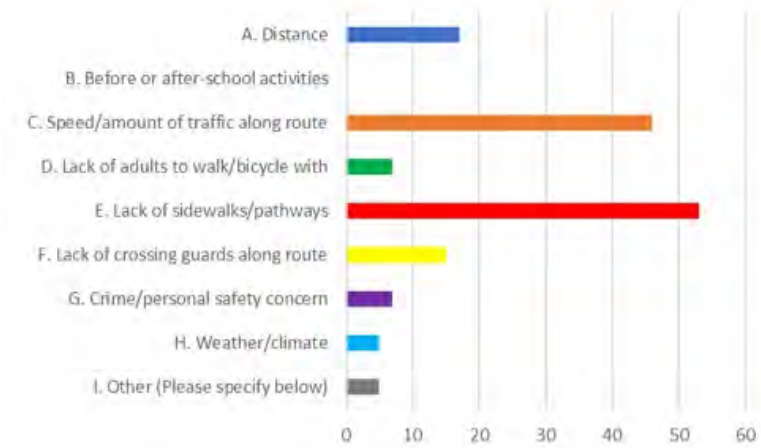


Answer	Count	Percentage
1	2	2.9%
2	1	1.5%
3	7	10.3%
4	7	10.3%
5	51	75%

Survey response about the importance of investing in infrastructure for safe access to schools

When asked about barriers to allowing their child to walk or bicycle to school, many parents mentioned a lack of sidewalks or pathways (73%), the speed or amount of traffic along the route (65%), and distance (25%). Respondents were allowed to check multiple responses.

What do you feel is the most important safety concern for students walking or biking to school?



Answer	Count	Percentage
A. Distance	17	11%
B. Before or after-school activities	0	0%
C. Speed/amount of traffic along route	46	29.7%
D. Lack of adults to walk/bicycle with	7	4.5%
E. Lack of sidewalks/pathways	53	34.2%
F. Lack of crossing guards along route	15	9.7%
G. Crime/personal safety concern	7	4.5%
H. Weather/climate	5	3.2%
I. Other (Please specify below)	5	3.2%

Survey response about the greatest safety concern for students walking or biking to school

Next, the survey asked how far they/their child lived from school. The most common answer was 1–2 miles (32%) followed by 1/2 to 1 mile (25%). Despite the relatively short distance from many homes to the school, 46% of children arrived at school by family vehicle and 35% arrived by school bus. Only 9% and 3% bicycled or walked, respectively. Unsurprisingly, given the short travel distance and mode, most respondents said it took their child 5–10 minutes to get to school.

The majority of parents (54%) said their child had asked permission to walk or bike to school. Fourth grade was the most popular grade at which parents would feel comfortable allowing their child to walk or bicycle to school without them.

A full summary of survey responses is provided in Appendix K.

Web Presence: A project-specific website was created and maintained throughout the duration of the study. The website provided information about the study, including public meeting announcements and materials; a link to the online survey and interactive comment map; the project email address; and an overview of the study purpose and goals. Basic information about the project and key outreach events was also provided on the WNSRTS web page.

Online Survey Comments:

"Today 5-16-23 I witnessed a child fall off their bike to the right of the exit and fell half in [the] road in front of a car. Luckily cars drive slow[ly]. Didn't think too much about sidewalks or bike paths until I saw this kid fall off his bike today."

"I allowed my son to ride his bike to school because there were sidewalks and volunteers/yard duty working at the crosswalks."

Over the course of the study, the project team received one email from a teacher who works in the Douglas County School District suggesting the addition of a sidewalk between Saratoga Springs Estates and Piñon Hills Elementary School.

Main Street Festival: WNSRTS co-hosted a community fair at Heritage Park on June 17, 2023. The event included music, food trucks, vendors, fun bicycle or scooter obstacle course, and a bicycle safety course. A booth was provided to share information about this plan and to seek input from participants about school transportation needs.

School and Stakeholder Engagement

Stakeholders have been actively engaged from the outset of the project. A partner agency kick-off meeting was held on March 15, 2023, to orient key stakeholders to the plan purpose, schedule, and upcoming engagement opportunities. The group also discussed their concerns and priorities related to SRTS in Douglas County.

Meetings with School Principals and Staff: Principals experience the transportation issues at their schools first-hand and communicate regularly with school staff, families, and students about these needs. The plan team met with principals at Douglas County schools to learn about the transportation safety priorities for each school site. These meetings occurred during April 2023.

Board and Committee Meetings/Presentations: Presentations were given to the Douglas County School Board on June 13 and September 12, 2023. A presentation was made to the Douglas County Commission on September 7, 2023. These presentations were provided to help keep elected officials and key stakeholders apprised of study happenings and provide opportunities for feedback.

3 – EXISTING CONDITIONS

Overview

This section provides an overview of common issues and themes among Douglas County schools. It is followed by a more detailed needs assessment and recommendations for each school in Appendices A through I.

Eleven public schools in Douglas County were included in this study, including seven elementary schools, two middle schools, and two high schools, as shown on **Exhibit 1**. Pedestrian, bicycle, and roadway/circulation conditions were reviewed and assessed at the following schools:

Elementary Schools:

C.C. Meneley Elementary School

Gardnerville Elementary School

Jacks Valley Elementary School

Minden Elementary School

Piñon Hills Elementary School

Scarselli Elementary School

Zephyr Cove Elementary School

Middle Schools:

Carson Valley Middle School

Pau-Wa-Lu Middle School

High Schools:

Douglas High School

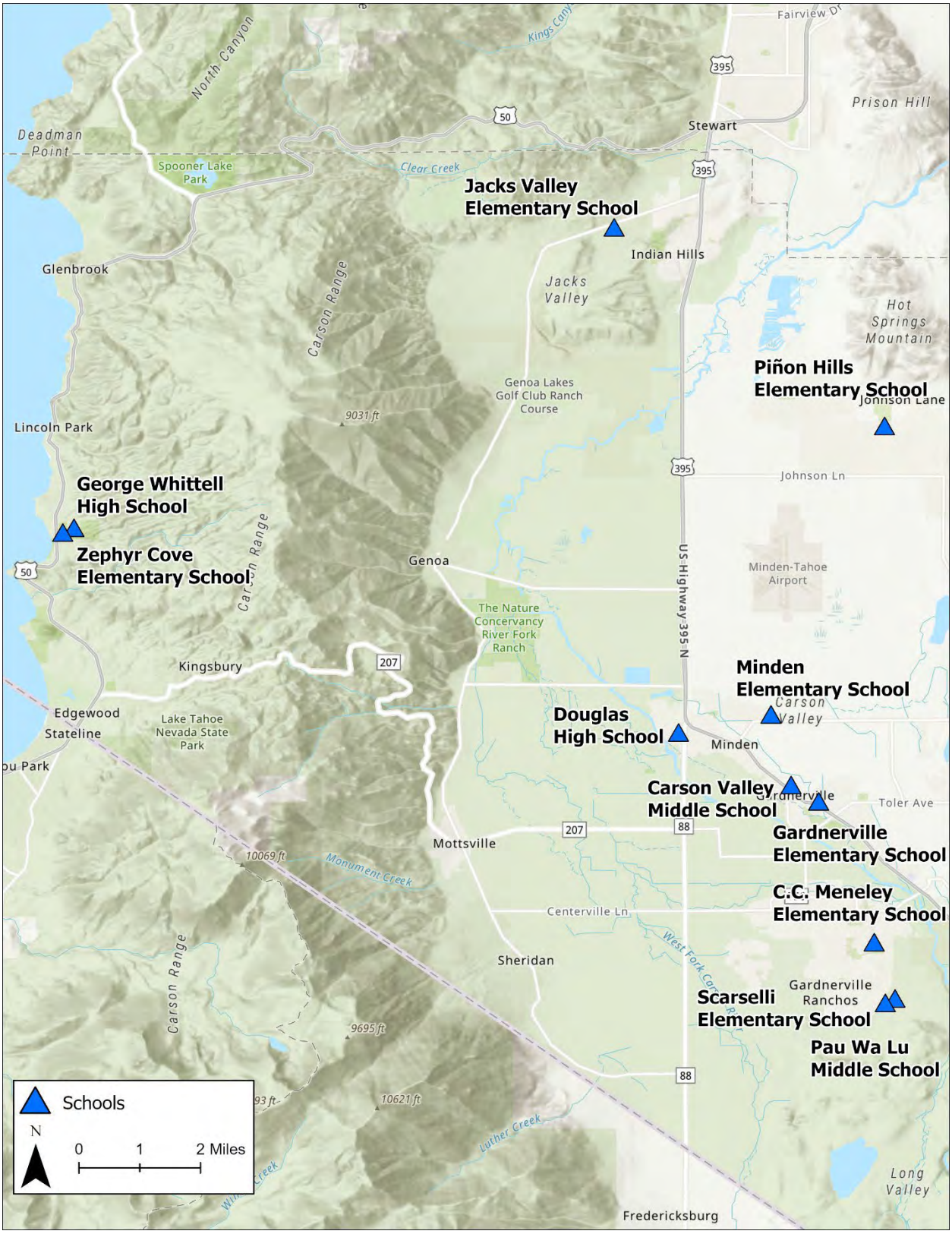
George Whittell High School

The existing conditions analysis is an important first step in understanding the issues and opportunities surrounding each school. The study team began by reviewing a comprehensive selection of maps, plans, and data related to each school. The area within a 2-mile radius of each school was considered. Next, the team field checked this information by conducting a walking audit of the area surrounding 9 of the 11 schools[1]. The walking audits focused on the school campuses themselves, and the areas immediately adjacent, particularly when off-campus areas (e.g., parks or neighborhood streets) are known to be used for pick-up and drop-off. Members of our team observed school pick-up and drop-off periods to better understand traffic circulation and mobility needs.

This chapter addresses topics including population density, safety, intersection operations, access and circulation, and equity.

[1] Walking audits were not conducted at Zephyr Cove Elementary and George Whittell High School due to the limited ability for students to walk and bicycle. Both schools are surrounded by Forest Service land rather than residential areas.

Exhibit 1: Douglas County Schools



School Age Population Density

School age population density was analyzed at the Census block level (**Exhibit 2**) for the region. Several of the schools have higher density blocks within 1–2 miles of their campus, the most notable being southeast of Jacks Valley Elementary School; east of Carson Valley Middle School and Gardnerville Elementary School; and west of Scarselli Elementary School and Pau-Wa-Lu Middle School. These areas generally have greater potential for students to walk and/or bicycle to school due to shorter trip distances and the efficiencies of making transportation investments between neighborhoods and schools. Detailed maps of population density around school groupings are provided below (**Exhibit 3** through **Exhibit 6**).

Exhibit 2: School Age Population Density by Census Block, 2020

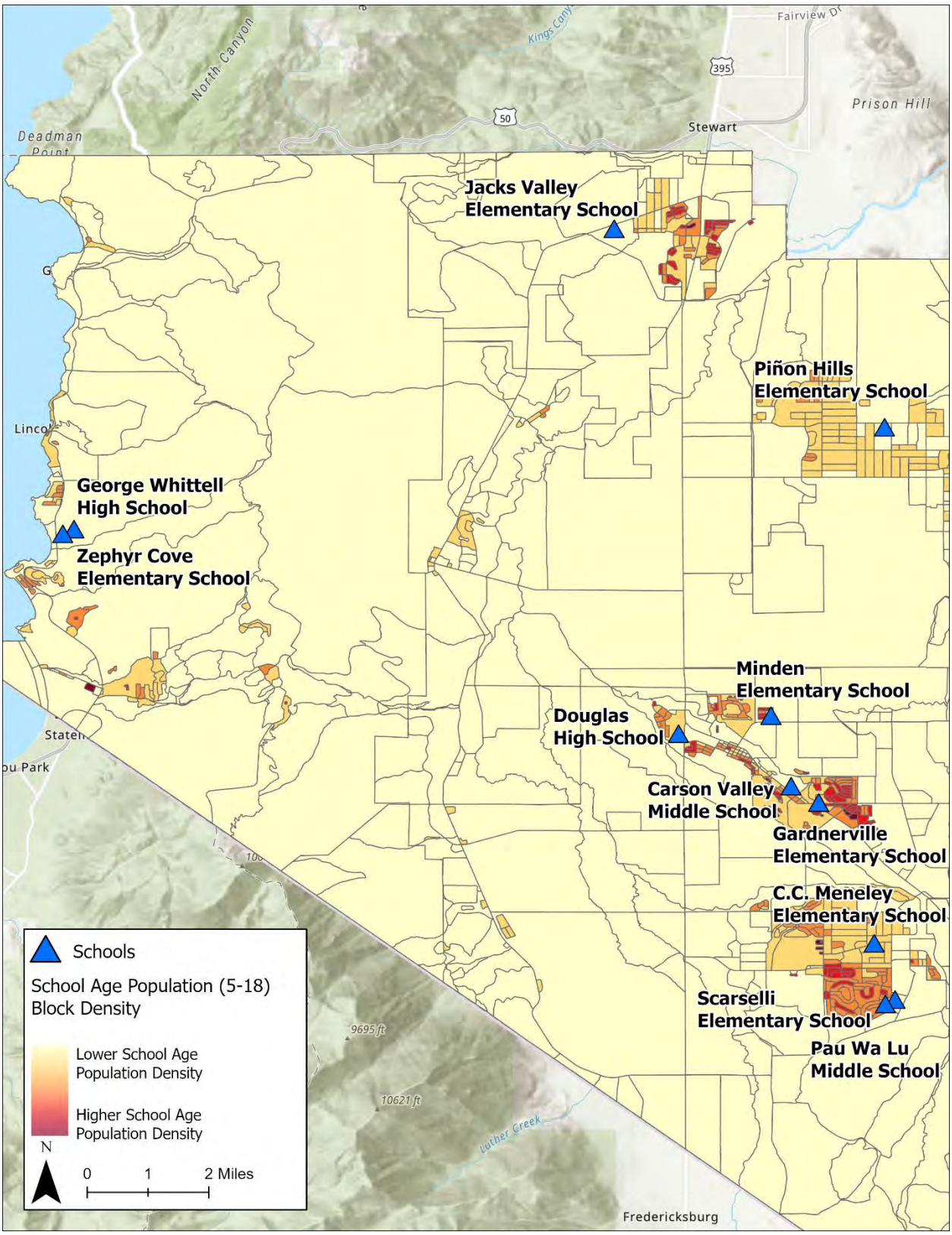


Exhibit 3: Jacks Valley and Piñon Hills Elementary Schools: School Age Population Density by Census Block, 2020

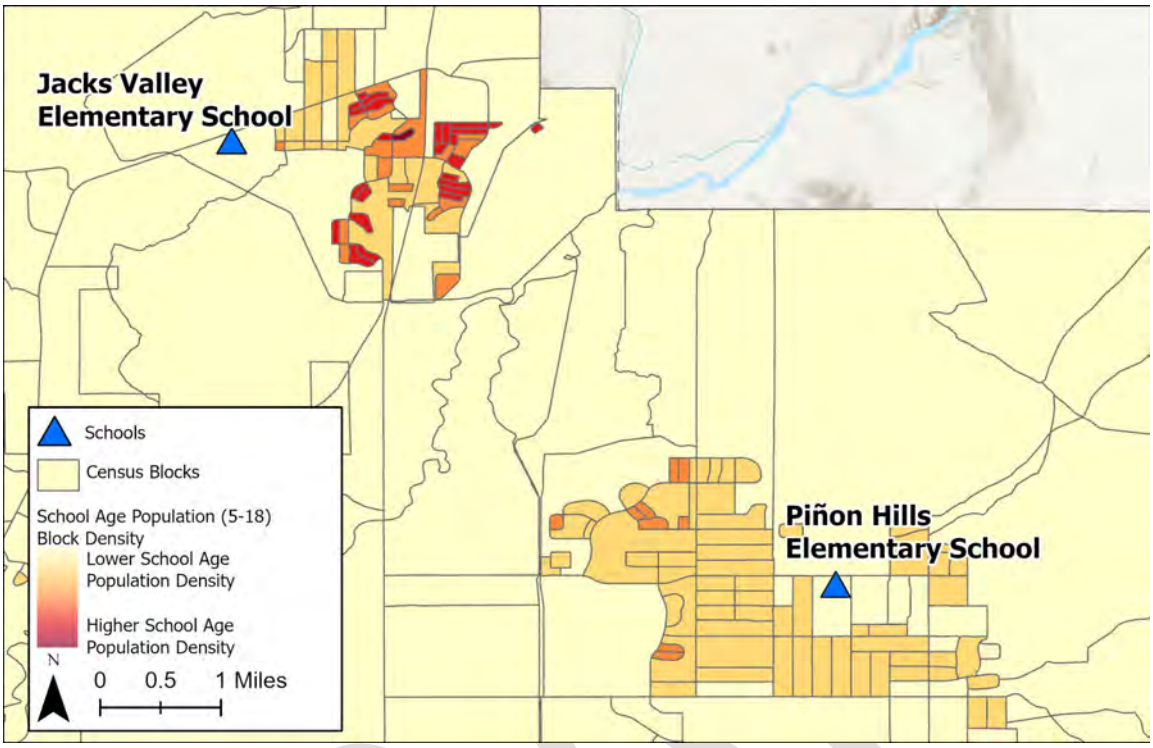


Exhibit 4: Douglas High, Minden Elementary, Carson Valley Middle, and Gardnerville Elementary Schools: School Age Population Density by Census Block, 2020

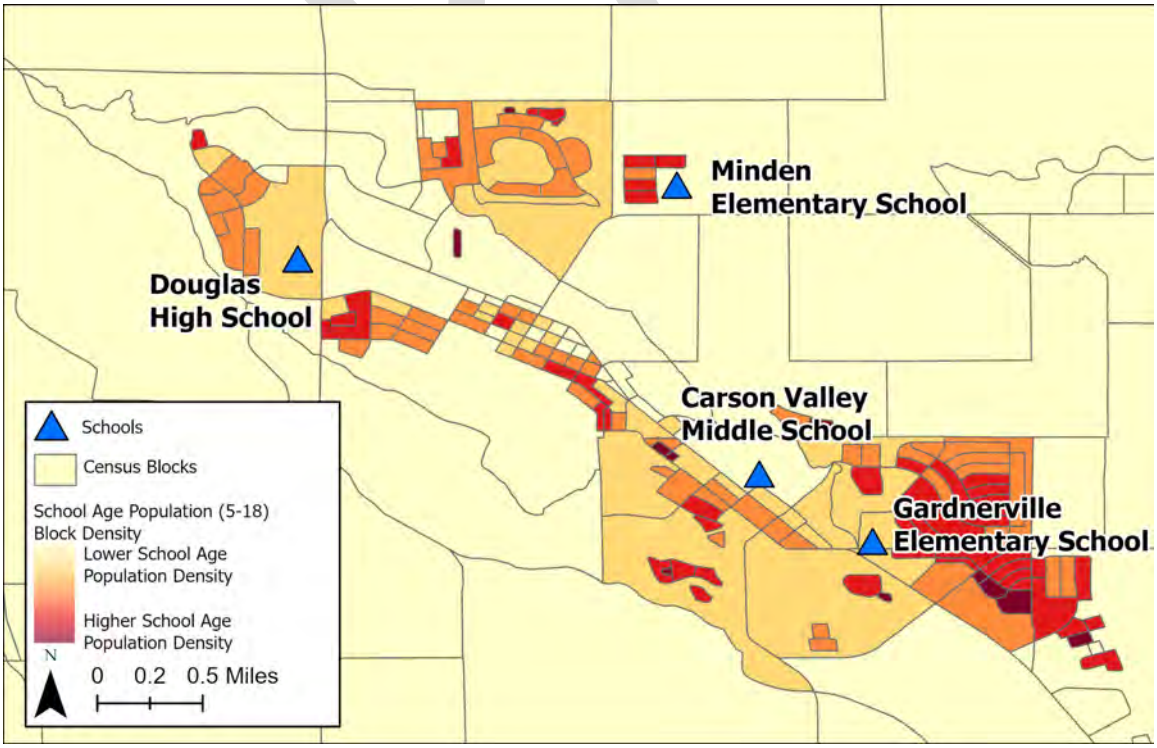


Exhibit 5: C.C. Meneley Elementary, Pau W Lu Middle, and Scarselli Elementary Schools: School Age Population Density by Census Block, 2020

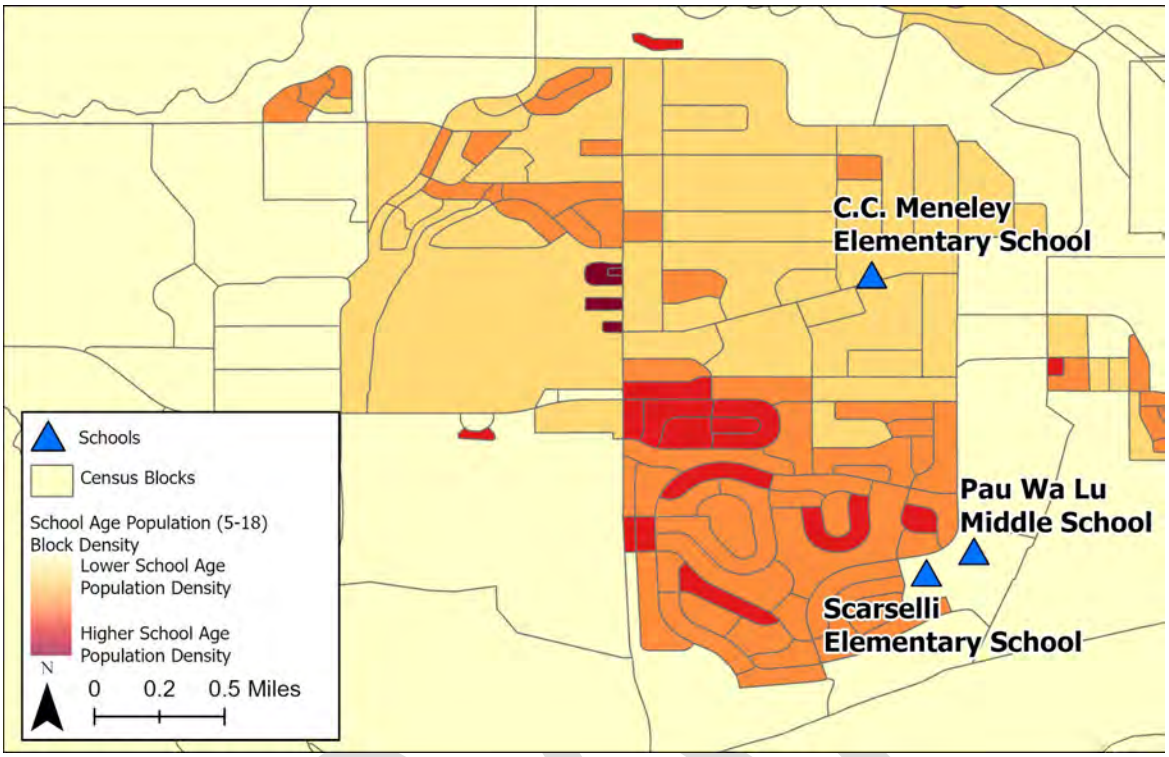
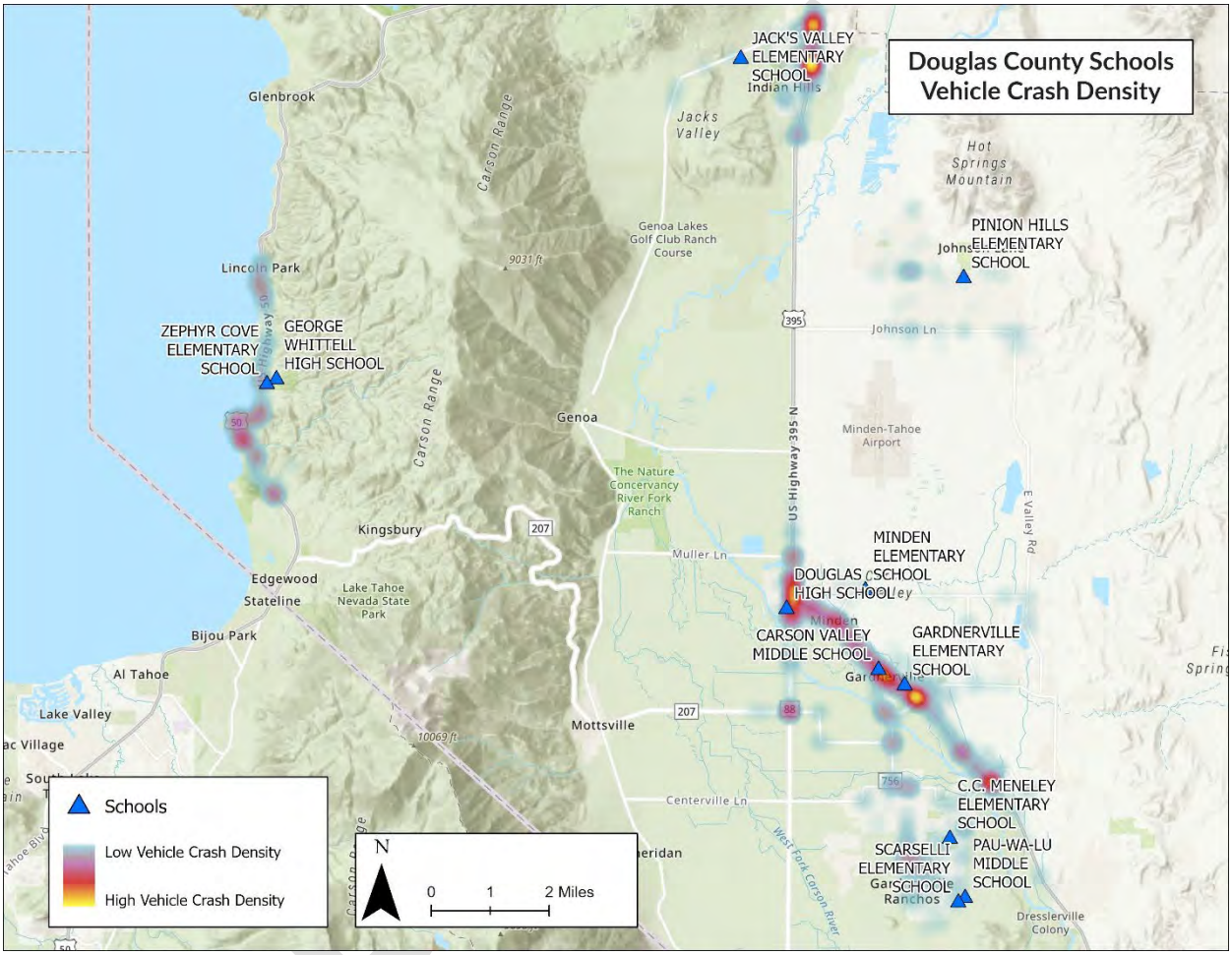


Exhibit 6: Zephyr Cove Elementary and George Whittell Schools: School Age Population Density by Census Block, 2020

Safety Conditions

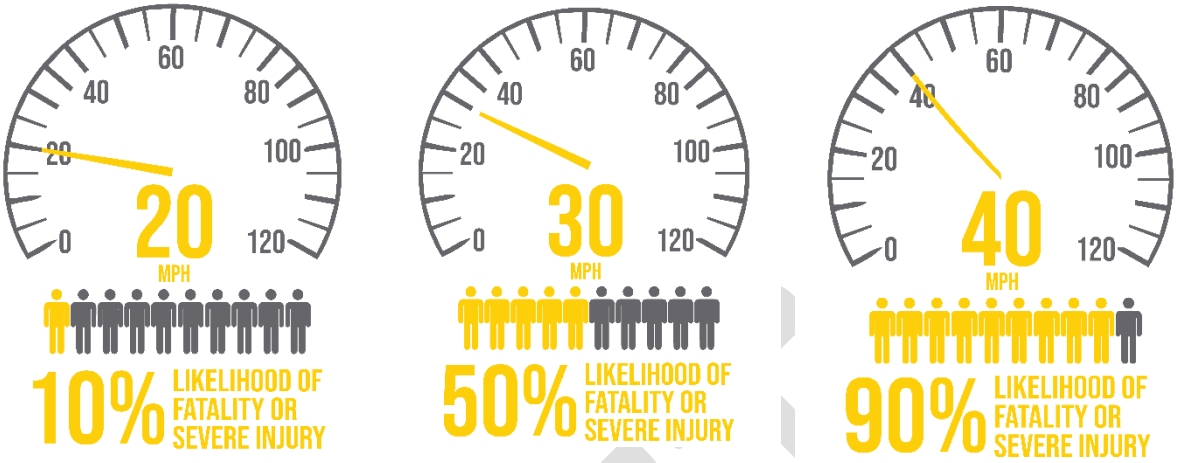
As with the overall existing conditions analysis, the safety analysis began with a review of data in the areas surrounding each school. Crash data from the Nevada Department of Transportation was reviewed for the 5-year span between 2016 and 2020, including vehicular crashes, as well as those involving pedestrians and bicyclists. The data showed that high vehicle crash density areas are primarily concentrated along highways, including US 395, US 50, and SR 88 (**Exhibit 7**).

Exhibit 7: Crash Densities Within 2 Miles of Douglas County Schools



In addition to the total number of crashes, it is important to consider crash severity. Speed is a determining factor in the severity of crashes for vehicles and pedestrians, as indicated in **Exhibit 8**. When vehicles are travelling at 40 miles per hour and hit a pedestrian, there is a 90% likelihood of severe injury or fatality for the pedestrian.

Exhibit 8: Impact of Speed on Pedestrian Crash Outcomes



Source: Vision Zero Truckee Meadows

Exhibit 9 illustrates the concentrations of crashes that resulted in fatalities or serious injuries within 2 miles of Douglas County schools. Major intersections along US 395, US 50 and SR 88 reflect higher levels of severe crashes. In addition, a cluster of severe crashes is present in the Gardnerville Ranchos area. **Exhibit 10** shows high density areas of vehicle crashes involving pedestrians or cycles within 2 miles of Douglas County schools, again primarily concentrated along highways, including US 395, US 50, and SR 88.

Between 2016 and 2020 there 1,744 vehicle crashes within 2 miles of schools in the study area. Of these, 12 resulted in fatalities, 22 involved severe injuries and 472 resulted in non-severe injuries. The remaining vehicle crashes were classified as property damage only. Of the vehicle crashes that occurred in the study area, 6% were recorded as happening during wet, snowy or ice road conditions. A summary of crash types is provided in **Table 1**. The most frequent crash types included rear-end crashes (36.3%), angle crashes (25.5%) and non-collision crashes (16.7%).

Table 1: Summary of Crash Types

Crash Type	Head-On	Angle	Backing	Rear-End	Sideswipe	Noncollision	Unknown
Number	51	446	45	635	258	291	18
Percentage	2.9%	25.6%	2.6%	36.4%	14.8%	16.7%	1.0%

Exhibit 9: Fatal and Sever Injury Crash Densities Within 2 Miles of Douglas County Schools

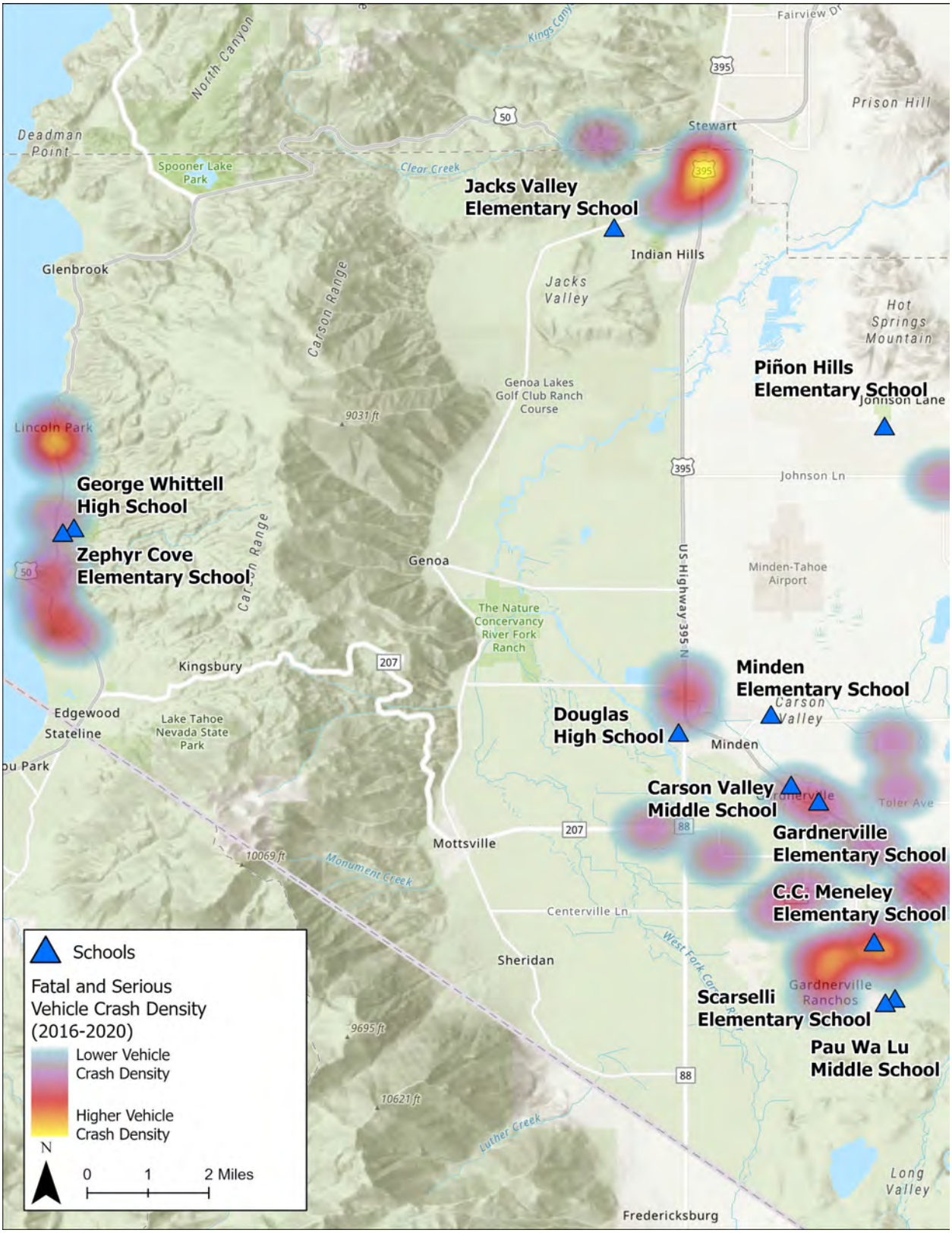
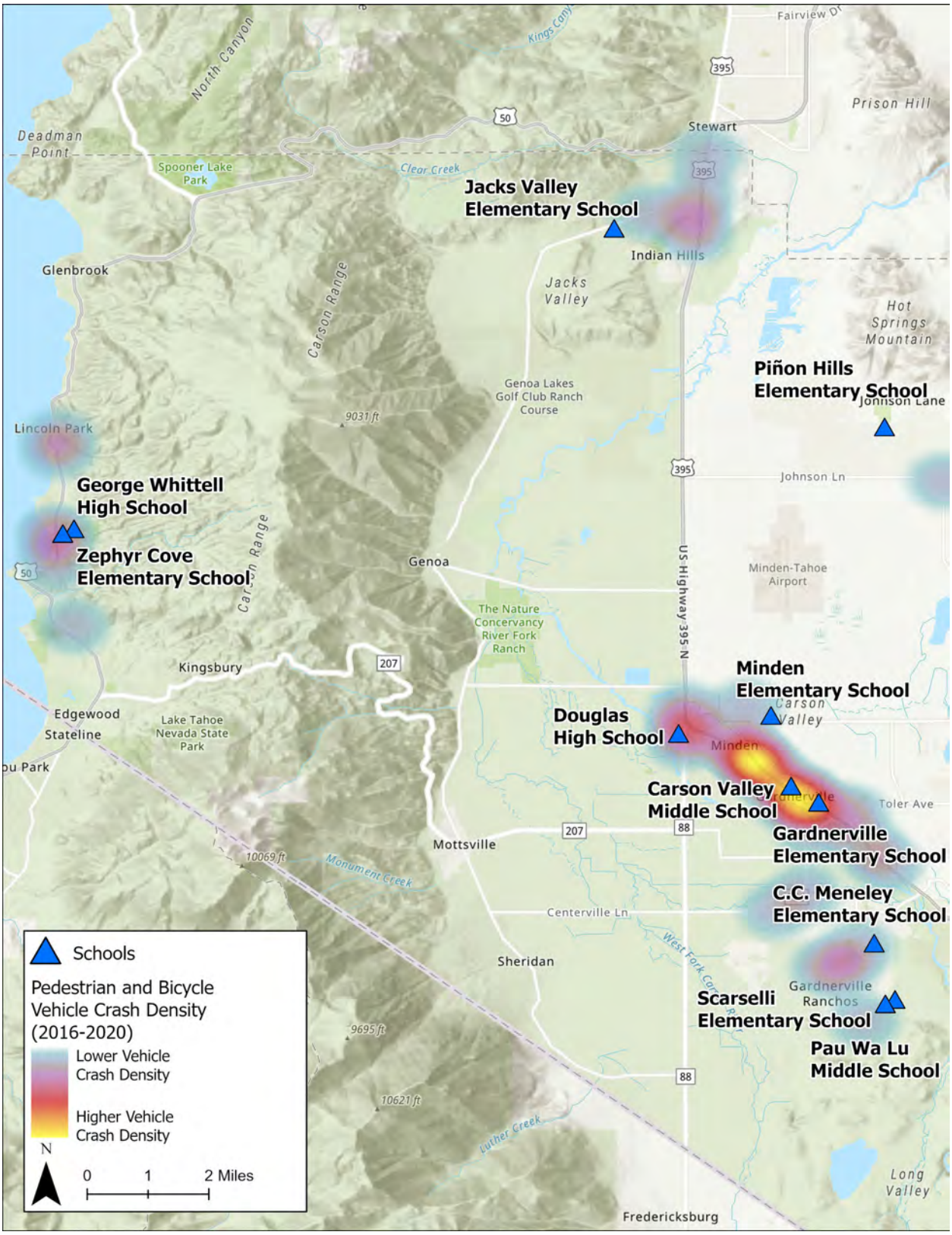


Exhibit 10: Crashes Involving Pedestrians or Cyclists Within 2 Miles of Douglas County Schools

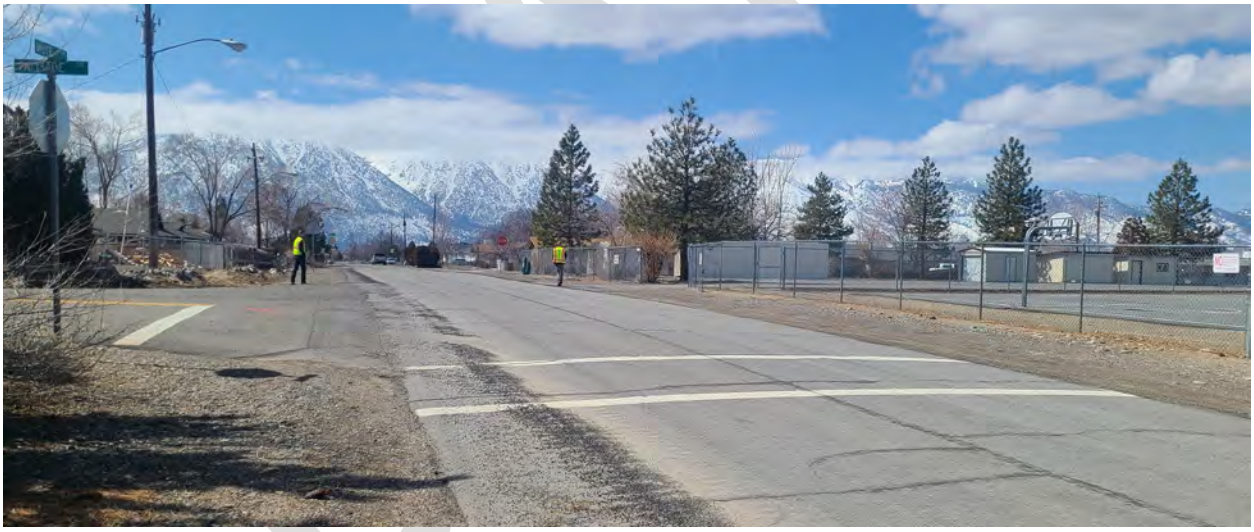


Safety considerations were a key component of the school site visits. The team conducted walking audits of the areas surrounding each school to identify safety concerns and potential needs. More detailed findings about safety issues around each school are presented in Appendices A through I.

Transportation Needs

Intersection issues and conditions in Douglas County, particularly near schools, merit attention due to several concerns. One of the primary issues is the high volume of heavy truck traffic passing through intersections along US 395 and SR 88. The presence of heavy trucks can pose safety risks to pedestrians at intersection crossings. High vehicle speeds further exacerbate the dangers, making it difficult for students to navigate the intersections safely.

Another concern is the lack of appropriate signage and traffic control devices at some intersections near schools. Signs within the school zone were often missing or outdated (i.e., nonfluorescent). Outdated crosswalk markings and inadequate signage may contribute to confusion for pedestrians and motorists. There are also crosswalks on multilane roadways that do not meet current design standards. Improved safety infrastructure can raise awareness for motorists that pedestrians are likely to be present.



Outdated pedestrian crossing

The lack of multimodal infrastructure adds to the safety and access concerns. Inconsistent school zone signage, limited shared-use paths, bicycle lanes, gaps in sidewalk connectivity, and the absence of paved walkways and sidewalk connections to nearby intersections make it challenging for students to travel safely around schools. Sidewalks, ramps, and facilities that do not meet current Americans with Disabilities Act (ADA) standards further compromise accessibility and safety at some intersections.

More detailed findings about transportation concerns around each school are presented in Appendices A through I.

Lack of paved path near Piñon Hills Elementary

Sidewalk obstruction at Scarselli Elementary

Operational Challenges During School Pick-Up and Drop-Off

Vehicle (parent) and school bus operations were observed during the morning arrival and afternoon dismissal peak activity periods. The following themes were identified:

- Insufficient student drop-off/pick-up areas such that queuing occurred in roadways or intersections and affected mainline traffic.
- Inadequate bus loading zones. Buses were observed parking at an angle at most schools to fit the needed buses in the limited staging areas. Buses did not fit within the staging area at a few locations for brief durations.
- Conflicts between students and vehicles.
- Illegal U-turns in school zones.
- Insufficient speed zone signage or a need for revisions to manage speeds.
- Pedestrians crossing from parking areas and not using crosswalks.
- Student drop-off and pick-up activities occurring in undesirable locations.

To help alleviate multimodal safety and travel issues/deficiencies, the following systemic improvements are recommended:

Sidewalks and Crosswalks

- Install sidewalks or shared-use paths where there are gaps in the existing network.
- Relocate/add crosswalks where pedestrian demand shows need.
- Restripe crosswalk pavement markings where they are faded or in need of maintenance.
- Upgrade side-positioned rectangular rapid flashing beacon (RRFB) systems or nonenhanced crossings across multilane roadways to overhead mast-arm-mounted RRFB systems in accordance with NDOT standards.
- Upgrade all pedestrian ramps to current ADA standards, including installing detectable warning surfaces at the base of the ramp.

Bicycle Facilities

- Modify bicycle facilities to promote the use of bicycles within the school areas.
- Shoulder bike lanes and painted bike lanes should be upgraded to be protected or separated bike lanes where warranted per the Federal Highway Administration's (FHWA's) Bikeway Selection Guide. Bike lanes can be protected by parked cars, concrete buffers, continuous curb, planters, and more, as long as a continuous vertical element protects and separates bicyclists from vehicles.

Signage

- Install school zone advanced warning signs on all approaches.
- Update/add school signage to help clarify circulation patterns.
- Update signs within school zones to meet current standards (i.e., fluorescent green/yellow).
- Replace damaged signage.

Traffic Operations

- Modify student drop-off/pick-up areas to alleviate confusion and queuing issues.
- Modify bus loading zones to provide more space and a safe and efficient area for student loading.

The specific improvement recommendations made for each school are outlined in Appendices A through I.

Equity Analysis

The equity analysis for this study considered four main factors: households with school-aged children living in poverty; minority populations; non-English-speaking households; and zero-vehicle households. These factors serve as high-level indicators of some of the challenges socioeconomically disadvantaged households experience, especially related to transportation.

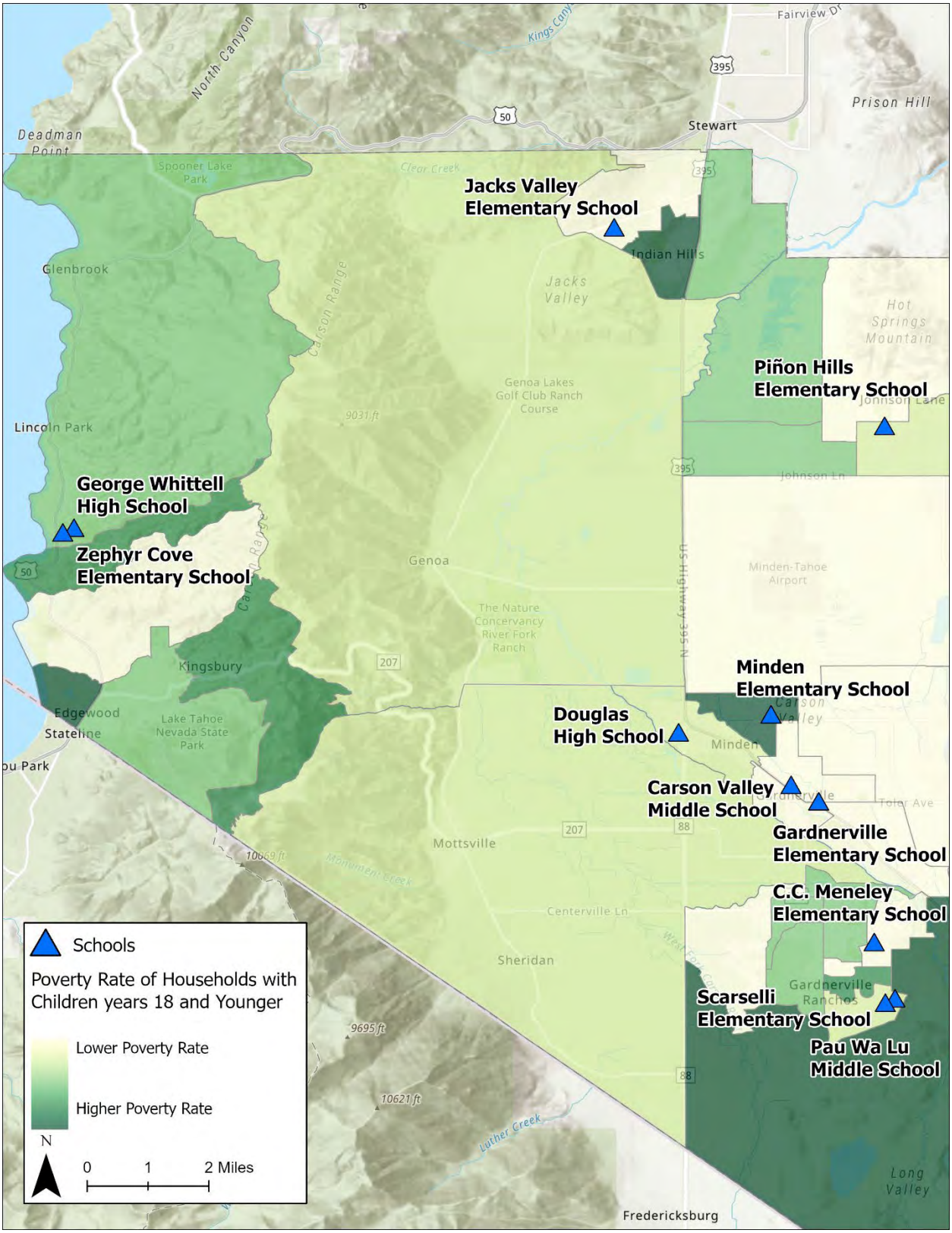
A summary for each factor is provided below, followed by maps (**Exhibit 4** through **Exhibit 6**) showing where these populations are concentrated throughout Douglas County, and in relation to its eleven public schools. Specific numbers for the populations in a 2-mile radius surrounding each school are provided in **Table 2**.

Table 2: Demographic Characteristics Surrounding Each School

School	Zero Vehicle Households	Non-English-Speaking Households	Poverty Rate for Families with Children
C.C. Meneley Elementary	2.6%	9.0%	4.0%
Carson Valley Middle	1.8%	7.0%	2.6%
Douglas High	0.7%	6.9%	2.8%
Gardnerville Elementary	2.0%	7.4%	2.8%
Jacks Valley Elementary	1.8%	11.7%	4.9%
Minden Elementary	0.8%	7.0%	2.3%
Piñon Hills Elementary	0.8%	7.7%	2.4%
Scarselli Elementary and Pau-Wa-Lu Middle	2.9%	10.5%	5.0%
Zephyr Cove Elementary and George Whittell High	4.3%	20.3%	3.5%

Poverty: Higher rates of poverty are seen in several portions of Douglas County, including the large block group to the south of Scarselli Elementary School and Pau-Wa-Lu Middle School; the block group just west of Minden Elementary School; and the block group just south and east of Jacks Valley Elementary School. There are also a few areas with more moderate poverty rates to the south and east of George Whittell High School and Zephyr Cove Elementary School (**Exhibit 11**).

Exhibit 11: Poverty Rate



Racial and Ethnic Diversity: The study area, 2 miles around each school, includes a racially diverse population as shown in **Table 3**. According to census data, approximately 80% of the population is white, 12% is Hispanic or Latino, 3% is two or more races, 2% is Asian, and 1.6% is American Indian and Alaska Native.

Table 3: Study Area Race and Ethnicity

Race and Ethnicity	Percentage
White	79.5%
Hispanic or Latino	12.3%
Two or More Races	3.3%
Asian	2.0%
American Indian and Alaska Native	1.6%
Black or African American	0.6%
Some Other Race	0.6%
Native Hawaiian and Other Pacific Islander	0.1%

Non-English-Speaking Households: There are several large block groups (or collections of block groups) throughout Douglas County with higher concentrations of non-English-speaking households. These areas include the entire western edge of the county (to the north, south, and east of George Whittell High School and Zephyr Cove Elementary School), two block groups southeast of Jacks Valley Elementary School, a block group southwest of Piñon Hills Elementary School, a block group just west of Minden Elementary School, and the large block group south of Scarselli Elementary School and Pau-Wa-Lu Middle School (**Exhibit 12**).

Zero Vehicle Households: There are two areas with relatively high proportions of households without a vehicle in the county – one to the southeast of George Whittell High School and Zephyr Cove Elementary School, and another to the west of C.C. Meneley Elementary School. There are also several large areas with more moderate rates of car ownership, including the area north of George Whittell High School and Zephyr Cove Elementary School, the block group surrounding Jacks Valley Elementary School, and the large block group to the south and west of Scarselli Elementary School and Pau-Wa-Lu Middle School (**Exhibit 13**).

More detailed information about equity issues surrounding each school is provided in Appendices A through I.

Exhibit 12: Non-English-Speaking Households

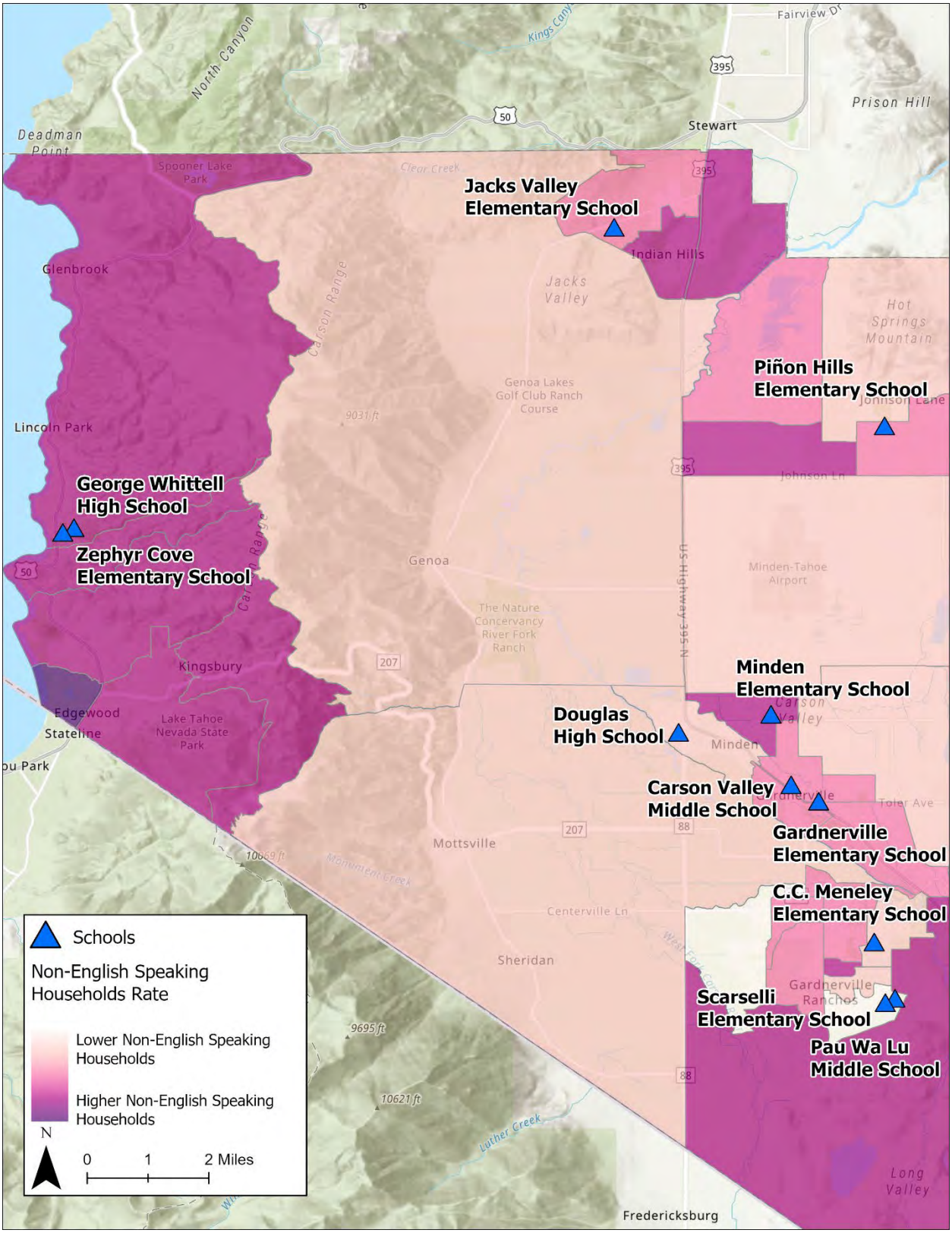
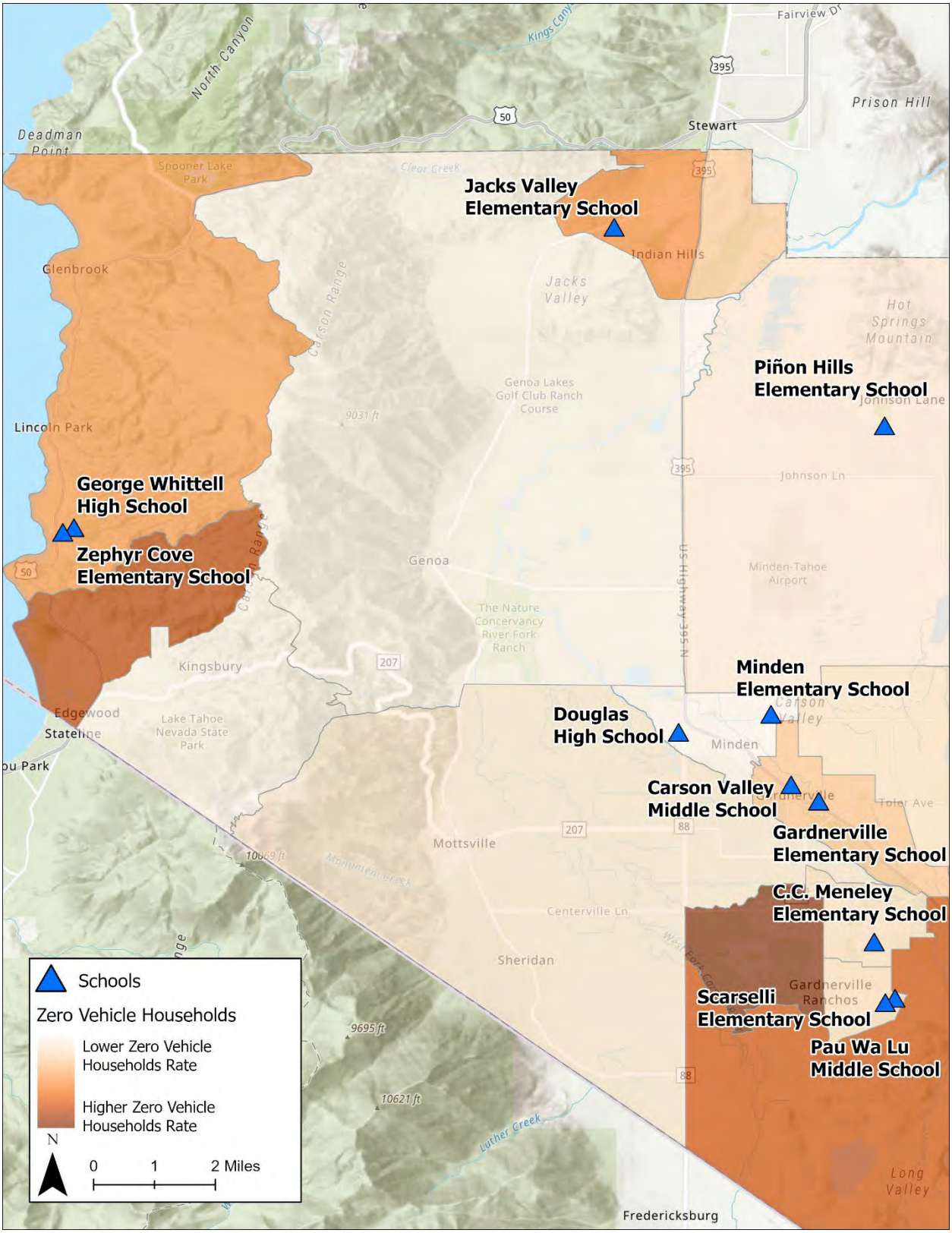


Exhibit 13: Zero Vehicle Households



4 – COLLABORATIVE SOLUTIONS

Development of Recommendations

The following recommendations were developed based on a needs assessment of each school. This incorporated community input, insights from school principals and staff, field reviews, and data analysis. The analysis considered circulation during pick-up and drop-off periods and the alternatives include elements to improve safety and mobility during these high-congestion periods. Over 100 recommendations were identified, ranging from upgrades to signage and striping to major roadway and sidewalk reconstruction. This section presents an overview of select projects, highlighted in **Table 4** on page 36, with additional detail on all schools provided in the Appendices.

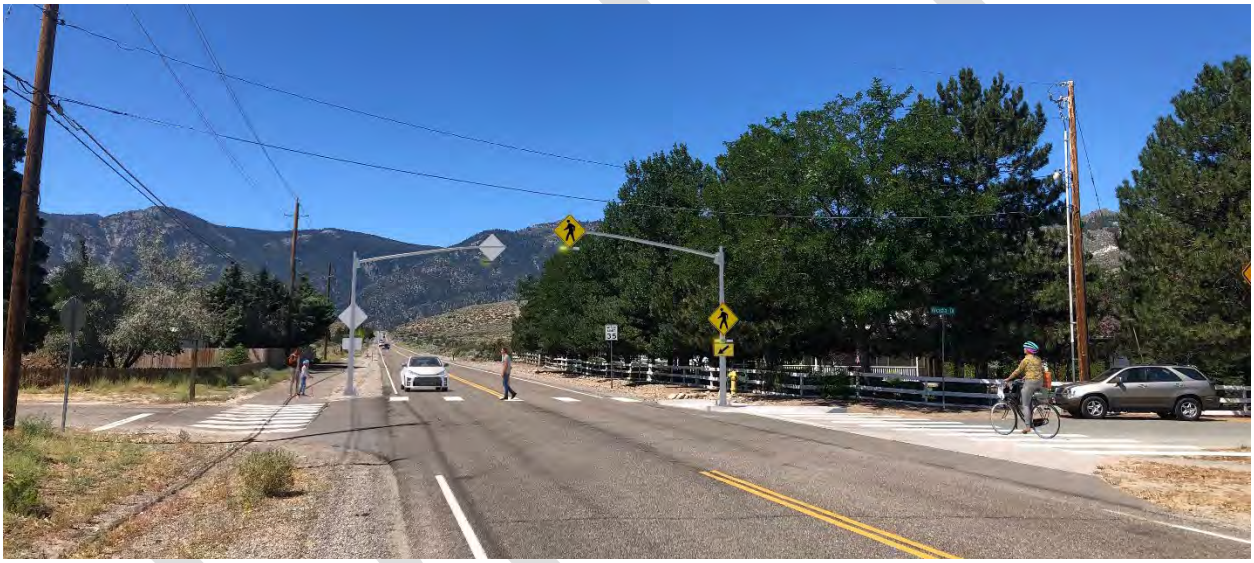
One priority project identified is located on Muir Drive along the frontage of C.C. Meneley Elementary School. Referenced as CC11 in **Table 4**, this improvement would address the lack of any paved sidewalk or path for students walking into the school. It would replace the unpaved shoulder with a 12-foot-wide sidewalk and curbside loading zone.

Existing conditions along Muir Drive

Muir Drive with proposed improvements

The multiuse path crossing at the intersection of Jacks Valley Road and Arcadia Drive was identified as a significant safety concern by Jacks Valley Elementary School. The current crosswalk is difficult to see and does not contain ADA accessible curb ramps. High travel spends of Jacks Valley Road were cited as a major concern for parents in considering allowing their students to walk or bike to school. In addition, the current crosswalk is located on the side of the intersection that experiences the dominant travel demand pattern of vehicles travelling from Arcadia to US 395. Improvement JV1 in **Table 4** would relocate the crosswalk to the other side of the intersection, install overhead pedestrian activated RRFB, and construct ADA compliant curb ramps.

Existing conditions at Jacks Valley Road and Arcadia Drive



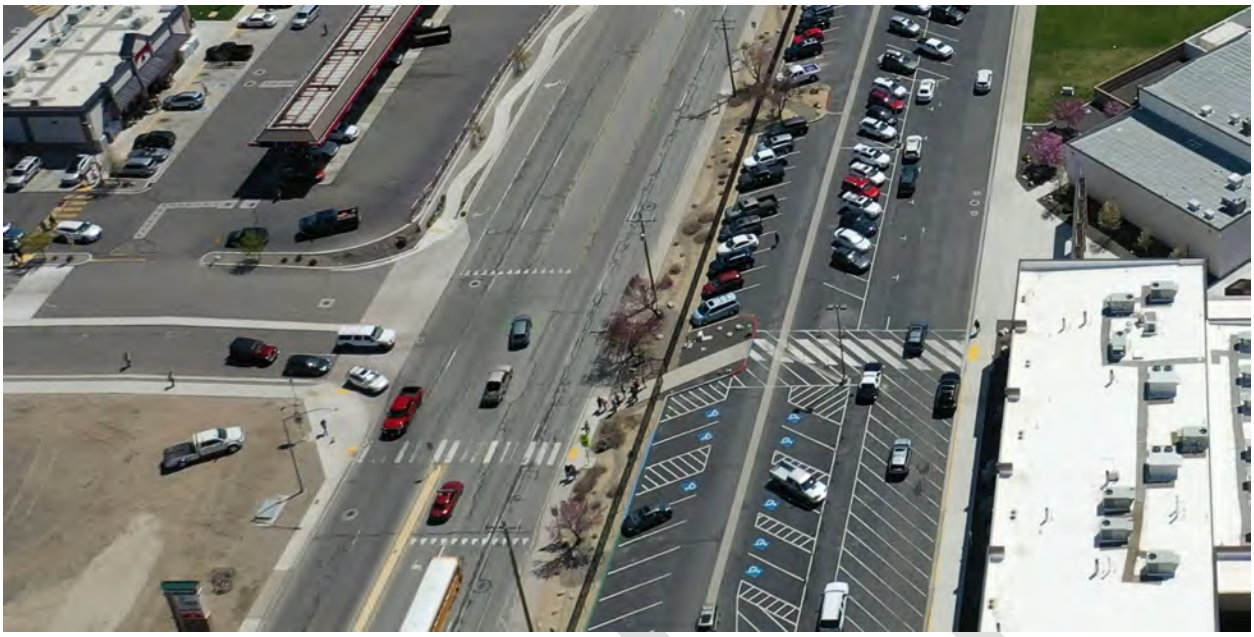
Proposed improvements at Jacks Valley Road and Arcadia Drive

Long Valley Road in front of Pau-Wa-Lu Middle School and Scarselli Elementary School is a wide two-lane road with bicycle lanes on one side of the street, narrow sidewalks, and on-street parking. Students and other members of the public noted high travel speeds and the lack of pedestrian and bicycle amenities in this area. Existing crosswalk markings are faded and do not provide high levels of visibility. Project SC1 in **Table 4** (page 7) proposes restriping the existing roadway to include two 11-foot-wide travel lanes, 6.5-foot-wide bicycle lanes next to the curb, and parking lanes to provide a buffer between the bicycle land and automobile travel lanes. Project SC5 proposes widening the sidewalks along the school frontage, removing barriers to the path of travel currently located in the sidewalk, and providing ADA accessible curb ramps.

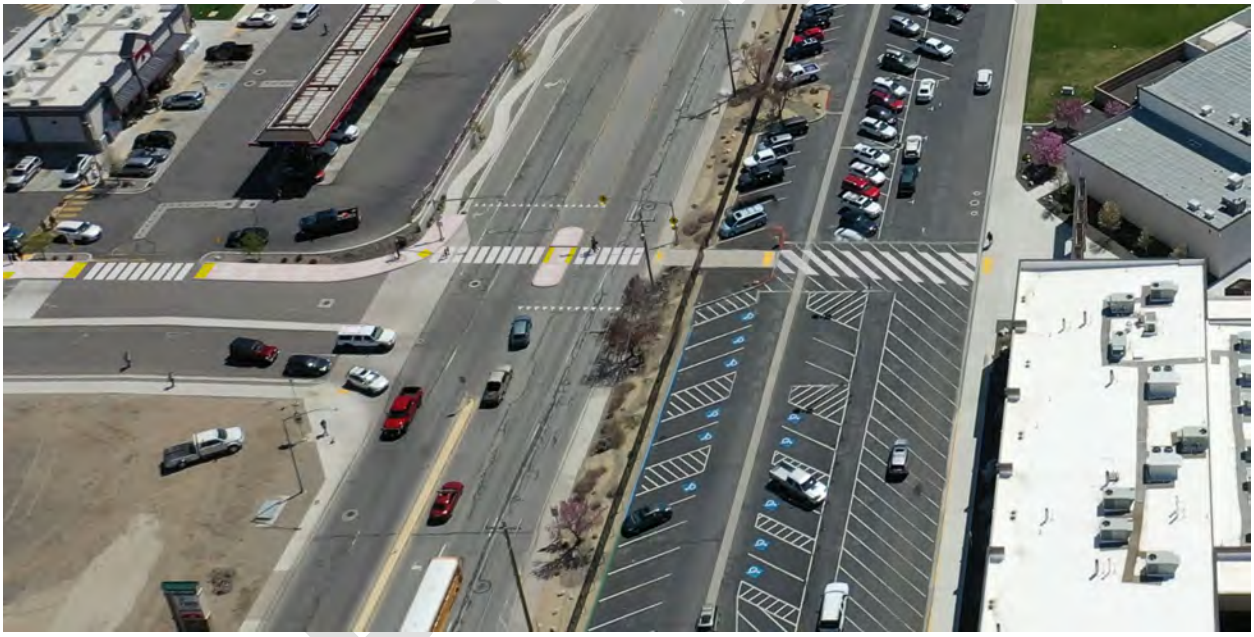
Existing conditions along Long Valley Road

Long Valley Road with proposed improvements

The crosswalk from Douglas High School to the Maverick driveway on SR 88 was identified as a priority due to the high volume of students crossing at this location and the high truck volumes on SR 88. The current crosswalk location traverses the center left turn lane used to access the Maverick driveway. The current crossing provides street-level pedestrian-activated RRFB. Concept DH2 in **Table 4** (page 7) proposes relocating the crosswalk to the opposite side of the driveway. By moving the crosswalk out of the center turn lane, it provides room for a center island that functions as a pedestrian refuge and offers enhanced visibility for pedestrians. Overhead RRFB are recommended due to high traffic and truck volumes at this location.



Existing conditions on SR 88 at Douglas High School



Proposed improvements along SR 88 near Douglas High School

US 395 near Gardnerville Elementary School is a major highway facility. Due to historical development patterns, there are some segments lacking ADA accessible sidewalks. An aging crosswalk and overhead RRFB at Mission Street no longer meet current NDOT standards for flashing beacons. Project GN16 in **Table 4** below proposes installing sidewalks and replacing the overhead RRFB according to current NDOT standards.

Existing conditions along US 395

US 395 with proposed improvements

While there are over 100 recommended projects in this plan document (see Appendices A through I for detailed lists), **Table 4** provides a summary of featured projects and concepts. These featured projects were selected based on being either a high-priority project (independent of implementation timeline) or a so-called "quick win." Quick wins are projects that may be implemented relatively quickly and/or inexpensively but are still expected to make a substantial impact on school safety.

Table 4: Proposed Concepts

School	Quick Win Package	Priority Project Package	ID	Location	Draft Recommendations
C.C. Meneley Elementary School	●		CC8	Muir Drive/ Palisade Circle	Install high visibility crosswalks along school frontage at entrance/exits of parking lots and at Palisade Circle.
		●	CC7	Muir Drive (at school frontage, parking lot entrance)	Remove crosswalk to dirt shoulder and modify gate for ADA access.
			CC10	Muir Drive, south side opposite school frontage	Install curb and gutter along south side of Muir Drive to prohibit pick-up and drop-off and prohibit parking in the dirt area south of Muir Drive.
			CC11	Muir Drive	Install sidewalk and loading zone on the school frontage. Reallocate the right-of-way along Muir Drive from south to north: 2' curb and gutter, 11' travel lanes, 9' parking/loading zone, 2' curb and gutter, 12' sidewalk. Install no loading signs along the south side of Muir Drive.
Carson Valley Middle School	●		CV3	Slaughterhouse Lane/ Courthouse Street intersection	Install high visibility crosswalk perpendicular across Slaughterhouse Lane. Connect the existing sidewalk to the new landing point on the north corner. Install ADA curb ramp.
			CV11	West side of Slaughterhouse Lane and north side of Courthouse Street	Maintain vegetation along sidewalks.
		●	CV1	US 395/ Mill Street intersection	Restripe crosswalk pavement markings for high visibility and upgrade crossing to an overhead mast arm RRFB per NDOT standards.
			CV9	US 395/High School Street intersection	Upgrade crossing to an overhead mast arm RRFB per NDOT standards.

School	Quick Win Package	Priority Project Package	ID	Location	Draft Recommendations
Douglas High School	●		DH13	School parking lot	Install traffic control pavement markings: stop bars/signs and pedestrian crosswalks.
		●	DH2	SR 88/Maverik driveway intersection	Relocate existing crosswalk to the south side of the intersection. Install a pedestrian refuge island. Install an overhead mast arm RRFB.
			DH3	SR 88/Maverik driveway intersection	Continue sidewalk on the south side of the Maverik roadway to provide pedestrian access to Maverik. Consider removing southmost driveway lane to install sidewalk.
Gardnerville Elementary School	●		GN15	Giles Lane/ Marion Russell Drive intersection	Install high visibility crosswalk with ADA curb ramps. Install advance warning signs in advance of this crosswalk.
		●	GN16	US 395 and Mission Street to US 395 and Toler Lane	Move the existing crosswalk from the east side of US 395/Mission Street to the south/east side of US 395/Toler Lane. Upgrade to an overhead mast arm RRFB per NDOT standards. Alternatively, add a crossing at US 395/ Toler Lane in addition to the existing crossing at US 395/Mission Street.
Jacks Valley Elementary School	●		JV5	Center school driveway off Jacks Valley Road	Convert the center driveway to be enter/exit rather than exit only.
			JV10	Front parking lot of school, off Jacks Valley Road	Extend bus loading zone to utilize the full curb length.
			JV12	Parking lot east of school	Update ADA parking signs/markings.
		●	JV1	Arcadia Drive/ Jacks Valley Road intersection	Restripe crosswalks for high visibility. Install crosswalk and solar RRFB across Jacks Valley Road. Install accessible walkway or curb ramps on the northeast and southeast corners of the intersection. Install fluorescent advance warning signs/students crossing signs in both directions for crossing.

School	Quick Win Package	Priority Project Package	ID	Location	Draft Recommendations
Minden Elementary School	●		MN6	Baler Street/ Sanford Way intersection	Install advance warning signs for pedestrian crossing/school zone prior to this intersection.
			MN11	East side of existing parking lot, in front of school	Install pull forward signage.
		●	MN3	Buckeye Road/ Sanford Way intersection	Restripe crosswalk pavement markings for high visibility and install ADA curb ramps. Install advance warning signs with flashers.
Piñon Hills Elementary School	●		PH4	Stephanie Way at the school's main entrance to the park across the street	Restripe crosswalk for high visibility.
			PH5	North side of Stephanie Way at the school's main entrance	Repair the sidewalk connection across the ditch that connects the school main entrance to Johnson Lane Park.
		●	PH2	Stephanie Way from Gordon Avenue to Fuller Avenue	Install a sidewalk or paved shoulder on the south side of Stephanie Way along the entire school frontage, at least from Gordon Avenue to Fuller Avenue.
Scarselli Elementary School	●		SC3	Long Valley Road/ Ann Way intersection	Restripe crosswalks for high visibility and install ADA curb ramps.
			SC11	Sidewalk at east end of bus loop of Gene Scarselli	Modify sidewalk for ADA compliance.
		●	SC5	Long Valley Road at the pick-up and drop-off lot at Scarselli (across from Irene Court)	Widen sidewalks and upgrade curb ramps at the Scarselli driveways so they are ADA compatible. Currently, the gates at the driveways block access to the curb ramps and do not meet ADA standards. Curb ramp users must enter the street to access the paired curb ramp.
Pau-Wa-Lu Middle School	●		PWL1	Long Valley Road at the Pau-Wa-Lu bus lane driveway	Install a high visibility crosswalk with ADA ramps across Long Valley Road to provide an alternative walking route to school that avoids the vehicular traffic at the Long Valley Road/Angora Drive intersection.
		●	PWL2	Pau-Wa-Lu drop-off loop	Extend student drop-off loop to bus driveway and add sidewalk.

School	Quick Win Package	Priority Project Package	ID	Location	Draft Recommendations
Scarselli and Pau-Wa-Lu Schools		●	SC1	Long Valley Road from Main River Road to Bluerock Road	Restripe the roadway so the bike lanes are parking protected (i.e., the bike lanes are next to the curb and the parking is in between the bike lanes and the travel lane). The curb-to-curb width is about 60' throughout the corridor. Consider the following rechannelization: 6.5' bike lanes with 3' painted buffer between bike lane and parking (on both sides), 7' parking lanes (on both sides), and 11' travel lanes. This configuration still leaves additional room that could either be allocated to the parking lane, buffer, or bike lane.
Zephyr Cove and Whittell Schools	●		ZC3	Warrior Way	Restripe/update existing crosswalks for high visibility and install ADA curb ramps.
		●	ZC4	Warrior Way	Install lateral rumble strips where the existing school zone speed feedback signs are located to increase attentiveness.

Funding Eligibility

A variety of funding sources can be considered for implementation of these improvements. Multiple partners may be involved in implementing improvements, including the Douglas County School District, Douglas County, and NDOT. **Table 5** provides a summary of potential funding sources.

Table 5: SRTS Funding Sources

SRTS Eligible?	Program Name	Agency	Program Description/ Eligibility	Match Requirement
Yes	Safe Streets and Roads for All (SS4A) Grant Program	Office of the Secretary	The Bipartisan Infrastructure Law established the new SS4A discretionary grant program, with $5 billion in appropriated funds over 5 years, 2022–2026. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Projects must be included in a safety action plan.	20%
Yes	Surface Transportation Block Grant (STBG)	FHWA	The STBG promotes flexibility in state and local transportation decisions and provides flexible funding to best address state and local transportation needs.	5%
Yes	Transportation Alternatives (TA) Set-Aside	FHWA	The TA Set-Aside from the STBG Program provides federal funds for community-based projects that expand travel choices and enhance the transportation experience. These projects are intended to integrate modes and improve the cultural, historic, and environmental aspects of our transportation infrastructure. Local governments, regional transportation authorities, transit agencies, metropolitan planning organizations (MPOs), and school districts, among others, are eligible to apply for TA Set-Aside funding. Projects must be selected based on a competitive process.	5%
Yes	Highway Safety Improvement Program (HSIP)	FHWA	The Bipartisan Infrastructure Law continues the HSIP to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.	5%

SRTS Eligible?	Program Name	Agency	Program Description/ Eligibility	Match Requirement
Yes	State Highway Fund	NDOT	NDOT receives fuel tax revenues that are available for use statewide. These funds are prioritized using the One Nevada process and programmed over a 4-year time period in the Statewide Transportation Improvement Program.	Varies
Yes	Regional/Local Funds	Douglas County/ RTC	Douglas County and the Regional Transportation Commission (RTC) collect local fuel taxes that are eligible for roadway operations and capital projects	No
Yes	Regional/Local Funds	Douglas County School District	The Douglas County School District has limited funding available for capital projects.	No
Yes	Private Funding/ Partnerships	Private	Public/private partnerships, including collaborations with area nonprofits, community organizations, the development community, or potential private donors, should be considered where feasible.	Varies

Safety Education Programming

While this plan is primarily focused on construction projects that will improve safety, it is important to recognize the significant role of education and awareness. The WNSRTS program serves all Douglas County public schools, in addition to those in Carson City, Story County, and Lyon County. Their engagement initiatives include helping kids learn the rules of the road and the best ways to protect themselves when they are walking and biking. WNSRTS makes this fun for younger students with Safety Sally, a mascot that encourages students to be alert and be safe when traveling. They provide important safety gear, such as helmets and reflective backpacks or wearable lights, at no cost to students or families. This is done in partnership with NDOT, which sponsors the Nevada Safe Routes to School Program and provides grant funding to WNSRTS. In addition to the Main Street Festival described in Chapter 2, the program visits schools, facilitates engagement through art expos, hosts the Ride for Reading and Nevada Moves Day, facilitates walking school bus events, and participates in many other community activities. Continued engagement of the WNSRTS team in expanding safety training and awareness for students and families is critically important for the community.