

# APPENDICES – ACTION PLAN





## Implementation Framework

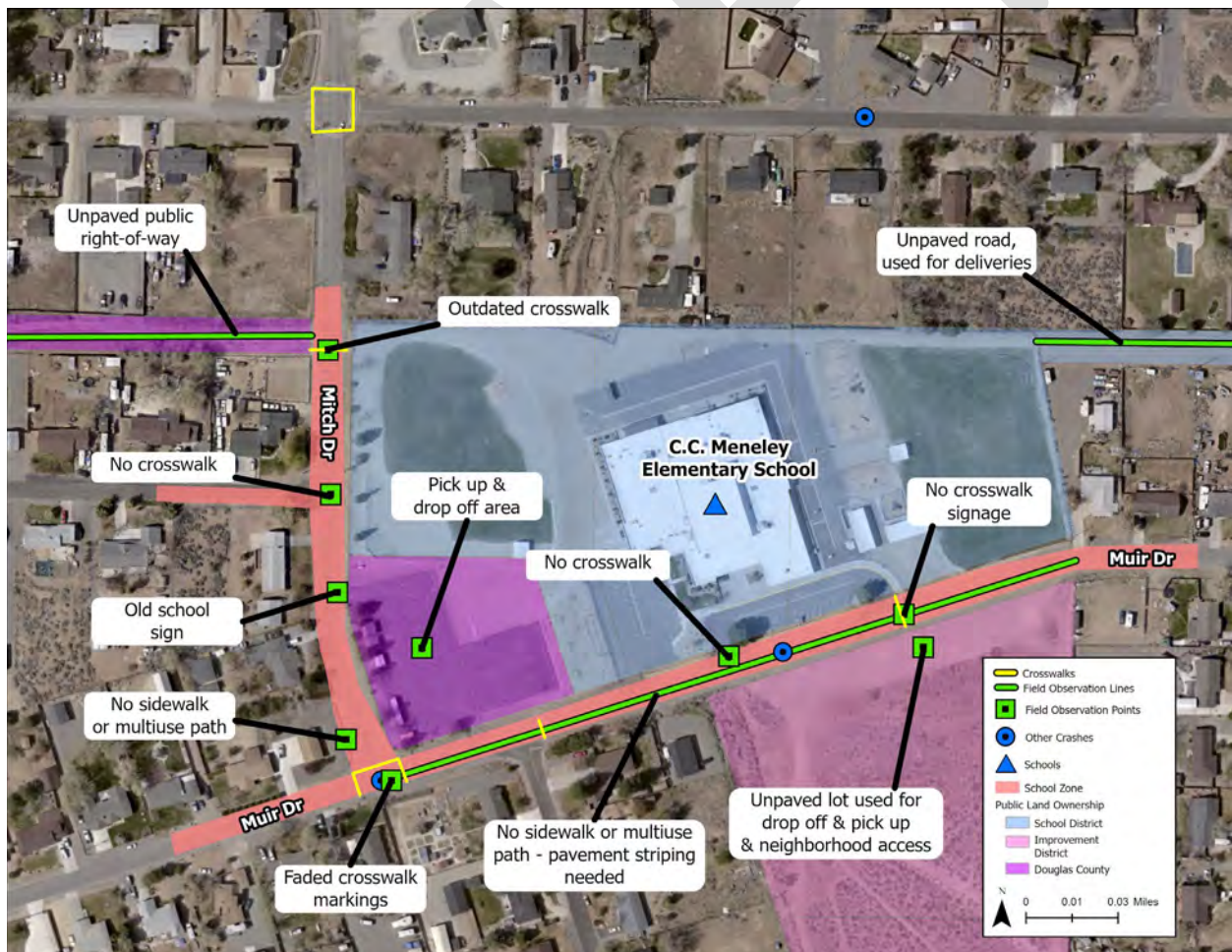
Appendices A-I provide a description of needs and recommended transportation investments at each school location. These recommendations reflect the community engagement and technical analysis that occurred throughout the 9-month study process. Recommendations include a project description and location. The proposed implementation timeline reflects the estimated complexity and cost of the project and is described as short (less than 2 years), mid (2–5 years) or long (over 5 years) term. The estimated rough order of magnitude cost is reflected in dollar signs, with one symbol representing a projected cost less than \$100,000, two symbols representing \$100,000–\$500,000, and three symbols representing project costs expected to be greater than \$500,000. The priority of the project is reflected as high, medium, or low, with the most urgent needs as assessed by the project team designated as high priority.

# Appendix A – C.C. Meneley Elementary School

C.C. Meneley Elementary School is located in the Gardnerville Ranchos subdivision area, south of Minden-Gardnerville. Although the school is located in a residential community with many parks and families, the area surrounding the school lacks sidewalks. Despite the lack of facilities, many students continue to walk along the road or the dirt sections adjacent to the roads to reach the school. The Gardnerville Ranchos community has a relatively large school-aged population and could see higher levels of walking and bicycling with improved facilities.

**Exhibit A-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding C.C. Meneley Elementary School.

## Exhibit A-1: C.C. Meneley Existing Conditions



## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Missing crosswalks along Mitch Drive and Muir Drive adjacent to the school property.
- Missing sidewalk and/or path along Muir Drive just south of the school.

## Intersection Needs

The following issues have been identified at intersections near C.C. Meneley Elementary School:

- The lack of safe connections for pedestrians at the intersection of Muir Drive and Mitch Drive. There is a need for paved walkways and high visibility crosswalks with ADA curb ramps, along with advance warning signs to alert drivers of pedestrian crossings near the school.
- The lack of safe and visible pedestrian crossings at the intersection of Selkirk Circle and Mitch Drive.
- Outdated crosswalks at the intersection of Mitch Drive and Riverview Drive.
- The lack of designated loading zones and parking areas near the school frontage poses risks during busy drop-off and pick-up times, particularly at the intersection of Muir Drive and Mitch Drive.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- The parent drop-off loop is currently inadequate to accommodate the number of vehicles observed during pick-up and drop-off times, leading to spillage onto Muir Drive.
- The bus loop and parking areas are also inadequate for the number of buses accessing the school, which can cause back-ups and delay.
- Illegal U-turns were observed along Muir Drive in front of the school.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023, including:

- Faded crosswalk markings near the intersection of Muir Drive and Mitch Drive.
- Missing or faded pavement striping along Muir Drive in front of the school.
- Outdated crosswalk along Mitch Drive just west of the school.
- Outdated school signage along Mitch Drive.

## Equity Considerations

In the 2-mile radius around the school, 23% of households with children are in poverty, 25% of households do not speak English at home, 23% of the population is a minority, and 7% of households do not have a vehicle at home. The economic reality of poverty makes having a vehicle that is available to drop students off at school very difficult. Students in these households are more likely to walk or bicycle to school out of necessity, regardless of whether safe facilities are provided.

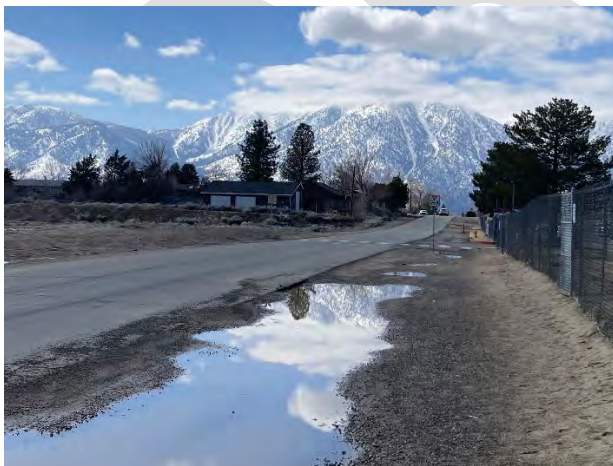
Due to adjacent residential areas, this school has substantial potential for generating walking and bicycling trips. Improving the safety and convenience of walking and bicycling to school would be especially beneficial for the area's socioeconomically disadvantaged residents.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at C.C. Meneley Elementary School are outlined in **Table A-1** and shown in **Exhibits A-2** and **A-3**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

A visualization of one of the proposed improvements in the vicinity of the school is provided below.



*Existing conditions along Muir Drive*



*Muir Drive with proposed improvements*



**Table A-1: C.C. Meneley Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
CC1	Mid	Medium	S Riverview Drive (east of S Riverview Drive/ Mitch Drive intersection)	Pave the public right-of-way to create a connection to Ranchos Aspen Park.	\$\$\$
CC2	Mid	High	S Riverview Drive/Mitch Drive intersection	Install high visibility crosswalk with ADA curb ramps. Install advance warning signs in advance of this crosswalk.	\$\$
CC3	Mid	High	Selkirk Circle/ Mitch Drive intersection	Install high visibility crosswalk with ADA curb ramps. Install advance warning signs in advance of this crosswalk.	\$\$
CC4	Short	High	School zone	Install or upgrade fluorescent advanced warning signs for all crosswalks within the school zone.	\$
CC5	Mid	High	Muir Drive	Install paved walkway from bus loop entrance to Whitney Way.	\$\$\$
CC6	Short	High	Mitch Drive/Muir Drive intersection	Restripe crosswalk pavement markings for high visibility.	\$
CC7	Short	High	Muir Drive (at school frontage, parking lot entrance)	Remove crosswalk to dirt shoulder and modify gate for ADA access.	\$
CC8	Short	High	Muir Drive/ Palisade Circle	Install high visibility crosswalks along school frontage at entrance/exits of parking lots and at Palisade Circle.	\$
CC9	Long	Low	Mitch Drive/ Muir Drive to Ranchos Aspen Park	Install an additional sidewalk path connection from Mitch Drive/ Muir Drive to Ranchos Aspen Park. Evaluate a shared-use path or trail connection through county or school district right-of-way.	\$\$\$
CC10	Mid	High	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.	\$\$

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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
CC11	Long	Medium	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.	\$\$\$
CC12	Mid	Medium	Mitch Drive/ S Riverview Drive intersection to Mitch Park	Install paved shoulder on east side of Mitch Drive to Mitch Park.	\$\$
CC13	Short	Medium	East side of Mitch Drive, in pick-up and drop-off lot	Install pull forward signage.	\$
CC14	Long	Medium	East side of school on Muir Drive (at school frontage, parking lot entrance)	Extend bus loop into the field. Reconstruct sidewalks, curb ramps, fence, and gates for the reconstructed bus loop.	\$\$\$
CC15	Short	High	West of school between parent drop-off parking lot and school	Construct pedestrian walkway connection to student drop-off/pick-up.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$\$** \$100,00–\$500,000, **\$\$\$** >\$500,000

**Exhibit A-2: C.C. Meneley Elementary School Recommended Improvements**

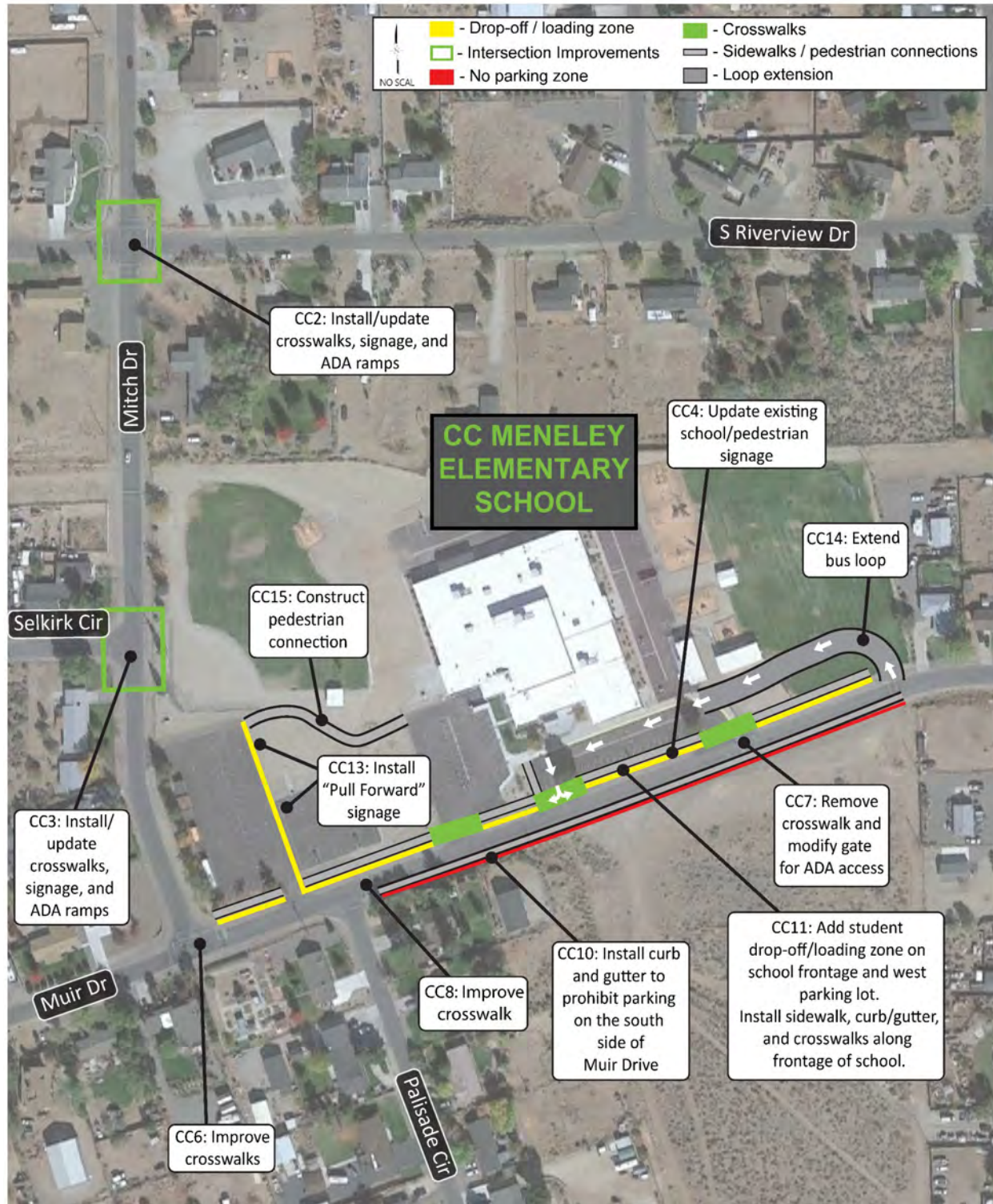




Exhibit A-3: C.C. Meneley Elementary School Recommended Improvements (Zoomed Out)



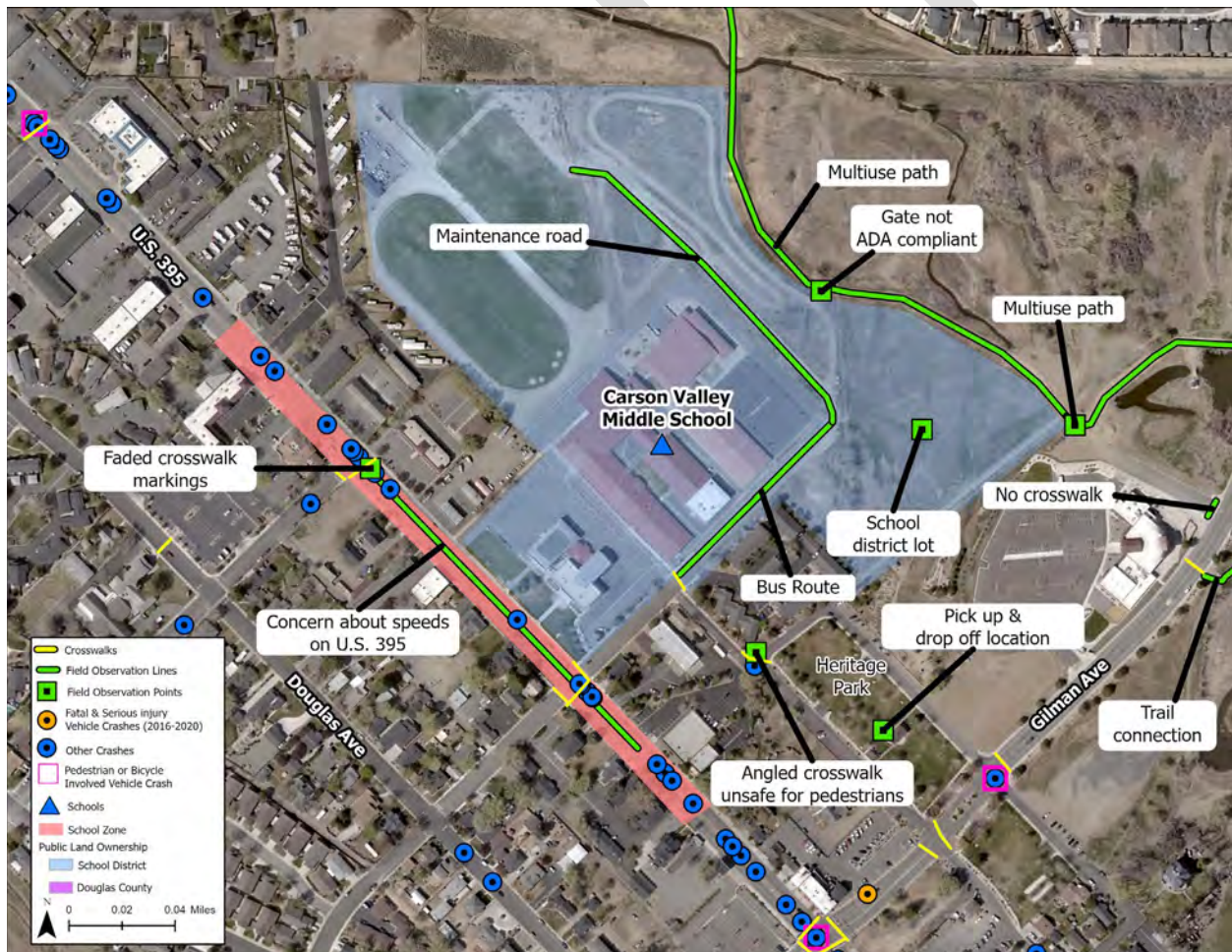


# Appendix B – Carson Valley Middle School

Carson Valley Middle School is located on US 395 in the heart of Minden-Gardnerville. The school is adjacent to both residential and commercial areas, in a relatively busy part of town. There is significant potential for students to commute to school by walking or bicycling, either from adjacent residential areas or nearby Heritage Park.

**Exhibit B-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Carson Valley Middle School.

## Exhibit B-1: Carson Valley Middle School Existing Conditions



## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Gate to access multiuse path is not ADA compliant.
- Missing crosswalk at side access point.
- Angled crosswalk just east of school location is unsafe for pedestrians.
- High speeds along US 395 (in front of the school) are unsafe for pedestrians, especially children.
- RRFBs along US 395 do not meet multilane highway specifications.
- There is no school zone signage along High School Street and Courthouse Street.
- There is a sight line issue near Courthouse Street and Slaughterhouse Lane due to overgrown vegetation.

## Intersection Needs

The following issues have been identified at intersections near Carson Valley Middle School:

- Faded crosswalk with low visibility at the intersection of US 395 and Mill Street.
- High truck percentages along US 395, creating safety issues for pedestrians at Mill Street and High School Street intersections.
- Unsafe pedestrian crossing at the Slaughterhouse Lane and Courthouse Street intersection.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- High School Street is congested during school pick-up and drop-off times.
- Parents have been observed cutting through the NAPA Auto Parts parking lot to pick up/drop off students due to congestion on High School Street.
- Driveway radius out of school parking lot is too small to properly accommodate buses.
- There is some confusion among drivers at the intersection of Courthouse Street and the school entrance/exit.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023:

- Crosswalk markings along US 395 are faded.



## Equity Considerations

In the 2-mile radius around the school, 16% of households with children are in poverty, 16% of households do not speak English at home, 19% of the population is a minority, and 7% of households do not have a vehicle at home.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Carson Valley Middle School are outlined in **Table B-1** and shown in **Exhibit B-2**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

**Table B-1: Carson Valley Middle School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
CV1	Short	High	US 395/Mill Street intersection	Restripe crosswalk pavement markings for high visibility and upgrade crossing to an overhead mast arm RRFB per NDOT standards.	\$\$\$
CV2	Short	High	US 395 within school zone	Install school zone limits signage. Upgrade school flashers to overhead mast arm.	\$
CV3	Mid	High	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.	\$\$
CV4	Mid	High	East corner of the school by the playground to the multiuse path	Pave a connection from the back of the school to the existing multiuse path.	\$-\$\$
CV5	Mid	Medium	Courthouse Lane, from Slaughterhouse Lane to High School Street	Widen sidewalks.	\$\$

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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
CV6	Short	High	Throughout the Heritage Park parking lot	Restripe crosswalk pavement markings for high visibility.	\$
CV7	Long	High	High School Street and Courthouse Street, northeast corner	Relocate utility pole that is located in the sidewalk and blocks access to the curb ramp.	\$\$\$
CV8	Mid	Medium	Main school entrance on US 395	Widen driveway for bus maneuvering.	\$\$
CV9	Mid	High	US 395/High School Street intersection	Upgrade crossing to an overhead mast arm RRFB per NDOT standards.	\$\$\$
CV10	Mid	Medium	High School Street east of Courthouse Street	Extend drop-off/loading zone to northeast corner of school. Create a turnaround area at the end of High School Street.	\$-\$\$
CV11	Short	Medium	West side of Slaughterhouse Lane and north side of Courthouse Street	Maintain vegetation along sidewalks.	\$
CV12	Long	Medium	End of pavement on High School Street (northeast corner of school)	Option 1: Connect High School Street to the intersection of High School Street and Gilman Ave. Option 2: Connect High School Street to the intersection of Slaughterhouse Lane/Ezell Street/High School Street.	\$\$\$
CV13	Short	Medium	West of the museum and cultural center	Restripe parking lot arrows to convert from one-way access to two-way access.	\$
CV14	Short	High	Northwest quadrant intersection of school	Convert intersection to three-way stop control.	\$
CV15	Short	High	On High School Street and Courthouse Street	Establish school speed zones.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$\$** \$100,00–\$500,000, **\$\$\$** >\$500,000

**Exhibit B-2: Carson Valley Middle School Recommended Improvements**





# Appendix C – Douglas High School

Douglas High School is located in the northern section of Minden, adjacent to the US 395 and SR 88 intersection. The school is located in an area of Minden with many different land uses, including single- and multi-family housing and commercial businesses. The area surrounding the school sees relatively high traffic volumes during pick-up and drop-off times, especially given the substantial school-aged population that lives near the school.

Because Douglas High School is the principal high school for the Minden-Gardnerville area, students from a variety of areas attend and travel to the school. Driving and walking are both significant modes of travel, leading to the potential for modal conflicts.

**Exhibit C-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Douglas High School.

Exhibit C-1: Douglas High School Existing Conditions



## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- An incomplete crosswalk south of the school along SR 88.
- A missing segment of sidewalk along Mahogany Drive just south of the school.
- A pedestrian sign along SR 88 was facing the wrong direction.

## Intersection Analysis

The following issues have been identified at intersections near Douglas High School:

- Unsafe and long-distance pedestrian crossing at the SR 88/Maverik driveway intersection.
- Faded crosswalks and reoriented signage at the SR 88/Mahogany Drive/County Road roundabout.
- Unsafe left-turn movements to/from school parking, especially during pick-up and drop-off times.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- It is difficult to make a left turn out of the school parking lot onto Mahogany Drive, especially during pick-up and drop-off times when traffic volumes are higher.

## Infrastructure Condition

Several of the issues noted under Safety Conditions are also infrastructure related.

## Equity Considerations

In the 2-mile radius around the school, 16% of households with children are in poverty, 16% of households do not speak English at home, 6% of the population is a minority, and 2% of households do not have a vehicle at home.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Douglas High School are outlined in **Table C-1** and shown in **Exhibit C-2**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement



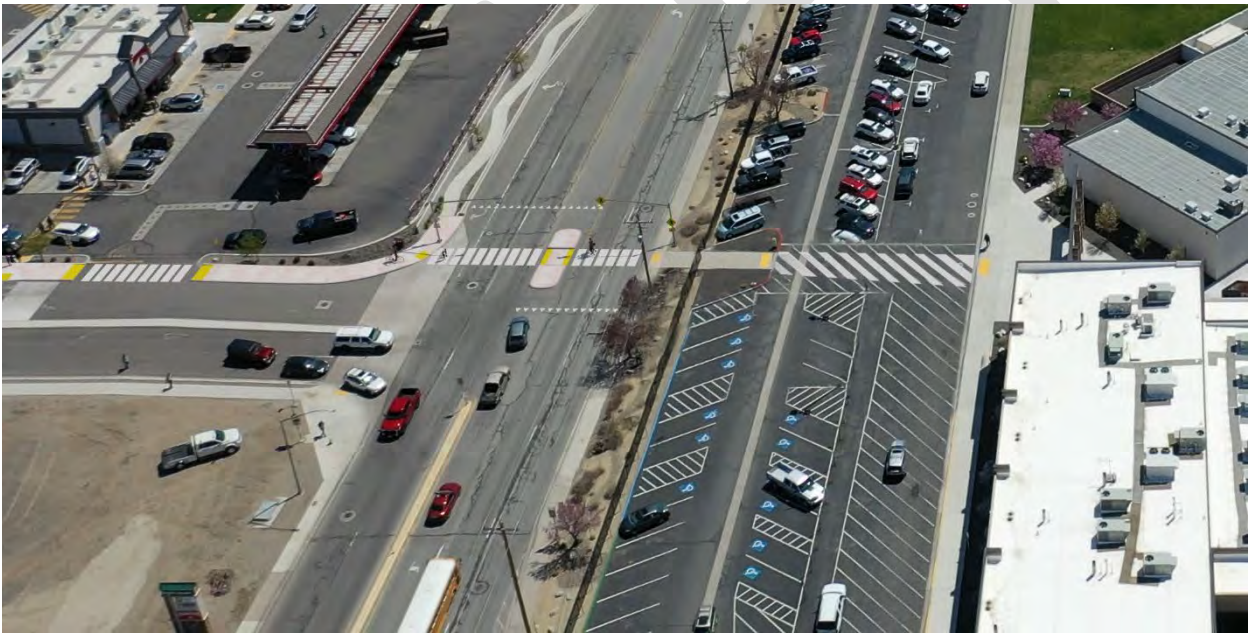
recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

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 3 of the Action Plan 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.

A visualization of one of the proposed improvements in the vicinity of the school is provided on the following page.



*Existing crosswalk along SR 88 near Douglas High School*



*Proposed crosswalk improvements along SR 88 near Douglas High School*

**Table C-1: Douglas High School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
DH1	Short	High	SR 88/Mahogany Drive/County Road Roundabout	Restripe all crosswalks. Reorient signage at the roundabout that was damaged during the snowstorm.	\$
DH2	Mid	High	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	Mid	High	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.	\$\$
DH4	Long	Medium	SR 88 along school frontage from Marsha's Park (US 395/SR 88) to the relocated crossing by Maverik	Widen sidewalks.	\$\$\$
DH5	Mid	High	SR 88 along school frontage from Marsha's Park (US 395/SR 88) to the relocated crossing by Maverik	Install high visibility crosswalks with ADA ramps.	\$\$
DH6	Mid	Medium	SR 88 from US 395 to the Mahogany roundabout	Narrow travel lanes to 10.5-11' in collaboration with Nevada DOT. Paint a wide edge line to visually reduce travel way. Evaluate widening sidewalk if there is enough ROW.	\$\$-\$\$\$
DH7	Short	High	School zone	Replace existing school zone and pedestrian signage with fluorescent signage.	\$
DH8	Mid	Low	Porkchop island on the south side of the US 395/SR 88 intersection	Evaluate gateway treatment or low-height landscaping that still provides visibility.	\$-\$\$



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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
DH9	Mid	Medium	Porkchop island on the south side of the US 395/SR 88 intersection	Install a through walkway with ADA ramps from the intersection crosswalks to the crosswalk across the slip lane.	\$
DH10	Mid	Medium	Slip lane from southbound US 395 to southbound SR 88	Remove slip lane and add truck aprons to allow right turn from the intersection. Alternatively, reduce slip lane width and add truck aprons. Collaborate with NDOT.	\$\$\$
DH11	Short	High	Mahogany Drive/ County Road/SR 88	Install ADA detectable warning surfaces at the roundabout medians.	\$
DH12	Short	High	West of SR 88/ Mahogany Drive/ County Road Roundabout	Install school speed zone sign on Mahogany Drive approaching SR 88.	\$
DH13	Short	High	School parking lot	Install traffic control pavement markings: stop bars/signs and pedestrian crosswalks.	\$
DH14	Short	High	East of SR 88/ Mahogany Drive/ County Road Roundabout	Install school speed zone sign on County Road approaching SR 88.	\$
DH15	Mid	Medium	School driveway entrance: north of SR 88/Mahogany Drive/County Road roundabout	Prohibit left turns out of the school driveway using a porkchop island or similar treatment.	\$
DH16	Mid	High	Northern Maverik approach	Install crosswalk on approach.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$\$** \$100,00-\$500,000, **\$\$\$** >\$500,000

Exhibit C-2: Douglas High School Recommended Improvements





# Appendix D – Gardnerville

## Elementary School

Gardnerville Elementary School is located near downtown Gardnerville adjacent to US 395. It is surrounded by residential housing areas and the commercial businesses along US 395. The school has the potential to see high levels of walking and bicycling due to the proximity of relatively dense nearby neighborhoods. However, the school also sees higher levels of student pick-up and drop-off by parents using personal vehicles, with the potential for congestion—especially near US 395.

**Exhibit D-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Gardnerville Elementary School.

### Exhibit D-1: Gardnerville Elementary School Existing Conditions





## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Missing crosswalk at US 395 and Mission Street.
- Missing sidewalk on the north side of US 395 just south of Mission Street.
- Pedestrian warning sign near US 395 and Mission Street was always flashing, which could eventually cause drivers to begin ignoring the warning. This sign could potentially be replaced with enhanced LEDs.
- Sidewalks along Toler Avenue south of the school are too narrow.
- Bike lane along Toler Avenue south of the school is not continuous.
- The bike lane along Toler Avenue is cut off by traffic calming just east of the school.

## Intersection Needs

The following issues have been identified at intersections near Gardnerville Elementary School:

- The intersection of Toler Avenue, Waterloo Lane, and Harvest Avenue is challenging to navigate due to its configuration.
- The intersection of Toler Avenue and US 395 is very busy and located immediately adjacent to the school property. The left-turn movement from southbound US 395 to Toler Avenue needs assessment to ensure safe and efficient traffic flow in the vicinity of the school.
- Unsafe and outdated crosswalk and sidewalk gaps at the intersection of US 395 and Mission Street.
- Unsafe and outdated crosswalk at the intersection of US 395 and Kingslane Court.
- High truck percentages at intersections along US 395.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- Many left turns were observed at the intersection of US 395 and Toler Avenue. These unprotected lefts are one of the riskier types of turning maneuvers.
- Parents have been observed picking up and dropping off students behind the school, off N Marion Russell Drive, with the potential for pedestrian-vehicle conflicts.
- Conflicts and potential conflicts were observed in the informal parking area behind the school, off Giles Lane.
- Crossing guards were observed along Toler Avenue in front of the school, and along US 395, just west of the school.

## Infrastructure Condition

Several of the issues noted under Safety Conditions are also infrastructure related.

## Equity Considerations

In the 2-mile radius around the school, 16% of households with children are in poverty, 16% of households do not speak English at home, 5% of the population is a minority, and 7% of households do not have a vehicle at home. Due to adjacent residential areas, this school has substantial potential for generating walking and bicycling trips. Improving the safety and convenience of walking and bicycling to school would be especially beneficial for the area's socioeconomically disadvantaged residents.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Gardenville Elementary School are outlined in **Table D-1** and shown in **Exhibits D-2** and **D-3**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development. A visualization of one of the proposed improvements in the vicinity of the school is provided below.



*Existing conditions along US 395*



*US 395 with proposed improvements*

**Table D-1: Gardnerville Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
GN1	Short	Low	Village Motel parking lot	Prohibit pick-up/drop-off through increased signage and communication with students' families.	\$
GN2	Short	High	US 395/ Mission Street intersection	Install high visibility crosswalk with ADA ramps across Mission Street.	\$\$
GN3	Mid	High	West of US 395/ Mission Street intersection	Install continuous sidewalk with ADA ramps along US 395, where there are currently gaps in the sidewalk network.	\$\$
GN4	Mid	Low	Toler Avenue along school frontage	Widen sidewalk and consider installing a landscape buffer between the travel lanes and sidewalk.	\$\$-\$\$\$
GN5	Mid	Medium	West of Toiyabe Avenue/Toler Avenue intersection	Install bike ramp on the curb extension at the existing crosswalk for the bike lane along Toler Avenue. Consider delineation of pedestrian and bicycle facilities through materials and linear detectable warning surfaces.	\$\$
GN6	Mid	Medium	US 395 from Kingslane Court to Mission Street	Consider lane narrowing and wide edge lines to speed management in areas adjacent to schools.	\$\$-\$\$\$
GN7	Short	High	North side of Toler Ave from US 395 to Harvest Avenue	Remove "No Parking Except 8–10am, 2–4pm" signs since the approximately 5' bike lane is not wide enough for parking and the times posted conflict with school pick-up and drop-off for students who bike to school.	\$
GN8	Mid	Medium	Toler/Harvest/ Waterloo intersection	Widen center median on Harvest Ave to be ADA compliant (minimum 6' pedestrian refuge). Widen opening through median to allow enough space for pedestrians and bicyclists (approximately 10'). Add detectable warning surfaces for ADA compliance. Extend the center median about 100' north of where it currently ends to deter drivers from making illegal U-turns.	\$\$



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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
GN9	Mid	Medium	Porkchop island between Toler Ave and Harvest Ave at the Harvest/Toler/Waterloo intersection	Perform an intersection evaluation for overall safety of all users.	\$
GN10	Long	Medium	Harvest/Toler/Waterloo intersection	Install high visibility crossing across Waterloo/Toler on the east side of the Harvest/Toler/Waterloo intersection. Install pedestrian refuge island. Install sidewalk connection to existing sidewalk and crosswalk. Install ADA curb ramps.	\$
GN11	Mid	High	Unpaved gravel lot directly north of the school parking lot	Pave and stripe the unpaved gravel lot parking area to reduce multimodal conflicts.	\$
GN12	Mid	High	US 395 from Kingslane Court to Toler Ave	Install continuous sidewalk with ADA ramps along US 395, where there are currently gaps in the sidewalk network.	\$-\$-\$-\$
GN13	Short	Medium	School front door entrance	Install additional bike rack at front of school.	\$
GN14	Mid	High	US 395/ Kingslane Court intersection	Install RRFB above high visibility crosswalk. Install advance warning signs in advance of this crosswalk.	\$
GN15	Mid	High	Giles Lane/ N Marion Russell Drive intersection	Install high visibility crosswalk with ADA curb ramps. Install advance warning signs in advance of this crosswalk.	\$

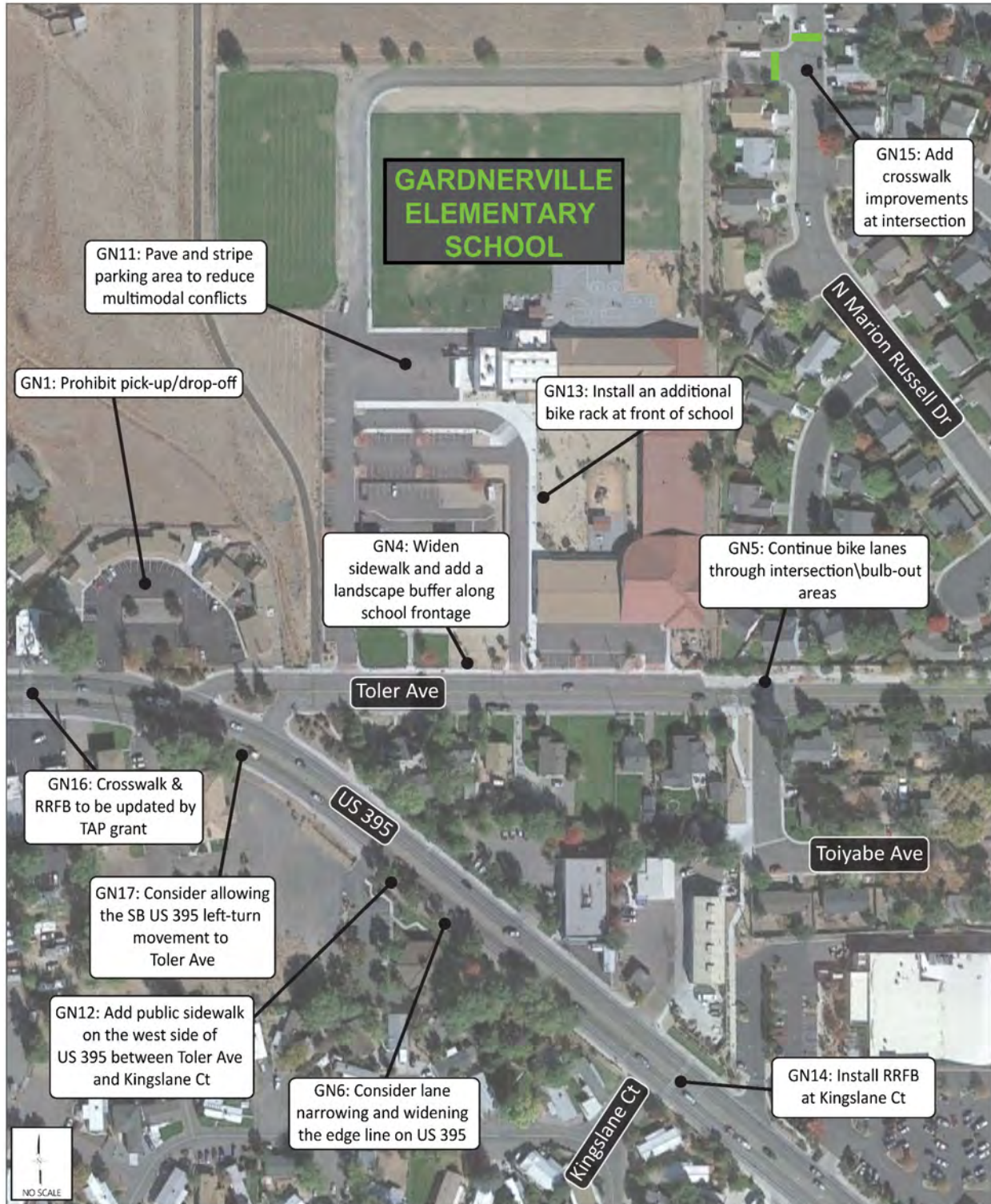
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ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
GN16	Long	High	US 395 and Mission Street to US 395 and Toler Lane	Move the existing crosswalk from the east side of US 395/Mission Street to the south/east side of US 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.	\$\$
GN17	Short	Medium	Intersection of Toler Ave/ US 395	Consider allowing the SB US 395 left-turn movement to Toler Ave.	\$

Implementation Timeline: **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

Cost Estimate: \$ <\$100,000, \$\$ \$100,00-\$500,000, \$\$\$ >\$500,000

**Exhibit D-2: Gardnerville Elementary School Recommended Improvements**





**Exhibit D-3: Gardnerville Elementary School Recommended Improvements (Zoomed Out)**



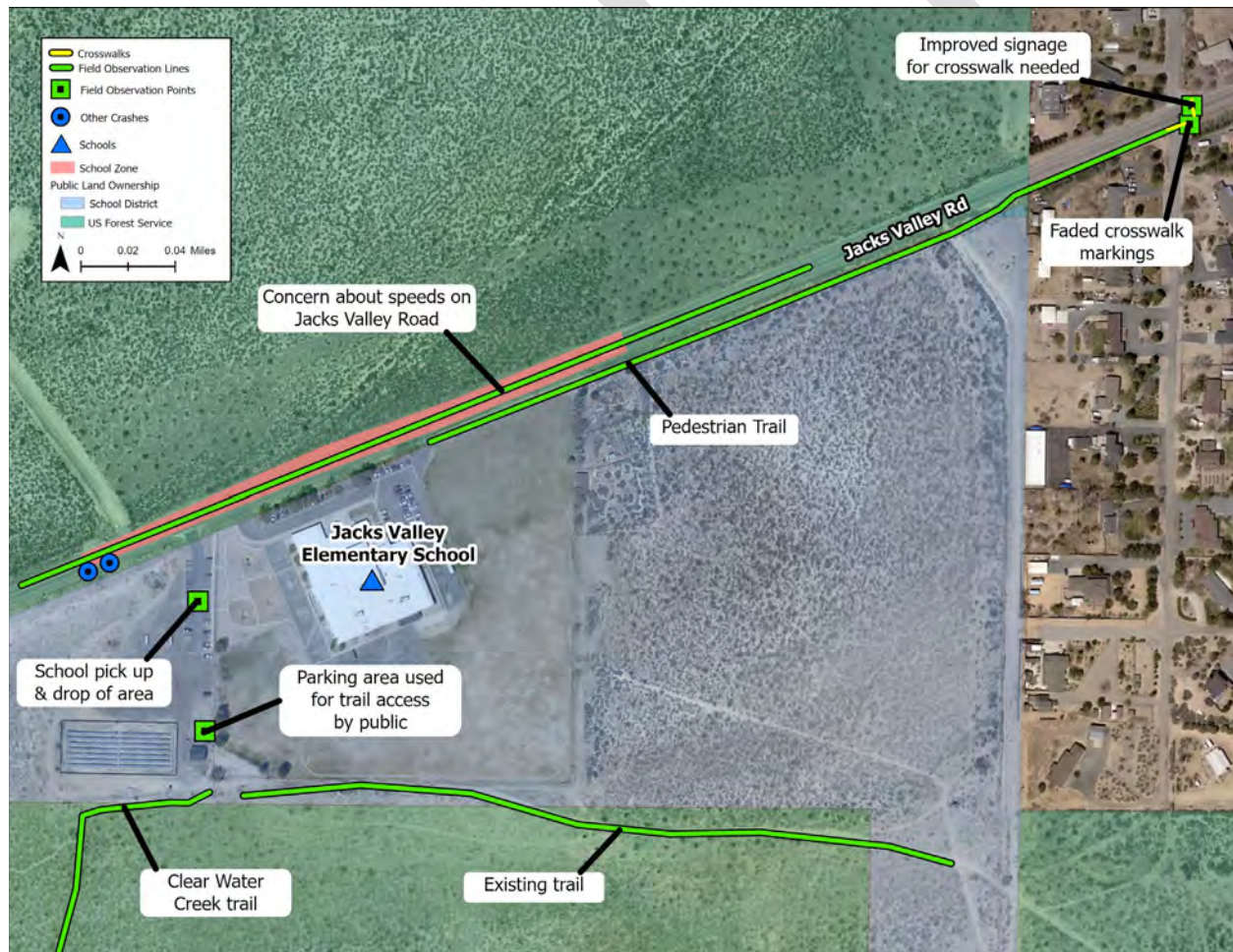


# Appendix E – Jacks Valley Elementary School

Although Jacks Valley Elementary is located on an isolated stretch of Jacks Valley Road, there is a residential area within 2 miles of the school that has the potential to generate walking and bicycling trips by students. In particular, the section of the Indian Hills subdivision near the school has a high density of school-aged children (ages 5–18).

**Exhibit E-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Jacks Valley Elementary School.

## Exhibit E-1: Jacks Valley Elementary School Existing Conditions



## Safety Conditions

The following safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Vehicles speeding along Jacks Valley Road.

## Intersection Needs

The following issues have been identified at intersections near Jacks Valley Elementary School:

- Crosswalk markings were faded at the intersection of Jacks Valley Road and Arcadia Drive. Improved crosswalk signage is also needed at this location.
- The lack of an accessible walkway or curb ramps on the northeast and southeast corners of the intersection of Jacks Valley Road and Arcadia Drive.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- The bus loop in front of Jacks Valley Elementary is inadequate to contain buses during pick-up and drop-off times, resulting in spill-out onto Jacks Valley Road.
- Shoulder parking has also been observed along Jacks Valley Road, presumably due to inadequate parking and/or loading/unloading zones for pick-up and drop-off times.
- Illegal U-turns have been observed in front of the school.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023, including:

- Silt and sand were observed on the pathway in front of the school along Jacks Valley Road, which poses a safety hazard for bicyclists, scooters, and wheelchair users.
- Sidewalk repairs are needed along Jacks Valley Road to the west of the school.
- ADA parking markings in front of the school did not meet current standards.
- There was no ADA accessible ramp/curb cut leading into the school building.

## Equity Considerations

In the area surrounding Jacks Valley Elementary school, 14% of families with children under the age of 18 are living in poverty. In the 2-mile radius around the school, 4% of homes do not have a vehicle, 18% do not speak English in their home, and 8% of the population is a minority.



## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at/near Jacks Valley Elementary School are outlined in **Table E-1**. The improvements can be seen in **Exhibit E-2** and **Exhibit E-3**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development. A visualization of one of the proposed improvements in the vicinity of the school is provided below.



*Existing conditions at Jacks Valley Road and Arcadia Drive*



*Proposed improvements along Jacks Valley Road*

**Table E-1: Jacks Valley Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
JV1	Mid	High	Arcadia Drive/Jacks Valley Road intersection	Relocate crosswalk to the west side of the intersection and restripe the existing southern crosswalk 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.	\$\$
JV2	Mid	Medium	Jacks Valley Road, from Arcadia Drive to Bavarian Drive	Consider lane narrowing and wide edge lines to reduce speeds in areas adjacent to schools.	\$\$
JV3	Mid	Low	School frontage on Jacks Valley Road and Clear Water Creek Trail parking lot, west of school	Update school area and parking lot signage. Add designated trailhead parking signage south of the parking lot.	\$-\$\$
JV4	Mid	High	Shared-use path and east school driveway	Continue the shared-use path from where it currently ends at the east school driveway to the center driveway. Install a sidewalk with ADA ramps from the center driveway to the front of the school. Stripe a high visibility crosswalk across the bus lane.	\$\$
JV5	Short	High	Center school driveway off of Jacks Valley Road	Convert the center driveway to be enter/exit rather than exit only.	\$
JV6	Short	High	Parking lot west of school	Fill gap in sidewalk next to the gate.	\$
JV7	Short	High	Jacks Valley Road school zone	Coordinate with Douglas County regarding operating times for 15 miles per hour (MPH) zone flashers.	\$

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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
JV8	Short	High	Jacks Valley Road school zone	Move existing 35 MPH posted speed limit sign further away from the 15 MPH posted speed limit signs and evaluate adding new 25 MPH posted speed limit signs to stage the deceleration in front of the school.	\$
JV9	Mid	High	Jacks Valley Road school zone	Install lateral rumble strips at the 25 MPH posted speed limit signs to increase driver attentiveness, in coordination with JV8.	\$
JV10	Mid	Medium	Front parking lot of school, off Jacks Valley Road	Extend bus loading zone to utilize the full curb length.	\$-\$
JV11	Mid	Medium	Jacks Valley Road school zone	Install curb and gutter along frontage of school and prohibit parking along frontage using signage.	\$
JV12	Short	Medium	Parking lot east of school	Update ADA parking signs/markings.	\$
JV13	Short	Medium	Shared-use path and east school driveway	Encourage shared-use path maintenance by Douglas County.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$** \$100,00–\$500,000, **\$** >\$500,000



**Exhibit E-2: Jacks Valley Elementary School Recommended Improvements**





**Exhibit E-3: Jacks Valley Elementary School Recommended Improvements (Zoomed Out)**





# Appendix F – Minden Elementary School

Minden Elementary School is located northeast of downtown Minden-Gardnerville. The school is surrounded by several newly completed housing developments, with additional housing construction planned in the future. The area surrounding the school has wide sidewalks separated from the road and low speed requirements near the school. These conditions support walking and bicycling to school for the large school aged population in these residential areas. However, the catchment area for the school is large, which leads to a combination of walking, bicycling, and vehicular pick-up/drop-off, and the potential for modal conflicts.

**Exhibit F-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Minden Elementary School.

**Exhibit F-1: Minden Elementary School Existing Conditions**





## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Missing crosswalks in two locations along Heybourne Road (at Chantel Drive and Monterra Drive).
- An ADA-accessible curb ramp is needed along Baler Street just south of the school.
- There was inadequate pedestrian advance signage along Buckeye Road.

## Intersection Needs

The following issues have been identified at intersections near Minden Elementary School:

- Lack of ADA ramps at the Heybourne Road/Monterra Drive intersection, Heybourne Road/Chantel Drive intersection, and Buckeye Road/Sanford Way intersection.
- Low visibility and faded crosswalks at the Heybourne Road/Monterra Drive intersection, Heybourne Road/Chantel Drive intersection, and Buckeye Road/Sanford Way intersection.
- Long pedestrian crossing distance across Buckeye Road at its intersections with Buckeye Road and Sanford Way.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- Pick-up and drop-off area is too small to accommodate daily school traffic and overflows/becomes congested.
- Traffic congestion is typical along Baler Street just south of the school.
- Illegal U-turns have also been observed in this location.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023, including:

- Crosswalk markings were faded at the intersection of Buckeye Road and Sanford Way, and signage was inadequate.
- School zone signage in the neighborhood behind the school (e.g., along Montecito Drive) is outdated.

## Equity Considerations

In the 2-mile radius surrounding the school, 16% of households with children are living in poverty, 16% of households do not speak English at home, 6% of the population is a minority, and 1% of households do not have a vehicle at home.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Minden Elementary School are outlined in **Table F-1** and shown in **Exhibits F-2** and **F-3**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

**Table F-1: Minden Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
MN1	Mid	Medium	Heybourne Road/ Monterra Drive intersection	Install high visibility crosswalk with ADA ramps on the south side of the intersection, with a pedestrian refuge island.	\$\$
MN2	Mid	Medium	Heybourne Road/ Chantel Drive intersection	Install high visibility crosswalk with ADA ramps on the south side of the intersection, with a pedestrian refuge island.	\$\$
MN3	Short	High	Buckeye Road/ Sanford Way intersection	Restripe crosswalk pavement markings for high visibility and install ADA curb ramps. Install advance warning signs with flashers.	\$\$
MN4	Mid	High	Buckeye Road/ Sanford Way intersection	Install curb extensions/bulb-outs on all corners to reduce the pedestrian crossing distance across Buckeye Road.	\$\$
MN5	Short	Medium	Azure Drive at Monterra Drive and Chantel Drive	Install east-west high visibility crosswalks with ADA ramps.	\$\$
MN6	Short	High	Baler Street/ Sanford Way intersection	Install advance warning signs for pedestrian crossing/school zone prior to this intersection.	\$

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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
MN7	Short	High	Baler Street, between the school parking lots	Restripe crosswalk for high visibility. Install ADA curb ramps.	\$
MN8	Short	High	School zone	Upgrade all school zone signs to fluorescent yellow/green.	\$
MN9	Mid	Medium	Buckeye Road east of Sanford Way	Install a transitional ramp between the shared-use path on the north side of Buckeye to the westbound shoulder bike lane on Buckeye Road.	\$
MN10	Short	High	Montecito Drive, east of Sanford Way	Update school speed zone signage.	\$
MN11	Short	Medium	East side of existing parking lot, in front of school	Install pull forward signage.	\$
MN12	Long	Medium	North side of existing parking lot, with new opening along Sanford Way	Install new egress road. Alternative 1: Install new road just north of existing parking lot. Alternative 2: Install new egress driveway on north side of existing parking lot, with new opening to Sanford Way.	\$\$\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$\$** \$100,00-\$500,000, **\$\$\$** >\$500,000



**Exhibit F-2: Minden Elementary School Recommended Improvements**

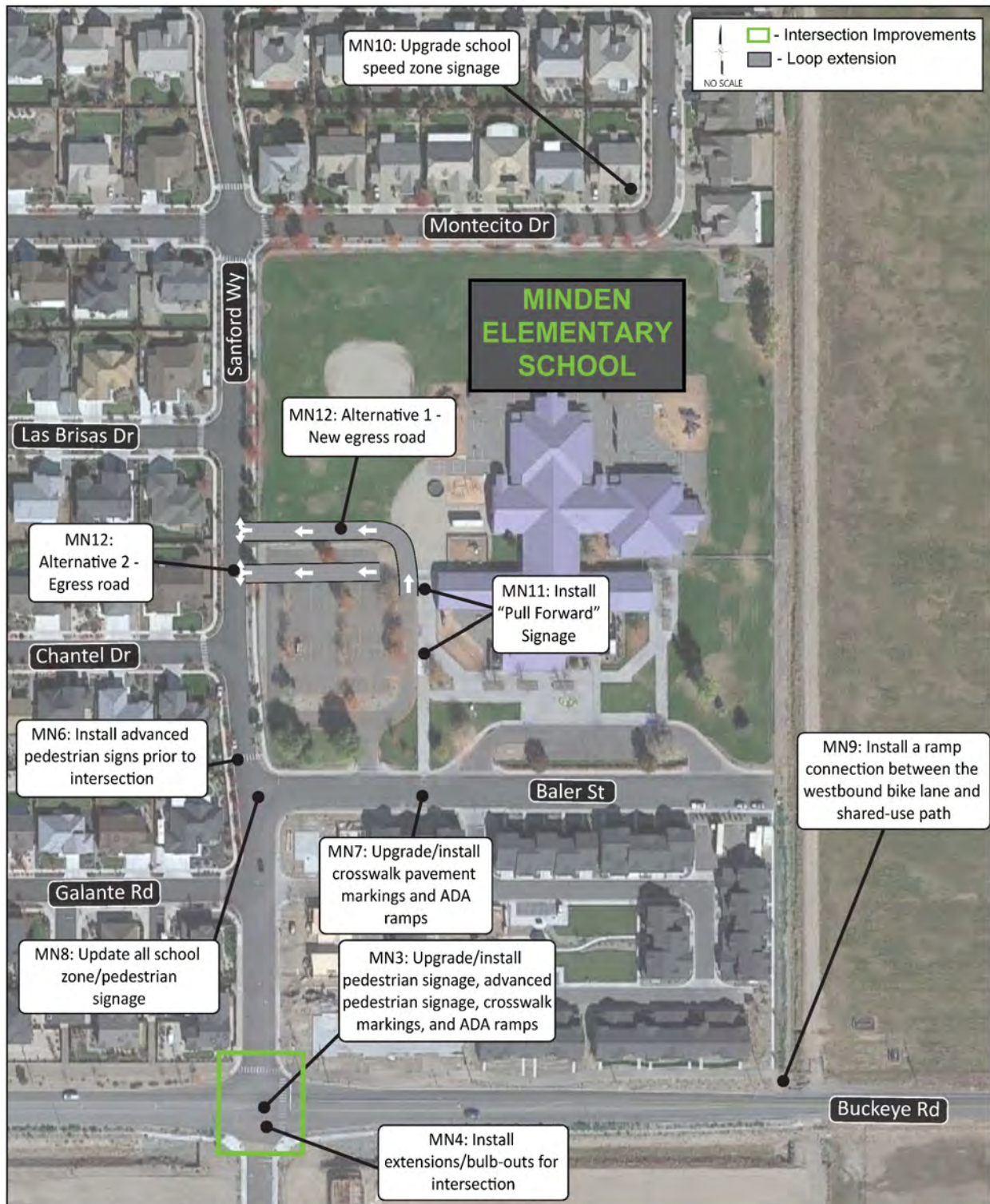




Exhibit F-3: Minden Elementary School Recommended Improvements (Zoomed Out)



# Appendix G – Pau-Wa-Lu Middle School and Scarselli Elementary School

Pau-Wa-Lu Middle School and Scarselli Elementary School are located next to each other in the southern section of Gardnerville Ranchos. Gardnerville Ranchos is a residential community with a large school aged population. Although there are sidewalks and crosswalks in many locations adjacent to the school, there are also gaps in connectivity and opportunities to improve accessibility. These improvements could encourage higher levels of walking and bicycling by students living nearby.

**Exhibit G-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Pau-Wa-Lu Middle School.

## Exhibit G-1: Pau-Wa-Lu Middle School and Scarselli Elementary Existing Conditions





## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Lack of stop signs or crosswalk markings at the four-way intersection just south of the school (Kathy Way and Jill Drive).
- Sidewalk in front of the school along Long Valley Road is not ADA compliant.
- The crosswalk at the intersection of Ann Way and Long Valley Road is outdated.
- There is a bike lane on only one side of Long Valley Road.

## Intersection Needs

The following issues have been identified at intersections near the schools:

- Outdated and faded crosswalks and a lack of ADA ramps at the intersections of Long Valley Road with Angora Drive and Ann Way.
- Missing crosswalk, ADA ramps, and stop sign at the intersection of Lassen Way and Angora Drive.
- There are no crosswalks or ADA ramp at the intersection of Kathy Way and Jill Drive.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit and pick-up/drop-off observation, including:

- Vehicle queueing can often be observed along Long Valley Road during pick-up and drop-off times due to inadequate capacity in the student drop-off loop.
- Illegal U-turns have been observed at the intersection of Long Valley Road and Angora Drive.
- Sidewalks leading from the parking area to the Scarselli Elementary School building are too narrow for the volume of students.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023:

- Crosswalk markings need to be updated at the intersections of Long Valley Road and Angora Drive, and Long Valley Road and Ann Way, from a Standard crosswalk to a high-visibility Zebra, Ladder, or Continental design.
- Sidewalks in front of the school do not meet ADA standards for clearance due to the location of fencing/gates.

## Equity Considerations

In the 2-mile radius around the school, 23% of households with children are in poverty, 30% of households do not speak English at home, 23% of the population is a minority, and 7% of households do not have a vehicle at home. Improving the safety and convenience of walking and bicycling to school would be especially beneficial for the area's socioeconomically disadvantaged residents.

## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Pau-Wa-Lu Middle School and Scarselli Elementary School are outlined in **Table G-1** and shown in **Exhibits G-2** and **G-3**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

A visualization of one of the proposed improvements in the vicinity of the school is provided below. Long Valley Road in front of Pau-Wa-Lue 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 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*



*Visualization of proposed improvements along Long Valley Road*



**Table G-1: Pau-Wa-Lu Middle School and Scarselli Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
PWL1	Short	Medium	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	Mid	High	Pau-Wa-Lu drop-off loop	Extend student drop-off loop to bus driveway and add sidewalk.	\$
PWL3	Short	Medium	North side of Pau-Wa-Lu, near the bus driveway	Relocate existing bike racks on the north side of Pau-Wa-Lu so they are closer to the main entrance.	\$
SC1	Mid	High	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.	\$-\$-\$-\$
SC2	Long	Medium	Angora Drive from Long Valley Road to Jill Drive	Install sidewalk on the west side of Angora Drive that ties into the existing sidewalk on Long Valley Road and Jill Drive including ADA curb ramps. Sidewalk would extend across the east side of the Scarselli parking lot, with high visibility crosswalks where vehicles enter/exit the lot.	\$-\$-\$-\$
SC3	Short	High	Long Valley Road/Ann Way intersection	Restripe crosswalks for high visibility and install ADA curb ramps.	\$

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<b>ID</b>	<b>Implementation Timeline</b>	<b>Priority</b>	<b>Location</b>	<b>Draft Recommendations</b>	<b>Cost Estimate</b>
SC4	Short	High	Kathy Way/Jill Drive intersection	Install high visibility crosswalks with ADA ramps on each leg.	\$
SC5	Mid	Medium	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.	\$
SC6	Short	High	Long Valley Road/Angora Drive intersection	Restripe crosswalks for high visibility and install ADA curb ramps.	\$
SC7	Short	High	School zone	Install fluorescent advanced warning signs for all crosswalks within the school zone.	\$
SC8	Long	Medium	Long Valley Road and connecting to the east parking lot	Add new entrance lane and pick-up and drop-off lane. Install new sidewalks along new entrance and extended student drop-off loop. Install and refresh arrows for better traffic control.	\$
SC9	Short	High	Sidewalk at east end of bus loop of Scarselli	Modify sidewalk for ADA compliance.	\$
SC10	Short	Medium	East side of Gene Scarselli	Relocate bike rack to main entrance.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

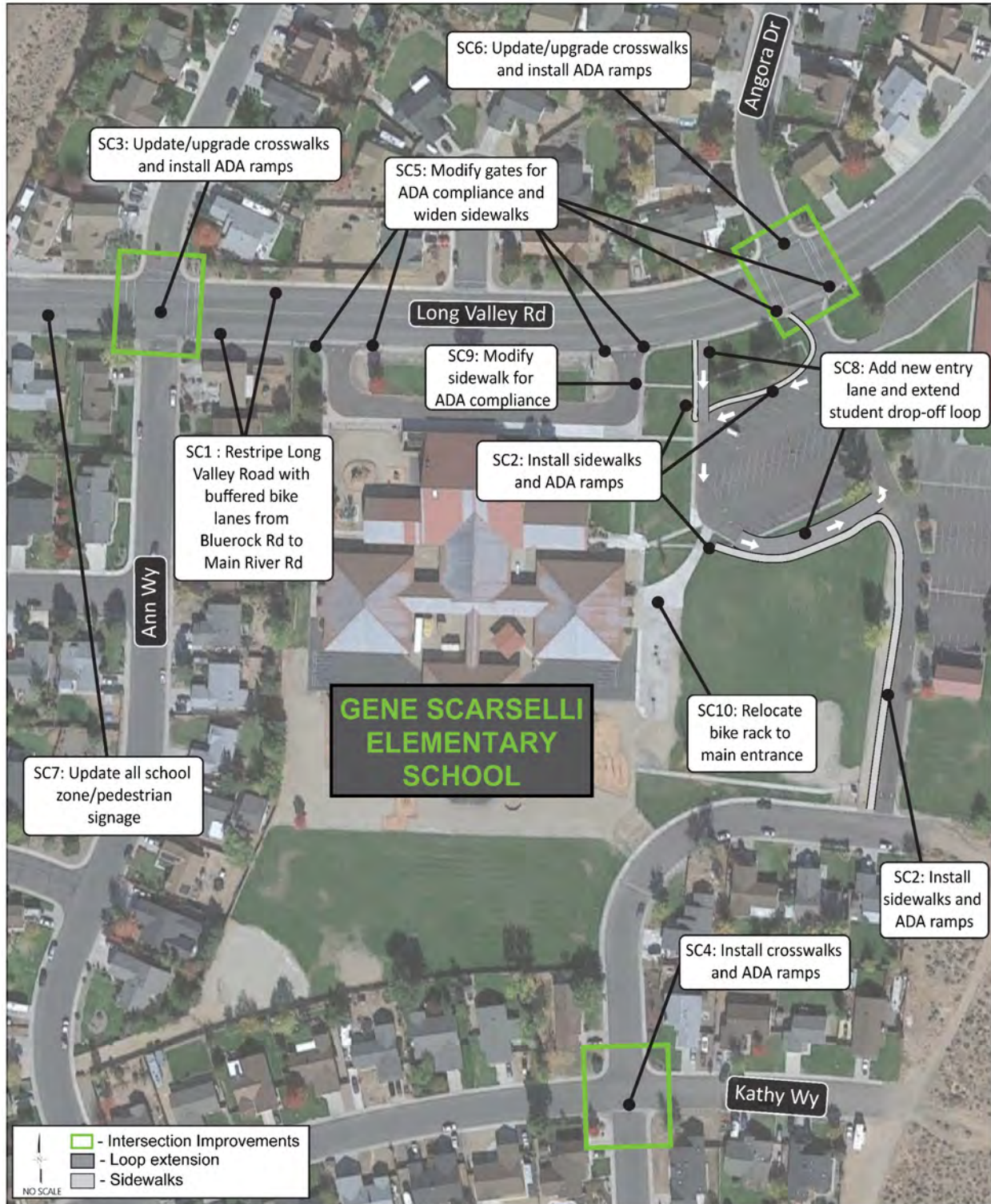
*Cost Estimate:* **\$** <\$100,000, **\$** \$100,00-\$500,000, **\$** >\$500,000

**Exhibit G-2: Pau-Wa-Lu Middle School- Recommended Improvements**





**Exhibit G-3: Scarselli Elementary School Recommended Improvements**

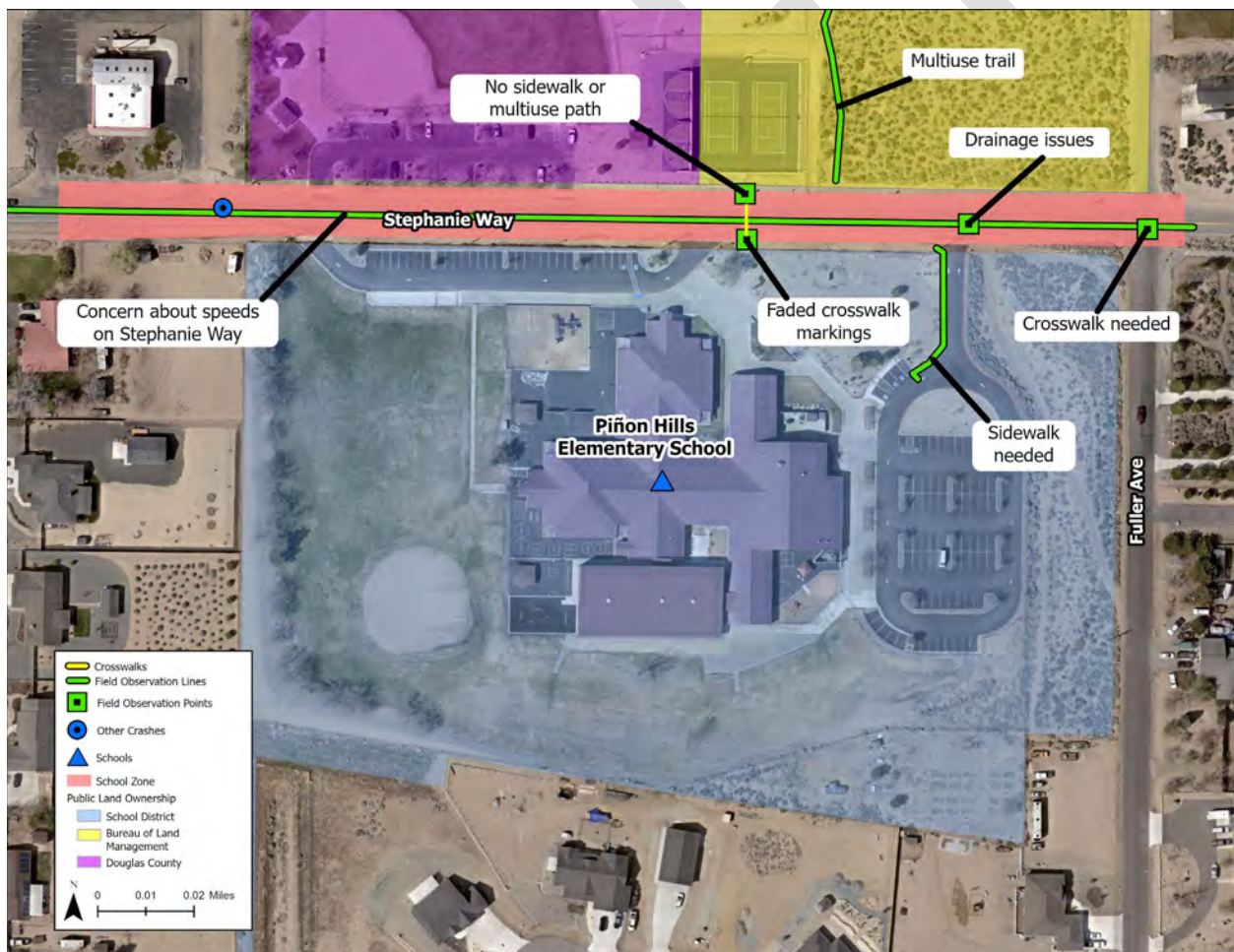


# Appendix H – Piñon Hills Elementary School

Piñon Hills Elementary School is located in the Johnson Lane subdivision, in the northern section of Douglas County. Johnson Lane is a residential area, with the school located in the center of the community. Although the area has a relatively large school-aged population with the potential to walk and bicycle to the centrally located school, the community is lacking sidewalks in many locations.

**Exhibit H-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding Piñon Hills Elementary School.

## Exhibit H-1: Piñon Hills Elementary School Existing Conditions





## Safety Conditions

A number of safety issues were identified during the walking audit conducted on March 16, 2023, including:

- Missing crosswalk at Stephanie Way and Fuller Avenue.
- Missing sidewalks on the north side of Stephanie way in front of the school building. This section of roadway is also lacking bicycle facilities (e.g., bike lanes).
- Concerns about vehicular speeds along Stephanie Way.
- Missing sidewalk along the parking access road northeast of the school.

## Intersection Needs

The following issues have been identified at intersections near Piñon Hills Elementary School:

- Lack of safe connections for pedestrians at the intersections of Stephanie Way with Gordon Avenue and Fuller Avenue. There is a need for paved walkways and high visibility crosswalks with ADA curb ramps at intersections and driveways, along with advance warning signs to reduce speeds and alert drivers of pedestrian crossings near the school.
- The lack of safe and visible pedestrian crossings at the intersection of Stephanie Way and Fuller Avenue.

## School Access and Circulation

The following issues related to school access and circulation were identified during the walking audit conducted on March 16, 2023, including:

- Minor spill out has been observed onto Stephanie Way during pick-up and drop-off times due to inadequate queueing space.

## Infrastructure Condition

The following issues related to infrastructure condition were identified during the walking audit conducted on March 16, 2023, including:

- Faded crosswalk markings along Stephanie Way immediately in front of the school.
- Drainage issues along Stephanie Way northeast of the school.

## Equity Considerations

In the 2-mile radius surrounding the school, 5% of families with children under the age of 18 are living in poverty, 17% do not speak English at home, 1% of households do not have a vehicle, and 3% of the population is a minority.



## Recommended Improvements

Improvements to help alleviate access, circulation, and infrastructure issues/deficiencies found at Piñon Hills Elementary School are outlined in **Table H-1** and shown in **Exhibit H-2**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

**Table H-1: Piñon Hills Elementary School Recommended Improvements**

ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
PH1	Mid	Medium	Stephanie Way from Gordon Avenue to Fuller Avenue	Narrow the travel lanes to 10.5-11' with a wide painted edge line to visually narrow the roadway.	\$
PH2	Mid	High	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.	\$\$\$
PH3	Long	Low	Stephanie Way from Gordon Avenue to Fuller Avenue	Evaluate a walking path on the north side of Stephanie Way that provides paved access to Johnson Lane Park. Consider a shared-use path or wide paved shoulder.	\$\$-\$\$\$
PH4	Short	High	Stephanie Way at the school's main entrance to the park across the street	Restripe crosswalk for high visibility.	\$
PH5	Mid	High	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.	\$
PH6	Mid	Medium	Stephanie Way at the main parking lot driveway	Install a sidewalk from Stephanie Way along the west side of the driveway and tie into the existing sidewalk near the ADA parking spaces.	\$

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ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
PH7	Short	High	Stephanie Way/ Fuller Avenue intersection	Install high visibility crosswalk across Fuller Avenue on the south side of the intersection.	\$
PH8	Long	Low	Fuller Avenue to south side of parking lot	Install a new sidewalk from Fuller Avenue to the south side of the parking lot and tie into the existing sidewalk on the west side of the parking lot. Alternatively, consider paving a shared-use path along the desire line between Fuller Avenue and the parking lot.	\$\$-\$\$\$
PH9	Short	Medium	School entrance, west of the existing parking lot	Install "Pull Forward" signage at the school drop-off area (east parking lot).	\$

Implementation Timeline: **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

Cost Estimate: \$ <\$100,000, \$\$ \$100,00–\$500,000, \$\$\$ >\$500,000

Exhibit H-2: Piñon Hills Elementary School Recommended Improvements



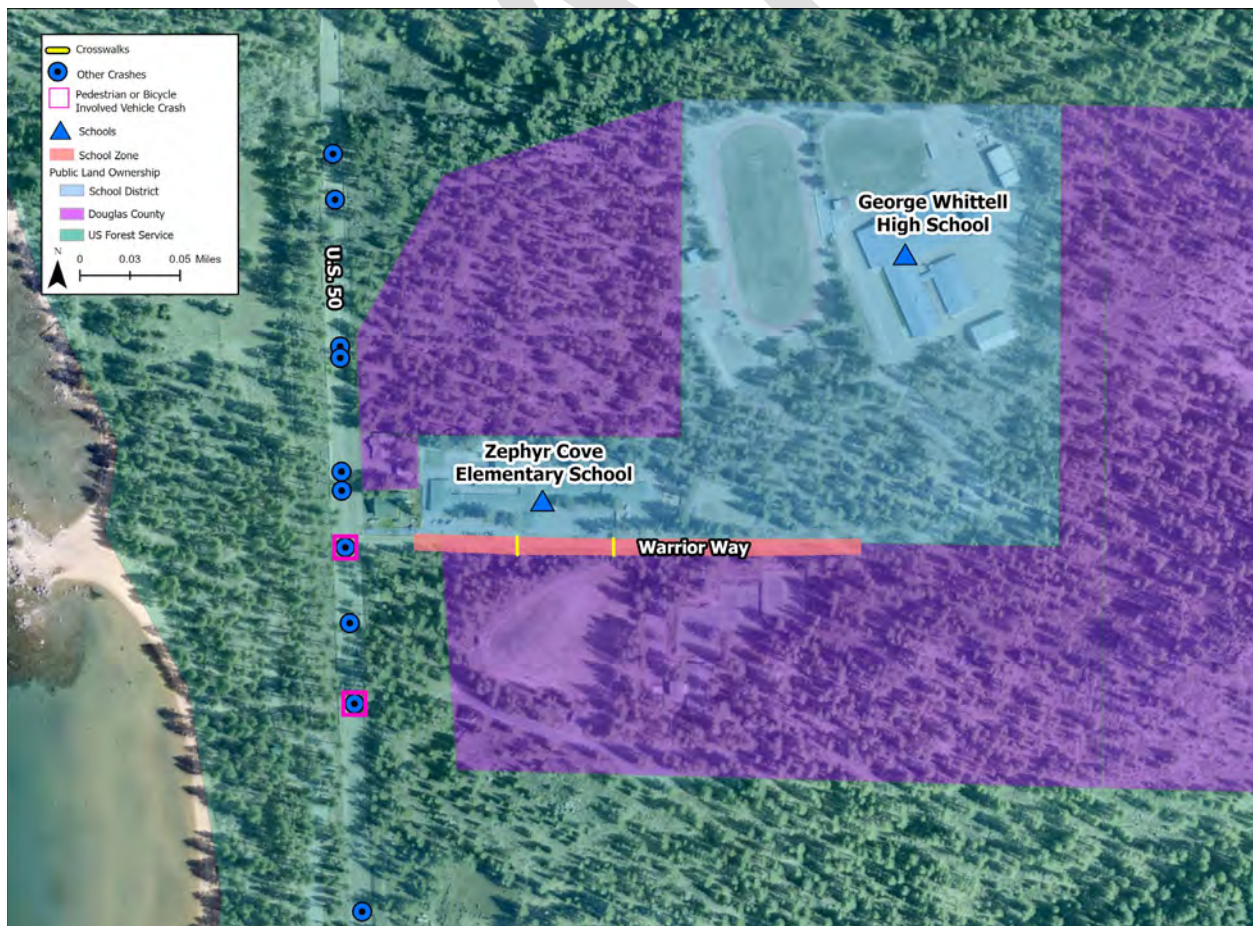


# Appendix I – Zephyr Cove Elementary School and George Whittell High School

Zephyr Cove Elementary School and George Whittell High School are located off US 50 near Stateline, Nevada. They are located next to Zephyr Cove Park and across the highway from Zephyr Cove beach. Because there are no residential communities nearby and US 50 does not have sidewalks, all students commute to these schools by vehicle (there is no school bus provided). Thus, a detailed walking audit was not conducted at this school location.

**Exhibit I-1** below provides a summary of the safety, intersection, access and circulation, and infrastructure condition issues surrounding these two schools.

## Exhibit I-1: Zephyr Cove Elementary and George Whittell High School Existing Conditions



## Safety Conditions

Although a walking audit was not conducted at this location, a safety analysis showed a high number of crashes along US 50 west of the school campus. There were nine crashes reported between 2016 and 2020 in the quarter mile stretch adjacent to the school.

## Intersection Needs

The main intersection in the vicinity of the school is the US 50 and Warrior Way intersection. The above-mentioned safety issues at this intersection necessitate coordination with NDOT regarding potential improvements to improve safety and pedestrian mobility.

## Equity Considerations

In the 2-mile radius around the school, 7% of households with children are in poverty, 22% of households do not speak English at home, 7% of the population is a minority, and 5% of households do not have a vehicle at home.

## Recommended Improvements

A summary of recommended improvements is provided in **Table I-1** and shown in **Exhibit I-2**.

The needs and concepts 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 and integration with other regional and statewide transportation planning processes. A lack of funding may limit the ability of local and state agencies to implement recommended improvements. This plan includes a summary of potential funding sources, including competitive grants and formula funds that can be considered for project development.

**Table I-1: Zephyr Cove Elementary and George Whittell High School Recommended Improvements**

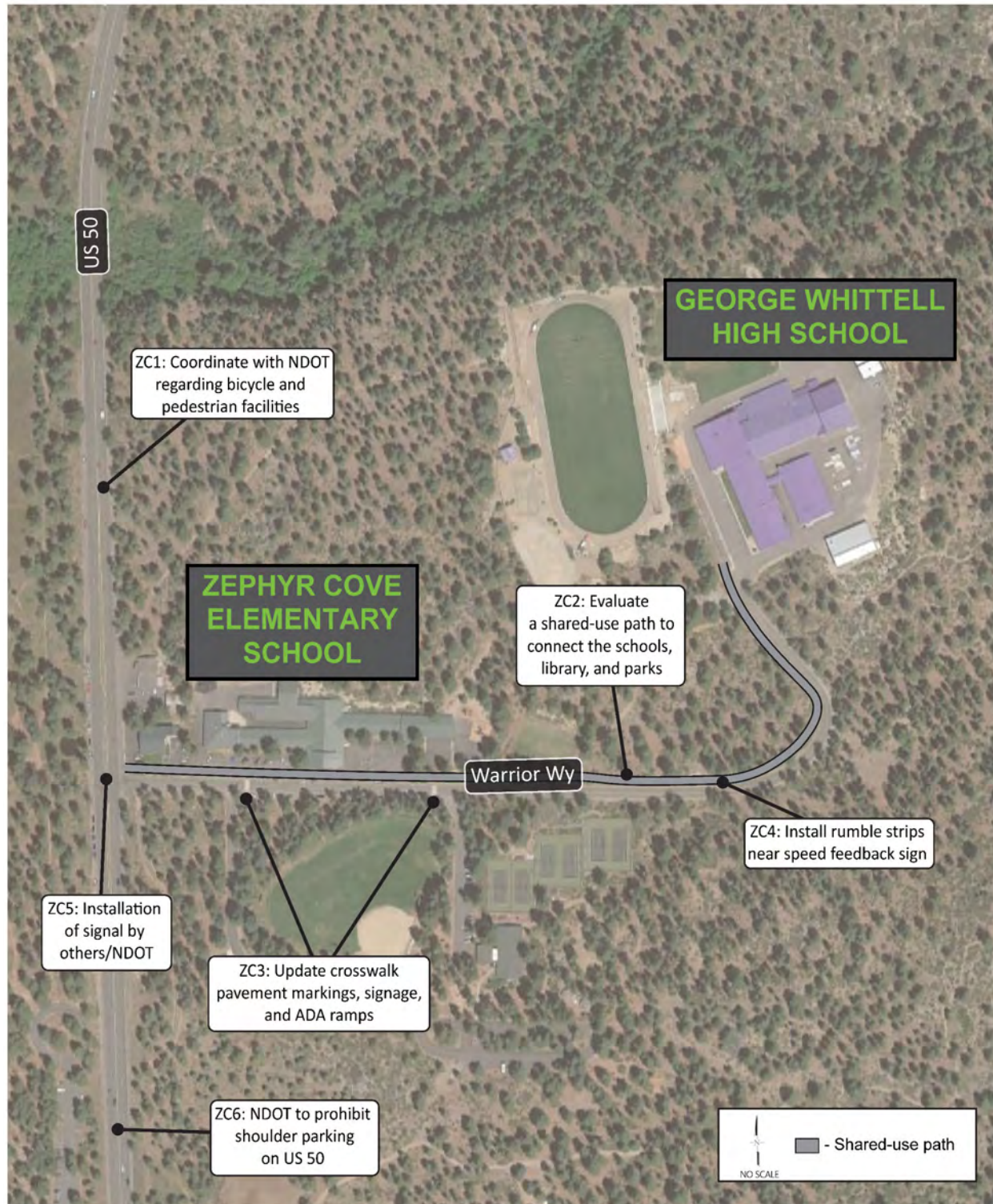
ID	Implementation Timeline	Priority	Location	Draft Recommendations	Cost Estimate
ZC1	Long	Medium	US 50	Coordinate with NDOT regarding potential bicycle and pedestrian facilities on US 50.	\$-\$\$\$
ZC2	Long	High	Warrior Way	Evaluate a shared-use path along Warrior Way that provides access to the elementary and high schools, library, and parks. Coordinate with ZC1.	\$-\$\$\$
ZC3	Short	High	Warrior Way	Restripe/update existing crosswalks for high visibility and install ADA curb ramps.	\$\$
ZC4	Short	High	Warrior Way	Install lateral rumble strips where the existing school zone speed feedback signs are located to increase attentiveness.	\$
ZC5	Mid	Medium	US 50/Warrior Way intersection	Installation of signal by others/NDOT.	\$\$\$
ZC6	Short	Medium	US 50	NDOT to prohibit shoulder parking on US 50.	\$

*Implementation Timeline:* **Short** <2 years, **Mid** 2–5 Years, **Long** >5 Years

*Cost Estimate:* **\$** <\$100,000, **\$\$** \$100,00–\$500,000, **\$\$\$** >\$500,000



## Exhibit I-2: Zephyr Cove Elementary and George Whittell High School Recommended Improvements



# Appendix J – Online Survey Results

An online survey was available between May 1 and June 23, 2023. The 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 about their commuting patterns and the walking and bicycling conditions surrounding their school(s).

Detailed response summaries and individual comments from the survey are provided on the following pages.



# **Appendix J:**

# **Douglas County**

# **Safe Routes to School**

# **Survey Results**

5/3/23 – 6/23/23

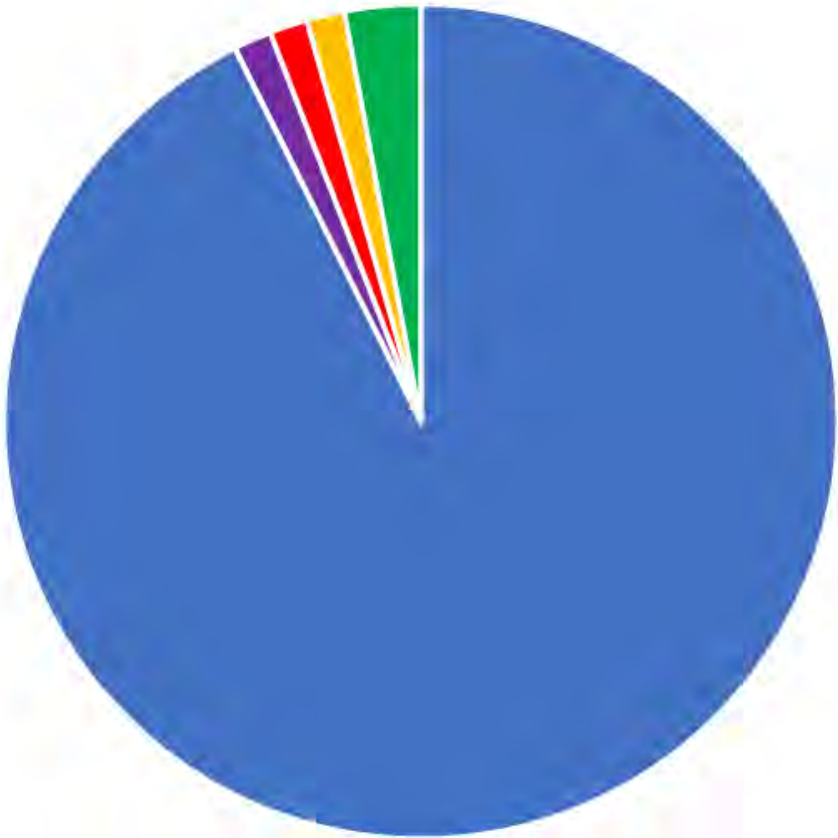






# 1. What is your relationship to Douglas County Public Schools?

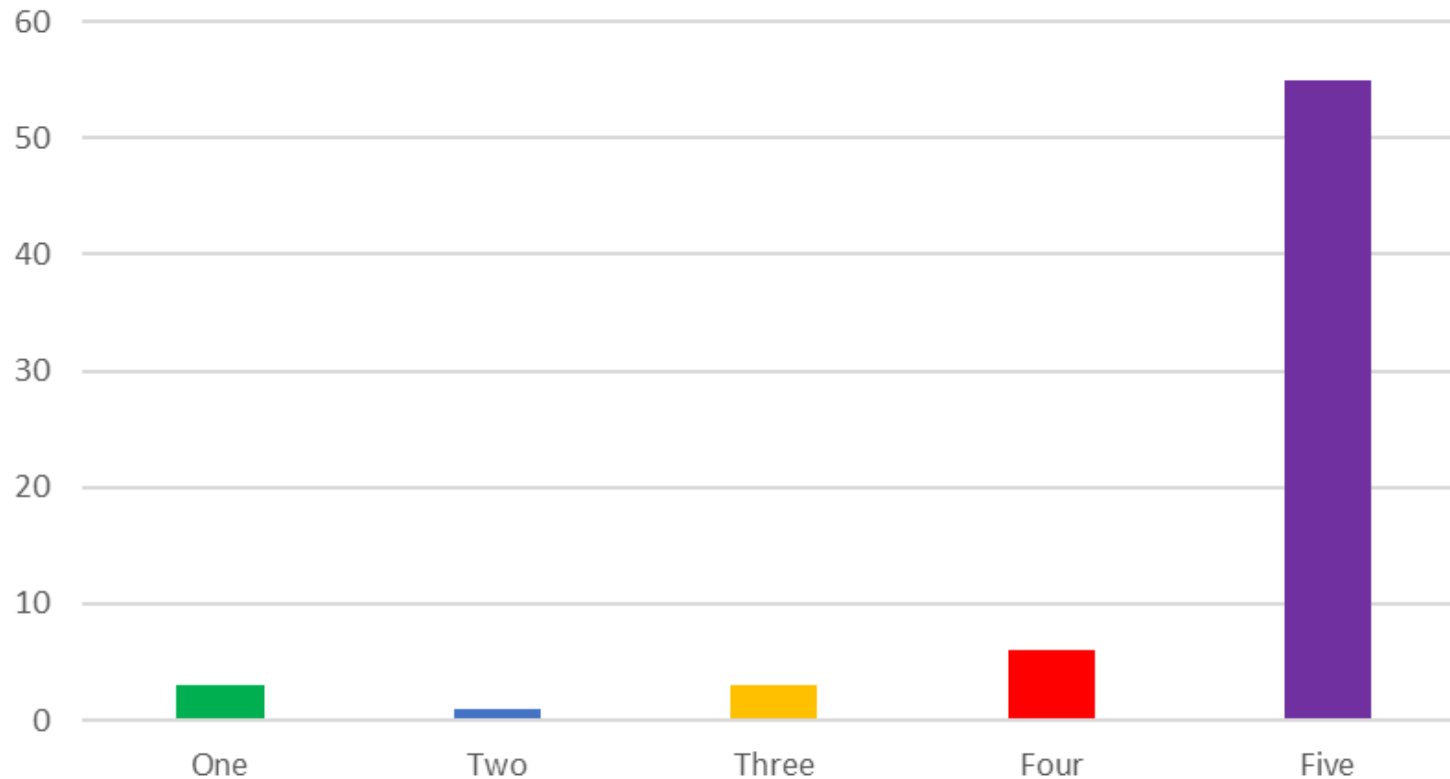
- I am a parent or guardian of a Douglas County school student
- I am a student
- I live near a school (Not a parent/guardian or student)
- I work at a school
- I am an interested resident



Answer	Count	Percentage
I am a parent or guardian of a Douglas County school student	63	92.65%
I am a student	1	1.47%
I live near a school (Not a parent/guardian or student)	1	1.47%
I work at a school	1	1.47%
I am an interested resident	2	2.94%

## 2. How important is it to you that students are able to walk and bike safely to school?

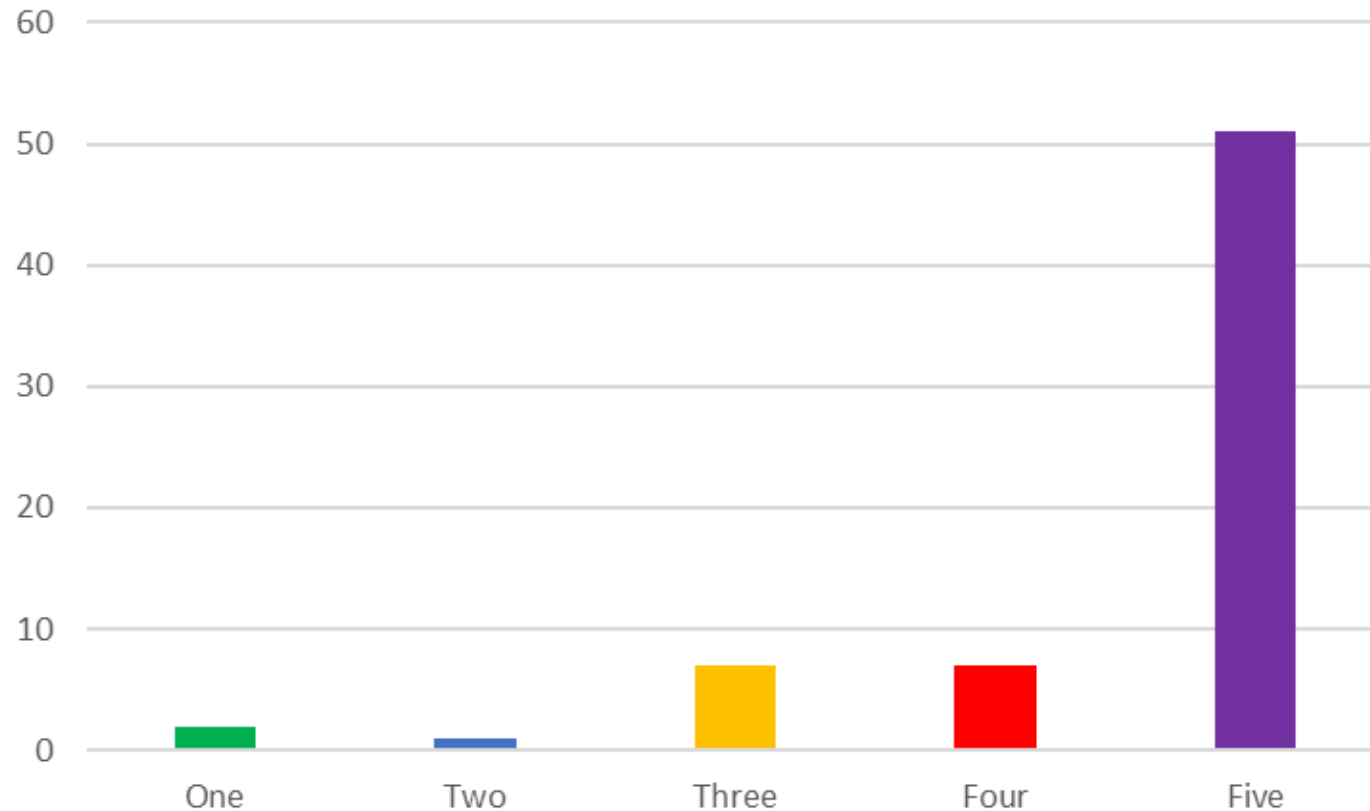
(On a scale of 1-5, with 1 being the lowest and 5 being the highest)



Answer	Count	Percentage
1	3	4.41%
2	1	1.47%
3	3	4.41%
4	6	8.82%
5	55	80.88%

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

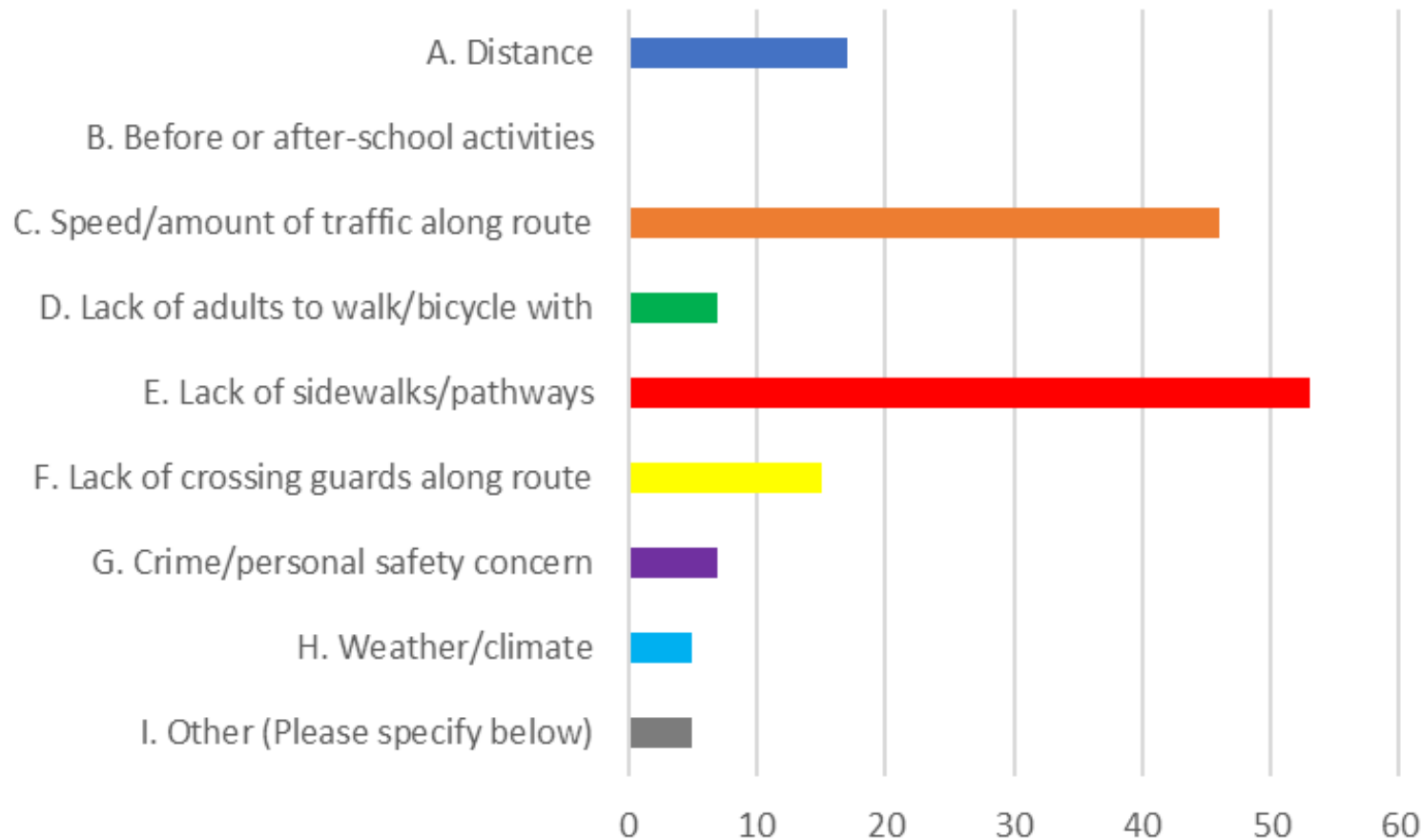
(On a scale of 1-5, with 1 being the lowest and 5 being the highest)



Answer	Count	Percentage
1	2	2.94%
2	1	1.47%
3	7	10.29%
4	7	10.29%
5	51	75%



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



Answer	Count	Percentage
A. Distance	17	10.97%
B. Before or after-school activities	0	0%
C. Speed/amount of traffic along route	46	29.68%
D. Lack of adults to walk/bicycle with	7	4.52%
E. Lack of sidewalks/pathways	53	34.19%
F. Lack of crossing guards along route	15	9.68%
G. Crime/personal safety concern	7	4.52%
H. Weather/climate	5	3.23%
I. Other (Please specify below)	5	3.23%

# 5. What do you feel is the most important safety concern for students walking or biking to school? (Additional comments/concerns)



## Other replies

Today 5-16-23 I witnessed a child fall off their bike to the right of the exit and fell half in road in front of a car. Luckily cars drive slow. Did t think too much about sidewalks or bike paths until I saw this kid fall off his bike today.

There is no safe path to ride or walk

Personal safety, traffic speed, distance, and lack of crossing guards.

No shoulder or bike path leaving the school, very narrow road with lots of traffic during drop off and pickup and no where to safely get off the road

Middle school and high school will be too far away.

Live in Indian Hills. Distance and 395 as only feasible route.

Lack of protected intersections at Stodick pkwy, Waterloo, and harvest for students from Arbor Gardens north to GES.

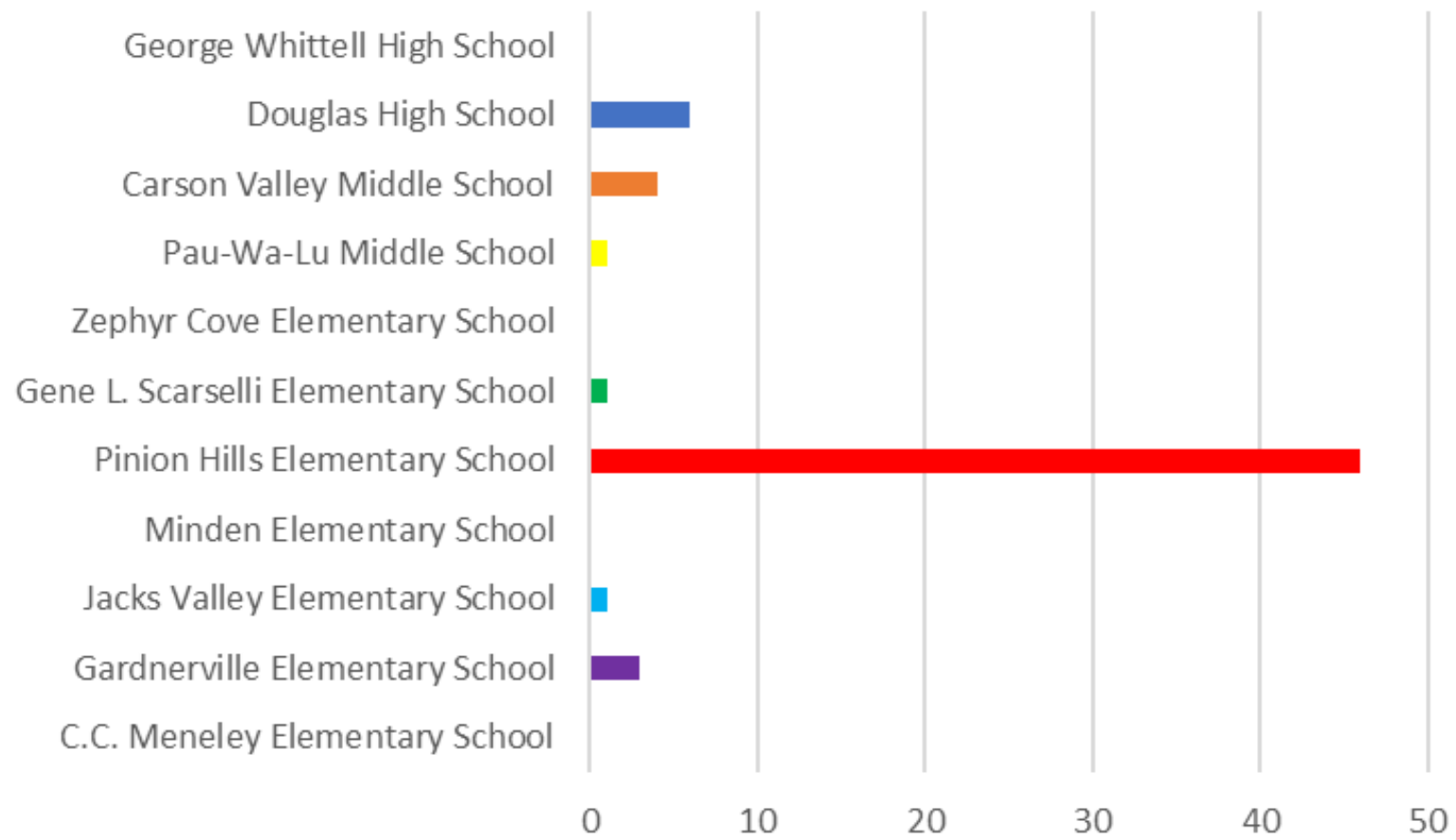
I allowed my son to ride his bike to school because there were sidewalks and volunteers/yard duty working at the crosswalks.

Crazy drivers that do not pay attention and always speed

Child does not like to ride up hill after school



# 6. Which school does your child attend?

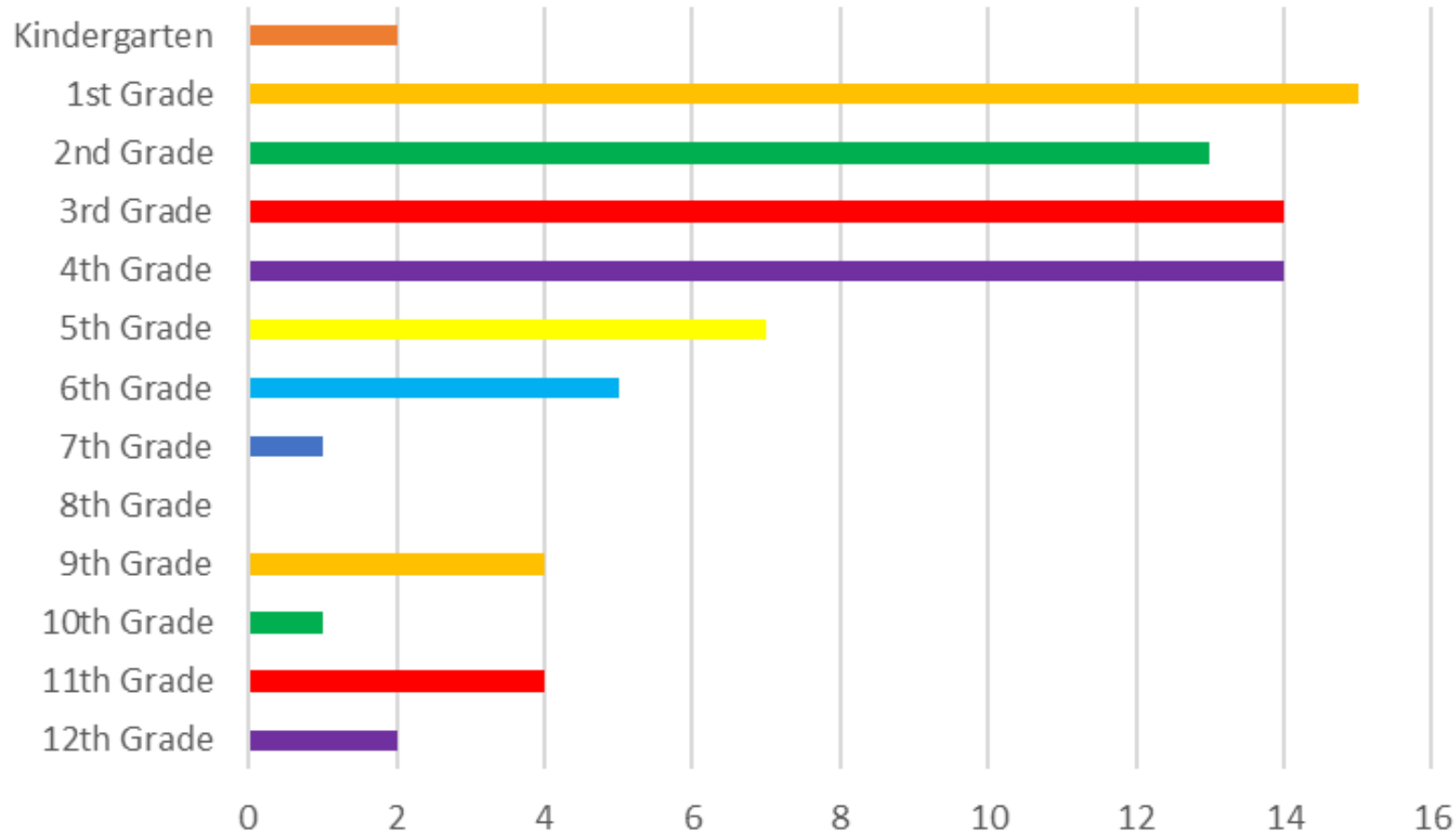


Answer	Count
George Whittell High School	0
Douglas High School	6
Carson Valley Middle School	4
Pau-Wa-Lu Middle School	1
Zephyr Cove Elementary School	0
Gene L. Scarselli Elementary School	1
Pinion Hills Elementary School	47
Minden Elementary School	0
Jacks Valley Elementary School	1
Gardnerville Elementary School	3
C.C. Meneley Elementary School	0





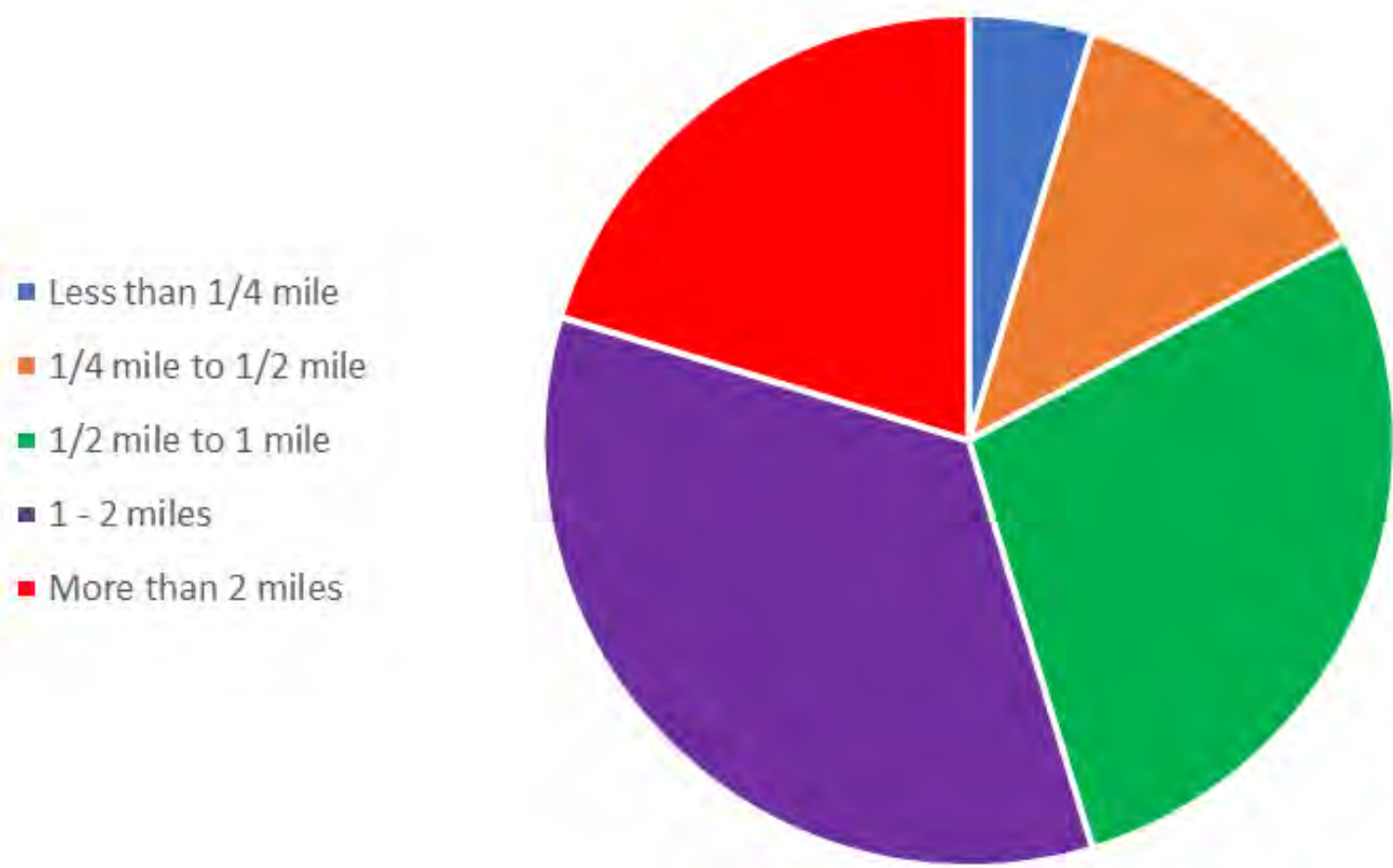
# 7. What is the grade of your child(ren)?



Answer	Count
Kindergarten	2
1 <sup>st</sup> Grade	15
2 <sup>nd</sup> Grade	13
3 <sup>rd</sup> Grade	14
4 <sup>th</sup> Grade	14
5 <sup>th</sup> Grade	7
6 <sup>th</sup> Grade	5
7 <sup>th</sup> Grade	1
8 <sup>th</sup> Grade	0
9 <sup>th</sup> Grade	4
10 <sup>th</sup> Grade	1
11 <sup>th</sup> Grade	4
12 <sup>th</sup> Grade	2



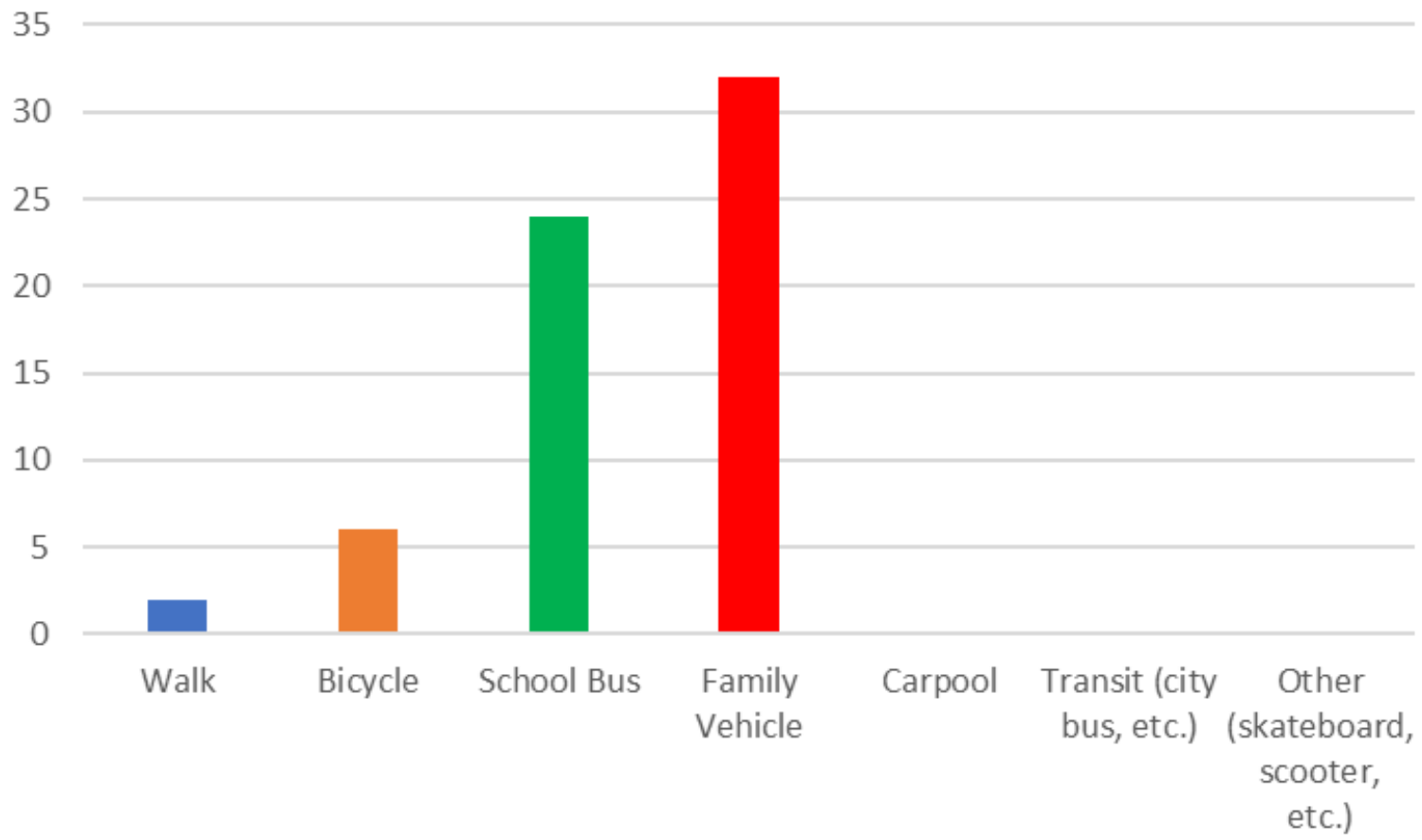
# 8. How far does your child live from school?



Answer	Count	Percentage
Less than ¼ mile	3	4.69%
¼ mile to ½ mile	8	12.50%
½ mile to 1 mile	18	28.13%
1 – 2 miles	22	34.38%
More than 2 miles	13	20.31%



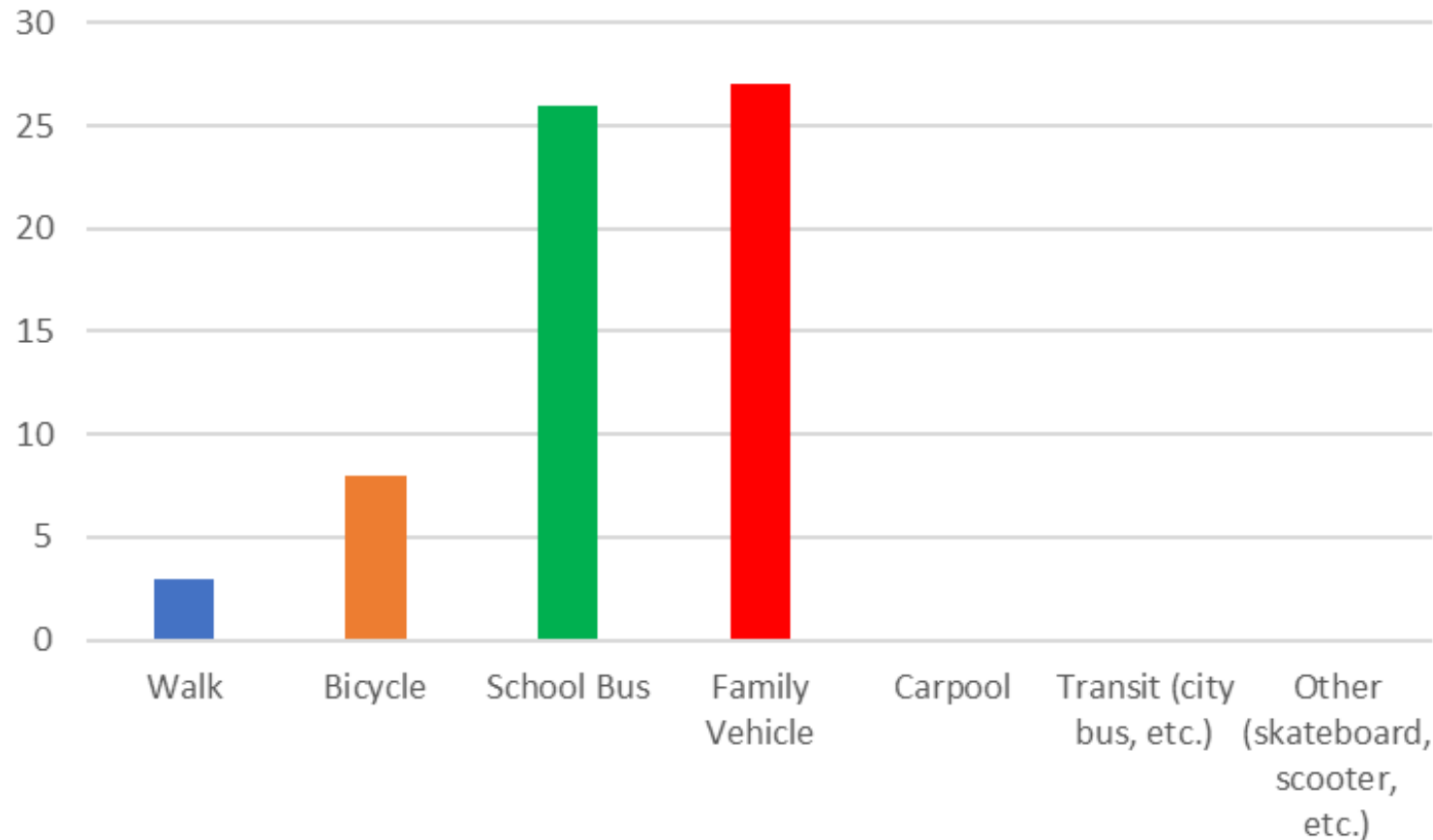
# 9. On most days, how does your child arrive at school?



Answer	Count	Percentage
Walk	2	3.13%
Bicycle	6	9.38%
School Bus	24	37.50%
Family Vehicle	32	50%
Carpool	0	0%
Transit	0	0%
Other	0	0%

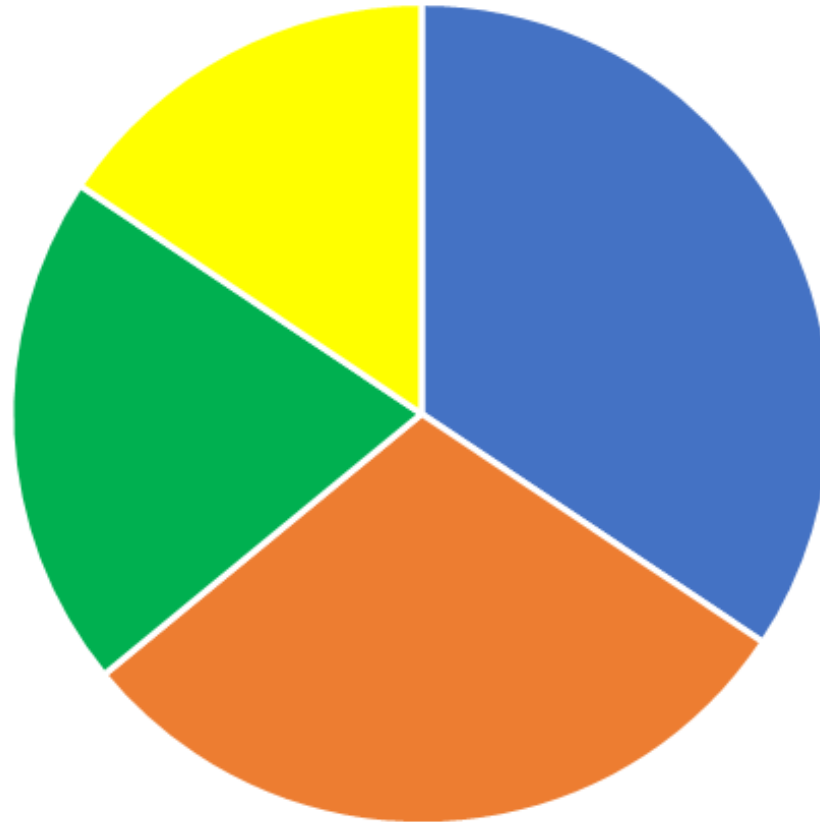


# 10. On most days, how does your child leave from school?



Answer	Count	Percentage
Walk	3	4.69%
Bicycle	8	12.50%
School Bus	26	40.63%
Family Vehicle	27	42.19%
Carpool	0	0%
Transit	0	0%
Other	0	0%

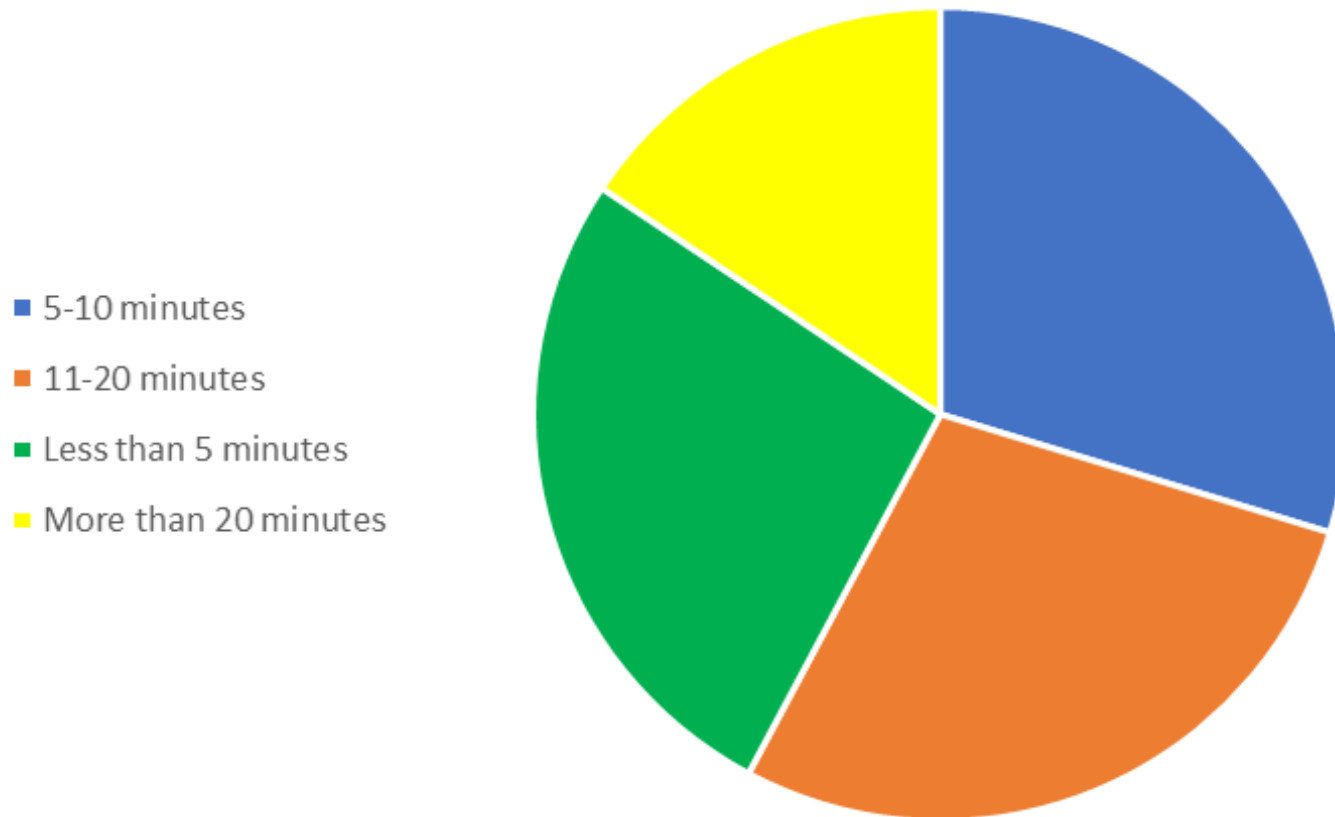
# 11. How long does it usually take your child to get to school?



- 5-10 minutes
- 11-20 minutes
- Less than 5 minutes
- More than 20 minutes

Answer	Count	Percentage
5 – 10 minutes	22	34.38%
11 – 20 minutes	19	29.69%
Less than 5 minutes	13	20.31%
More than 20 minutes	10	15.63%

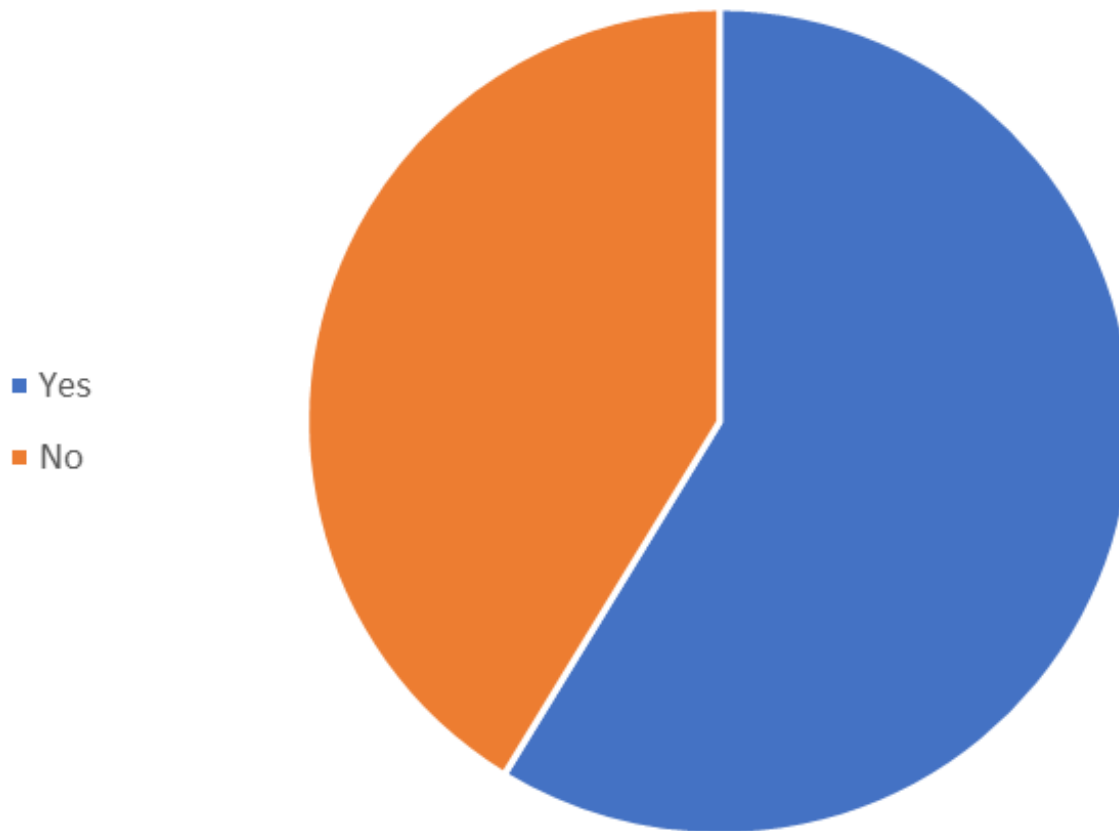
# 12. How long does it usually take your child to get home from school?



Answer	Count	Percentage
5 – 10 minutes	19	29.69%
11 – 20 minutes	18	28.13%
Less than 5 minutes	17	26.56%
More than 20 minutes	10	15.63%



# 13. Has your child asked for permission to walk to/from school in the last year?



Answer	Count	Percentage
Yes	37	58.73%
No	26	41.27%



# 14. Feel free to share any additional comments or concerns:

## Other replies

Would love to have a safe path for kids to ride bikes or walk to and from school in the Johnson lane area

With the current times I feel it is not safe for kids to walk or bicycle to school. It was safe in my day but times were different back than.

We would like to request a sidewalk to be put in from Saratoga Springs Santa Barbara to Pinion Hills Elementary School. There is no shoulder to walk or ride on safely to get to school in this area. Kids are not safe riding bikes or walking to school without a sidewalk. Please consider putting a sidewalk in to ensure our student safety to and from school. Thank you.

We live within a 1/2 mile of our kids' school, but do not feel confident allowing them to ride to school alone. Crossing Chichester Drive is our main concern as traffic crosses quickly and at times drivers are not paying attention (looking down, on phone, general distractions).

We live West of 395 so to bike to school at GES we cross at High School Street. The time of day for drop off and pick up for the elementary school the flashing school zone signs on 395 is not on making it very dangerous to cross 395. The 2nd issue the flashing crosswalk sign is always on at the crosswalk between Mission Street and Toler Ave leading drivers to a ignore subsequent flashing cross walks.

There needs to be safe street crossings for the kids, especially in the Ranchos

There are currently several students who walk to school at Piñon and I am always concerned for their safety as they walk, bike and run along Stephanie. I would love to see this remedied with bike paths.

The traffic issue is horrendous at DHS. Two entrance/exits is completely insufficient for the traffic volume. Furthermore, students must use a crosswalk which cannot accommodate the amount of students and vehicles coming and going, or they have to use a crosswalk in a busy traffic circle. They are crossing a highway, and they would be far safer if there was a pedestrian bridge, there are too many close calls. Commuters are stuck waiting for far too long.

Stephanie is a busy street. PHES parking lot has only one entrance which is very busy after school (Cars lined up out into Stephanie Way). Bike lane is very small. I'm just not confident those drivers are always paying attention to pedestrians/bicyclists (especially young children).

Stephanie has no sidewalks, traffic can get pretty heavy, and cars tend to speed. My kids would love to bike to school but it isn't really safe without sidewalks or a bike path.



# 14. Feel free to share any additional comments or concerns:

## Other replies

SRTS seems too focused on transportation network immediately adjacent to school. Ped and bike improvement needs are greater in the 1/4 mile to 1 mile from schools. Maps show vehicle crash locations but not ped and bike collisions. Biggest improvement need for GES is separated and protected walk from Toler to Mission. Wide motel access and restaurant head in parking backing into sidewalk/guarded crossing is unacceptable during school hours.

SRTS are generally safe routes for everyone. Schools and the district should be engaged in transportation issues for non-motorists. Schools feel like a drive thru and school grounds don't allow public access have become barriers between neighborhoods rather than THE central place. I don't believe in discouraging use of public parks such as Heritage Park by closing restrooms, discriminating against kids. Long term CVMS and Town of Gardnerville need the equivalent of Courthouse street continuing to the Circle Dr access, Meneley alley.

Sidewalks or bike paths along Stephanie would add to safety and allow the community to safely access the school and park.

Sidewalks are desperately needed on Dresslerville Road.

Sidewalk or walking path would be amazing for our school.

Pinon is an ideal school for kids to ride their bikes to school. It is rural, nested into Johnson Lane, surrounded by 25 mph roads. However, there isn't a bike lane for the kiddos to safely commute to and from school. Currently, the kids that do ride bikes, do so in the middle of Stephanie. I have seen numerous close calls between kids on bikes and cars. Please consider a bike lane for students at Pinon. It would improve the safety for students and would likely reduce the car and bus traffic to and from the school. If there was a bike lane on Stephanie, we would drop off/pick up our kiddo on bikes.

Pinion elementary has no side walks along Stephanie rd. 1 crossing guard at the school. A path or sidewalk added would be great.

Our route to school goes up Stephanie. There aren't any sidewalks or shoulders for bike riding, and given the ages of our kids while they're at Pinon Hills, we'd drive them to school before letting them ride their bikes.

Next year he will be in middle school which is way to far. He will take the bus.

Need more sidewalks





# 14. Feel free to share any additional comments or concerns:

## Other replies

My kids would bike to Pinion every day if there were safe, setback sidewalks on Stephanie Lane.

In this day and age, safe routes to and from school should be on top of the priority list. I do not feel it is safe for children and adults to walk on Stephanie. I would like to ask each BOD to walk individually on the shoulder lane of Stephanie from Vicky to Piñon Hills School at 7:30 a.m., Monday - Friday. That is all. Thank you for your time creating this survey for safer school routes.

I would love to be able to walk/bike with my children to school but there are no sidewalks or even shoulders on the roads. I've seen moms with strollers precariously walking on the edge of the road because there is no shoulder. We live in such a beautiful area and it would be so nice to be able to safely walk/bike with the kids to school but we need road shoulders at a minimum and preferably sidewalks. Also the drainage issues could be helped by sidewalks and gutters as well.

I would love a bike path to school. But first I would love for schools to get the proper funding so that they can stop fundraising. I feel like I'm constantly being asked to donate items to classrooms, attend a fundraiser at school, or send my child out to solicit money for the school. It's a backwards system that plays on the sweet faces of our babies and the heartstrings of the ones who love them. Pay the teachers what they deserve and give the schools the funding for a FREE education.

I understand that we are rural in the Johnson Lane community, but being able to install sidewalks along our major roadways (i.e. Stephanie and Johnson) would be great for not only our children, but the community as a whole! Especially if sidewalks were installed east of Vicky Lane going east and west. Thank you!

I think there should be maintained cross walks for children walking to/from school within a certain radius of the schools at the very least. I do not think we need to add sidewalks or bike lanes.

I have a friend who attends Pinion and their school has no safety measures in place for students if they do not ride the bus. I hope this will change so that the students will be able to participate in bike/walk to school programs.

I experience unsafe drivers every single day when I walk my children to and from school. Nobody pays attention to the speed not even in the school zone with the lights flashing. There is no real way to walk or even cross the street. After it rains the sides are completely washed out and muddy. On May 25th 2023 at 3:16 pm for school pick up a woman in a white Nissan Altima tried to purposely run me and my children off the road for crossing into the parking lot. She was speeding up to me as fast as she could indicating that she will hit us in the school zone, yelling and honking at us. I have an active police report filed against her. This is not safe for children. I hope there will be sidewalks build. And there needs to be more police presence.

I don't know if I'll let my kids bike to school. Maybe supervised but by the time they get to an age where I would be fine with it as if now, they'll be in middle school which is to far for them.



# 14. Feel free to share any additional comments or concerns:

## Other replies

I do let my child ride his bike to school whenever he wants but I worry about the lack of adequate bike lanes. We have a bike lane painted on the road but it's approximately a foot wide and drivers who are constantly looking at their phones and not paying attention. A bike lane separated by an actual divider would be amazing.

Hello, The neighborhood surrounding Pinon Hills is completely lacking in sidewalks or bike lanes. The school is on a busy street with lots of auto traffic and there are no safe areas for walking or biking. We live about 1/2 mile from the school and yet I cannot allow my daughter to walk or bike to school because there is no safe access. If the county would install sidewalks and bikes lanes along Stephanie Lane and Vicky Lane, it would improve the neighborhood so much. This project could be done in conjunction with installing necessary drainage upgrades on those same roads. Not only would families be able to walk or bike to school, but they could also go to the county park, ball field and dog park. Sincerely, Erin Westerlund

Bike paths would not only help my children significantly but also benefit the community with safe routes for all Douglas county residents for recreation, access, and exercise. Connecting schools and parks is a great start! Knox excavation would be an awesome partner for a multiple use path along Stephanie way leading to a multiple use trail head on blm (for ohv and non motorized riders).

Bike paths along East Valley and buckeye or toler would make biking from Johnson lane safer. My kids hate the bus and ask to bike, but East Valley isn't safe. Or if we could extend Heybourne into a bike path from Airport Rd to Buckeye, it is much safer than East Valley.

Again witness a child fall off the jet bike and went half in raid due to no pathways

A walking and biking path around and to Pinon, would be benefit everyone wanting to utilize the dog park as well.

A bike path from Fuller to the parking lot of the school would be amazing. Fuller has some traffic but not too bad. I would feel comfortable biking along there and then taking a bike path into the school. There needs to be a way to get into the school on a bike without going on Stephanie.

There should be a bike lane along Santa Barbara to Vickey continuing up Stephanie to the school for the children who live in the Saratoga Springs subdivision.

A bike path from Santa Barbara to Vickie then to Stephanie up to Pinion Elementary needs to be provided. Currently there isn't and safe route for kids walking or riding their bikes to Pinion Elementary.