



COPPER MESA ELEMENTARY
Traffic Memorandum

Project Number: 1124175

Prepared For: Douglas County
School District

March 21, 2025



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Highlands Ranch, Colorado

Project Number: 1124175

Prepared For: Douglas County School District
Planning and Construction
2808 Highway 85, Building B
Castle Rock, Colorado 80109

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1. EXECUTIVE SUMMARY

Douglas County School District is considering options for consolidating schools in Highlands Ranch, Colorado. The consolidation option includes having 6th Grade students remain at the elementary school or a second option that moves 6th Grade to the separate middle school. At the time of this memorandum, there are no options to consolidate a school into Copper Mesa Elementary. This Traffic Memorandum reviews existing traffic and provides potential mitigation measures for current traffic and potential increased traffic challenges.

Copper Mesa has a parking area on the south side of the building, which is connected to a two-lane pick-up and drop-off access drive. This drive has two access points on Poston Parkway. There is also another drop-off and pick-up drive on the west side of the building, with two access points on Windridge Circle. School bus service is provided at Copper Mesa.

There are no recommended traffic mitigation measures at Copper Mesa Elementary.

2. INTRODUCTION

2.1 Study Purpose and Scope

The purpose of this Traffic Memorandum is to discuss the existing traffic patterns at Copper Mesa Elementary (Copper Mesa) and potential mitigation measures for current traffic and potential increased traffic due to increased enrollment caused by school consolidations. At the time of this memorandum, there are no options being considered that would consolidate a school into Copper Mesa.

The scope of this memorandum includes assessing school driveways, nearby intersections, school parking lots, school drop-off and pick-up locations, traffic flow, bicycle and pedestrian facilities, and general traffic challenges at Copper Mesa.

2.2 Study Area

Copper Mesa Elementary School is located at 3501 Poston Parkway in the central region of Highlands Ranch. The school is located near the intersection of Windridge Circle and Poston Parkway. The parcel number for the property is 222924101064. A vicinity map showing the school's location is provided as **Figure 1**.



Figure 1: Vicinity Map

Nighborhood local and collector streets are analyzed for safety challenges, bicycle and pedestrian facilities, parking availability, and queueing lengths. Larger intersections at arterial streets are analyzed for the same items, but also for accident history.

2.3 School Description

Copper Mesa has a start time of 8:35 AM and an end time of 3:30 PM. The school is located in the neighborhood to the southeast of the intersection of Wildcat Reserve Parkway and McArthur Ranch Road. Copper Mesa has a parking area on the south side of the building, which is connected to a two-lane pick-up and drop-off access drive. This drive has two access points on Poston Parkway. There is also another drop-off and pick-up drive on the west side of the building, with two access points on Windridge Circle. Pedestrian crosswalks are located at the intersection of Poston Parkway & Windridge Circle, and on Windridge Circle, adjacent to the northern access point of the pick-up and drop-off lane. Copper Mesa has a maximum Capacity of 800 students but the largest enrollment since 2013 is 654 students.

School bus service is provided at Copper Mesa. Douglas County School District’s policy is for bus service to only be provided to elementary students within the school’s attendance boundary, and outside of a designated one-mile waling radius. **Figure 2** depicts Copper Mesa’s local attendance boundary in light pink with the orange circle representing the walking radius. As depicted, the entire local attendance boundary is within one mile, so no local bus service is provided.

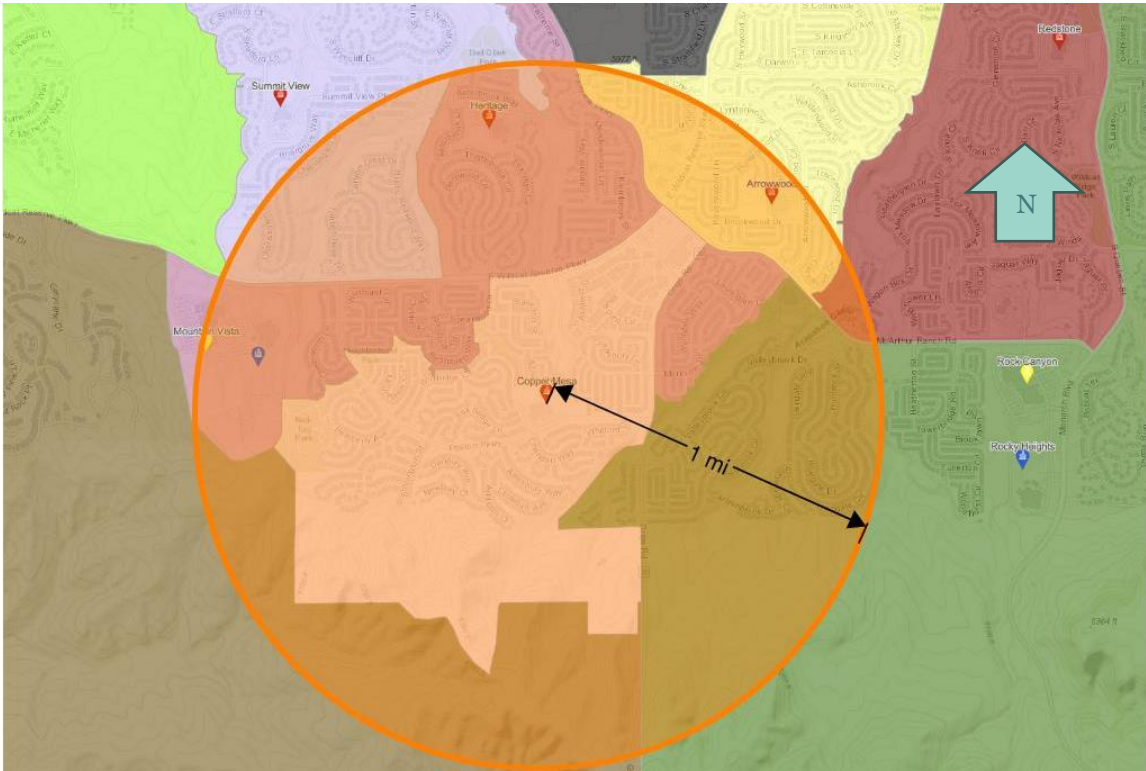


Figure 2: Copper Mesa Bus Service Map

3. EXISTING CONDITIONS

3.1 Site Observation

A site observation was performed at Copper Mesa on November 18, 2024. Field notes from the site observation are included in **Appendix A**. The morning site observation was conducted from 7:45 AM through 9:15 AM and the afternoon site observation was conducted from 2:45 PM through 4:15 PM. Key observations included:

- Congestion at the intersection of Poston Parkway at Windridge Circle
- Occasional speeding on Poston Parkway
- Challenges with sun glare in the mornings

3.2 Roadway Network

The Highlands Ranch roadway network is maintained by Douglas County. Copper Mesa is situated within a built-out neighborhood and is surrounded by local and neighborhood collector streets. The main accesses to the neighborhood are from Wildcat Reserve Parkway at Poston Parkway and Grig's Road at Poston Parkway, with Wildcat Reserve Parkway being the main arterial closest to the school. Poston Parkway extends from the school to a signalized intersection at Wildcat Reserve Parkway and an unsignalized intersection at Grig's Road.

School zone flashers operate from 8:05 to 8:45 AM and from 3:20 to 4:00 PM. Two flashers are located on Poston Parkway, on either side of the school, and one is located on Windridge Circle to the north of the school.

Wildcat Reserve Parkway at Poston Parkway/Timberchase Trail

The intersection of Wildcat Reserve Parkway at Poston Parkway/Timberchase Trail is a signalized intersection with protected/permissive left-turn lanes/phases for all approaches except southbound Timberchase Trail, which is permissive only. **Figure 3** shows an aerial of the intersection with the current intersection layout.

Wildcat Reserve Parkway has two through lanes and a dedicated left-turn lane in each direction. The southbound approach of Timberchase Trail has only one lane for all three possible turning movements. The northbound approach of Poston Parkway has a dedicated left-turn lane and a shared right turn lane. Bike lanes are present for both directions on Wildcat Reserve Parkway. Bike lanes on Poston Parkway run in both directions, but merge with traffic before the intersection.



Figure 3: Wildcat Reserve Parkway at Poston Parkway/Timberchase Trail

Poston Parkway at Grig's Road

The intersection of Poston Parkway at Grig's Road is an unsignalized three-way intersection with stop control on eastbound Poston Parkway Approach. **Figure 4** shows an aerial of the intersection with the current intersection layout.

Grig's Road contains one through lane in each direction. The southbound approach has a second through lane that becomes a dedicated right-turn lane at the intersection, and the northbound approach has a dedicated left-turn lane. The Poston Parkway approach has only one lane, shared between left-turn and right-turn movements. Grig's Road has two through lanes in the northbound direction to the north of the intersection. Bike lanes are present in each direction for all approaches, however, the bike lanes on Poston Parkway merge with traffic to the west of the intersection. There is a pedestrian crossing on the south side of the intersection with a rectangular rapid flashing beacons.



Figure 4: Poston Parkway at Grig's Road

Roadway Characteristics

General features of the roadways in the vicinity of Copper Mesa are summarized in **Table 1**.

Table 1 – Roadway Characteristics

Roadway	Poston Parkway	Wildcat Reserve Parkway	Grig's Road
Speed Limit	30 mph	45 mph	40 mph
Number of Through Lanes	2	4	2**
Lane Width	14 feet	12 feet	12 feet
Bike Lane Width	6 feet*	5 feet	7 feet*
Median	None	Striped	None
On-Street Parking	North side near school	None	North side near school

*Bike lane width is measured from stripe to flowline

**Becomes 4 lanes north of Poston Parkway

3.3 Traffic Safety Analysis

School Safety

Students are picked up and dropped off primarily via the drop-off lane to the south of the school. A one-way aisle facilitates traffic, with vehicles entering the lot through the east access point and exiting through the west access point. Vehicles drop-off students using the right lane and use the left lane to exit the queue. On-street parking is provided on the north side of Poston Parkway, but it not fully used. Bike lanes are present for both directions on Poston Parkway.

Copper Mesa was provided with a questionnaire to provide any feedback related to traffic and school safety. Responses to the questionnaire are provided in **Appendix B**.

The main comments from the questionnaire are:

- High pedestrian volume crossing Windridge Circle at Fox Sedge Lane
- Queues extending onto Poston Parkway and Windridge Circle on cold days
- Street parking can cause visibility issues

Copper Mesa also provided the following excerpt from their parent handbook regarding their drop-off and pick-up procedures:

“Students can be dropped off in front of the school (Poston Pkwy) or on the west side bus loop (Windridge Circle). In general, students K-2 are dropped off in front and 4-6 are dropped off on the side bus loop, but you are welcome to drop off at either spot. We embrace a “kiss and go” approach to drop off to keep our morning time efficient. There will be car attendants to help get students out of the cars in the morning. Please pull all the way forward. We ask that you do not get out of the car in the car lane and that students exit on the right side of the vehicle for safety purposes. If you would like to walk your child up to the door, please park in the front lot. Preschool parents must park in the lot and walk their child up to the door to sign in with the teacher.”

4. PROJECTED SITE TRAFFIC IMPACTS

4.1 Projected Traffic

Douglas County School District (DCSD) is considering potential school consolidation options. At the time of this memorandum, there are no options being considered that would consolidate a school into Copper Mesa. The consolidation options would include having 6th Grade students remain at the elementary school or a second option that moves 6th Grade to the separate middle school. **Table 3** provides data on student enrollment for Copper Mesa with and without 6th Grade.

Table 2 – School Enrollment

School	Ideal Capacity per DCSD	Maximum Historic Enrollment	2023-2024 Enrollment Count*	Projected 2028-2029 Enrollment*	2023-2024 Enrollment Count**	Projected 2028-2029 Enrollment**
Copper Mesa	506	654	322	211	281	185

*Enrollment values include Pre-School through 6th Grade.

**Enrollment values include Pre-School through 5th Grade. 6th Grade enrollment was assumed to 1/7 of kindergarten through 6th Grade enrollment.

4.2 Mitigation

Based on site observations and feedback from the Copper Mesa Administration, Copper Mesa faces the following challenges:

- Pedestrians crossing at non-designated locations
- Speeding on Poston Parkway

There are numerous students and families that cross Windridge Circle at Fox Sedge Lane. A crosswalk could be added at this location, but it would introduce an additional vehicle/pedestrian conflict point. The crosswalk at Poston Parkway is 150-feet away and pedestrians should be encouraged to use that crosswalk or the addition crosswalk 300-feet further north in lieu of installing a third crosswalk in a short distance. The crosswalk locations are depicted in the **Figure 5** aerial.

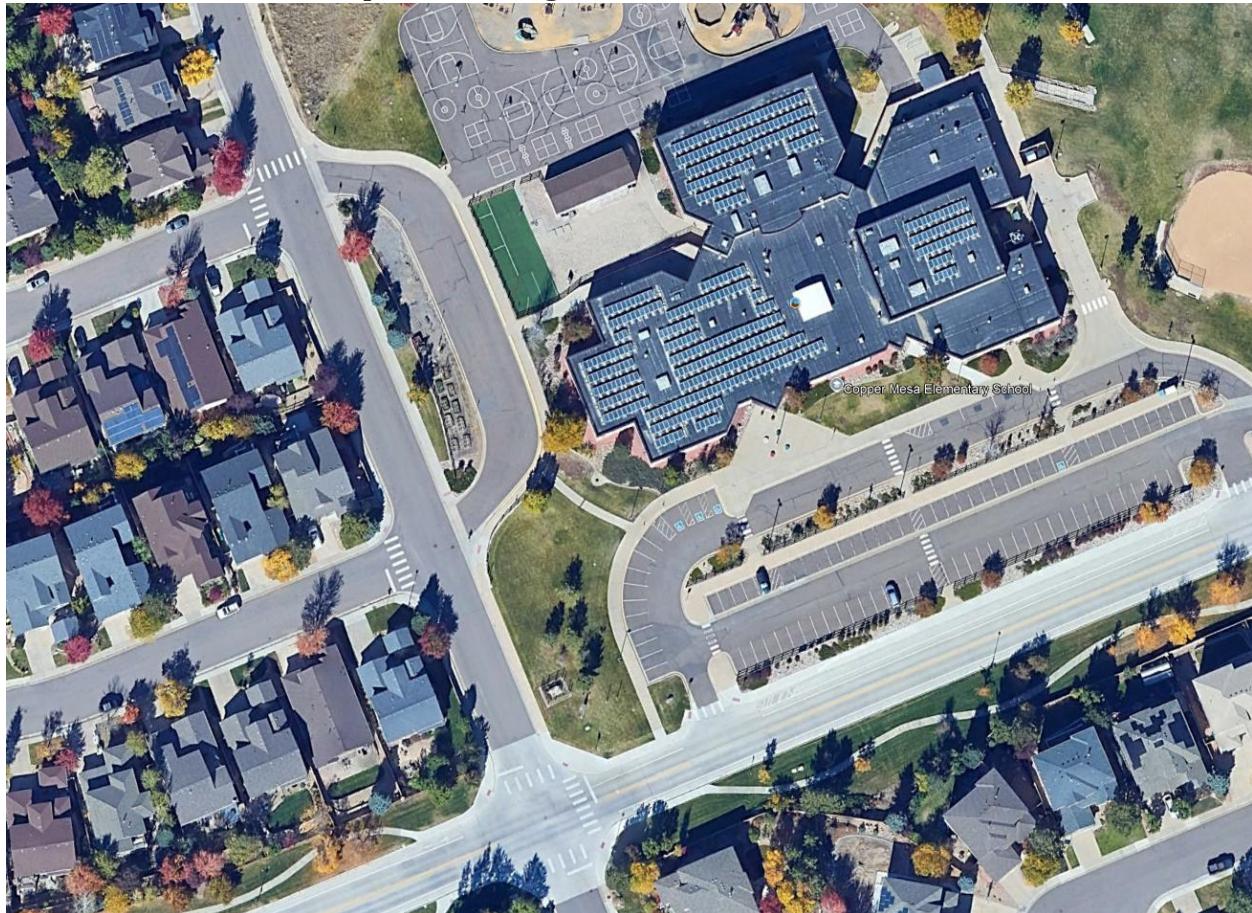


Figure 5: Copper Mesa Aerial

5. CONCLUSIONS/RECOMMENDATIONS

This traffic memorandum addresses existing traffic patterns and potential traffic challenges at Copper Mesa Elementary School. At the time of this memorandum, there are no options being considered to consolidate a school into Copper Mesa. Two options are being considered if schools are consolidated: one maintaining 6th grade at the elementary school and one moving 6th grade to the middle school. There are no recommendations for traffic improvements at Copper Mesa.



Appendix A Site Observation Notes

TRAFFIC OBSERVATION REPORT

Project Name	DCSD Highland Ranch TIS	Project No.	1124175
Observer	Greg Nguyen		
Location	Copper Mesa Elementary School		
Time	7:45 AM	AM / PM	
DATE	11/18/2024		
	M	S	W Th F S S

Queueing Data

Start Time: 8:10 AM

End Time: 8:35 AM

Maximum Queueing Length: Approximately 400', utilizing the full storage lane at the front of the school.

Total Storage Length Available:

Approximately 400', measured from the front of the unloading lane to the entrance of the parking lot.

Comments:

On-Street Parking Locations and Availability

Comments:

Street parking is available on Poston Parkway, only on the opposite side of the main parking lot along westbound Poston. No other street parking is allowed on Poston. Street parking is allowed on, and used by parents on Windridge Circle. The bus loop is used for temporary parking/idling while unloading. The main parking lot has 94 parking stalls, with four additional ADA stalls available. Snow plowing has eight stalls unusable from snow piles. Cars were observed to temporarily park in the lane to the school dumpsters.

Crosswalk Locations and Usage

Comments:

Children have been observed to cross Windridge instead of going to the crosswalks at the intersection or at Trotwood Way. Crosswalks to the school are available at the intersection of Poston, Windridge, and Chandon, and are available across Windridge at Trotwood Way. A major crosswalk across Grig's Road is present east of the school. Crosswalks are also available across the school parking lot at the middle of the lot and the westmost edge, and three further crosswalks are available across the loading/unloading lane to the school front doors.

Roadway Characteristics

Speed Limit(s) and Location(s):

Poston Parkway is a 30 MPH road, and all nearby local roads in the neighborhood are 25 MPH roads. The school zone is a 15 MPH zone, and school zone lights are on from 8:05 to 8:45 AM.

Signage:

Cones are used at the entrance/exit of the parking lot near the intersection of Poston Parkway and Windridge Circle to establish one-way flow of traffic through the parking lot. The parking lot is signed for only entry in on the east side of the parking lot, with two exits. The bus loop is signed for school bus only traffic. Poston Parkway is signed for street parking availability at the school and the bikes lanes.

Bike Lanes:

Bike lanes are available on both sides of Poston Parkway.

Other Comments:

Sight Visibility Challenges

Comments:

Seasonally, cars leaving the parking lot and traveling southbound on Windridge have the sun directly in front of the vehicle at the turn.

Congestion Areas

Comments:

Congestion was noted at the intersection of Poston Parkway and Windridge. Flaggers are at the intersection to control traffic while pedestrians cross at the crosswalk there. The parking lot entrance/exit is coned off nearby to prevent further congestion.

General Traffic Observations

Comments:

Students enter into the school at multiple doors around the school, which reduces concentration of traffic at any particular side. Some students are also allowed into the school as early as 7:45 AM. Icy conditions on the road at the west side of the intersection of Poston and Windridge are noted by school staff at some points in time during the year, and that cars slide while trying to come to a stop before the intersection. The nearby high school and middle school start later than Copper Mesa, which decreases peak traffic on Poston. No bus services the school at this time. School faculty note that sizeable portions of the school bike or walk to school, bike racks are available at the north end of the school. A foot path across Ashworth Avenue, extending from East Fork Trail connects to the school baseball field. A sidewalk also connects the school playground to Firelight Trail.

TRAFFIC OBSERVATION REPORT

Project Name	DCSD Highland Ranch TIS	Project No.	1124175
Observer	Greg Nguyen		
Location	Copper Mesa Elementary School		
Time	2:45 PM	AM / PM	
		DATE	11/18/2024
		M	S W Th F S S

Queueing Data

Start Time: 2:55 PM

End Time: 3:40 PM

Maximum Queueing Length: Approximately 400', utilizing the full storage lane at the front of the school.

Total Storage Length Available:

Approximately 400', measured from the front of the unloading lane to the entrance of the parking lot.

Comments:

Parents pick up students from multiple doors at the school, including the two southern facing doors and the west facing side door at the bus loop. Parents queue at the bus loop back to the intersection of Windridge and Poston. Kids walk down the queue to their parent's car, or are walked back to their car by their parents.

On-Street Parking Locations and Availability

Comments:

Street parking is available on Poston Parkway, only on the opposite side of the main parking lot along westbound Poston. No other street parking is allowed on Poston. Street parking is allowed and used at Windridge Circle, Chandon Way, and Fox Sedge Lane. The bus loop is used for temporary parking/idling while unloading. The main parking lot has 94 parking stalls, with four additional ADA stalls available. Snow plowing has eight stalls unusable from snow piles.

Crosswalk Locations and Usage

Comments:

Children have been observed to cross Windridge instead of going to the crosswalks at the intersection or at Trotwood Way. Crosswalks to the school are available at the intersection of Poston, Windridge, and Chandon, and are available across Windridge at Trotwood Way. A major crosswalk across Grig's Road is present east of the school. Crosswalks are also available across the school parking lot at the middle of the lot and the westmost edge, and three further crosswalks are available across the loading/unloading lane to the school front doors. Foot traffic from the nearby high school and middle school also uses the crosswalks and sidewalks along Poston.

Roadway Characteristics

Speed Limit(s) and Location(s):

Poston Parkway is a 30 MPH road, and all nearby local roads in the neighborhood are 25 MPH roads. The school zone is a 15 MPH zone, and school zone lights are on from 3:20 to 4:00 PM.

Signage:

Cones are used at the entrance/exit of the parking lot near the intersection of Poston Parkway and Windridge Circle to establish one-way flow of traffic through the parking lot. The parking lot is signed for only entry in on the east side of the parking lot, with two exits. The bus loop is signed for school bus only traffic. Poston Parkway is signed for street parking availability at the school and the bikes lanes.

Bike Lanes:

Bike lanes are available on both sides of Poston Parkway.

Other Comments:

No bus services this school. The intersection of Poston, Windridge, and Chandon is a four way stop.

Sight Visibility Challenges

Comments:

Seasonally, cars leaving the parking lot and traveling southbound on Windridge have the sun directly in front of the vehicle at the right turn. Westbound traffic also has sun glare right into the path of travel.

Congestion Areas

Comments:

Congestion was noted at the intersection of Poston Parkway and Windridge. Flaggers are at the intersection to control traffic while pedestrians cross at the crosswalk there. The parking lot entrance/exit is coned off nearby to prevent further congestion. Congestion was also noted in the parking lot as cars queued to leave, and complicated by parked cars pulling out and pedestrian traffic through the parking lot or across the exit crosswalk. The traffic at the intersection of Poston and Windridge backs up to the parking lot entrance/exit.

General Traffic Observations

Comments:

Children were observed cutting through the lawn, walking directly from the side, west door of the school and the main front door of the school to the intersection corner instead of using the sidewalks to the intersection. Faculty at the school noted that cars occasionally speed down Poston.



Appendix B School Questionnaire

Review: DCSD Traffic and Pedestrian Safety Questionnaire

Respondent

13 Anonymous

1607:04

Time to complete

1. What school do you represent?

Score / 0 pts

Copper Mesa Elementary

2. Please provide your name.

Score / 0 pts

Candice Laviaguerre

3. Please provide your email.

Score / 0 pts

claviaguerre1@dcsdk12.org

4. Please provide feedback on crosswalks. Are crosswalks provided in adequate locations? Do families in general abide by crosswalk locations? Are additional crosswalk locations desired? Score / 0 pts

We have two crosswalks and they are in a good place. I would love to have one more crosswalk in between the two. We have many people that cross at the corner of Windridge Circle and Fox Sedge Lane (on the north corner), so a crosswalk would be so helpful.

5. Please provide feedback on pickup/drop-off. Where are your schools pickup and drop-off locations? Is there adequate length or do vehicle queues extend on to public roadways? Score / 0 pts

Our front drop off/pick up lane is ok because we only have 276 students. On a cold day, they queue out onto Poston Pkwy. Our 2nd bus loop pick up in the afternoon can be challenging as car queue out onto Windridge Circle. We don't have busses.

6. If available, can you provide your school's written pickup and drop-off procedures? Please send to nick.westphal@dibblecorp.com. Score / 0 pts

Sent

7. Please provide feedback on parking lot safety. Is there an adequate number of parking spaces? Are there any sight visibility challenges when exiting a parking lot (e.g. parked vehicles blocking views)? If so, where? Score / 0 pts

Our parking lot is adequate for our staff size. We still have a lot of unused spaces during the day because we have a small staff. People can park on the street on Poston and Windridge and that can sometimes be a challenge to see.

8. Please provide feedback on roadway safety. Do vehicles in general follow traffic laws such as speed limits, stop signs, no parking zones, etc.? Score / 0 pts

Signage seems fine. We do occasionally have people that blow through our crosswalk on Poston.

9. Does your school have a designated bus drop-off area? Are there any conflicts between buses and other vehicles? Score / 0 pts

We do, however we are a non-bus school.

10. Please provide any general information related to vehicle and pedestrian safety at or around your school that you would like to share. Score / 0 pts

My only concern is people walking across the street in between the two crosswalks as mentioned above..