

# Memorandum

**To:** Richard Cosgrove, PE **Date:** January 12, 2025  
**Copy:** Michael Schuurman  
**From:** Nick Westphal, PE **Project No.:** 1124175

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**Subject: Douglas County School District (DCSD) – North Planning Area  
(Highlands Ranch) Traffic Recommendations**

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## 1. Introduction

Dibble prepared 8 Traffic Memorandums and 18 Traffic Impact Studies, analyzing the existing traffic impacts at Highlands Ranch, Colorado elementary and middle schools that feed into ThunderRidge High School, Mountain Vista High School, and Highlands Ranch High School. Each site was observed and data was provided by the Douglas County Traffic Department, DCSD Operations, DCSD elementary and middle school administrators, and traffic data was collected at 57 intersections to support the analysis.

Recommendations for each school to improve traffic and safety, based on the traffic analysis and engineering judgement, are summarized below. A concept level range for potential costs to complete the recommended improvement is also provided. Further details and figures can be found in the associated Traffic Memorandums and Traffic Impact Studies. The recommendations below are subject to change based on future Douglas County Traffic Department reviews.

## 2. ThunderRidge High School Elementary Feeders

### 2.1. Coyote Creek Elementary to Trailblazer Elementary

1. Coordinate with Douglas County to modify signal timing at Highlands Ranch Parkway and Spring Hill Parkway/Wildcat Reserve Parkway.

**Concept Level Cost Estimate: No Improvements Required**

2. Coordinate with Douglas County to convert the Hackberry Street and Spring Hill Parkway intersection to a 4-way stop.

**Concept Level Cost Estimate: \$20,000 - \$40,000**

3. Add pavement markings and signage on Hackberry Street at Spring Hill Parkway to create a shared eastbound through/left-turn lane and a dedicated eastbound right-turn lane. The existing pavement width should accommodate the layout.

**Concept Level Cost Estimate: \$20,000 - \$40,000**

### 2.2. Trailblazer Elementary to Coyote Creek Elementary

1. Request Douglas County install a right-turn lane on eastbound Highlands Ranch Parkway at Westridge Village Parkway. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.

**Concept Level Cost Estimate: \$450,000 - \$750,000**



### **2.3. Trailblazer Elementary to Eldorado Elementary**

1. Request Douglas County install a right-turn lane on eastbound Highlands Ranch Parkway at Westridge Knolls Parkway. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.

**Concept Level Cost Estimate: \$400,000 - \$700,000**

### **2.4. Stone Mountain Elementary to Saddle Ranch Elementary**

1. Coordinate with Highlands Ranch Community Association to request the owner at the northwest corner of Royal Eagle Lane at Eagle Valley Way trim vegetation for increased site visibility.

**Concept Level Cost Estimate: No Improvements Required**

2. Create a no parking zone along the southbound curb, north of the bus loop entrance on Royal Eagle Lane, to prevent traffic from parking at and near the crosswalk, limiting visibility of pedestrians crossing the street.

**Concept Level Cost Estimate: \$5,000 - \$10,000**

3. Monitor the intersection of Wildcat Reserve Parkway at Royal Eagle Road/Weathersfield Way for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.

**Concept Level Cost Estimate: No Improvements Required**

### **2.5. Saddle Ranch Elementary to Stone Mountain Elementary**

1. Enact a school policy that prohibits vehicles from parking on Southbound Weatherford Way, north/east of the Abbotswood Court intersection during pick-up and drop-off times to allow for vehicle queuing.

**Concept Level Cost Estimate: No Improvements Required**

2. Partner with Douglas County to create curb extensions on Weathersfield Way at intermittent spaces along the roadway to promote reduced vehicle speeds.

**Concept Level Cost Estimate: \$80,000 - \$140,000**

3. Monitor the intersections of Wildcat Reserve Parkway at Royal Eagle Road/Weathersfield Way and Wildcat Reserve Parkway at Kingfisher Avenue/Stone Mountain Drive for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.

**Concept Level Cost Estimate: No Improvements Required**

4. Partner with Highlands Ranch Metro District to utilize Pronghorn Park as an additional parking area for student pickup.

**Concept Level Cost Estimate: No Improvements Required**

### **3. Mountain Vista High School Elementary Feeders**

#### **3.1. Northridge Elementary to Sand Creek Elementary**

1. Request Douglas County install a right-turn lane on eastbound Dad Clark Drive at Maplewood Drive. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.

**Concept Level Cost Estimate: \$300,000 - \$500,000**

2. Partner with Douglas County to install a traffic signal at the Dad Clark Drive and Northridge Road intersection based on signal warrant analysis and capacity analysis for both existing conditions and future projected conditions.

**Concept Level Cost Estimate: \$800,000 - \$1,400,000**

3. Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.

**Concept Level Cost Estimate: \$800,000 - \$1,400,000**

#### **3.2. Northridge Elementary to Bear Canyon Elementary**

1. Coordinate with Douglas County to modify the signal timing at Broadway and Salford Lane as needed.

**Concept Level Cost Estimate: No Improvements Required**

2. Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.

**Concept Level Cost Estimate: \$800,000 - \$1,400,000**

#### **3.3. Bear Canyon Elementary to Northridge Elementary**

1. Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Southpark Road.

**Concept Level Cost Estimate: No Improvements Required**

2. Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.

**Concept Level Cost Estimate: \$800,000 - \$1,400,000**

### **3.4. Summit View Elementary to Heritage Elementary**

1. Provide a short length of a no parking area west of the main parking lot entrance on Summit View Parkway, similar to westbound Summit View Parkway at Astorbrook Place to increase sight visibility looking west.

**Concept Level Cost Estimate: \$5,000 - \$10,000**

2. Monitor the intersection of Summit View Parkway and Fairview Parkway for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.

**Concept Level Cost Estimate: No Improvements Required**

### **3.5. Heritage Elementary to Summit View Elementary**

1. Relocate the school zone indicators (signs and flashers) to a location prior to the first access drives into Summit View Elementary for both directions of traffic.

**Concept Level Cost Estimate: \$40,000 - \$70,000**

2. Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Summit View Parkway.

**Concept Level Cost Estimate: No Improvements Required**

### **3.6. Copper Mesa**

1. No recommendations for improvements.

## **4. Highlands Ranch High School Elementary Feeders**

### **4.1. Fox Creek Elementary to Cougar Run Elementary**

1. Enact a school policy that prohibits vehicles from parking on eastbound Venneford Ranch Road, west of Meadow Creek Drive, during pick-up and drop-off times

**Concept Level Cost Estimate: No Improvements Required**

2. Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Venneford Ranch Road.

**Concept Level Cost Estimate: No Improvements Required**

3. Analyze the ability to stagger school start and end times for half of the school by at least 10 minutes to decrease the peak pick-up and drop-off demand.

**Concept Level Cost Estimate: No Improvements Required**

### **4.2. Fox Creek Elementary to Arrowwood Elementary**

1. Coordinate with Douglas County to install a right-turn lane for southbound Arrowwood Drive at the parking lot access.

**Concept Level Cost Estimate: \$150,000 - \$300,000**

2. Install a No U-turn sign at the intersection of Arrowwood Drive and Brookwood Drive to deter U-turns in the intersection.

**Concept Level Cost Estimate: \$1,000 - \$5,000**

3. Partner with Douglas County to install a crosswalk with Rapid Rectangular Flashing Beacons (RRFB) and a raised median, on McArthur Ranch, near Arrowwood Drive.

**Concept Level Cost Estimate: \$300,000 - \$500,000**

### **4.3. Fox Creek Elementary to Eagle Ridge Elementary**

1. Partner with the Church of Jesus Christ of Latter-Day Saints to utilize their parking lot as an additional parking area for student pickup to limit on-street parking.

**Concept Level Cost Estimate: No Improvements Required**

2. Coordinate with Douglas County to convert Deercrest Way at Ptarmigan Trail to an all-way stop control intersection.

**Concept Level Cost Estimate: \$20,000 - \$40,000**

#### **4.4. Eagle Ridge Elementary to Fox Creek Elementary**

1. Analyze the ability to stagger school start and end times for half of the school by at least 10 minutes to decrease the peak pick-up and drop-off demand.

**Concept Level Cost Estimate: No Improvements Required**

2. Add pavement markings and signage on Collegiate Drive at the parking lot access to create a shared westbound through lane and a westbound right-turn lane. The existing pavement width should accommodate the layout.

**Concept Level Cost Estimate: \$20,000 - \$40,000**

3. Request Douglas County install a southbound right-turn lane at the intersection of Quebec Street at Collegiate Drive Road. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.

**Concept Level Cost Estimate: \$300,000 - \$500,000**

#### **4.5. Eagle Ridge Elementary to Acres Green Elementary**

1. Construct two crosswalks within the school parking lot to facilitate safe pedestrian routes through the parking lot and pick-up/drop-off queue. Crossing attendants will need to be present at these crosswalks to enforce pedestrian right of way.

**Concept Level Cost Estimate: \$5,000 - \$10,000**

2. Add pavement markings at the parking lot exit to Maximus Drive to provide one entrance lane, one left-turn exit lane, and one right-turn exit lane. The existing pavement width should accommodate the layout.

**Concept Level Cost Estimate: \$5,000 - \$10,000**

## 5. Middle Schools

### 5.1. Ranch View Middle School

1. Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation, but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.

**Concept Level Cost Estimate: No Improvements Required**

2. Widen the parking lot access to provide 2 entrance lanes into the main parking area between the high school and the middle school allowing for one lane to queue and one lane to pass.

**Concept Level Cost Estimate: \$30,000 - \$50,000**

### 5.2. Mountain Ridge Middle School

1. Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.

**Concept Level Cost Estimate: No Improvements Required**

2. Install no parking signs along Summit View Parkway, north of Wildcat Reserve Parkway to discourage parking in the northbound bike lane and southbound right-turn lane.

**Concept Level Cost Estimate: \$5,000 - \$10,000**

3. Reconfigure the parking areas to allow for greater storage length for queued vehicles on the property by completing the following:

- a) Switch the high school staff/visitor parking lot and the bus parking lot. The bus parking and bus pick-up/drop-off area will move to the north parking lot. The median at the exit of the north parking lot will need to be shortened to allow for buses to turn north out of the parking lot.
- b) Restripe the current bus parking lot to provide parking spaces for personal vehicles. Considerations for accessible parking will need to be considered.
- c) Provide a break in the concrete/sidewalk between the existing bus parking lot and large southern parking lot to connect the parking areas on the west end. The break will be at the west end and will provide the ability for vehicles to queue around both parking lots.
- d) Provide striping for two travel lanes around the proposed queue loop, one for parking and one for passing.
- e) High school pick-up and drop-off will occur around the existing bus parking lot.
- f) Middle school pick-up and drop-off will occur on the west side of the middle school and/or in the existing staff/visitor parking lot.
- g) Widen the exit drive to provide 2 exits lanes north of the middle school parking lot.

**Concept Level Cost Estimate (item a-b): \$130,000 - \$210,000**

**Concept Level Cost Estimate (item c-f): \$20,000 - \$40,000**

**Concept Level Cost Estimate (item g): \$80,000 - \$140,000**

### **5.3. Cresthill Middle School**

1. Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.

**Concept Level Cost Estimate: No Improvements Required**

2. Coordinate with Douglas County to install a dedicated right-turn lane on southbound Cresthill Lane at the northern parking lot entrance/Weeping Willow Circle.

**Concept Level Cost Estimate: \$160,000 - \$280,000**

3. Provide crossing guards to the north parking lot access/Weeping Willow Circle at Cresthill Lane.

**Concept Level Cost Estimate: No Improvements Required**