

Town of Buena Vista

# US 24 Access Control Plan

March 2014



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# Introduction

The US 24 Access Control Plan (ACP) is a joint effort between the Colorado Department of Transportation (CDOT) and the Town of Buena Vista, in conjunction with Fehr & Peers, (the “Project Team”) to determine the appropriate access to/from US 24 and roadway configuration of US 24 to improve traffic safety and preserve traffic flow capacity of US 24 today and long into the future. The project will preserve reasonable access to properties and businesses adjacent to US 24 and strive to provide safe travel for all people using the corridor.

The result of the study will be an Intergovernmental Agreement (IGA) between CDOT and the Town of Buena Vista. This IGA will supersede the State of Colorado State Highway Access Code regulations. ACPs are traditionally long term planning tools, with the recommendations from the plan being implemented as redevelopment takes place along the corridor. However, just prior to the commencement of this project, Buena Vista applied for and was awarded RAMP funding to correct drainage concerns and provide sidewalks. This award created a unique opportunity to modify and improve access points along the corridor during the reconstruction rather than waiting until redevelopment occurs.

## *Study Location*

The ACP evaluated the portion of the US 24 corridor that travels through Buena Vista. The northern boundary of the study is just north of Harrison Road while the southern boundary is at Steel Drive/CR 319. The corridor being evaluated is just over 2 miles long. The study area is shown in Figure 1 on page 4.

## *Purpose*

The purpose of the ACP is to identify the location, type, and basic design elements of future access points within the study limits to provide reasonable access to adjacent properties while maintaining safe and efficient movement of all modes of transportation along, adjacent to, or on alternatives routes for US 24.

Figure 1: US 24 Access Control Plan Study Area



According to the *State Highway Access Code*, CDOT is required to provide access to individual properties when a reasonable alternative to the general street system does not exist and is not obtainable. CDOT has the ability to modify existing access points for safety and operational reasons and recommend restricting the number of allowable vehicle movements.

Because of the roadway reconstruction immediately following the completion of the ACP, another purpose of this study was to define the desired cross section for US 24 to be implanted during the reconstruction. Buena Vista completed a planning effort prior to the ACP that evaluated the desired community vision for US 24. A myriad of cross sections were generated. Through the ACP process, the cross sections were again evaluated by the community. The outcome of these community meetings is the desire to retain two travel lanes in each direction with additional enhancements for pedestrians and bicyclists in the corridor as well as strategically placed medians to enhance the corridor visually and provide pedestrian refuge for those crossing the corridor.

## Objectives

Proper application of an ACP will allow traffic to move more efficiently and safely along US 24 by controlling the design, location, and frequency of access points. Specific project objectives include:

- Document existing access locations; evaluate traffic and crash statistics along the corridor
- Evaluate potential reconfiguration of US 24 and access along the corridor
- Identify future locations of traffic signals (signal spacing) as the town develops
- Locate major pedestrian crossing locations
- Develop recommendations about the configuration of US 24 and the location, nature, and number of accesses along the corridor.

Traffic volumes on the US 24 corridor are projected to nearly double over the next 20 years. Access control can help limit the number of conflicts and the amount of delay on the corridor to prevent severe congestion on the highway for many hours of the day.

## *Access Management Plan Process*

The process for developing the US 24 ACP began with data collection. Crash data and traffic volumes were collected and mapped. All access locations were identified, described, and mapped. Additional counts were collected in locations with missing data so that adequate corridor analysis could be completed. Previously completed and related plans were reviewed to ensure appropriate coordination with other planning studies. After the existing conditions data were collected, operational analysis was completed. The operational analysis was conducted to understand both the impacts of closing key access locations and the reconfiguration of US 24 to a three lane cross section. At this point in the process, the first of three community meetings were held. The community provided feedback on the existing conditions analysis. This information was compiled and a set of preliminary recommendations for access reconfiguration and roadway reconfiguration options were drafted. These preliminary recommendations were brought to the public in the second community meeting. This meeting used keypad polling to evaluate the community response to corridor reconfiguration options. Additional outreach was completed through one-on-one meetings with individual property owners whose access was being recommended for change. Based on the comments received, the preliminary recommendations were revised to reflect a preferred alternative. The preferred alternative was presented at a final public meeting.

Additional public outreach included a project website where comments were accepted as well as Town outreach to citizens along the US 24 corridor. The recommended US 24 ACP is contained within this final report. The plan adoption process started during the documentation process and will be completed in early 2014. Materials from the community outreach process, including exhibits, comment forms, and summary notes from one-on-one meetings, are included in the appendices of this document.

# General Access Requirements

State highways are classified in accordance with the *State Highway Access Category Assignment Schedule*, which was revised on September 13, 2013. According to the schedule, US 24 is classified as follows:

- NR-A (Non-Rural Principal Highway) from 1663 feet north of Farwell St to 597 feet north of Farwell St in Buena Vista
- NR-B (Non-Rural Arterial) from 597 feet north of Farwell St in Buena Vista to 1373 feet south of DePaul Ave
- NR-A from 1373 feet south of DePaul Ave to Steele Drive/County Road 319

## Functional Characteristics of US 24

The functional characteristics of a highway provide a basic description of the highway based upon location, travel speed, traffic volumes, and type of travel. The functional characteristics for a category NR-A roadway include:

- A non-rural highway with the capacity to handle medium to high speeds and provide for medium to high traffic volumes in a safe and efficient manner.
- Provide interregional, intraregional, intercity, and intra-city travel needs in suburban and urban areas as well as serving as major arterials in smaller cities and towns.
- Direct access to abutting land is secondary to providing service to through traffic.

The functional characteristics for a category NR-B roadway include:

- A non-rural highway with the capacity for moderate travel speeds and relatively moderate to high traffic volumes over medium and short travel distances.
- Provide intercity, intra-city, and intercommunity travel needs.
- Provides service to through traffic movements, while allowing more direct access to occur.



## *Specific Access Requirements for US 24*

The number, location, and type of access to adjacent properties are also controlled by the access code depending on the type of highway. The access requirements for a category NR-A roadway include:

- One access shall be granted per parcel if reasonable access cannot be obtained from the local street or road system.
- The spacing for a full movement intersection with the potential for signalization should be 0.5 mile intervals. Exceptions may be permitted if the proposal documents that no reasonable alternative exists to achieve the 0.5 mile interval.
- Left turns in  $\frac{3}{4}$  movements may be allowed if it improves operation at an adjacent full movement intersection, meets the appropriate design criteria, and does not cause safety or operational problems. Left turns shall be prohibited if a non-traversable median exists and the proposed opening does not provide significant benefits.
- Additional right turn access shall be allowed where required acceleration and deceleration lanes can be provided, where it will relieve congestion, where it would not create safety or operational issues, and where it would not cause hardship to an adjacent property.

The access requirements for a category NR-B roadway include:

- One access shall be granted to each parcel if it does not create a significant safety problem or degrade operations.
- Primary access should be right-in, right-out, or 3/4 movements, with full movement signalized intersections at 0.5 mile spacing.
- Additional right-in, right-out access may be granted where required auxiliary lanes can be provided, where the access will relieve a congested condition, and where the access would not cause hardship to adjacent property or interfere with the operations of the general street system.
- An existing access that warrants a traffic signal, but does not meet the spacing requirements may result in the need to reconstruct the access, add a median to eliminate or restrict access, or the access may be closed if a reasonable alternative access is available.

## *Auxiliary Lane Requirements for US 24*

The State Highway Access Code defines the thresholds for deceleration and acceleration auxiliary lanes depending on the volumes of turning vehicles. These individual left turn and right turn lanes are beneficial for both safety and efficiency. In an urban corridor such as US 24 in Buena Vista, a left turn lane (center turn lane) provides a safe refuge for left turning vehicles, while a right turn lane is generally less beneficial since the delay experienced by right turning traffic is typically less due to fewer conflicts. The following are general auxiliary lane requirements for the highway categories identified in the Buena Vista ACP Corridor:



- A left turn deceleration lane is required for any access with a projected peak hour ingress turning volumes greater than 10 vehicles per hour (vph) or 25 vph depending upon category and speed limit.
- A right turn deceleration lane is required for any access with a projected peak hour ingress turning volume greater than 25 vph or 50 vph depending upon category and speed limit.
- A right turn acceleration lane is required for any access with a projected peak hour right turning volume greater than 25 vph or vph depending upon category and speed limit.

The current roadway lane configuration as well as the proposed roadway configuration in the ACP identifies a left turn lane throughout this corridor. The Town and CDOT have considered the benefit versus the tradeoffs of right turn lanes in this urban corridor and have determined that right turn lanes are undesirable, except where the lane configuration of the roadway is less than 5 lanes total (two through lanes each direction, and one Two-Way-Left-Turn Lane (TWLTL)).

# Existing Conditions

The study area on US 24 is approximately 2 miles in length and stretches from the north Town boundary, through Buena Vista, to Steele Drive/CR 319. The first step in developing an ACP is defining the existing conditions of the study roadways. This is done by collecting the following data:

- Property adjacent to the corridor and those potentially impacted by the ACP
- Location and type of each access point
- Average daily traffic (ADT)
- Intersection turning movement counts
- Crash data
- Current Town planning efforts

Using this data, the study roadway can be analyzed to determine if any safety or operational issues exist. The following sections provide a discussion on the data collection and existing conditions analysis.

## *Property Information*

The data regarding property ownership was provided by the Town of Buena Vista. For this study, it was determined that all property adjacent to US 24 would be included in the study area. The Town sent information about the project to all residents and business owners in Buena Vista and reached out personally to all properties adjacent to US 24 in the study area.

## *Roadway and Access Description*

Figures 2-9 on pages 11-18 show the locations that are all direct access points to the US 24 corridor within the identified study area for this project. The bounds of the study area are the north Town boundary to Steele Drive/CR 319 along US 24. Each access point has been given a description of how it interacts with US 24.

Figure 2: Existing US 24 Access - Harrison to Farwell

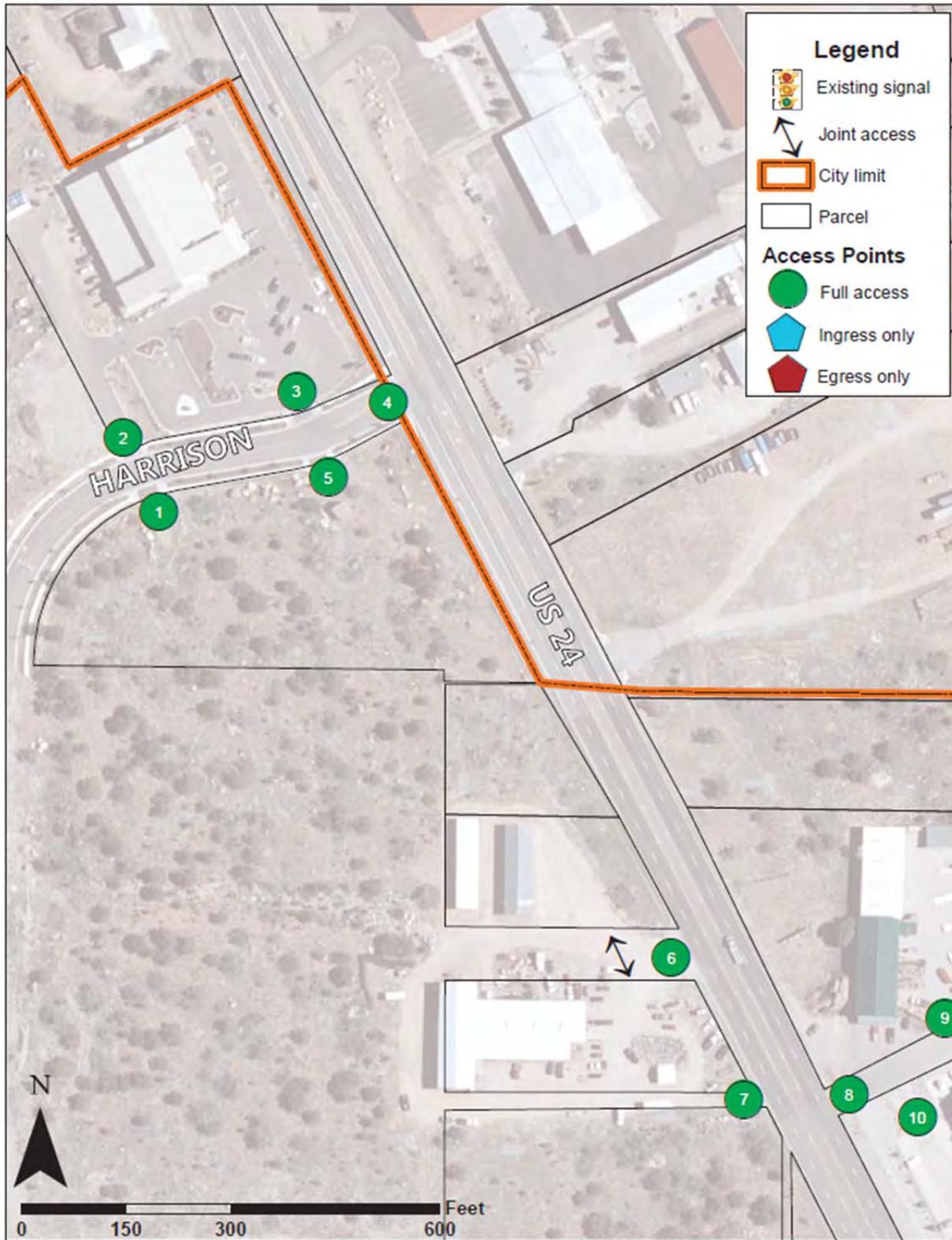


Figure 3: Existing US 24 Access - Farwell to Crossman

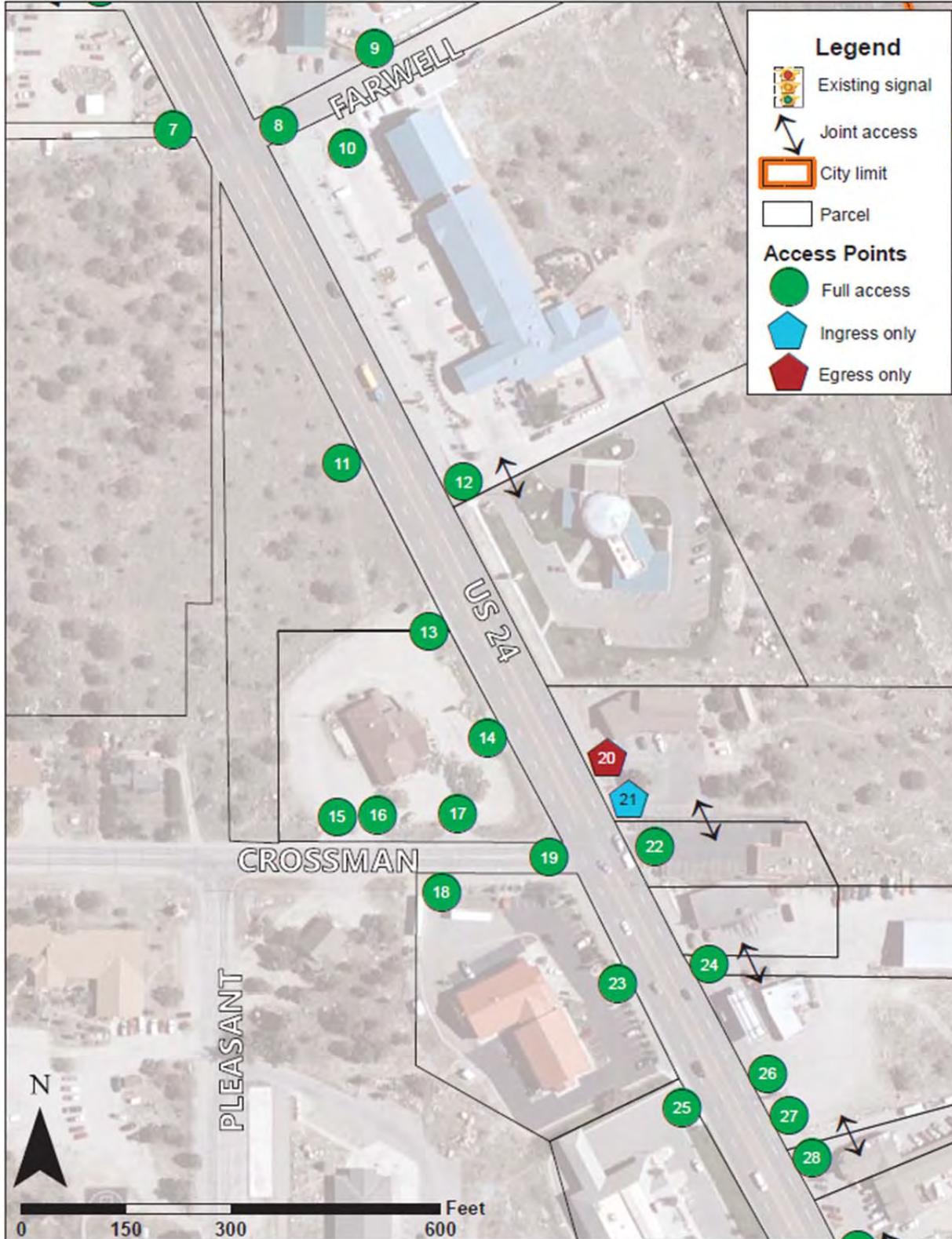


Figure 4: Existing US 24 Access – Brookdale to Sterling

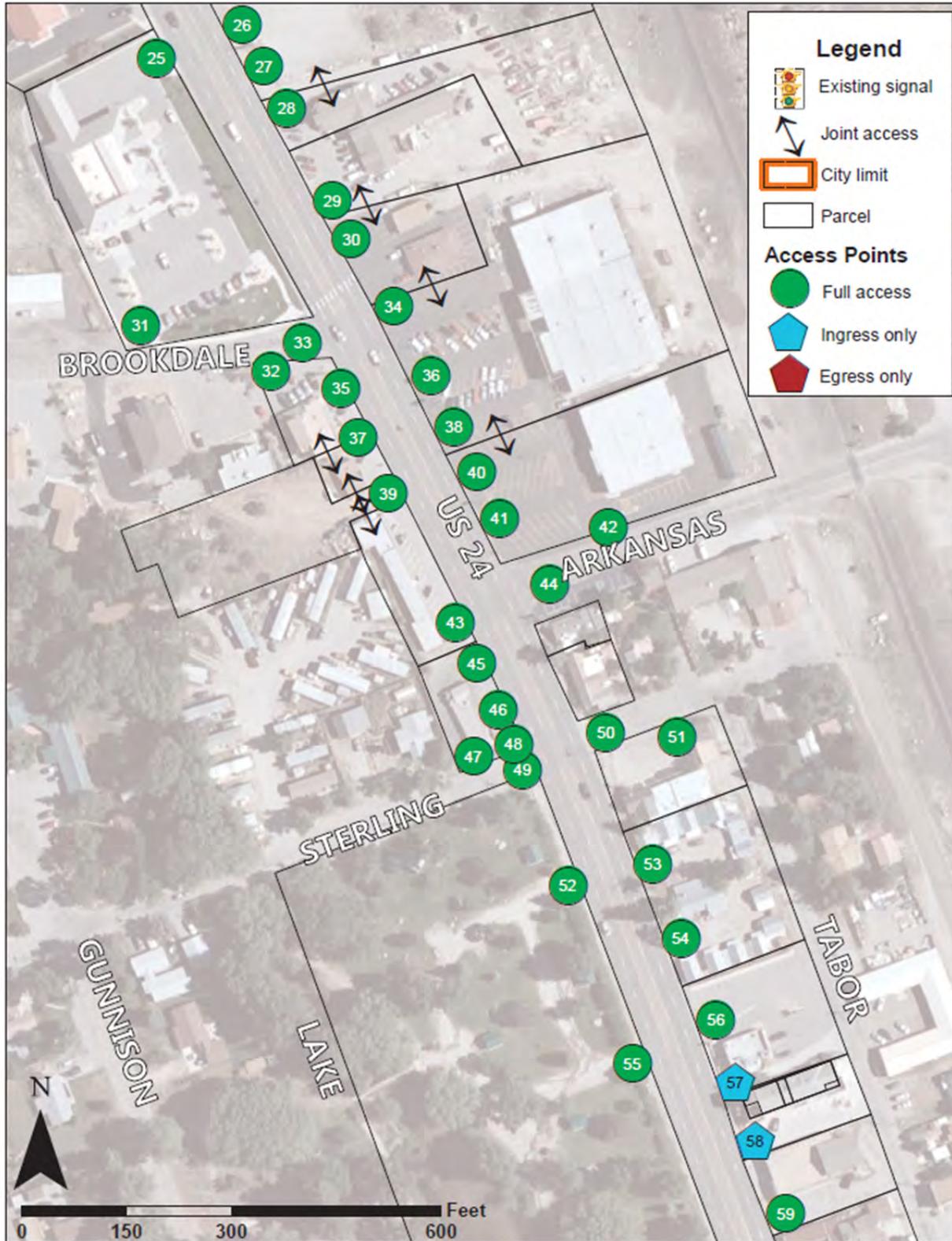


Figure 5: Existing US 24 Access – Main to Pine

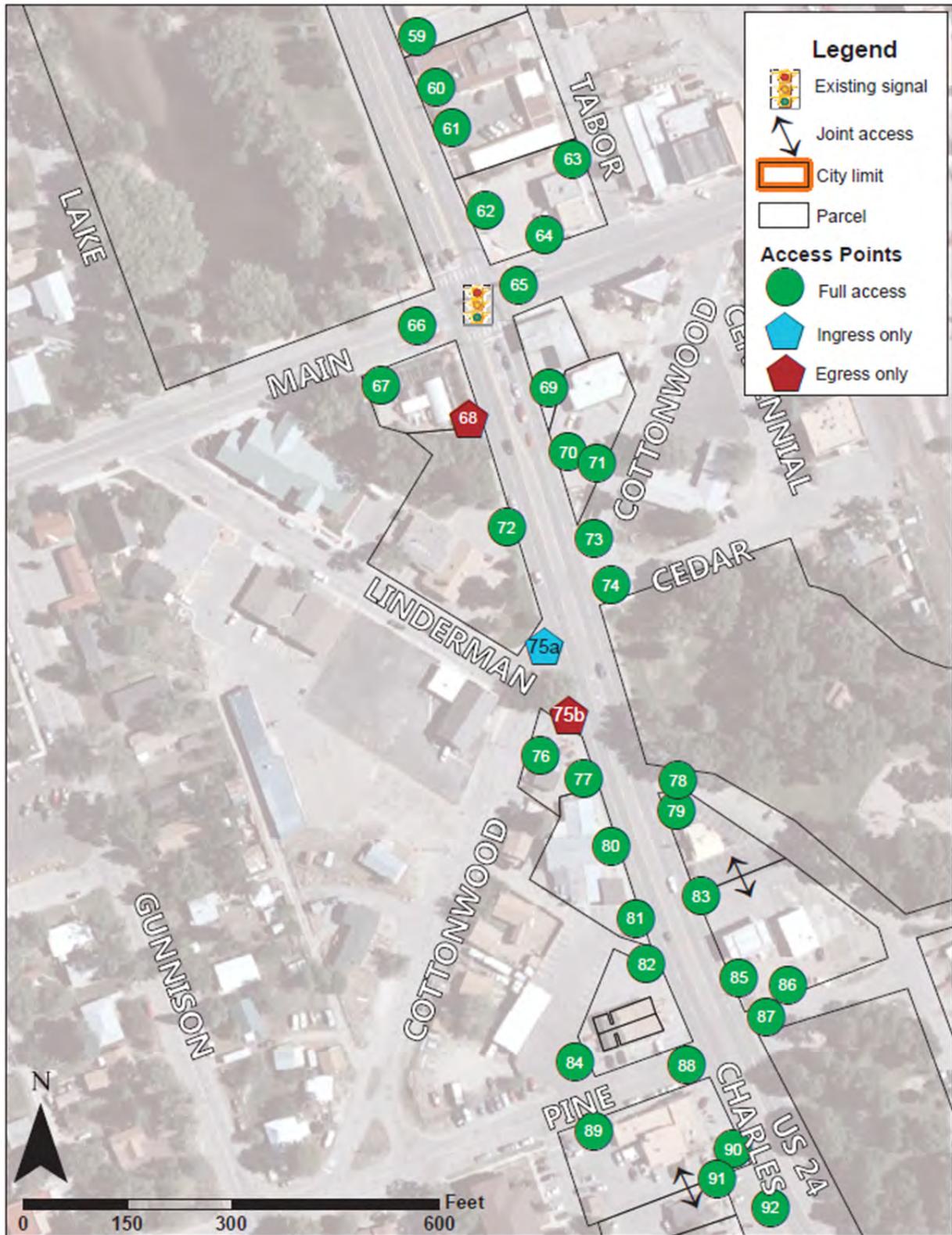


Figure 6: Existing US 24 Access - Pine to Oak

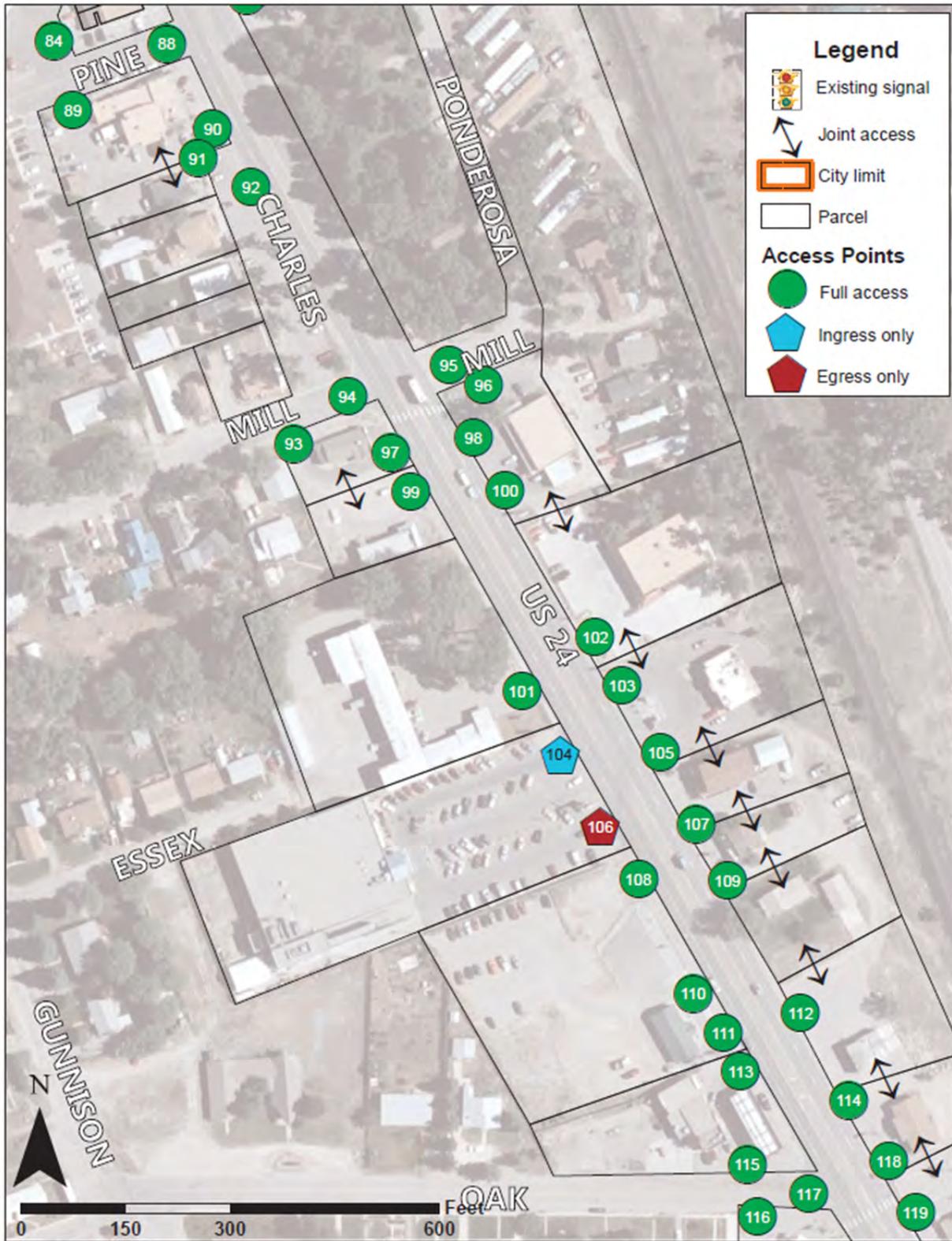


Figure 7: Existing US 24 Access - Oak to Baylor

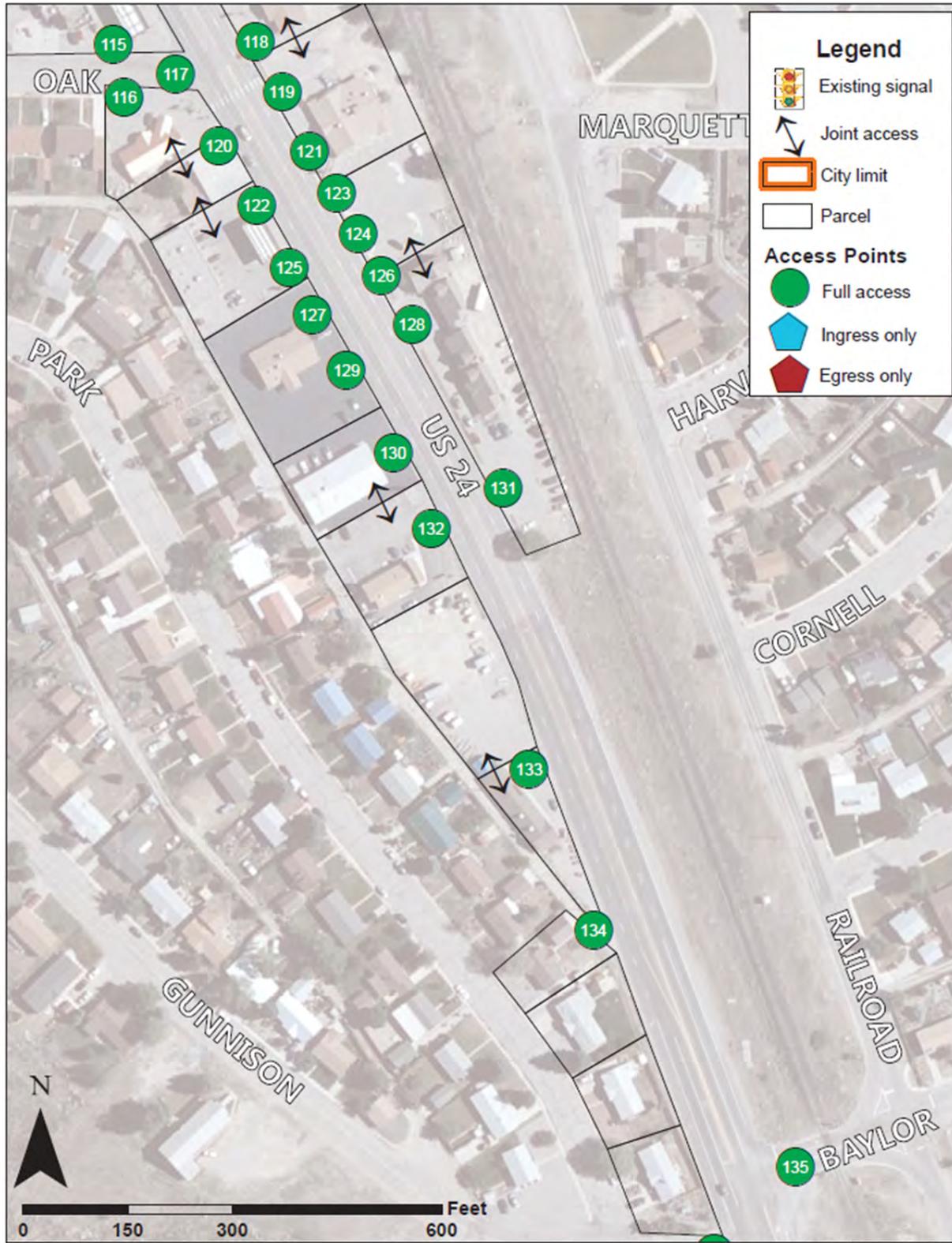


Figure 8: Existing US 24 Access - Baylor

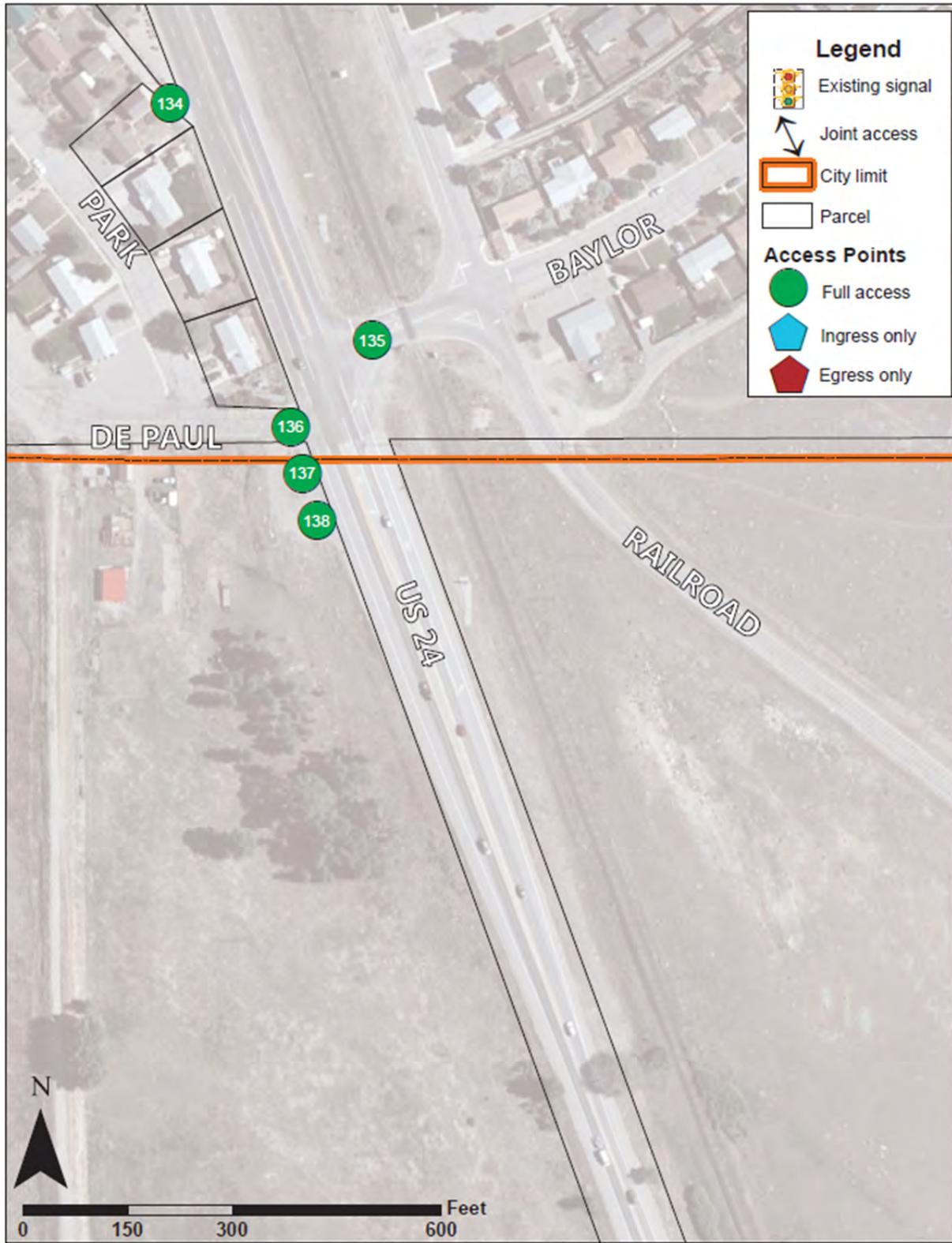
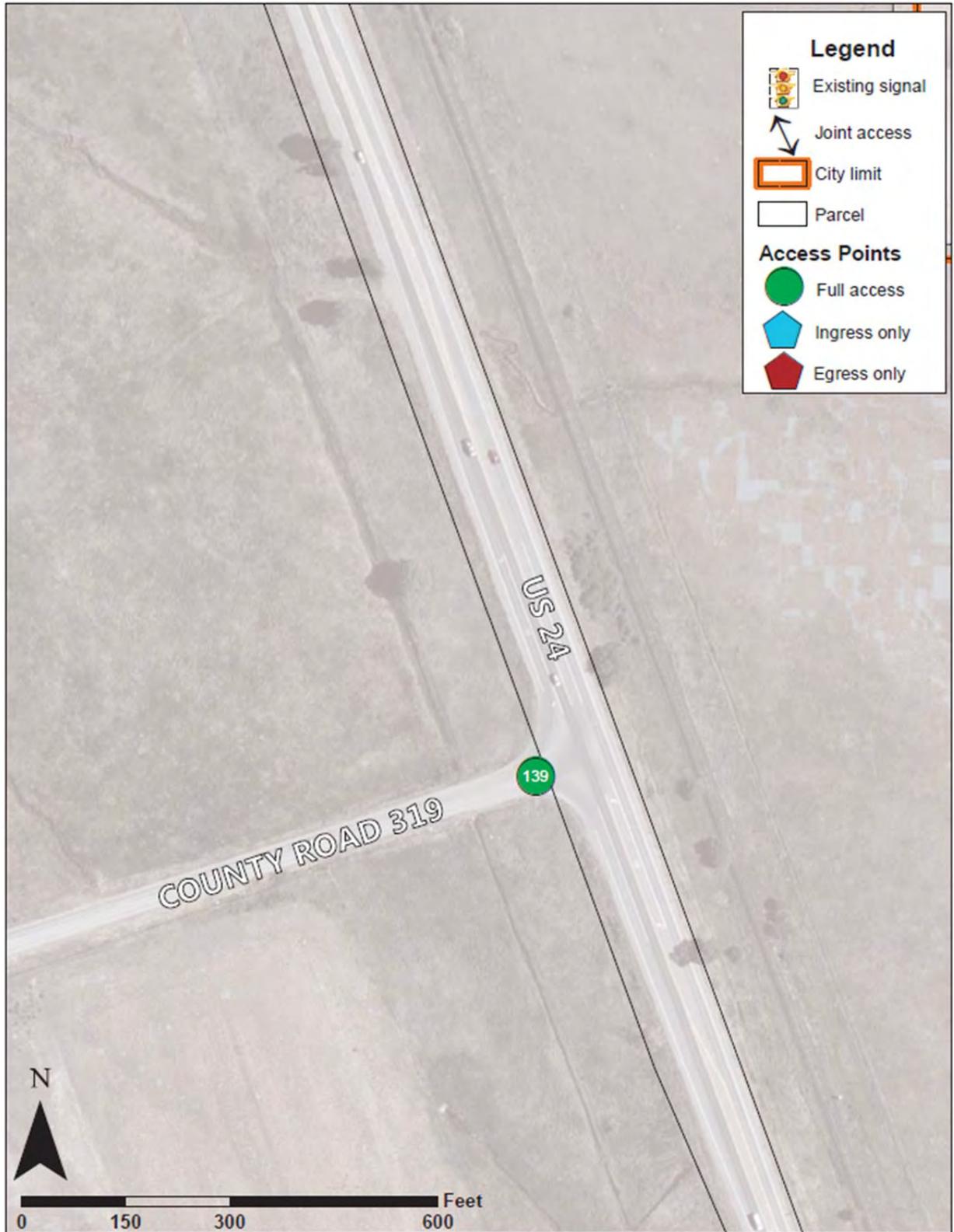


Figure 9: Existing US 24 Access – Steel Drive/CR 319



The following access descriptions correspond with the previous maps and provide detail regarding each existing access point in the study area.

- Access 1: This access west of US 24 is a curb cut only that provides the western access to a vacant lot.
- Access 2: This full access driveway is the western access to a retail shop west of US 24.
- Access 3: This full access driveway is the eastern access to a retail shop west of US 24.
- Access 4: This full access T-intersection is the only access to Harrison Ave west of US 24. The intersection is controlled by a stop sign on Harrison Ave. Harrison Ave. is currently a dead end street, as it is still under construction, that provides only access to a hardware store.
- Access 5: This access is a curb cut only that provides the eastern access to a vacant lot west of US 24.
- Access 6: This full access driveway provides joint access to two businesses, a storage facility and auto parts retail, on the west of US 24.
- Access 7: This is a curb cut with blocked access on the west of US 24.
- Access 8: This full access T-intersection east of US 24 provides the only access to Farwell St. This access is controlled by a stop sign on Farwell St. Farwell St. provides access to a lumber yard and a motel.
- Access 9: This full access driveway off of Farwell Street provides access to a hardware store east of US 24.
- Access 10: This full access driveway off of Farwell Street provides access to lodging east of US 24.
- Access 11: This access is a curb cut only that provides the northeastern access to a vacant lot west of US 24.
- Access 12: This full access driveway provides joint access to two businesses, lodging and a bank, east of US 24.
- Access 13: This full access driveway is one of five accesses to a restaurant west of US 24. Additional access is provided off of Crossman.
- Access 14: This full access driveway is one of five accesses to a restaurant west of US 24. Additional access is provided off of Crossman.
- Access 15: This full access driveway off of Crossman Street is one of five accesses to a restaurant west of US 24.
- Access 16: This full access driveway off of Crossman Street is one of five accesses to a restaurant west of US 24.
- Access 17: This full access driveway off of Crossman Street is one of five accesses to a restaurant west of US 24.
- Access 18: This full access driveway off of Crossman Street is one of two accesses to lodging west of US 24.
- Access 19: This full access intersection west of US 24 provides the only access to Crossman, controlled by a stop sign.
- Access 20: This driveway is egress only, ingress provided by access 21 for a group of retail businesses east of US 24.



- Access 21: This ingress only driveway is one of two accesses to a group of retail businesses east of US 24.
- Access 22: This full access driveway is the only access to a restaurant east of US 24.
- Access 23: This full access driveway is one of two accesses to lodging west of US 24.
- Access 24: This full access driveway provides joint access to three parcels/ businesses, a gas station/convenience store, grocery store and automotive parts, east of US 24.
- Access 25: This full access driveway is one of two accesses to a bank west of US 24.
- Access 26: This full access driveway is one of 4 accesses to a gas station/convenience store east of US 24.
- Access 27: This full access driveway is one of 4 accesses to a gas station/convenience store east of US 24.
- Access 28: This full access driveway provides joint access to two businesses, a gas station/convenience store and a group of retail stores, east of US 24.
- Access 29: This full access driveway provides joint access to three businesses, including a Chinese Restaurant and a group of retail stores, east of US 24.
- Access 30: This full access driveway provides joint access to three businesses, including a Chinese Restaurant and a group of retail stores, east of US 24.
- Access 31: This full access driveway off of Brookdale Ave is one of two accesses to a bank west of US 24.
- Access 32: This full access driveway off of Brookdale Ave is one of three accesses to a cafe west of US 24.
- Access 33: This full access T-intersection west of US 24 provides access to Brookdale Ave. This access is controlled by a stop sign on Brookdale Ave.
- Access 34: This full access driveway provides joint access to two businesses, a large format retail and Chinese Restaurant, east of US 24.
- Access 35: This full access driveway is one of four accesses to a cafe west of US 24.
- Access 36: This full access driveway is one of four accesses to a large format retail shopping center east of US 24.
- Access 37: This full access driveway provides joint access to two businesses, a café and a vacant building, west of US 24.
- Access 38: This full access driveway is one of three accesses to a large format retail shopping center east of US 24.
- Access 39: This full access driveway provides joint access to three businesses, a vacant building, lodging and a vacant lot west of US 24.
- Access 40: This full access driveway is one of three accesses to a large format retail shopping center east of US 24.
- Access 41: This full access driveway is one of three accesses to a large format retail shopping center east of US 24.
- Access 42: This full access driveway off of Arkansas Street provides one of three accesses to a large format retail shopping center east of US 24.
- Access 43: This is a full access driveway providing access from lodging west of US 24.



- Access 44: This full access T-intersection east of US 24 provides access to Arkansas Street. This access is controlled by a stop sign on Arkansas Street.
- Access 45: This full access driveway is one of four accesses to a liquor store west of US 24
- Access 46: This full access driveway is one of four accesses to a liquor store west of US 24
- Access 47: This full access driveway is off of Sterling Avenue and is one of four accesses to a liquor store west of US 24
- Access 48: This full access driveway is on the corner of Sterling Avenue and US 24 and provides one of four accesses to a liquor store west of US 24
- Access 49: This full access intersection west of US 24 provides access to Sterling Ave. This access is controlled by a stop sign on Sterling Ave.
- Access 50: This full access intersection east of US 24 provides access to Sterling Ave. This access is controlled by a stop sign on Sterling Ave.
- Access 51: This full access driveway is off of Sterling Avenue and is the only access to a group of retail stores and offices east of US 24
- Access 52: This full access driveway west of US 24 provides one of two accesses to McPhelamy Park.
- Access 53: This full access driveway is one of two accesses to lodging east of US 24
- Access 54: This full access driveway is one of two accesses to lodging east of US 24
- Access 55: This full access driveway west of US 24 provides one of two accesses to McPhelamy Park.
- Access 56: This full access driveway is one of two accesses to a restaurant east of US 24
- Access 57: This ingress only driveway serves as a drive-thru and is one of two access to a restaurant east of US 24
- Access 58: This ingress only driveway is the only access to a group of retail stores and offices east of US 24
- Access 59: This full access driveway is the only access to a group of retail stores east of US 24
- Access 60: This full access driveway is one of two accesses to lodging east of US 24
- Access 61: This full access driveway is one of two accesses to lodging east of US 24
- Access 62: This full access driveway is one of three accesses to a real estate office east of US 24. Additional access to the property is found in the rear of the building on Tabor St.
- Access 63: This full access driveway off of Tabor Street is one of three accesses to a real estate office east of US 24
- Access 64: This full access driveway off of Main Street is one of three accesses to a real estate office east of US 24
- Access 65: This full access intersection east of US 24 provides access to Main St. This access is signalized.
- Access 66: This full access intersection west of US 24 provides access to Main St. This access is signalized.
- Access 67: This full access driveway off of Main Street is one of two accesses to a garden and produce shop west of US 24, with an egress only access provided by access 68.



- Access 68: This egress only driveway west of US 24 provides one of two accesses to a garden and produce shop. Additional access to the shop is found on Main St.
- Access 69: This full access driveway provides the only access to a vacant gas station east of US 24.
- Access 70: This full access driveway provides one of two accesses to the Chaffee County Council on the Arts east of US 24. Additional access to the property is found on Cottonwood.
- Access 71: This full access driveway off of Cottonwood provides one of two accesses to the Chaffee County Council on the Arts east of US 24.
- Access 72: This full access curb cut provides one of two accesses to the Buena Vista Safety Complex west of US 24, with a second access off Linderman Ave.
- Access 73: This full access T-intersection east of US 24 provides access to Cottonwood Ave. Cottonwood Ave. forms a Y-intersection with Cedar St. This access is controlled by a stop sign on Cottonwood Ave.
- Access 74: This full access T-intersection east of US 24 provides access to Cedar St. Cedar St. Forms a Y-intersection with Cottonwood Ave. This access is controlled by a stop sign on Cedar St.
- Access 75a: This ingress only T-intersection access west of US 24 provides access to Linderman Ave and Cottonwood Ave.
- Access 75b: This egress only T-intersection provides access from Linderman Ave and Cottonwood Ave. This access is controlled by a stop sign on Linderman Ave.
- Access 76: This full access driveway off of Cottonwood provides one of two access points for a vehicle rental shop west of US 24.
- Access 77: This full access driveway provides one of two access points for a vehicle rental shop west of US 24.
- Access 78: This full access T-intersection east of US 24 provides access to Linderman Ave. This access is controlled by a stop sign on Linderman Ave.
- Access 79: This full access driveway provides one of three access points to a restaurant east of US 24
- Access 80: This full access driveway provides one of three access points to the consignment shop west of US 24
- Access 81: This full access driveway provides one of three access points to the restaurant west of US 24
- Access 82: This full access driveway provides one of three access points to the restaurant west of US 24
- Access 83: This full access driveway provides joint access to two businesses, a restaurant and a gas station, east of US 24. Additional access to the property is provided from Pine St. and Linderman Ave.
- Access 84: This full access driveway provides the only access point to the restaurant west of US 24
- Access 85: This full access driveway provides one of four access points to the gas station east of US 24. Additional access to the property is provided from Pine St. and Linderman Ave.



- Access 86: This full access driveway off of Pine Street provides one of four access points to the gas station east of US 24
- Access 87: This full access intersection east of US 24 provides access to Pine St. This intersection is controlled by a stop sign on Pine St.
- Access 88: This full access intersection west of US 24 provides access to Pine St. This intersection is controlled by a stop sign on Pine St.
- Access 89: This full access driveway off of Pine Street provides one of three access points to the restaurant east of US 24
- Access 90: This full access driveway provides one of three access points to the restaurant east of US 24
- Access 91: This full access driveway provides joint access to two business, a restaurant and real estate office, east of US 24
- Access 92: This full access intersection west of US 24 provides access to the frontage road Charles St. This access transitions into Access 96.
- Access 93: This full access driveway provides one of three accesses to the liquor store on the west side of US 24
- Access 94: This full access intersection west of US 24 provides access to Mill St. This intersection is controlled by a stop sign on Mill St.
- Access 95: This full access intersection east of US 24 provides access to Mill St. This intersection is controlled by a stop sign on Mill St.
- Access 96: This full access driveway off of Mill Street provides one of three accesses to the drug store on the east side of US 24
- Access 97: This full access driveway provides one of three accesses to the liquor store on the west side of US 24
- Access 98: This full access driveway provides one of three accesses to the drug store on the east side of US 24
- Access 99: This full access driveway provides the only access to the Jeep tour office on the west side of US 24
- Access 100: This full access driveway provides one of three accesses to the drug store on the east side of US 24, with joint access to the realty office to the south.
- Access 101: This full access driveway provides the only access to the lodging west of US 24
- Access 102: This full access driveway provides one of two accesses to the realty office, with joint access to the gas station/ convenience store to the south.
- Access 103: This full access driveway provides one of three accesses to the gas station/ convenience store, with joint access to the realty office to the north.
- Access 104: This ingress only access provides one of two accesses to the grocery store to the west of US 24.
- Access 105: This full access driveway provides one of three accesses to the gas station/ convenience store.
- Access 106: This egress only access provides one of two accesses to the grocery store to the west of US 24.



- Access 107: This full access driveway provides the only access to the group of retail stores and offices east of US 24.
- Access 108: This access west of US 24 is a curb cut only that does not provide driveway access to the bank on that parcel.
- Access 109: This full access driveway provides the only access to the fly fishing shop east of US 24.
- Access 110: This full access driveway provides one of two functional accesses to the bank west of US 24
- Access 111: This full access driveway provides one of two functional accesses to the bank west of US 24
- Access 112: This full access driveway provides one of two accesses to the car wash east of US 24 with joint access to the house to the north
- Access 113: This full access driveway provides one of two accesses to the gas station/convenience store west of US 24
- Access 114: This full access driveway provides one of two accesses to the car wash east of US 24 with joint access to the insurance office to the north
- Access 115: This full access driveway provides one of two accesses to the gas station/convenience store west of US 24
- Access 116: This full access driveway provides one of two accesses to the real estate office to the west of US 24
- Access 117: This full access intersection west of US 24 provides access to Oak St. This intersection is controlled by a stop sign on Oak St.
- Access 118: This full access driveway provides one of two accesses to the insurance office to the east of US 24 with joint access to the restaurant to the south
- Access 119: This full access driveway provides one of three accesses to the restaurant to the east of US 24
- Access 120: This full access driveway provides one of two accesses to the real estate office to the west of US 24 with joint access to the vacant building to the south
- Access 121: This full access driveway provides one of three accesses to the restaurant to the east of US 24
- Access 122: This full access driveway provides one of two accesses to the gas station/convenience store to the west of US 24 with joint access to the vacant building to the north
- Access 123: This full access driveway provides one of three accesses to a parking lot.
- Access 124: This full access driveway provides one of three accesses to a parking lot.
- Access 125: This full access driveway provides one of two accesses to the gas station/convenience store to the west of US 24
- Access 126: This full access driveway provides one of three accesses to a parking lot to the east of US 24 with joint access to the strip mall of retail and offices to the south
- Access 127: This full access driveway provides one of two accesses to the restaurant to the west of US 24



- Access 128: This full access driveway provides one of three accesses to the strip mall of retail and offices to the east of US 24
- Access 129: This full access driveway provides one of two accesses to the restaurant to the west of US 24
- Access 130: This full access driveway provides one of two accesses to the auto parts store to the west of US 24
- Access 131: This full access driveway provides one of three accesses to the strip mall of retail and offices to the east of US 24
- Access 132: This full access driveway provides one of two accesses to the fast food restaurant to the west of US 24
- Access 133: This full access driveway provides the only accesses to the pawn shop to the west of US 24 with joint access to the parcel to the north
- Access 134: This full access driveway west of US 24 provides access to an alleyway. Multiple lots are connected to alleyway.
- Access 135: This full access T-intersection east of US 24 provides access to Baylor Dr. This access is controlled by a stop sign.
- Access 136: This full access T-intersection west of US 24 provides access to DePaul Ave. This access is controlled by a stop sign.
- Access 137: This full access curb cut west of US 24 provides one of two accesses to a dirt circle. This access is also connected to DePaul Ave.
- Access 138: This full access curb cut west of US 24 provides one of two accesses to a dirt circle. This access is also connected to DePaul Ave.
- Access 139: This full access T-intersection west of US 24 provides access to Steele Drive/CR 319. This access is controlled by a stop sign on Steele Drive/CR 319.



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Transportation



## Existing Traffic Volumes

An analysis of the existing traffic conditions was performed based on existing traffic volume data collected in September 2013. Intersection turning movement counts were conducted during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 pm) peak periods at 25 locations within the study area. Data was collected over several typical weekdays. The count data indicate that the AM peak hour occurs from 7:30 to 8:30 AM and the PM peak hour occurs from 4:30 to 5:30 PM. The intersection traffic counts are provided in Appendix A.

Due to higher vehicular traffic occurring during the summer months, a seasonal factor of 1.17 was applied to the September counts. This seasonal factor was determined using CDOT historical traffic count data for US 24, and adjusting the September counts for peak seasonal volumes in July.

## Existing Level of Service

To measure and describe the operational status of the local roadway network and corresponding intersections, transportation engineers and planners commonly use a grading system called level-of-service (LOS) put forth by the Transportation Research Board's Highway Capacity Manual (HCM). LOS characterizes the operational conditions of an intersection's traffic flow, ranging from LOS A (indicating free flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed the design capacity, resulting in long queues and delays). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. Although LOS A through C are desired levels, LOS D is considered acceptable in urban conditions. Traffic conditions with LOS E or F are generally considered unacceptable and represent significant travel delay, increased crash potential, and inefficient motor vehicle operation. The LOS is determined differently depending on the type of control at the intersection.

At signalized intersections, the operation analysis uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the intersection's volume-to-capacity (v/c) ratio. For signalized intersections, the HCM defines the intersection LOS as the average delay per vehicle for the overall intersection, which includes all approaches.

At unsignalized intersections, the operation analysis uses various intersection characteristics (such as traffic volumes, lane geometry, and stop-controlled approaches) to estimate the intersection's volume-to-capacity (v/c) ratio. For unsignalized intersections, the HCM defines the intersection LOS as the average delay per vehicle for the worst approach intersection.

Table 3-1 summarizes the relationship between delay and LOS for unsignalized and signalized intersections.

Table 1: Intersection Level of Service Criteria

Level-of-Service	Average Stopped Delay (seconds/vehicle)		Description
	 Signalized	 Unsignalized	
A	< 10	< 10	Very low delay. Most vehicles do not stop.
B	>10 to 20	>10 to 15	Generally good progression of vehicles. Slight delays.
C	>20 to 35	>15 to 25	Fair progression. Increased number of stopped vehicles.
D	>35 to 55	>25 to 35	Noticeable congestion. Large portion of vehicles stopped.
E	>55 to 80	>35 to 50	Poor progression. High delays and frequent cycle failure.
F	>80	>50	Oversaturation. Forced flow. Extensive queuing.

Source: *Highway Capacity Manual (Transportation Research Board, 2010).*

Traffic operations were modeled using the Synchro 7 software program. Synchro is based on the procedures outlined in the *2000 HCM*. The model includes the existing roadways, lane configuration, intersection geometry, traffic controls, existing signal timing, and existing traffic parameters (e.g. peak hour factor and heavy-vehicle percentage). Since *2000 HCM* does not recognize unconventional intersection traffic control signing, a few locations had to be adjusted for this analysis. These include Cottonwood Avenue/Centennial Plaza, Cottonwood Avenue/Linderman Avenue, and Baylor Drive/Railroad Street. In each of these scenarios, the intersections were treated as an all-way stop for analysis. Due to low vehicular volumes, the minor added delay is negligible. Volumes were balanced between adjacent intersections when appropriate. Measures of effectiveness (MOEs) are based upon the *2000 HCM*, which includes intersection delay, LOS performance, and vehicle queuing for each of the studied intersections. Both field count data (September 2013) and seasonal volumes (factored for July peak traffic) were analyzed in the models. The existing conditions provided a baseline for the future analyses. Table 2 summarizes the results of the capacity analysis for the existing conditions and seasonally adjusted volumes.

Based on the results of the existing conditions analysis, the signalized intersection of US 24/Main Street currently operates at an acceptable LOS C. Most of the stop-controlled intersections along the US 24 corridor operate at a very acceptable LOS B or better during peak hours. However, some intersections, including Main Street/Railroad Street and US 24/CR-319, experienced a LOS C.

Table 2: Existing Level of Service

Study Intersection	Traffic Control	2013 Existing		2013 Existing		2013 Existing (Seasonal)		2013 Existing (Seasonal)	
		AM		PM		AM		PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Crossman Ave/Hwy 24	SSSC	13.2	B	12.3	B	14.6	B	13.5	B
Brookdale Ave/Hwy 24	SSSC	10.5	B	10.6	B	11.1	B	11.2	B
Arkansas St/Hwy 24	SSSC	10.5	B	11.1	B	11.0	B	11.4	B
Sterling Ave/Hwy 24	SSSC	11.9	B	12.2	B	12.7	B	13.0	B
Main St/Hwy 24	Signal	32.8	C	31.2	C	34.8	C	32.5	C
Cottonwood St/Hwy 24	SSSC	12.1	B	13.3	B	12.9	B	14.7	B
Linderman Ave/Hwy 24	SSSC	11.9	B	10.8	B	13.1	B	11.4	B
Pine St/Hwy 24	SSSC	10.8	B	14.0	B	11.8	B	15.7	C
Mill St/Hwy 24	SSSC	10.8	B	12.5	B	11.4	B	13.7	B
Oak St/Hwy 24	SSSC	11.5	B	11.9	B	12.4	B	12.9	B
Gunnison Ave/Hwy 24	SSSC	15.5	C	16.1	C	18.5	C	21.4	C
County Road 319/Hwy 24	SSSC	14.4	B	16.2	C	16.7	C	19.7	C
Main St/Gunnison Ave	SSSC	13.9	B	11.6	B	16.1	C	12.4	B
Main St/Lake St	SSSC	15.4	C	11.8	B	17.5	C	12.7	B
Main St/Cottonwood	SSSC	10.7	B	10.4	B	11.3	B	10.9	B
Main St/Railroad St	SSSC	14.4	B	13.7	B	16.4	C	15.7	C
Centennial Plaza/Cottonwood St	AWSC	0.0	A	0.0	A	0.0	A	0.0	A
Linderman Ave/Cottonwood St	SSSC	7.1	A	7.3	A	7.2	A	7.4	A
Pine St/Cottonwood St	SSSC	8.8	A	8.8	A	8.9	A	8.8	A
Pine St/Gunnison Ave	SSSC	9.3	A	9.4	A	9.4	A	9.4	A
Baylor Dr/Railroad St	SSSC	9.8	A	9.2	A	10.9	B	9.9	A

Note: SSSC = Side-street stop control  
 AWSC = All-way stop control

## Crash Analysis

Understanding the location and types of crashes occurring along US 24 will help to inform access recommendations. To better understand existing safety conditions, a 5-year crash analysis (January 1, 2008 to December 31, 2012) was conducted. Crashes were classified into ten categories.

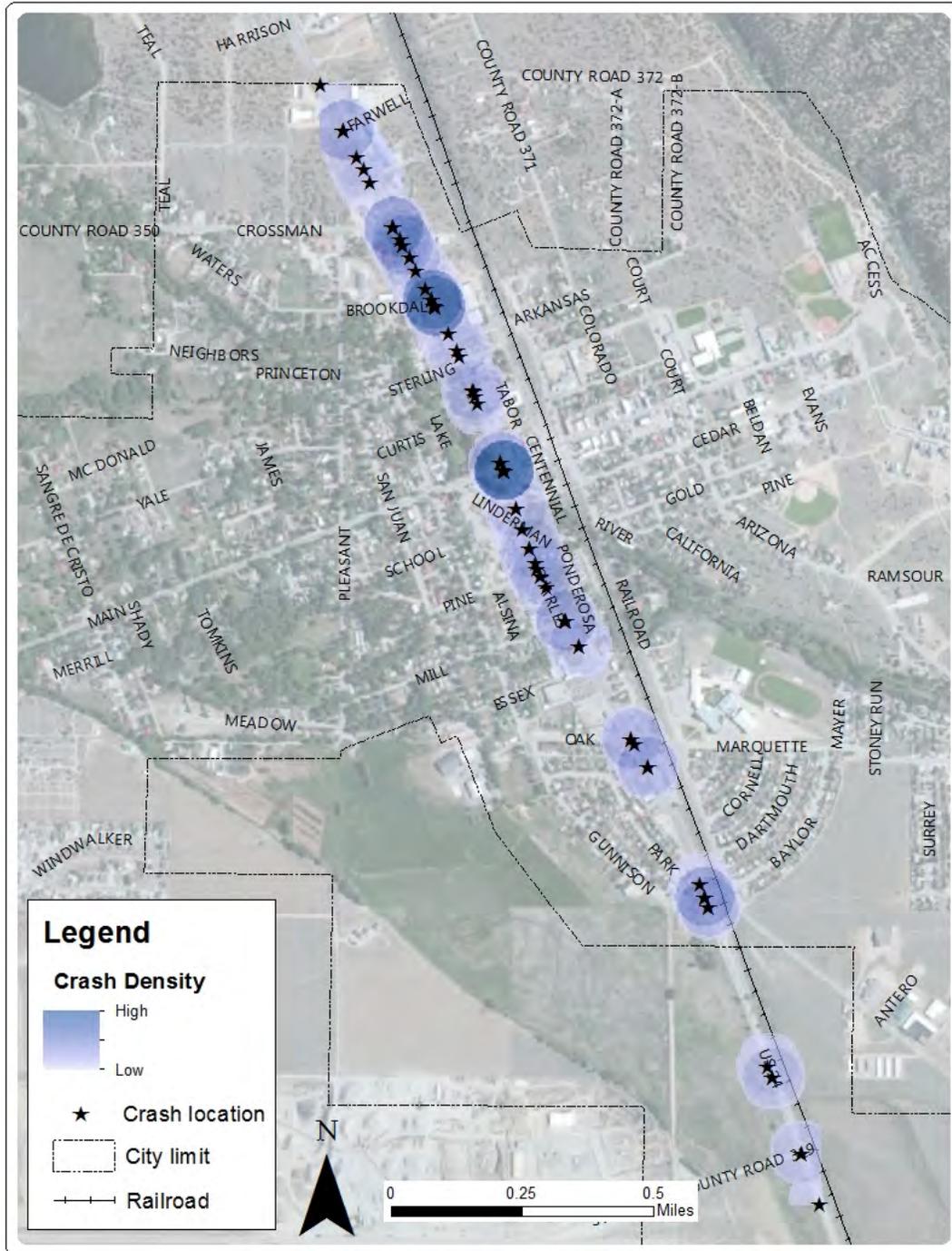
- **Rear End.** This type of crash occurs when one vehicle strikes the rear of the vehicle in front of it because that vehicle is stopped or slowing down.
- **Broadside.** This type of crash occurs when a vehicle traveling through an intersection in the opposite direction strikes a left-turning vehicle at a 90-degree angle.
- **Sideswipe.** This type of crash typically involves the side of one vehicle making contact with the side of another vehicle that is traveling in the same or opposite direction.
- **Fixed Object.** This type of crash occurs when a vehicle travels off the roadway and strikes an object along the roadside.
- **Wild Animal.** This type of crash occurs when a vehicle strikes a wild animal in the roadway.
- **Overtaking Turn.** This type of crash occurs when two adjacent approach vehicles, whose paths are unintended to come in conflict, collide as a result of one or both vehicles over- or under-turning. This type of crash would also include a vehicle initially going straight, but leaving its proper travel lane and colliding with a stopped or moving vehicle on an adjacent approach road or driveway.
- **Pedestrian.** This type of crash occurs when a vehicle and pedestrian collide within the roadway, and when this type of collision is the primary event that has occurred.
- **Overtaking.** This type of crash occurs when a vehicle overturns on or off the roadway without first having been involved in some other type of crash.
- **Head-on.** This type of crash occurs when two vehicles, traveling in opposite directions, strike one another front first.
- **Approach Turn.** This type of crash occurs when a vehicle traveling through an intersection in the opposite direction strikes a left-turning vehicle.

An analysis found 60 crashes within the bounds of the study area within the 5-year time period. Figure 10 on page 28 shows the crash locations and density. The highest number of crashes was in the rear end category (19). A majority of these crashes occurred at intersections or access points. The next highest crash type was broadside (11) followed closely by crashes with wild animals (10). Much like the rear end crashes, a majority of the broadside crashes occurred at intersections. Interestingly, crashes involving wild animals were just as likely to occur inside of the town core as they were to happen at the community's periphery. None of the 60 crashes involved pedestrians.

In summary, 18% of all crashes occurred at the intersection of US 24 and Main Street. While the majority of these crashes were rear-end crashes, nearly half were of the approach turn variety. The large percentage of rear-end crashes are consistent with signalized intersections. The approach turn crash type could be related to intersection geometry, signal phasing, and travel speeds. 32% of all crashes occurred on the block between Crossman Avenue and Brookdale Avenue. Sideswipe,

broadside, and rear end crashes occurred at equal prevalence along this roadway segment. The high number of access points (20) between Crossman Avenue and Brookdale Avenue may be a contributing factor to the high concentration of crashes.

Figure 10: US 24 Crash Locations



## *Alternative Transportation Modes*

Although an ACP deals primarily with vehicle access to and from highways, the Town has shown an interest in ensuring that all modes, including pedestrians and bicyclists, can move through Town safely and efficiently.

CDOT also has a policy commitment to provide transportation infrastructure that accommodates bicycle and pedestrian use of the highway in a manner that is safe and reliable for all highway users. CDOT is committed to including the needs of bicyclists and pedestrian in the planning, design, and operation of transportation facilities, as a matter of routine.

The Town and CDOT have recently installed several striped crossing locations with rapid rectangular flashing beacons. These crossings are on the south side of Oak Street, the south side of Mill Street, and the north side of Brookdale Avenue. A marked pedestrian crossing is also present at the signal of Main Street and US 24. There are currently no bike facilities on US 24.

# 2035 Projected Conditions

## 2035 Traffic Volumes

Growth factors were determined based on CDOT’s projected future traffic volumes. Within Buena Vista, CDOT maintains four traffic count locations along US 24, as shown in Table 3. Of these sites, US 24/SE Crossman Avenue had the most conservative growth factor of 1.69 in 2035. This growth factor was applied in all 2035 future condition models.

Table 3: Growth Factors for Buena Vista

Location on US 24	2035 Growth Factor
NW Crossman	1.64
SE Crossman	1.69
Sterling	1.47
Main	1.42

In addition to the 2035 growth factor, a seasonal factor of 1.17 was applied to projected volumes. For future conditions, a peak hour factor of 0.92 was assumed in all scenarios. By including both the 2035 growth factor and seasonal adjustment factor, the traffic volume projections present a very conservative estimate of future traffic volumes on the US 24 corridor and throughout the town.

## 2035 No-Action Level of Service

Traffic operations for the 2035 No-Action model assumes all existing lane configurations and traffic control devices. Signal timing was optimized for the increased traffic volumes. Table 4 provides a summary of the results for the 2035 No-Action model. With the increase in volumes, the intersections on US 24 at Crossman Avenue, DePaul Avenue, and CR-319 decline to a LOS E/F. Furthermore, the side-street intersection of Main Street/Railroad Street falls to a LOS F during the PM peak hour. Without any changes to the existing roadway network, all intersections see a decline in LOS with the projected growth in traffic.

Table 4: 2035 No-Action LOS

Study Intersection	Traffic Control	2035 No-Action		2035 No-Action	
		AM		PM	
		Delay	LOS	Delay	LOS
Crossman Ave/Hwy 24	SSSC	24.5	C	38.4	E
Brookdale Ave/Hwy 24	SSSC	14.2	B	15.3	C
Arkansas St/Hwy 24	SSSC	13.5	B	14.0	B
Sterling Ave/Hwy 24	SSSC	16.7	C	18.8	C
Main St/Hwy 24	Signal	48.7	D	49.1	D
Cottonwood St/Hwy 24	SSSC	16.6	C	33.3	D
Linderman Ave/Hwy 24	SSSC	15.3	C	15.8	C
Pine St/Hwy 24	SSSC	13.3	B	24.4	C
Mill St/Hwy 24	SSSC	13.4	B	22.8	C
Oak St/Hwy 24	SSSC	18.3	C	22.9	C
Gunnison Ave/Hwy 24	SSSC	113.1	F	>120	F
County Road 319/Hwy 24	SSSC	46.7	E	>120	F
Main St/Gunnison Ave	SSSC	22.2	C	23.9	C
Main St/Lake St	SSSC	20.5	C	26.4	D
Main St/Cottonwood	SSSC	15.9	C	15.0	B
Main St/Railroad St	SSSC	29.1	D	52.9	F
Centennial Plaza/Cottonwood St	AWSC	0.0	A	0.0	A
Linderman Ave/Cottonwood St	SSSC	7.2	A	7.7	A
Pine St/Cottonwood St	SSSC	9.1	A	8.9	A
Pine St/Gunnison Ave	SSSC	9.6	A	9.7	A
Baylor Dr/Railroad St	SSSC	16.2	C	15.2	C

Note: SSSC = Side-street stop control  
AWSC = All-way stop control

## 2035 Future Build Level of Service

Traffic operations for the 2035 Build model analyzed two different roadway configurations along US 24 including:

- five lane cross section with added bike lanes
- three lane cross section with bike lanes and on-street parking

In addition to these two roadway configuration options, signalized intersections were also incorporated into the analysis at three additional locations based on poor operations under 2035 No-Action conditions. These locations included US 24/DePaul Avenue/Baylor Drive, US 24/Mill Street, and US 24/Crossman Avenue. Through discussions with the Town and CDOT early on in the study, significant changes to the access configuration at the intersections of US 24 with Cottonwood Avenue and Linderman Avenue were assumed for the analysis to present a worst case scenario where both accesses were closed and all traffic on these streets was rerouted to the US 24/Main Street intersection. It should be noted that the preferred reconfiguration of these two intersections, which are described further in the Recommendations Section, both maintain some access and egress from US 24.

The 2035 Future Build analysis also assumed geometric improvements to the US 24/Main Street intersection to eliminate the existing split phased traffic signal operation at the intersection. The existing geometry at the intersection provides shared left-through turn lanes on both the east and westbound approaches of Main Street, which results in the split phase operation. In the future build condition, this split phase was eliminated by providing dedicated left turn lanes on both approaches. Due to constrained roadway width at the intersection, the westbound approach will have a shared through-right turn lane while the eastbound approach will have exclusive through and right turn lanes.

Tables 5 and 6 provide a summary of the results for the 2035 Future Build scenario using both a 3-lane and 5-lane cross section on US 24. In the 5-lane cross section scenario, all the intersections are projected to operate at very acceptable LOS C or better. The exception is the Main Street intersection with Lake Street which is off the US 24 network and should be relatively unaffected by this project. With the decrease in the number of through lanes in the 3-lane cross section option, there is a degradation in LOS at the intersections of US 24 with Arkansas Street and Main Street during the PM peak hour. The Arkansas Street intersection is a side street stop controlled intersection and is impacted by the reduction of available gaps for left turning vehicles from Arkansas Street onto US 24. The drop in LOS at the US 24 and Main Street intersection during the PM peak hour shows that two through lanes will need to be provided in both directions of US 24 to maintain acceptable LOS assuming the conservative 2035 traffic volume projections are realized.

Table 5: 2035 Future Build LOS – 5 Lane Cross Section

Study Intersection	2035 - 5 Lane			
	AM		PM	
	Delay	LOS	Delay	LOS
Crossman Ave/Hwy 24	12.0	B	11.1	B
Brookdale Ave/Hwy 24	13.0	B	12.6	B
Arkansas St/Hwy 24	14.3	B	14.7	B
Sterling Ave/Hwy 24	17.1	C	18.9	C
Main St/Hwy 24	27.4	C	32.6	C
Pine St/Hwy 24	17.3	C	17.9	C
Mill St/Hwy 24	9.9	A	13.1	B
Oak St/Hwy 24	12.7	B	13.3	B
Gunnison Ave/Hwy 24	21.2	C	37.1	D
County Road 319/Hwy 24	17.7	C	25.1	D
Main St/Gunnison Ave	22.2	C	23.9	C
Main St/Lake St	24.6	C	38.6	E
Main St/Cottonwood	20.6	C	21.4	C
Main St/Railroad St	24.2	C	21.0	C
Centennial Plaza/Cottonwood St	0.0	A	0.0	A
Pine St/Cottonwood St	9.3	A	9.8	A
Pine St/Gunnison Ave	9.6	A	9.7	A
Baylor Dr/Railroad St	16.2	C	15.2	C

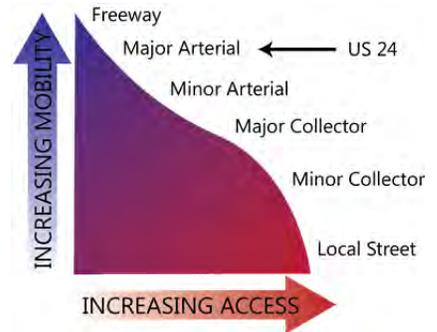
Table 6: 2035 Future Build LOS – 3 Lane Cross Section

Study Intersection	2035 - 3 Lane			
	AM		PM	
	Delay	LOS	Delay	LOS
Crossman Ave/Hwy 24	12.9	B	12.5	B
Brookdale Ave/Hwy 24	20.7	C	28.5	D
Arkansas St/Hwy 24	19.5	C	37.9	E
Sterling Ave/Hwy 24	17.3	C	24.5	C
Main St/Hwy 24	41.4	D	77.5	E
Pine St/Hwy 24	22.0	C	32.2	D
Mill St/Hwy 24	16.7	B	39.9	D
Oak St/Hwy 24	20.3	C	25.1	D
Gunnison Ave/Hwy 24	20.8	C	52.0	D
County Road 319/Hwy 24	17.7	C	25.1	D
Main St/Gunnison Ave	22.2	C	23.9	C
Main St/Lake St	24.6	C	39.9	E
Main St/Cottonwood	20.6	C	21.4	C
Main St/Railroad St	24.2	C	21.0	C
Centennial Plaza/Cottonwood St	0.0	A	0.0	A
Pine St/Cottonwood St	9.3	A	9.8	A
Pine St/Gunnison Ave	9.6	A	9.7	A
Baylor Dr/Railroad St	16.2	C	15.2	C



# Access Control Techniques

The number and frequency of access points along with the location of intersections and driveways can have a major impact on the efficiency and safety of roadways. Access Management is the proactive management of access points and conflict points in an effort to promote safe and efficient use of the transportation network. This management is a way to strike a balance between the mobility and access needs of a roadway based on functional classification. Many techniques are used to control access to roadways including signal spacing, driveway location and spacing, use of exclusive turn lanes, median treatments, and right-of-way management.



## Signal Spacing

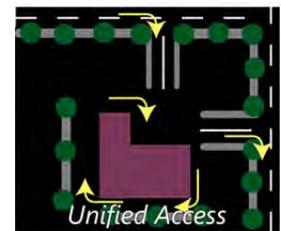
The distance between traffic signals can have major implications for travel time and roadway safety. With increases in the number of signals per mile, there is a corresponding travel time increase. Similarly, increases in the number of signals per mile greatly increase the number of crashes per million vehicle miles travel (VMT). To combat this, spacing can be increased between traffic signals. The advantages of this technique include a reduction in the number of places where vehicle queuing obstructs access, a reduction in the number of crashes, and an overall improvement in vehicular travel time. This technique may be cost prohibitive in some cases when attempting to retrofit due to the need for intersection reconstruction. Further, inconsistent driveway volumes may make this technique difficult to establish in commercial areas.

Signals Per Mile	Increase in Travel Time (%)
2	-
3	9
4	16
5	23
6	29
7	34
8	39

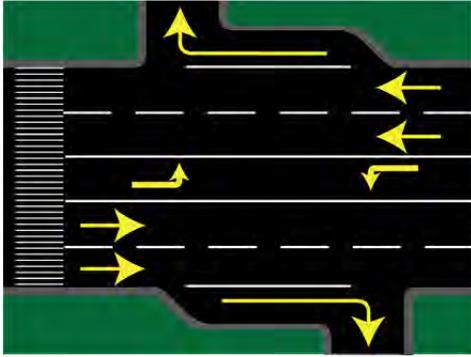
Signals Per Mile	Crashes Per Million VMT
Under 2	3.53
2 to 4	6.89
4 to 6	7.49
6+	9.14

## Driveway Location and Spacing Management

Driveway locations and spacing have an impact on roadway safety and travel speeds. Increases in the number of driveways and reduction in spacing increase the number of conflict points along a roadway. To combat this, shared access and reducing driveway frequency can be used as a technique to improve roadway efficiency and safety. Advantages to unified access include a reduction in the number of conflict points on major roadways and the creation of new areas of landscaping. This strategy can be difficult to implement due to a perception that a reduction in the number of access points corresponds to reduced business revenues; however, this has been disproven in a number of FHWA studies.



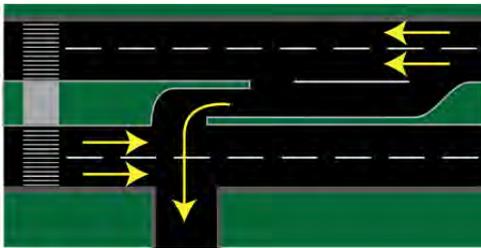
## Exclusive Turn Lanes



Exclusive turn lanes, such as right and left turn lanes can be an effective treatment for reducing roadway congestion. Each of these treatments can reduce delays for through movements by providing a queuing space for turn movements. This additional space for queuing increases the capacity of an intersection. While this treatment can improve conditions for through traffic, two-way left turn lanes can cause conflicts between opposing traffic leading to safety concerns in some implementations. Further, turn

lanes do not provide a pedestrian refuge and can lead to concerns for users of alternative modes of transportation.

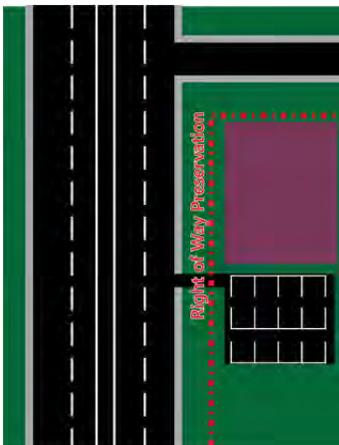
## Median Treatments



Median treatments can reduce the number of conflict points along a roadway, improving safety for motorists and pedestrians alike. This treatment separates opposing traffic flows, provides refuge areas for pedestrians, and can improve the aesthetic of a roadway. Implementation of a median treatment can be difficult due to the high cost of installation. Median treatments cannot be

implemented with a piecemeal approach if they are to be effective. Further, treatments are usually met with resistance in commercial areas due to restricted access to businesses.

## Right-of-way Management



Land use policies, such as right-of-way preservation, can be advantageous in numerous circumstances. Right-of-way preservation can reduce the number of access points to major roads and reserve the right-of-way for future roadway treatments such as turn lanes, medians, or expansion. However, this treatment can be difficult to retrofit into developed, built-out areas and requires substantial coordination between stakeholders and government bodies.

# Roadway Reconfiguration

In addition to reviewing access along the US 24 corridor, this project reviewed a series of roadway reconfiguration alternatives that had been developed through a Town Planning effort between 2009 and 2012. The Town had developed 5 cross section alternatives for US 24. These sections included:

- Three lane US 24 with on-street parking, curb extensions, bike lanes, and medians
- Five lane US 24 with gateway medians
- Three lane US 24 with bike lanes and a wide median
- Five lane US 24 with sidewalks and new access
- Five lane US 24 with pedestrian refuge crossing locations

More information about these designs can be found in Appendix B.

As discussed in the 2035 Projected Conditions section, both the three lane and five lane cross sections function with an acceptable level of service, with the exception of US 24/Main Street and US 24/Arkansas in the three lane section. Because of this, it was recommended to the community that a 5 lane section on US 24 be retained through Main Street to minimize delay in the future.



# Community Involvement

Community involvement took place throughout the project and included three community meetings and a series of one-on-one meetings with property owners and concerned citizens. Community input was a strong guidance in the direction of this plan and directly influenced the recommendations made. Below are descriptions of each element of community outreach. Detailed meeting materials and community comments can be found in Appendix C.

## *Community Meeting #1*

The first community meeting was the project kick-off, which was held in September. The community was invited to learn about the intent of the project, review the previous work completed during the Town's US 24 corridor study, and provide feedback on their desired outcomes of the project. Approximately 40 comments were received at and after that meeting. The comments received described strong support for street amenities such as trees and landscaping, safety enhancements, sidewalks, and bike facilities. There was a mixed response regarding on-street parking and a highway diet.

## *Community Meeting #2*

Like many projects, by the second community meeting in November there was some misinformation floating around about the intention of the project. Some people thought that the project was designed to force the Town to accept a three lane cross section while others wanted to have the reconfiguration of US 24 on the ballot for a vote. Because of this, the second community meeting agenda was enhanced from just presenting the preliminary corridor and access reconfiguration options to also include opportunities to correct the misinformation. To do this, keypad polling was used to collect input. Keypad polling allowed meeting attendees to provide input on a series of questions with the results of the input being shown immediately following each question. This process worked well to facilitate input from a packed house of approximately 130 people. Meeting attendees left feeling like they had been heard. The topic of a ballot initiative was not heard again as many people felt that they were able to "vote" using the keypad polling. The polling also allowed everyone in the room to see that over  $\frac{3}{4}$  of the audience was in favor of retaining a five lane cross section.



## *One-on-One Meetings*

One-on-one meetings were held with individuals periodically over the course of the project and as schedules allowed over the course of the project. The individual meetings were geared toward conversations with individual property owners in the US 24 corridor to discuss access reconfiguration. The project team met with approximately 45 property owners along the corridor to discuss access alternatives. These conversations have led to a strong acceptance of the recommendations in the ACP. The project team learned a lot about circulation requirements for some of the properties as well as future plans that helped to influence the recommendations.

## *Community Meeting #3*

The third and final community meeting was held in February 2014. Approximately 50 people attended to review the corridor access and roadway reconfiguration recommendations. Overall, the community gave positive feedback on the direction that the ACP took and the recommendations that were made. Several conversations during the open house portion lead to minor modifications of some recommendations, but generally, the plan recommendations were widely accepted.

# Recommendations

## *Access Reconfiguration*

Through many conversations between the Town and CDOT as well as with the community, access reconfiguration recommendations were developed for the US 24 ACP.

Figures 11 – 18 on pages 42-49 show the recommended access points that are all direct access points to the US 24 corridor within the identified study area for this project. The bounds of the study area are the north Town boundary to Steele Drive/CR 319 along US 24. Each access point has been given a description of how it interacts with US 24. A table summarizing existing access points and proposed access reconfiguration can be found in Appendix D.

Figure 11: Recommended US 24 Access- Harrison to Farwell

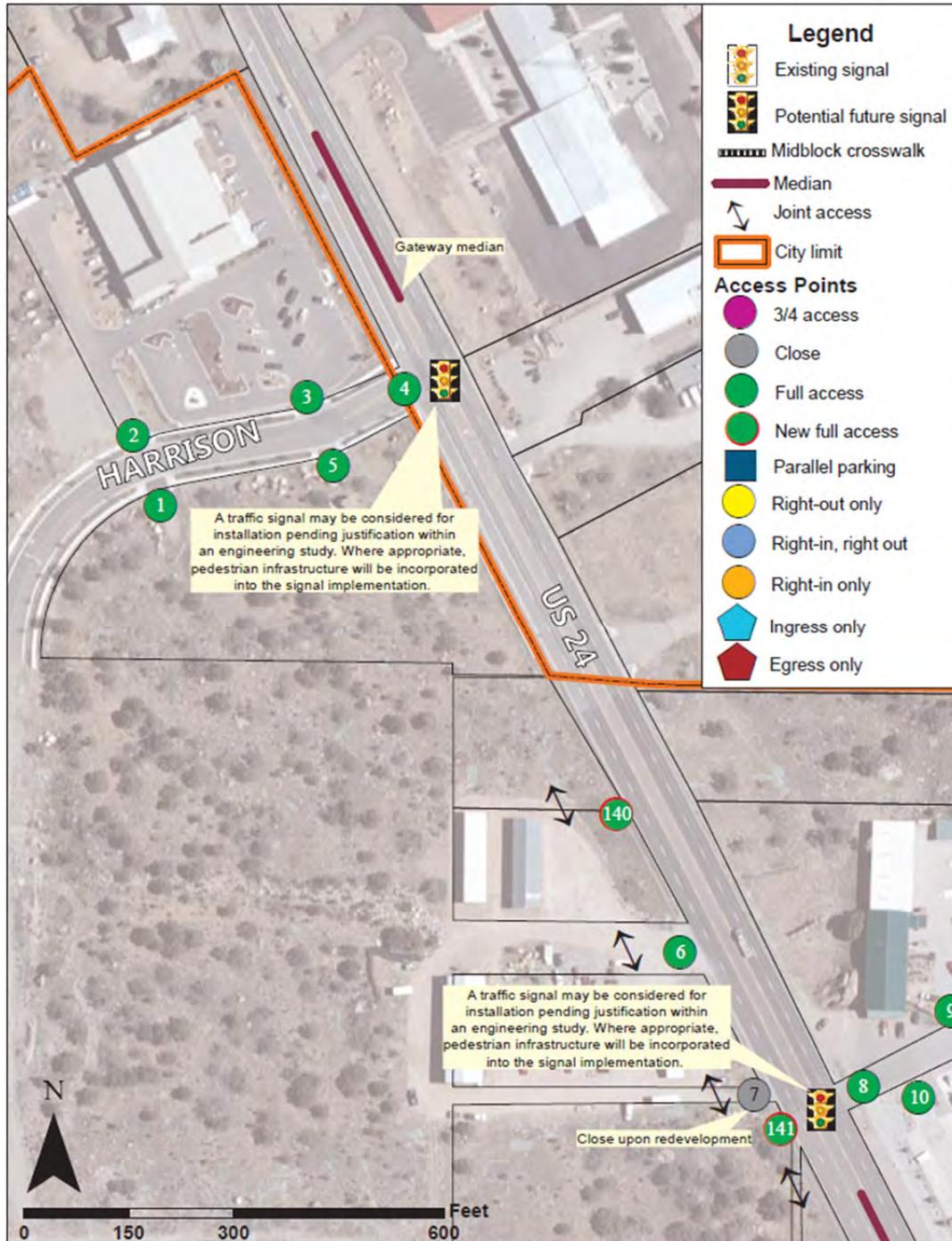


Figure 12: Recommended US 24 Access- Farwell to Crossman

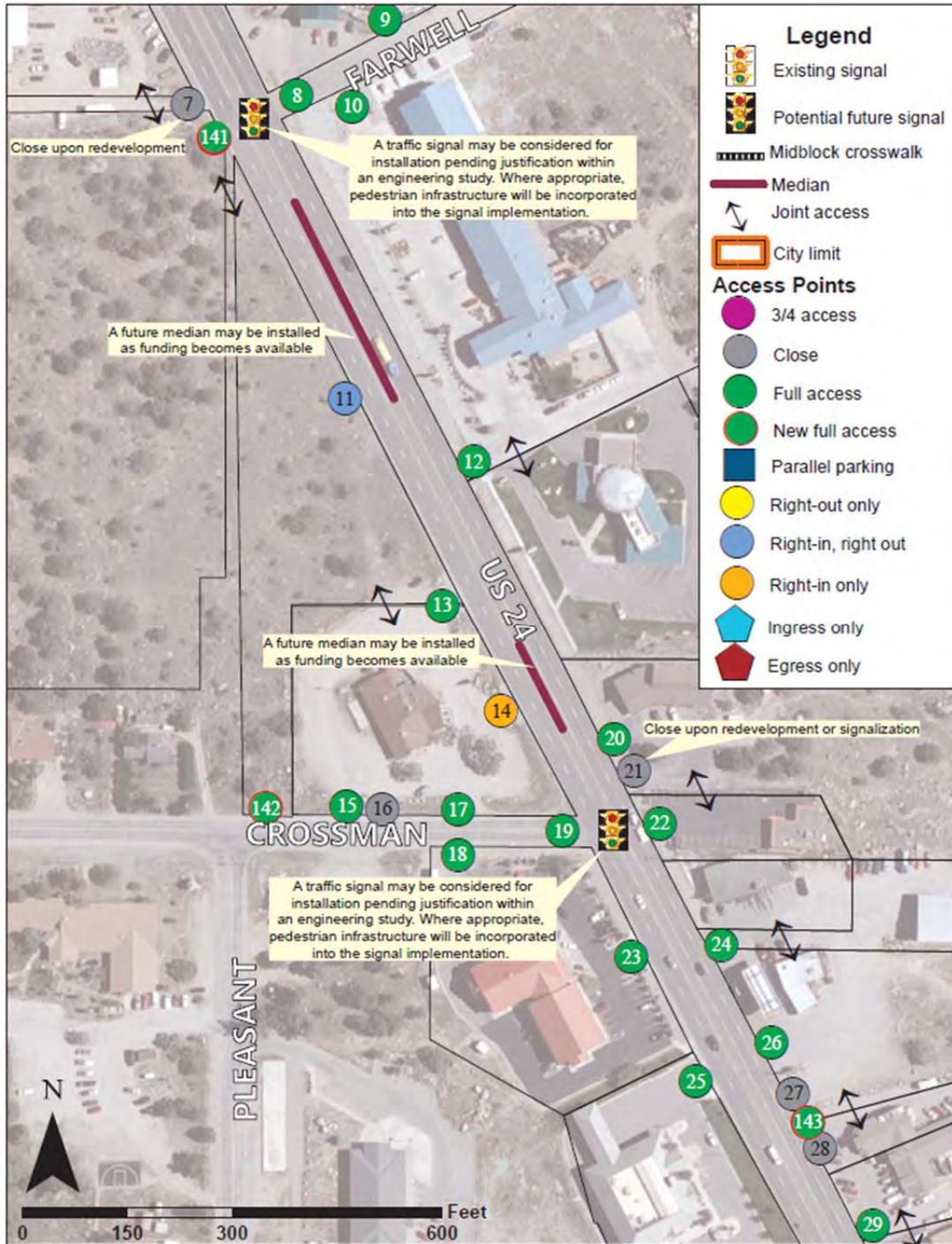


Figure 13: Recommended US 24 Access- Brookdale to Sterling

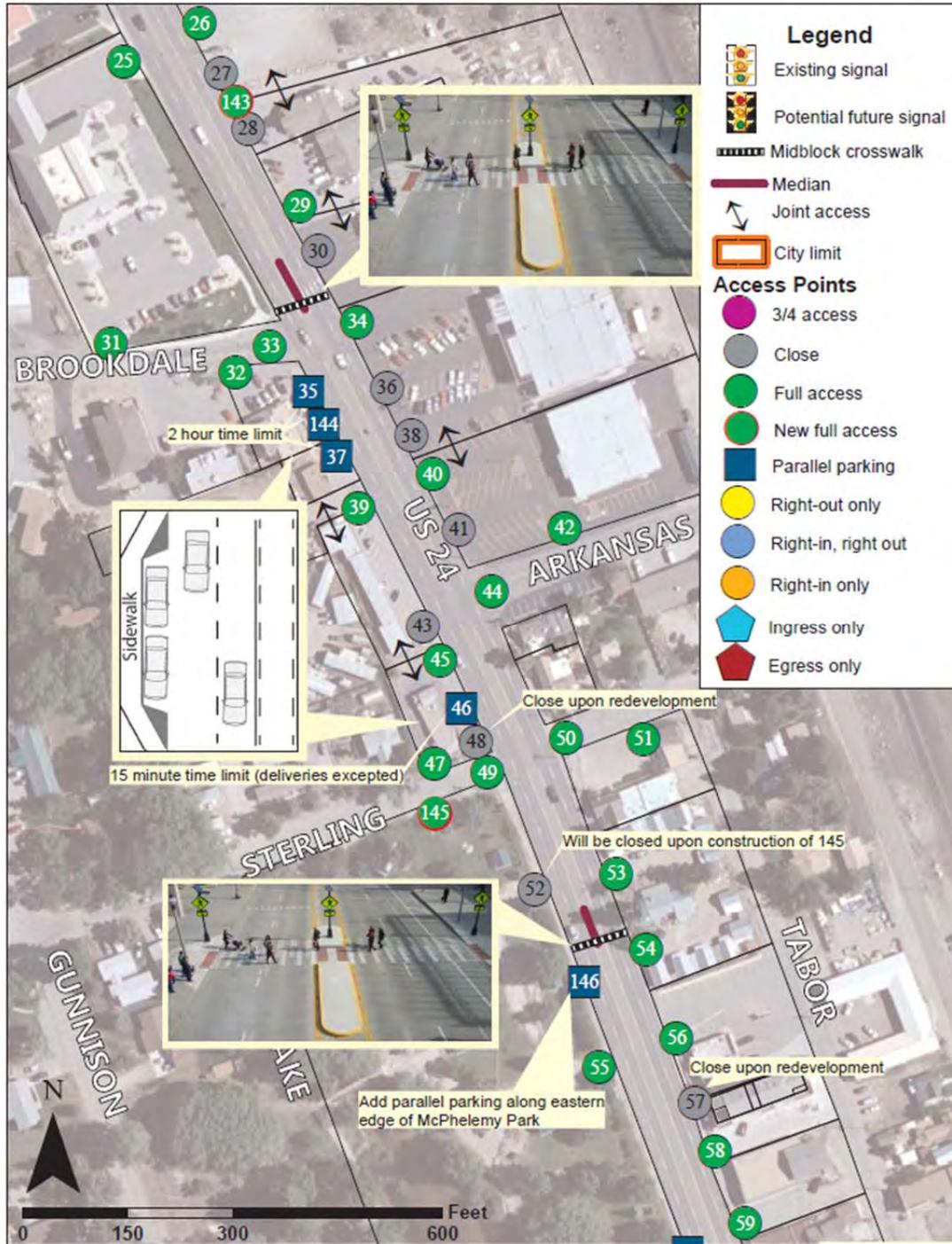


Figure 14: Recommended US 24 Access- Main to Pine

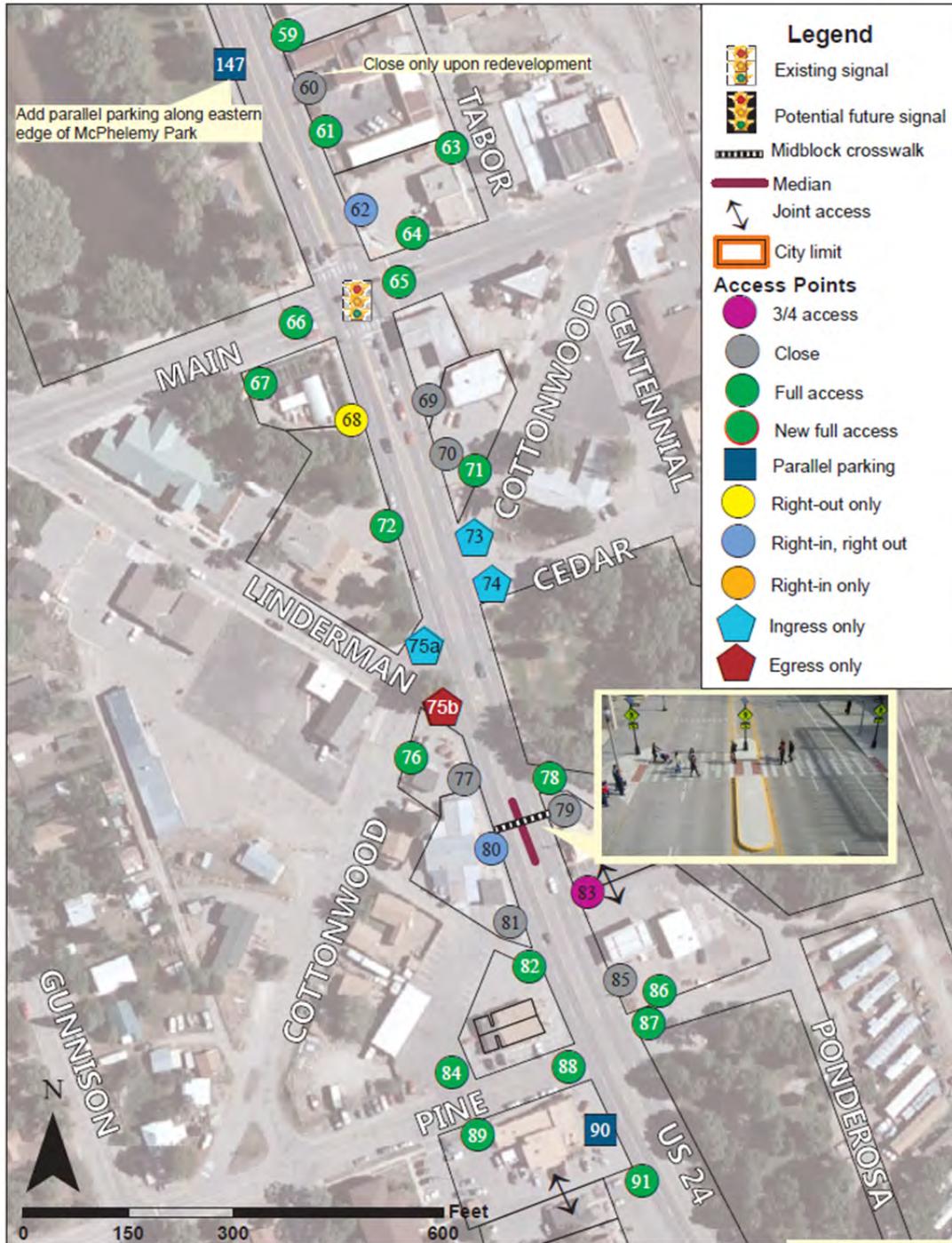


Figure 15: Recommended US 24 Access- Pine to Oak

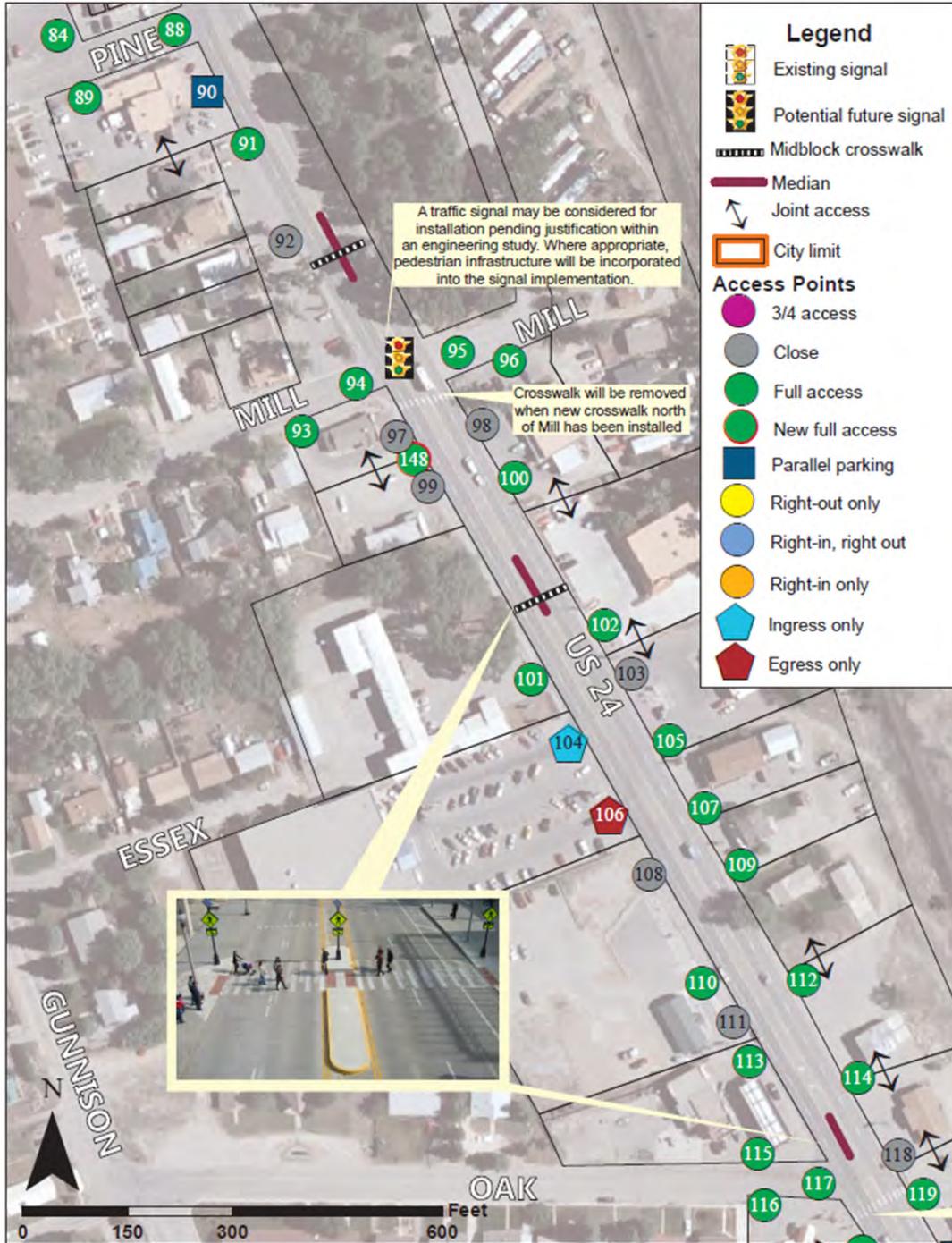


Figure 16: Recommended US 24 Access- Oak to Baylor

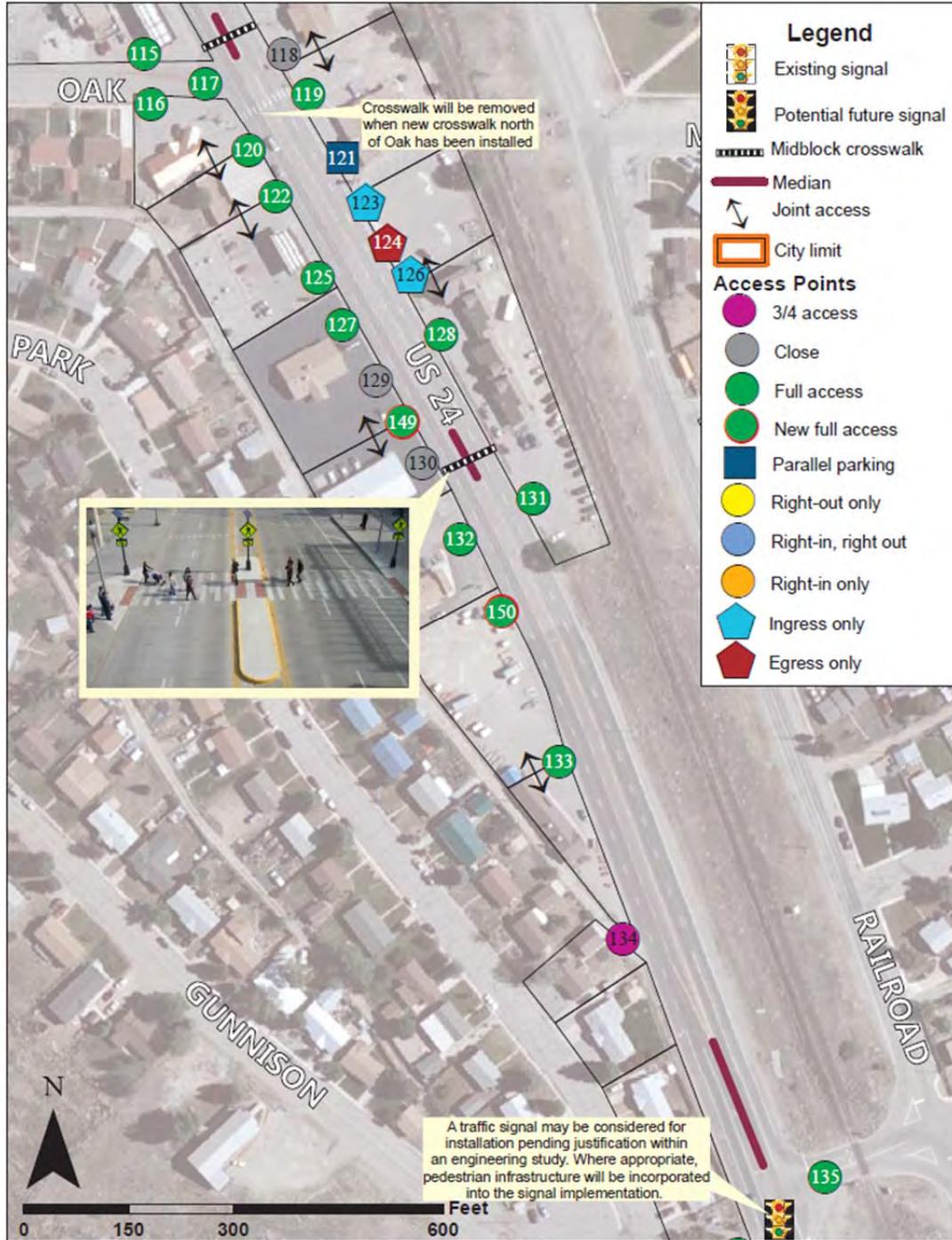


Figure 17: Recommended US 24 Access- Baylor

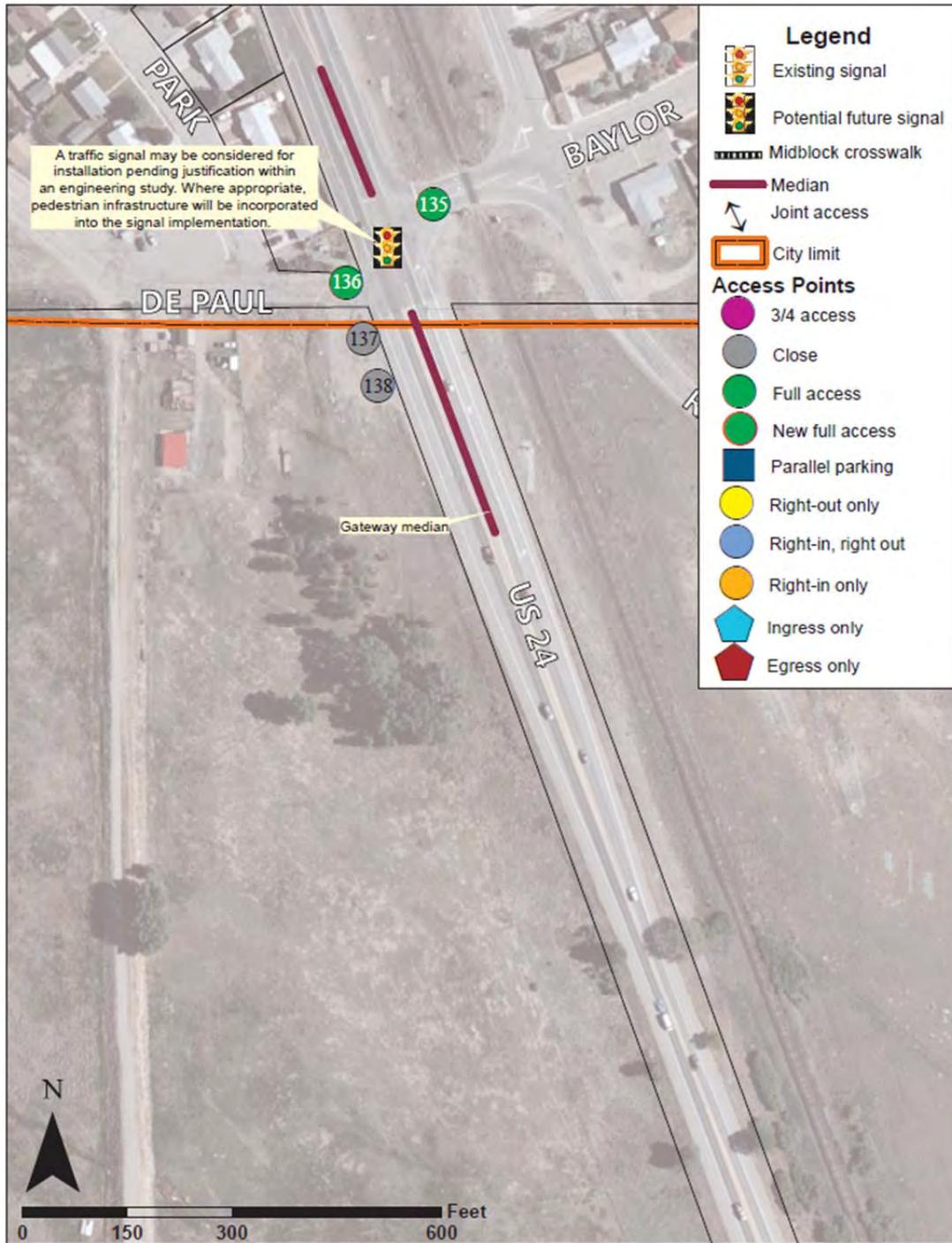
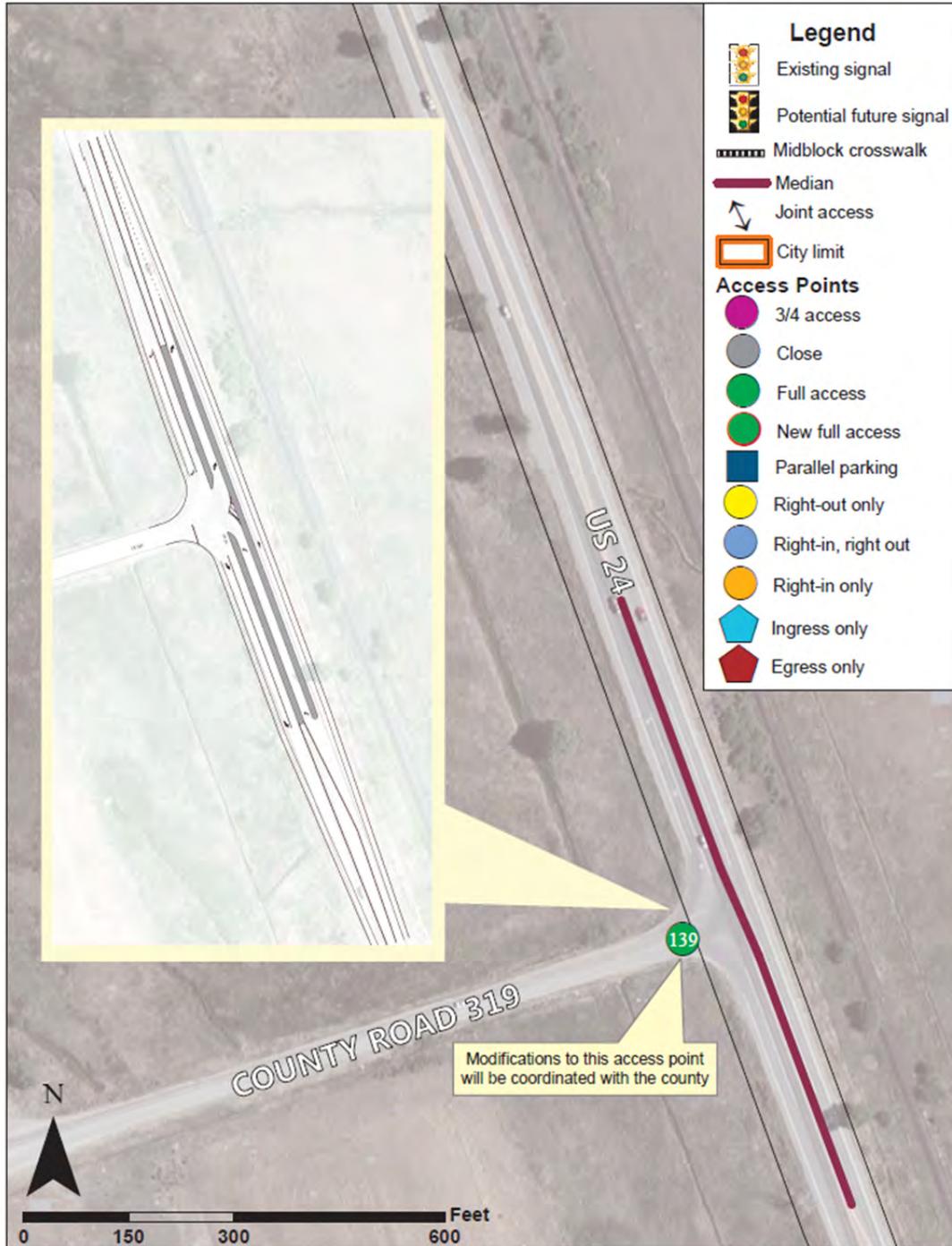


Figure 18: Recommended US 24 Access- Steele Drive/CR 319



The following access descriptions correspond with the previous maps and provide detail regarding each recommended existing access point in the study area.

- Access 1: This existing curb cut will become a full access driveway upon development of the associated parcel.
- Access 2: No changes will be made to this access.
- Access 3: No changes will be made to this access.
- Access 4: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Harrison.
- Access 5: This existing curb cut will become a full access driveway upon development of the associated parcel.
- Access 140: This new full access will provide joint access to the storage facility and the currently vacant lot to its north.
- Access 6: No changes will be made to this access.
- Access 7: This access will be closed upon redevelopment and replaced by Access 141, the new full access to the currently vacant parcel to the left. This is a secondary access point for Napa Autoparts to the north, which is accessible primarily by Access 6. It also provides access to the vacant lot to the south.
- Access 141: This new full access will provide access to the currently vacant lot upon its development. This is a secondary access point for Napa Autoparts to the north, which is accessible primarily by Access 6. It also provides access to the vacant lot to the south.
- Access 8: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Farwell.
- Access 9: No changes will be made to this access.
- Access 10: No changes will be made to this access.
- Access 11: This access, currently a curb cut, will become a right-in, right-out access point due to the implementation of a median.
- Access 12: No changes will be made to this access, with joint access maintained.
- Access 13: No changes will be made to this access, with joint access maintained.
- Access 14: This access will go from a full access to a right-in only due to the implementation of a median and proximity to the intersection and full access at #13.
- Access 142: This new full access on Crossman will provide a full movement driveway to the currently vacant lot upon development.
- Access 15: No changes will be made to this access.
- Access 16: This is a secondary access and will be closed. Access to this parcel will be obtained by Access 15 and 17.
- Access 17: No changes will be made to this access.
- Access 18: No changes will be made to this access.
- Access 19: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Crossman.
- Access 20: This is a full access driveway to a group of retail businesses east of US 24



- Access 21: This is a secondary access point and will be closed upon redevelopment or signalization. Access will be obtained from Access 20.
- Access 22: No changes will be made to this access.
- Access 23: No changes will be made to this access.
- Access 24: No changes will be made to this access, with joint access maintained.
- Access 25: No changes will be made to this access.
- Access 26: No changes will be made to this access.
- Access 27: This is a secondary access point and will be closed. Access will be obtained from Access 26 or 143.
- Access 143: This is a new full access driveway that will provide joint access and replace the closed Access 27 and 28 that will be closed.
- Access 28: This access will be closed. Access will be provided by the new Access 143.
- Access 29: No changes will be made to this access, joint access will be maintained.
- Access 30: This is a secondary access and will be closed, given the new median and existing access from the parcel to the north. Access will be obtained through the joint cross-easement agreement of Access 29.
- Access 31: No changes will be made to this access.
- Access 32: No changes will be made to this access.
- Access 33: No changes will be made to this access.
- Access 34: No changes will be made to this access.
- Access 35: This full access driveway will be transformed into parallel parking. This parking area will have a 2 hour time limit. Access can also be obtained from the Access 32 full access driveway. See Figure 13 on page 44 for associated diagram of this construction.
- Access 144: An additional access point that is parallel parking will be added to the Brookdale-US 24 corner parcel. This parking area will have a 2 hour time limit. See Figure 13 on page 44 for associated diagram of this construction.
- Access 36: This is a secondary access point and will be closed. Access will be obtained to the multiple connected lots of large format retail from Access 34, 40 or 42.
- Access 37: This full access driveway will be transformed into parallel parking. This parking area will have a 2 hour time limit. See Figure 13 on page 44 for associated diagram of this construction.
- Access 38: This is a secondary access point and will be closed. Access will be obtained to the multiple connected lots of large format retail from Access 34, 40 or 42.
- Access 39: No changes will be made to this access, joint access will be maintained.
- Access 40: No changes will be made to this access, joint access will be maintained.
- Access 41: This is a secondary access point and will be closed. Access will be obtained to the multiple connected lots of large format retail from Access 34, 40 or 42.
- Access 42: No changes will be made to this access.
- Access 43: This is a secondary access point that will be closed upon redevelopment and redesign of the parking lot. Access can be attained from Access 39 and 45.
- Access 44: No changes will be made to this access.



- Access 45: No changes will be made to this access, joint access will be maintained.
- Access 46: This full access driveway will be transformed into parallel parking. This parking area will have a 15 minute time limit, deliveries excepted. Access can also be obtained from the Access 44 or 46 full access driveway. See map for associated diagram of this construction.
- Access 47: No changes will be made to this access.
- Access 48: This is a secondary access point and will be closed upon redevelopment. Access will be obtained to the Sterling-US 24 corner business from Access 45, 46 or 47.
- Access 145: This new full access will provide access to McPhelemy Park from the north, allowing access 52 to close.
- Access 49: No changes will be made to this access.
- Access 50: No changes will be made to this access.
- Access 51: No changes will be made to this access.
- Access 52: This is a secondary access point and will be closed upon construction of Access 145. Access to the park will be obtained from Access 55, 145 or 146.
- Access 53: No changes will be made to this access.
- Access 146: An additional access point that is parallel parking will be added along the length of the eastern edge of McPhelemy Park along US 24. See map for associated diagram of this construction.
- Access 54: No changes will be made to this access.
- Access 55: No changes will be made to this access.
- Access 56: No changes will be made to this access.
- Access 57: This ingress only access point that currently serves as a drive-thru will be closed upon redevelopment. Access will be provided by Access 56.
- Access 58: No changes will be made to this access.
- Access 147: An additional access point that is parallel parking will be added along the length of the eastern edge of McPhelemy Park along US 24. See map for associated diagram of this construction.
- Access 59: No changes will be made to this access.
- Access 60: This is a secondary access point and will be closed upon redevelopment. Access to this business will be obtained from Access 61.
- Access 61: No changes will be made to this access.
- Access 62: This full access driveway will become a right-in, right-out access. Drivers wishing to make a left in to the business can make a left on Main Street and a left into Access 64. Drivers wishing to make a left out of the business can utilize access 63 or 64.
- Access 63: No changes will be made to this access.
- Access 64: No changes will be made to this access.
- Access 65: No changes will be made to this access.
- Access 66: No changes will be made to this access.
- Access 67: No changes will be made to this access.



- Access 68: This egress only access driveway will become a right-out only access. Drivers wishing to make a left out of the business can make a right and utilize Linderman or Cottonwood.
- Access 69: This access will be closed.
- Access 70: This is a secondary access point and will be closed. Access to this business will be obtained from Access 71 off of Cottonwood.
- Access 71: No changes will be made to this access.
- Access 72: No changes will be made to this access.
- Access 73: This full access T-intersection will become an ingress only access. See Figure 19 on page 58 for the intersection reconfiguration.
- Access 74: This full access T-intersection will become an ingress only access. See Figure 19 on page 58 for the intersection reconfiguration.
- Access 75a: This access is an ingress only. See Figure 20 on page 59 for the intersection reconfiguration.
- Access 75b: This access is an egress only. See Figure 20 on page 59 for the intersection reconfiguration.
- Access 76: No changes will be made to this access.
- Access 77: This is a secondary access point and will be closed. Access to the Cottonwood-US 24 corner business will be obtained from Access 76 off of Cottonwood Avenue.
- Access 78: No changes will be made to this access.
- Access 79: This is a secondary access point and will be closed. Access to the Linderman-US 24 corner business will be obtained from the joint access agreement provided by Access 78 and 83.
- Access 80: This access will go from full movement to a right-in, right-out due to the implementation of a median.
- Access 81: This is a secondary access point and will be closed. Access to this business will be provided by Access 82.
- Access 82: No changes will be made to this access.
- Access 83: This full access driveway will become a  $\frac{3}{4}$  access and maintain its existing joint cross-easement agreement. Drivers can use Pine and Linderman as alternatives. Left turns out will be restricted, Drivers can use Pine and Linderman as alternatives.
- Access 84: No changes will be made to this access.
- Access 85: This is a secondary access point that will be closed. Access will be obtained from Access 86 and 83 off of Pine.
- Access 86: No changes will be made to this access.
- Access 87: No changes will be made to this access.
- Access 88: No changes will be made to this access.
- Access 89: No changes will be made to this access.
- Access 90: This full access driveway will be transformed into parallel parking. Access can also be obtained from Access 89 full access driveway. See map for associated diagram of this construction.



- Access 91: Access to Charles Street will be modified, as show in Figure 21 on page 60. Access to Charles will be tightened and will retain full movement access. Modifications can be made with RAMP funded roadway reconstruction or as funding becomes available.
- Access 92: This full access to Charles will be closed. Access to this frontage street will be directed as shown in the diagram in Figure 21 on page 60.
- Access 93: No changes will be made to this access.
- Access 94: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Mill.
- Access 95: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Mill.
- Access 96: No changes will be made to this access.
- Access 97: This is a secondary access point that will be closed. Access will be obtained from Access 93 off Mill or new Access 148.
- Access 98: This is a secondary access point that will be closed. Access will be obtained from Access 96 off Mill or 100.
- Access 148: This is a new full movement joint access, taking the place of the closed Accesses 97 and 99.
- Access 99: This is a secondary access point that will be closed. Access will be obtained from Access 148.
- Access 100: No changes will be made to this access.
- Access 101: No changes will be made to this access.
- Access 102: No changes will be made to this access, joint access will be maintained.
- Access 103: This is a secondary access point that will be closed. Access will be obtained from the joint cross-easement access provided by Access 105 and 102 in the parcel to the north.
- Access 104: No changes will be made to this access; it will remain ingress only.
- Access 105: No changes will be made to this access.
- Access 106: No changes will be made to this access; it will remain egress only.
- Access 107: No changes will be made to this access.
- Access 108: This curb cut does not currently serve as a functional access and will be closed permanently. Access to this parcel can be obtained from Access 110.
- Access 109: No changes will be made to this access.
- Access 110: No changes will be made to this access.
- Access 111: This is a secondary access point that will be closed. Access will be obtained from Access 110.
- Access 112: No changes will be made to this access, joint access will be maintained.
- Access 113: No changes will be made to this access.
- Access 114: No changes will be made to this access, joint access will be maintained.
- Access 115: No changes will be made to this access.
- Access 116: No changes will be made to this access.
- Access 117: No changes will be made to this access.



- Access 118: This is a secondary access point that will be closed. Access will be obtained from the joint cross-easement access provided by Access 114 in the parcel to the north and 119 in the parcel to the south.
- Access 119: No changes will be made to this access, joint access will be maintained.
- Access 120: No changes will be made to this access, joint access will be maintained.
- Access 121: This access point will become a parallel parking space.
- Access 122: No changes will be made to this access, joint access will be maintained.
- Access 123: This access point will become ingress only. Egress will be available from Access 124.
- Access 124: This access point will become egress only. Ingress will be available from Access 123 or 126.
- Access 125: No changes will be made to this access.
- Access 126: This access point will become ingress only. Egress will be available from Access 124.
- Access 127: No changes will be made to this access.
- Access 128: No changes will be made to this access.
- Access 129: This full access driveway is a secondary access point that will be closed. Access can be obtained by Access 127 and the new Access 149 that will provide access to the parcel through a joint cross-easement with the parcel to the south.
- Access 149: This new joint cross-easement full access point replaces the access provided parcels by Access 129 and Access 130.
- Access 130: This full access driveway is a secondary access point that will be closed. Access can be obtained by Access 132 and the new Access 149 that will provide access to the parcel through a joint cross-easement with the parcel to the south.
- Access 131: No changes will be made to this access.
- Access 132: No changes will be made to this access.
- Access 150: This additional full access point provides supplementary access to the northern parcel accessible through the joint cross-easement of Access 133.
- Access 133: No changes will be made to this access, joint access will be maintained.
- Access 134: This full access driveway will become a ¾ access. Drivers wishing to make a left out of the business can make a U-turn at Baylor.
- Access 135: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of Baylor.
- Access 136: A traffic signal may be considered for installation pending justification within an engineering study at the t-intersection of DePaul.
- Access 137: This access point currently does not serve any needs of the parcel and will be closed.
- Access 138: This access point currently does not serve any needs of the parcel and will be closed.



- Access 139: This access point will remain full access, however the design of the intersection will change, as shown in the diagram in Figure 22 on page 61. Modifications to this access point will be coordinated with the county.

## Intersection Reconfiguration

As part of developing the proposed Access Control Plan for US 24 and through discussions with CDOT and the Town, several intersection locations were identified as needing more in depth analysis and the need to reconfigure the current intersection geometry. The locations included the following:

- US 24 and Cottonwood Avenue/Cedar Street
- US 24 and Cottonwood Avenue/Linderman Avenue
- US 24 and Charles Street
- US 24 and Steele Drive/CR 319

A summary of the recommended improvements for each intersection along with a conceptual design plan is provided below. These plans incorporate feedback that the project team received from both CDOT and the Town and strive to address known safety and operational issues. These plans should serve as the basis for future design efforts involving these locations.

### US 24 AND COTTONWOOD AVENUE/CEDAR STREET

Presently Cottonwood Avenue and Cedar Street both allow left turns out onto US 24 within very close proximity to one another, which presents certain challenges from a safety and operational perspective. The proposed reconfiguration of the US 24 intersection at Cottonwood Avenue and Cedar Street was developed to address these challenges by restricting left turns out of both side streets, effectively making it a  $\frac{3}{4}$  movement. Cedar Street would remain primarily as a two-way street with the westbound approach of Cedar Street being required to turn right onto northeast bound Cottonwood Avenue. Cottonwood Avenue would be converted to a one-way northeast bound street allowing for diagonal parking to be developed on the east side of the street. The proposed channelization improvements at the intersection will decrease the pedestrian crossing distance along US 24 and should result in improved overall safety for all travel modes. As part of this conceptual design, channelization improvements to the Cottonwood Avenue and Centennial Plaza intersection are also proposed to reduce the pedestrian crossing distance along Centennial Plaza and better define the intersection limits.

Figure 19: Preferred Intersection Reconfiguration for US 24 and Cottonwood/Cedar



## US 24 AND COTTONWOOD AVENUE/LINDERMAN AVENUE

Similar to the Cedar Street and Cottonwood Avenue intersection, the US 24 intersection with Cottonwood Avenue and Linderman Avenue faces similar challenges with both streets intersecting just west of the actual intersection with US 24. Adding further complications is the presence of a landscape median island and wide roadway approach widths that result in a misunderstanding among many drivers on which side of the landscape median they should travel. The proposed reconfiguration of the US 24 intersection at Cottonwood Avenue and Linderman Avenue was developed to improve safety and operations at the intersection by better defining the intersection traffic flow patterns and limiting some of the turning conflicts created by the existing intersection geometry. The proposed

improvements tighten up the intersection at US 24 through the use of curb extensions to physically restrict two-way traffic on both sides of the landscape median. The restriction of northbound left turn movements from Cottonwood Avenue onto westbound Linderman Avenue will also simplify intersection operations. The current intersection traffic control would remain unchanged with both approaches of Linderman Avenue and Cottonwood Avenue being stop controlled and inbound traffic from US 24 having the right-of-way.

Figure 20: Preferred Intersection Reconfiguration for US 24 and Cottonwood/Linderman



### *US 24 and Charles Street*

In its current configuration, Charles Street functions primarily as a frontage road on the west side of US 24 by providing access to the various businesses along the roadway. The existing intersection with US 24 and Charles Street is poorly defined with one large driveway cut that extends approximately from Pine Street half way to Mill Street to the south. Charles Street is currently a two-way street with informal head-in parking along the west side of the street. In order to better define the actual intersection, the proposed reconfiguration of Charles Street would narrow the intersection approach on Charles Street and restrict traffic to one-way southbound. In order to reinforce the one-way travel pattern, the current head-in parking would be converted to diagonal parking on the west side of the street with parallel

parking provided on the east side of the street. This reconfiguration will allow for additional green space and landscaping elements to be incorporated on the south end of the block. The proposed head-in parking in front of Jan's restaurant on the southwest corner of the US 24 and Pine Street intersection will also be converted to parallel parking to allow for the pedestrian sidewalk to be provided along the corridor. In order to accommodate additional parking for Jan's customers, parking could be reconfigured along the south side of Pine Street from parallel parking to diagonal parking.

Figure 21: Preferred Intersection Reconfiguration for US 24 and Charles



### *US 24 and Steel Drive/CR 319*

The existing "T" intersection with US 24 and Steele Drive/CR 319 is located on the south end of town and is shown under 2035 traffic conditions to begin to operate poorly. In order to enhance the operational performance and safety of this intersection for future conditions, it is recommended that the current intersection be widened to accommodate channelized islands along US 24 to physically separate the northbound left turn deceleration and acceleration lanes from adjacent through traffic lanes. This design would be similar to the current configuration at the intersection of US 24 and US 285 south of this location. This intersection configuration should help drivers turning left out of Steele Drive/CR 319 by providing them with increased comfort in accepting gaps in traffic in one direction and providing them with a protected lane in which to accelerate up to speed along US 24.

Figure 22: Preferred Intersection Reconfiguration for US 24 and Steele Drive/CR 319



### *Pedestrian Refuge Median Islands*

In order to enhance pedestrian safety and slow travel speeds along the US 24 corridor, a series of pedestrian refuge median islands have been proposed at strategic locations where there is a documented history of high pedestrian volumes or pedestrian attractors. These refuge medians have been shown to increase the safety of pedestrians crossing multi-lane highways similar to US 24. Often it is challenging for pedestrians to cross multi-lane roadways due to the lack of acceptable gaps in traffic from both directions. The refuge median islands allow pedestrians to cross the roadway in two stages and require acceptable gaps in traffic from only one direction at a time. The proposed refuge median island would also incorporate industry best practice by staggering the alignment of the median island cut through and thereby encouraging pedestrians to make eye contact with approaching traffic. Staggering the alignment of the pedestrian crosswalk through the median also prevents pedestrians from walking right out into traffic, which might be a potential problem if a more linear cut through of the refuge median were proposed. In conjunction with the pedestrian refuge median islands, rectangular rapid flash beacons (RRFB's) would be provided and include signs with pedestrian push buttons to activate the signs located both on the edge of the roadway and within the center median. The RRFB's have been shown to increase driver yielding compliance to 70% in most locations. Photos of the RRFB and staggered refuge median island along with a plan view of the island applied on the US 24 corridor are provided below.

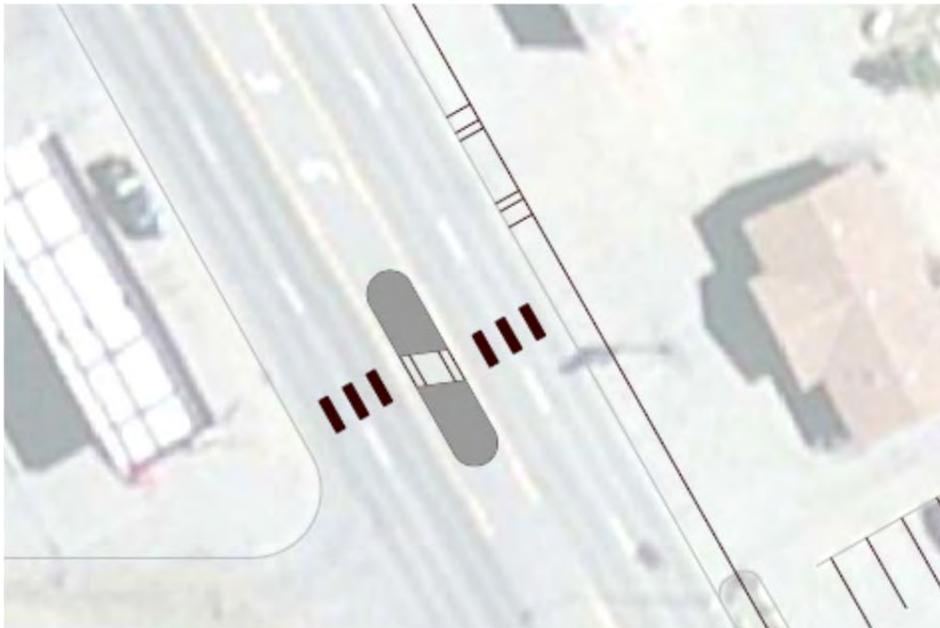
Figure 23: Image of a Rectangular Rapid Flash Beacon Pedestrian Crossing



Figure 24: Staggered Pedestrian Crossing



Figure 25: Diagram of a Proposed Pedestrian Crossing North of Oak Street



## Roadway Reconfiguration

Through a robust community conversation that was informed by a future conditions analysis, a preferred cross section for US 24 was developed. The community clearly stated that they would like to retain a five lane cross section with two travel lanes in each direct and a two way center left turn lane. Sidewalks and bike lanes are important additions, as are gateway medians and pedestrian refuge islands that have minimal impact on access throughout Town.

Figure 26: Preferred US 24 Cross Section



The preferred cross section includes two 11 foot travel lanes in each direction, a 12 foot center left turn lane, 6 foot bike lanes, and 6 foot sidewalks on either side of the road. It will be important to maintain the 6 foot widths of the sidewalks and bike lanes throughout the corridor. If there are locations where a 14 foot center left turn lane is necessary, for example, the extra width should be taken from the inside lane to create a 10 foot travel lane, rather than from the bike lane or sidewalk.

Figure 27: Modified Future Option US 24 Cross Section



Some community members were disappointed to see five lanes retained. Several people were very interested in seeing a three lane cross section that would provide more opportunity for wider, landscaped sidewalks or on-street parking. The preferred five lane section does not preclude a conversion to three lanes at some point in the future if that is desired. The conversion could be accomplished through restriping and some minimal investment. Curb lines would not need to be moved and reconstructed, which can be very costly.

Figure 28: Potential Future Reconfiguration of US 24 with Parking



Figure 28 shows a reconfiguration option that includes a cycle track that is protected by on-street parking on both sides of the street. The two-way center left turn lane as well as one travel lane in each direction are retained. This reconfiguration would provide ample separation between moving traffic and people on the sidewalk, creating a more comfortable walking environment.

Figure 29: Potential Future Reconfiguration of US 24 with Enhanced Sidewalks or Parking



Figure 29 shows another alternative for potential future reconfiguration. This option shows either on-street parking or extended pedestrian space adjacent to the curb. It also adds a buffered bike lane while maintaining the two-way center left turn lane and one travel lane in each direction.

# Next Steps

This document describes the process of developing the SH 133 ACP. There are several important steps that need to occur in the short term and long term to ensure the study roadway realizes the maximum benefit of the recommended ACP. These next steps start with the approval process.

## Approval Process

Before the study roadways can begin to benefit from the recommendations of the ACP, a few important events must occur:

- Intergovernmental Agreement (IGA) – All parties must develop and agree to an IGA.
- Plan Approval – The ACP must be approved by and adopted by the Town Board.
- Plan Adoption – The Town must sign the IGA.

Once the ACP is officially adopted by the Town and CDOT, the adopted ACP becomes the basis for future decisions on site access. The current US 24 ACP, as identified in this document, does not have any implementation timing or schedule. The RAMP funding identified for the reconstruction of US 24 provides some opportunity for immediate implementation.

## Plan Implementation

It is important to remember that the ACP is intended to represent a long range plan for the study roadway. Implementation of the full plan can occur as a single project, or over the long term in smaller increments as a phased approach.

Implementation of the full plan at a single time is not likely feasible. This would be a publicly funded project by any combination of the Town and CDOT. A future public project would include the access changes described in the ACP that could be implemented at the time of the project. With the implementation of a roadway improvement project, such as the US 24 RAMP funded reconstruction project, the government would be responsible for making the access changes to the highway. Even with the planned project, the entire plan will not be implemented at one time because access must still be provided to each property on the corridor. For example, if a property has not redeveloped, it might not be feasible to relocate the driveway, or if the Town street network has not been completed, alternative access may not be available. In cases like this, an interim access to the property would be maintained until the ultimate access configuration could be achieved.

When intersections or access points have operational or safety concerns, the Town and CDOT will look for ways to address these issues. These projects would most likely incorporate portions of the ACP,

such as implementing turn restrictions or improving adjacent intersections/access locations, to improve operations or increase safety along the corridor.

The most common trigger for implementation relates to when a property along US 24 develops, redevelops, or if a driveway experiences a traffic volume increase of 20 percent or more (per the *State Highway Access Code*). Under this scenario, a new CDOT access permit is required, and the Town and CDOT would work with the property owner or the developer to make the access changes and highway improvements in the area directly impacted by the development/redevelopment. Coordination through the development process is critical to the ultimate success of the plan. If the ultimate ACP cannot be implemented when a property redevelops, the property should develop in such a way as to not prohibit the plan implementation. For example, buildings should be constructed in such a manner as to use a future access location shown on the plan.

Even if project related traffic volumes do not warrant the full implementation of the plan, the Town should develop a method to collect funds from the owner/developer with the understanding that the changes will be necessary in the future. This may encourage some development to occur now, but the Town will have collected funds to help offset the cost of the future improvements. This is especially important in the case where a property simply redevelops, but does not increase the traffic generated by 20 percent or more. If the Town does not implement the plan at the same time or collect funds for future implementation, it is unlikely the same property would redevelop again before the changes are necessary, creating a missed opportunity to implement the plan or collect contributions toward the improvements.

Another important aspect of the implementation process is how access is granted to new developments. Each property along the study roadway must be provided with reasonable access. The Town and CDOT should work with the owner/developer to ensure projects are designed with consideration to where access will be permitted in the ultimate ACP. Access will be provided to the property as shown on the ACP unless it is not feasible to implement at the time of the development. Then, an interim access will be permitted, which will change once the ultimate access conditions can be achieved. Coordinating with the owner/developer throughout the project development process will ensure the final design of the property does not preclude the implementation of the final ACP configuration on the study roadway.

## Plan Modification

The outcome of this study is the US 24 ACP, which identifies the number, location, and type of access points that will be allowed on US 24 within the study limits. Future changes to the plan are allowed based upon the guidelines of the *State Highway Access Code*, according to Section 2.12, "Access Control Plans":

*The plan must receive the approval of both the Department and the appropriate local authority to become effective. This approval shall be in the form of a formal written agreement signed by the local authority and the Chief Engineer of the Department. After an access control plan is in effect, modifications to the plan must receive the approval of the local authority and the Department. Where an access control plan is in effect, all action taken in regard to access shall be in conformance with the plan and current Code design standards unless both the Department and the local authority approve a geometric design waiver under the waiver subsection of the Code (p. 30, paragraph 3).*



**COLORADO**  
Department of  
Transportation



# Appendix

Appendix A – Traffic Counts

Appendix B – Previous Plan Sections

Appendix C – Meeting Materials

Appendix D – Access Point Table