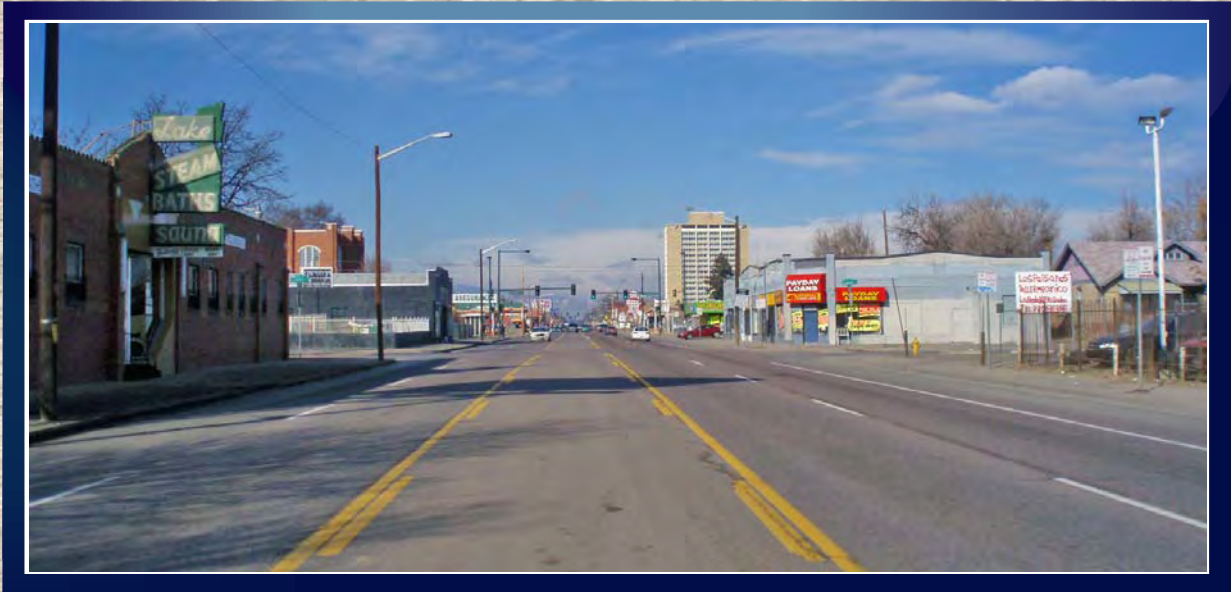
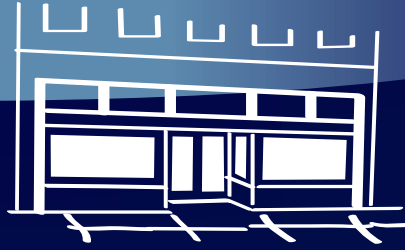


West Colfax CORRIDOR TRANSPORTATION STUDY



Final Report | May, 2010

West Colfax Corridor Transportation Study

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Final Report
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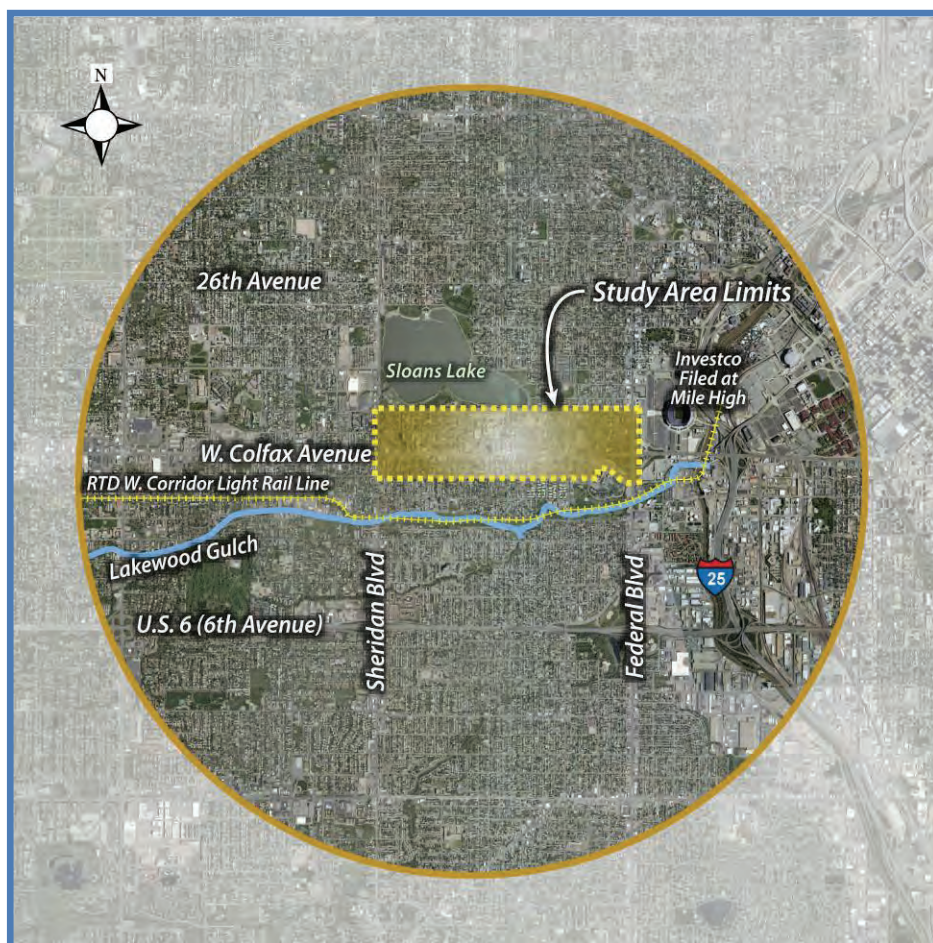
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Introduction

The West Colfax area holds unique opportunities. Perhaps most important is broad, robust support for growth and change on the part of property and business owners in the corridor. There is a general consensus that the area is “left behind, and needs to catch up” with the rest of Denver in terms of the quality of the urban environment. Along with that consensus, however, comes a strong concern that redevelopment and public improvements should be coordinated to maintain a distinct character, reflect attention to the area’s unique circumstances and history, and take synergistic advantage of public infrastructure investment and private redevelopment.

In anticipation of the 2007 Bond project for West Colfax Avenue, Denver Public Works met with the West Colfax Business Improvement District (BID) and the public to discuss potential improvements to the West Colfax Corridor. At the public meeting held on September 30th, 2008, the BID and general public clearly supported the desire to have permanent on-street parking on both sides of Colfax Avenue. This desire was contrary to the recommendations from the West Colfax Avenue Transportation Study, which was completed in 1999.

Figure 1: Project Vicinity Map



The 1999 study evaluated current and future transportation conditions in order to provide recommendations for short-and long-term improvements in the West Colfax Corridor. The recommended long-term improvement was to maintain the five through-lanes (three westbound and two eastbound) with significant streetscape and sidewalk amenities. The recommended lane configuration was found to accommodate the projected year 2020 peak hour traffic volumes. The third westbound through lane (curb lane) would continue to function as a through travel lane during the p.m. peak period (4:00 – 6:00 p.m., Monday – Friday)) and as an on-street parking lane during all other times.

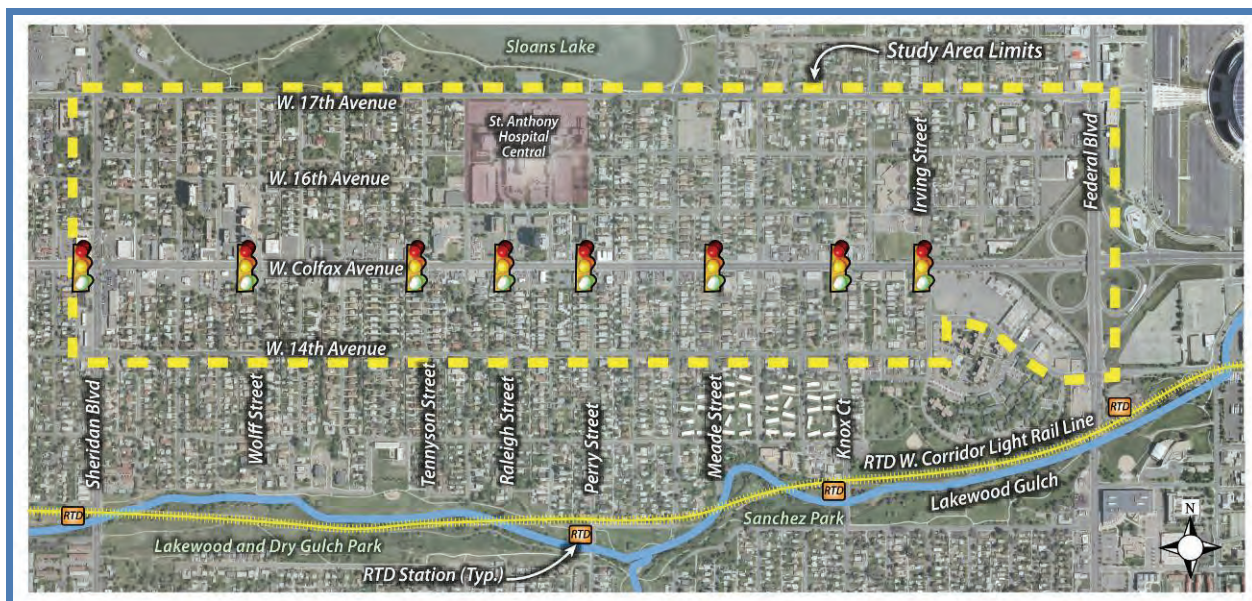
Given that several changes have occurred in and around the corridor since the 1999 study, the City’s Public Works Department agreed to conduct an updated transportation study of the corridor to investigate potential alternatives to accommodate multi-modal travel and on-street parking.

Scope of Project

Figure 1 shows the project vicinity and Figure 2 identifies the study area boundaries for the West Colfax Corridor Transportation Study. The study area is generally bounded by Sheridan Boulevard on the west, Federal Boulevard on the east, 14th Avenue to the south and 17th Avenue to the north.

The scope of this study included an evaluation of existing transportation conditions (vehicle, transit, pedestrian, bicycle and parking), future traffic projections, development and analysis of multi-modal corridor alternatives, and selection of a preferred alternative and implementation strategy.

Figure 2: Project Study Area



Previous Studies

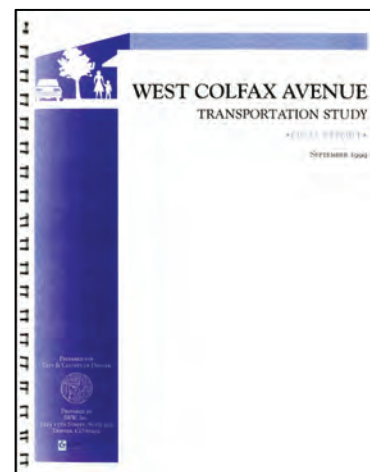
Several studies have been completed since 1999 that have a direct or indirect influence on transportation planning for the West Colfax corridor. A summary of these studies and their relationship to West Colfax is provided below.

West Colfax Transportation Study - 1999

The previously mentioned West Colfax Transportation Study evaluated four alternative street configurations:

- Alternative 1: Four Through-Lanes with Painted Median
- Alternative 2: Four Through-Lanes with Raised Median
- Alternative 3: Five Through-Lanes with Painted Median and Streetscape/Sidewalk Improvements
- Alternative 4: Six Through-Lanes with Raised Median

In addition, several improvement recommendations were made including: streetscape improvements, sidewalk enhancements, utility relocations, street lighting and upgrades to the storm drainage system.



The analysis of alternatives showed that neither Alternative 1 nor Alternative 2 would have sufficient capacity to meet current or long-term traffic demand for the p.m. peak period. Alternative 4 provided a third travel lane in the eastbound direction (in addition to three lanes westbound) to better accommodate long-term traffic growth; however, the lane widening would have required significant right-of-way acquisition (17 building takes) and also had a negative impact on pedestrian mobility and safety due to the increased roadway width. The preferred alternative from the 1999 study was to essentially maintain the existing street section (3 westbound lanes and 2 eastbound lanes) and also to convert the westbound curb lane from a shared parking/travel lane to a full time travel lane. Additionally, the preferred alternative included:

- ⊕ Capacity and Safety Improvements at Irving Street/Colfax Avenue intersection
- ⊕ Bus stop enhancements
- ⊕ Upgrade trunk storm sewer system
- ⊕ Sidewalk improvements (including upgrade to American with Disability Act (ADA) standards)
- ⊕ Additional lighting
- ⊕ Undergrounding of overhead utility lines
- ⊕ Streetscape
- ⊕ Consolidation of driveways

Most of the above recommendations from the 1999 Study have not been implemented; although, in 2004 West Colfax Avenue was resurfaced by the Colorado Department of Transportation (CDOT) and that project included miscellaneous sidewalk improvements including replacement of the curb ramps to bring them into conformance with ADA standards. The lane configuration of West Colfax Avenue did not change.

Blue Print Denver – 2002

Blueprint Denver is an integrated land use and transportation plan that was adopted in 2002 as a supplement (subject plan) to the Denver Comprehensive Plan 2000. It is also complimented by other subject plans such as the *Bicycle, Pedestrian, Parks and Housing Plans*. “Small Area Plans”, such as the West Colfax Corridor Transportation Plan, are at the center of Denver planning and are influenced by subject plans. Blueprint Denver included three major themes:

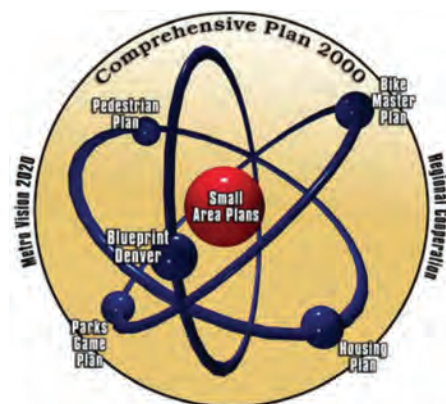
A multi-modal street balances the needs of all modes of travel, giving people the option to walk, bike, take transit or drive. The concept of multi-modal streets diverges from conventional street designs that emphasize a high level of service for automobiles over other transportation modes.

Blueprint Denver - 2002

- ✦ Areas of Change and Areas of Stability – West Colfax Avenue is identified as an “Area of Change” where new development should be directed to create an “infusion of population, economic activity and investment”.
- ✦ Multi-Modal Streets – Recognizes that streets should serve all modes of transportation (vehicular, transit, pedestrians and bicycles), which aides in the success of mixed-use development and reducing traffic congestion.
- ✦ Mixed-Use Development – Creates urban spaces “where residential, retails and commercial uses are intertwined, including...corridors along main streets” (i.e. West Colfax Avenue).

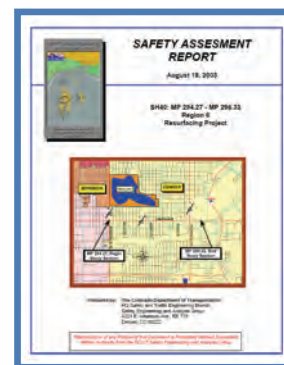
Recommendations from Blueprint Denver pertaining to West Colfax Avenue include:

- ✦ Designates West Colfax Avenue as an “Area of Change” for in-fill and redevelopment
- ✦ Classifies West Colfax as a “Mixed-Use” Arterial corridor
- ✦ Identifies West Colfax as an “Enhanced Transit Corridor”
- ✦ Recommends access management in Areas of Change to manage the location and flow of vehicular traffic into and out of businesses and residential developments across the pedestrian area and into the travelway area.
- ✦ Recommends multi-modal improvements along arterial corridors such as West Colfax



CDOT Colfax (US 40) Safety Assessment Report – 2003

Prior to the resurfacing of West Colfax Avenue in 2004, the Colorado Department of Transportation (CDOT) completed a Safety Assessment report to identify potential safety issues and recommend cost-effective counter measures to address those problems. The report showed that West Colfax had an accident rate that was more than double the statewide average (7.42 versus 3.18) of similar facilities for crashes that occurred during 1999, 2000 and 2001. The report recommended the following actions:



- ✦ Construct a raised median east of Sheridan to control left-turn access
- ✦ Construct a raised median at Osceola to prohibit eastbound left-turn

movements from Colfax

- ⊕ Install pedestrian crossing warning signs at conspicuous locations to increase driver awareness of pedestrian activity
- ⊕ Consider changing the left-turn signal phasing for southbound Sheridan at Colfax to restrict left-turn movements on green arrow only
- ⊕ Consider adding east-west left turn arrows at Irving Street and Colfax Avenue

Due mostly to project budget constraints, none of the above safety recommendations were implemented during the West Colfax resurfacing project.

West Colfax Assessment – 2005

In 2005, the Denver Department of Planning and Community Development prepared the West Colfax Assessment report. The Assessment report evaluated historical, demographic, land-use, infrastructure and economic characteristics of the corridor. The report did not include specific recommendations for West Colfax but it did include an outline of the corridor’s “strengths, weaknesses, opportunities and threats”, as well as a Vision Statement.

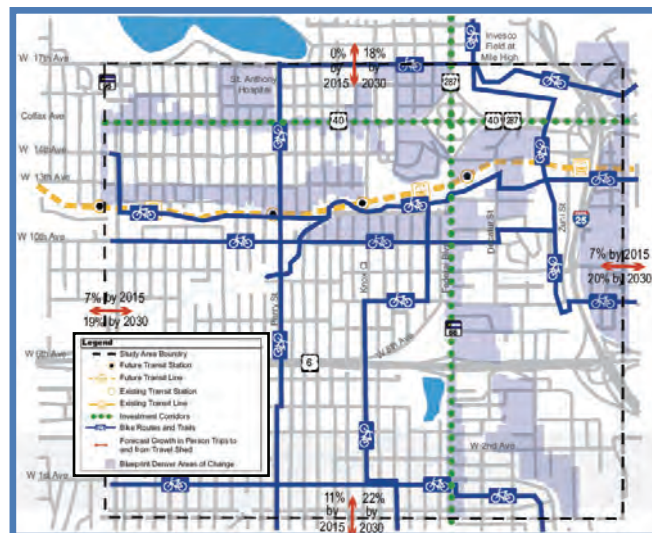
The Vision Statement reads: *“We envision that West Avenue will be a safe and attractive mixed-use commercial and residential corridor that complements and sustains the adjacent residential neighborhoods to preserve and enhance the ethnic and economic mix of people while encouraging walking, biking, transit use, and a positive community image.”*

Specific components of the Vision Statement were also identified. Those related to transportation include:

- Pedestrian friendly environment
- Better street lighting
- Improved neighborhood connections
- Integrate light rail with businesses
- Community shuttle
- Real commercial parking

Strategic Transportation Plan – 2008

The Strategic Transportation Plan (STP) was completed in October, 2008. The STP creates a multimodal transportation system to support a livable, connected and sustainable city. As a foundation to the plan, it seeks to maintain the existing infrastructure, eliminate gaps in the transportation system (vehicle, pedestrian and bicycle) and use transportation demand and management strategies to control growth. Two other fundamental concepts of the STP are that it recognizes the importance of moving people, not just vehicles, and it does not grow Denver’s “road





footprint”.

As part of the West Side Travel Shed, West Colfax Avenue is identified as an *Investment Corridor* for future multimodal reconstruction. From a travel shed growth standpoint, the West Side travel shed is expected to experience an 18% increase in person trips by 2030. The West Corridor Light Rail line, currently under construction 2 blocks to the south of West Colfax, is expected to satisfy this projected increase in person trips for east-west travel.

Project Approach

The project approach for this study included an action-oriented plan that could be implemented based on both public input and technical analysis. This section provides a summary of the purpose and goals of the project, public involvement and the technical analysis.

Purpose and Goals

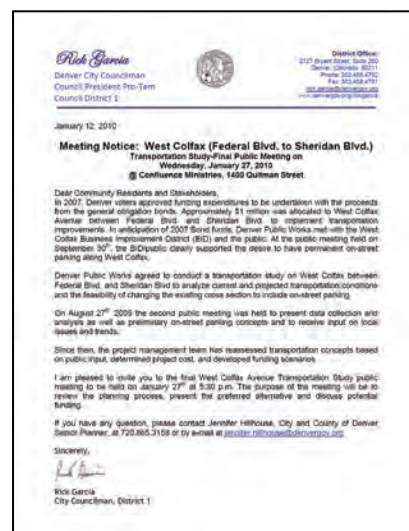
The purpose of this study is to recommend transportation improvement strategies that fulfill the vision of Blueprint Denver and the Strategic Transportation Plan, that comply with all applicable standards, and that encourage efficient and safe multimodal travel to achieve the following goals:

- ✦ Investigates and balances safety improvements with efficient pedestrian, bicycle, transit, and auto movement through and within the West Colfax travel shed.
- ✦ Determines the feasibility of changing the existing cross section to add on-street parking.
- ✦ Recognizes the role of the roadways, transit linkages, and bike and pedestrian pathways within the study area as an integral component in the overall city and regional transportation system.

Stakeholder and Public Involvement

The aim of the public involvement process for this study was to gather stakeholder input early in the project in order to facilitate the assessment of existing conditions and the development of alternatives. Stakeholders within the study area included:

- ✦ City and County of Denver
- ✦ Colorado Department of Transportation
- ✦ Regional Transportation District
- ✦ Denver Public Schools
- ✦ West Colfax Business Improvement District (BID)
- ✦ Saint Anthony's Hospital
- ✦ West Colfax Neighborhood
- ✦ Sloan's Lake Citizen's Group

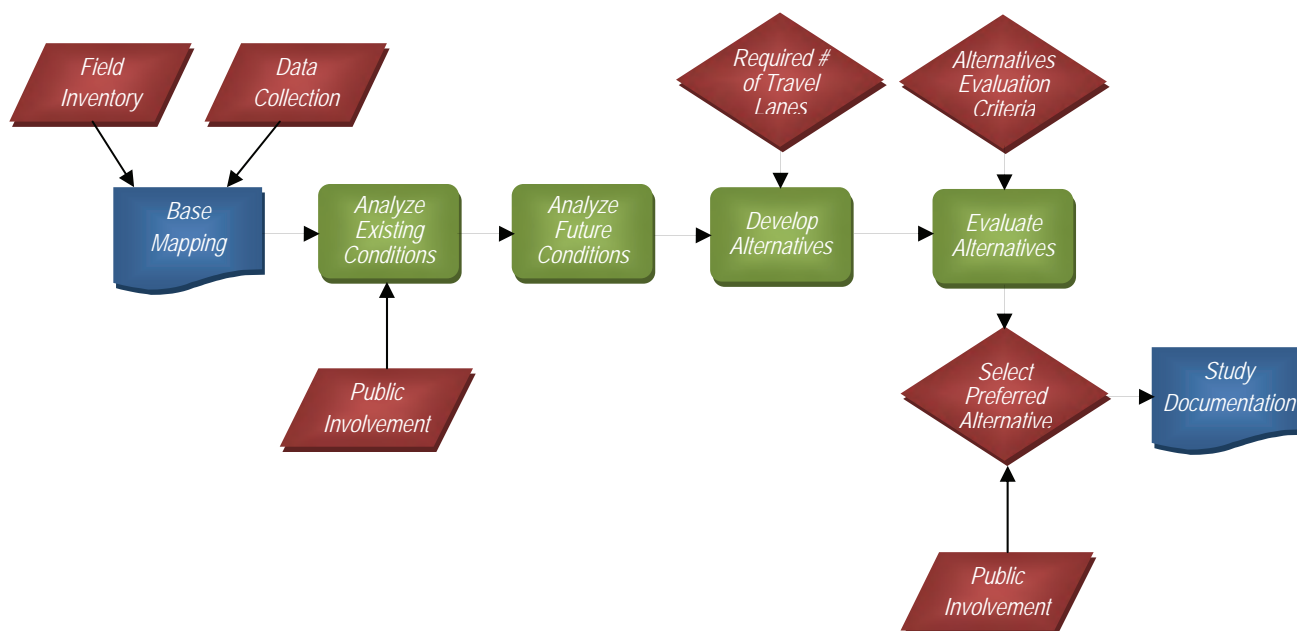


The initial public meeting was held on April 29, 2009. The project team presented an assessment of the existing multimodal transportation conditions, traffic growth projections and four preliminary concept layouts of Colfax Avenue with permanent (24/7) on-street parking. A second and final public meeting was held on January 27, 2010 to present the evaluation of alternatives and the preferred alternative. Input from stakeholders was also received via email correspondence, comment forms and individual meetings throughout the project.

Technical Analysis

The technical analysis consisted of evaluating the existing and future conditions, developing alternatives, selecting a preferred alternative and study documentation. Figure 3 below illustrates the steps used for the technical analysis.

Figure 3: Technical Analysis Process



Transportation data included information pertaining to vehicular traffic, pedestrians, bicyclists and bus ridership. When available, existing data were accumulated from the appropriate agencies. Supplemental data and field inventories were also completed by Muller Engineering Company.

The existing conditions analysis was completed to provide a current assessment of multi-modal transportation conditions using standard analysis methodologies. Future traffic projections were based on Denver Regional Council of Governments' (DRCOG) regional travel demand model for a horizon year 2030. The future conditions analysis was conducted using the same methodologies as the existing conditions analysis.

The alternatives development process was an iterative process based on input from City staff, CDOT and project stakeholders. The alternatives were evaluated based on criteria relating to corridor safety, mobility and community impacts. The evaluation criteria formed the basis for selecting the preferred alternative.

Analysis of Existing Conditions

The analysis of existing conditions included both quantitative and qualitative assessments of operating conditions for vehicles, buses, pedestrians, bicycles, and on-street parking. A summary of each analysis is provided below.

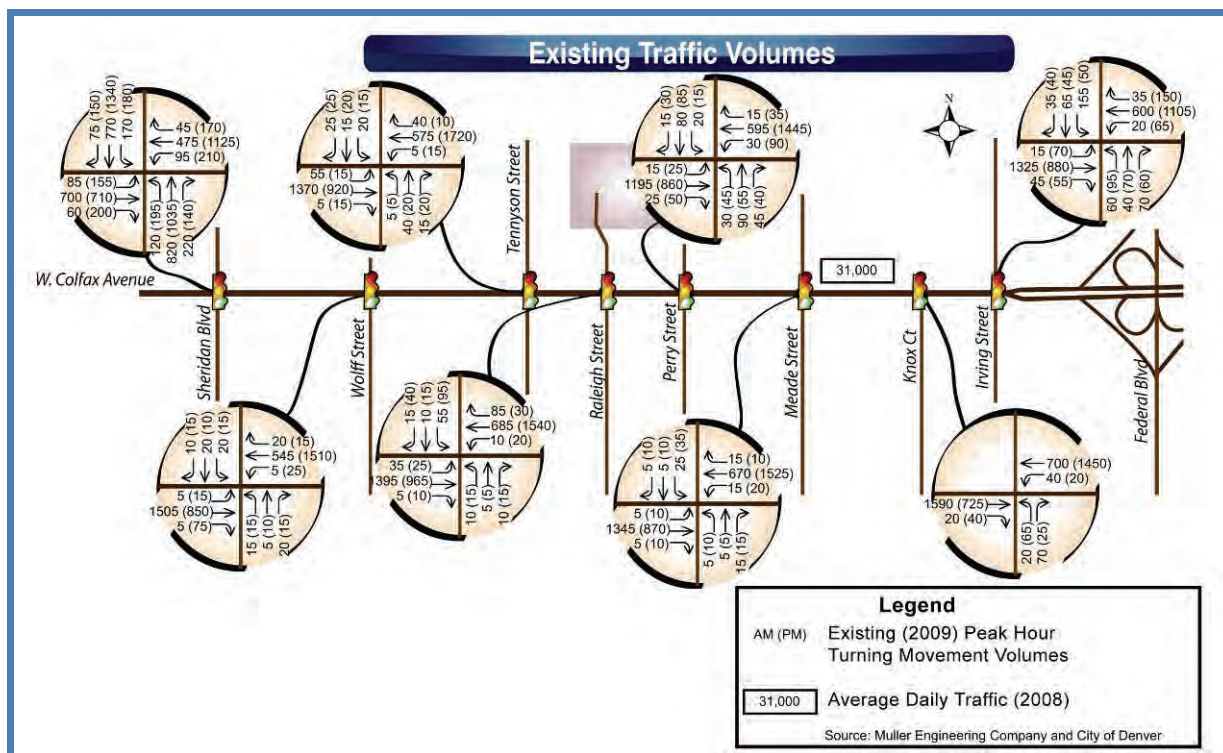
Vehicular Traffic

Data Collection

Vehicular traffic data included collection of turning movement counts at each signalized intersection, average daily traffic counts, vehicle and pedestrian crash data, lane utilization measurements, and traffic signal timing data. Additionally, field observations were made to assess lane geometry at each intersection, lane utilization for westbound traffic and general traffic flow conditions during peak traffic periods.

Turning movement count data was collected at each signalized intersection for the a.m. peak (7:00 – 9:00) and p.m. peak (4:00 – 6:00) periods on January 28 and 29, 2009. Average daily traffic count data was collected by the City and County of Denver east and west of Lowell Street for the week of October 20, 2008. Figure 4 summarizes the turning movement counts and average daily traffic data for West Colfax Avenue and Figure 5 illustrates the lane configuration at each intersection and traffic control devices.

Figure 4: Intersection Vehicle Turning Movement Volumes



With the exception of Sheridan Boulevard, side street traffic volumes are relatively low compared with the volume of traffic on West Colfax Avenue. From Wolff Street to Irving Street, the large majority of traffic is traveling through the corridor with only a small amount of traffic turning to and from the side streets. Sheridan Boulevard carries approximately 25-percent more traffic than West Colfax Avenue and, as a result, turning traffic volumes are much higher at the Sheridan Boulevard intersection than anywhere else along the corridor.

Figure 5: Lane Configuration and Existing Traffic Control Devices

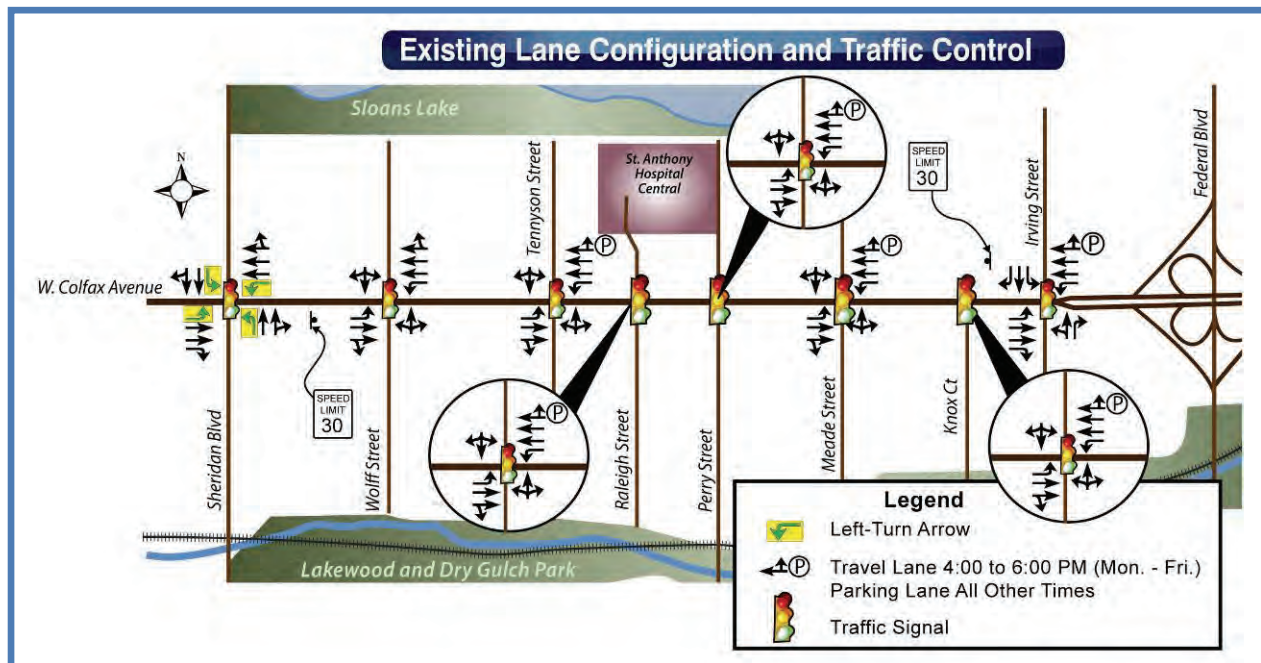
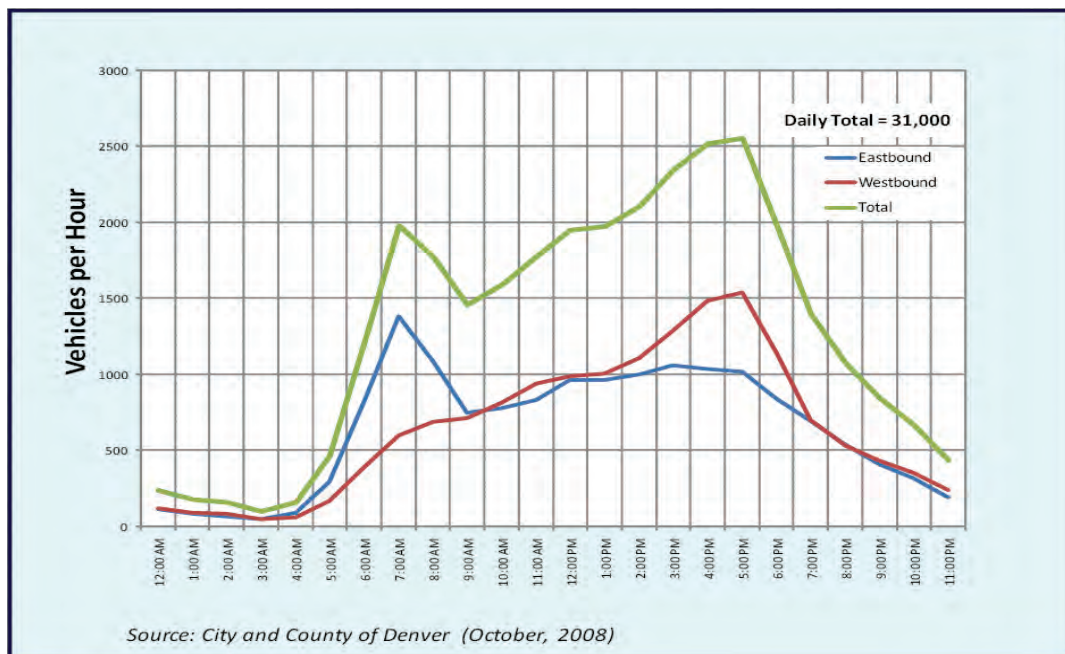


Figure 6 below shows the variation in traffic flow throughout an average weekday as recorded in October, 2008. Morning traffic flow in the eastbound direction peaks between 7:00 and 8:00 a.m. The directional split in traffic flow during that time period is 30-percent westbound and 70-percent eastbound. Afternoon peak flows occur from 5:00 to 6:00 p.m., with a 60/40 directional split favoring the westbound direction.

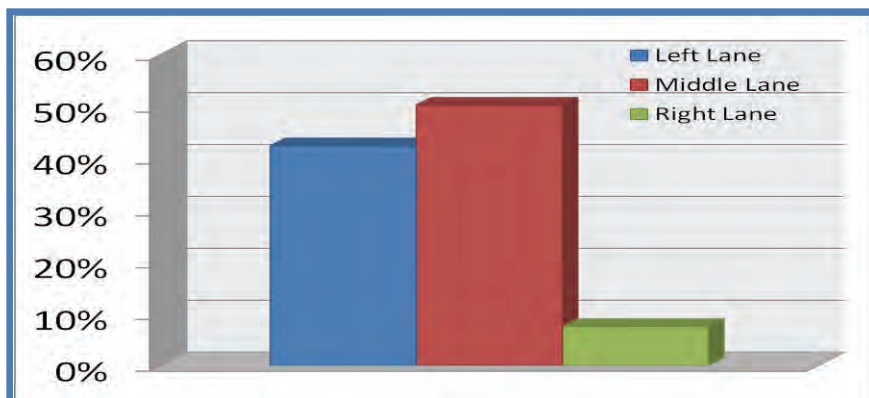
Figure 6: Hourly Traffic Flow on West Colfax Avenue



Lane utilization of the westbound travel lanes was also measured during the p.m. peak period to determine the distribution of traffic among the three westbound travel lanes. The data was collected to determine if the right-most lane (curb lane) carried a less-than proportional share of westbound traffic due to its operation as a parking lane during most hours of the day (all hours except 4:00 – 6:00 p.m.)

Two separate counts were taken east of Quitman Street between 5:00 and 5:30 p.m. on 2/12/2009 and 2/18/2009. The data from those counts indicate the westbound right-most travel lane is heavily underutilized during the p.m. peak period. Just 7.5 percent of westbound traffic uses the curb lane during this time. This is mostly due to under-saturated traffic conditions, and the presence of buses and an occasional illegally parked car in the travel lane. Figure 7 illustrates the distribution of westbound traffic.

Figure 7: Westbound Lane Utilization on West Colfax between 5:00 and 5:30 p.m.



Analysis of Vehicular Traffic Flow

The above traffic data was entered into the Synchro™ traffic analysis software model to evaluate existing traffic conditions for the a.m. and p.m. peak periods. Synchro provides an assessment of the level-of-service (LOS) for each intersection in accordance with the procedures outlined in the Highway Capacity Manual (2000). LOS measures range from A to F and provide both a qualitative and quantitative assessment of traffic flow conditions. LOS A represents free flow traffic conditions where motorists experience very little delay. LOS F, on the other hand, represents highly congested conditions where motorists' delays exceed 80-seconds on average at a signalized intersection. Table 1 summarizes the results of this analysis for the West Colfax Corridor from Irving Street through Sheridan Boulevard.

Table 1: Existing Intersection Operations

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS ¹	Delay (sec/veh)	v/c ²	LOS ¹	Delay (sec/veh)	v/c ²
Sheridan/Colfax	D	37.4	0.89	F	83.6	1.06
Wolff/Colfax	A	4.9	0.59	A	2.5	0.41
Tennyson/Colfax	A	4.5	0.54	A	5.7	0.61
Raleigh/Colfax	A	3.4	0.58	A	6.7	0.65
Perry/Colfax	A	8.4	0.57	A	6.9	0.62
Meade/Colfax	A	2.4	0.53	A	4.9	0.55
Knox Court/Colfax	A	4.7	0.64	A	4.4	0.54
Irving/Colfax	C	21.9	0.85	B	13.4	0.53

¹Level of Service based on definition in Highway Capacity Manual 2000.

²Ratio of critical movement volume to critical movement capacity.

With the exception of the Sheridan Boulevard intersection, all intersections currently operate at LOS C or better during both the a.m. and p.m. peak periods. The City of Denver and CDOT typically strive for LOS D or better for urban streets.

Due to the high volume of turning traffic and north-south traffic flow at Sheridan Boulevard, the Sheridan intersection operates at LOS D / F during the a.m. / p.m. peak periods. During the a.m. peak period, the northbound through and right turn movements operate near capacity. The p.m. peak period is more congested than the a.m. peak period with several movements operating at or near capacity during most of the peak period. These include all northbound and southbound movements (left, through and right) and also the westbound through movement on Colfax.

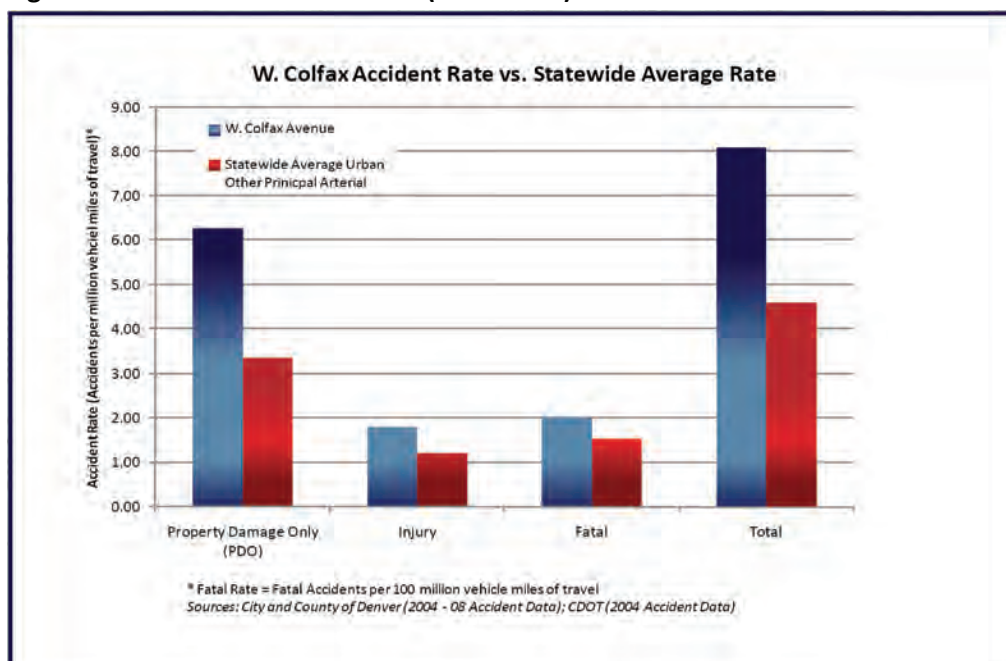
Vehicular Safety

Crash data from 2004 through 2008 from the City of Denver was analyzed to determine possible trends and accident patterns along the corridor. The data showed a total of 816 crashes in the corridor over the five year period. The data also indicates that the number of crashes is trending downward with an average of 145 crashes per year occurring in 2007 and 2008 as compared to 174 crashes per year in 2004 and 2005. However, when the number of crashes per year is adjusted relative to the amount of

traffic volume per year, the crash rate along West Colfax has remained relatively constant over the past five years.

As shown by Figure 8, the total crash rate along West Colfax is nearly twice the statewide average rate for similar state highways. The most common crash type is rear-end crashes, which account for 35-percent of all crashes in the corridor. Broadside collisions account for 19-percent of all crashes, followed by sideswipe crashes (18-percent). The high incidence of rear-end crashes is not atypical for an urban arterial corridor like West Colfax Avenue. The high percentage of broadside and sideswipe collisions is indicative of the amount of uncontrolled access points through the corridor and the fact that most left-turn movements along West Colfax occur in a “permissive” manner.

Figure 8: West Colfax Crash Rates (2004-2008)



Street Infrastructure

The West Colfax Avenue street section includes two eastbound travel lanes, a center left-turn lane and three westbound travel lanes. Between Knox Court and Vrain Street the right-most westbound travel lane functions as a parking lane for all hours of the day, except from 4:00 p.m. to 6:00 p.m. on weekdays when it serves as a through travel lane. As previously discussed, the westbound combination parking/travel lane is not well utilized for parking or for through travel. This is likely due to frequent parking violations that occur during the 4-6 p.m. time period and driver uncertainty as to the availability of the lane.



The pavement surface of West Colfax is in fair condition, having last been resurfaced by CDOT in 2004. That project also included minor sidewalk repairs, curb-ramp upgrades, minor drainage improvements,

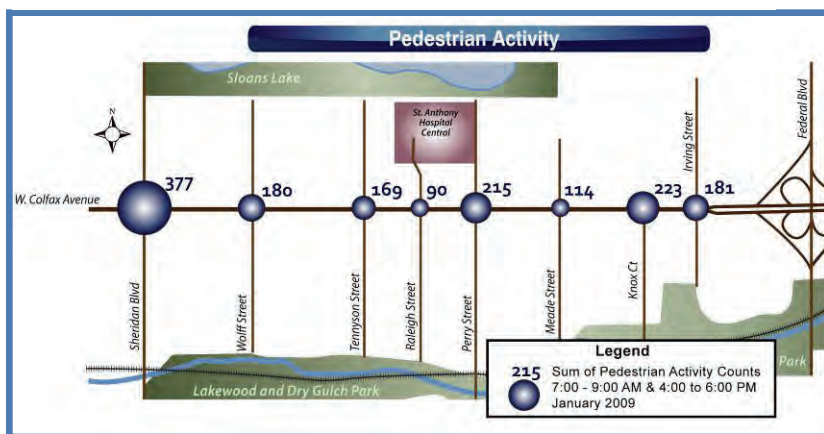
and new long-life pavement markings. Some localized drainage problems still exist at the Irving Street and Yates Street intersections.



Pedestrians and Bicyclists

Pedestrian activity was recorded at each signalized intersection along the corridor from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. Figure 9 illustrates the amount of pedestrian activity at each intersection during this time period. The corridor exhibits a “non-dumbbell” effect, meaning there is a lot of pedestrian activity through-out the corridor and the activity is not heavily weighted on both ends of the corridor.

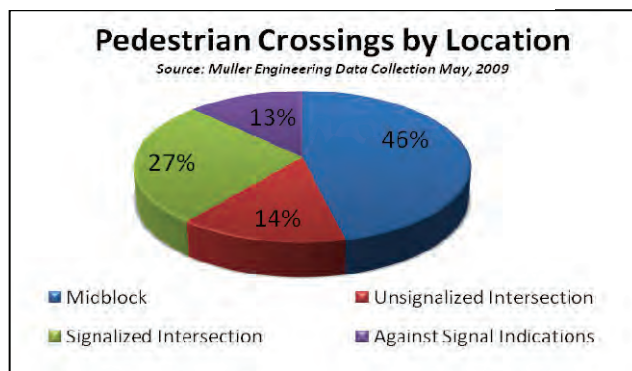
Figure 9: Pedestrian Activity on West Colfax



The Sheridan Boulevard intersection does have the highest amount of activity, which is largely due to pedestrians transferring between bus routes on Colfax Avenue (Route 16/16L) and Sheridan Boulevard (Route 51). Perry Street and Knox Court also have a fair amount of pedestrian activity related to bus transfers (Route 49) and school crossings, respectively.

Additional field observations were completed to measure the amount of midblock pedestrian crossings that occur along the corridor. Data was collected during the early afternoon hours of May 13 and May 14, 2009. Based on those observations, it was found that 46-percent of pedestrian crossings occurred at midblock locations. Of the 41-percent of pedestrians that crossed at a traffic signal, approximately one-third of those pedestrians crossed against the signal indications.

Figure 10: Pedestrian Crossings by Location



An analysis of pedestrian LOS was also completed to assess the current mobility for pedestrians along West Colfax. For pedestrians crossing West Colfax at signalized intersections, the average traffic signal delay is 40 seconds. Based on LOS criteria presented in the Highway Capacity Manual 2000, and shown in Table 2 below, this amount of delay is at the threshold between LOS D and E, which results in a high level of non-compliance because pedestrians often cross against the signal or decide to cross at unsignalized (midblock) locations, putting themselves at further risk of conflicts with vehicles.

Table 2: Level-of-Service Criteria for Pedestrians at Signalized Intersections

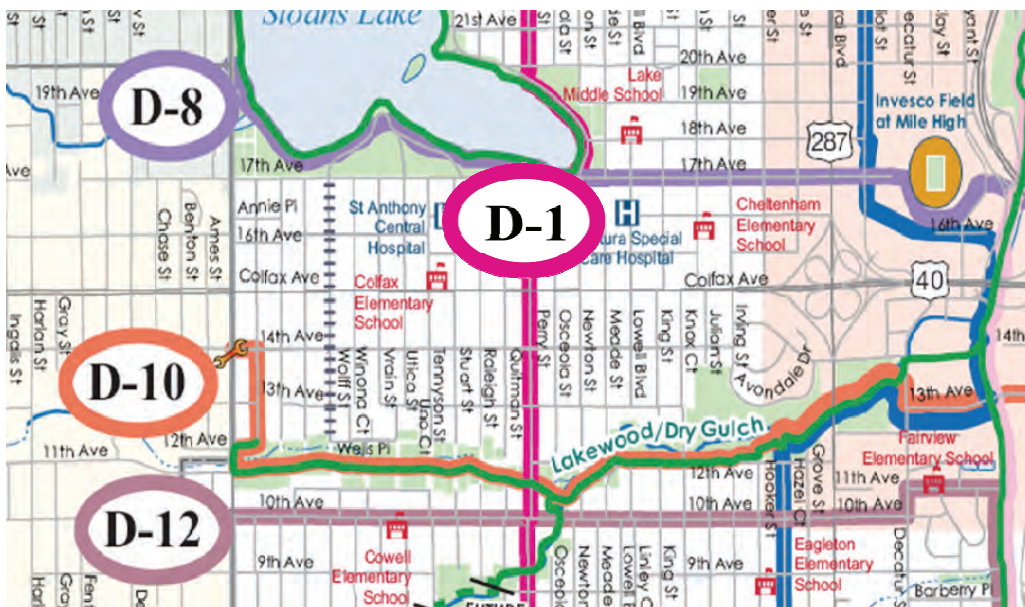
EXHIBIT 18-9. LOS CRITERIA FOR PEDESTRIANS AT SIGNALIZED INTERSECTIONS

LOS	Pedestrian Delay (s/p)	Likelihood of Noncompliance
A	< 10	Low
B	≥ 10-20	
C	> 20-30	Moderate
D	>30-40	
E	> 40-60	High
F	> 60	Very High

Source: Highway Capacity Manual 2000, Transportation Research Board

Bicycle data was also collected for bike travel along and crossing West Colfax Avenue. Very few bicyclists were observed in the corridor during the a.m. and p.m. peak periods. Bicyclists make up just five percent of the total amount of pedestrian-bicycle activity. Figure 11 shows the existing bike routes within the study area. The D-8 route along 17th Avenue and the D-10 route along Lakewood Dry Gulch are parallel routes that offer a less congested alternative than West Colfax. The D-1 route on Perry Street is the only north-south bike route in the study area; however, no bicyclists were observed on that route during the four hours (7-9 a.m. and 4-6 p.m.) when data were collected.

Figure 11: Denver Bicycle Routes near West Colfax Avenue



Pedestrian-Bicycle Safety

Pedestrian-vehicle and bicycle-vehicle collision data from 2004 through 2008 was compiled from the City of Denver’s crash data base. There were a total of 69 crashes during the five year period. Figure 12 shows the location of these crashes. Both the Sheridan Boulevard and Irving Street intersections had the highest number of crashes during this period. At unsignalized locations, the segment between Knox Court and Meade Street had the highest number of crashes.

Eighty percent of the pedestrian/bicycle crashes along West Colfax Avenue involved pedestrians and 20% involved bicyclists. The data does indicate that pedestrian and bicycle crashes are trending downward. Between 2004 and 2006, there were an average of 16 crashes per year, and in 2007 and 2008 there have been 11 and 10 crashes, respectively.

Figure 12: Location of Pedestrian-Vehicle and Bicycle-Vehicle Crashes on West Colfax



Pedestrian Infrastructure

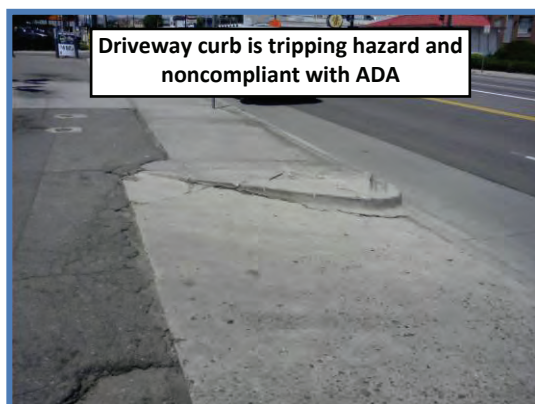
The majority of West Colfax includes attached sidewalk that varies in width from 4 feet to 10 feet. In many locations, utility poles, signs and driveways obstruct the sidewalk walking path and present obstacles to visually impaired pedestrians and those in wheel chairs. In 2004, when West Colfax was resurfaced by CDOT, many of the curb ramps were replaced and miscellaneous sidewalk repairs were made to correct damaged sidewalk segments; however, there are still a number of locations throughout the corridor where sidewalk width is substandard and/or obstructions to pedestrian travel exist.

For pedestrians crossing West Colfax Avenue, marked crosswalks and pedestrian signal indications are located at each of the signalized intersections. Accessible curb ramps are also present at each of these locations. Pedestrian signal indications at Irving Street and at Sheridan Boulevard include “countdown” timers, which have been shown to have a positive impact on pedestrian understanding of signal indications. All other pedestrian signals in the corridor use person/hand signal indications without a countdown timer.



At several driveway locations the sidewalk is adversely cross-sloped where it intersects with the driveway. Utility poles are also often present in many sidewalk segments, which limit the effective width of the sidewalk and hinder pedestrian mobility. Figure 13 below shows several examples of substandard pedestrian conditions that have an adverse impact on pedestrian mobility.

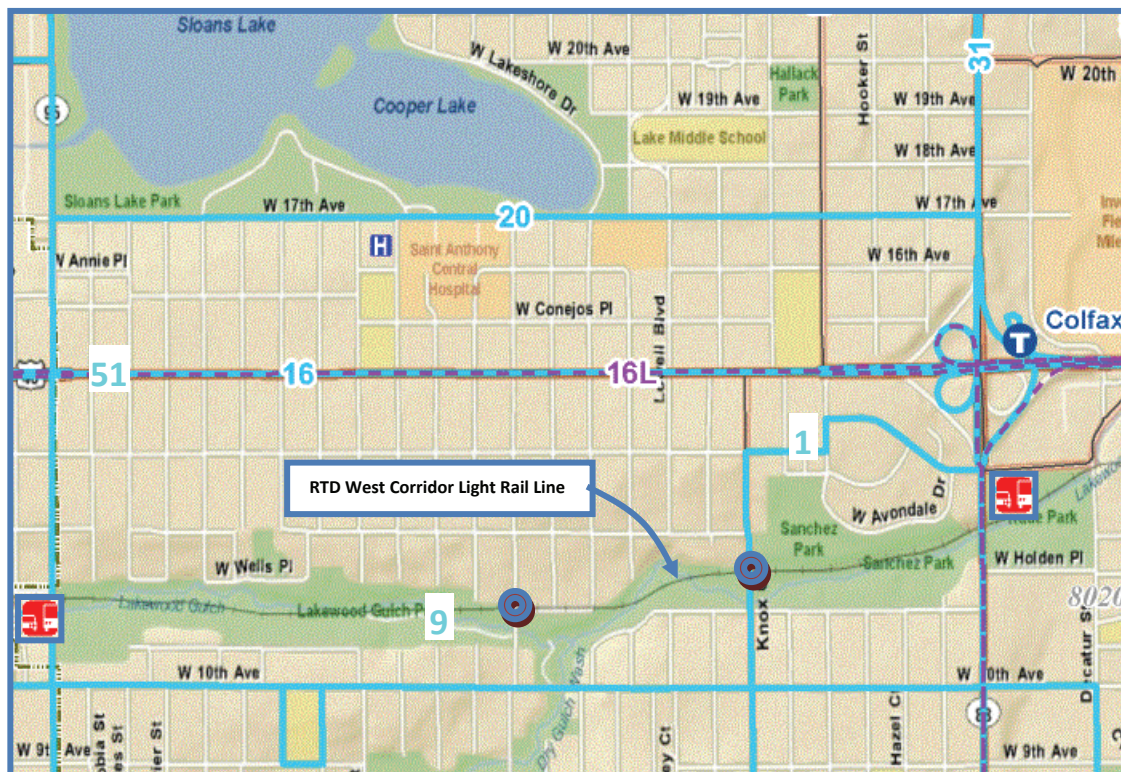
Figure 13: Examples of Poor Sidewalk Condition along West Colfax



Transit

Figure 14 shows the bus routes that currently serve the West Colfax corridor. The Route 16 provides local service at 15-minute headways on weekdays from approximately 4:30 a.m. until 10:00 p.m., and at 30-minute headways from 10:00 p.m. until 1:00 a.m. The Route 16L offers limited stop service (at Sheridan Boulevard, Perry Street and Irving Street) from 5:45 a.m. to 9:30 p.m. Service headways are at 15-minute intervals during the morning and evening peak periods and at 30 minute headways the remainder of the day. There are also several crossing bus routes within the study area including routes 1, 20, 31, and 51.

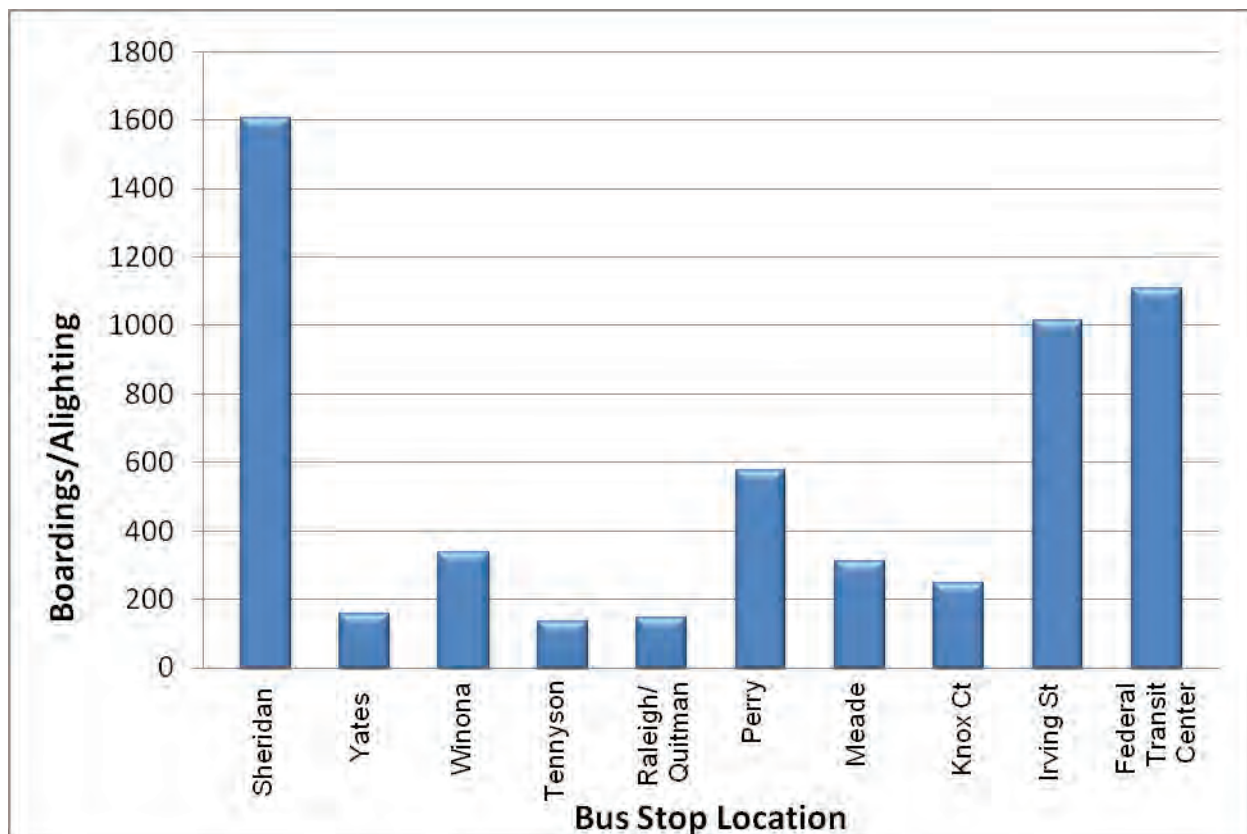
Figure 14: RTD Bus Routes in the Study Area



Ridership data provided by the Regional Transportation District (RTD) shows that bus service accounts for approximately 4,000 person trips per day along West Colfax. This represents about 10-percent of the daily total person-trips in the corridor and 23-percent of trips during the a.m. and p.m. peak hours. Figure 15 below shows the daily bus stop activity along West Colfax Avenue. The highest bus stop activity occurs where crossing bus routes intersect West Colfax at Sheridan Boulevard, Perry Street and Irving Street (Note: The 49 bus route (Perry Street) was recently cancelled by RTD so bus stop activity at Perry Street will decrease in the future as a result).

The West Corridor light rail line, located three blocks south of West Colfax Avenue, is currently under construction and scheduled to open in early 2013. The light rail line will run through Lakewood Gulch Park and will include stations at Sheridan Boulevard, Perry Street, Knox Court and Federal Boulevard. The stations at Sheridan and Federal will be park-n-ride stations while the stations at Perry and Knox will be walk-up stations. The West Corridor light rail line is approximately 13-miles in length and will connect downtown Denver to the Jefferson County Government Center in Golden.

Figure 15: West Colfax Bus Stop Activity

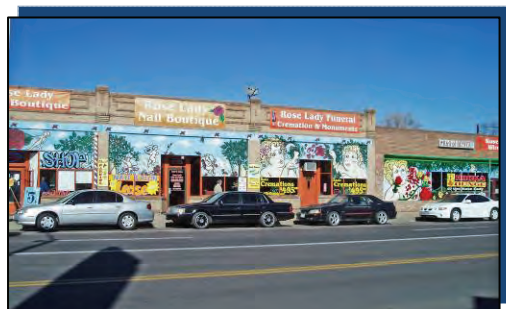


Bus shelters are currently provided at Sheridan Blvd (WB), Raleigh Street (WB), Meade Street (EB), Knox Court (EB) and Irving Street (EB and WB). All shelters include benches, system maps and schedule information, and all are in good condition.

Parking and Land Use

The supply of parking along West Colfax Avenue is constrained by the limitation of on-street parking along only the north side of Colfax and also by the “no parking” time restriction during the hours of 4:00 – 6:00 p.m., weekdays. During this time, the curb lane becomes a travel lane for westbound traffic and parking is prohibited. This shared-use of the curb lane creates a condition where the curb lane is poorly utilized for both parking and moving traffic. The lack of parking usage is likely due to parking not being

available during the late afternoon peak retail hours and also to potential ambiguity among business patrons regarding the intended function of the shared lane. Additionally, some patrons may have concerns that their vehicle could be at risk of a collision given the temporary nature of the parking lane. A number of parcels have no



off-street parking and must rely solely on the availability of on-street parking along West Colfax or the side streets.

The study area for the West Colfax Corridor Transportation Study encompasses approximately 440 acres. The study area includes a wide variety of land uses, including residential, lodging, commercial, retail, office, industrial and institutional uses. The Colfax corridor comprises the majority of the commercial and institutional activities of this area.

In 2007 the majority of parcels along West Colfax were re-zoned from General Business District (B-4) to Main Street zoning (MS-1, MS-2 and MS-3). The main street zoning promotes sustainable development of Denver’s commercial corridors. It intends to *improve the function and appearance of commercial streets and enhance the convenience, ease and enjoyment of transit use, walking, shopping and public gathering*. Figure 16 shows the extent of the Main Street zoning limits within the study area.

Figure 16: Current Zoning



Future Traffic Operations

Future traffic conditions were evaluated on West Colfax Avenue by applying appropriate growth factors and modeling two different lane scenarios:

- A. Two eastbound and three westbound through lanes (current configuration)
- B. Two eastbound and two westbound through lanes with on-street parking

Scenario A was modeled for the future (2030) p.m. peak period and scenario B was modeled for both the 2030 a.m. and p.m. peak period.

Based on the results of previous studies for the corridor, several traffic projections were obtained to evaluate the range of future traffic forecasts. These included forecasts from the Denver Regional Council of Governments (DRCOG), RTD’s West Corridor Environmental Impact Statement (2004), CDOT’s US 40 20-year growth factor, and Denver’s Strategic Transportation Plan (October, 2008). Table 3 below shows the differing traffic forecasts from each of these sources and the 2030 forecasted average weekday traffic (AWDT).

Table 3: Traffic Growth Forecasts for West Colfax between Federal and Sheridan Boulevards

Source	Annual Growth Rate	2008 - 2030 Growth Factor	2030 Forecasted AWDT
Existing AWDT (CCD Count, Oct. 2008)	N/A	N/A	31,100
West Corridor EIS (West Colfax at Pierce St)	-0.29%	-6.4%	29,100
Denver Strategic Transportation Plan (<u>Vehicle Trips</u>)	0.00%	0.0%	31,100
CDOT 20-Year Growth Factor	0.70%	16.5%	36,200
Denver Strategic Transportation Plan (<u>Person Trips</u>)	0.79%	17.4%	36,500
DRCOG Regional Travel Demand Model	0.82%	18.0%	36,700
CDOT Historic Traffic Data Tread line	1.35%	29.7%	40,300

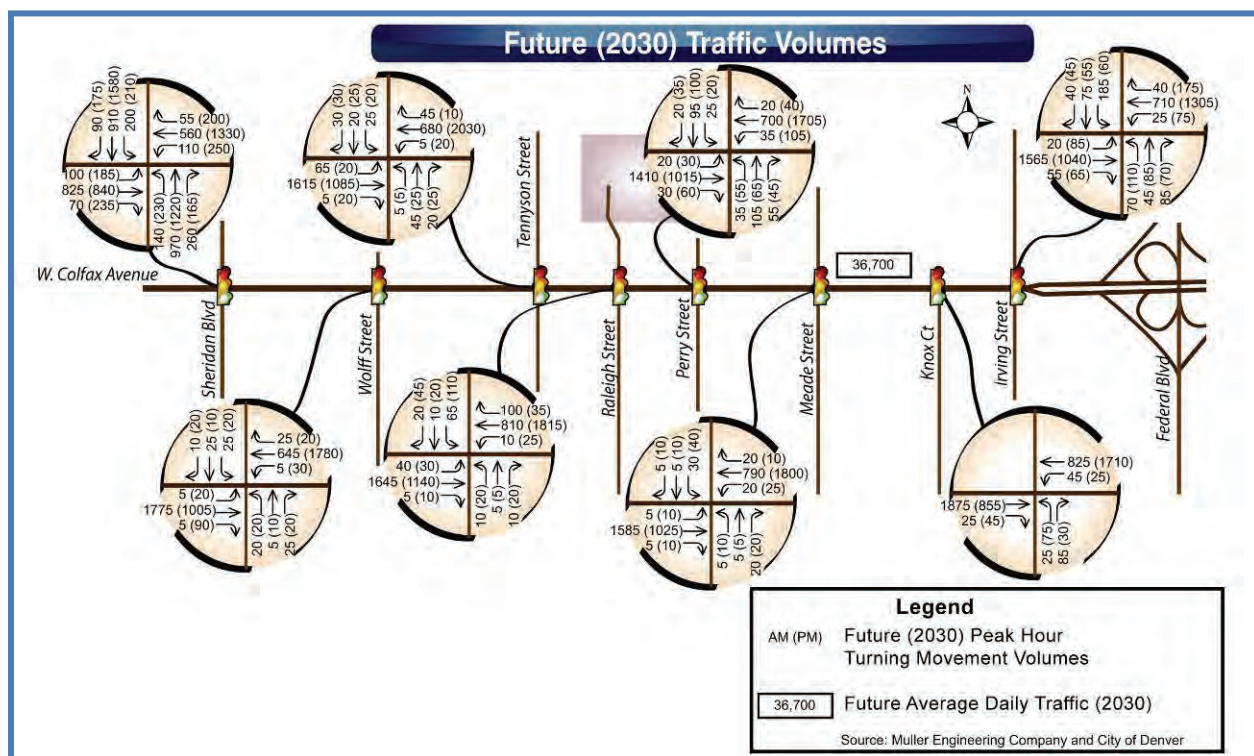
The DRCOG growth rate of 18.0% was selected because it presented a reasonably conservative forecast and also offered consistency with the regional travel demand model. Key assumptions applied by DRCOG for their traffic projections include:

- ✦ West Colfax as a six-lane facility
- ✦ Federal Boulevard widened to six-lane facility
- ✦ Reconstruction of Federal Boulevard/US 6 interchange
- ✦ West Corridor Light Rail Transit operational in 2013

DRCOG’s 2030 traffic projections for Sheridan Boulevard north of West Colfax also showed an 18-percent increase in AWDT. South of West Colfax, the 2030 traffic forecasts for Sheridan showed a 17-percent increase. Based on the small variation between West Colfax forecasts and those on Sheridan Boulevard, a system-wide increase of 18-percent traffic growth was used for purposes of modeling

future traffic conditions and evaluating alternatives. Figure 17 shows the resulting 2030 intersection traffic volumes for the a.m. and p.m. peak hours. Westbound traffic volumes in the p.m. peak hour vary from approximately 1,300 to 2,000 vph. The locations with higher volumes occur at intersections that have a small amount of cross-street and, therefore, have excess capacity to carry the higher traffic flow. Eastbound traffic volumes in the a.m. peak hour follow a similar pattern, and range from about 800 to 1,900 vph.

Figure 17: 2030 A.M. and P.M. Peak Hour Traffic Volumes



Traffic Operations Analysis

The above traffic volumes were applied to the previously mentioned lane scenarios and the resulting traffic operations were modeled using Trafficware’s Synchro software application. Tables 4 and 5 show the results of the 2030 traffic analysis.

Table 4: 2030 Traffic Operations Analysis (Scenario A: 3 Lanes WB and 2 Lanes EB)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS ¹	Delay (sec/veh)	v/c ²	LOS ¹	Delay (sec/veh)	v/c ²
Sheridan/Colfax	E	60.1	1.00	F	147.5	1.36
Wolff/Colfax	A	5.9	0.70	A	2.9	0.49
Tennyson/Colfax	A	4.9	0.64	A	7.9	0.73
Raleigh/Colfax	A	4.2	0.69	A	8.6	0.77
Perry/Colfax	B	10.3	0.68	A	8.6	0.74
Meade/Colfax	A	2.7	0.62	A	6.4	0.65
Knox Court/Colfax	A	8.0	0.77	A	5.4	0.64
Irving/Colfax	E	64.5	1.01	B	16.9	0.83

¹Level of Service based on definition in [Highway Capacity Manual 2000](#).

²Ratio of critical movement volume to critical movement capacity.

Table 5: 2030 Traffic Operations Analysis (Scenario B: 2 Lanes WB and 2 Lanes EB)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS ¹	Delay (sec/veh)	v/c ²	LOS ¹	Delay (sec/veh)	v/c ²
Sheridan/Colfax	E	60.1	1.00	F	148.9	1.36
Wolff/Colfax	A	5.9	0.70	A	2.1	0.49
Tennyson/Colfax	A	4.8	0.64	A	8.7	0.87
Raleigh/Colfax	A	4.1	0.69	B	11.1	0.89
Perry/Colfax	B	10.2	0.68	A	10.0	0.86
Meade/Colfax	A	2.7	0.62	A	9.4	0.78
Knox Court/Colfax	A	8.1	0.77	A	7.9	0.76
Irving/Colfax	E	64.5	1.01	B	18.1	0.81

¹Level of Service based on definition in [Highway Capacity Manual 2000](#).

²Ratio of critical movement volume to critical movement capacity.

As indicated by these tables, the resulting traffic operations for the two scenarios are very similar despite the reduction of westbound travel lanes from three to two. The following reasons are attributable:

1. The third westbound travel lane carries less than 10-percent of the westbound traffic flow during the p.m. peak period.
2. During the a.m. peak period, the third westbound travel lane serves as a parking lane in both scenarios.
3. Scenario A and B include the same lane configuration at the intersection of Sheridan because the parking lane ends at Wolff Street in Scenario B.
4. The intersections from Tennyson to Irving Street are well-enough under-capacity such that a reduction in lane capacity does not appreciably change the intersection delay or intersection level of service.



The above analysis shows that conversion of the third westbound travel lane from a part-time parking/travel lane to a full-time parking lane will have little, if any, impact on traffic flow during the 2030 a.m. and p.m. peak hour traffic operations. The only intersection that will experience a reduction in LOS is the Raleigh Street intersection during the p.m. peak period, when the LOS drops from A to B. The Sheridan Boulevard intersection will operate at LOS E/F in either scenario due to the high volume of left-turning traffic and the absence of dual-left turn lanes. The Irving Street intersection will also operate at LOS E during the a.m. peak period. This LOS condition is not a result of insufficient capacity for westbound traffic, but rather a result of the high volume of pedestrian crossings during the exclusive pedestrian phase at Irving, combined with the high volume of eastbound traffic flow in the a.m. peak period.

Alternatives Development and Analysis

Preliminary Options

Based on the analysis of existing and future conditions, several alternatives were developed to address identified issues along the corridor. Four preliminary options were presented at the first public meeting based on initial input received from the community. Three other preliminary options were also developed after the public meeting. All of the options included two through-lanes in each direction; and all options, except Option 4, included on-street parking. A brief description of the seven preliminary options is provided below:

- Option 1:** Convert the existing westbound curb lane from a travel/parking lane to a full-time parking lane along with a continuous median from Irving St. to Sheridan Blvd.
- Option 2:** Install a narrow median and on-street parking on both sides. Allow left-turn access only at signalized intersections.
- Option 3:** Install a narrow median with on-street parking on both sides and allow left-turn access at all intersections.
- Option 4:** Omit on-street parking and provide a continuous left turn lane and wider sidewalks.
- Option 5:** Provide a continuous left turn lane, wider sidewalks, and selective on-street parking.
- Option 6:** Provide parking on both sides and allow left-turn access at all intersections.
- Option 7:** Alternate on-street parking between the north and south sides and install intersection “cigar” medians.

Evaluation Screening Criteria

The above options were evaluated based on three core criteria: Safety, Mobility, and Societal and Community Impacts. Specific scoring criteria tied to each of these core areas included:

Safety

- Improve safety for pedestrians crossing West Colfax Avenue
- Improve vehicular safety
- Meet or exceed City and CDOT transportation standards

Mobility

- Preserve vehicular mobility
- Improve pedestrian sidewalk corridors along West Colfax Avenue
- Accommodate transit (bus) service

Societal and Community Impacts

- Enhance land use and redevelopment opportunities
- Minimize maintenance costs
- Enhance corridor appearance
- Maintain consistency with previous planning efforts
- Provide context sensitive solutions
- Minimize Capital Cost

Each of the preliminary options were rated on an equivalent scale of 1 through 5 with 1 being “very poor” and 5 being “very good”. None of the preliminary options were carried forward due to poor scoring against the evaluation criteria and/or fatal flaws. Table 6 below shows the evaluation criteria rating for each preliminary option.

Table 6: Evaluation of Preliminary Options

Screening Criteria	Preliminary Options Considered and Discarded						
	Option 1 North Side Parking with Continuous Median	Option 2 BID Concept A Parking on Both Sides with 2' Raised Median	Option 3 BID Concept B Parking on Both Sides with Median and Lefts	Option 4 Four Lanes w/ TWLTL, Wide Sidewalks & No Parking	Option 5 Same as 4 but with Pkg. Where No Off-Street Parking Exists	Option 6 Same as Option 3 But with Painted Median	Option 7 Alternate Parking N & S Sides with "Cigar" Medians
SAFETY							
Improve Safety for Pedestrians Crossing W. Colfax	●	○	○	○	○	○	○
Improve Vehicular Safety	●	○	○	○	○	○	○
Meet or Exceed City and State Transportation Standards	●	○	○	○	○	○	○
MOBILITY							
Preserve Vehicular Mobility	○	○	○	○	○	○	○
Improve Pedestrian Sidewalk Corridors Along W. Colfax	○	○	○	○	○	○	○
Accommodate Transit	○	○	○	○	○	○	○
SOCIETAL AND COMMUNITY IMPACTS							
Enhance Land Use and Redevelopment Opportunities	○	○	○	○	○	○	○
Minimize Maintenance Costs	○	○	○	○	○	○	○
Enhance Corridor Appearance	○	○	○	○	○	○	○
Consistency with Previous Plans	○	○	○	○	○	○	○
Provide Context Sensitive Solutions	○	○	○	○	○	○	○
Minimize Capital Cost	○	○	○	○	○	○	○
Alternative Carried Forward?	No	No	No	No	No	No	No
Primary Reason for Failure	Capital Cost & No Parking on South Side	Doesn't meet CCD/CDOT standards	Doesn't meet CCD/CDOT standards	Doesn't meet project goal of on-street parking	Doesn't meet project goal of on-street parking	Poor Safety and Mobility	Poor Safety

○ Very Poor ● Poor ◐ Fair ● Good ● Very Good

Final Alternatives

The next step of the alternatives development process included refining several alternative concepts to develop final alternatives to be evaluated against the scoring criteria. With the exception of the “No Action” alternative, all of the final alternatives included two travel lanes in each direction and on-street parking. The alternatives differed in the following manner:

- Alternative 1:** Provide on-street parking on the south side from Julian Street to Perry Street and then on the north side from Quitman Street to Wolff Street.
- Alternative 2a:** Alternate parking from the north side to the south side and then back to the north side from Knox Ct. to Wolff Street. Provide a continuous median along Colfax.
- Alternative 2b:** Same as Alternative 2a but include inset parking where right-of-way is available.
- Alternative 3a:** Provide parking only on the north side and no medians
- Alternative 3b:** Provide parking only on the south side and no medians
- Alternative 4a:** Provide on-street parking on the south side between Julian Street and Lowell Boulevard and between Quitman and Tennyson Streets, and on the north side between Meade and Perry Streets and between Utica and Wolff Streets.
- Alternative 4b:** Same as Alternative 4a but with a continuous median along West Colfax.

These alternatives were evaluated against the same criteria as the preliminary options. The evaluation of the Final Alternatives is shown in Table 7.

Table 7: Evaluation of Final Alternatives

	Final Alternatives Considered							
	No Action	Alternative 1 Alternate Parking 1/2 N & 1/2 S	Alternative 2a Alternate Parking N-S-N and add Medians	Alternative 2b Same as 2a Plus Inset Parking	Alternative 3a Parking on North Side Only (No Medians)	Alternative 3b Parking on South Side Only (No Medians)	Alternative 4a Alternate Parking N-S-N-S Plus Streetscape	Alternative 4b Alternate Parking N-S-N-S Plus Medians
SAFETY								
Improve Safety for Pedestrians Crossing W. Colfax	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Improve Vehicular Safety	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Meet or Exceed City and State Transportation Standards	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
MOBILITY								
Preserve Vehicular Mobility	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Improve Pedestrian Sidewalk Corridors Along W. Colfax	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Accommodate Transit	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
SOCIETAL AND COMMUNITY IMPACTS								
Enhance Land Use and Redevelopment Opportunities	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Minimize Maintenance Costs	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Enhance Corridor Appearance	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Consistency with Previous Plans	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Provide Context Sensitive Solutions	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Minimize Capital Cost	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Pros:	1. No capital cost	1. Minimal lane shift tapers 2. Provides some parking on both sides of Colfax	1. Improves Pedestrian Safety 2. Improves Vehicular Safety 3. Provides some south side parking	1. Improves Pedestrian Safety 2. Improves Vehicular Safety 3. Provides some south side parking	1. Can be quickly implemented 2. Low Cost 3. Low Maintenance Cost	1. South side parking provides buffer between sidewalk and traffic 2. Low maintenance costs	1. Provides best distribution of parking along corridor 2. Improves pedestrian mobility along Colfax 3. Enhances land usage 4. Enhances corridor appearance	1. Provides best distribution of parking along corridor 2. Improves pedestrian mobility along Colfax 3. Enhances land usage 4. Improves pedestrian safety 5. Enhances corridor appearance
Cons:	1. Does not address pedestrian safety, pedestrian mobility, redevelopment opportunities or corridor appearance	1. Does not provide equity along corridor 2. Does not address pedestrian safety 3. Does not enhance corridor appearance	1. Parking not very well dispersed along corridor 2. Medians may be a maintenance issue 3. High Capital Cost	1. Parking not very well dispersed along corridor 2. Medians may be a maintenance issue 3. High Capital Cost	1. No south side parking 2. Does not enhance corridor appearance 3. Does not address Pedestrian Safety 4. Future parking changes may be difficult as redevelopment occurs	1. No north side parking 2. Does not enhance corridor appearance 3. Does not improve pedestrian crossing safety 4. Eliminates existing on-street parking spaces	1. Does not improve pedestrian safety 2. Does not improve vehicular maintenance issue	1. Capital Cost 2. Medians may be a maintenance issue
Alternative Recommended?	No	No	No	No	No	No	Yes (Preferred Alt.)	No

Very Poor
 Poor
 Fair
 Good
 Very Good

The final alternatives presented several variations in alternating the parking between both sides of West Colfax. During the preliminary options evaluation, the project team had determined the existing 60-foot curb to curb width of West Colfax was not sufficiently wide to accommodate two travel lanes in each direction, a left-turn lane and parking on both sides. Thus development of the final alternatives focused on providing variations of alternating parking between the north side and south side of West Colfax, as well as including two alternatives with parking on just one side.

Alternating parking provided the benefit of better parking distribution between south and north side land uses and also created the visual appearance of a corridor with “double-loaded” on-street parking. The alternating parking from one side of West Colfax to the other required shifting the alignment of the through traffic lanes in a safe manner. Gradual transition taper rates of 30:1 were used to eliminate abrupt shifts in the alignment. Alternatives with a continuous median scored lower in the evaluation primarily due to both the added capital cost of median construction and the ongoing maintenance cost associated with medians. The evaluation of the final alternatives resulted in Alternative 4a being selected as the Preferred Alternative because it provided the best distribution of parking without creating a “serpentine” alignment for through traffic on West Colfax.

The Preferred Alternative includes four segments of on-street parking from Julian to Wolff Street. The on-street parking segments alternate between the south side and the north side in 3-block segments, thereby providing an equitable amount of parking between the north and south side of West Colfax. The precise location of parking within these segments will need to be determined during final design and may change slightly based on access considerations, sight distance, and other miscellaneous parking constraints. Other elements of the Preferred Alternative include:

- ✦ “Gateway” medians between Sheridan and Yates Street and between Irving Street and Knox Court.
- ✦ Undergrounding of overhead utility lines
- ✦ Additional street lighting
- ✦ Narrowing of the crosswalk width at Irving Street
- ✦ Replacement of damaged sidewalk and minor sidewalk widening where right-of-way is available
- ✦ Installation of pedestrian “countdown” signal indications
- ✦ Minor drainage improvements associated with new curb and gutter construction

Recommendations and Implementation

The West Colfax Corridor Transportation Study included a detailed analysis of existing and future transportation conditions. The results of that analysis showed that the existing westbound shared parking/travel lane is under-utilized as both a parking lane and during its operation as a through travel lane from 4:00 to 6:00 p.m. The analysis also showed that removing the through travel lane operation would have very little impact on peak period traffic flow in year 2030. Based on this analysis, several alternatives were developed that included two through lanes in each direction, a left turn lane, and various on street parking configurations. The evaluation of those alternatives resulted in Alternative 4A being selected as the preferred alternative. The recommendations of Alternative 4A include:

- ✦ Two westbound and two eastbound through lanes.
- ✦ Continuous two-way left-turn lane.
- ✦ On street parking on the north side of West Colfax between Meade and Perry Streets and between Utica and Wolff Streets.
- ✦ On-street parking on the south side of West Colfax between Julian Street and Lowell Boulevard and between Quitman and Tennyson Streets.
- ✦ “Gateway” medians between Sheridan Boulevard and Yates Street and between Irving Street and Knox Court.
- ✦ Undergrounding of overhead utility lines (Xcel Franchise agreement).
- ✦ Additional street lighting.
- ✦ Irving intersection improvements which will ultimately narrow the crossing distance.
- ✦ Replacement of damaged sidewalk, and minor sidewalk widening associated with construction and where right-of-way is available.
- ✦ Installation of pedestrian “countdown” signal indications at Knox Ct, Meade St, Perry St, Raleigh St, Tennyson St and Wolff St.
- ✦ Minor drainage improvements associated with new curb and gutter construction.

The estimated cost for these improvements is \$2,004,000. Figure 18 provides a graphic illustration of the preferred alternative.

The City and County of Denver has secured funding for implementation of the Preferred Alternative. The project will be funded through the City’s Better Bond program and in partnership with the Colorado Department of Transportation. Design of the proposed improvements is scheduled to occur in 2010 and construction is scheduled to take place in 2011.



Conclusions and Next Steps

The West Colfax Corridor Transportation Study evaluated existing and future transportation conditions along West Colfax from Federal to Sheridan Boulevards. Conclusions from the study include:

1. The analysis of existing traffic conditions showed that the current westbound lane configuration, which includes a part-time parking/part-time travel lane, is not efficiently utilized. Traffic counts that were conducted as part of this study indicate the westbound curb lane carries less than 10-percent of the westbound traffic during the p.m. peak period.
2. Analysis of future traffic conditions indicates that traffic volumes in the corridor will increase by approximately 18-percent between 2010 and 2030. The projected growth in traffic can be accommodated with a five-lane street section (2 eastbound, 2 westbound and 1 left turn lane) between Irving Street and Wolff Street. Between Wolff Street and Sheridan Boulevard, three westbound lanes are required for both existing and future conditions.
3. There is strong community support within the corridor to provide on-street parking during all hours of the day, preferably on both sides of West Colfax Avenue.
4. A total of 15 alternatives were evaluated as part of this study. The evaluation of the alternatives considered criteria related to safety, mobility and community impacts. The Preferred Alternative was ranked the highest among the 15 alternatives when measured against the evaluation. The Preferred Alternative was presented at the final public meeting and was strongly supported by the citizens present at the meeting.

Next Steps

Preliminary design of the Preferred Alternative is underway and is scheduled to continue through the summer of 2010. Final design is scheduled for completion in the fall of 2010 with construction to follow in 2011.

Figure 18a: Preferred Alternative – Sheridan Boulevard to Wolff Street



Note: The exact location of on-street parking and the amount of spaces to be provided are dependent on access

Legend





-  Existing Signalized Intersection
-  Parking
-  RTD Bus Stop
-  Raised Median

Figure 18d: Preferred Alternative – Perry Street to Lowell Boulevard



Figure 18e: Preferred Alternative – Lowell Boulevard to Irving Street

