



WESTMINSTER | EST. 1870 |

72nd AVENUE

C O R R I D O R S T U D Y

NOVEMBER 2023

EXISTING CONDITIONS REPORT

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Existing Conditions

1.1 Introduction

Project Purpose

The 72nd Avenue Corridor Study is to evaluating opportunities for enhancing multimodal infrastructure to deliver increased safety and comfort for people walking, biking, riding transit, and driving along, to, and from 72nd Avenue between Pierce and Zuni Streets. The project is also identifying opportunities to enrich public spaces, recommend appropriate enhancements based on the variety of character areas present and make 72nd Avenue into a gateway for the Westminster Station Area that is welcoming to residents, commuters and visitors alike.

Existing Conditions Process

The first phase of the planning process comprised an analysis of existing conditions, which included review of previous relevant planning documents from the City of Westminster, a physical assessment, a mobility and operational assessment and a review of safety data, which culminated in a comprehensive needs assessment. Simultaneously, targeted engagement with business and property owners, the general public and a community advisory committee informed the needs analysis.

1.2 Existing Plans Summary

Summary

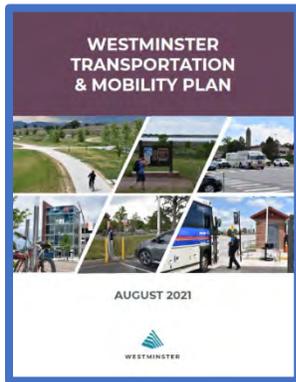
The project team reviewed City of Westminster plans relevant to the study area to inform the existing conditions analysis. The goal of this review is to understand priorities and principles related to multi-modal transportation planning and garner important recommendations to inform the future of the 72nd Avenue corridor.

Westminster Station Area Specific Plan (2017)



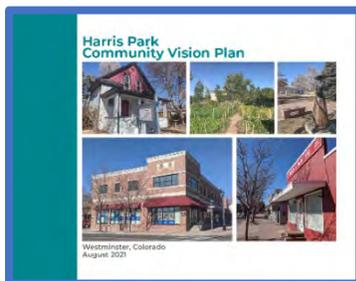
- Calls for enhancing pedestrian crossings, plus reevaluating crossing times along 72nd Avenue given it acts as a “northern gateway” to Westminster Station.
- References the 2009 72nd Avenue Streetscape Plan (Utica Street to Meade Street) which called for wider sidewalks, tree lawns/street trees, decorating lighting, a planted median between Raleigh Street and Newton Street and enhanced crossings.

Westminster Transportation & Mobility Plan (2021)



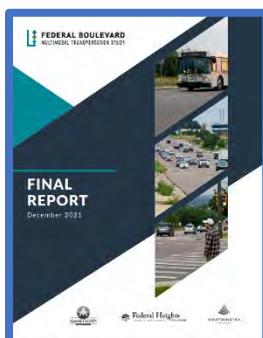
- Identifies 72nd Avenue as one of seven priority transit corridors recommended for stop and station enhancements.
- The 72nd Avenue corridor is noted as an area of high pedestrian demand, particularly the areas directly east and west of Federal Boulevard.
- Mapped future recommended transportation improvements:
 - *Near Term Projects (0-5 years)*: Conduct a corridor study, implement traffic signal infrastructure and ITS signal coordination improvements and evaluate bus stop amenity upgrades.
 - *Mid-Term Projects (6-10 years)*: Complete the missing sidewalk between Clay Street and Eliot Street (south side).
 - *Long-Term Projects (11+ Years)*: Upgrade on-street bike lanes to buffered bike lanes and widen sidewalks to be multiuse paths.

Harris Park Community Vision Plan (2021)



- Calls for installing intersection improvements and gateway elements (signage, landscaping) along 72nd Avenue at Bradburn Boulevard and Lowell Boulevard.
- Calls for detached sidewalks, trees/landscaping and additional lighting in multiple areas along the corridor.
- Calls for an enhanced connection to the Little Dry Creek Trail along 72nd Avenue between Bradburn Boulevard and Newton Street.
- Calls for speed mitigation measures along the corridor.

Federal Boulevard Multimodal Transportation Study (2021)



- The 72nd Avenue stops are the busiest within the entire Federal Boulevard study area (52nd Avenue to 120th Avenue).
- Within “Zone A” (52nd Avenue to 73rd Avenue), a new west-side BRT stop is planned south of the 72nd Avenue intersection, in addition to median refuge islands, red left-turn arrows, and separate turns lanes (where appropriate).
- 72nd Avenue is noted as the cross-street experiencing the highest number of KSI pedestrian crashes within Zone A.
- Federal Boulevard between 72nd Avenue and 76th Avenue is an Opportunity Zone, given the adjacency to the RTD B-Line route.
- 72nd Avenue stops have the longest bus dwell times in the study area – a stop’s physical infrastructure, passenger loading needs (such as wheelchairs), and rider questions impact dwell time.

1.3 Physical Assessment

1.3.1 Land Use and Zoning

Future Framework

The City of Westminster’s 2040 Comprehensive Plan (approved in March 2023) outlines a future-thinking framework to support thriving communities citywide. Chapter 4: Transportation, Mobility and Connections focuses on transportation-supportive goals and policies. Two strong connection and safety-oriented goals bolstering this study’s importance include:

- **Goal TM-1:** Develop a comprehensive multimodal transportation network that includes convenient, safe, and accessible transportation options for all and integrates land use.”
- **Goal TM-3:** Reduce traffic-related deaths and injuries by improving the safety and comfort for all modes of transportation.

An eastern portion of the 72nd Avenue corridor study area (just west of Lowell Boulevard to just east of Federal Boulevard) is considered the Westminster Station neighborhood. The neighborhood’s focal point is Westminster Station, located along Little Dry Creek and the Little Dry Creek Trail (see **Figure 1** below).



Figure 1: Westminster Station Transition Area Framework (City of Westminster 2040 Comprehensive Plan).

Corridor Demographics

Demographics data is from U.S. Census Bureau American Community Survey (ACS) 5 Year Estimates for 2012-2016 and 2017-2021. Population and household data encompasses a ¼ mile radius (buffer) north and south along the corridor study area. Other demographic information for the corridor reflects data from the Block Groups encompassed within the ¼ mile corridor buffer.

Population

Approximately 21,500 people in over 8,000 households live within the ¼ mile buffered corridor study area. The study area accounts for 19% of the City's population and 18% of the households. Median household sizes in the study area are approximately 2.7 persons per household, which is slightly larger than the City's median of 2.46 persons per household.

The median age in the study area (37 years) and in the City (38 years) is about the same, however, the corridor tends to be slightly younger. The exception is the oldest age group of over 75 years. A greater concentration of older seniors can be found in the study area (see **Figure 2** below).

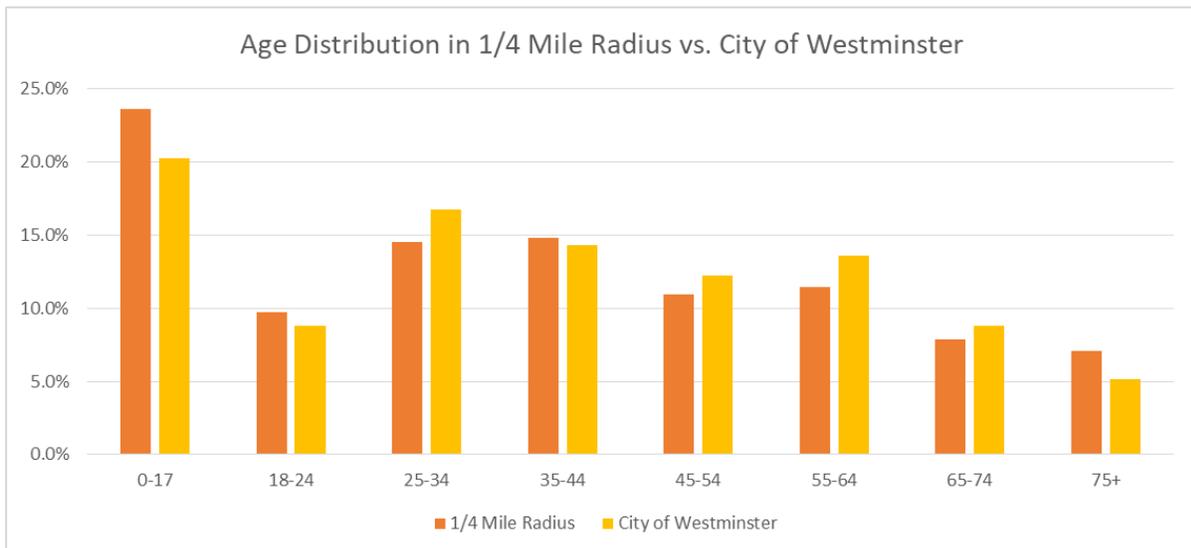


Figure 2: Age Distribution for Corridor Area vs. City of Westminster (2012-2016 and 2017-2021 ACS Data)

Race & Ethnicity

The majority of the City is Non-Hispanic White. The study area is home to a higher percentage of Hispanic or Latino residents compared to the City, at 40% of the study area population compared to 20% citywide (see **Figure 3** below).

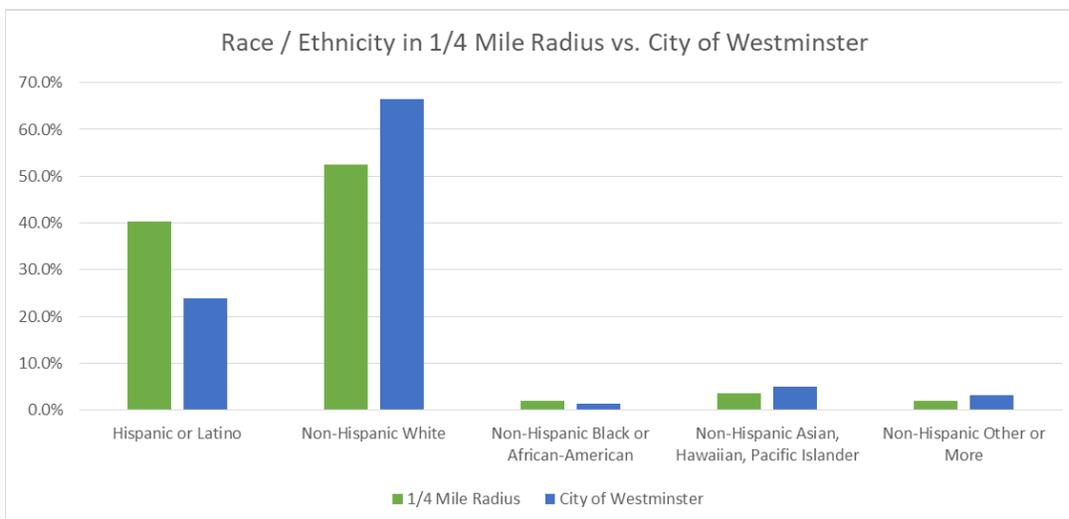


Figure 3: Race and Ethnicity for Corridor Area vs. City of Westminster (2012-2016 and 2017-2021 ACS Data)

Education

Most of the adults (the population aged 25 and over) in the study area and the City have a high school diploma (80-90% of the population). The bachelor's degree attainment rate in the City as a whole is about 40% among adults compared to the study area, which has a 20% bachelor's degree educational attainment rate.

Housing

Housing units in the study area are approximately 59% owner-occupied while units in the City of Westminster as a whole are approximately 65% owner-occupied.

Income

The median household income in the study area is about \$58,500 while the City's median household income is estimated at \$80,000. Most households in the study area have incomes in the \$50,000 – \$74,999 range, while most City households have household incomes over \$150,000 (see **Figure 4** and **Figure 5** below).

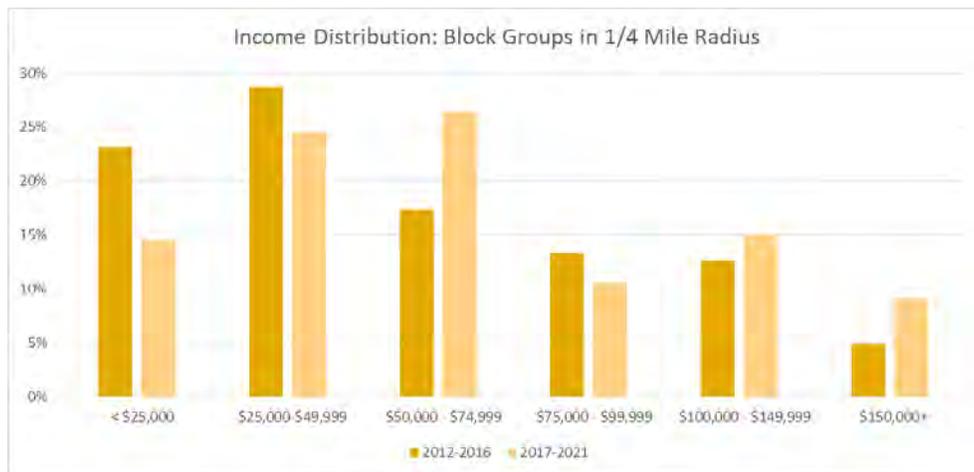


Figure 4: Income Distribution Data (2012-2016 and 2017-2021 ACS Data)



Figure 5: Income Distribution Data (2012-2016 and 2017-2021 ACS Data)

1.3.2 Urban Design

Summary

Adjacent land uses, whether residential, commercial or mixed-use, influence the urban design elements and existing infrastructure present along 72nd Avenue. Currently, the high-speed conditions and lack of continuous facilities for bicyclists and pedestrians create a high-stress environment for those navigating the corridor.

Character Zones

The varying conditions of the study area are characterized by a total of nine identifiable zones. There are five zone areas within three primary zone categories – residential corridor (2), commercial corridor (2), and open space gateway (1). Additionally, there are four transitional zones – two that are primarily residential, and two that are primarily commercial. See the character areas map below for a visual representation.

Residential Corridors

The two residential corridor zones bookend the study area, at the western end between Pierce Street and Ingalls Court (**Figure 6**), and at the eastern end between Canosa Court and Zuni Street (**Figure 7**).



Figure 6 (left): Western End Residential Corridor Zone between Pierce Street and Ingalls Court (MIG)

Figure 7 (right): Eastern End Residential Corridor Zone between Canosa Court and Zuni Street (MIG)

The western residential corridor is enclosed by high brick walls on either side of the road and narrow sidewalks. In particular, the southern edge has no pedestrian facility and the adjacent wall blocks sunlight in the winter, leaving the bicycle facility snow-covered. The frontage road condition, which exists along much of the southern edge of this zone, should provide pedestrian access, but navigation is illegible.

The point of connection between the frontage road and 72nd Avenue at Ingalls Street is hidden and narrow (see **Figure 8** and **Figure 9** below). Crosswalks are infrequent and the curvature of the road may make it difficult to introduce others.

These conditions create a tunnel effect and, along with the middle turn lane, contribute to this segment's feel as a high-speed, high-volume corridor, which is compounded by the use of a crash barrier along part of the northern edge. Additionally, the walls significantly limit permeability into the surrounding neighborhoods. The area is largely comprised of single-family homes. Faversham Park is integrated at the northeast corner.



Figure 8: Existing wall on 72nd Avenue west of Ingalls Street

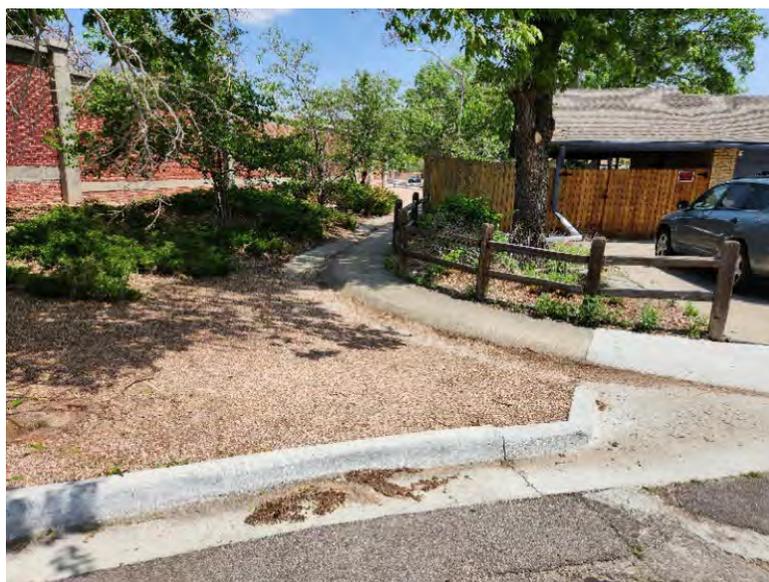


Figure 9: Dead end to sidewalk at the corner of Ingalls Street and 72nd Avenue Frontage Road

The eastern residential corridor feels more like a neighborhood collector, as houses and yards are clearly visible from, and at times oriented towards, the street. Sidewalks are still narrow and attached. The lack of buffer, either through a bicycle facility or vegetation, is consistent on both sides, placing pedestrians close to adjacent traffic (see **Figure 10** below). Unlike the western residential corridor, there is not a consistent material palette unifying the aesthetic. The lack of uniformity and the varied nature of the adjacent residence’s orientation toward the street changes the ‘feel’ of the corridor. Crosswalks are also infrequent here. Again, the primary land-use is single-family housing and Skyline Vista Park forms a significant portion of the northern street frontage. The park provides one unique condition with a parallel, detached path providing a meandering, alternative to the street’s attached sidewalk (**Figure 11**).



Figure 10 (left): Bus stop boarding area

Figure 11 (right): Existing multiuse path in Skyline Vista Park

Commercial Corridors

The two commercial corridors zones are internal to the study area, to the west between Depew Street and Xavier Street (**Figure 12**), and to the east between Lowell Boulevard and Federal Boulevard (**Figure 13**).

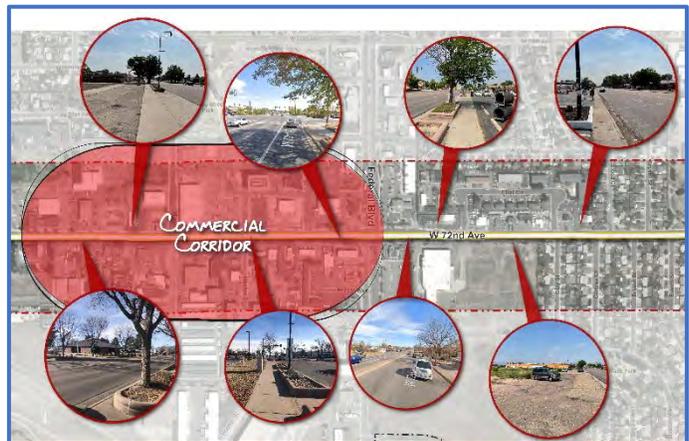


Figure 12 (left): Western End Commercial Corridor Zone between Depew Street and Xavier Street

Figure 13 (right): Eastern End Commercial Corridor Zone between Lowell Boulevard and Federal Boulevard

The western commercial corridor is characterized by modern suburban shopping center and strip mall style big box designs with larger, contiguous parking structures. Many of these businesses are regional or national chains. This area is dominated by single-story buildings, set back significantly from the street with parking or formally landscaped areas.

The road widens in this area to accommodate turn lanes and sidewalks are wider with green buffers between Depew Street and Sheridan Boulevard. While the sidewalks narrow east of Sheridan, most of the pedestrian facilities are detached from the road, and some near 10' in width (see **Figure 14** below).

The high brick wall characteristic is again present on the south side of the street, east of Sheridan where the single-family neighborhood abuts these busy roads. The southeast corner is in contrast with the more porous edges of the opposing three corners commercial uses. Though, while visually porous, access is often limited due to some minor grade changes, unbroken parking, and large areas for stormwater detention (especially in the northwest section of the intersection at 72nd Avenue and Sheridan Boulevard – see **Figure 15** below).

A narrow vacant lot separates the commercial activity from single-family residential at the northeast edge of this zone, and the high brick walls separate residential areas to the west. Modest, low-rise multifamily also serves as a transition to the single-family neighborhood to west.



Figure 14 (left): Pedestrian refuge median at driveway entrance to Hidden Lakes Shopping Center, east of Sheridan Boulevard

Figure 15 (right): Detached sidewalk approaching Sheridan Boulevard

The eastern commercial corridor, conversely, is somewhat more traditional in its design and development patterns, with greater diversity and individuality in the building stock, much of which orients to 72nd Avenue. While this area is also dominated by single-story buildings with some strip mall conditions and modest setbacks (parking or landscaped), the overall feel is more local. The diversity of the commercial use and building style is balanced by the uniformity of the public realm, with consistent furnishings, raised planters, and colored concrete (see **Figure 16** below). Though dated, uniformity provides a strong foundation for further augmentation of the public realm.

Commercial activity is also mixed in this area, with local and chain retail and service businesses, office buildings, and some civic uses, such as the Colorado STEM Academy (see **Figure 17** below). This area also includes some vacant buildings, which provide an opportunity for redevelopment.



Figure 16: Planters east of Federal Boulevard



Figure 17: Sidewalks near Colorado STEM Academy

Open Space Gateway

The open space gateway is central to the study area, between Tennyson Street and Orchard Court (**Figure 18**). This area is characterized primarily by the Little Dry Creek canal and surrounding green space that runs northwest to southeast across the study area.

Additionally, the train tracks run parallel to the creek on the east, with interspersed development between the two. The confluence of the creek and the train tracks, one in an underpass and the other at grade, create a unique opportunity to leverage the atypical land use pattern to introduce area identity elements. The topography slopes upward to the east and north in this section between the creek and tracks.

To the western portion of this zone, the creek is abutted by residential single-family and modest low-rise multifamily uses, while the western portion is mostly abutted by commercial uses. Although the open space is currently unprogrammed and largely inaccessible to the public, England Park's ongoing master planning process will support upgrades in this area. The sidewalks in the western portion are wider and offer green buffers, while they remain relatively narrow and unprotected on the eastern side.

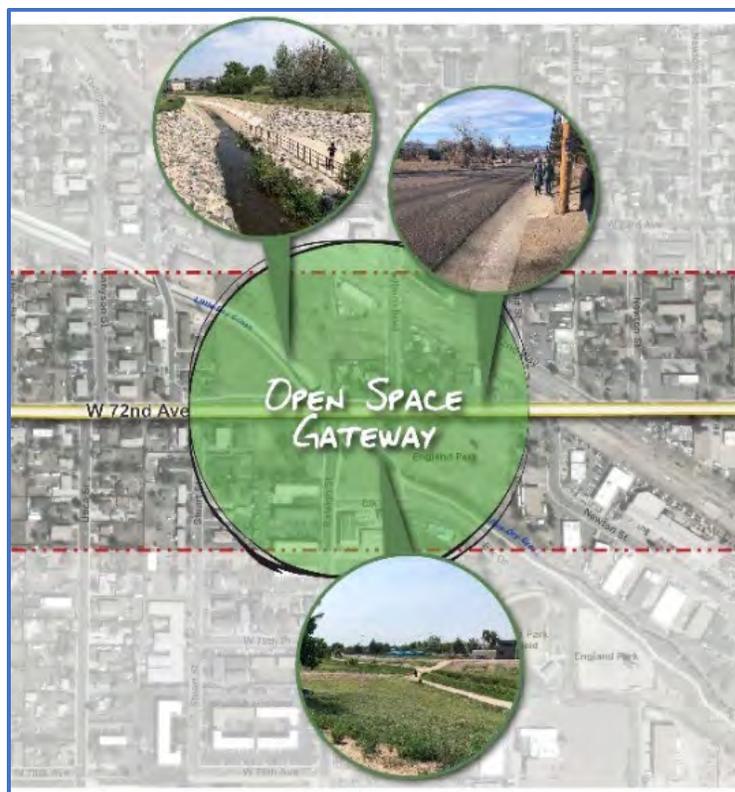


Figure 18: Open Space between Tennyson Street and Orchard Court (MIG)

Residential Transition Zones

These two zones sit on either side of the western commercial corridor, to the west between Ingalls Street and Depew Street (**Figure 19**), and to the east between Xavier Street and Tennyson Street (**Figure 20**).



Figure 19 (left): Western Residential Transition Zone between Ingalls Street and Depew Street (MIG)



Figure 20 (right): Eastern Residential Transition Zone between Xavier Street and Tennyson Street (MIG)

The western zone continues the characteristics of the residential primary zone to the west, with high brick walls enclosing the street and surrounding single-family neighborhood. However, both sides of the street maintain a detached sidewalk (see **Figure 21**), the north of which manages a grade differential from the street providing a greater buffer. This is one of the only zones where a curve is introduced in the roadway. The conceal/reveal nature of the curve may provide an opportunity for identifying the transition with an aesthetic treatment. Faversham Park is integrated to the north and modest, low-rise multifamily serves as a transition to the commercial corridor to the east.



Figure 21: Detached sidewalk west of Depew Street

The eastern zone is a mix between the characteristics of the western and eastern residential primary zones, however, is most analogous with the eastern residential zone. The high brick wall along the south side of the street continues east about a block into this area, enclosing the neighborhood. The surrounding use on both sides is residential, with more permeable street frontages to the north and western portion of the area, including yards and intermittent fencing on individual lots.

The neighborhood transitions from single-family to modest, low-rise multifamily toward the west, adjacent to the open space gateway. A narrow vacant lot separates the single-family residential at the northwest edge of this zone where it abuts the commercial corridor. Sidewalks are narrow and attached, with limited crosswalks, and thus opportunities in the existing right-of-way may be limited (see **Figure 22** below).

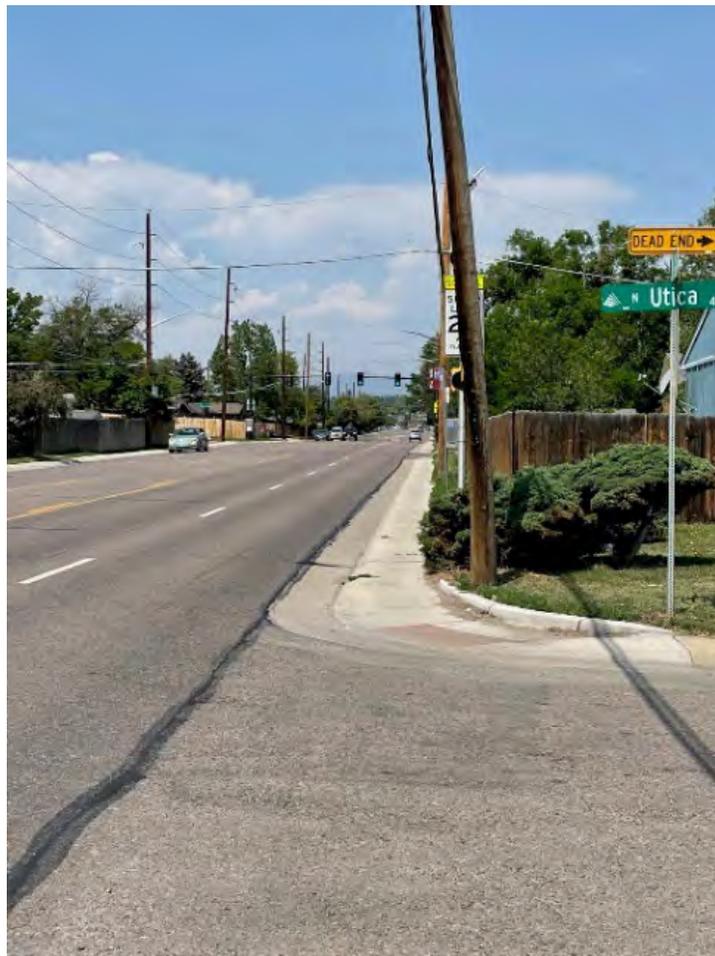


Figure 22: Narrow sidewalk at Utica Street

Commercial Transition Zones

The two commercial transition zones sit on either side of the eastern commercial corridor zone, to the west between Orchard Court and Lowell Boulevard (**Figure 23**), and to the east between Federal Boulevard and Canosa Court (**Figure 24**).

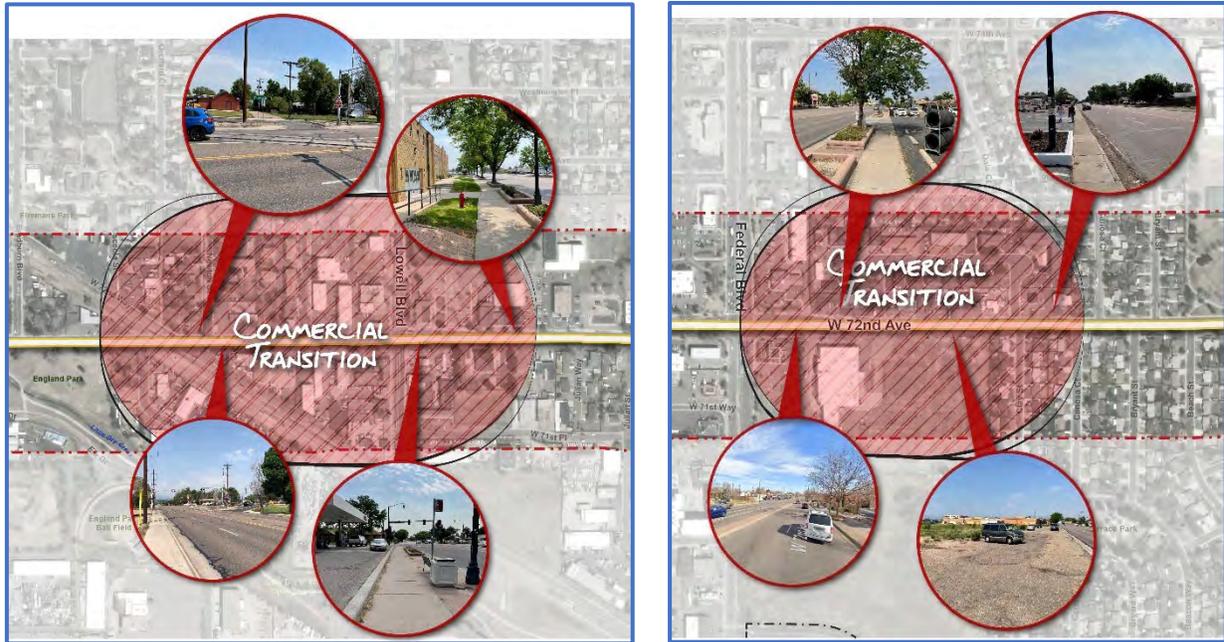


Figure 23: (left) Western Commercial Transition Zone between Orchard Court and Lowell Boulevard (MIG)
Figure 24: (right) Eastern Commercial Transition Zone between Federal Boulevard and Canosa Court (MIG)

The western zone shares characteristics with the adjacent commercial corridor to the east, with small scale service and retail businesses and varied architectural styles and setbacks. Both separated and strip mall style conditions exist. However, both parallel and perpendicular to the corridor, challenging grade changes present some difficulties in ease of access (see **Figure 25** below).



Figure 25: Sidewalk near railroad tracks near Orchard Court

Navigating contiguous vehicular access for some businesses as a pedestrian is dangerous and currently restricts the opportunity to extend some of the consistent urban design elements westward from the adjacent commercial zone. Furthermore, residences are interspersed occasionally along the street frontage and modest, low-rise multifamily extends beyond the commercial activity to the north. Sidewalks are narrow with frequent and/or expansive curb cuts. Small planters provide minimal buffering to the east end of the area.

The eastern zone changes quite abruptly from single family residential to commercial, just west of Canosa Court. Modest, low-rise multifamily serves as a minor transition on the north side of the street, behind street-front businesses. On the southern side of the street, a large vacant lot of mixed concrete and overgrown grass creates a vast expanse between the residential neighborhood to the east and big box commercial to the west, which provides opportunity for new development (see **Figure 26** below). In general, the commercial development pattern in this area transitions east to west from older small-scale local to newer big-box shopping center. Sidewalks are narrow, with small planters that provide minimal buffering in some places, while in others, private landscaping pushes the pedestrian very close to traffic (see **Figure 27** below). Crosswalks are limited. The road narrows to the east end of this zone, transitioning from the wider commercial area with a center turn lane to the residential corridor.



Figure 26: Vacant lot across from Eliot Circle



Figure 27: Narrow sidewalks near Guadalajara Restaurant

Cross Sections

Roadway configurations along the three-mile 72nd Avenue study area vary dramatically. The curb-to-curb width varies from 50-feet to nearly 100-feet with a variation between two and three lanes present in each direction. Portions of the corridor contain two-way center turn lanes or medians. The presence of sidewalks, and whether they are attached or detached, also varies throughout the corridor. Bicycle facilities are present in the western portion of the corridor but not elsewhere. The urban design varies too, including the presence or lack thereof of a planted buffer. The following cross sections show typical exhibits of the roadway at various locations along the corridor (also see **Figure 28**).

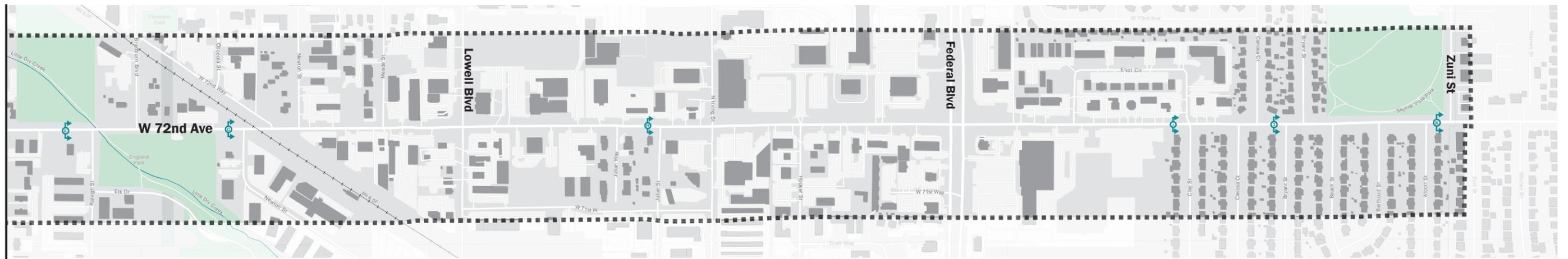
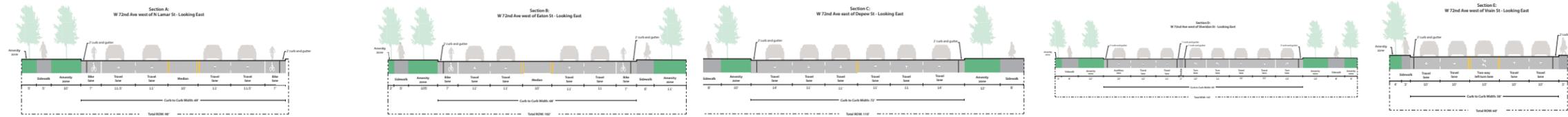


Figure 28: Cross Sections Reference Map

Figure 29: Section A (72nd Avenue West of N Lamar Street – Looking East)

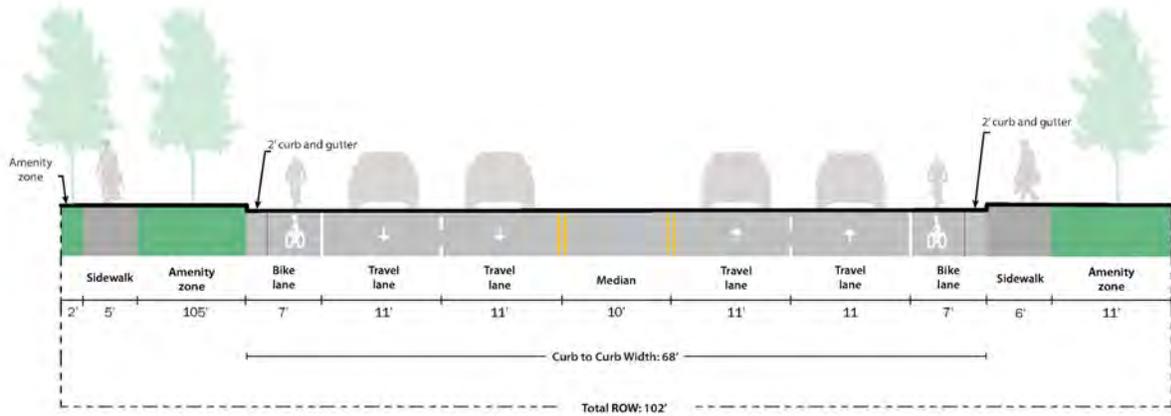


Figure 30: Section B (72nd Avenue West of Eaton Street – Looking East)

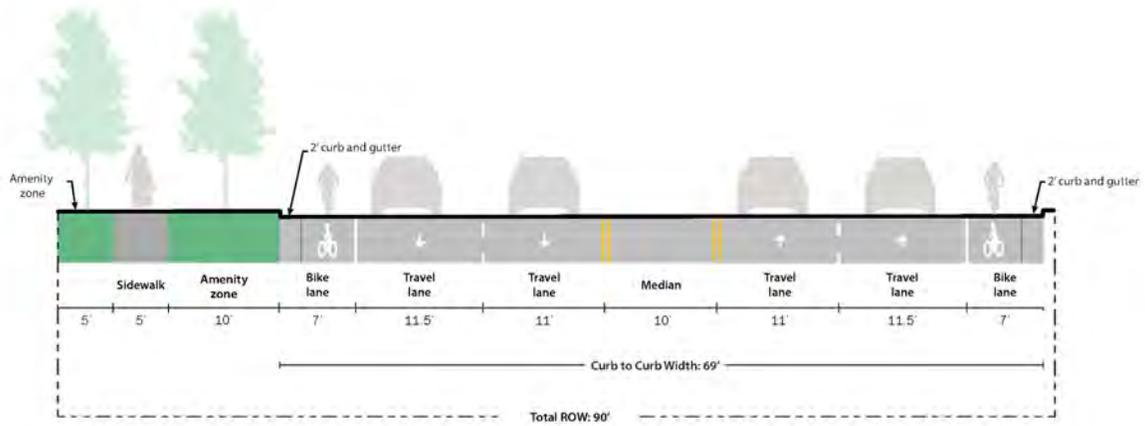


Figure 31: Section C (72nd Avenue East of Depew Street – Looking East)

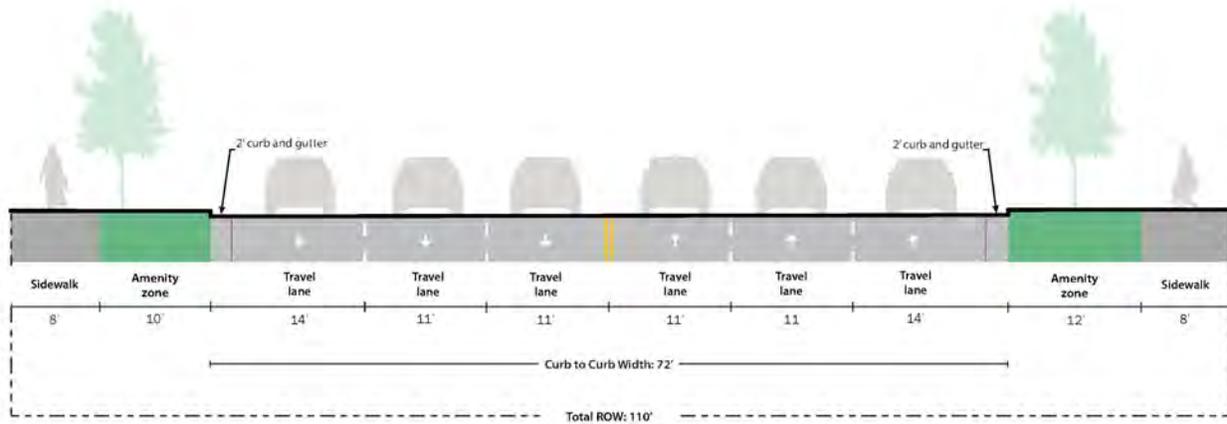


Figure 32: Section D (72nd Avenue West of Sheridan Boulevard – Looking East)

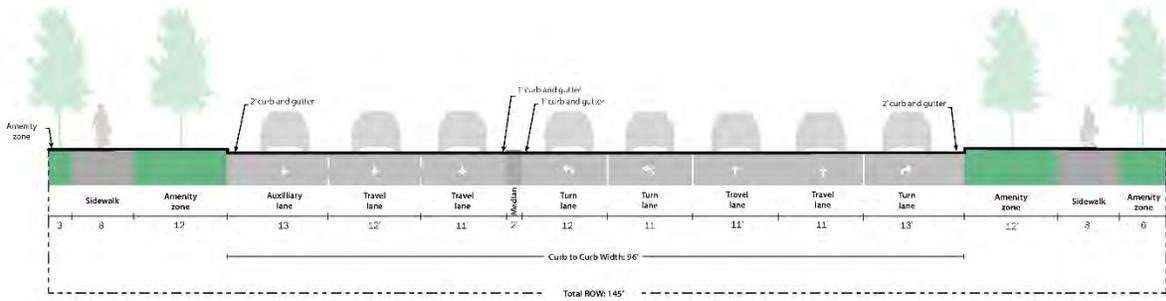


Figure 33: Section E (72nd Avenue West of Vrain Street – Looking East)

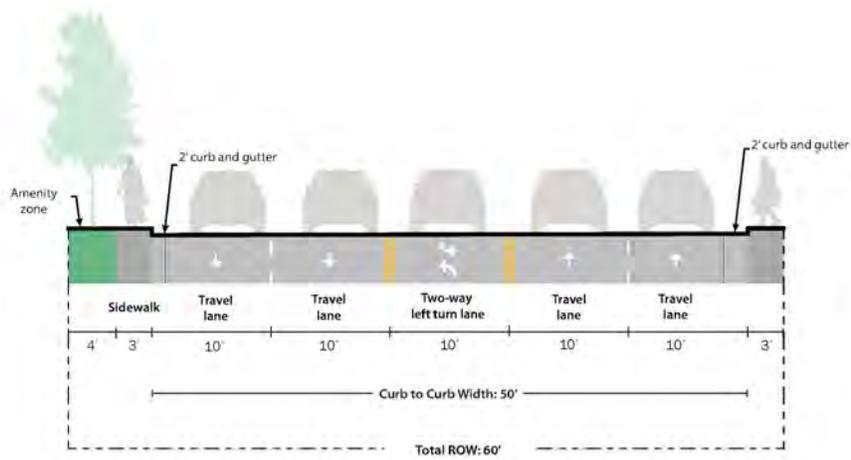


Figure 34: Section F (72nd Avenue West of Raleigh Street – Looking East)

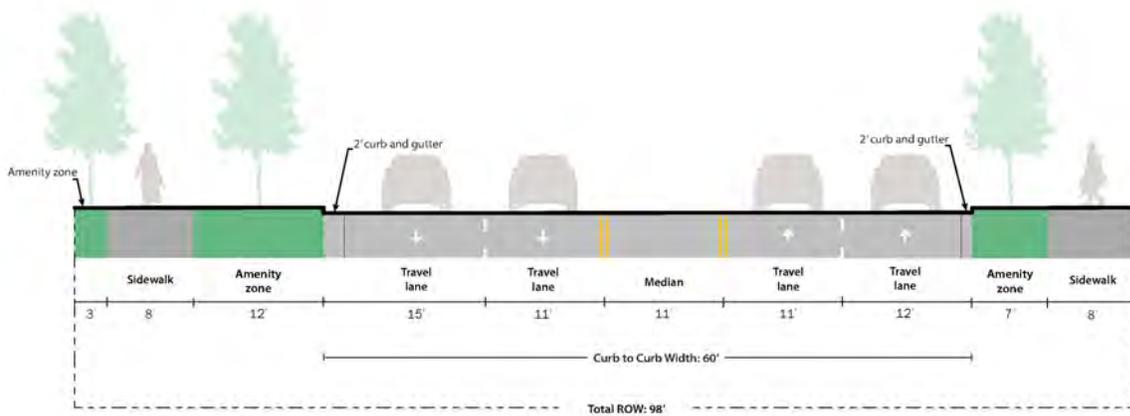


Figure 35: Section G (72nd Avenue West of Newton Street – Looking East)

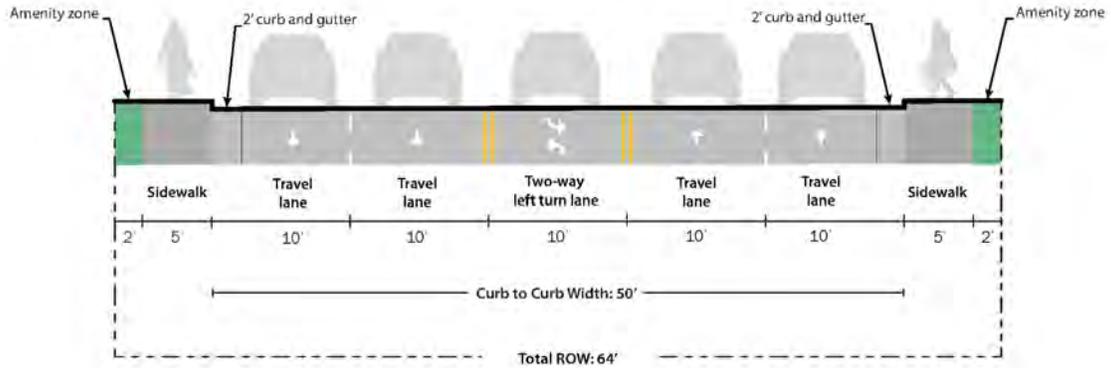


Figure 36: Section H (72nd Avenue West of Julian Street – Looking East)

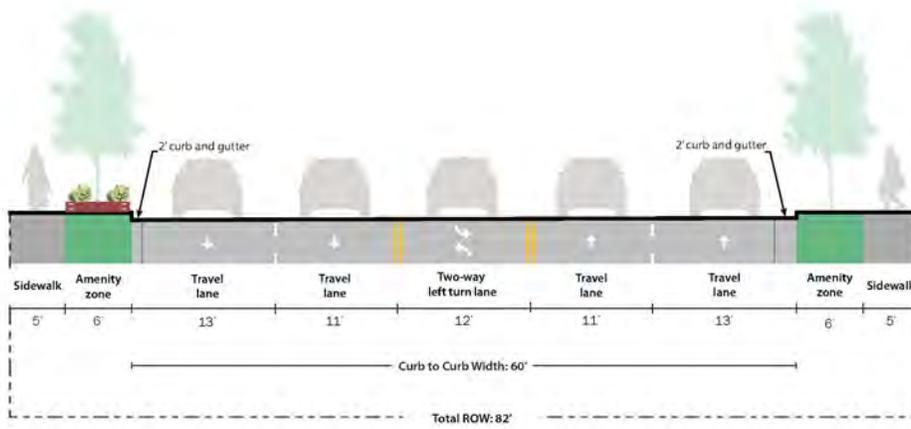


Figure 37: Section I (72nd Avenue West of Clay Street – Looking East)

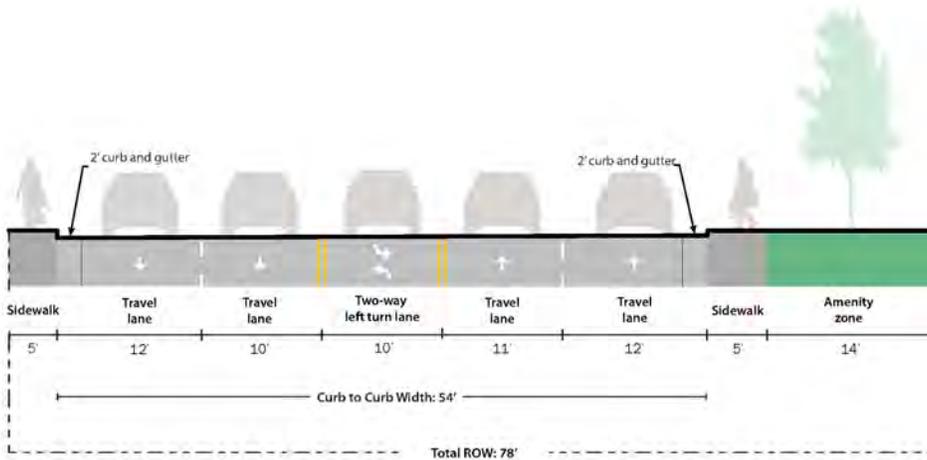


Figure 38: Section J (72nd Avenue West of Bryant Street – Looking East)

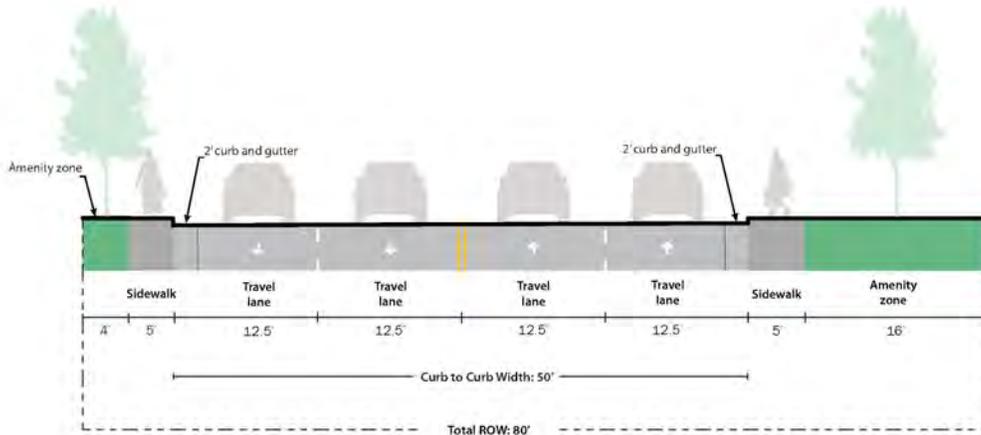
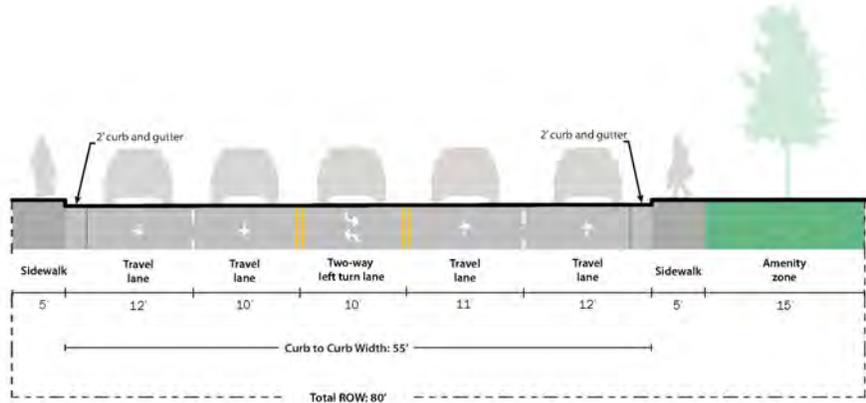


Figure 39: Section K (72nd Avenue West of Zuni Street – Looking East)



1.3.3 Environmental Overview

An Environmental Overview was completed to identify environmental resources that may affect the alternatives development and evaluation process and/or have major impacts to future environmental clearances and permitting processes. The review relied upon readily available existing data and “windshield” survey findings. The following environmental resources were reviewed and summarized:

- Threatened and endangered species, species of concern, migratory birds
- Historic and archaeological resources
- Environmental Justice communities
- Parks, open spaces, trails, recreational resources, and Section 6(f)
- Traffic noise
- Visual resources
- Hazardous materials

Relevant information is included for each resource including maps, photographs, and next steps to consider as this project advances from planning to implementation. The full overview is attached as **Appendix A**.

1.4 Mobility Assessment

1.4.1 People Walking

Summary

Adjacent land uses, whether residential, commercial or mixed-use, influence the current urban design elements and existing infrastructure present along 72nd Avenue. Currently, the high-speed conditions along the corridor may dissuade users from traveling on foot where existing facilities are lacking. A summary map of existing pedestrian facilities conditions is shown below in **Figure 40**.

Sidewalks

The majority of the 72nd Avenue corridor features sidewalks on both sides of the street, with a checkered pattern of detached and attached sidewalks present. A sidewalk gap does exist on the south side of 72nd Avenue between Elliot Circle and Clay Street. The sidewalks along the corridor range from 4 to 8 feet in width. Detached sidewalks are more common in two portions of the corridor: in a primarily residential portion on the western end (between Sheridan and Pierce Streets) and in a more commercial zone between Meade Street and just east of Federal Boulevard.

Crosswalks

In the residential portions of the corridor, crosswalks are non-existent or few and far between, creating challenging conditions for those accessing bus stops, parks and other amenities. Crossing at the Sheridan Boulevard intersections involves a two-staged crossing, including waiting at corner islands before navigating through traffic turning from or turning onto Sheridan Boulevard.

Curb Ramps

Though most curb ramps at major intersections are ADA compliant, many of the curb ramps at corners where residential intersections meet 72nd Avenue are non-compliant. Lack of compliance compromises the ability of those using mobility devices, pushing strollers or navigating with packages or suitcases. Findings and guidance from the City of Westminster's 2019 Americans with Disabilities Act Transition Plan may support future accessibility upgrades along corridors such as 72nd Avenue.

Pedestrian Volumes

The project team collected pedestrian and bicyclist counts (including people in crosswalks) at intersections along 72nd Avenue on Saturday, February 25, 2023 and Tuesday, February 28, 2023. These counts are summarized in **Table 1** and **Table 2** below. Not surprisingly, the signalized intersections experienced the highest pedestrian and bicyclist volumes, especially at Hooker Street, Pierce Street, and Raleigh Street.

Table 1: Weekday (Tuesday) Peak Hour AM and PM Counts

Intersection	Peak Hour	Ped/Bike Peak Hour Counts
72nd Avenue & Zuni Street	7:30 – 8:30 am	5
72nd Avenue & Zuni Street	4:00 – 5:00 pm	8
72nd Avenue & Federal Boulevard	7:30 – 8:30 am	18
72nd Avenue & Federal Boulevard	5:00 – 6:00 pm	14
72nd Avenue & Hooker Street	7:45 – 8:45 am	11
72nd Avenue & Hooker Street	4:00 – 5:00 pm	27
72 nd Avenue & Irving Street	7:45 – 8:45 am	9
72nd Avenue & Irving Street	4:00 – 5:00 pm	16
72nd Avenue & Raleigh Street	7:45 – 8:45 am	21
72nd Avenue & Raleigh Street	4:00 – 5:00 pm	13
72nd Avenue & Winona Street	7:45 – 8:45 am	3
72nd Avenue & Winona Street	4:45 – 5:45 pm	7
72nd Avenue & Yates Street	7:45 – 8:45 am	7
72nd Avenue & Yates Street	5:00 – 6:00 pm	10
72nd Avenue & Sheridan Boulevard	7:15 – 8:15 am	13
72nd Avenue & Sheridan Boulevard	4:45 – 5:45 pm	9
72nd Avenue & 5400 West	7:30 – 8:30 am	2
72nd Avenue & 5400 West	4:30 – 5:30 pm	8
72nd Avenue & Depew Street	7:30 – 8:30 am	7
72nd Avenue & Depew Street	4:30 – 5:30 pm	7
72nd Avenue & Lamar Street	7:45 – 8:45 am	0
72 nd Avenue & Lamar Street	4:45 – 5:45 pm	2
72nd Avenue & Pierce Street	7:15 – 8:15 am	22
72nd Avenue & Pierce Street	3:15 – 4:15 pm	14

Table 2: Weekend (Saturday) Peak Hour Counts

Intersection	Peak Hour	Ped/Bike Peak Hour Counts
72nd Avenue & Hooker Street	11:45 am – 12:45 pm	19
72nd Avenue & Yates Street	12:00 – 1:00 pm	5
72nd Avenue & 5400 West	12:00 – 1:00 pm	9

Existing Pedestrian Facilities Legend

- Attached Sidewalk
- Detached Sidewalk
- Multi-use Trail
- Driveway
- - - Marked Crosswalk
-  Railroad
-  School Zone
-  Pedestrian Signal
-  Non-Compliant Curb Ramp
-  Study Area Boundary

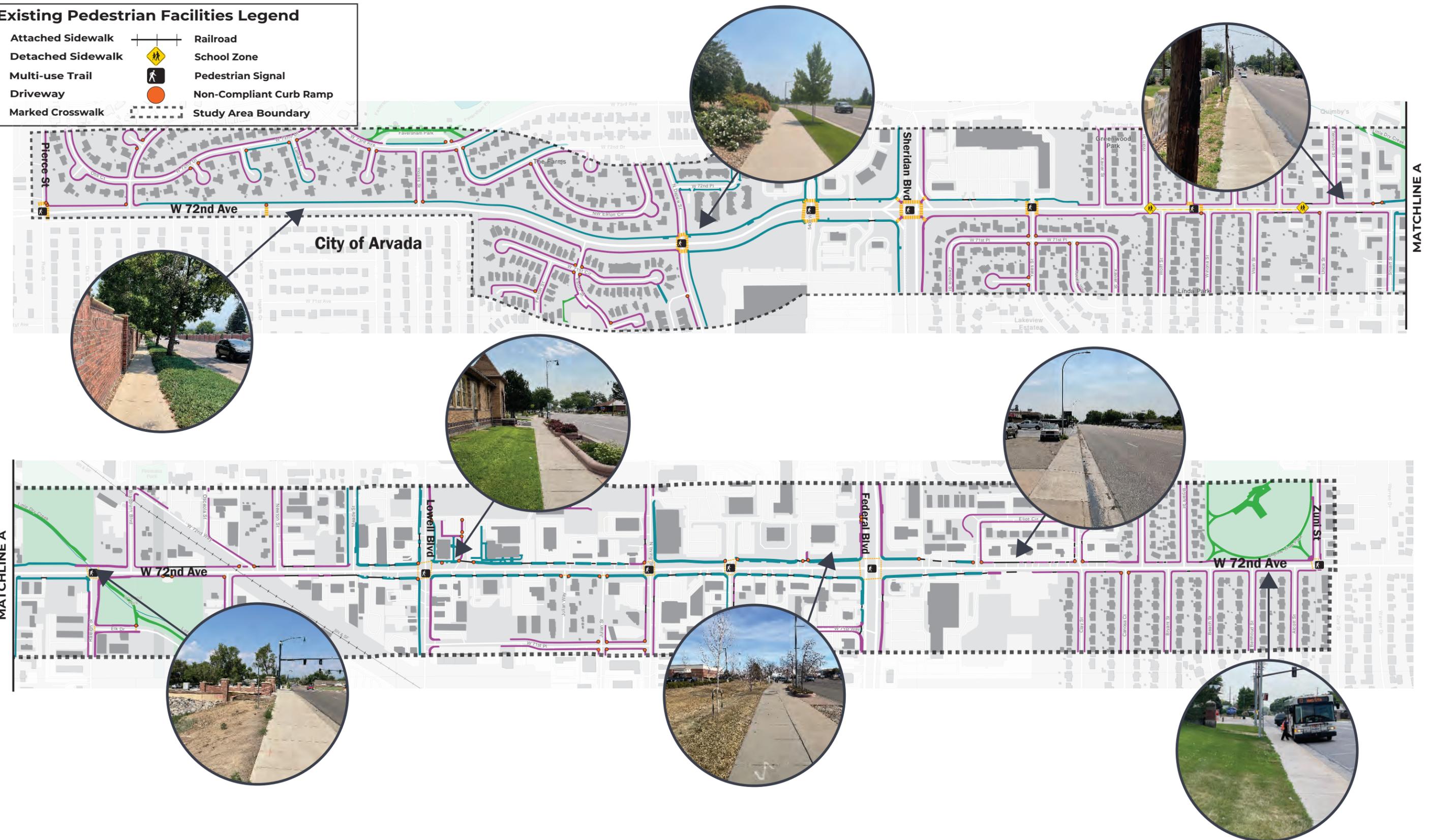


Figure 40: Existing Pedestrian Conditions Map

1.4.2 People Biking

Summary

Currently, 72nd Avenue lacks a continuous network of safe bicycling facilities along the corridor. People bicycling may choose to utilize the sidewalks and sidepaths rather than ride with vehicular traffic. Those approaching 72nd Avenue from parallel routes with existing facilities (such as Lowell Boulevard) typically meet challenging crossing conditions at intersections.

Existing & Planned Bicycle Facilities

A mix of bicycle facilities currently exist along the corridor. An on-street, seven-foot wide bicycle lane is present between Pierce Street and Depew Street. Detached multiuse paths exist between Depew Street and Sheridan Boulevard. No other bicycle facilities exist on 72nd Avenue in the study area. Bicycle facilities cross the corridor at Lowell Boulevard, Irving Street and Bradburn Boulevard.

The 2021 Transportation & Mobility Plan developed a future conditions assessment for 72nd Avenue, including calling for widening sidewalks to multiuse sidewalks along both sides of 72nd Avenue from Sheridan Boulevard to Zuni Street and upgrading the existing bike lanes between Pierce Street and Depew Street to buffered bike lanes. A summary map of both existing bicycle facilities and those proposed based on Westminster's 2021 Transportation & Mobility Plan is shown below in **Figure 41**.

A Level of Traffic Stress (LTS) developed for the corridor mapped ranges from 1 (little traffic stress) to 4 (the highest traffic stress). The majority of the study area is categorized as a Level 4 LOS (from Depew St to Zuni St) with the remainder a Level 3 (Pierce St to Depew St). View the LTS map on Page B-41 in the [Current and Future Conditions Report](#).

1.4.3 Trail Users

There are over 150-miles of multi-use trails within Westminster. Little Dry Creek Trail is one of the city's important regional routes, and trail users travel the trail via an underpass at 72nd Avenue. Little Dry Creek extends from Clear Creek Trail to the south, alongside Westminster Station, north to Standley Lake Regional Park. 72nd Avenue corridor users can also connect with the Skyline Vista Park trail system between Beach Street and Zuni Street.

Existing and Proposed* Bicyclist Facilities Legend

- Bike Lane: Existing
 - - - Bike Lane: Proposed
 - Multiuse Sidepath: Existing
 - - - Multiuse Sidepath: Proposed
 - Shared Lane: Existing
 - - - Shared Lane: Proposed
 - Trail: Existing
 - Study Area Boundary
 - - - Buffered Bike Lane: Proposed
 - - - Separated Bike Lane: Proposed
 - - - Neighborhood Bikeway: Proposed
- * Proposed facilities based on Westminster's Transportation & Mobility Plan.



Figure 41: Bicyclist Conditions Map

1.4.4 Transit Operations and Amenities

Summary

Three RTD bus routes service the 72nd Avenue study area. Route 72 runs along 72nd Avenue from Arvada to Commerce City. Route 51 runs along Sheridan Boulevard to Englewood. Route 31 extends north on Federal Boulevard to Front Range Community College and south to the Decatur-Federal Station W line connection. Westminster Station is located just south of the corridor, between Lowell Boulevard and Federal Boulevard, and offers access via the B Line commuter rail daily, on an hourly frequency, to Union Station in downtown Denver. A summary map of existing transit conditions is shown below in **Figure 42**.

Bus Service

Table 3 summarizes the current service levels for the three aforementioned routes that serve the 72nd Avenue study area.

Table 3: Bus Service at Stops in the 72nd Avenue Study Area

Route	Name	Days of Operation	Peak Frequency
72	72nd Avenue	Monday – Saturday	1-hour
51	Sheridan Boulevard	Monday – Sunday	30-minutes
31	Federal Boulevard	Monday – Sunday	10-minutes

** Route 31 runs along Federal Boulevard and Route 51 runs along Sheridan Boulevard, both within the study area.*

Bus Stops

The 2021 Transportation & Mobility Plan recommends conducting a bus stop conditions inventory and corridor study to identify needed stop amenity upgrades, including both physical additions such as shelters and first and final mile connections.

Bus Stop Amenities

- There are 24 bus stops along 72nd Avenue in the study area:
 - Only two of the stops contain shelters.
 - 18 of the 24 stops (75%) contain only signs.
 - Five stops have trash cans and benches.
- Bus stops between Pierce Street and Sheridan Boulevard have no amenities, except for the 72nd Avenue and Sheridan Boulevard eastbound stop.

Bus Stop Access Challenges

- Multiple stops present challenges for users with mobility devices (such as wheelchairs), and small sidewalk widths may force users to travel on-street.
- Legibility of access points is also a challenge, as at 72nd Avenue and Ingalls Street westbound, where the sidewalk is hidden behind a brick wall.

Ridership

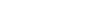
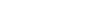
- Though not included in the study area, Westminster Station Gate D has a 2022 Average Weekday Daily *Boardings* (passengers entering the bus) of 10 (eastbound) and 12 (westbound), and an Average Weekday Daily *Alightings* (passengers exiting the bus) of 9 (eastbound) and 13 (westbound).
- The stops at Sheridan, Federal and 5400 Block have the highest ridership in the study area. View **Table 4** below for a full ridership summary by stop.

Table 4: Bus Stops, Amenities, and Ridership in the 72nd Avenue Study Area

Stop	Amenities	2022 Average Weekday Daily Boardings/Alightings
72nd Avenue & Lamar Street (Eastbound)	None	.2 / .6
72nd Avenue & Ingalls Street (Eastbound)	None	.1 / .2
72nd Avenue & Ingalls Street (Westbound)	None	.1 / .3
72nd Avenue & Depew Street (Eastbound)	None	.2 / .1
72nd Avenue & Depew Street (Westbound)	None	.5 / .2
72nd Avenue & 5400 Block (Eastbound)	None	10 / 4
72nd Avenue & Sheridan Boulevard (Eastbound)	Trash can, bench, shelter	10 / 1
72nd Avenue & Sheridan Boulevard (Westbound)	None	3 / 18
72nd Avenue & Yates Street (Westbound)	Bus pad	.1 / .5
72nd Avenue & Xavier Street (Eastbound)	None	.3 / .1
72nd Avenue & Xavier Street (Westbound)	None	1 / 7
72nd Avenue & Utica Street (Eastbound)	None	1 / .7
72nd Avenue & Utica Street (Westbound)	None	1 / 1
72nd Avenue & Raleigh Street (Eastbound)	None	5 / 2
72nd Avenue & Bradburn Street (Westbound)	None	3 / 5

72nd Avenue & Newton Street (Eastbound)	None	.3 / 3
72nd Avenue & Newton Street (Westbound)	None	1 / 1
72nd Avenue & Lowell Boulevard (Eastbound)	Trash can, bench	5 / 3
72nd Avenue & Lowell Boulevard (Westbound)	Trash can, bench	4 / 4
72 nd Avenue & Irving Street (Eastbound)	None	1 / 6
72nd Avenue & Irving Street (Westbound)	Trash can, bench	5 / 2
72nd Avenue & Federal Boulevard (Eastbound)	Trash can, bench, shelter	9 / 4
72nd Avenue & Federal Boulevard (Westbound)	None	6 / 12
72nd Avenue & Clay Street (Eastbound)	None	1 / 1
72 nd Avenue & Eliot Street (Westbound)	None	1 / 4
72nd Avenue & Berthoud Street	None	.4 / 3
72nd Avenue & Alcott Street (Westbound)	None	3 / 1

Existing Transit Facilities Legend

-  Transit Stops
-  Station Area
-  Study Area Boundary
-  RTD Bus Route 31
-  RTD Bus Route 51
-  RTD Bus Route 72

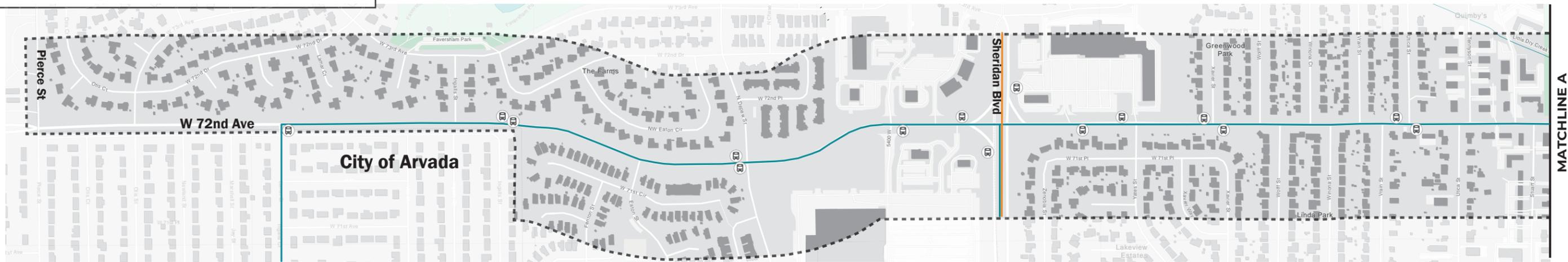


Figure 42: Existing Transit Conditions Map

1.4.5 People Driving

Summary

72nd Avenue is owned and managed by the City of Westminster. The corridor's traffic signals are operated either by the City of Westminster, City of Arvada, or the Colorado Department of Transportation (CDOT). The posted speed limit varies from 25 MPH (in a school zone) to 40 MPH throughout the study area. Speed limit signs exist on both sides of the roadway. Traffic volumes along the corridor are between 5,178 and 10,574 vehicles per day. See **Figure 44** for a summary map of existing driving conditions.

Traffic Volumes & Speeds

The project team collected average daily traffic (ADT) and speeds at five locations in the study area on Tuesday, February 29 and Wednesday, March 1 (view Table 5 below). The results suggest that volumes are highest (over 10,000) west of Julian Street and 85th percentile speeds are consistently between 5 to 8 mph above the speed limit throughout the corridor. Additionally, westbound speeds tended to be slightly higher than eastbound.

The majority of vehicles reported at the four locations below were Class 2 – Passenger Cars (80-84%), with the remainder of vehicles classified as either Class 3 – Other Two-Axle, Four-Tire Single Unit Vehicles (including pickups, vans, campers, motor homes and ambulances, representing 13-15%), larger axle vehicles/trailers (3-4%) and motorcycles (under 1%).

Table 5: Weekday (Tuesday & Wednesday) Traffic Speeds and Volumes

Location on 72nd Avenue	Eastbound Speed (85 th percentile)	Westbound Speed (85 th percentile)	Eastbound Average Daily Traffic (ADT)	Westbound Average Daily Traffic (ADT)
West of Eaton Street	40 mph	41 mph	5,868	5,729
West of Wolff Street	35 mph	36 mph	7,856	8,342
West of Julian Street	36 mph	37 mph	10,375	10,574
East of Canosa Court	38 mph	36 mph	6,406	6,401

Access

The majority of driveways along the corridor provide access to a variety of businesses in the commercial areas. However, there are also a handful of access points in residential segments, such as between Vrain Street and Stuart Street. Driveway pans can prove problematic to safe pedestrian travel, particularly in locations of attached and narrow sidewalks, or where sidewalk gaps exist (see **Figure 43**). Those using mobility devices are particularly inconvenienced by large and frequent driveway pans, which can be challenging to navigate, force users closer to traffic and introduce potential conflicts between vehicles entering or existing the access point and those navigating sidewalks.



Figure 43: Driveway entrances near Guadalajara Restaurant east of Federal Boulevard

Existing Driving Facilities Legend

- Traffic Signal
 - Stop Sign
 - Pedestrian Signal
 - Speed Limit Sign
 - Study Area Boundary
- Volume and Speed Data**
 ADT: Average Daily Traffic
 85th (95th) Percentile Speed: Speed at or below which 85 (95) percent of all vehicles are observed to travel under free-flowing conditions.
- Turning Movement Counts (TMCs)**
 Weekday peak morning (7:15-8:15 AM) counts

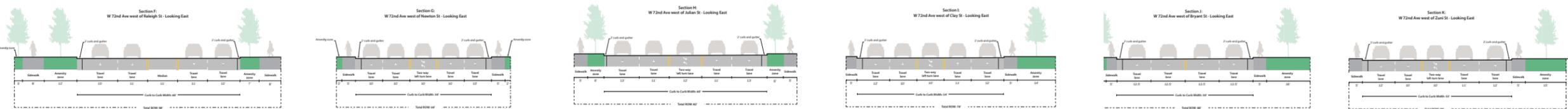
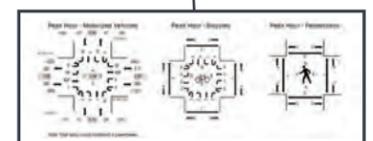
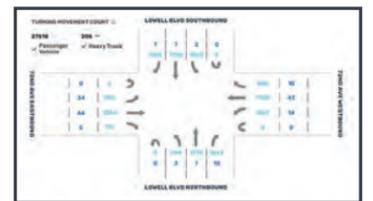
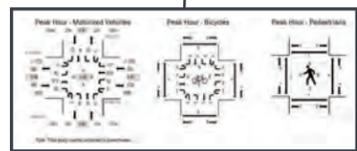
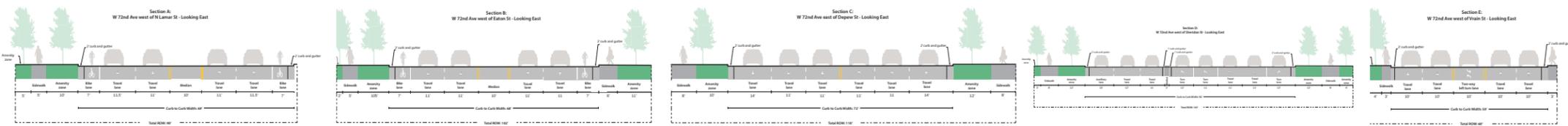


Figure 44: Existing Driving Conditions Map

1.4.6 Turning Movement Counts

The following diagrams show the turning movements collected for vehicles at 13 intersections along 72nd Avenue. Data for all modes was collected on Tuesday, February 28, 2023 during the AM and PM peak hours. See **Table 1** and **Table 2** above for pedestrian and bicycle counts summaries.

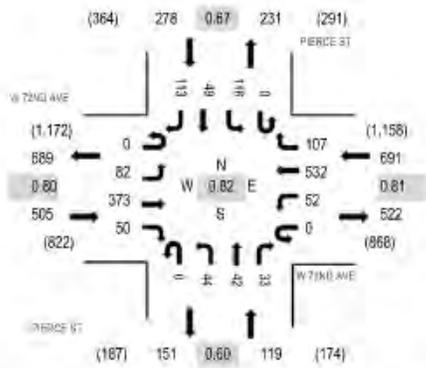


Figure 45: 72nd & Pierce St AM Peak Hour TMC

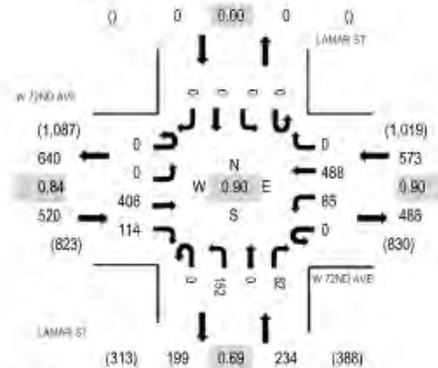


Figure 46: 72nd & Lamar St AM Peak Hour TMC

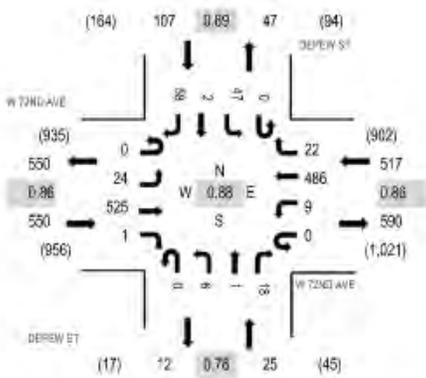


Figure 47: 72nd & Depew St AM Peak Hour TMC

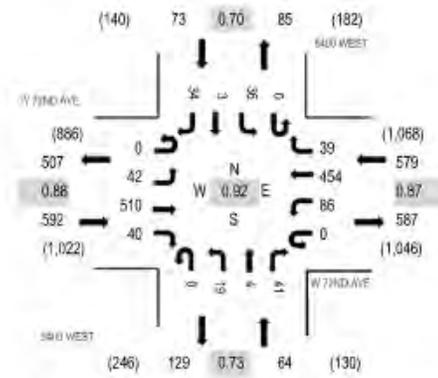


Figure 48: 72nd & 5400 West AM Peak Hour TMC

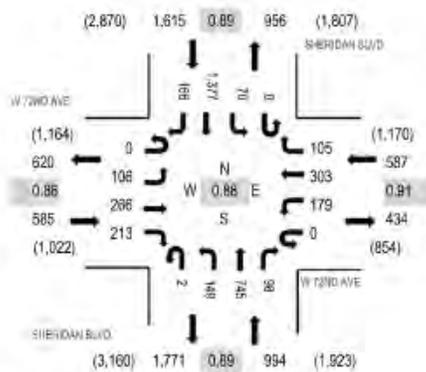


Figure 49: 72nd & Sheridan Blvd AM Peak Hour TMC

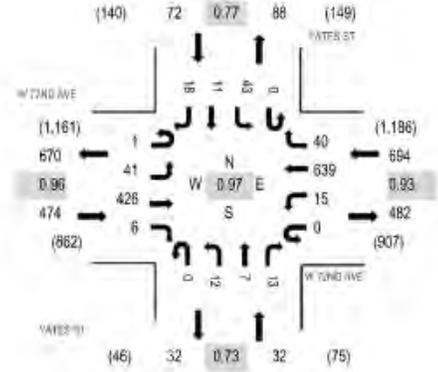


Figure 50: 72nd & Yates St AM Peak Hour TMC

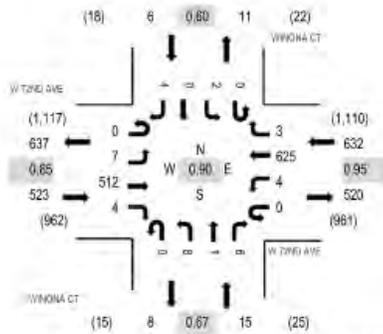


Figure 51: 72nd & Winona Ct AM Peak Hour TMC

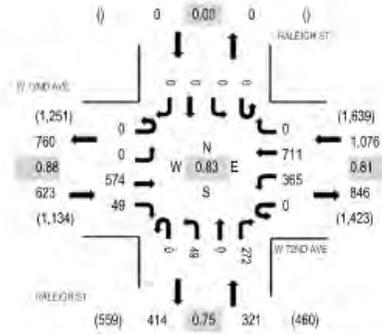


Figure 52: 72nd & Raleigh St AM Peak Hour TMC

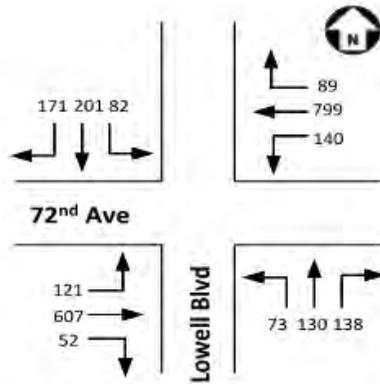


Figure 53: 72nd & Lowell Blvd AM Peak Hour TMC

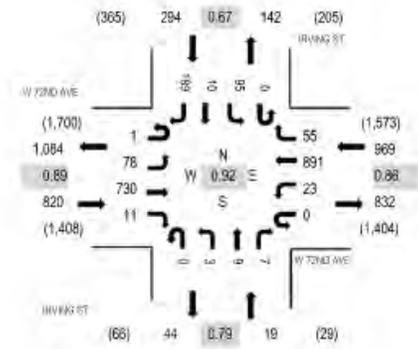


Figure 54: 72nd & Irving St AM Peak Hour TMC

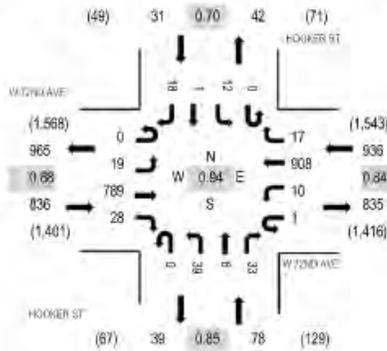


Figure 55: 72nd & Hooker St AM Peak Hour TMC

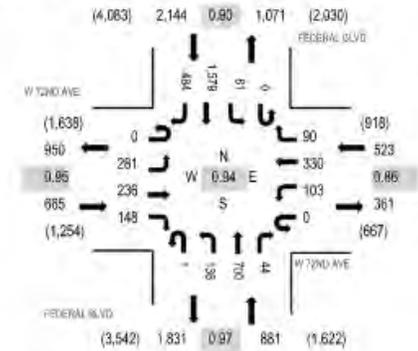


Figure 56: 72nd & Federal Blvd AM Peak Hour TMC

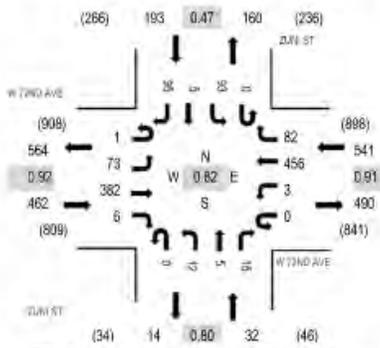


Figure 57: 72nd & Zuni St AM Peak Hour TMC

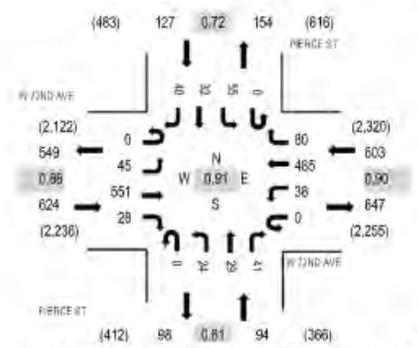


Figure 58: 72nd & Pierce St PM Peak Hour TMC

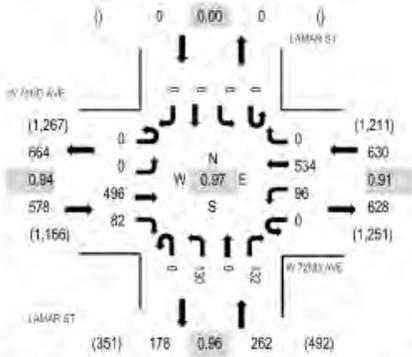


Figure 59: 72nd & Lamar St PM Peak Hour TMC

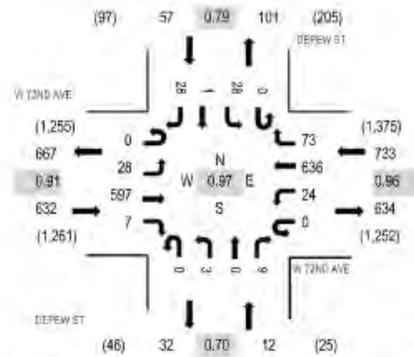


Figure 60: 72nd & Depew St PM Peak Hour TMC

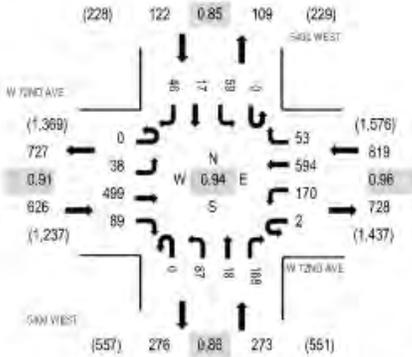


Figure 61: 72nd & 5400 West PM Peak Hour TMC

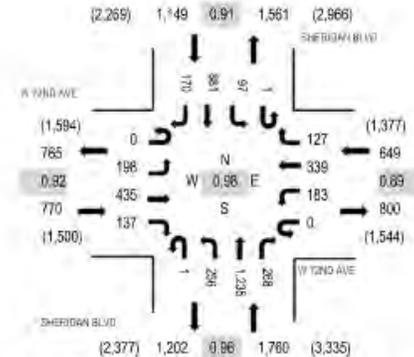


Figure 62: 72nd & Sheridan Blvd PM Peak Hour TMC

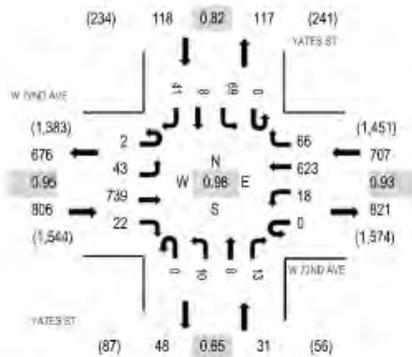


Figure 63: 72nd & Yates St PM Peak Hour TMC

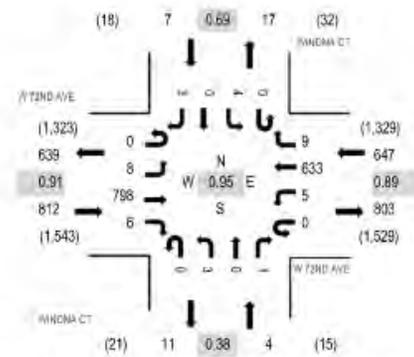


Figure 64: 72nd & Winona Ct PM Peak Hour TMC

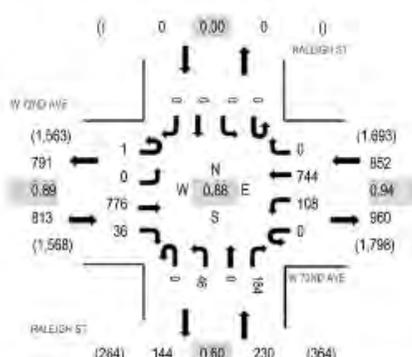


Figure 65: 72nd & Raleigh St PM Peak Hour TMC

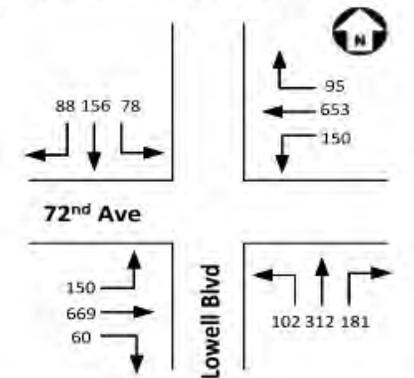


Figure 66: 72nd & Lowell Blvd PM Peak Hour TMC

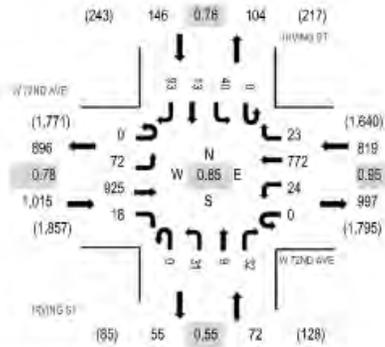


Figure 67: 72nd & Irving St PM Peak Hour TMC

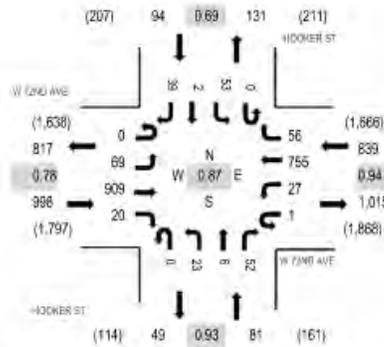


Figure 68: 72nd & Hooker St PM Peak Hour TMC

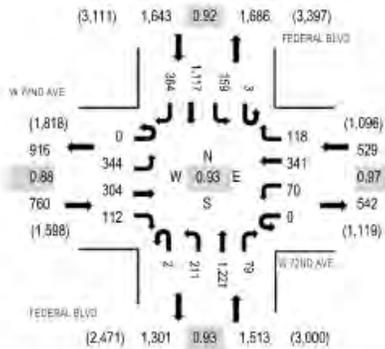


Figure 69: 72nd & Federal Blvd PM Peak Hour TMC

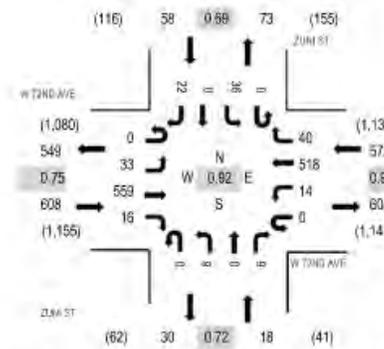


Figure 70: 72nd & Zuni St PM Peak Hour TMC

1.4.7 Traffic Operations Analysis

Summary

The project team conducted a traffic operations analysis for the 72nd Avenue study area using Synchro 11 software and signal timing from the City of Westminster and the Colorado Department of Transportation (CDOT). Synchro 11 utilizes the Highway Capacity Manual, 6th Edition (HCM) methodology to assess the performance of signalized intersections. The following table outlines the data that was used to code the traffic model.

Queues

The Highway Capacity Manual defines a Queue as: "A line of vehicles, bicycles, or persons waiting to be served by the system in which the flow rate from the front of the queue determines the average speed within the queue." The modeled 95th percentile vehicle queue length is used to estimate the extent of queued vehicles for an approach.

Synchro processes queue lengths in relation to the modeled geometric and traffic-related conditions of each movement. The ‘#’ before the length indicates that the 95th percentile queue exceeds capacity and the actual queue may be longer. The ‘m’ before the length indicates that traffic in this queue is metered by an upstream traffic signal.

Level of Service (LOS)

The Highway Capacity Manual defines Level of Service (LOS) for signalized and unsignalized intersections as a function of the average vehicle control delay. LOS may be calculated for an intersection, or per movement or per approach for any intersection configuration. Signalized and unsignalized intersection LOS differ in their delay thresholds and are expressed in the form of an uppercase or lowercase letter, respectively.

Table 6: Level of Service Based on Average Vehicle Control Delay (seconds)

LOS	Signalized Intersection	Unsignalized Intersection
A	≤10	≤10
B	10–20	10–15
C	20–35	15–25
D	35–55	25–35
E	55–80	35–50
F	>80	>50

Existing Conditions Operations

The 72nd Avenue study area contains 13 signalized intersections. About 10,000 vehicles travel along the corridor in the morning peak hour, with closer to 17,000 vehicles during the evening peak hour.

To better understand traffic operations along the corridor, the project team conducted a traffic analysis using existing volume data and lane configurations. The analysis focused on the morning and evening peak hours. Summaries of the analysis for each intersection are shown in the table below.

Table 7: Average Vehicle Control Delay (seconds)

Intersection	AM Peak LOS (Delay in seconds/vehicle)	PM Peak LOS (Delay in seconds/vehicle)
72nd Avenue & Pierce Street	C (23.3)	B (13.7)
EB Left	A(8.5)	A (7.0)
EB Through	B (11.7)	B (10.9)
EB Right	B (10.7)	A (9.0)
WB Left	A (8.1)	A (7.0)
WB Through	A (0.3)	A (0.2)
WB Right	A (0.3)	A (0.2)
NB Left/Through/Right	E (72.9)	E (61.4)
SB Left/Through	F (89.2)	E (57.5)
SB Right	E (66.6)	D (53.2)
72nd Avenue & Lamar Street	A (7.6)	B (13.6)
EB Through/Right	A (3.7)	B (15.1)
WB Left	A (4.0)	A (5.6)
WB Through	A (3.6)	A (4.2)
NB Left/Right	C (26.1)	C (32.1)
72nd Avenue & Depew Street	A (6.0)	A (4.3)
EB Left	A (3.8)	A (3.9)
EB Through/Right	A (3.5)	A (3.3)
WB Left	A (3.7)	A (3.7)
WB Through	A (3.2)	A (3.1)
WB Right	A (2.7)	A (2.5)
NB Left	C (27.0)	C (26.7)
NB Through/Right	C (25.4)	C (26.0)
SB Left	C (26.7)	C (26.7)
SB Through/Right	C (27.8)	C (27.2)
72nd Avenue & 5400 West	A (9.4)	B (12.6)
EB Left	A (2.7)	A (7.2)
EB Through/Right	A (4.0)	B (10.1)
WB Left	A (2.6)	A (6.7)
WB Through	A (3.8)	A (8.8)
WB Right	A (3.3)	A (7.3)
NB Left	E (58.0)	C (25.8)
NB Through	D (53.7)	C (21.7)
NB Right	E (59.5)	C (29.7)
SB Left	E (56.4)	C (23.5)
SB Through/Right	E (58.1)	C (22.8)
72nd Avenue & Sheridan Boulevard	C (31.6)	D (38.2)
EB Left	E (58.7)	E (57.1)

EB Through	E (59.0)	E (72.5)
EB Right	Free	Free
WB Left	E (57.5)	E (62.9)
WB Through	D (50.2)	E (67.6)
WB Right	Free	Free
NB Left	E (77.7)	D (49.3)
NB Through	C (21.0)	B (17.3)
NB Right	Free	Free
SB Left	D (44.7)	E (60.6)
SB Through	B (16.8)	C (24.0)
SB Right	Free	Free
72nd Avenue & Yates Street	A (4.9)	A (6.0)
EB Left	A (3.5)	A (4.6)
EB Through	A (2.7)	A (4.1)
EB Right	A (2.3)	A (3.1)
WB Left	A (3.1)	A (5.3)
WB Through/Right	A (2.9)	A (3.9)
NB Left/Through/Right	C (26.7)	C (24.1)
SB Left/Through/Right	C (28.1)	C (26.8)
72nd Avenue & Winona Court	A (3.1)	A (3.3)
EB Through	A (3.1)	A (3.4)
WB Through	A (3.2)	A (3.2)
72nd Avenue & Raleigh Street	B (13.3)	A (9.8)
EB Through/Right	B (16.0)	B (14.7)
WB Left	C (28.1)	A (7.2)
WB Through	A (3.3)	A (3.5)
NB Left	D (40.6)	D (39.5)
NB Right	A (8.4)	A (8.1)
72nd Avenue & Lowell Boulevard	B (19.0)	C (30.0)
EB Left	A (9.4)	B (12.3)
EB Through	A (0.4)	B (19.9)
EB Right	A (0.1)	A (1.0)
WB Left	A (9.0)	C (21.7)
WB Through	A (7.4)	D (35.6)
WB Right	A (6.1)	B (12.1)
NB Left	D (42.7)	C (33.1)
NB Through/Right	D (51.5)	D (46.9)
SB Left	D (41.9)	C (34.8)
SB Through	D (54.2)	D (54.4)
SB Right	E (56.0)	A (3.8)
72nd Avenue & Irving Street	B (12.1)	A (6.6)
EB Left	A (5.5)	A (3.0)
EB Through/Right	A (2.3)	A (4.5)

WB Left	A (5.6)	A (1.2)
WB Through	A (0.5)	A (2.4)
WB Right	A (0.1)	A (0.0)
NB Left	D (44.9)	E (56.1)
NB Through/Right	D (44.8)	C (24.2)
SB Left	D (49.9)	E (60.1)
SB Through	D (44.5)	D (49.2)
SB Right	F (88.0)	B (15.9)
72nd Avenue & Hooker Street	A (3.7)	A (5.2)
EB Left	A (2.2)	A (4.0)
EB Through/Right	A (0.5)	A (0.8)
WB Left	A (2.4)	A (4.2)
WB Through	A (0.2)	A (0.3)
WB Right	A (0.0)	A (0.1)
NB Left	E (55.4)	D (47.7)
NB Through/Right	E (58.1)	D (49.5)
SB Left/Through/Right	E (55.5)	D (54.6)
72nd Avenue & Federal Boulevard	C (32.9)	C (33.1)
EB Left	E (68.8)	E (63.9)
EB Through	D (50.3)	D (40.9)
EB Right	D (53.5)	D (40.3)
WB Left	E (59.8)	E (56.9)
WB Through	E (64.1)	D (48.4)
WB Right	D (36.5)	D (43.9)
NB Left	E (67.5)	E (63.4)
NB Through	B (16.7)	C (27.2)
NB Right	A (7.4)	B (12.6)
SB Left	D (53.4)	D (47.7)
SB Through	C (20.3)	C (21.0)
SB Right	C (22.9)	A (9.3)
72nd Avenue & Zuni Street	A (8.2)	A (3.7)
EB Left	A (6.9)	A (2.4)
EB Through	A (5.4)	A (2.3)
WB Through/Right	A (3.2)	A (3.0)
SB Left	D (43.0)	C (30.7)
SB Right	B (12.2)	B (14.5)

All intersections operate at an overall LOS “D” or better during both the morning and evening peak hours. Detailed LOS and queuing reports can be found in **Appendix B**.

The following intersections have one or more movements that operate at or below a LOS “E” during either of the peak hours studied:

- 72nd Avenue & Pierce Street

- 72nd Avenue & 5400 West
- 72nd Avenue & Sheridan Boulevard
- 72nd Avenue & Lowell Boulevard
- 72nd Avenue & Irving Street
- 72nd Avenue & Hooker Street
- 72nd Avenue & Federal Boulevard

1.4.8 Travel Demand Modeling

Background

The Denver Regional Council of Governments (DRCOG) Focus 2.3.1 Travel Demand Model was used to develop long-range travel demand forecasts for the project corridor. The travel demand modeling process used a comparison of existing traffic counts with the 2020 base year model volume to adjust 2050 model forecasts according to procedures described in the National Cooperative Highway Research Program Report (NCHRP) 765. These forecasts were used to develop 2050 average annual daily traffic (AADT) and peak hour traffic volumes for the project corridor.

Model Transportation Network

In the travel demand model, the 2020 and 2050 transportation network is reflected as follows:

- Principal Arterial
- Four-lane (two lanes per direction)

Table 8 summarizes daily traffic volumes on 72nd Avenue obtained from the travel demand model for 2020 and 2050. The 2050 Forecasts are adjusted using NCHRP 765 methodology. Traffic growth between 2020 and 2050 is generally 1% per year.

Table 8: Daily Forecasts

Location	2023 Counts	2050 Forecasts
East of Canosa Street	12,800	18,900
West of Julian Street	20,900	25,800
West of Wolff Street	16,200	21,200
West of Eaton Street	11,600	17,500

Model Socioeconomics

Model socioeconomics were evaluated to verify expected population and employment growth. The maps in **Appendix C** depict 2020 and 2050 model population and employment within the project corridor vicinity, and the model population and employment growth between 2020 and 2050 within the project corridor vicinity.

1.5 Safety Assessment

1.5.1 Crash Analysis

Analysis Tools & Methodology

Crash data for the years 2015-2019 was provided by CDOT. There were 736 crashes during the 2015-2019 analysis period, with a breakdown of crashes by year shown in **Figure 71**.

Both fatal crashes that occurred during the analysis period involved bicyclists or pedestrians. Crashes most commonly occurred on weekdays (see **Figure 72**), during Winter, Spring and Fall (see **Figure 73**) and during typical periods of rush hour traffic, such as between 7:00 – 8:00 AM and between 3:00 – 5:00 PM (see **Figure 74**).

72nd Avenue is considered a DRCOG High Injury Network (HIN) Corridor ([see HIN map](#)), with the portion of the study area between Sheridan Boulevard and Federal Boulevard considered a Critical Corridor. Critical Corridors identify the top 50% of killed and seriously injured (KSI) crash density corridors along the regional HIN. Locations with the highest crash frequency are highlighted in further detail below. Also see **Figure 75** for a map of all reported crashes during the analysis period.

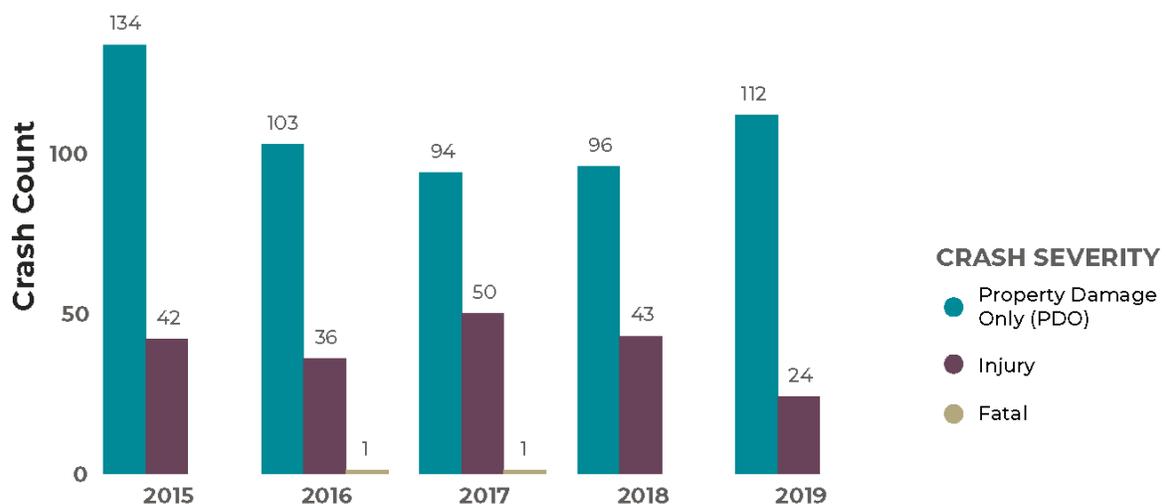


Figure 71: Crash Counts by Year and Severity

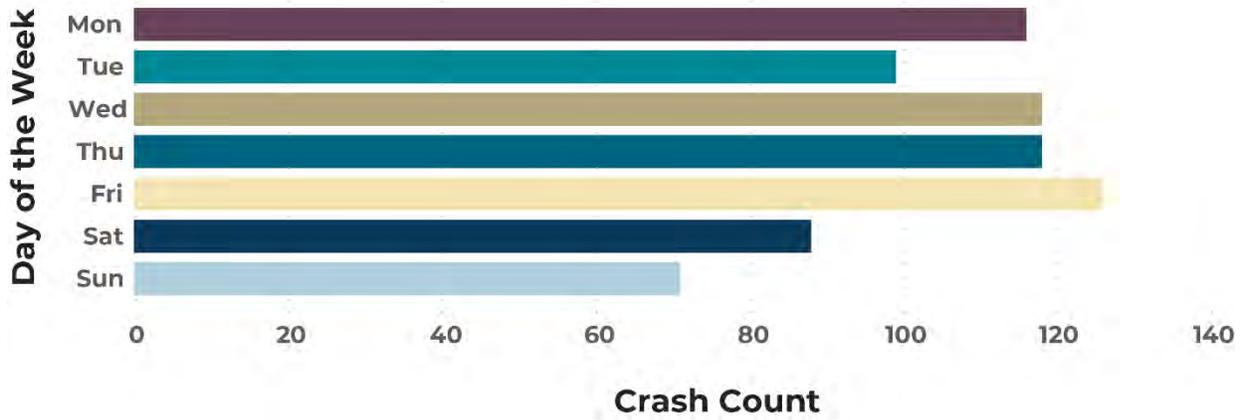


Figure 72: Crash Counts by Day of Week

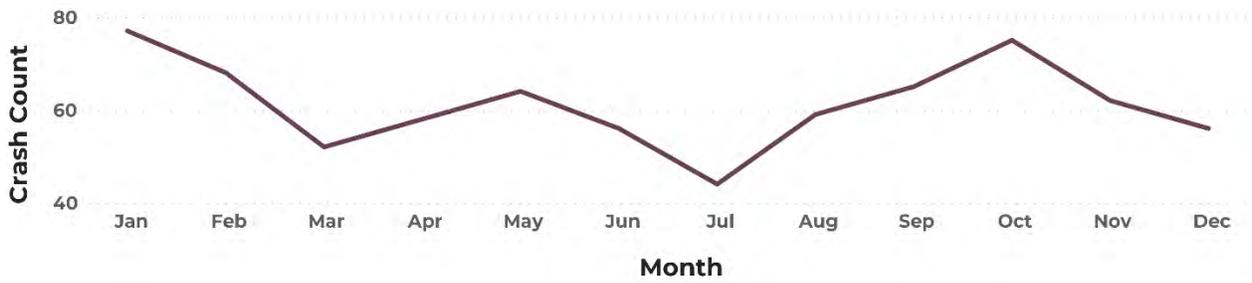


Figure 73: Crash Counts by Month

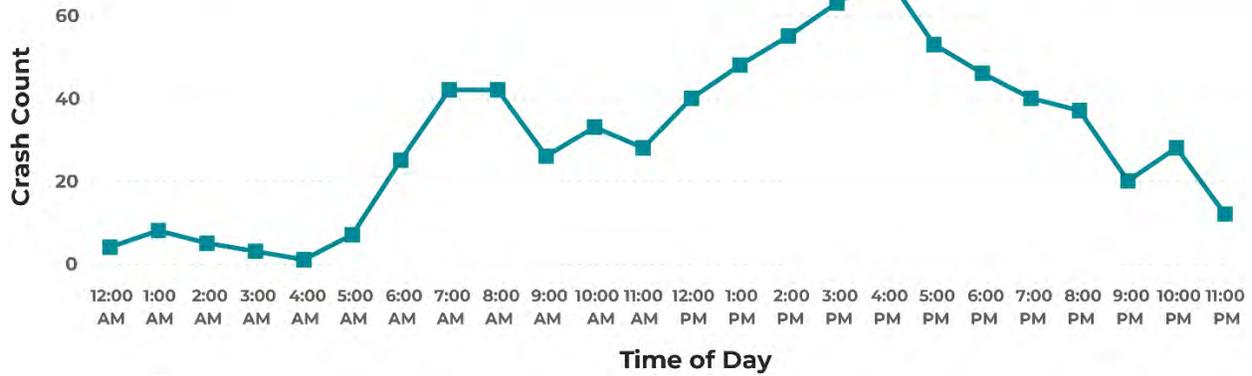


Figure 74: Crash Counts by Time of Day

Federal Boulevard & 72nd Avenue



Figure 76: The intersection of 72nd Avenue and Federal Boulevard, looking east from 72nd Avenue

Of all intersections along the three-mile corridor, the Federal Boulevard intersection had the highest crash count during the 2015-2019 analysis period, at 228 total crashes. Though 181 (79%) of these were Property Damage Only (PDO) crashes, the remaining 47 crashes did result in injuries. Bicyclists/pedestrians were involved in four crashes at this intersection. Furthermore, according to the 2020 Transportation & Mobility Plan, the 72nd Avenue and Federal Boulevard intersection is within the top 10 intersections in Westminster with the highest number of crashes between 2015 and 2017.

Sheridan Boulevard & 72nd Avenue



Figure 77: The intersection of 72nd Avenue and Sheridan Boulevard, looking west from 72nd Avenue

The Sheridan Boulevard intersection had the second highest crash count of project area intersections during the 2015-2019 analysis period, at 105 total crashes. 23% (24) of these crashes resulted in injuries. Bicyclists/pedestrians were involved in five crashes at this intersection.

Lowell Boulevard & 72nd Avenue



Figure 78: The intersection of 72nd Avenue and Lowell Boulevard, looking east from 72nd Avenue

The Lowell Boulevard intersection had the third highest crash count during the 2015-2019 analysis period, at 92 total crashes. 29% (27) of these crashes resulted in injuries. Bicyclists/pedestrians were involved in five crashes at this intersection.

Crash Types

Review of the most common crash types revealed that more than a third (35%) of the 736 crashes that occurred along the study area during the 2015-2019 analysis period were rear-end crashes. Common crash types are defined below, and listed by most to least common for the 72nd Avenue study area data set. See **Figure 79** for a breakdown on crashes by crash type.

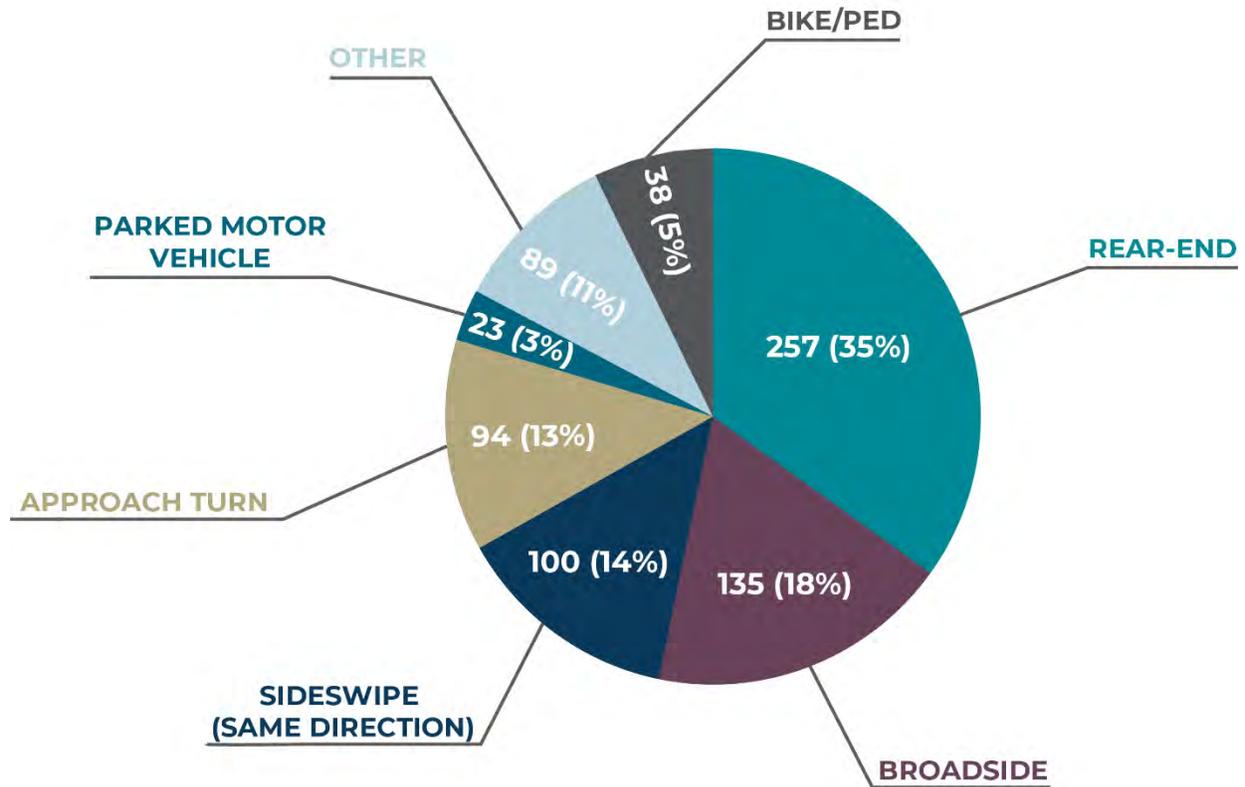


Figure 79: 2015-2019 72nd Avenue crashes by crash type

Rear-End

A crash type that involves two vehicles in a position of one behind the other and collide, regardless of what movements(s) either vehicle was in the process of making with the exception of one or both vehicles backing

Broadside

A crash type that involves two vehicle approaching from nonopposing angular directions (i.e. T-bone)

Sideswipe (same direction)

A crash type that involves two vehicles moving alongside each other and collide, with at least one of the vehicles being struck on the side

Approach Turn

A crash type that involves two vehicles in the opposite direction, one turns into the path of the other

Parked Motor Vehicle

A crash type in which a vehicle in motion collides with a parked motor vehicle, whether occupied or not.

Other

Crash types in the “Other” category included pedestrian or bicycle crashes, sidewalk (opposite direction) crashes and those involving fixed objects such as signs, light/utility poles, wall/buildings, guard rails, trees/shrubbery, bridge trails, traffic signal poles, concrete barriers, fences, etc.

Bike/Ped

Crash involving either a bicyclist or pedestrian. **Table 9** displays the percentage of crashes involving a bicyclist or pedestrian by intersection (sorted by west to east).

Table 9: Percentage of Overall Crashes Involving a Bicyclist or Pedestrian

Nearest Intersecting Street	Percent of Overall Crashes Involving a Bicyclist or Pedestrian
Pierce Street	0%
Otis Street	67%
Lamar Street	0%
Ingalls Street	11%
Eaton Street	0%
Depew Street	8%
5400 Block	0%
Sheridan Boulevard	5%
Yates Street	0%
Xavier Street	0%
Wolff Street	0%
Winona Court	0%
Vrain Street	0%
Utica Street	14%
Tennyson Street	0%
Stuart Street	19%
Raleigh Street	6%

Bradburn Boulevard	9%
72nd Way	0%
Newton Street	0%
Meade Street	13%
Lowell Boulevard	5%
Julian Way	0%
Julian Street	11%
Irving Street	13%
Hooker Street	7%
Federal Boulevard	2%
Eliot Circle	11%
Clay Street	0%
Canosa Court	6%
Bryant Street	0%
Beach Street	67%
Berthoud Street	0%
Alcott Street	0%
Zuni Street	0%

1.6 Needs Assessment

1.6.1 Needs Assessment Mapping

Overview

The needs assessment is a summary of gaps and barriers related to multimodal transportation within the study area. These mobility challenges were identified during the existing conditions phase and plan review performed by the project team as well as during the stakeholder engagement efforts. Reference **Figure 80** which aligns with the numbers below.

Place-Specific Recommendations

- 1 Complete sidewalk gaps on the south side of the corridor between Pierce Street and Ingalls Street.
- 2 Upgrade wayfinding to orient corridor users to area amenities such as Faversham Lake/Park to the north on Ingalls Street.
- 3 Provide better connections to 72nd Avenue amenities (such as bus stops) from 72nd Frontage Road and Ingalls Street (south side of corridor).
- 4 Install aesthetic treatments along curve between Ingalls Street and Depew Street.
- 5 Improve transit stop amenities and comfort at the eastbound 72nd Avenue & 5400 Block stop.
- 6 At Sheridan Boulevard intersection, install raised crossings at bypass lanes to reduce exposure time for vulnerable users.
- 7 Install traffic calming measures to reduce speeds in the school zone between Wolff Street and Utica Street.
- 8 Improve connections and wayfinding from 72nd Avenue to Little Dry Creek Trail.
- 9 Install concrete curb extensions at the Lowell Boulevard intersection to decrease vehicle turning radii and reduce exposure time for vulnerable users.
- 10 Install a Station Area gateway sign structure on the south side of 72nd Avenue at Irving Street, noting this as the primary TOD entrance to Westminster Station.
- 11 Improve maintenance of trees and plants in existing amenity zone planters between Meade Street and Eliot Circle.
- 12 Improve ADA accessibility and installed raised driveway crossings at major driveways between Newton Street and Canosa Court.

- 13 Install secondary Station Area gateway signage and landscaping at Hooker Street and 72nd Avenue.
- 14 Crossing improvements are needed at the Federal Boulevard intersection to reduce exposure time for vulnerable users.
- 15 Improve transit stop amenities and comfort at westbound 72nd Avenue & Federal Boulevard stop.
- 16 Install additional crosswalk between Federal Boulevard and Canosa Court.
- 17 Complete missing sidewalk gap on south side of 72nd Avenue between Elliot Circle and Clay Street.
- 18 Install crosswalk at Beach Street (where a high percentage of bicyclist/pedestrian involved crashes occurred) to connect with Skyline Vista Park path, which has been identified as an important route for students accessing area schools.

Corridor Wide Recommendations

-  Increase winter clearance of sidewalks and bicycle facilities, given the existence of snow and ice inhibit safe multimodal travel.
-  Upgrade all corridor facilities to be ADA compliant, including curb ramps, access routes to bus stops and bus stop landing pads.
-  Ensure prioritization of pedestrian and transit rider infrastructure upgrades during development and redevelopment.
-  Provide a continuous bicycle facility throughout the corridor that provides appropriate protection for users.
-  Implement traffic calming measures to reduce overall vehicle corridor speeds.
-  Implement countermeasures to help remove 72nd Avenue from the DRCOG High-Injury Network.

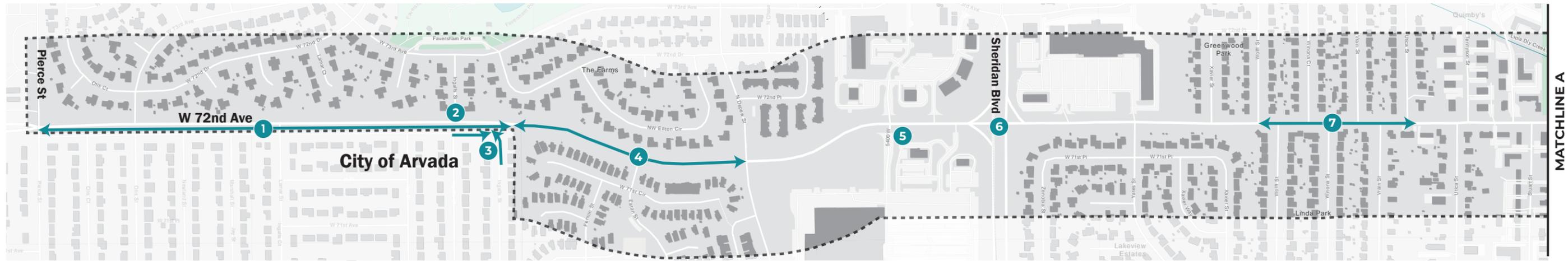


Figure 80: Needs Assessment Map