

October 2018



NW AURORA



Mobility Study



FINAL REPORT

Northwest Aurora Mobility Study

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1. Executive Summary

The Northwest (NW) Aurora Mobility Study evaluates the operational effectiveness of existing traffic control devices, as well as current and potential multimodal connections in and adjacent to the NW Aurora neighborhood (the area bordered by Westerly Creek Park to the west, Peoria Street to the east, 26th Avenue to the north, and Montview Boulevard to the south). The purpose of the NW Aurora Mobility Study is to improve mobility for all people in the neighborhood, including people walking, riding bicycles, persons using wheelchairs, caregivers pushing strollers, people skateboarding, riding transit, and driving automobiles.

The vision for NW Aurora is a neighborhood with a sense of place where bicycle- and pedestrian-friendly streets are available for all age groups and abilities, making it an even better neighborhood in which to live, work, and play.

While recent residential and commercial developments create additional traffic and demand on the overall network and neighborhoods, they also provide an opportunity to expand mobility options and enhance the quality of life by connecting people to destinations, community amenities, schools, and parks. The study analyzes the transportation patterns of all modes to identify opportunities to enhance multimodal connectivity, increase public safety, and improve traffic operations.

Many other plans and projects related to NW Aurora are underway or recently completed. The following plans and projects were considered: Aurora Places, Original Aurora Zoning Update, Westerly Creek Village Community Plan, and Montview Connections. Many recent and planned developments in or near the study area were also considered when developing this study. The following were evaluated as part of this study: Montview Boulevard, Westerly Creek Village, and Stanley Marketplace; the Anschutz Medical and Fitzsimons Campuses; and the Stapleton Redevelopment and Martin Luther King Jr. Boulevard extension.

Current Conditions

NW Aurora is a diverse neighborhood of approximately 5,800 residents, where the median household income is approximately \$39,000. Approximately 40 percent of residents are 24 years old or younger.

The neighborhood is built on a strong gridded street network. The streets in the study area generally include a 2.5-foot attached sidewalk on each side, 8-foot parking on each side of the street, and one 12-foot travel lane in each direction. The posted speed limit within the neighborhood is generally 25 miles per hour (MPH) and the existing traffic control in the area is primarily two-way stop control. The stop-sign orientation is unbalanced and it creates faster routes on some streets. The NW Aurora neighborhood includes bicycle routes on Montview Boulevard and Moline Street, multiple school walking routes, and a sidewalk network that is almost fully connected but is narrow and inadequate for mobility.



Alternatives Development and Evaluation

Three packaged alternatives were developed recognizing that it is not realistic to improve every street or widen every sidewalk in the neighborhood due to constraints such as right-of-way and funding. In each alternative, the improvements focus on streets where the greatest benefits could be realized. Each packaged alternative provided a different way to achieve the vision for the NW Aurora neighborhood. The alternatives included Alternative A (Balanced Network), Alternative B (Neighborhood Placemaking Focus), and Alternative C (Connections Focus).

The three packaged alternatives were qualitatively evaluated based on their contribution to 15 distinct criteria. Rather than scoring to select the “best” alternative, it was an exercise to understand the strongest aspects of each alternative to inform the development of the recommended alternative.

Recommended Mobility Concept

The Recommended Mobility Concept emphasizes improved multimodal connections to the major activity nodes within and close to the neighborhood, and the creation of comfortable and safe walking zones within the activity nodes. The improvements and traffic control are intended to create a balanced street network for all travel modes.

Key elements of the Recommended Mobility Concept include:

- ◆ Emphasis on multimodal connections to the major activity nodes
- ◆ East-west walking enhancements focused on 22nd Avenue and 25th Avenue
- ◆ East-west bicycle enhancements focused on 23rd Avenue for commuter bicyclists and on 22nd Avenue for recreational bicyclists and families
- ◆ Complete streets on north-south streets including Fulton Street, Havana Street and Iola Street, Lima Street, and Oswego Street
- ◆ Motor vehicle and parking priority and connections to adjacent neighborhoods on Dayton Street and Moline Street
- ◆ Unique and inviting walking zones created through Westerly Creek Village, Stanley Marketplace, and within the Moorhead Recreation Center/Fletcher Community School area
- ◆ Encouragement of walking and biking to neighborhood schools
- ◆ Use of stop sign orientation and traffic calming to define and support the modal priority for each street

Public input from all three public meetings and online surveys influenced the development of the Recommended Mobility Concept (see **Figure 1**).

Placemaking in the Recommended Mobility Concept

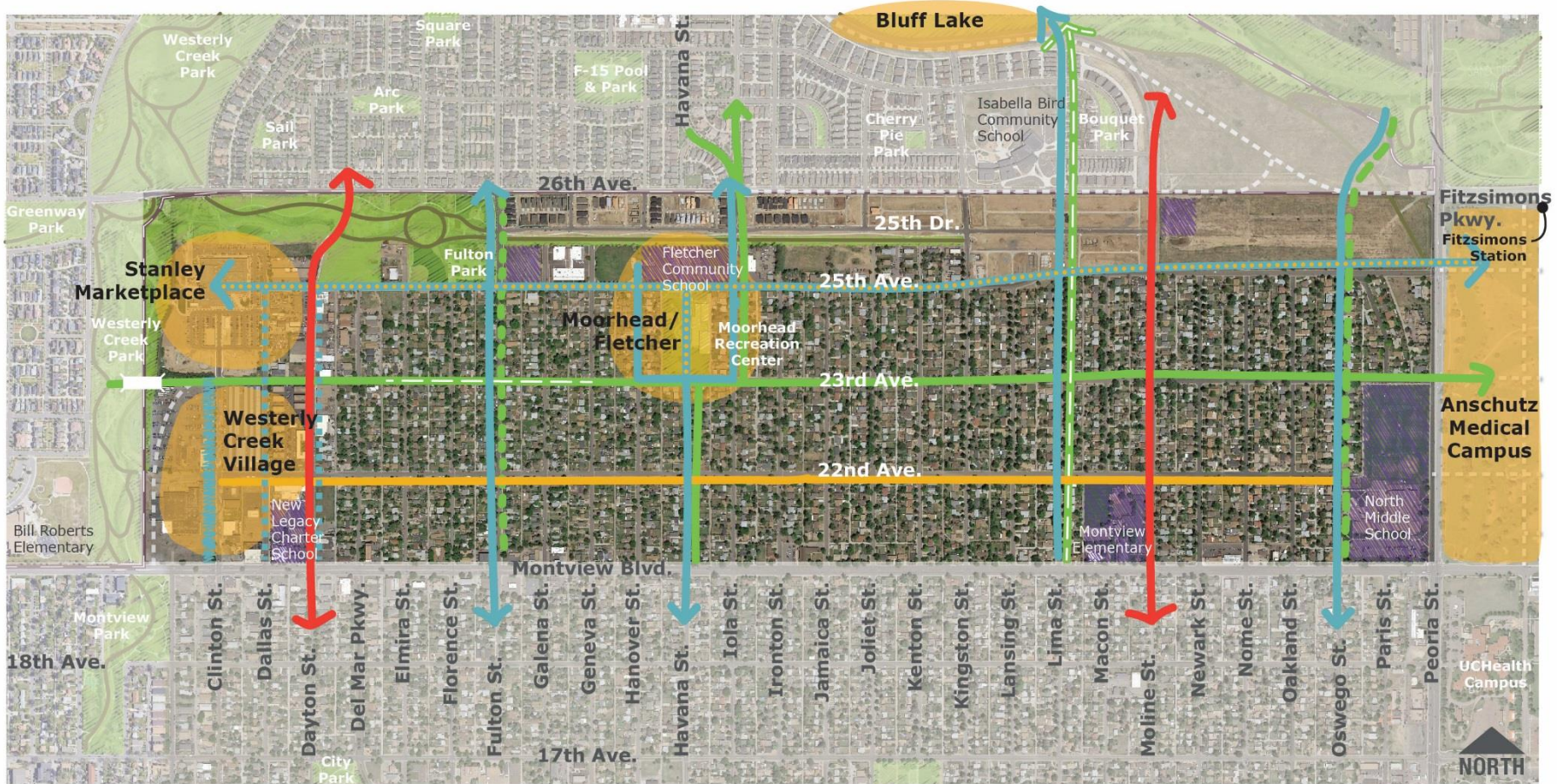
An overall placemaking framework was created as an integral part of the Recommended Mobility Concept. The placemaking approach emphasizes stronger connections to and from existing community amenities, as well as current and proposed developments, to establish stronger neighborhood connectivity, accessibility for pedestrians, bicyclists, and vehicles, and community amenities that build from existing neighborhood assets.

Figure 2 presents the Recommended Placemaking Concept.

The placemaking framework is organized around existing neighborhood amenities—such as schools, commercial destinations, the recreation center, parks and open spaces—to enhance the overall character and create a comfortable, connected, and overall enjoyable experience for residents. In all cases, the recommendations are a combination of transportation improvements and placemaking features that offer new mobility choices and public realm enhancements.



Figure 1. Recommended Mobility Concept



LEGEND

- | | | |
|---|---|--|
|  = Sidewalk and Pedestrian Enhancements |  = Shared Use Path |  = Motor Vehicle and Parking Priority |
|  = Main Street Pedestrian Zone |  = Bike Lanes |  = Activity Nodes |
|  = Pedestrian Boulevard |  = Shared Lanes |  = Schools |
|  = Missing/Substandard Sidewalks to be Improved with Redevelopment |  = Bike Boulevard | |

Figure 2. Recommended Placemaking Concept



Community Input

Three public meetings were held at distinct times throughout the study. All three meetings were held in the neighborhood at either Fletcher Community School or Moorhead Recreation Center. Nearly 100 people attended the public meetings.



The purpose of the first meeting was to introduce the study and existing conditions and to hear from the community on their transportation values and priorities. The community strongly indicated their desire for widening neighborhood sidewalks, maintaining trees, adding and/or improving green space, improving safety with enhanced lighting, and providing more biking connections and safer routes. This input was the basis for developing packaged alternatives.

The second public meeting provided an opportunity for attendees to review and discuss the three packaged alternatives. The public preference was for Alternative B (Neighborhood Placemaking Focus), but the public also viewed elements from the other alternatives favorably. The public input received was used as a starting point for developing the Recommended Concept.

The purpose of the third public meeting was to hear from the community on the Recommended Mobility Concept. The community supports the Recommended Mobility Concept and their priority projects include the pedestrian boulevard on 25th Avenue, the RRFB crossing treatment on 25th Avenue, and the bike lane on 23rd Avenue.

Implementation and Next Steps

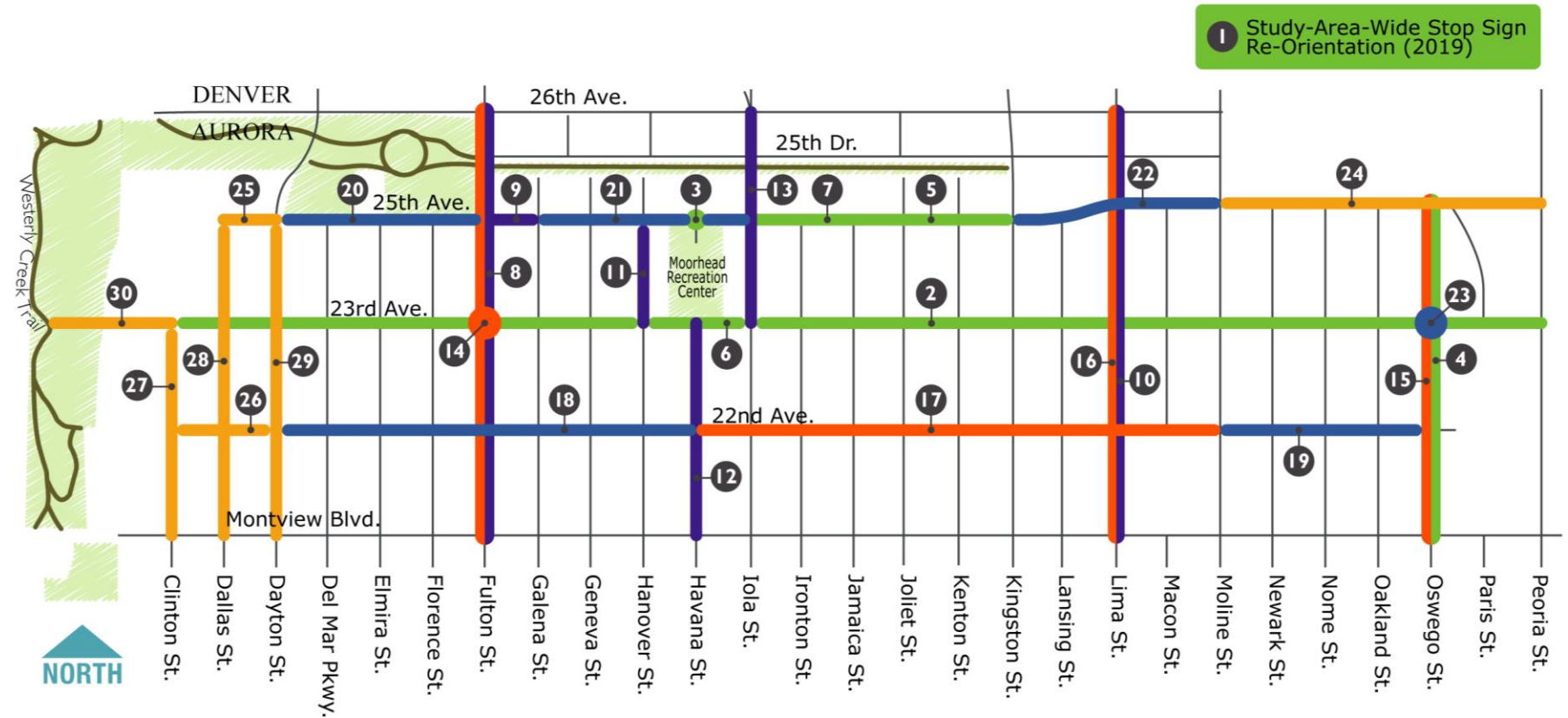
This document is meant to be a living concept that will continue to evolve. While the Recommended Mobility Concept balances the changes to the neighborhood with existing needs and desires, future opportunities to enhance mobility and placemaking within the neighborhood are possible.

The city of Aurora does not have funding to make all the recommended improvements immediately; the improvements will be made over time as funding becomes available. The Recommended Mobility Concept has been separated into 29 projects based on logical implementation phases.

Figure 3 shows the project locations and anticipated implementation timing. **Table 2** describes the projects and identifies phasing and potential funding sources.

Several sources can be leveraged to fund the various projects, including Denver Regional Council of Governments (DRCOG) TIP Funding, Safe Routes to School (SRTS) grants, and Aurora General Fund (including operations and ADA/Access funding). The city of Aurora has included a line item in the 2019 and 2020 budget for implementation of high-priority projects in NW Aurora. The city will continue to pursue funding opportunities and partnerships as a possible way to expedite the implementation of projects.

Figure 3. Project Phasing





2. Introduction

The city of Aurora's Northwest (NW) Aurora Mobility Study evaluates the operational effectiveness of existing traffic control devices, as well as current and potential multimodal connections. The study analyzes the transportation patterns of all modes to identify opportunities to enhance multimodal connectivity, increase public safety, and improve traffic operations.

Vision and Needs

The vision for NW Aurora is a neighborhood with a sense of place where bicycle- and pedestrian-friendly streets are available for all age groups and abilities, making it an even better neighborhood in which to live, work, and play.

The greatest needs to be addressed include:

- ◆ Managing the flow of traffic within and through the neighborhood
- ◆ Providing safe and comfortable sidewalks to encourage walking in the neighborhood
- ◆ Identifying preferred routing for bicyclists and designating space for bicycles
- ◆ Enhancing the safety of school walking and biking routes to help eliminate barriers to children walking and biking to school
- ◆ Increasing non-vehicular trips (such as biking, walking, and riding transit)
- ◆ Providing multimodal connections to neighborhoods and local regional destinations and amenities
- ◆ Enhancing the neighborhood character through beautification and placemaking
- ◆ Improving access to local and regional transit services
- ◆ Connecting the neighborhood to parks and the regional open space and trail network
- ◆ Accommodating all users through complete streets design

The neighborhood vision and needs will help to identify potential improvements in the neighborhood and are based on community input from previous planning efforts.

Study Area

Figure 4 shows the study area bordered by Westerly Creek Park to the west, Peoria Street to the east, 26th Avenue to the north, and Montview Boulevard to the south. The neighborhood is built on a strong grid network but has long been physically disconnected from the surrounding areas to the west and north, originally due to the proximity of Stapleton International Airport. This study considers multimodal connectivity within the neighborhood, as well as neighborhoods and locations adjacent to the study area.

Planning Context

The combination of a well-established residential neighborhood, major commercial areas, parks, schools, and public amenities within NW Aurora provides a foundation to create a balanced transportation network that benefits the community and optimizes mobility. While the recent residential and commercial developments create additional traffic and demand on the overall network and neighborhoods, they also provide an opportunity to expand mobility options and enhance the quality of life by connecting people to destinations, community amenities, schools, and parks.



Study Goals

The purpose of the NW Aurora Mobility Study is to improve mobility for all people in the neighborhood, including bicyclists, pedestrians, wheelchair users, strollers, skateboarders, drivers, and transit riders. Mobility is simply the ability to move freely and easily.

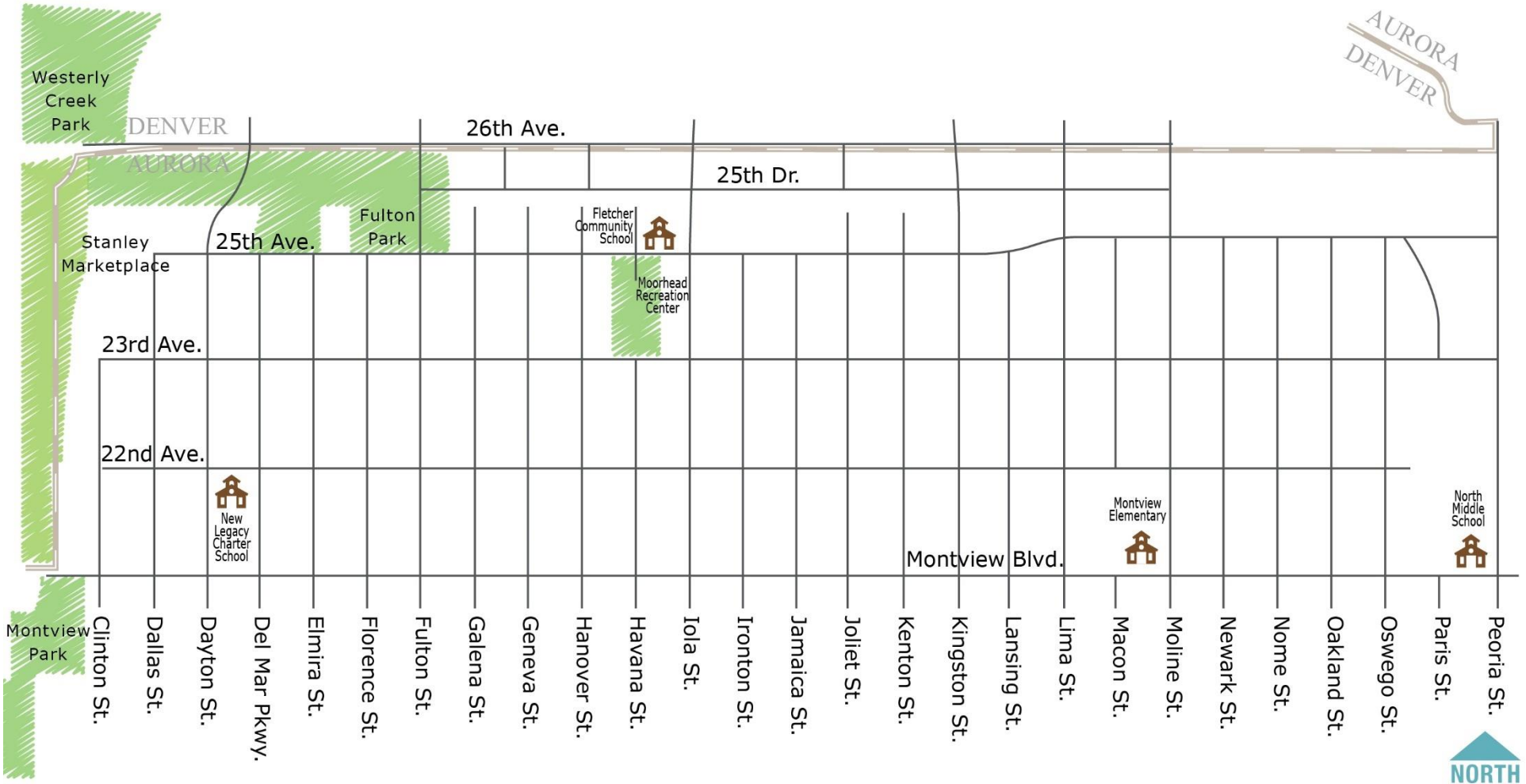
The project goals are to:

- ◆ Understand existing travel patterns for all users, including bicyclists, pedestrians, drivers, and transit riders
- ◆ Evaluate the effectiveness of existing stop signs and traffic signals
- ◆ Evaluate current and potential multimodal connections between the major activity centers in and near the study area, including school walking routes
- ◆ Identify short-term and mid-term improvements to enhance the safety and quality of life in the neighborhood
- ◆ Develop conceptual design and cost estimates for the recommended improvements



NW Aurora has experienced many recent redevelopments in and adjacent to the neighborhood

Figure 4. Study Area





Related Plans and Projects

Other plans and projects that relate to the NW Aurora Mobility Study are underway or have been recently completed.

Aurora Places

Aurora Places is the current planning effort to update the citywide 2009 Comprehensive Plan. The plan will outline the current challenges and opportunities in the city, describe future goals and objectives for development, and include an action plan on how to achieve these goals and objectives. Aurora Places includes goals and policies related to land use and development; residential, commercial, and industrial areas; transportation and mobility; parks, recreation, and environmental features; public health; environmental stewardship, community image, and authenticity; public arts and cultural themes; and an action strategy for implementation. The plan will detail a long-term vision for land use and development for the next 10 to 20 years.

Original Aurora Zoning Update

The city of Aurora has completed a zoning update for Original Aurora (the area bordered by Yosemite Street, Peoria Street, East 6th Avenue, and East 26th Avenue). Zoning creates rules for what may be built on property and how that property may be changed. The completed plan updates zoning along key corridors in Original Aurora from single-use zoning (for example, commercial only) to mixed-use zoning. This zoning update allows complementary uses. It allows housing, shops, restaurants, and offices to be located closer together, creating more services, things to do, and jobs close to home, and puts more “eyes on the street” to increase public safety. It may also potentially attract new businesses to the area, while at the same time protect single-family homes, increase options for property owners, improve property values and quality of life, and create new living options in Original Aurora.

Westerly Creek Village Community Plan

In 2010, the city of Aurora received a grant from the Environmental Protection Agency’s Brownfields Area-Wide Planning Pilot Program. The grant program resulted in a guide for brownfield remediation and redevelopment possibilities for the Westerly Creek Village Community. In 2013, the city of Aurora conducted community meetings and extensive planning efforts to create an overall vision for the Westerly Creek Village Community. The plan envisions a thriving, vibrant, and safe community with a mix of shops, restaurants, and businesses. The redeveloped area will include enhanced bicycle- and pedestrian-friendly streets as the adopted 2009 Comprehensive Plan includes a strategy to “improve pedestrian and bicycle routes within Northwest Aurora, Westerly Creek Village and the adjacent Westerly Creek Trail Corridor.”

Montview Connections

In 2016 and 2017, the city installed buffered bicycle lanes on Montview Boulevard in coordination with the street repaving program. On-street parking was eliminated to accommodate the new bicycle facilities. Before and after data collection indicates that vehicle speeds remain at pre-installation levels and cyclists and pedestrians feel safer. The design was the outcome of a study prepared in 2015 and funded by a Walk & Wheel grant.

Recent and Planned Development

NW Aurora is an established residential neighborhood surrounded by significant redevelopment and transformation. The study area is surrounded by major activity centers or corridors, including Montview Boulevard, the Westerly Creek Village and Stanley Marketplace redevelopments, the Anschutz Medical Campus and Fitzsimons Campus, and Martin Luther King Jr. Boulevard (MLK) and the Stapleton neighborhood redevelopment. Other major regional corridors and destinations, such as Colfax Avenue and the Aurora Arts District, are also near the study area.

Figure 5 shows the recent and planned developments in the study area.

Montview Boulevard, Westerly Creek Village, and Stanley Marketplace

Westerly Creek Village is located in the northern portion of the NW Aurora neighborhood, between Yosemite Street, Iola Street, 25th Avenue, and 19th Avenue. The redevelopment will include new residential properties and enhance the multimodal trail connections from the NW Aurora neighborhood to Westerly Creek.

The former Stanley Aviation airplane ejector seat factory has been repurposed into a retail/event center with bicycle and pedestrian connections to the Westerly Creek Trail system and the new 26th Avenue Park.

Anschutz Medical Campus and Fitzsimons Campus

The Anschutz Medical Campus, located due east of the study area, is currently home to the University of Colorado Hospital, Children’s Hospital Colorado, and the recently opened Rocky Mountain Regional VA Medical Center, and is adjacent to the Fitzsimons Innovation Campus. Nearly 150 acres of developable land is available through the Fitzsimons Redevelopment Authority, which is working closely with the city of Aurora

to identify land use concepts and a street layout that will guide the development in the coming years. The city has planned street connections of 22nd Avenue, 23rd Avenue, and 25th Avenue from the study area to the Anschutz Medical Campus and the Fitzsimons Innovation Campus. These new connections are anticipated to change travel patterns in and around the study area.

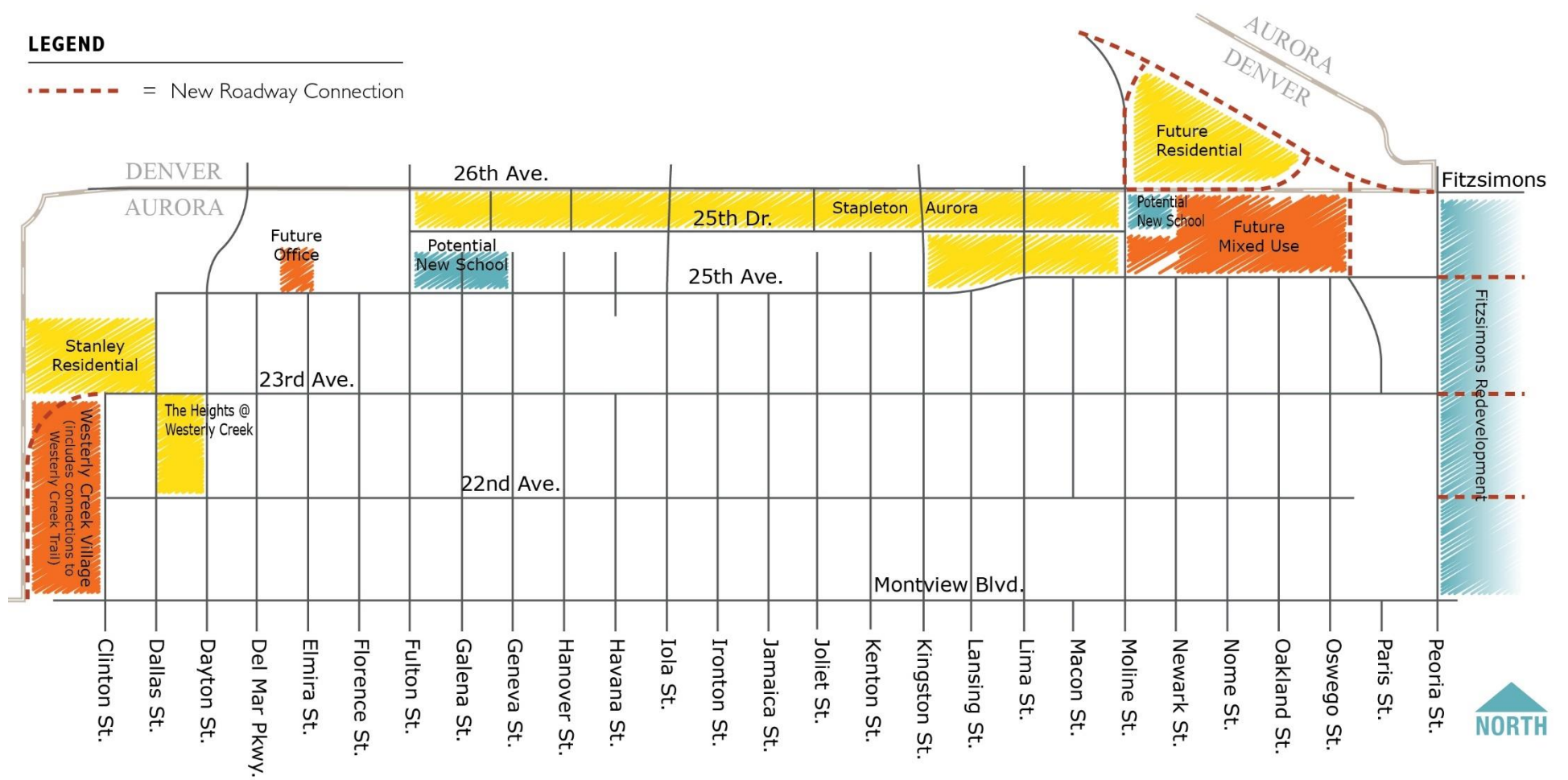
Stapleton Redevelopment and Martin Luther King Jr. Boulevard

The Aurora phase of the Stapleton redevelopment project began in 2016. The Stapleton Aurora redevelopment has introduced new north-south roadway connections of Fulton Street, Iola Street, and Kingston Street, and more recently, new connections of Lima Street and Dayton/Emporia Street between the study area and the Stapleton neighborhood to the north. These new connections are changing traffic patterns and increasing travel along streets in the study area.



Stanley Marketplace located at Dallas Street and 25th Avenue

Figure 5. Recent and Planned Developments





N Dayton Way connection between NW Aurora and Stapleton

In addition to new connections to the NW Aurora neighborhood, construction of the extension of MLK from Havana Street east to Peoria Street in Stapleton is expected to be completed in early 2020.

The project consists of:

- ◆ A new roadway between Havana Street and Peoria Street built to arterial standards, with two travel lanes and one parking lane in the eastbound direction and two travel lanes in the westbound direction
- ◆ A paved bicycle/pedestrian path and a soft-surface equestrian trail on the north side of MLK between Havana Street and Peoria Street, separated from the roadway by a landscaped buffer
- ◆ A raised median with landscaping between the eastbound and westbound lanes
- ◆ A paved bicycle/pedestrian path on the south side of MLK between Havana Street and Peoria Street, separated from the roadway by a tree lawn
- ◆ Reconstruction of Moline Street to 26th Avenue as a two-lane collector street
- ◆ Traffic signals at Kingston Street, Moline Street, and 26th Avenue; street lighting; and signage for a 35-mile per hour (MPH) speed limit

The Fitzsimons redevelopment is anticipated to occur initially on the south side of the development area, near Montview Boulevard, in the short-term future. No future connections across Peoria Street have been assumed in the development of the 2025 traffic projections. Traffic forecasts completed as part of the Fitzsimons Redevelopment Authority traffic study indicate that future roadway connections across Peoria are anticipated at 23rd and 25th Avenues, with signalization of the 23rd Avenue intersection.

Operational analyses of study area intersections retained current intersection configuration and traffic control. Generally, all study area intersections are projected to continue to operate at acceptable levels of service.



Current conditions along 25th Avenue

Study Process and Schedule

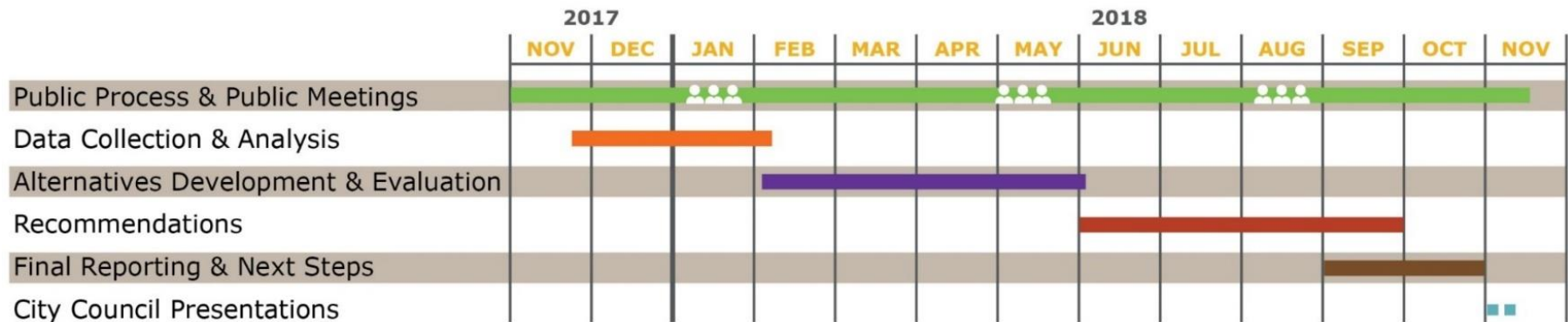
The study began in November 2017 and has been a yearlong process.

Figure 6 shows the five main study phases:

- ◆ **Public Process & Public Meetings:** The public process was ongoing and included three public meetings (January, May, and August 2018).
- ◆ **Data Collection & Analysis:** Existing and future conditions data were collected and documented for all modes. This included a field inventory, observations, and a connectivity assessment. This phase resulted in a vision and a statement of needs.

- ◆ **Alternatives Development & Evaluation:** Potential solutions were developed, evaluated, and packaged as three alternatives. A multimodal operational analysis was completed to support the packaged alternatives.
- ◆ **Recommendations:** The recommended alternative concept was refined and conceptually designed. This included developing an implementation plan identifying major next steps.
- ◆ **Final Reporting & Next Steps:** This final report will be presented to the Aurora City Council for information in November 2018.

Figure 6. Project Schedule



3. Current Conditions

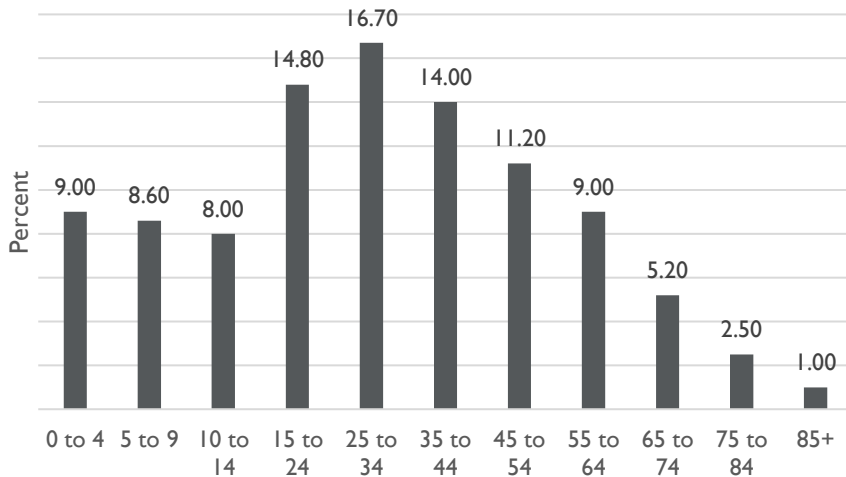
An inventory and analysis of the existing transportation conditions in the study area and surrounding neighborhoods was conducted to present a snapshot of how transportation is currently provided to NW Aurora. Completed in early 2018, the inventory establishes a baseline of the current roadway, bicycle, pedestrian, transit, and rail conditions.

Appendix A contains a complete copy of the Current Conditions report.

Demographics

NW Aurora is a diverse neighborhood of approximately 5,800 residents. Approximately 40 percent of residents are 24 years old or younger. Approximately 9 percent of residents are 65 years old or older. The median age of residents is 30.8 years.

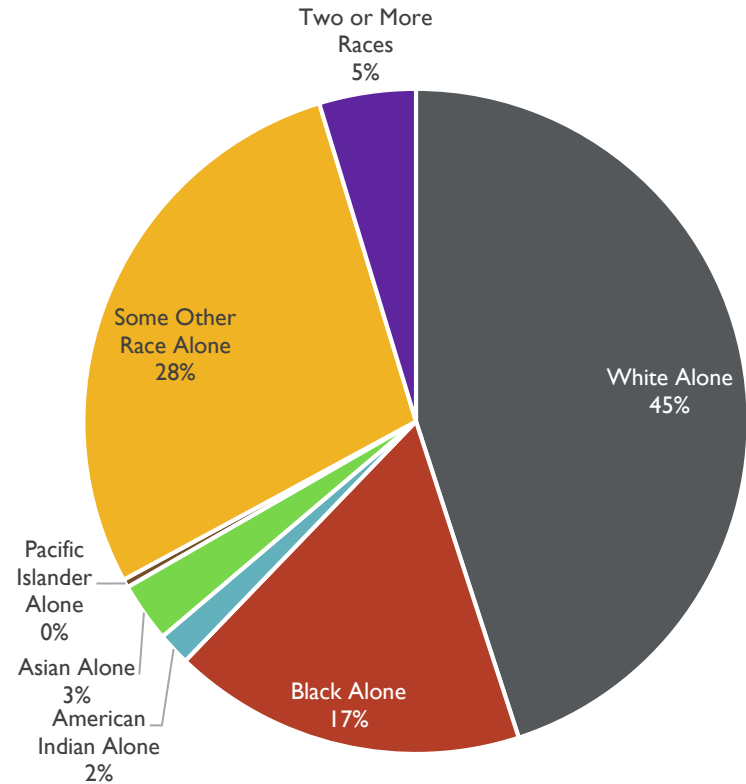
2017 Study Area Population by Age



Source: ESRI. 2017. Community Profile. Forecasts for 2017 and 2020 using US Census 2010 Summary File. Accessed December 15, 2017.

Residents are racially and ethnically diverse, sixty percent of residents are of a Hispanic origin. Forty-five percent of residents reporting as white alone, approximately 17 percent of residents as black alone, and another 28 percent reporting as some other race alone.

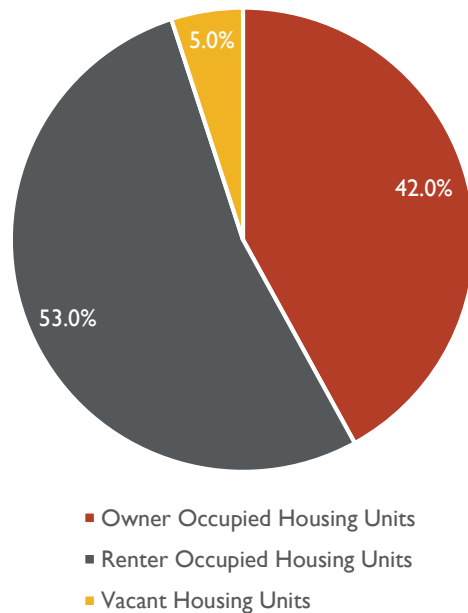
2017 Population by Race/Ethnicity



Source: ESRI. 2017. Community Profile. Forecasts for 2017 and 2020 using US Census 2010 Summary File. Accessed December 15, 2017.

In 2017, the neighborhood contained approximately 1,900 housing units, of which 53 percent were renter-occupied, 42 percent were owner-occupied, and another 5 percent were vacant. The median self-reported home value was approximately \$163,000, while the median household income was approximately \$39,000.

2017 Housing Units



Source: ESRI. 2017. Community Profile. Forecasts for 2017 and 2020 using US Census 2010 Summary File. Accessed December 15, 2017.

Existing Roadway Characteristics and Traffic Operations

An inventory of the existing roadway cross sections was completed to understand travel lane widths and the presence of on-street parking,

sidewalks, bicycle facilities, and landscaping characteristics. The streets in the study area generally include a 2.5-foot attached sidewalk on each side, 8-foot parking on each side of the street, and one 12-foot travel lane in each direction.

Posted and Observed Speeds

Speed limits promote public safety by informing drivers of the prudent travel speed. Crashes are less likely to happen when most drivers are traveling at consistent speeds. The posted speed limit in the NW Aurora neighborhood is generally 25 MPH. However, 25th Avenue is posted at 30 MPH, Moline Street north of 25th Avenue is posted at 30 MPH, and Iola Street north of 26th Avenue is also 30 MPH. Peoria Street and Montview Boulevard are posted at 35 MPH. **Figure 7** shows the posted speed limits.

Many factors can be taken into consideration when determining the appropriate speed limit. Traditionally, the primary consideration for determining the speed limit is the 85th percentile speed, which is the speed at or below which 85 percent of vehicles are traveling. However, posted speed limits can also take into consideration other factors such as existing and future land use, bicycle and pedestrian activity, parking practices and safety to determine a suitable speed limit given the context of the facility. Observed speeds in this area indicated that most vehicles are traveling at or below the posted speed limit. **Figure 8** shows the observed travel speeds.

Traffic Control

The existing traffic control in the area is primarily two-way stop control. Generally, in the study area, stop signs are oriented to allow vehicles traveling east-west to drive more freely, while north-south vehicles are often required to stop at intersections. **Figure 8** shows the stop sign orientation, as well as free-flow movements.

Neighborhood streets designed in a grid like the study area often have stop signs positioned in a “woven” pattern so that travelers must stop at roughly every other intersection, which can reduce cut-through traffic and speeding. Stop sign orientation can also be strategically modified to prioritize bicycles and/or pedestrians to make biking and walking easier along common routes.

Figure 7. Posted Speed Limits

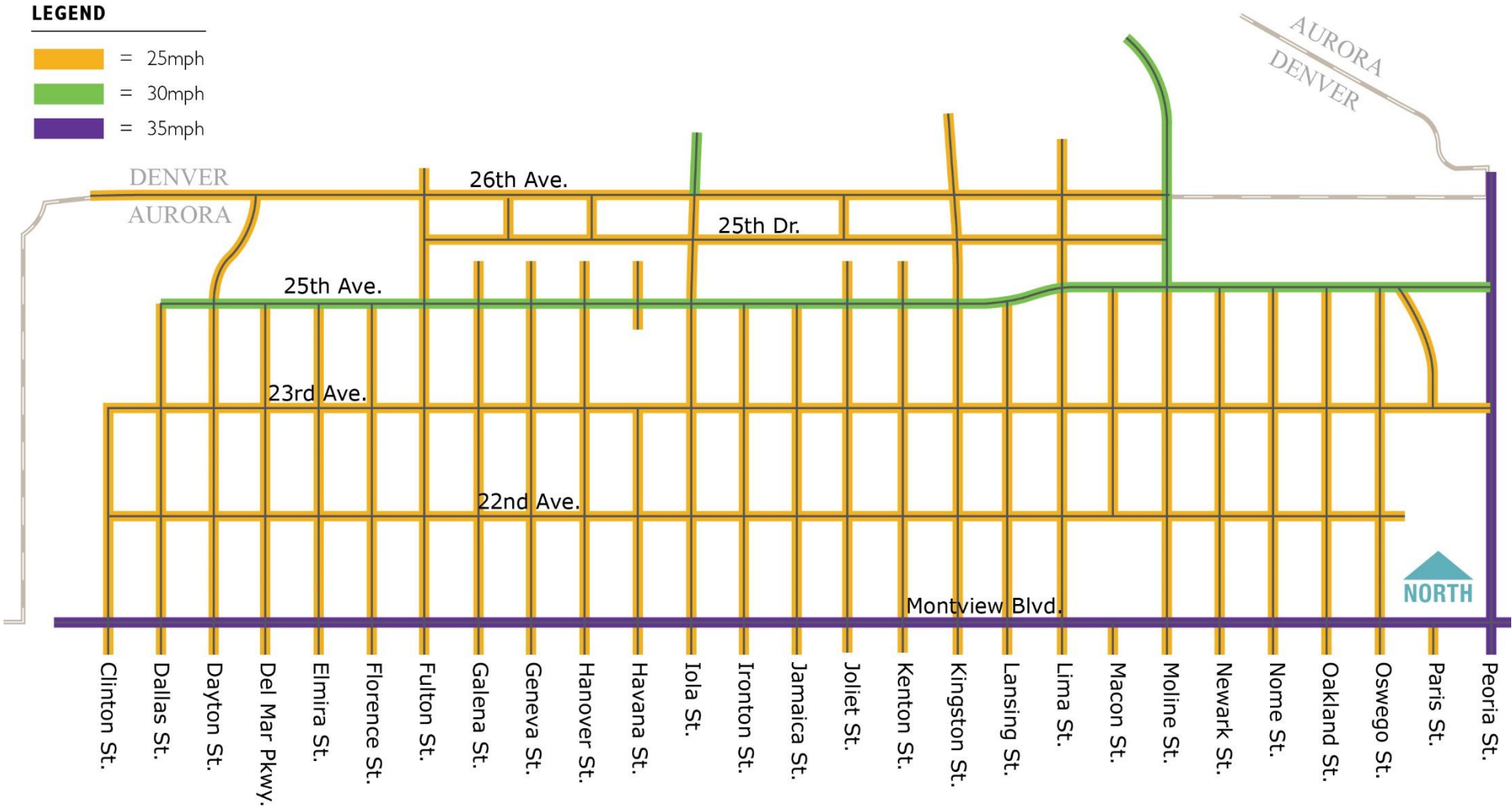
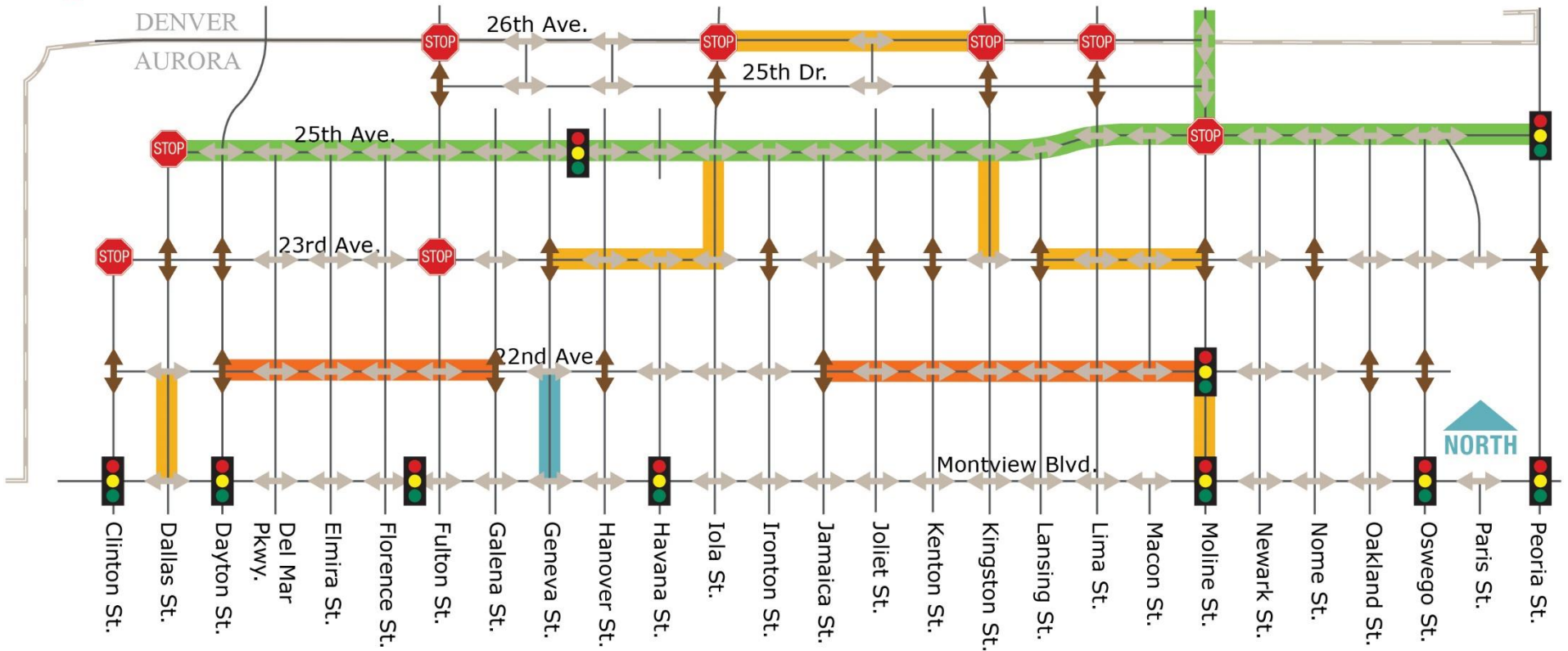


Figure 8. Traffic Control, Observed Speeds

LEGEND

- ↔ = East-West Free Flow Movement
- ↕ = North-South Free Flow Movement
- STOP = All-Way Stop
- 🚦 = Traffic Signal
- 13-17 mph = 85th Percentile (Observed)
- 18-22 mph = 85th Percentile (Observed)
- 23-27 mph = 85th Percentile (Observed)
- 28-32 mph = 85th Percentile (Observed)



Traffic Volumes and Operations

All streets in the study area are classified as local streets, with the following exceptions: Peoria Street and Montview Boulevard are classified as major arterials; 26th Avenue and Moline Street north of 25th Avenue are classified as collector streets. The city of Aurora strives to keep traffic volumes on local streets less than 3,000 vehicles per day (vpd).

Daily traffic volumes and turning movement counts were collected on major streets in the study area in late November 2017. The counts indicate that 25th Avenue is the major east-west thoroughfare, with increasing volumes near Peoria Street. Similarly, Moline Street and Iola Street are the more major north-south routes through the study area. On average, most study area streets were observed to serve less than 1,000 vpd, with a few (25th Avenue, Moline, and Iola) carrying approximately 3,500. The portion of Moline north of 25th Avenue and 25th Avenue east of Moline currently experience roughly 10,000 vpd. This is primarily due to the heavy movement of vehicles to/from the east toward the Fitzsimons campus and connections to I-225. The MLK extension project is expected to relieve much of the demand on these roadway segments.

Parking

On-street parking is provided on all local and collector streets within the study area. Parking is most used on the north-south streets, and several locations of designated on-street handicap parking are present. Some limited parking restrictions are in place on streets near the Stanley Marketplace and near the schools.

Existing Bicycle and Pedestrian Facilities

As shown on **Figure 9**, the NW Aurora neighborhood includes multiple bicycle facilities, many identified school walking routes, and a sidewalk network that is almost fully connected.

Bicycle Facilities

Designated and marked bicycle facilities help establish a dedicated space for bicyclists and increase comfort and safety for cyclists. One east-west bicycle route in the study area runs along Montview Boulevard. The bike lane is buffered from Oswego Street to Havana Street and signed from Havana Street to the Westerly Creek Trail. Another buffered bicycle lane is

available on 26th Avenue in the Stapleton Aurora portion of the study area from Moline Street to the Westerly Creek Trail. The only north-south bike route in the study area is a signed bike route on Moline Street from Montview Boulevard to 26th Avenue.

Bike Share Programs

In 2017, the city of Aurora launched its Bike Share Permit Program to provide additional mobility options for its residents. Aurora was the first city in Colorado to offer dockless bike sharing. As of September 2018, all three dockless bike share providers have stopped servicing the city and have removed their bikes from the Aurora service area. The city continues to accept applications from additional mobility share companies.



Buffered bike lane on Montview Boulevard

Pedestrian Facilities

The NW Aurora neighborhood has a nearly complete sidewalk network; however, many sidewalks are narrow, often only 3 feet wide or narrower. **Figure 9** identifies the multiple segments where sidewalks are wider than 3 feet. These wider sidewalks are generally located in the newer portion of the study area of Stapleton Aurora.

Most sidewalks in the area are attached, often forcing pedestrians to walk single file and directly adjacent to passing vehicles.



Narrow sidewalks like these are characteristic in the NW Aurora neighborhood

School Walking Routes

The study area includes several identified school walking routes, as shown on **Figure 9**.

Existing Transit Facilities

The NW Aurora neighborhood is served by bus, light rail, and commuter rail services, all operated by the Regional Transportation District (RTD).

Bus Service

RTD bus routes 20, 89, 105, and 121 travel through the area. Route 20 services Montview Boulevard, Route 89 services Moline Street and Montview Boulevard, Route 105 services Montview Boulevard to south on Havana Street, and Route 121 services Peoria Street.

Aurora Public School Bus Routes

Aurora Public Schools (APS) provides limited bus service to district students. APS provides busing for Fletcher Community School/Rocky Mountain Prep Fletcher Elementary Charter School and Montview Elementary School students, specifically to provide a safe transportation crossing of Montview Boulevard. North Middle School is a walk-in school.

Rail Service

The recent additions of the University of Colorado A Line commuter rail and the R Line light rail provide rail service through Aurora with connections to Downtown Denver and Denver International Airport. The A Line and the R Line both serve the Peoria Station, located northeast of the study area near 37th Avenue and Peoria. The Fitzsimons Station on the R Line is located on Fitzsimons Parkway, just east of Peoria, and serves the Anschutz Medical and Fitzsimons Innovation campuses.

Multimodal Connectivity Assessment

Connectivity means being able to get from one place to the other through direct routes without having to go long distances out of the way. Good connectivity provides easy and safe access to key destinations and allows the efficient movement of bikes, pedestrians, and vehicles. A multimodal connectivity assessment was completed to understand the overall connectivity of all modes to major neighborhood and regional destinations (see **Figure 10**).

The NW Aurora neighborhood has strong connectivity to neighborhood and regional destinations such as Stanley Marketplace, Aurora Cultural Arts District, Anschutz Medical Campus, and commercial retail along both Montview Boulevard and Colfax Avenue. In addition, the neighborhood has access to many parks, open space, and trails, including Westerly Creek Park, City Park, and Central Park in Stapleton.

Figure 9. Existing Bicycle and Pedestrian Facilities

LEGEND

-  = School Walking Routes
-  = Striped Bike Lane
-  = Trails
-  = Signed Bike Route
-  = Parks
-  = Missing Sidewalk
-  = Wider/Detached Sidewalks

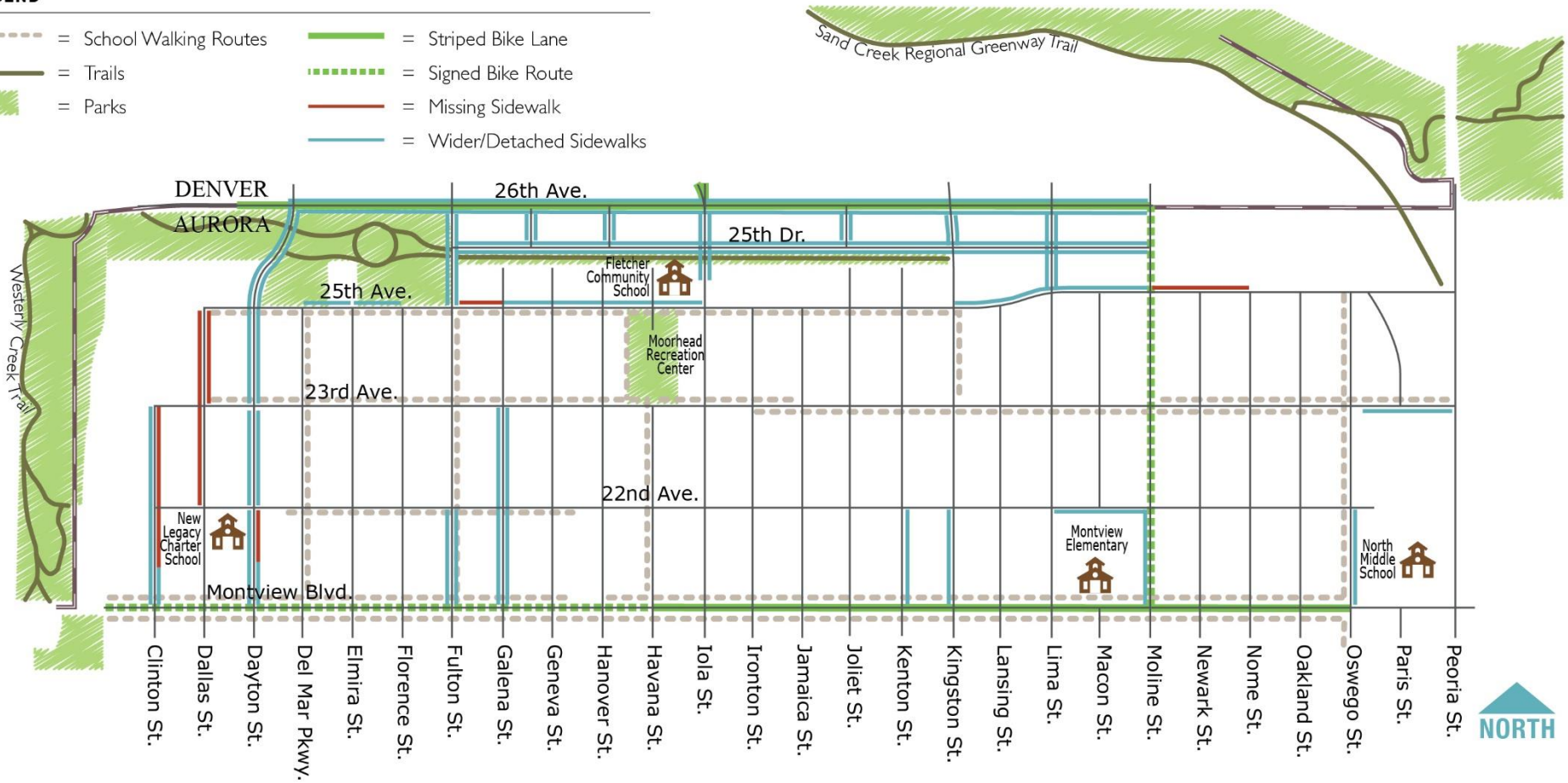


Figure 10. Connectivity Assessment



LEGEND

- | | | | |
|---|--|---|---|
|  Neighborhood Destinations |  Existing Parks |  LRT Station |  Major Routes |
|  Regional Destinations |  Existing Schools |  New Roadway Connections |  Trail Network |
| | |  Planned Roadway Connections | |

Future Transportation Conditions

The Denver Regional Council of Governments (DRCOG) 2020 and 2030 regional travel demand models were referenced for the development of the study area 2025 future year traffic projections. These models reflect the most up-to-date population and employment projections for the study area. The models include projects with committed or identified funds for construction that would be built with or without any other improvements identified in this study. The adjusted average annual growth rate was approximately 1.0 percent for study area roadways.

The 2025 volumes reflect the anticipated shift of traffic from Moline Street and 25th Avenue associated with the 2020 MLK extension project from Havana to Peoria. The project improvements are projected to generally reduce traffic volumes on study area streets, specifically on 25th Avenue and Moline Street.

The Fitzsimons redevelopment is anticipated to occur initially on the south side of the development area, near Montview Boulevard, in the short-term future. No future connections across Peoria Street have been assumed in the development of the 2025 traffic projections. Traffic forecasts completed as part of the Fitzsimons Redevelopment Authority traffic study indicate that future roadway connections across Peoria are anticipated at 23rd and 25th Avenues, with signalization of the 23rd Avenue intersection.

Operational analyses of study area intersections retained the current intersection configuration and traffic control. Generally, all study area intersections are projected to continue to operate at acceptable levels of service.



Recently constructed intersection of Dayton Way and 26th Avenue, connecting Northwest Aurora to Stapleton

4. Public Engagement

For the study recommendations to be supported and successfully implemented, they must be acceptable to both the local neighborhood and the larger community, including community leaders and members of the public. This is completed by having the public



identify the transportation values and priorities important to them, identify specific problems or concerns, and help provide input and reaction to how those problems and concerns could be addressed. To facilitate public engagement, the process included public meetings at three key points and a project webpage for continuous information sharing and communications with the public. All materials were provided in English and in Spanish.

Project Webpage

The city of Aurora maintained a project webpage throughout the planning process (AuroraGov.org/NWMobility). The webpage provided a project overview, contact information for the project team, project materials, and up-to-date information on public meetings. Public meetings and surveys were advertised on the project webpage, and meeting materials were uploaded to the webpage following every meeting.

Public Meeting #1

The first public meeting was held on Thursday, January 25, 2018, from 5:30 p.m. to 7:30 p.m. at Fletcher Community School. The meeting was an open house format where attendees could view the materials at their own pace.

The primary purposes of the first meeting were to:

- ◆ Introduce the study to the community
- ◆ Provide information on current and future conditions
- ◆ Solicit input from the community on current and future conditions, as well as their transportation values and priorities

Twenty-two people signed in and a few more attended without providing contact information. Many attendees were actively engaged, providing feedback to the project team members and completing a comment sheet.

At the board concerning Community Values, attendees were asked to identify which community values were most important to them. The top answers were to widen the sidewalks, improve safety with enhanced lighting, maintain trees and add or improve green space, and provide more biking connections and safer routes.

In addition to the public meeting, an online survey, which asked the same questions as the public meeting, was available after the meeting to solicit feedback from the neighborhood. The online survey received significant input from the community. The top Community Values responses were to widen sidewalks, maintain trees and add or improve green space, provide more biking connections and safer routes, and maintain and improve the existing character.

The input received from Public Meeting #1 was used in developing the packaged alternatives. **Appendix B** provides a summary of the first public meeting and presents the meeting materials, including the meeting boards and survey results.

What We Heard

The community strongly desires widening of neighborhood sidewalks, maintaining trees and adding and/or improving green space, improving safety with enhanced lighting, as well as providing more biking connections and safer routes. The public input received was the basis for developing packaged alternatives.

Public Meeting #2

Held on Wednesday, May 9, 2018, from 5 p.m. to 7 p.m. at Moorhead Recreation Center, Public Meeting #2 was also an open house format where attendees could view the materials at their own pace and discuss with project team members at any time. The public meeting materials were available on the project website with a supporting online survey.

The second meeting solicited feedback on the three packaged alternatives and on specific design elements, such as bicycle facilities level of comfort and sidewalk widening.

Approximately 35 people attended the meeting. Attendees were actively engaged, providing feedback to the project team members through discussions and completing a survey and comment sheet. All meeting materials were provided in English and in Spanish.

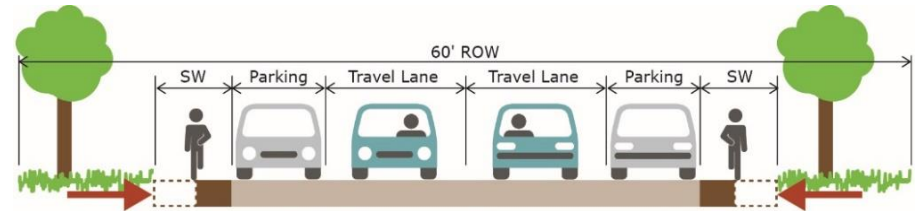


Meeting attendees were encouraged to indicate their preference at three of the boards: the Bicycle Facilities and Voting Board, the Pedestrian Facilities and Voting Board, and the Sidewalk Widening Options and Voting Board.

At the Bicycle Facilities and Voting Board, attendees were asked how comfortable they would feel riding certain bicycle facilities within the neighborhood. Attendees indicated the greatest level of comfort in a two-way separated bikeway, then a bike lane, then a buffered bike lane.

At the Pedestrian Facilities and Voting Board, attendees were asked what types of pedestrian facilities they would like to see within the neighborhood. Attendees indicated the strongest preference for a pedestrian boulevard and a shared-use path.

At the Sidewalk Widening Options and Voting Board, attendees were asked to indicate their preferences for how to widen the existing sidewalks. Attendees indicated the strongest preference for widening sidewalks on both sides to the outside, creating two standard-width sidewalks by impacting approximately 3 feet of lawn space on each side of the street.



Option 1: Widen sidewalks on both sides to the outside

Attendees were also asked to identify specific elements they liked and disliked about each alternative and which alternative they preferred.

For Alternative A (Balanced Network) attendees liked that Moline Street was maintained as a motor vehicle priority route, that 25th Avenue was identified as a walking destination/priority, and that a number of sidewalks would be added and widened. Attendees disliked that there was no dedicated bicycle facility for north-south travel, the shared-lane bicycle facility, and the amount of parking eliminated.

For Alternative B (Neighborhood Placemaking Focus), attendees liked the inclusion of the activity node near Moorhead Recreation Center, the sidewalk enhancements to 25th Avenue, and the dedicated bike lane to Moorhead Recreation Center. Attendees disliked the vehicle priority of Kingston Street, the shared-lane bicycle facility, and the lack of any placemaking nodes in the eastern part of the neighborhood.

For Alternative C (Connections Focus), attendees indicated their preference for the one-way street, the pedestrian boulevard on 25th Avenue, and the bicycle connectivity between Bluff Lake and Colfax Avenue. Attendees disliked the amount of parking eliminated, the confusion of the one-way streets, and the lack of a bicycle crossing of Montview Boulevard.

See **Appendix B** for a complete summary of Public Meeting #2 and the meeting materials, including the meeting boards and survey results.

What We Heard

The public preference was for Alternative B (Neighborhood Placemaking Focus), but the public also viewed elements from the other alternatives favorably. The public input received was used as a starting point for developing the Recommended Concept.

Public Meeting #3

Public Meeting #3 was held on Wednesday, August 15, 2018, from 5 p.m. to 7 p.m. at Moorhead Recreation Center. Just like the first two public meetings, the third meeting was an open house format where attendees could stop by at any time and view the materials and connect with the project team.

The third meeting solicited feedback on the Recommended Concept and which improvements the public would prefer to be completed first.

Approximately 40 people attended the meeting. The project team received significant feedback from conversations with attendees and from the comment worksheets that attendees completed.

All meeting materials were provided in English and in Spanish.

Meeting attendees were encouraged to respond to specific questions, which included:

- ◆ Which aspects of the Recommended Concept do you like?
- ◆ Do any aspects of the Recommended Concept concern you?
- ◆ Which improvements of the Recommended Concept would you prefer to see completed first?

Attendees generally liked the additional opportunities for pedestrians and cyclists, the increase in stop signs and plans to decrease speed (traffic control), and the connectivity to surrounding areas like the medical campus, Stapleton, and Westerly Creek Trail.

Attendees voiced their concern about the Recommended Concept's disruptive impact on their properties, the lack of protected bike lanes, and the inclusion of roundabouts. A few attendees also inquired about whether lighting would be included/added as a part of the Recommended Concept.

Attendees indicated that they would like to see the following projects completed first:

- ◆ Pedestrian boulevard on 25th Avenue
- ◆ Rectangular Rapid Flashing Beacon (RRFB) crossing treatment on 25th Avenue between Moorhead Recreation Center and Fletcher Community School
- ◆ Bike lane on 23rd Avenue



In addition to the public meeting, online surveys in English and in Spanish were made available after the meeting. The online survey asked the same questions as the comment worksheet at the public meeting. No one completed the Spanish survey, and only two people completed the survey in English.

The input received from Public Meeting #3 was used in developing the project phasing plan. **Appendix B** includes a complete summary of the third public meeting and presents the meeting materials, including the meeting boards and survey results.

What We Heard

The public supports the Recommended Mobility Concept. Their priority projects include the pedestrian boulevard on 25th Avenue, the RRFB crossing treatment on 25th Avenue between Moorhead Recreation Center and Fletcher Community School, and the bike lane on 23rd Avenue.

5. Alternatives Development and Evaluation

Three packaged alternatives were developed recognizing that it is not realistic to improve every street or widen every sidewalk in the neighborhood due to constraints such as right-of-way and funding. In each alternative, the improvements focus on streets where the greatest benefits could be realized. Public input from the first public meeting and the first online survey influenced the development of the three alternatives.

Common Themes

Common themes among the three alternatives include:

- ◆ 23rd Avenue is the primary east-west bike route in all alternatives due to its ability to provide an uninterrupted connection for bicyclists to Westerly Creek Trail on the west and the Anschutz Medical Campus on the east.
- ◆ 25th Avenue is a primary east-west street for walking in all alternatives due to the concentration of walking destinations along the street, including the Stanley Marketplace, Fulton Park, Moorhead Recreation Center, and Fletcher Community School.
- ◆ Improvements to north-south bicycle and pedestrian mobility focus on a common set of streets that provide continuity through the study area and access to neighborhood destinations, including Clinton Street, Fulton Street, Havana Street/Iola Street, Lima Street, and Oswego Street.

Design Elements

Each packaged alternative includes varying types of bicycle and pedestrian facilities. Bike facilities considered include shared lanes, bike lanes, buffered bike lanes, bike boulevards, and two-way separated bikeways. Pedestrian facilities considered include detached sidewalks, shared use paths, main street pedestrian zones, and pedestrian boulevards.

Bicycle Facilities

Shared Lanes

Both automobiles and bicyclists use shared lanes, which are typically delineated by shared lane markings (sometimes called sharrows). These markings indicate a shared environment for bicycles and automobiles. Shared lane markings reinforce the legitimacy of bicycle traffic on the street and recommend proper bicyclist positioning. Shared lane markings should be applied in situations where the speed differential between bicyclist and motorist travel speeds is very low.



Source: National Association of City Transportation Officials

Bike Lanes

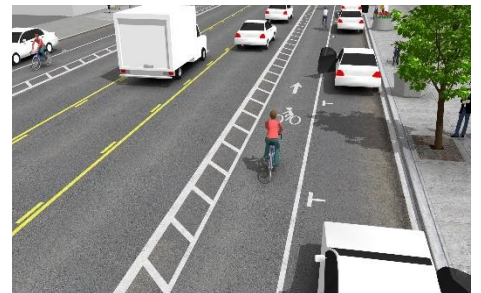
Bike lanes designate an exclusive space for bicyclists by using pavement markings and signage. The bike lanes are located adjacent to motor vehicle travel lanes and flow in the same direction as motor vehicle traffic. Bike lanes facilitate predictable behavior and movements between bicyclists and motorists.



Source: National Association of City Transportation Officials

Buffered Bike Lanes

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes provide greater distance between motor vehicles and bicyclists, which appeals to a wider cross section of bicycle users.



Source: National Association of City Transportation Officials

Bike Boulevards

Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. Bike boulevards not only benefit people on bicycles but also help create and maintain “quiet” streets that benefit residents and improve safety for all road users.

Two-Way Separated Bikeways

Two-way separated bikeways are physically separated travelways that allow bicycle movement in both directions on one side of the road. Two-way separated bikeways may be protected at street level with parking lanes or other vertical barriers between the bikeway and the motor vehicle travel lane. A raised bikeway could also be used to provide vertical separation from the adjacent vehicle lane. Two-way separated bikeways dedicate and protect space for bicyclists, thereby improving perceived comfort and safety.

Pedestrian Facilities

Detached Sidewalks

The sidewalk is the primary, accessible pathway that runs parallel to the street. Sidewalks ensure that pedestrians have a safe and adequate place to walk and should be 4 to 6 feet wide in residential settings and 8 to 12 feet wide in commercial areas. A detached sidewalk is disconnected from the street’s curb and gutter, sometimes with grass or trees separating the sidewalk from the roadway.



Source: National Association of City Transportation Officials

Shared Use Paths

Shared use paths provide a means of transportation and recreation that is usually detached from a street’s curb and gutter within the street right-of-way. A shared use path serves various users, including pedestrians, bicyclists, skaters, and people with disabilities. Shared use paths are usually designed for two-way travel and are marked to indicate directionality. Shared use paths are typically wider than sidewalks, ranging from 12 to 16 feet wide.



Main Street Pedestrian Zones

Main street pedestrian zones are sidewalks with supporting pedestrian enhancements adjacent to the sidewalks such as street furniture, pedestrian scaled lighting, benches, tree pits, and bicycle parking. Main streets are typically adjacent to commercial land uses and activated by pedestrians. The street design, presence of street trees and furniture and amount of pedestrian activity slows traffic and emphasizes pedestrians.



Pedestrian Boulevards

Pedestrian boulevard environments should be considered in places where pedestrian activity is high and vehicle volumes are either low or discouraged. Pedestrian boulevards should consist of green infrastructure elements, such as wide tree lawns or bioswales. Pedestrian boulevards may also include a range of enhancements, including street furniture, pedestrian scaled lighting, benches, and bicycle parking.



Alternative A (Balanced Network)

The prevailing theme of Alternative A (Balanced Network) is the dispersion of travel movements to minimize the concentration of traffic and to create a balanced street network for all travel modes. The stop sign orientation generally alternates between east-west and north-south from one block to the next, eliminating higher speed streets from the network. Alternative A (Balanced Network) incorporates wide shared use paths for east-west bicycle and pedestrian movements, and bike boulevards to create priority north-south through movements for bicyclists, paired with pedestrian enhancements. These elements are strategically located to encourage walking and biking to the neighborhood schools.

Distinguishing Elements

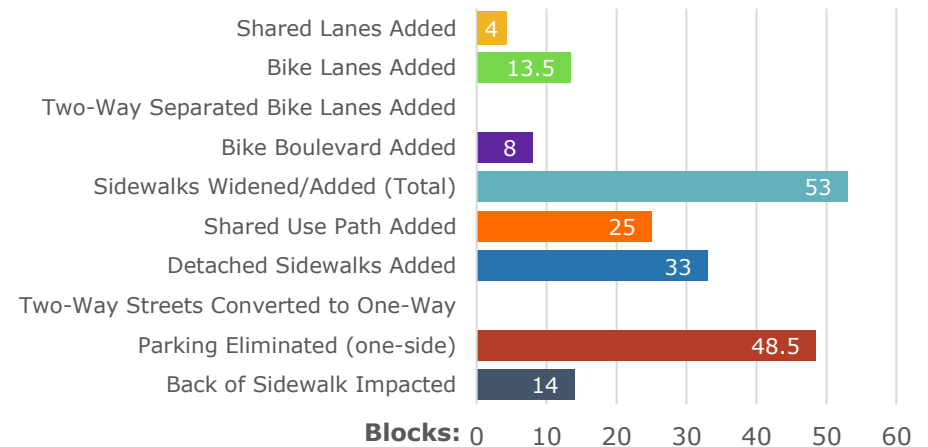
Distinguishing elements of Alternative A include:

- ◆ Equally distributes travel to minimize traffic concentrations
- ◆ Creates a balanced street network for all travel modes
- ◆ Locates featured elements (shared use paths and bike boulevards) to encourage walking and biking to neighborhood schools
- ◆ Reduces traffic on streets with bike boulevards
- ◆ Reduces higher-speed streets by alternating stop signs

Figure 11 presents a rendering, and **Figure 12** shows the distinguishing elements of Alternative A (Balanced Network).

By the Numbers

Alternative A (Balanced Network) adds 33 blocks of detached sidewalks and 25 blocks of shared use paths but also affects the back of sidewalks for 14 blocks. Alternative A (Balanced Network) also includes 13.5 blocks of bike lanes and 8 blocks of a bike boulevard, a facility type not included in Alternatives B or C.



Note: North-south blocks were considered 1 block, and east-west blocks were considered 1/2 blocks.

Placemaking Opportunities

Opportunities for placemaking in Alternative A (Balanced Network) build on the primary mobility recommendations and focus on two major areas: (1) Fulton Street and Oswego Street bike boulevards and (2) Moorhead Recreation Center Gateways & Pedestrian Zone.

- ◆ Fulton Street and Oswego Street bike boulevards offer an opportunity to create a different user experience for neighborhood residents by emphasizing bicycle use and pedestrian experiences. The traffic calming elements promote low-speed streets that create more comfortable places for walking and biking and encourage other forms of placemaking, such as enhanced planting areas, parklets, street furnishings, alternative paving materials, and small gathering spaces.
- ◆ Moorhead Recreation Center Gateways (north and south) & Pedestrian Zone creates a pedestrian-friendly zone on the block surrounding Moorhead Recreation Center. Improved linear gateways, along 25th and 23rd Avenues, will create recognizable entry points and an identifiable public edge to the site that is safe and comfortable for pedestrians. New trees, improved sidewalks, wide crossing zones, bulb-outs, and traffic calming devices can create a recognizable “slow zone” that emphasizes walking and encourages pedestrian activity.

How It Addresses Community Input

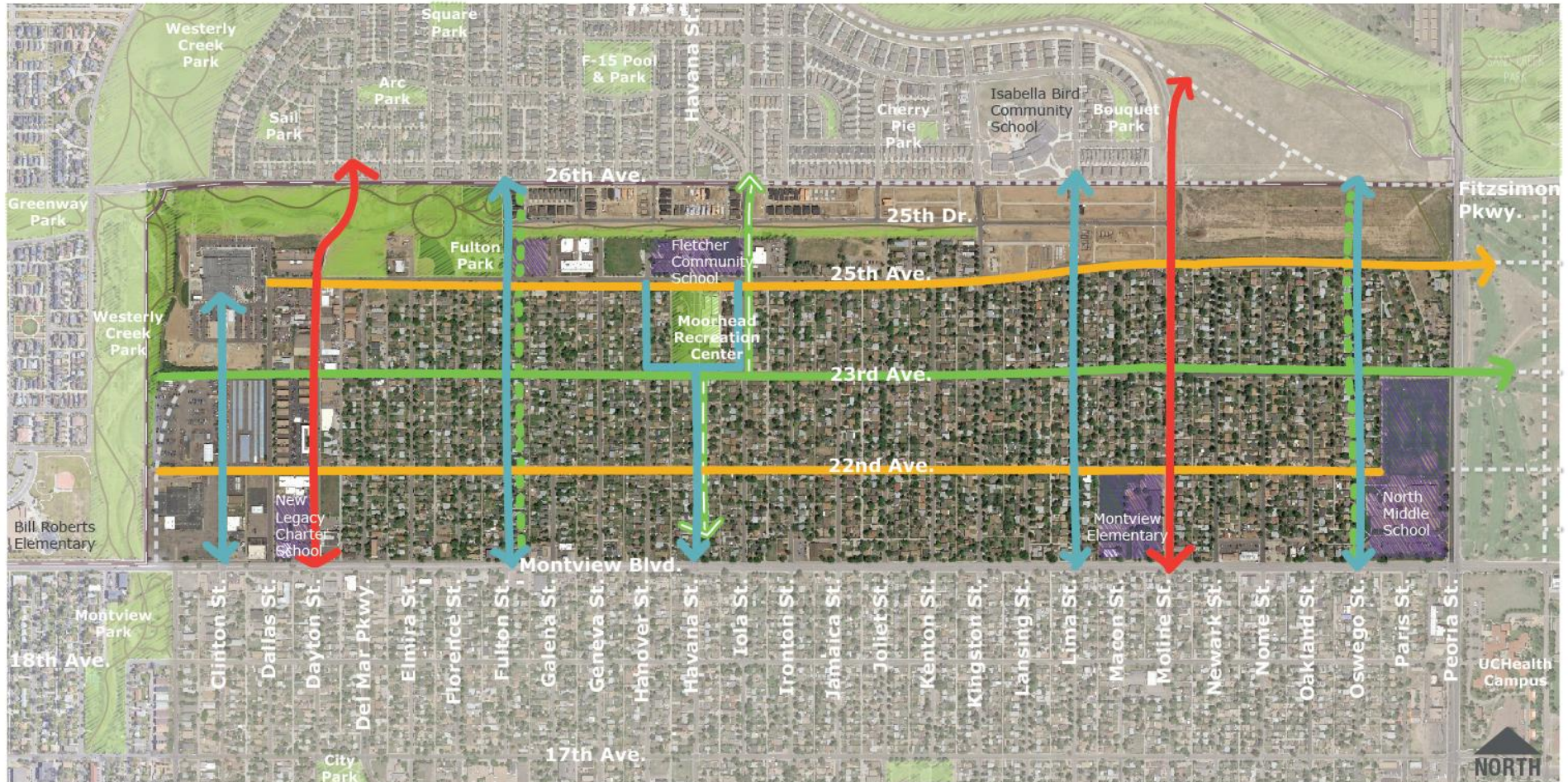
Since the beginning of the project, the top community priority has been to widen the sidewalks. Alternative A (Balanced Network) addresses this

priority by including sidewalk enhancements/widening on the north-south streets equally dispersed throughout the study area, as well as shared use paths on 22nd Avenue and 25th Avenue. This alternative also includes a bike lane on 23rd Avenue connecting Westerly Creek Trail to the Anschutz Medical Campus, addressing the community’s interest in lower-stress bicycle facilities. The project team also received many comments related to the increase in traffic and traffic speeding. Alternative A (Balanced Network) seeks to minimize the ability for fast cut-through traffic by dispersing and balancing traffic control.

Figure 11. Alternative A – Balanced Network Rendering



Figure 12. Alternative A (Balanced Network)



LEGEND

- = Sidewalk and Pedestrian Enhancements
- = Bike Lanes
- - - = Bike Boulevard
- - - - = Shared Lane
- = Shared Use Path
- = Motor Vehicle and Parking Priority
- = Schools

Alternative B (Neighborhood Placemaking Focus)

Alternative B (Neighborhood Placemaking Focus) emphasizes enhancing multimodal connections to the major activity nodes within and proximate to the neighborhood and creating inviting pedestrian zones within the activity nodes. Activity nodes include the Stanley Marketplace/Westerly Creek Village, Anschutz Medical Campus/Fitzsimons Stations, Moorhead/Fletcher, Galena Street Historic District, and Bluff Lake.

Complete streets are created on select north-south streets to provide enhanced bicycle and pedestrian connections to the activity nodes. East-west pedestrian enhancements focus on 25th Avenue, while the east-west bicycle route is on 23rd Avenue. Unique pedestrian zones are created through Westerly Creek Village, Galena Street Historic District, and the Moorhead/Fletcher node. Stop sign orientation and traffic calming measures are designed to promote right-of-way priority for the designated mode on each street.

Distinguishing Elements

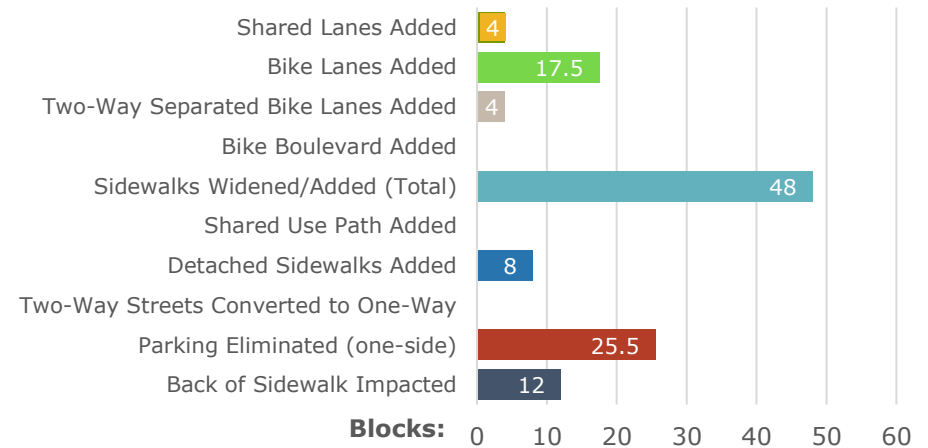
Distinguishing elements of Alternative B (Neighborhood Placemaking Focus) include:

- ◆ Emphasizes multimodal connections to the major activity nodes
- ◆ Creates complete streets on select north-south streets
- ◆ Focuses east-west walking enhancements on 25th Avenue, while an east-west bicycle route is on 23rd Avenue
- ◆ Creates unique and inviting walking zones through Westerly Creek Village, Galena Street Historic District, and the Moorhead/Fletcher node
- ◆ Uses stop sign orientation and traffic calming to define and support the modal priority for each street

Figure 13 presents a rendering, and **Figure 14** shows the distinguishing elements of Alternative B (Neighborhood Placemaking Focus).

By the Numbers

Alternative B (Neighborhood Placemaking Focus) includes more than 17 blocks of bike lanes and 4 blocks two-way separated bikeways, the most of any alternative.



Note: North-south blocks were considered 1 block, and east-west blocks were considered 1/2 blocks.

Placemaking Opportunities

Since placemaking is the main theme of Alternative B (Neighborhood Placemaking Focus), it provides several opportunities for major placemaking areas that build on existing neighborhood destinations and amenities:

- ◆ The Clinton Main Street area forms a major entry to Stanley Marketplace and a destination pedestrian street connecting Colfax Avenue and Stanley. As a major main street and gateway, generous sidewalks, café areas, lighting, signage, banners, and art create a unique pedestrian experience and mixed-use destination for the neighborhood. The vibrant public realm is activated by commercial and retail uses fronting the street and direct pedestrian connections to the Westerly Creek Park Trail network to the west.
- ◆ Stanley Marketplace Plaza terminates the Clinton Main Street experience and reinforces Stanley as a major destination. The existing plaza is expanded to create a larger front door experience on the south side of the building.
- ◆ To celebrate this historical gem of Aurora, the Galena Street Historic Walk provides a tranquil and beautiful street for strolling and learning about Aurora’s history. Featuring historic Fletcher Houses, historical signage, new landscape enhancements and seating, the street creates a special walking experience for the neighborhood and entire city.

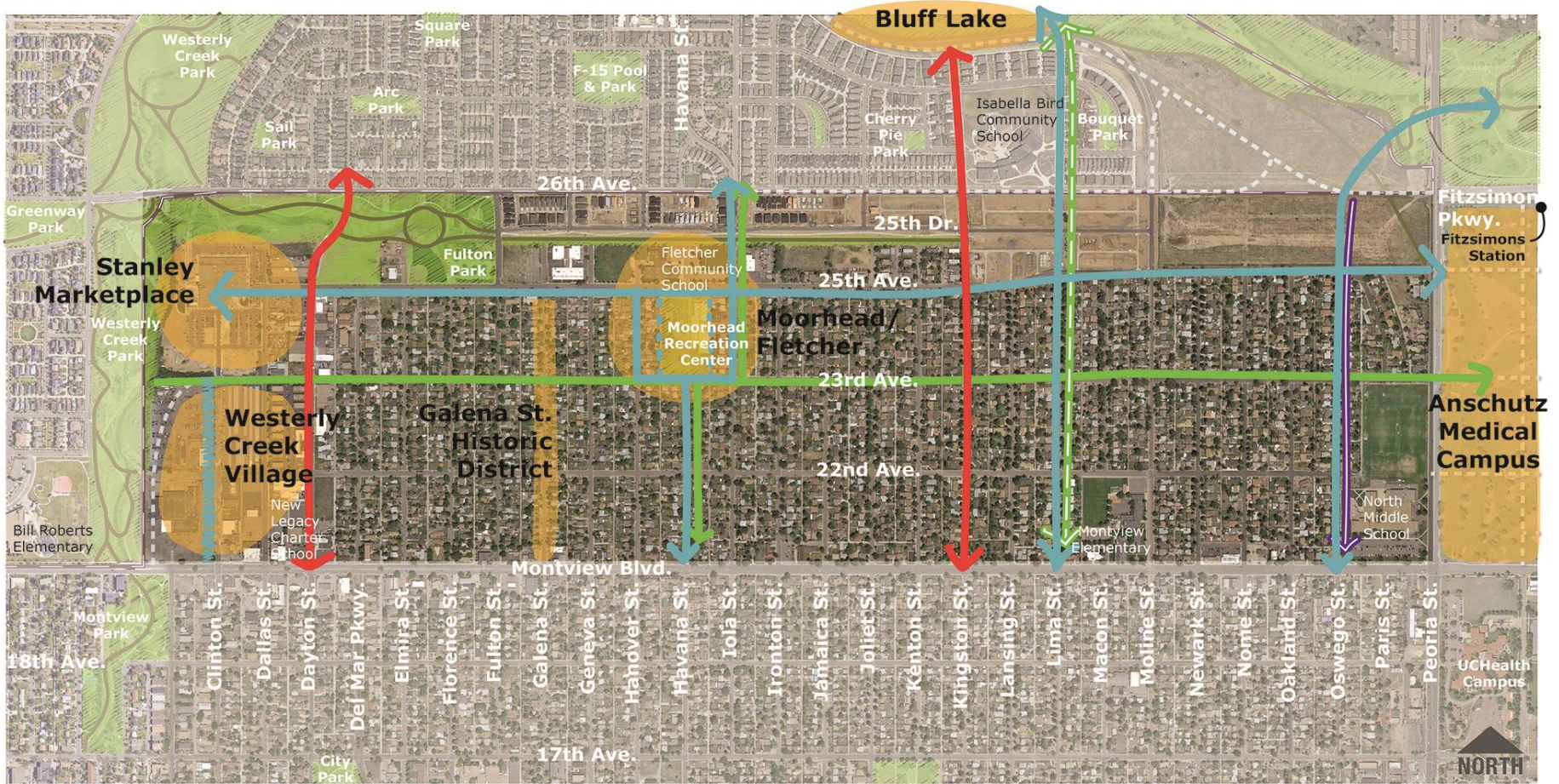
How It Addresses Community Input

Alternative B (Neighborhood Placemaking Focus) creates zones where the pedestrian and bicyclist are prioritized, creating a safer environment for more vulnerable users such as children, which was a strong desire expressed by the community. It includes sidewalk enhancements and pedestrian zones where they are most needed, which is near the community destinations/activity nodes such as the schools, Moorhead Recreation Center, and Stanley Marketplace. Alternative B (Neighborhood Placemaking Focus) seeks to separate the vehicular priority streets from the bicycle and pedestrian priority corridors, further creating lower-stress environments for all users.

Figure 13. Alternative B (Neighborhood Placemaking Focus) Rendering



Figure 14. Alternative B (Neighborhood Placemaking Focus)



LEGEND

- | | |
|--|--|
|  = Sidewalk and Pedestrian Enhancements |  = Two-Way Separated Bikeway |
|  = Main Street Pedestrian Zone |  = Shared Lanes |
|  = Alley Enhancements |  = Motor Vehicle and Parking Priority |
|  = Bike Lanes |  = Activity Nodes |

Alternative C (Connections Focus)

The organizing feature of Alternative C (Connections Focus) is strong connectivity and mobility from the neighborhood with convenient multimodal access to the regional network and regional destinations, through optimization of the existing infrastructure. By converting 22nd and 23rd Avenues to one-way couplets, a high-quality bicycle facility is incorporated on 23rd Avenue without widening the street, and an inviting pedestrian environment with water quality features is created along 25th Avenue. North-south pedestrian and bicycle enhancements are made with minimal impact behind the sidewalks. Consistent stop sign orientation can be combined with traffic calming practices to achieve desired speeds and volumes. Additionally, stop sign orientation can be designed to prioritize bicycles on high-quality bicycle facilities.

Distinguishing Elements

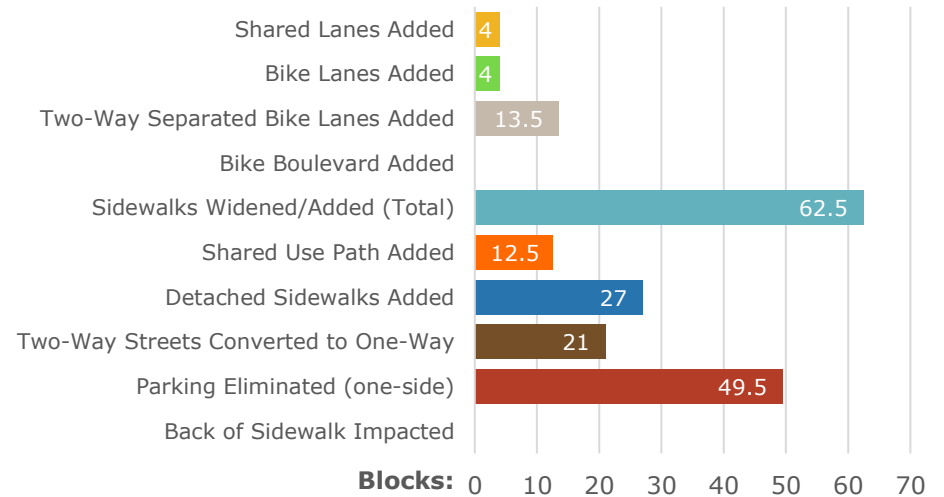
The distinguishing elements of Alternative C (Connections Focus) include:

- ◆ Provides convenient multimodal access to the regional network and regional destinations
- ◆ Converts 22nd and 23rd Avenues to one-way streets
- ◆ Includes a high-quality bicycle facility on 23rd Avenue and an inviting walking environment and water quality features along 25th Avenue
- ◆ Combines consistent stop sign orientation with traffic calming practices to reduce speeding and direct walkers, bikers, and vehicles to the appropriate facility

Figure 15 presents a rendering, and Figure 16 shows the distinguishing elements of Alternative C (Connections Focus).

By the Numbers

Alternative C (Connections Focus) widens and/or adds over 62 blocks of sidewalks, the most of any alternative. It also converts 21 blocks of two-way streets to one-way streets, a feature not included in Alternative A (Balanced Network) or Alternative B (Neighborhood Placemaking Focus). Alternative C (Connections Focus) also eliminates over 49 blocks of parking, the most of any alternative but has no back of sidewalk impacts.



Note: North-south blocks were considered 1 block, and east-west blocks were considered 1/2 blocks.

Placemaking Opportunities

Opportunities in Alternative C (Connections Focus) expand on the major mobility corridors and emphasize their dual role as areas for walkability and placemaking/identity:

- ◆ The 25th Avenue Pedestrian Boulevard will reinforce its role as a primary pedestrian route with enhanced street plantings, signage, seating at key locations and integrated public art. The overall linear experience will create a comfortable walking experience that is functional, safe, and beautiful. Keeping in line with traditional boulevards, the street will benefit from a continuous street canopy and planter areas.
- ◆ Just to the south, the 23rd Avenue Bikeway offers another opportunity to create an identifiable corridor in the neighborhood. With the introduction of the two-way separated bikeway, 23rd Avenue will be defined by frequent bicycle activity, including regular use by families, children, and people of all ages. Distinct surface graphics, signage, and wayfinding create a visual identity and fun user experience.

How It Addresses Community Input

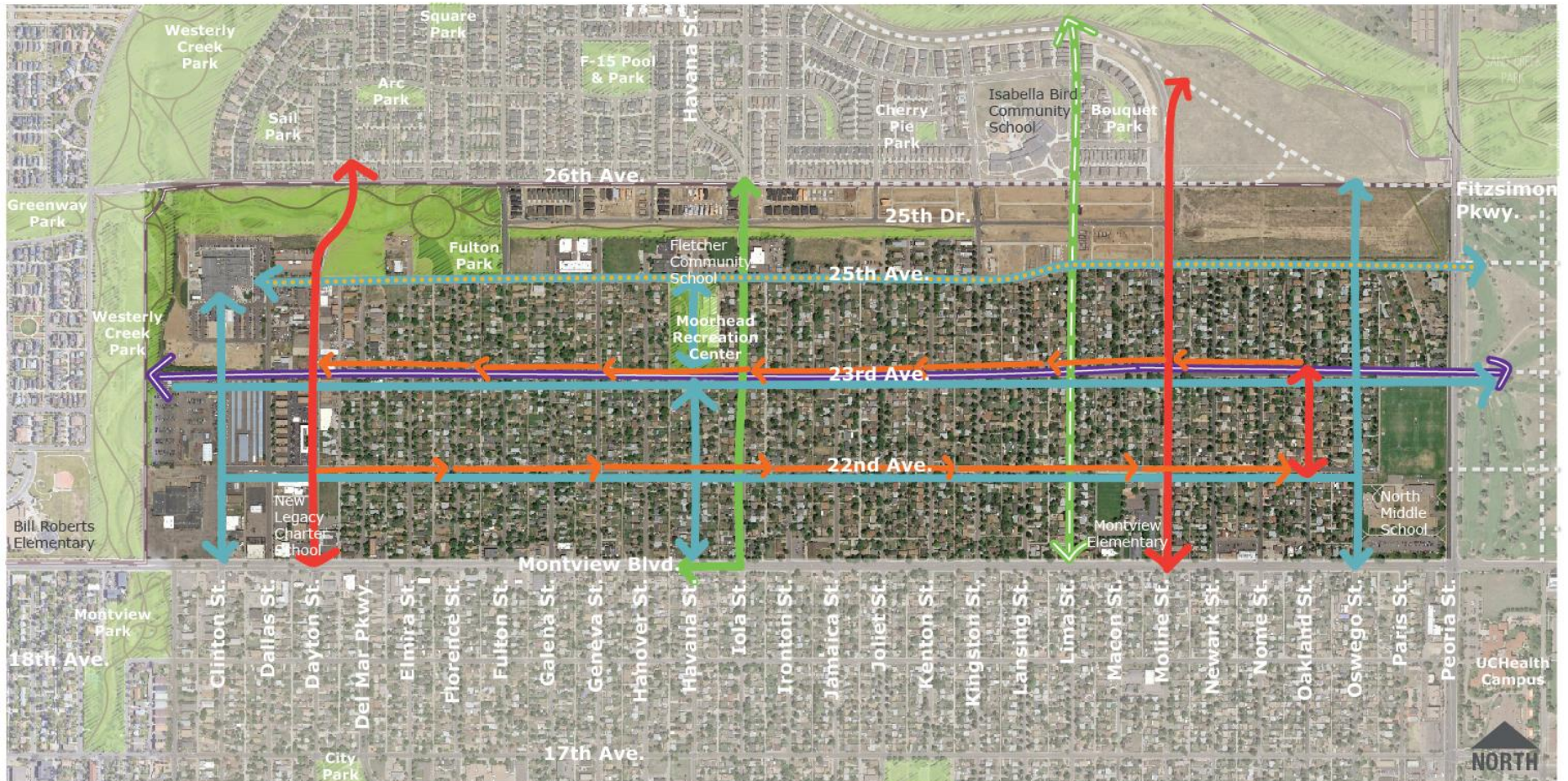
Alternative C (Connections Focus) prioritizes neighborhood residents' ability to access local and regional destinations, many of which are located beyond the study area. Many residents who live in the neighborhood travel elsewhere and desire safe connections along and across the major travel

corridors, specifically 25th Avenue, Montview Boulevard, and Peoria Street. The project team received many comments related to the increase in cut-through traffic because of the increase in the activity of nearby destinations. Alternative C (Connections Focus) seeks to define the travel corridors for each mode. It also minimizes impacts outside the existing sidewalks and minimizes parking impacts, both of which are community desires.








Figure 15. Alternative C – Connections Focus Rendering



Figure 16. Alternative C (Connections Focus)



LEGEND

- | | | | |
|---|--|---|--------------------------------------|
|  | = Sidewalk and Pedestrian Enhancements |  | = Two-Way Separated Bikeway |
|  | = Pedestrian Boulevard |  | = One-Way |
|  | = Bike Lane |  | = Motor Vehicle and Parking Priority |
|  | = Shared Lanes | | |

Evaluation Categories and Criteria

The three packaged alternatives, as well as a No-Action Alternative, were qualitatively evaluated based on their contribution to 15 distinct categories. Rather than scoring to select the “best” alternative, it was an exercise to understand the strongest aspects of each alternative to inform the development of the Recommended Mobility Concept.

Table 1 summarizes the evaluation categories and evaluation criteria.

Table 1. Evaluation Categories and Criteria

Evaluation Category	Evaluation Criteria
<i>Pedestrian Comfort and Safety</i>	Would the alternative enhance the level of comfort and safety for pedestrians?
<i>Bicycle Comfort and Safety (East-West Connectivity)</i>	Would the alternative enhance the level of comfort and safety for bicyclists?
<i>Bicycle Comfort and Safety (North-South Connectivity)</i>	Would the alternative enhance the level of comfort and safety for bicyclists?
<i>Access to Transit</i>	Would the alternative enhance access to the Peoria and Fitzsimons stations and/or local bus stops?
<i>Access to Trails and Greenspace</i>	Would the alternative provide direct and convenient access to Westerly Creek, Sand Creek, and Bluff Lake?
<i>School Accessibility</i>	Would the alternative provide safe and convenient access to schools in the neighborhood?
<i>Motor Vehicle Routing and Operations</i>	Would the alternative provide convenient traffic routing and operations?
<i>Connectivity (All Modes)</i>	Would the alternative improve connectivity to neighborhood destinations and mobility through the neighborhood?
<i>Parking</i>	Would the alternative provide adequate on-street parking? Does the alternative minimize parking impacts?

Evaluation Category	Evaluation Criteria
<i>Community Character</i>	Would the alternative balance preservation and enhancement of the community culture and character of Original Aurora?
<i>Landscape Preservation</i>	Would the alternative minimize impacts on existing trees and landscaping in the neighborhood?
<i>Placemaking</i>	Would the alternative create opportunities for areas with distinct character, places to gather, or encourage active uses along the street?
<i>Economic Development</i>	Would the alternative create appropriate economic redevelopment opportunities?
<i>Green Infrastructure</i>	Would the alternative incorporate green infrastructure design elements (stormwater and soft infrastructure)?
<i>Community Support</i>	Is the alternative supported by the community?

The three alternatives were rated on the following scale:

- ◆ The alternative would contribute **positively** toward the criterion.
- ◆ The alternative would contribute **somewhat positively** toward the criterion.
- ◆ The alternative would have **no contribution** toward the criterion.
- ◆ The alternative could contribute **somewhat negatively** toward the criterion.
- ◆ The alternative would contribute **negatively** toward the criterion.



Results

Pedestrian Comfort and Safety

This evaluation was based on the number of blocks of sidewalk improved, the quality of sidewalk improvements, with preference for pedestrian-only, wide and inviting sidewalks. Alternative C includes the pedestrian boulevard (12.5 blocks) and sidewalks widened/added (62.5 blocks). This is the highest number of sidewalk improvements of the alternatives.

Bicycle Comfort and Safety (East-West Connectivity)

This evaluation was based on the quality and comfort of the proposed east-west bike facilities. The protected bikeway in Alternative C (Connections Focus) provides the greatest separation from traffic, and therefore, received the highest rating.

Bicycle Comfort and Safety (North-South Connectivity)

This evaluation was based on the quality and comfort of the proposed north-south bike facilities. The bike boulevards in Alternative A (Balanced Network) and protected bikeway in Alternative B (Neighborhood Placemaking Focus) provide the greatest separation from traffic and, therefore, received the highest ratings.

Access to Transit

All three packaged alternatives improve access to bus stops along Montview Boulevard. Alternative B (Neighborhood Placemaking Focus) includes a stronger connection to Fitzsimons Station via Sand Creek greenway, while Alternative C (Connections Focus) includes a stronger connection to Fitzsimons Station via the protected bikeway on 23rd Avenue through the Fitzsimons Campus.

Access to Trails and Greenspace

Alternative B (Neighborhood Placemaking Focus) includes the highest quality north-south connectivity to Bluff Lake and Sand Creek. Alternative C (Connections Focus) has the highest quality east-west connection to Westerly Creek via the separated bikeway.

School Accessibility

Alternative A (Balanced Network) and Alternative C (Connections Focus) increase accessibility to the neighborhood schools the most. Alternative B (Neighborhood Placemaking Focus) lacks east-west connectivity to Montview Elementary and North Middle School.

Motor Vehicle Routing and Operations

This criterion was considered from the driver's perspective. For Alternative A (Balanced Network), the diversions with the bike boulevards would reroute traffic and disrupt the continuous flow. Alternative B (Neighborhood Placemaking Focus) and Alternative C (Connections Focus) have minimal impact on the traffic routing and operations.

Connectivity (All Modes)

Generally, all three packaged alternatives contribute positively toward increasing connectivity.

Parking

Alternative A (Balanced Network) and Alternative C (Connections Focus) would remove approximately 20 percent of the on-street parking in the neighborhood, while Alternative B (Neighborhood Placemaking Focus) would eliminate approximately 10 percent of the on-street parking in the neighborhood.

Community Support

This evaluation was based on input from the public meetings and online responses. The community supported different design elements of each alternative. Alternative B (Neighborhood Placemaking Focus) had the highest overall community support.

Appendix C summarizes the full results of the evaluation.

6. Recommended Mobility Concept

Overview

The Recommended Mobility Concept emphasizes improved multimodal connections to the major activity nodes within and close to the neighborhood and the creation of comfortable and safe walking zones within the activity nodes. The improvements and traffic control are intended to create a balanced street network for all travel modes.

The Recommended Mobility Concept was developed using packaged Alternative B (Neighborhood Placemaking Focus) as a base, while including elements from Alternative A (Balanced Network) and Alternative C (Connections Focus). Public input from all three public meetings and online surveys influenced the development of the Recommended Mobility Concept.

Figure 17 shows a rendering of the Recommended Mobility Concept, and **Figure 18** shows the Recommended Mobility Concept. **Appendix D** includes the conceptual design, and **Appendix E** includes additional design considerations.

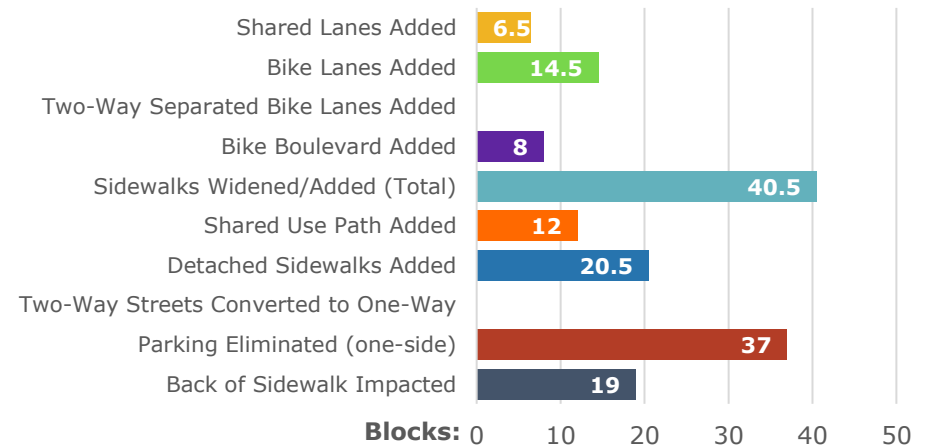
Key Elements

Key elements of the Recommended Mobility Concept include:

- ◆ Emphasis on multimodal connections to the major activity nodes
- ◆ East-west walking enhancements focused on 22nd Avenue and 25th Avenue
- ◆ East-west bicycle enhancements focused on 23rd Avenue for commuter bicyclists and on 22nd Avenue for recreational bicyclists and families
- ◆ Complete streets on select north-south streets
- ◆ Unique and inviting walking zones created through Westerly Creek Village, Stanley Marketplace, and within the Moorhead Recreation Center/Fletcher Community School area
- ◆ Encouragement of walking and biking to neighborhood schools
- ◆ Use of stop sign orientation and traffic calming to define and support the modal priority for each street

By the Numbers

The Recommended Mobility Concept adds/widens over 40 blocks of sidewalks, adds 12 blocks of shared use paths, and adds 20.5 blocks of detached sidewalks. It also adds 8 blocks of bike boulevards, more than 14 blocks of bike lanes, and more than 6 blocks of shared lanes. It also eliminates 37 blocks of parking.

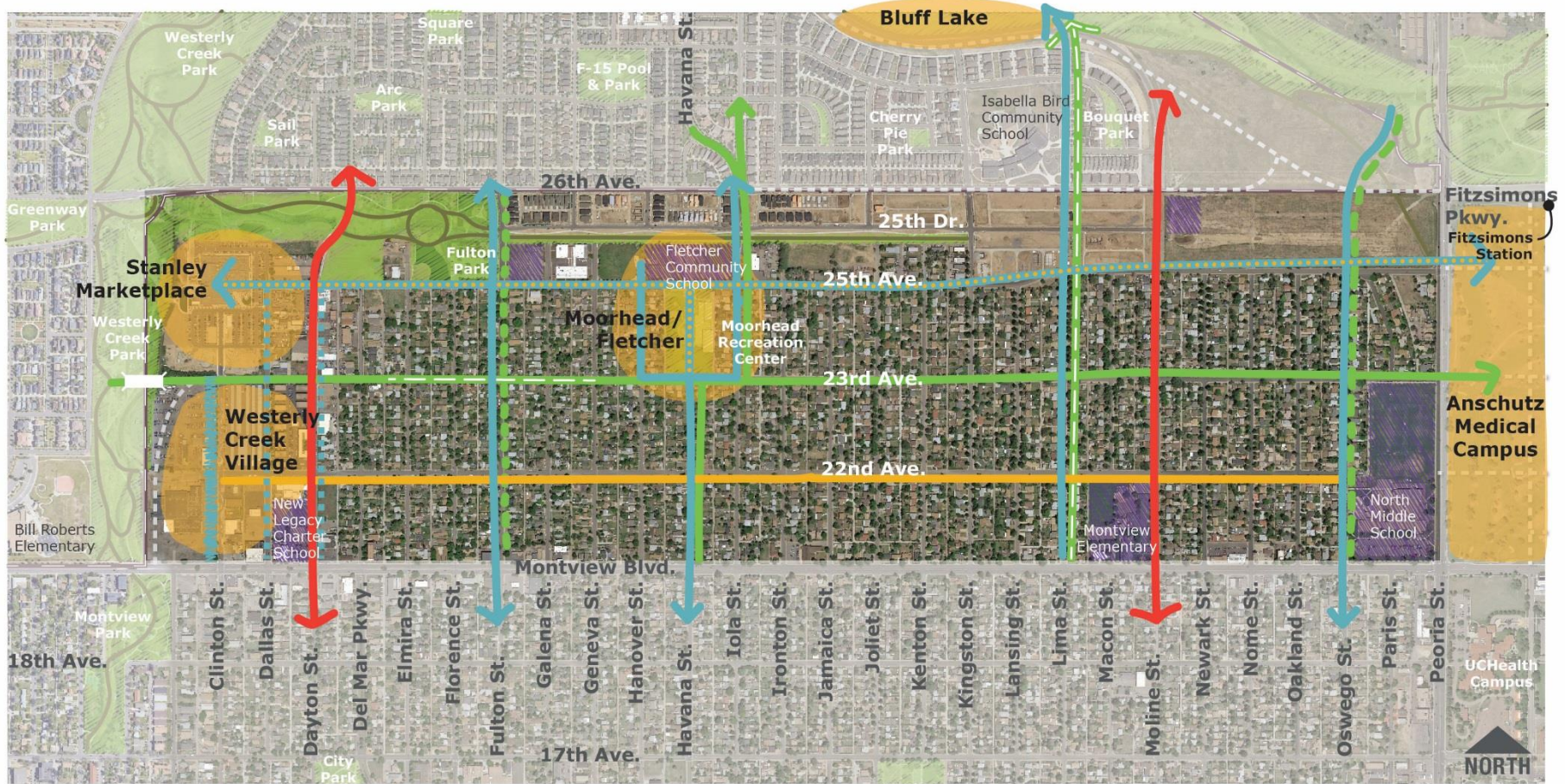


Note: North-south blocks were considered 1 block, and east-west blocks were considered 1/2 blocks.

Figure 17. Recommended Mobility Concept Rendering



Figure 18. Recommended Mobility Concept



LEGEND

- | | | | | | |
|---|---|---|-------------------|---|--------------------------------------|
|  | = Sidewalk and Pedestrian Enhancements |  | = Shared Use Path |  | = Motor Vehicle and Parking Priority |
|  | = Main Street Pedestrian Zone |  | = Bike Lanes |  | = Activity Nodes |
|  | = Pedestrian Boulevard |  | = Shared Lanes |  | = Schools |
|  | = Missing/Substandard Sidewalks to be Improved with Redevelopment |  | = Bike Boulevard | | |



Placemaking Opportunities

Placemaking focuses on designing cities and communities for people, not just cars and infrastructure, by focusing on social and cultural aspects of a specific place to create lively neighborhoods with inviting and attractive public spaces. Rather than solely focusing on infrastructure improvements for mobility or stormwater, it brings forward an emphasis on human comfort and looks to capitalize on the local community's assets to create quality public spaces that contribute to people's health, happiness, and overall wellbeing.

The placemaking approach used in NW Aurora emphasizes stronger connections to and from existing community amenities, as well as current and proposed developments, to establish stronger neighborhood connectivity, accessibility for pedestrians, bicyclists, and vehicles, and community amenities that build from existing neighborhood assets.

Figure 19 presents the recommended placemaking concept.

The historic nature of the neighborhood provided substantial context to draw from and guided many of the placemaking concepts and

recommendations. This included retaining the well-established existing residential neighborhood character, reinforcing the importance of the neighborhood schools, bolstering the role of the newly renovated Moorhead Recreation Center as a centerpiece of the community, and connecting people to Stanley Marketplace, as well as Westerly Creek and Sand Creek open spaces.

As an integral part of the Recommended Mobility Concept, an overall placemaking framework was created. To build from and leverage the community's assets, it is organized around existing neighborhood amenities—such as schools, commercial destinations, the recreation center, parks and open spaces—to enhance the overall character and create a comfortable, connected, and overall enjoyable experience for residents. In all cases, the recommendations are a combination of transportation improvements and placemaking features that offer new mobility choices and public realm enhancements.

Figure 19. Recommended Placemaking Concept



Five major placemaking concepts provide a framework for the detailed mobility recommendations that follow.

Moorhead Recreation Center & Moorhead Park

Centrally located in the neighborhood, Moorhead Recreation Center and Park serve as the symbolic heart of the community and a place where adults and children frequently gather. Thanks to recent improvements, the recreation center is a beacon of activity with a vibrant social



scene and abundant recreational offerings. The mobility and placemaking recommendations reinforce and enhance this by suggesting a pedestrian-friendly zone in the area and blocks around Moorhead Recreation Center. New and improved sidewalks will provide safer connectivity along 25th and 23rd Avenues, with a potential opportunity to enhance the entry points to the Park and Recreation Center. In addition to improved sidewalks, wide crossing zones, bulb-outs, and traffic calming devices create a recognizable “slow zone” that emphasizes walking and encourages pedestrian activity to and from the recreation center and park.

Clinton Street and Stanley Marketplace

As a major entry to the Westerly Creek Village area and pedestrian destination for the neighborhood, Clinton Street forms a major entry to Stanley Marketplace and provides an opportunity for a destination pedestrian street connecting Montview Boulevard and Stanley. This potential “main street” and gateway provides an opportunity for generous sidewalks, café areas, lighting, signage, banners and art to create a unique pedestrian experience and mixed-use destination for the neighborhood.

The vibrant public realm is activated by commercial and retail uses fronting the street and direct pedestrian connections to the Westerly Creek Park Trail network to the west. Stanley Marketplace and the gathering spaces out front provide a terminating point



for the street. As Stanley continues to develop and evolve, the existing gathering spaces can be expanded to create a larger front door experience on the south side of the building.

Neighborhood Schools



An integral part of any well-balanced neighborhood is proximity to neighborhood schools where children can receive education in their local community and create social bonds with friends.

With four schools within a $\frac{3}{4}$ mile area, including an elementary school and a middle school, the neighborhood is truly a place for learning, where children can grow into adulthood within walking distance from their homes. As major destinations for daily learning, community gatherings, events, and activities, the schools are centerpieces around which many of the mobility concepts are organized. New mobility and placemaking improvements reinforce the schools as community hubs and provide students a safer and easier commute to and from school, whether by walking or bicycling.

Existing Neighborhood Character

Retaining and enhancing the character of the existing neighborhood will continue to preserve the residential feel while allowing it to adapt to some of the new mobility and placemaking improvements. The existing housing and residential blocks



create a comfortable neighborhood character that is familiar to residents old and new. The mobility and placemaking concepts would enhance the residential sense of place by providing improved connectivity and a more attractive public realm with comfortable sidewalks, bike facilities, and potential streetscape improvements. Through these concepts, the established neighborhood character will be enhanced to promote a healthy and vibrant community.

Westerly Creek Open Space



Easy and convenient access to great parks and open space helps people nurture a healthy connection to nature and to each other. Westerly Creek, as a signature regional open space, provides that type of amenity for the

community by connecting residents to trails, water, green space, and natural landscape features. The placemaking concepts see this as a major

destination for walking, biking, and exploring nature, and look to provide improved access by establishing a broader network of sidewalks, multi-use paths, and bike connections to and from the open space.

Placemaking Components

Building on the five major placemaking concepts, site-specific placemaking elements are also included in the mobility network improvements that use existing streets. These come in the form of roadway improvements, new bicycle and pedestrian facilities, and improved connections to transit and schools. While the mobility network improvements address the overall travel network in the neighborhood, the placemaking elements focus on user experience and comfort. The recommendations were prompted by asking: "When people choose to walk, bike or gather in the neighborhood, how does it feel and what makes it comfortable for people?" In response to this question, the improvements look to make user experience safer, more comfortable and enjoyable, so that people of all ages can choose their preferred mode to travel to visit amenities and destinations.

In the following recommendations, each mobility network improvement includes placemaking components that focus on users and the human experience. In some instances, it is the addition of landscaping treatments, such as new planting areas, a continuous row of new trees, or landscape plantings in stormwater planters to create a more livable neighborhood. In other cases, it is the addition of a few street furnishings to allow people to sit and take a break, adding creative signage/wayfinding to help people navigate, or including different paving materials to make a place feel special.

The mobility network improvements with integrated placemaking elements include:

- ◆ **Fulton Street and Oswego Street Bike Boulevards** – The two bike boulevards provide an opportunity to create a different user experience for residents by emphasizing bicycle use and pedestrian experience.



Source: National Association of City Transportation Officials

The low-speed streets create more comfortable places for walking and biking and provide an opportunity to encourage other forms of placemaking, such as enhanced planting areas, parklets, street furnishings, alternative paving materials, and small gathering spaces.



Due to the roadway reconfiguration and the addition of the small roundabout to reduce vehicular traffic on the street, the bike boulevards have the greatest potential for enhanced landscape and stormwater collection

areas with plantings, as well as creative design treatments in the roundabout.



- ◆ **25th Avenue Pedestrian Boulevard** – The 25th Avenue pedestrian boulevard creates a primary pedestrian route with opportunities for enhanced street plantings, signage, seating and integrated public art. The overall linear experience, which is in the northern portion of the neighborhood, is intended to create a comfortable walking experience that is functional, safe, and attractive. The proposed improvement provides space for walking, jogging, and biking at slower speeds. Keeping in line with traditional boulevards, the street is envisioned to have a

continuous street canopy and planter areas, creating comfortable space for walking with direct connections to schools and neighborhood destinations.

- ◆ **23rd Avenue Bike Lanes** – Located in the center of the neighborhood, the bike lanes on 23rd Avenue offer another opportunity to create an identifiable corridor and promote bike use by residents and commuters. Two new on-street bike lanes will encourage frequent bicycle activity. Combined with the bike facilities, opportunities for distinct surface graphics or markings, signage and wayfinding can provide visual identity and make it an interactive user experience.



- ◆ **22nd Avenue Shared Use Path** – The 22nd Avenue shared-use path on the south side of the street provides a facility for recreational bicyclists and pedestrians to access schools and amenities. Located on the southern portion of the neighborhood, the path provides another multi-use sidewalk as a safe route for children and parents. Placemaking opportunities include the use of colorful and playful markings, signage, and small seating areas to create a comfortable and enjoyable experience for users.



Neighborhood Recommendations

Bicycle Network

The Recommended Mobility Concept includes bicycle facilities for every type of user and ability. The shared use path on 22nd Avenue is intended to serve eastbound/westbound residents, children, and commuters who are not comfortable sharing the street with motor vehicles. The bike boulevards on Fulton and Oswego Streets provide a lower-stress environment where bicycle mobility is prioritized for users looking to travel north-south. The bike lanes on 23rd Avenue and Havana Street/Iola Street, as well as the shared lanes on Lima Street, provide an opportunity for higher speed bicycle mobility by more confident riders seeking to access destinations within the neighborhood and beyond. The bike lanes on Havana Street/Iola Street connect to the existing buffered bike lanes in Denver.

Pedestrian Facilities

The Recommended Mobility Concept strategically adds/widens over 40 blocks of sidewalks, adds 12 blocks of shared-use paths, and adds 20.5 blocks of detached sidewalks. These improvements are concentrated on 25th Avenue (the pedestrian boulevard), on 22nd Avenue (the shared-use path), Fulton Street, Havana Street, Lima Street, and Oswego Street. Together, these streets create a network of improved facilities providing access to all activity nodes within the neighborhood and beyond.

School Walking and Biking Routes

The Recommended Mobility Concept provides safer, lower-stress routes for walking and biking to schools located in the neighborhood. Specifically, the shared-use path on the south side of 22nd Avenue provides connections to New Legacy Charter School, Montview Elementary School, and North Middle School. The pedestrian boulevard along 25th Avenue provides a connection to Fletcher Community School/Rocky Mountain Prep Fletcher Elementary Charter. Dallas Street provides north-south access to New Legacy Charter School; the sidewalk and pedestrian enhancements on Hanover, Havana, and Iola Streets provide connections to Fletcher Community School/ Rocky Mountain Prep Fletcher Elementary Charter. Sidewalk and pedestrian enhancements on Lima Street provide a lower-stress route for accessing Montview Elementary, just like the sidewalk and pedestrian enhancements on Oswego Street to North Middle School.

Figure 20 shows the recommended school walking routes.

Traffic Control








The proposed traffic control in NW Aurora is designed to balance the flow of traffic, encourage slower speeds through the neighborhood, and work with school walking routes. The proposed traffic control is compatible with the current neighborhood streets and with the recommended improvements. **Figure 21** shows the recommended traffic control concept.

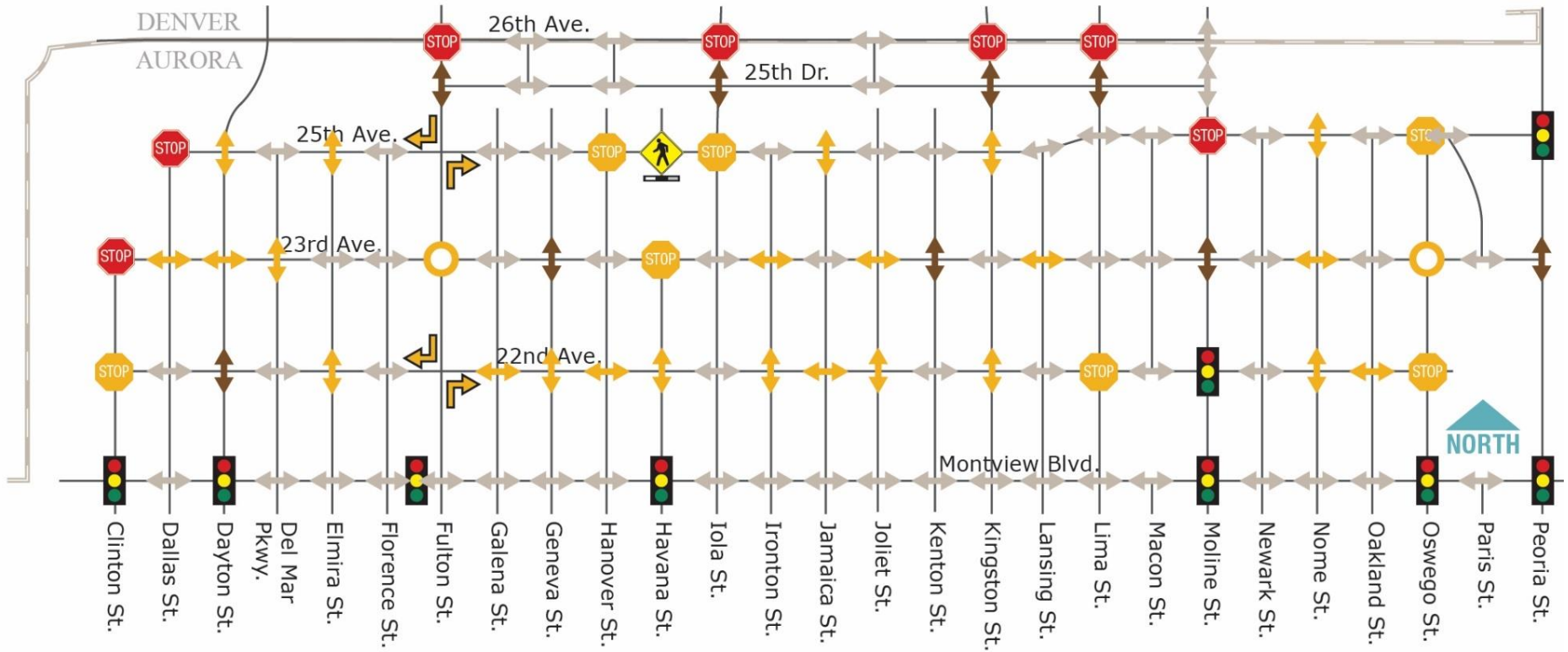
Figure 20. Recommended School Walking Routes



Figure 21. Proposed Traffic Control

LEGEND

-  = East-West Free Flow Movement
-  = North-South Free Flow Movement
-  = All-Way Stop
-  = Traffic Signal
-  = Changed Flow Movement
-  = Right Turn Only for Motor Vehicles (no restrictions for bicyclists, pedestrians and emergency vehicles)
-  = New Mini Roundabout
-  = New All-Way Stop
-  = New Rectangular Rapid Flashing Beacon

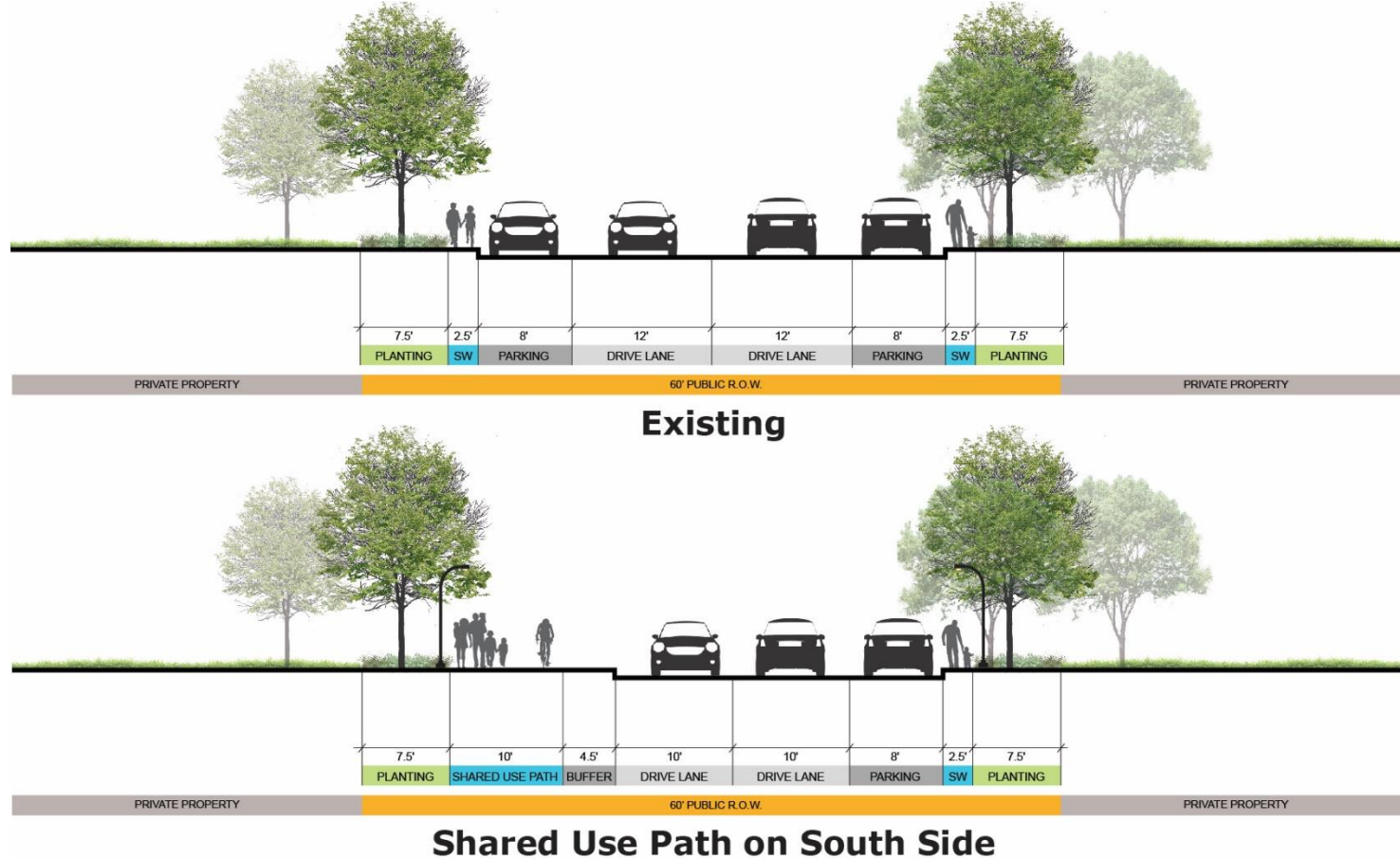


Recommended Cross Sections

22nd Avenue

A 10-foot shared use path (for pedestrians and bicyclists) with a 4.5-foot buffer is recommended on the south side of 22nd Avenue. Travel lanes would be narrowed to 10 feet and parking would be eliminated on the south side of the street to make space for the shared use path. Where feasible, the shared use path would be added to the back of the existing curb, parking would be preserved on the south side (Clinton to Dayton), and the school bus loading zone would be maintained (Macon to Moline). The recommended stop sign orientation alternates between east-west and north-south orientation (refer to Projects 17, 18, 19, and 25 in Chapter 7, Implementation Plan).

Figure 22. 22nd Avenue Cross Section – Facing West

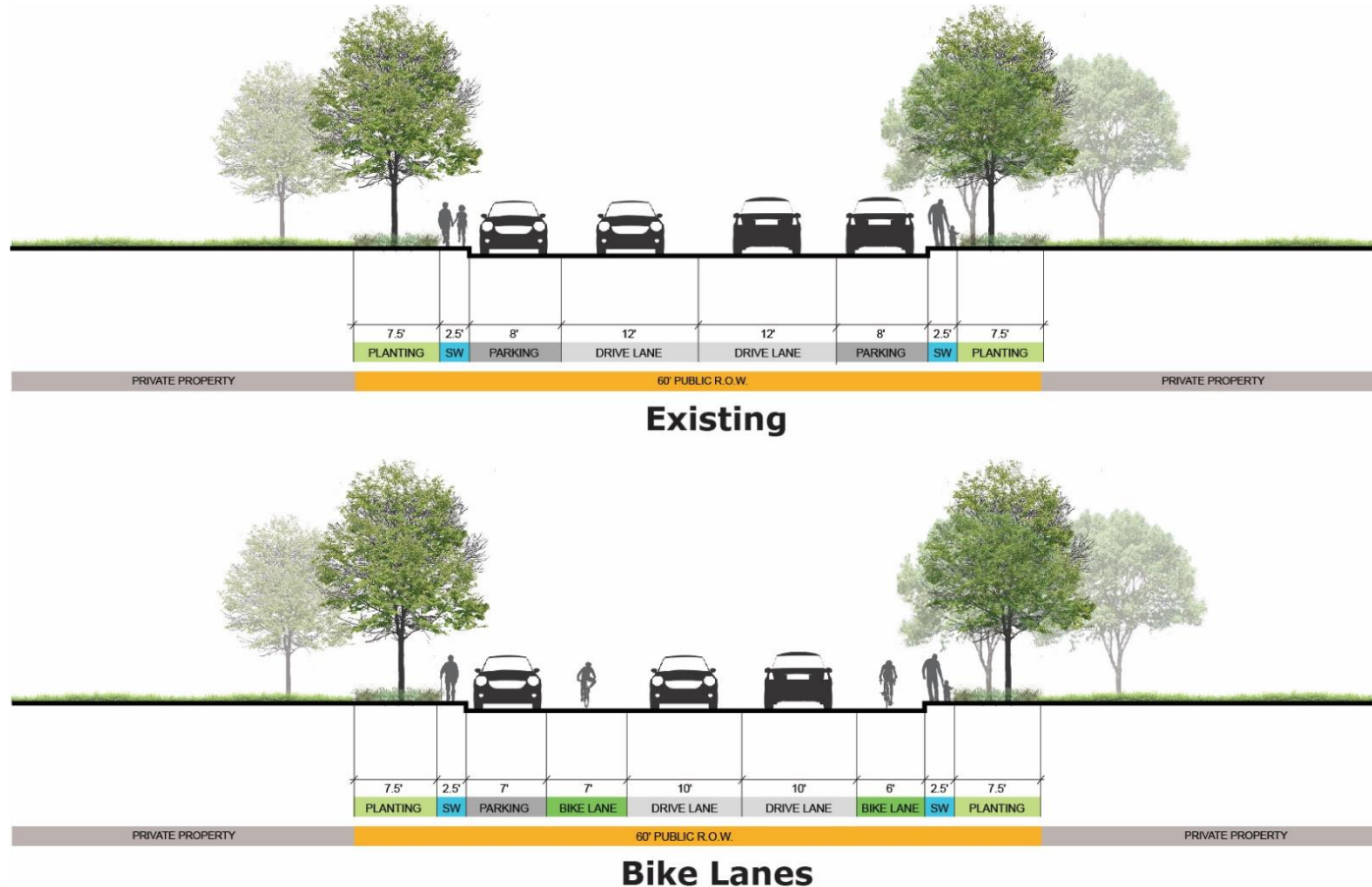


23rd Avenue

On-street bike lanes are recommended along 23rd Avenue. Travel lanes would be narrowed to 10 feet and parking would be eliminated on the north side of the street to make space for the bike lanes. The 5-block section between Emporia and Geneva is narrow and has houses fronting onto 23rd Avenue; this section would include shared lanes to preserve parking on both sides of the street*. The sidewalk along the north side of 23rd Avenue would be widened adjacent to Moorhead Recreation Center (Hanover Street to Iola Street). A trail connection and bridge over Westerly Creek, connecting to the Westerly Creek Trail, is recommended along the 23rd Avenue alignment west of Clinton Street (refer to Projects 2, 6, and 29 in Chapter 7, Implementation Plan).

*Forward stop bars for bikes at the transition points (Emporia Street and Geneva Street) will allow bicyclists to establish themselves in the shared lane. The stop sign orientation is primarily designed to provide bicycle through movement priority on 23rd Avenue.

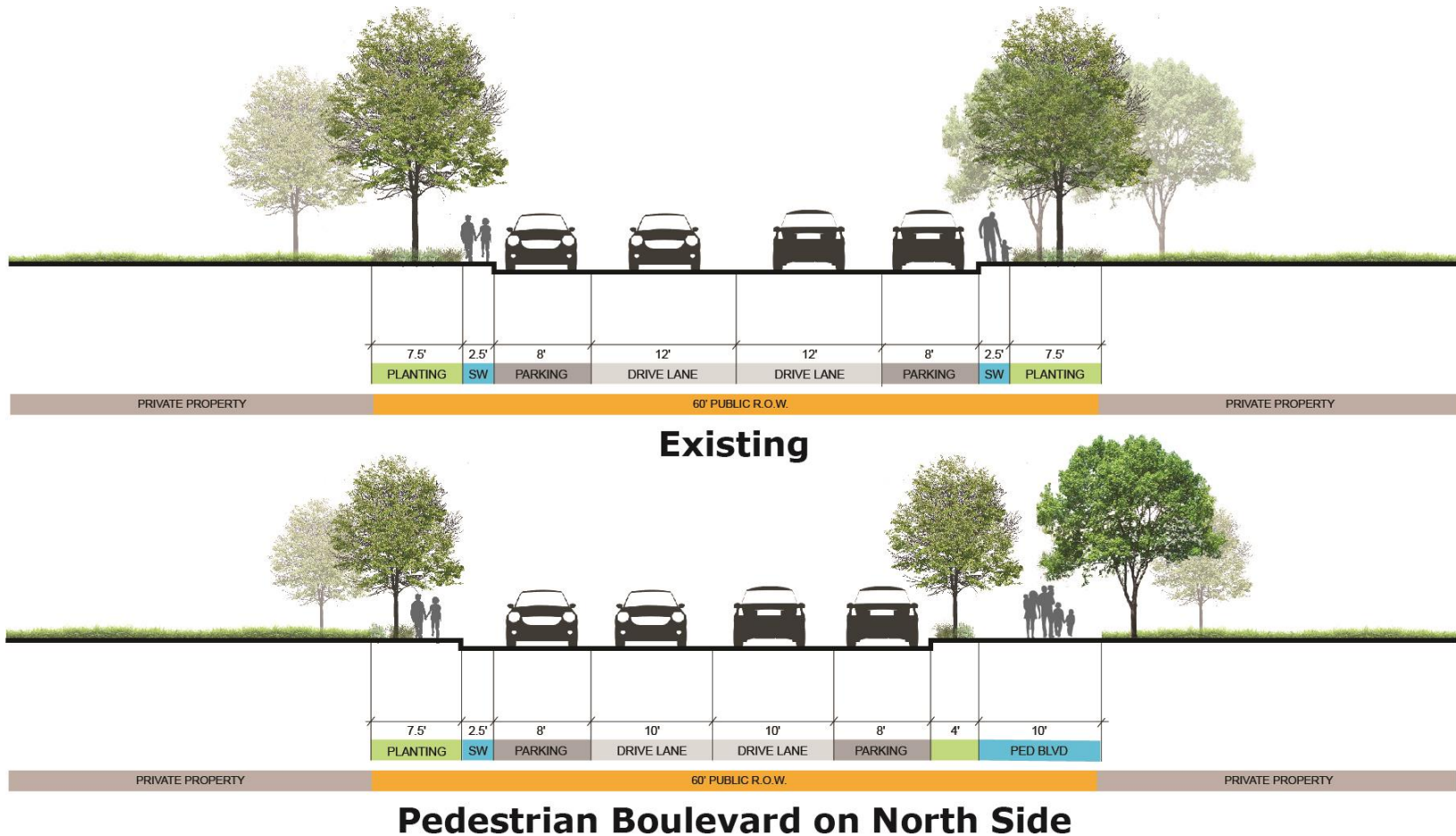
Figure 23. 23rd Avenue Cross Section – Facing West



25th Avenue

A 10-foot tree-lined pedestrian boulevard is recommended on the north side of 25th Avenue. Typically, the pedestrian boulevard would be added to the back of the existing curb; occasionally parking would be eliminated on the north side of the street to minimize impacts on yards within public right-of-way. The stop sign orientation along 25th Avenue should alternate between east-west and north-south orientation with all-way stop control flanking the Moorhead/school zone at Hanover Street and Iola Street. The existing pedestrian signal east of Hanover Street will be replaced with a pedestrian activated Rectangular Rapid Flashing Beacon (RRFB) on the west leg of Moorhead Recreation Center/Fletcher Community School access (refer to Projects 3, 5, 8, 13, 20, 21, 22, 23, and 24 in Chapter 7, Implementation Plan).

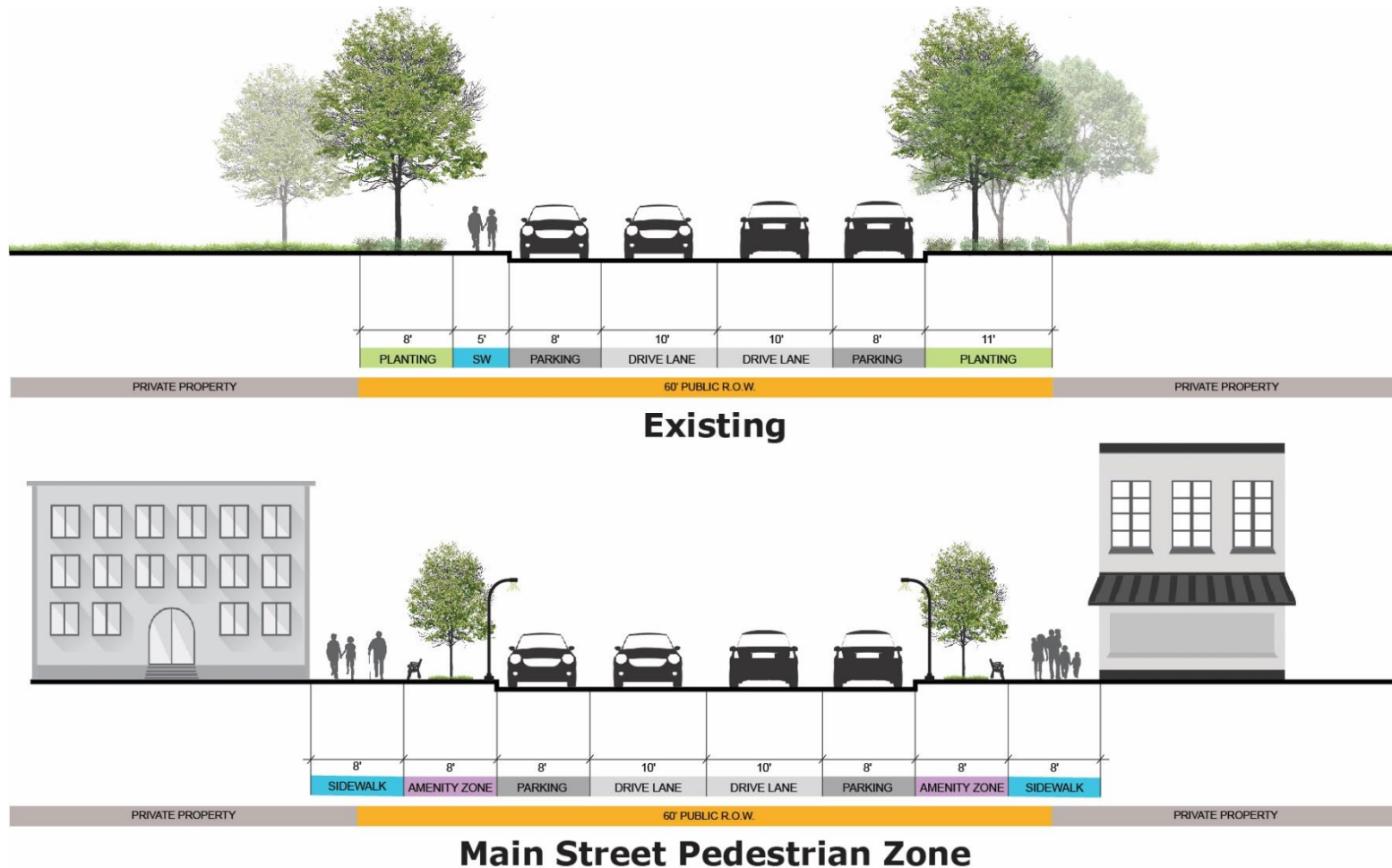
Figure 24. 25th Avenue Cross Section – Facing West



Clinton Street

Clinton Street is designated as a Main Street Pedestrian Zone with detached sidewalks and amenity zones, including benches and pedestrian-scaled lighting. The recommended cross-section includes parking on both sides of the street and a 16-foot pedestrian zone with amenities. These improvements would be linked to redevelopment of parcels along Clinton Street, including Stanley Residential and Westerly Creek Village (refer to Project 26 in Chapter 7, Implementation Plan).

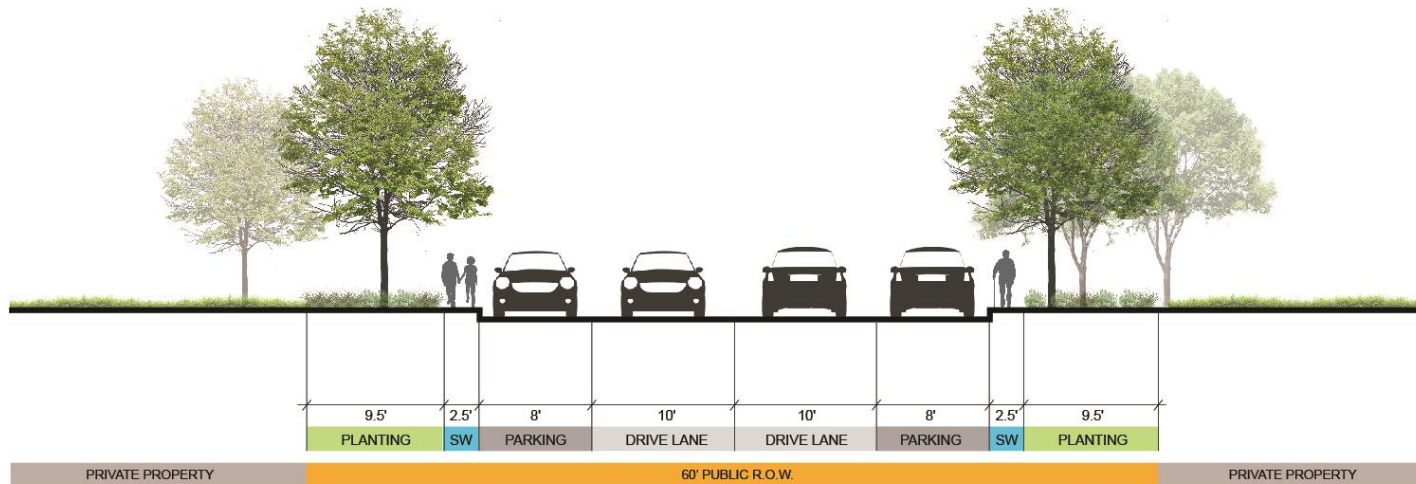
Figure 25. Clinton Street Cross Section – Facing North



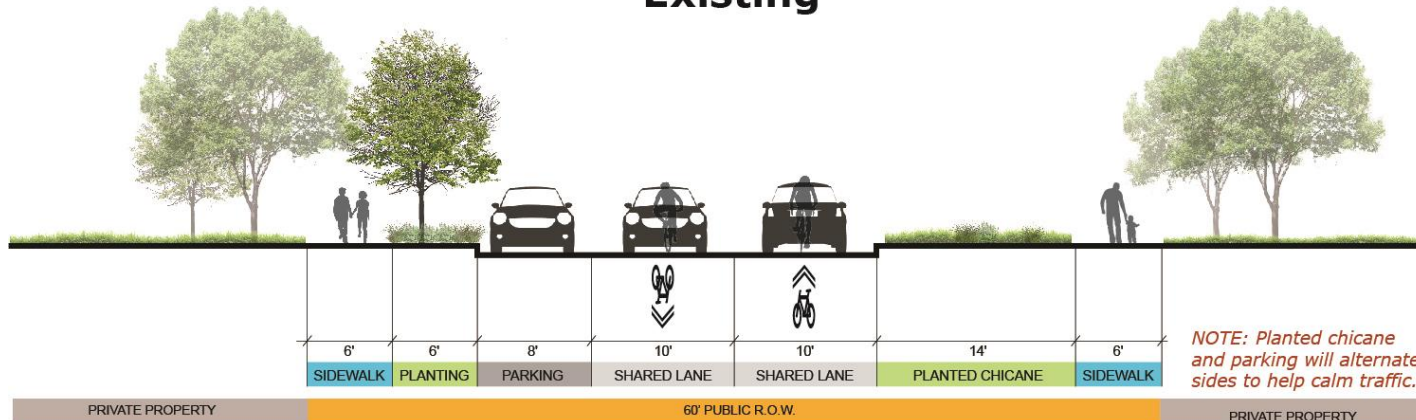
Fulton Street

A bicycle boulevard is recommended on Fulton Street, along with 6-foot detached sidewalks. The bicycle boulevard would be created using a combination of traffic calming elements (chicanes and a mini-roundabout at 23rd Avenue) and traffic diversions (motor vehicles on Fulton Street would be forced to turn right at 22nd Avenue and at 25th Avenue). Parking would be eliminated on alternating sides of the street using chicanes. The detached sidewalks would impact yards within the public right-of-way (refer to Projects 7 and 14 in Chapter 7, Implementation Plan).

Figure 26. Fulton Street Cross Section – Facing North



Existing



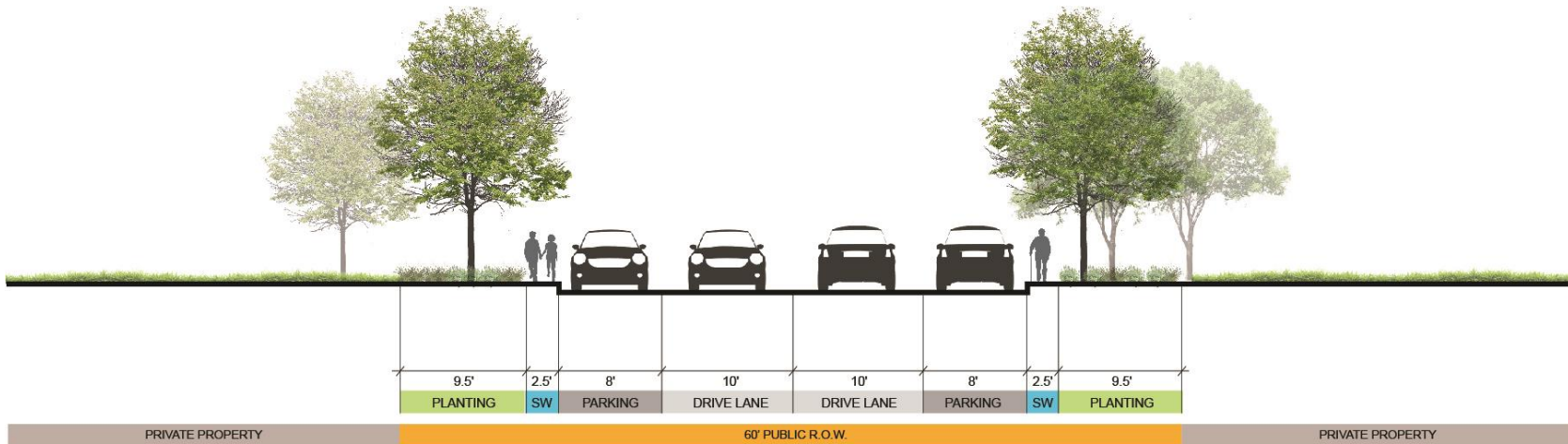
NOTE: Planted chicane and parking will alternate sides to help calm traffic.

Bike Boulevard and Detached Sidewalks

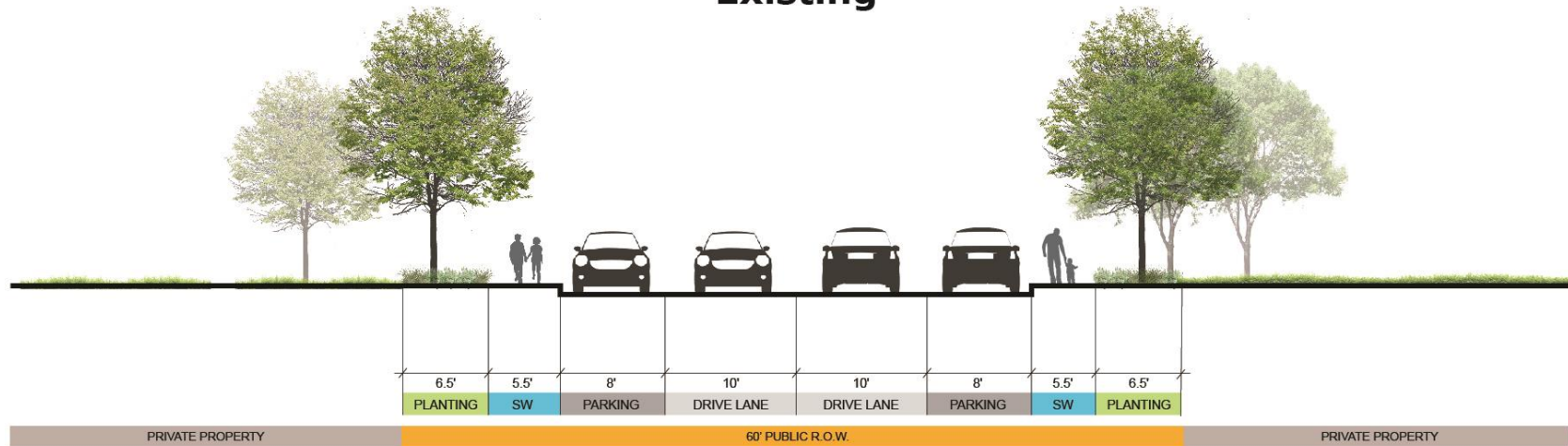
Hanover Street

Widened sidewalks are recommended on Hanover Street from 23rd Avenue to 25th Avenue. This would be accomplished by widening the sidewalk into the adjacent yards within the public right-of-way. On-street parking would be maintained on both sides (refer to Project 10 in Chapter 7, Implementation Plan).

Figure 27. Hanover Street Cross Section – Facing North



Existing

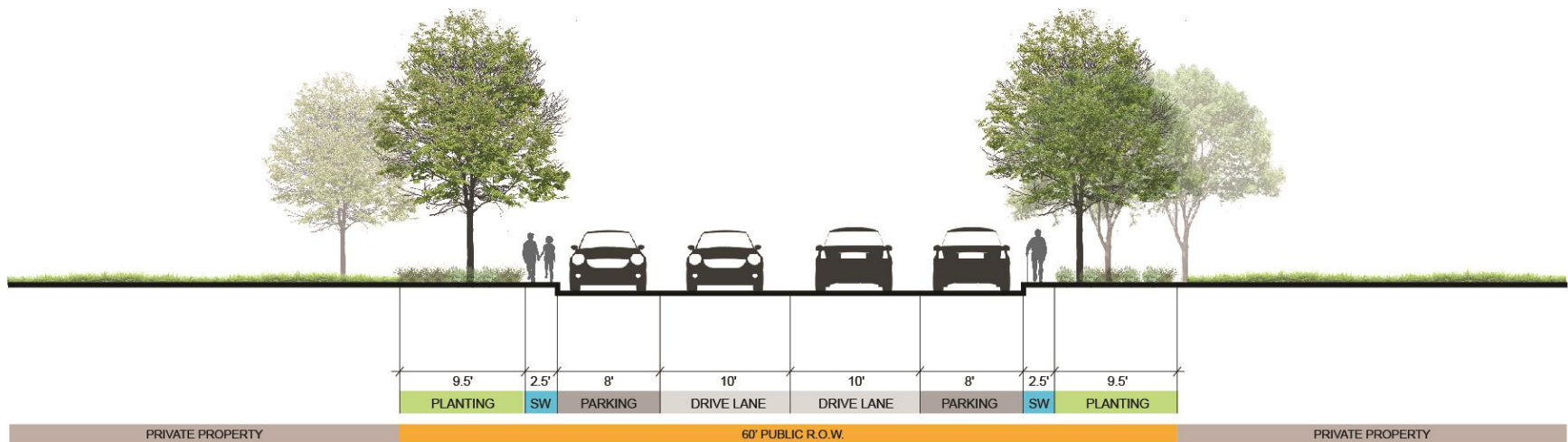


Widen Sidewalks to Outside

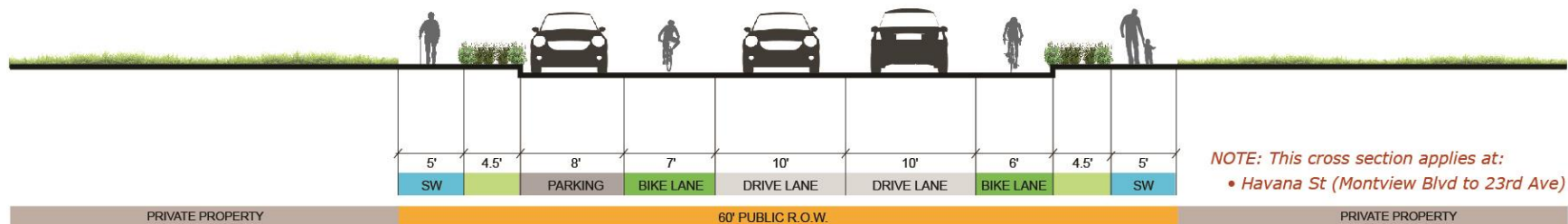
Havana Street

On-street bike lanes and detached sidewalks are recommended along Havana Street from Montview Boulevard to 23rd Avenue. To make space for these bicycle and pedestrian enhancements, parking would be eliminated on the east side of the street, the street would be widened, and the sidewalks would be widened, impacting yards within the public right-of-way. All-way stop control is recommended at the Havana Street and 23rd Avenue intersection to facilitate safe pedestrian access to the Moorhead Recreation Center (refer to Project 11 in Chapter 7, Implementation Plan).

Figure 28. Havana Street Cross Section – Facing North



Existing



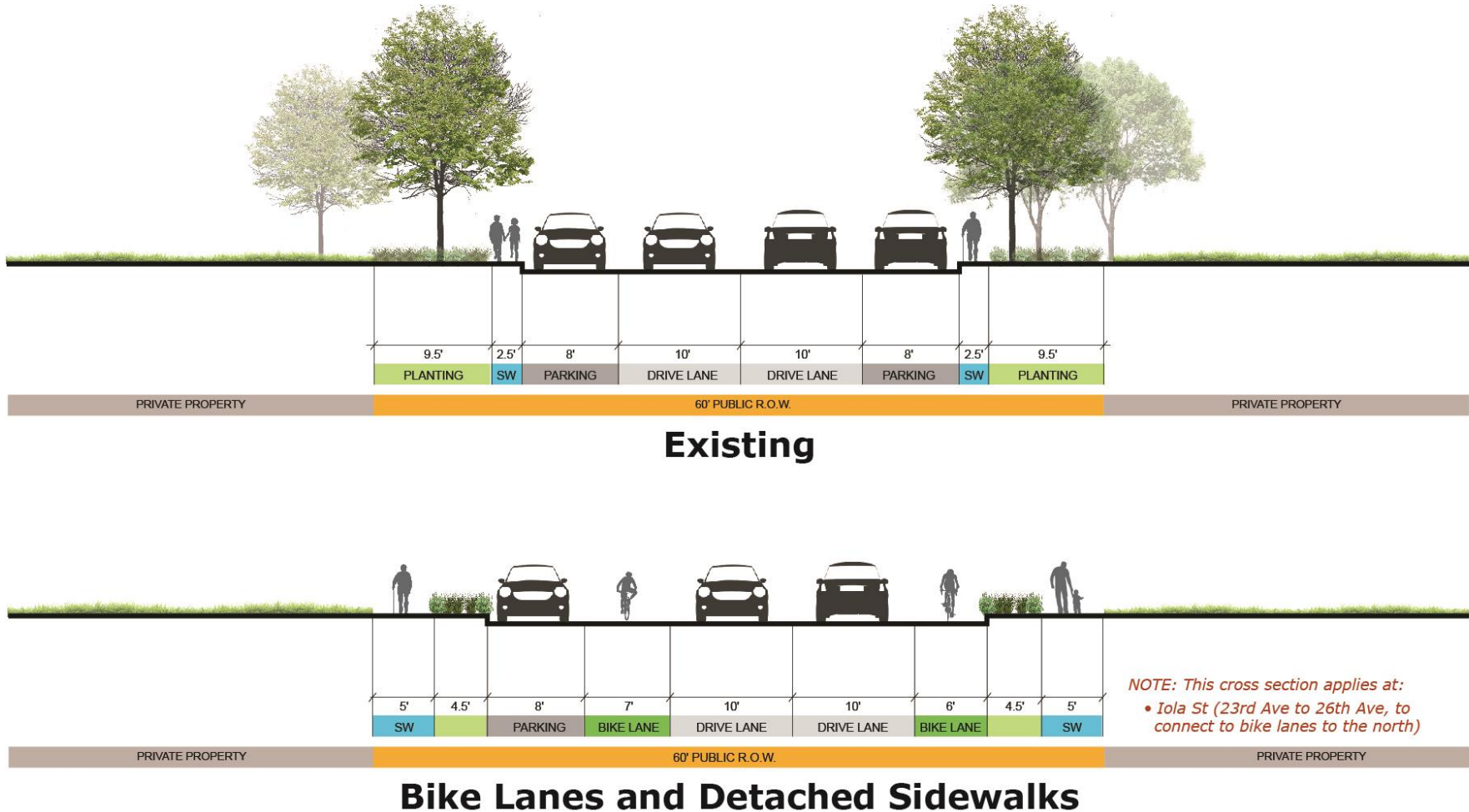
NOTE: This cross section applies at:
 • Havana St (Montview Blvd to 23rd Ave)

Bike Lanes and Detached Sidewalks

Iola Street

On-street bike lanes and detached sidewalks are recommended along Iola Street from 23rd Avenue to 26th Avenue, connecting to the existing buffered bike lanes in Denver. To make space for these bicycle and pedestrian enhancements, parking would be eliminated on the east side of the street, the street would be widened, and the sidewalks would be widened, impacting yards within the public right-of-way (refer to Project 12 in Chapter 7, Implementation Plan).

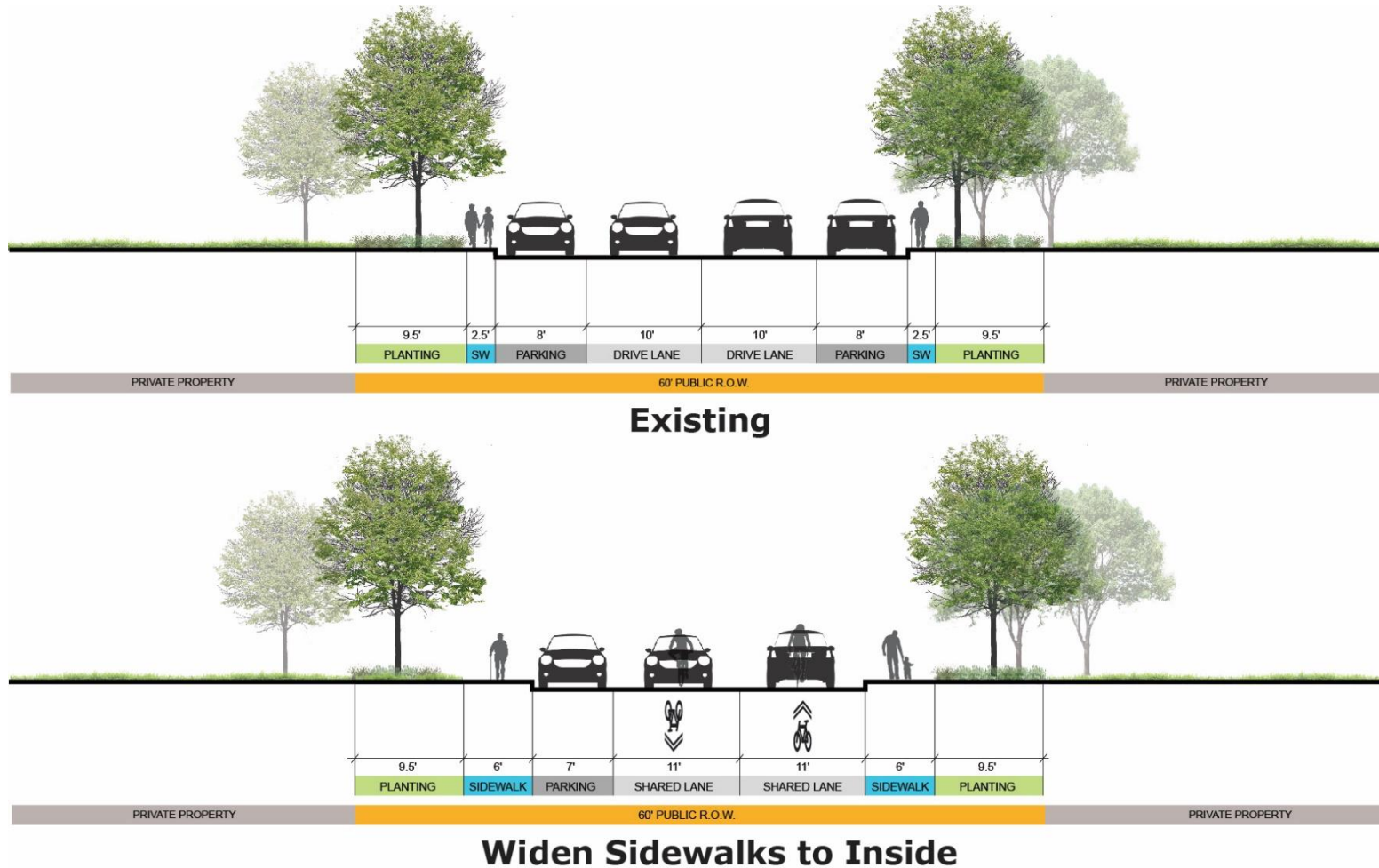
Figure 29. Iola Street Cross Section – Facing North



Lima Street

Shared lanes are recommended for Lima Street to denote the street as a bike route and to increase driver expectation of bicyclists using the street. Widened sidewalks are also recommended on Lima Street. These bicycle and pedestrian enhancements would be made by eliminating parking on one side of the street (east side from 22nd Avenue to 23rd Avenue, west side from 23rd Avenue to 25th Avenue, and Montview Boulevard to 22nd Avenue). The bike route on Lima Street would replace the existing bike route on Moline Street. All-way stop control is recommended at 22nd Avenue to facilitate safe pedestrian access to Montview Elementary (refer to Projects 9 and 16 in Chapter 7, Implementation Plan).

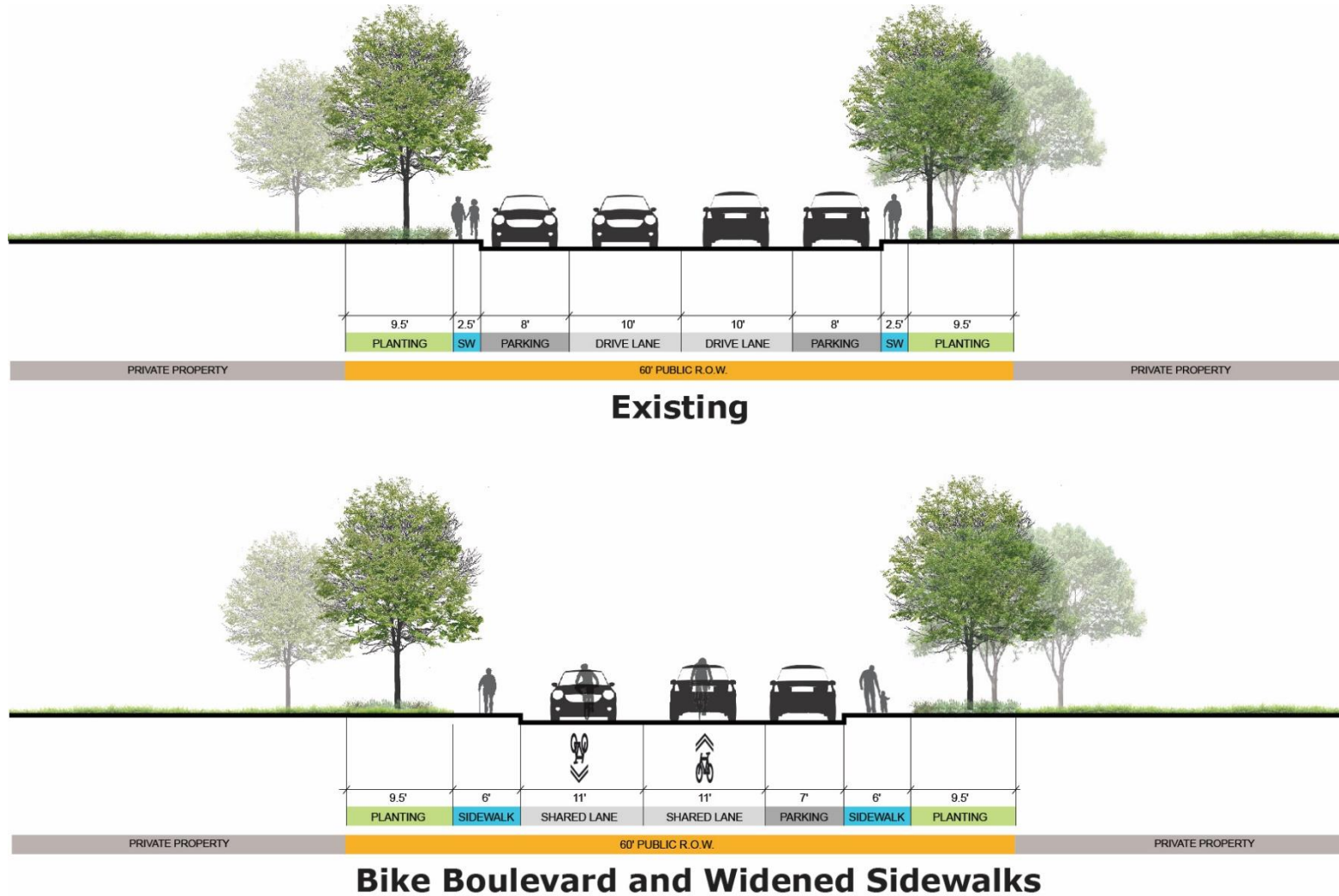
Figure 30. Lima Street Cross Section – Facing North



Oswego Street

A bicycle boulevard is recommended on Oswego Street, along with 6-foot sidewalks. The bicycle boulevard would be created using traffic calming (street narrowing and a mini-roundabout at 23rd Avenue). Parking would be eliminated on alternating sides of the street to accommodate the widened sidewalks. Alternating parking would help to slow traffic (refer to Projects 4 and 15 in Chapter 7, Implementation Plan).

Figure 31. Oswego Street Cross Section – Facing North



7. Implementation Plan

The Recommended Mobility Concept described in the previous chapter was developed through a collaborative process with city of Aurora staff from various departments and with strong consideration for the community input received from residents of NW Aurora and nearby areas. The recommendations of this plan were carefully crafted to balance the needs and desires of the people living in and using the streets of NW Aurora. While most everyone involved in the planning effort expressed a desire for improved bicycle and pedestrian mobility, there was also concern expressed about the loss of on-street parking and impacts on lawns and street trees within the public right-of-way. The recommendations strive to balance these desires and optimize the use of the public right-of-way within NW Aurora.

This document is meant to be a living concept that will continue to evolve. While the Recommended Mobility Concept balances the changes to the neighborhood with existing needs and desires, future opportunities to further enhance the bicycle, pedestrian, and placemaking within the neighborhood are possible.

Phasing

The city of Aurora does not have funding to make all the recommended improvements immediately; the improvements will be made over time as funding becomes available. The Recommended Mobility Concept has been separated into individual projects based on logical implementation phases, and cost estimates have been prepared for each project. The 29 projects have been phased based on the relative level of complexity, public support, cost, and funding availability. **Figure 32** depicts the project locations and anticipated implementation timing, and **Table 2** provides a description of the project phasing and potential funding sources.

Appendix F includes detailed cost estimates for each project.

Stop-sign re-orientation to more effectively serve all roadway users is identified as a high-priority project for near-term implementation. The recommended traffic control is designed to provide a more balanced network for north-south and east-west movements and to reinforce bicycle and pedestrian routes. Starting with the implementation of the study area wide stop sign re-orientation will help establish the traffic patterns and modal priorities identified in the Recommended Mobility Concept.

The next tier of early-action projects includes projects that require minimal infrastructure modifications and/or work to complete the pedestrian and bicycle network in the study area. These projects include completing sidewalk connections where they do not currently exist and adding striping to designate bicycle facilities.

The Fulton Street bike boulevard has been identified as a demonstration project. Phase 1 of the Fulton Street bike boulevard would temporarily mark shared lane (sharrow) pavement markings, chicanes, parking restrictions, and vehicular restrictions. The demonstration project would have a 12- to 18-month implementation period. The permanent installation of the Fulton Street bike boulevard is a candidate for DRCOG Transportation Improvement Program (TIP) funding, with the demonstration project serving as city and neighborhood support for full installation.

The longer-term horizon includes projects that are both higher cost and will require additional design considerations. These projects include those that will modify the existing curb line and/or impact yards back of curb. These projects are proposed as longer-term because of the capital and design requirements. However, should funding or funding opportunities become available, these projects could be implemented sooner.

A handful of projects have also been identified to occur in conjunction with development or redevelopment. No timeline or cost estimates have been identified for these projects. As redevelopment occurs, the city will coordinate with property owners/developers to ensure that mobility concept recommendations are implemented.

Funding

Several mechanisms can be leveraged to fund the various projects, including DRCOG TIP Funding, Safe Routes to School (SRTS) grants, and Aurora General Fund (including operations and ADA/Access funding). The city of Aurora has included a line item in the 2019 and 2020 budget for implementation of high-priority projects in NW Aurora.

The DRCOG TIP emphasizes projects that improve mobility infrastructure and services for vulnerable populations, increase the reliability of the multimodal transportation network, and improve transportation safety and security.



Two projects have been identified as candidate TIP projects:

- ◆ Fulton Street bike boulevard (permanent installation)
- ◆ Havana Street and Iola Street bicycle and pedestrian improvements

The Colorado Department of Transportation administers the Colorado SRTS grants. Grants are provided for infrastructure and non-infrastructure projects. The minimum grant award is \$100,000, with a maximum amount of \$500,000 (up to the statewide limit of \$4 million for infrastructure projects, and \$1 million for non-infrastructure projects). The SRTS grants are on a two-year grant cycle with applications open until November 1, 2018, for fiscal years 2019 and 2020. The city will not be applying for the SRTS grant this round due to the application deadline and Federal

requirements. The next call for projects will be August 2020. Projects that have been identified for potential SRTS funding are along the recommended school walking routes and proximate to neighborhood schools.

Next Steps

The city of Aurora will continue to pursue funding opportunities and partnerships as a possible way to expedite the implementation of projects. As the city of Aurora moves forward with implementation of the projects that make up the Recommended Mobility Concept, public notifications will be provided.

Figure 32. Project Phasing

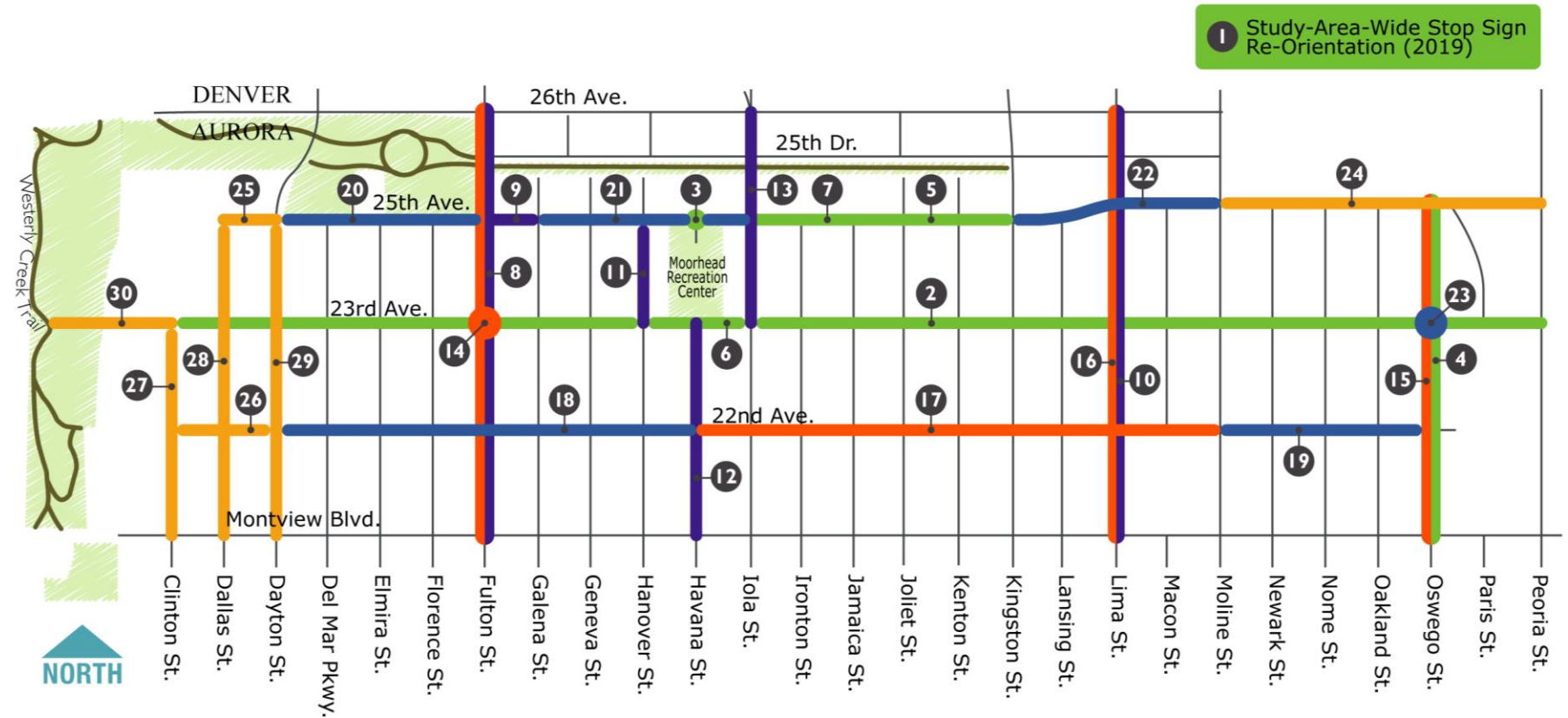


Table 2. Project Phasing and Funding Plan

Project ID	Location/Description	Bicycle Enhancements	Pedestrian Enhancements	Traffic Control & Traffic Calming	Parking Elimination	Back of Curb Impacts	Costs	Timing	Potential Funding Sources					
									TIP	SRTS	Developer	General Funds		
												Operations	NW Aurora	ADA/Access
1	Study Area-Wide Stop Sign Reorientation			Stop Sign Reorientation				Spring 2019				✓		
2	23rd Avenue Bike Lanes	Stripe bike lanes in both directions; Mark shared lanes Emporia to Geneva					\$93,000	Spring 2019					✓	
3	Fletcher/Moorhead Pedestrian Crossing on 25th Avenue		Hanover to Iola: Sidewalk on south side of 25th	RRFB Installation & Signal Removal			\$299,000	Summer 2019				✓		
4	Oswego Phase I – Bike Boulevard	Mark sharrows					\$14,000	2019					✓	
5	25th Avenue Phase 2 Ped Blvd – Joliet to Kingston		Complete missing sidewalk as pedestrian boulevard		Eliminate parking on north side of street		\$179,000	2019					✓	✓
6	23rd Avenue – Sidewalk Hanover to Iola		Widen sidewalk on north side along Moorhead	Use bulb-outs to define parking and provide traffic calming		Sidewalk improvements are added back of curb	\$190,000	2019					✓	
7	25th Avenue Phase 3 Ped Blvd – Iola to Joliet		Add 10-ft pedestrian blvd with 4-ft buffer on north side		Eliminate parking on north side of street		\$284,000	2019		✓			✓	
8	Fulton Bike Boulevard Phase 1	Mark sharrows		Temporary traffic diversion at 22nd and 25th; chicanes	Montview to 25th: Eliminate parking on alternating sides of street		\$40,000	2020					✓	
9	25th Avenue Phase 1 Ped Blvd – Fulton to Galena		Complete missing sidewalk as pedestrian boulevard			Add pedestrian blvd back of curb to preserve parking	\$70,000	2020						✓



Project ID	Location/Description	Bicycle Enhancements	Pedestrian Enhancements	Traffic Control & Traffic Calming	Parking Elimination	Back of Curb Impacts	Costs	Timing	Potential Funding Sources					
									TIP	SRTS	Developer	General Funds		
												Operations	NW Aurora	ADA/ Access
10	Lima Street Phase 1	Mark sharrows; Relocate bike route on Moline to Lima					\$17,000	2020					✓	
11	Hanover Street – Sidewalk 23rd to 25th		Add 6-foot sidewalks on both sides			Sidewalk improvements are added back of curb	\$218,000	2020		✓				✓
12	Havana Street Bike/Ped Improvements – Montview to 23rd	Stripe NB 6-ft bike lane and 7-ft parking adjacent to SB bike lane	Add 5-ft detached sidewalks both sides with 4-ft buffers			Eliminate parking on east side of street	\$763,000	2020		✓			✓ (Match)	
13	Iola Street Bicycle & Pedestrian Improvements	Provide 6-ft NB bike lane and 6-ft SB bike lane	Add 5-ft detached sidewalks both sides with 4-ft buffers			Eliminate parking on east side of street	\$381,000	2020	✓		✓		✓ (Match)	
14	Fulton Bike Boulevard Phase 2	Sharrows Added in Phase I	Add 6-ft sidewalks on both sides	Permanent traffic diversion at 22nd and 25th; chicanes; Add mini roundabout at Fulton	Parking Eliminated in Phase I	Sidewalk improvements are added back of curb	\$2,405,000	2021	✓					
15	Oswego Street Phase 2 – Sidewalks		Add 6-ft sidewalks on both sides	Use bulb-outs to define parking and to provide traffic calming	Eliminate parking on alternating sides of street		\$733,000	2022			✓			✓
16	Lima Street Phase 2		Add 6-ft sidewalks on both sides		Eliminate parking on alternating sides of street		\$734,000	2023						✓
17	22nd Avenue Phase 3 Shared Use Path – Havana to Moline		Add 10-ft shared use path with 4-ft buffer on south side of the street		Eliminate parking on south side of street	Improvements back of curb along bus parking zone	\$800,000	2024			✓			
18	22nd Avenue Phase 2 Shared Use Path – Dayton to Havana		Add 10-ft shared use path with 4-ft buffer on south side of the street		Eliminate parking on south side of street	Improvements back of curb along bus parking zone	\$640,000	2025			✓			



NW AURORA

Mobility Study

Project ID	Location/Description	Bicycle Enhancements	Pedestrian Enhancements	Traffic Control & Traffic Calming	Parking Elimination	Back of Curb Impacts	Costs	Timing	Potential Funding Sources						
									TIP	SRTS	Developer	General Funds			
												Operations	NW Aurora	ADA/ Access	
19	22nd Avenue Phase 1 Shared Use Path – Moline to Oswego		Add 10-ft shared use path with 4-ft buffer on south side of the street		Eliminate parking on south side of street		\$389,000	2025		✓					
20	25th Avenue Phase 4 Ped Blvd – Dayton to Fulton		Replace sidewalk with 10-ft ped blvd with 4-ft buffer on north side			Add pedestrian blvd back of curb to preserve parking	\$324,000	Future							
21	25th Avenue Phase 5 Ped Blvd – Galena to Iola		Replace sidewalk with 10-ft ped blvd with 4-ft buffer on north side		Hanover to Iola: Maintain school pick-up/drop-off on north side	Add pedestrian blvd back of curb to preserve parking	\$359,000	Future							
22	25th Avenue Phase 6 Ped Blvd – Kingston to Moline		Replace sidewalk with 10-ft ped blvd with 4-ft buffer on north side			Replace existing detached sidewalk with ped blvd	\$311,000	Future							
23	23rd Avenue Oswego Mini Roundabout			Add mini roundabout at Oswego			\$560,000	Future							
24	25th Avenue Ped Blvd – Moline to Peoria		Add 9-ft pedestrian blvd with 4-ft buffer on north side			Replace existing detached sidewalk with ped blvd	With Development/ Redevelopment				✓				
25	25th Avenue Ped Blvd – Dallas to Dayton		Add 10-ft ped blvd with 4-ft buffer on north side			Replace existing detached sidewalk with ped blvd	With Development/ Redevelopment				✓				
26	22nd Avenue Shared Use Path – Clinton to Dayton		Add 10-ft shared use path with 4-ft buffer on south side of the street				With Development/ Redevelopment				✓				
27	Clinton Street Pedestrian Zone		16-ft ped zone; 8-ft buffer w/ amenities, 8-ft sidewalk				With Development/ Redevelopment				✓				



Project ID	Location/Description	Bicycle Enhancements	Pedestrian Enhancements	Traffic Control & Traffic Calming	Parking Elimination	Back of Curb Impacts	Costs	Timing	Potential Funding Sources					
									TIP	SRTS	Developer	General Funds		
												Operations	NW Aurora	ADA/ Access
28	Dallas Street – Sidewalks		Add/improve missing/substandard sidewalks				With Development/ Redevelopment			✓				
29	Dayton Street – Sidewalks		Add/improve missing/substandard sidewalks				With Development/ Redevelopment			✓				
30	23rd Avenue Westerly Creek Bicycle/Pedestrian Trail & Bridge		Provide trail connection to Westerly Creek				With Development/ Redevelopment			✓				

