



# ATHMAR PARK BUILT ENVIRONMENT ASSESSMENT



*Thanks to all of the volunteers who collected data, participated in WalkShops, and provided feedback and input!*

## ACKNOWLEDGEMENTS

### Athmar Park Neighborhood Association

Meghan Boydston

Ian Harwick

Derek Medina

Esmerala Martinez

### Bicycle Colorado

Ted Heyd

### Colorado Department of Transportation

Ken Brubaker

Miguel Aguilar

### Denver Department of Environmental Health

Kayla Gilbert

### Denver Department of Public Works

Dan Raine

Rachael Bronson

Dylan Monke

### Denver Police Department

Emily Pabst

### Regional Transportation District

Jeff Dunning

Douglas Monroe

### WalkDenver

Gosia Kung

Jill Locantore





## I. INTRODUCTION

Athmar Park is a neighborhood in southwest Denver, bordered by West Alameda Avenue to the north, West Mississippi Avenue to the south, South Platte River Drive to the east, and South Federal Boulevard to the west. In 2016 the Athmar Park Neighborhood Association received a grant from the Kaiser Health Foundation to form an Active Living Coalition with a goal to increase and incentivize the number of community members who walk, bicycle, and wheelchair roll to destinations in the area. In support of this goal, WalkDenver conducted a Built Environment Assessment to identify the existing conditions, opportunities, and constraints of Athmar Park's built environment and how it relates to active transportation and active living. This report is a summary of that assessment.

WalkDenver obtained data for the Built Environment Assessment from several sources. WALKscope ([www.walkscope.org](http://www.walkscope.org)) is a mobile tool that allows users to collect information about sidewalks and intersections and aggregates the data for analysis. A significant amount of WALKscope data for Athmar Park was collected prior to May 2017, and WalkDenver held three "WalkShops" in June of that year in which volunteers collected the remaining data. WalkShop participants also assessed transit stops and bicycle facilities using a methodology developed by the Denver Department of Environmental Health's Community Active Living Coalition. In total, residents and volunteers gathered 1,040 WalkScope data points in Athmar Park, including 814 sidewalks and 226 intersections, as well as 65 transit stops and 84 blocks of bicycle facilities.

WalkDenver partnered with the Colorado Department of Transportation (CDOT) to collect pedestrian counts at key locations in Athmar Park. The Denver Department of Public Works provided information regarding existing and proposed bicycle facilities, and the Regional Transportation District (RTD), which operates bus service in the area, supplied bus ridership statistics. WalkDenver assessed crash data for the years 2012 to 2016 from the Denver Department of Transportation and Mobility's online Crash Dashboard, and the Police Department provided information for crashes from January to May 2017. Finally, the Athmar Park community contributed valuable information about how they experience and interact with their built environment through participatory mapping exercises. The components and key findings of the assessment are described on the following page.

## MAP 1.1. ATHMAR PARK LOCATION



*Volunteers participate in a WalkShop on June 14, 2017.*

## ASSESSMENT COMPONENTS



**OVERALL QUALITY** (pp. 6-7) - Ratings of the overall pedestrian environment.



**SIDEWALK QUALITY** (pp. 8-15) - Type, condition, safety, and amenities.



**INTERSECTION QUALITY** (pp. 16-23) - Traffic controls, crossing distance, amenities, and driver behavior.



**TRANSIT STOP QUALITY** (pp. 24-25) - Overall quality ratings and amenities.



**BICYCLE FACILITIES QUALITY** (pp. 26-27) - Existing, proposed, and requested bicycle facilities.



**TRAVEL MODE COUNTS** (pp. 28-31) - Traffic counts, pedestrian counts, and bus ridership statistics.



**CRASH STATISTICS** (pp. 32-33) - Pedestrian- and bicycle-involved crashes from January 2012 to May 2017.

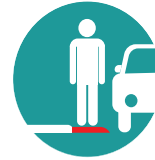


**COMMUNITY INPUT** (pp. 34-36) - Participatory maps results.

## KEY FINDINGS



**POOR PEDESTRIAN ENVIRONMENT** - The overall quality rating for the pedestrian environment is 2.7 on a scale from 1 (low) to 5 (high).



**NARROW SIDEWALKS PREDOMINATE** - Over 70% of sidewalks are less than three feet wide and have no tree lawn or other buffer between the street.



**FEDERAL BLVD. AND ALAMEDA AVE. ARE PARTICULARLY HAZARDOUS** - High vehicle volumes, speeds, crash rates, and long pedestrian crossing distances are concentrated on these two streets.



**TRANSIT STOPS NEED IMPROVEMENTS** - 66% of stops were rated 1 or 2 for overall quality, 58% of transit stops have no seating, and 83% have no shelter.



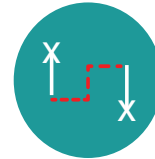
**BICYCLE FACILITIES ARE MINIMAL** - The only existing bicycle facilities are shared roadways, and wayfinding signs are few and far between.



**PEDESTRIAN AMENITIES ARE LACKING** - Only 6% of sidewalks have shade trees and 5% have quality landscaping.



**DRIVERS NOT OBEYING TRAFFIC LAWS IS AN ISSUE** - Speeding vehicles were reported at over half of all intersections, and 33% of intersections had issues with drivers not obeying traffic controls.



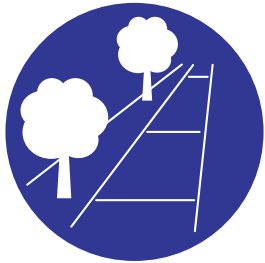
**DESTINATIONS ARE NOT ACCESSIBLE** - Community members expressed a need for safer, more comfortable, and clearer routes to popular destinations.



## RECOMMENDATIONS

---

The data that was collected and analyzed for the Built Environment Assessment helped to inform recommendations for improving Athmar Park's built environment, which are listed below and discussed in further detail on pages 37-41.



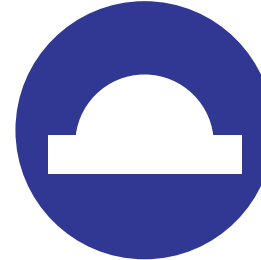
Add tree lawns, widen sidewalks, and plant trees on residential streets. Install sidewalks and curb ramps where none exist.



Use traffic calming measures to create more a comfortable environment for bicyclists and pedestrians.



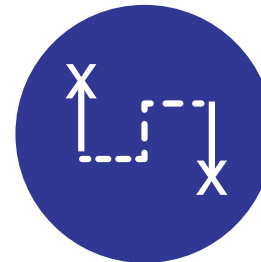
Improve streetscape and safety on South Federal Boulevard and West Alameda Avenue.



Install traffic calming treatments on streets surrounding Huston Lake Park.



Encourage transit stop sponsorship.



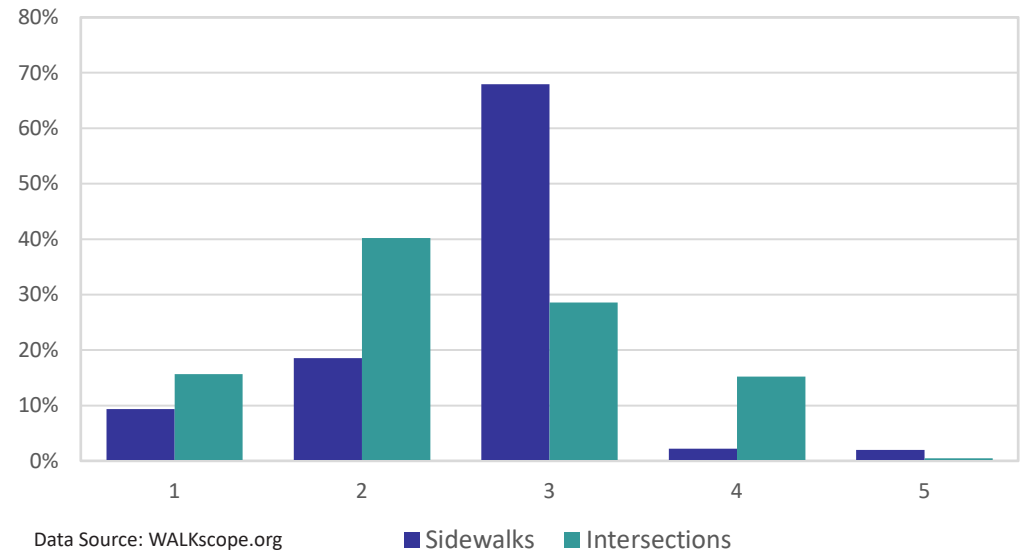
Improve connectivity and access to key destinations for non-motorized users.

## 2. OVERALL QUALITY OF THE PEDESTRIAN ENVIRONMENT

The quality of the pedestrian environment in Athmar Park varies considerably, as the images below demonstrate. Some streets lack a sidewalk at all, while others have broad pedestrian paths lined with trees and other amenities. In the WALKscope mobile tool, data collectors rated the overall pedestrian environment for 814 sidewalk segments and 226 intersections from one (lowest quality) to five (highest quality). The average quality rating was 2.65 for sidewalks and 2 for intersections. As a whole, Athmar Park's pedestrian environment has an average rating of 2.7.

Very few sidewalk segments or intersections were considered to have a high quality pedestrian environment by volunteer data collectors. Approximately 68 percent of sidewalks received a rating of three, 28 percent received a rating of two or lower, and only four percent were rated a four or higher. Intersections fared even worse; users rated 56 percent of intersections a two or lower, 29 percent a three, 15 percent four or better. Figure 2.1 and Map 2.1 illustrate the overall quality ratings. Sidewalks and intersections in the interior of the neighborhood are mostly rated three, while lower quality environments are concentrated on the east side and along South Federal Boulevard and West Alameda Avenue.

Figure 2.1. Percent Overall Quality Ratings



***WALKscope data collectors gave the pedestrian environment an average rating of 2.7 out of 5***



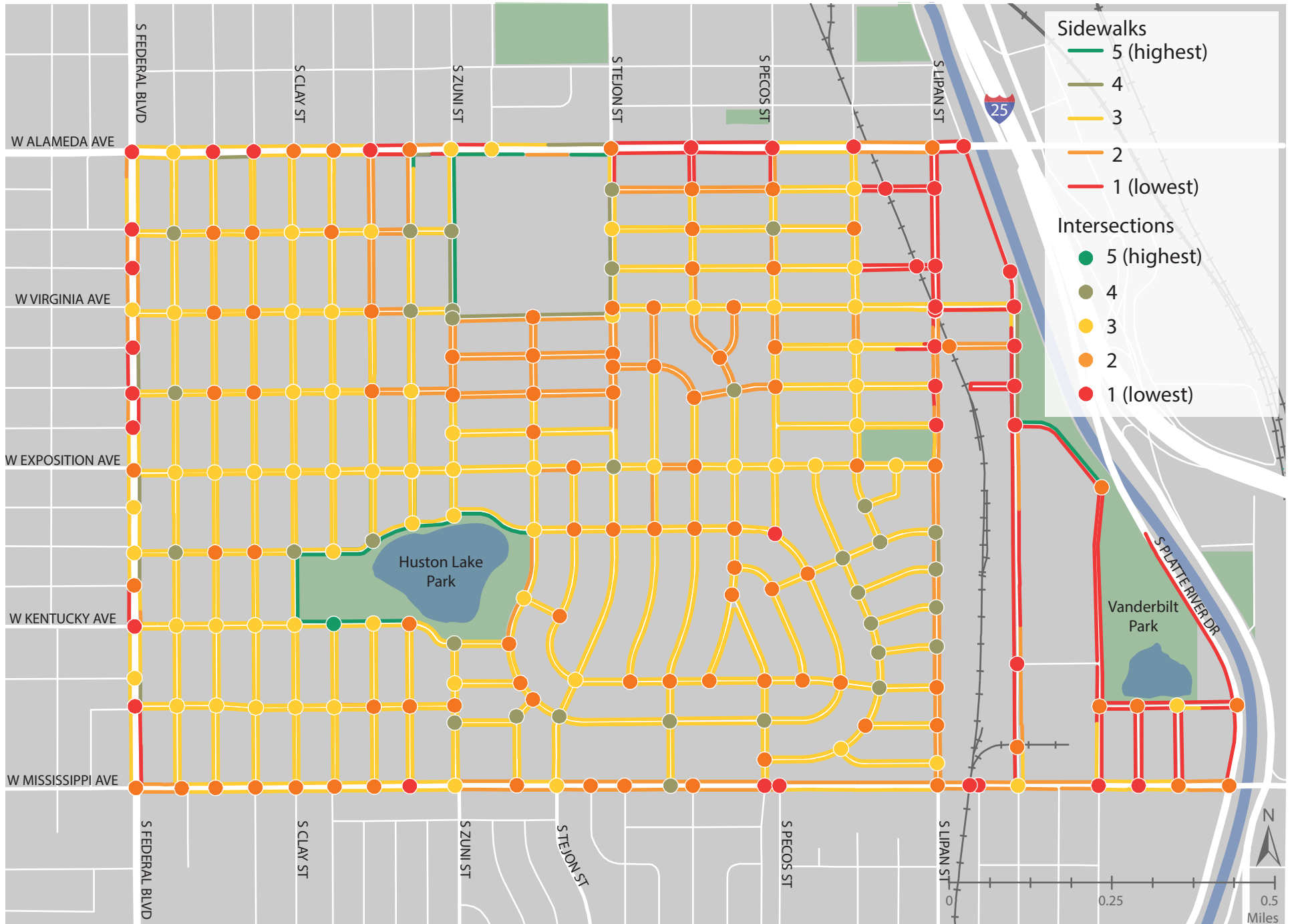
*Low quality pedestrian environment on W. Alameda Ave.*



*High quality pedestrian environment at Huston Lake Park.*



# MAP 2.1. OVERALL QUALITY RATINGS



Data Sources: City and County of Denver; WALKscope.org

### 3. SIDEWALK QUALITY

In addition to quality of the overall pedestrian environment, WALKscope data collectors recorded information relating to sidewalk type, condition, safety, and pedestrian amenities.

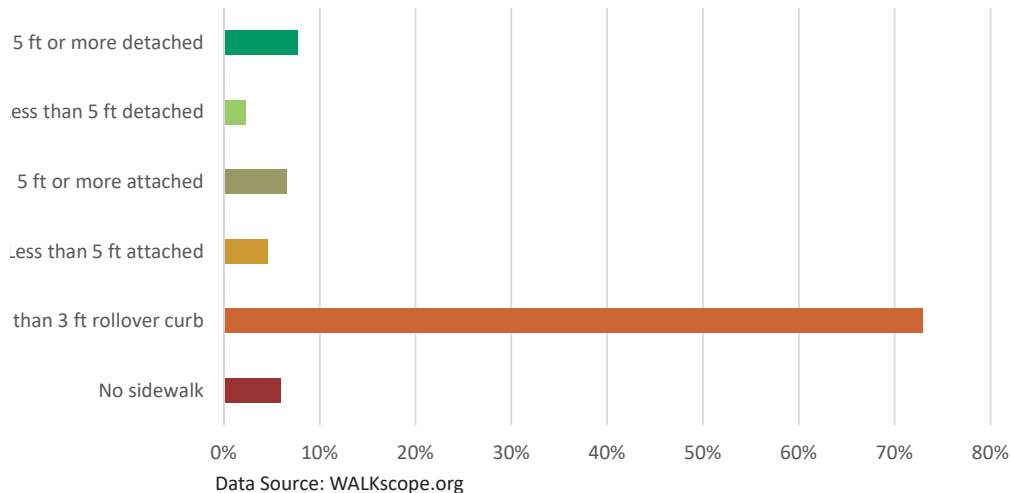
#### 3.1. Sidewalk Type

Nearly three-quarters of sidewalk segments in Athmar Park are less than three feet wide with rollover curbs. Nearly all of the residential streets have this type of sidewalk (pictured in the image for Overall Quality Rating 3). They have no buffer between the road, are typically wide enough for only one person, and are too narrow for strollers or wheelchairs. This type of sidewalk received an average rating of 2.8.

The sidewalks along West Alameda Avenue, South Federal Boulevard, and West Mississippi Avenue range from narrow and attached to relatively wide and detached. Five percent of sidewalks in Athmar Park are less than five feet attached, seven percent are five feet or more attached, two percent are less than five feet detached, and eight percent are five feet or more detached. This final category received an average rating of three, the highest out of all sidewalk types.

Six percent of sidewalk segments have no sidewalk at all. These segments received an average rating of 1 and are concentrated on the east side of the neighborhood where industrial uses predominate. Figure 3.1 illustrates the percent of sidewalk by type, Table 3.1 lists the average quality rating by sidewalk type, and Map 3.1 on the following page illustrates their distribution within the neighborhood.

Figure 3.1. Percent Sidewalk Type



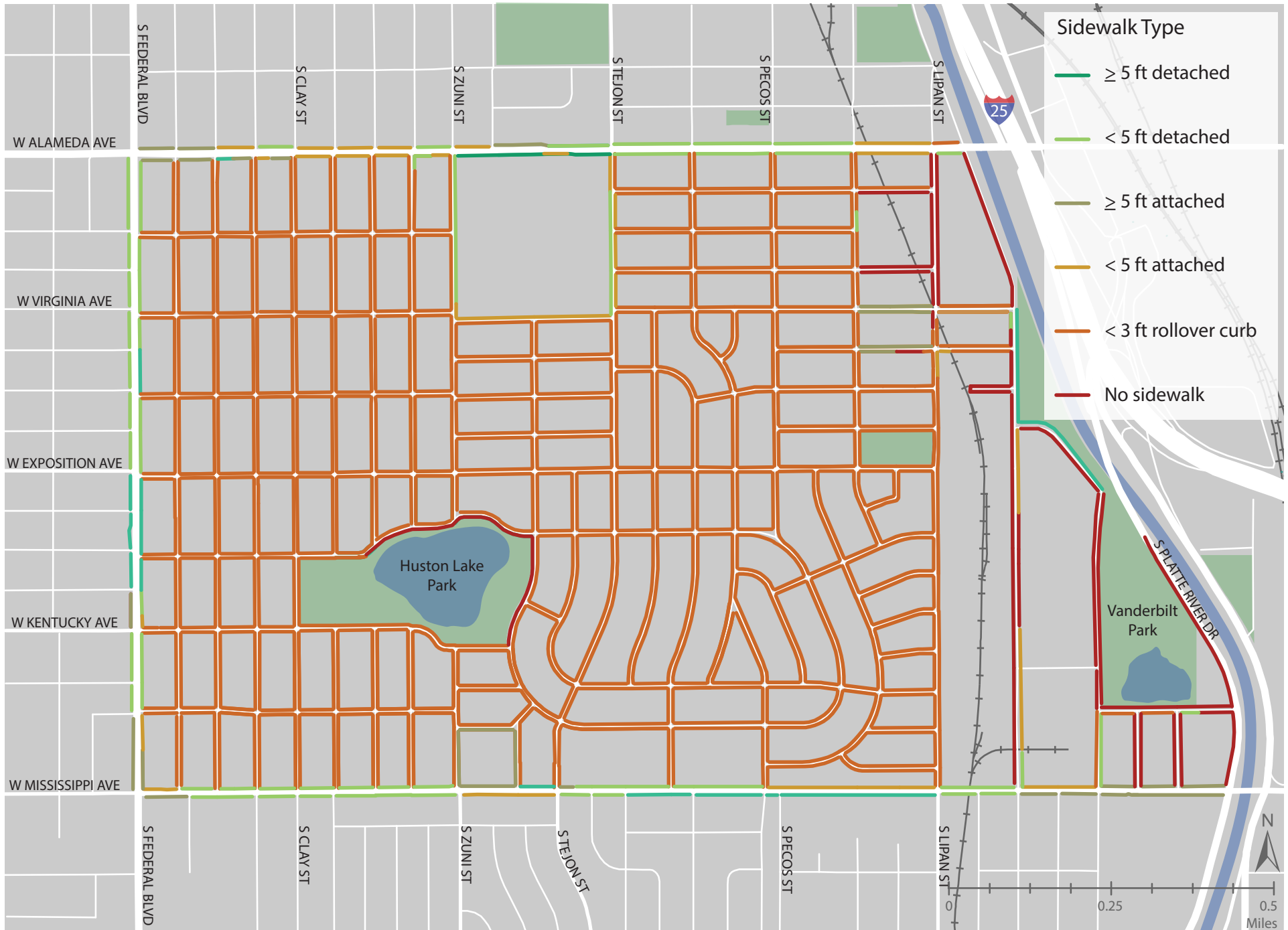
Sidewalk Types	Avg. Rating
5 ft or more detached	3.0
Less than 5 ft detached	2.8
5 ft or more attached	2.6
Less than 5 ft attached	2.1
Less than 3 ft rollover curb	2.8
No sidewalk	1.0
<b>Overall</b>	<b>2.7</b>

Data Source: WALKscope.org





# MAP 3.1. SIDEWALK TYPE



Data Sources: City and County of Denver; WALKscope.org

### 3.2. Sidewalk Conditions

WALKscope users collected data regarding sidewalk condition by recording whether a sidewalk segment was significantly cracked or uneven, had obstructions (such as utility poles, dumpsters, parked cars, overgrown vegetation, etc.), or other problems, which users could specify. Problems with sidewalk conditions were generally associated with lower overall quality ratings. For low quality sidewalks (rated a one or two) 16 percent were significantly cracked or uneven, 12 percent had obstructions, and five percent had other problems. Interestingly, medium sidewalks (rated a three) had fewer condition problems than those rated a four or five. This suggests that factors other than condition, such as the presence or lack of trees and landscaping, may have had a greater influence on quality ratings.

Table 3.2 lists the percent of sidewalks with problem conditions by sidewalk quality. Problems with sidewalk conditions tend to be concentrated on West Alameda Avenue and South Federal Boulevard, as is illustrated in Map 3.2 on the following page.

Table 3.2. Percent of Sidewalks with Problem Conditions

	Obstructions	Cracked or Uneven	Other Problems
<b>Low Quality</b> Sidewalks rated 1 or 2	12%	16%	5%
<b>Medium Quality</b> Sidewalks rated 3	1%	1%	0%
<b>High Quality</b> Sidewalks rated 4 or 5	9%	3%	3%
<b>Total</b>	<b>5%</b>	<b>5%</b>	<b>2%</b>

Data Source: WALKscope.org



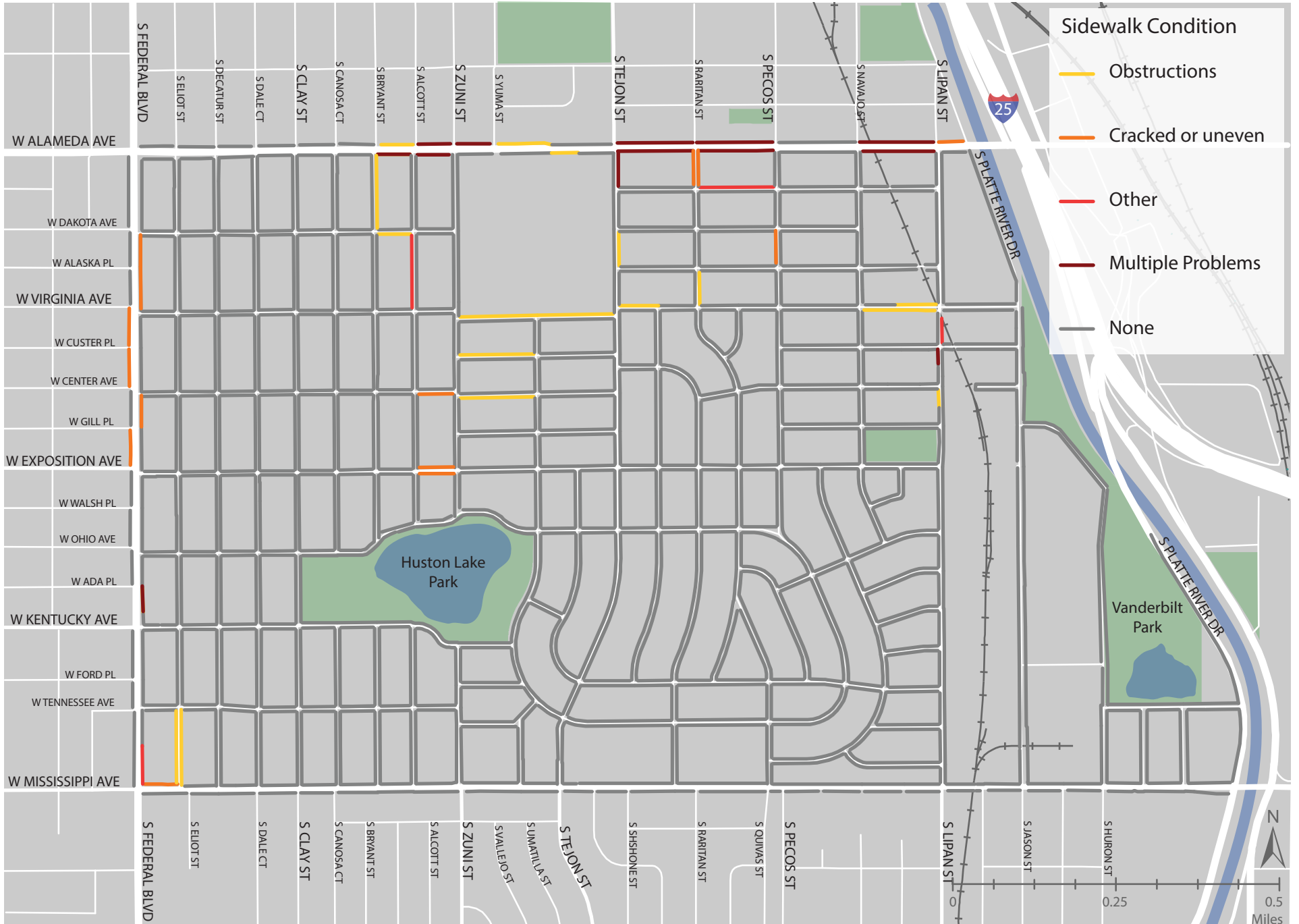
A utility pole obstructs the sidewalk on S. Federal Blvd.



Significant sidewalk cracks on S. Federal Blvd.



# MAP 3.2. SIDEWALK CONDITION



Data Sources: City and County of Denver; WALKscope.org

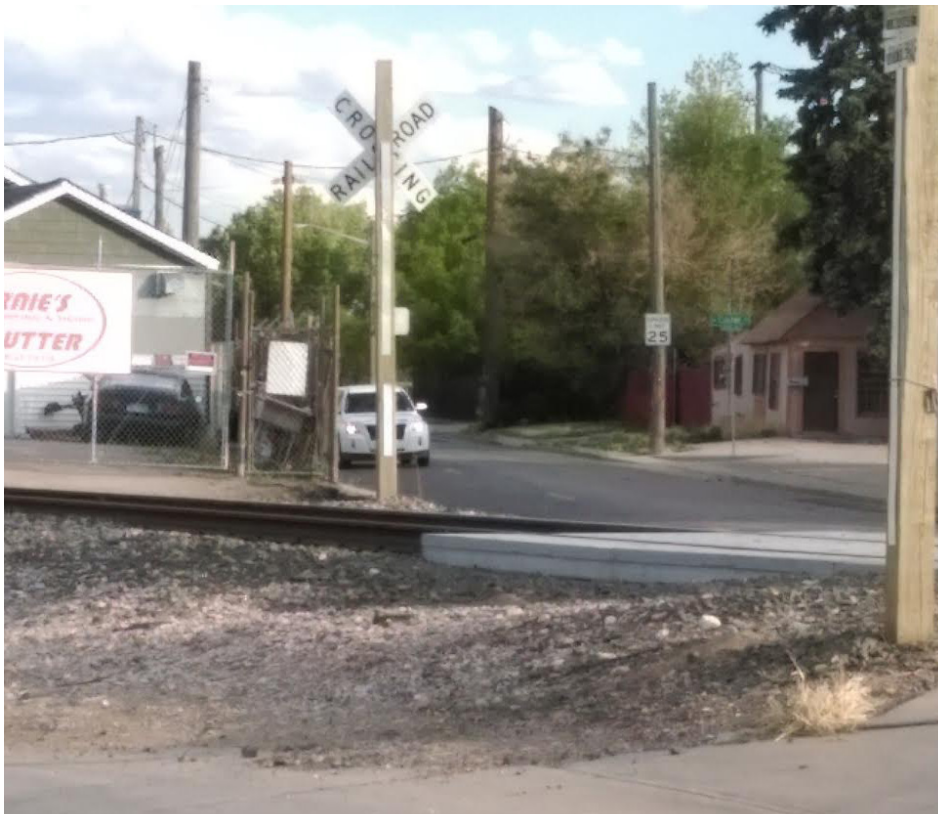
### 3.3. Sidewalk Safety

WALKscope users collected safety data about sidewalks, including visibility/lighting conditions, speed and volume of traffic, and other issues, which the user could specify. Visibility issues and unsafe traffic were correlated with lower quality sidewalks. Ten percent of sidewalks of low quality sidewalks had visibility issues and 20 percent had unsafe traffic. Only two percent of medium quality sidewalks had unsafe traffic, compared to twelve percent of high quality sidewalks, though a significant number of the few high quality sidewalk segments in the neighborhood are located on streets with high traffic volumes and high speed limits. Overall, sidewalk safety issues are concentrated on South Federal Boulevard, West Alameda Avenue, the residential streets surrounding the Alameda Square Shopping Center, and on South Jason Street, which is depicted in Map 3.3 on the following page. Table 3.3 lists the percent of safety issues by sidewalk quality.

Table 3.3. Percent of Sidewalks with Safety Issues

	Visibility Issues	Unsafe Traffic	Other Safety Issues
<b>Low Quality</b> Sidewalks rated 1 or 2	10%	20%	2%
<b>Medium Quality</b> Sidewalks rated 3	6%	2%	0%
<b>High Quality</b> Sidewalks rated 4 or 5	0%	12%	3%
<b>Total</b>	7%	7%	1%

Data Source: WALKscope.org



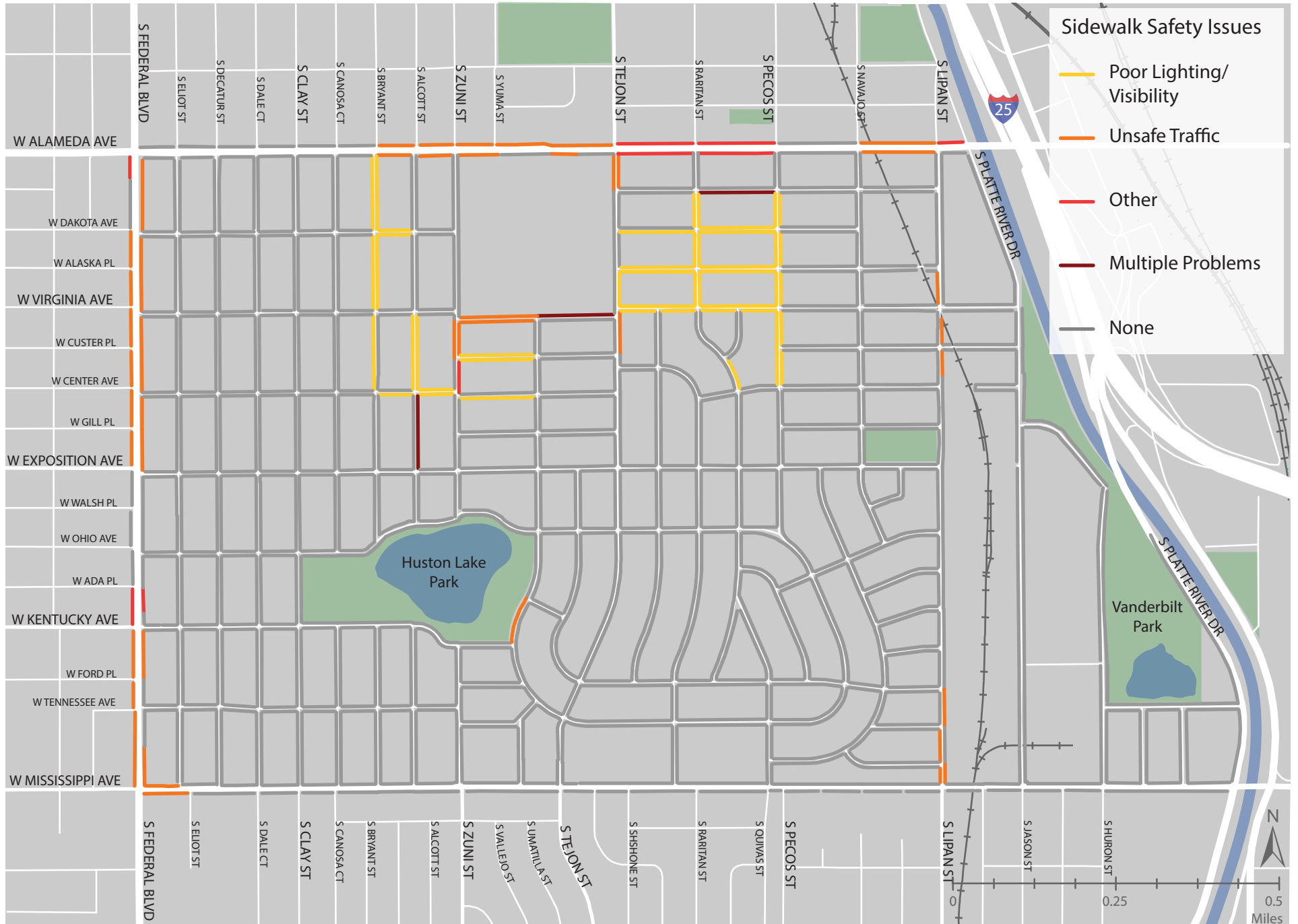
Limited visibility at W. Virginia Ave. and S. Lipan St.



Heavy traffic on W. Alameda Ave.



# MAP 3.3. SIDEWALK SAFETY ISSUES



Data Sources: City and County of Denver; WALKscope.org

### 3.4. Sidewalk Amenities

WALKscope data collectors recorded the presence of sidewalk amenities including shade trees, quality landscaping, and other amenities, such as benches (not including benches at transit stops) and public art. Overall, there are very few sidewalk amenities in the neighborhood. Only six percent of all sidewalk segments have shade trees, five percent have quality landscaping, and less than one percent have other amenities. However, high quality sidewalks are strongly correlated with shade trees and quality landscaping. 38 percent of high quality sidewalks have shade trees and 56 percent have quality landscaping, while only two to four percent of low and medium quality sidewalks have either amenity.

The few sidewalks that do have amenities are along certain segments of South Federal Boulevard, West Alameda Avenue, some residential streets near the Alameda Square Shopping Center, the streets surrounding Huston Lake Park, and some of the streets around Goldrick Elementary School and the Athmar Park Library off of West Mississippi Avenue. There are only two pieces of public art in the entire neighborhood, on South Federal Boulevard and West Kentucky Avenue, and at the Pacific Ocean Marketplace off of West Alameda Avenue. The lack of amenities is most likely partially attributable to the general lack of tree lawns.

Table 3.4 lists the percent of sidewalks with pedestrian amenities and Map 3.4 on the following page shows their locations within the neighborhood.



Trees provide shade on S. Federal Blvd.



High quality landscaping on S. Federal Blvd.

Table 3.3. Percent of Sidewalks with Safety Issues

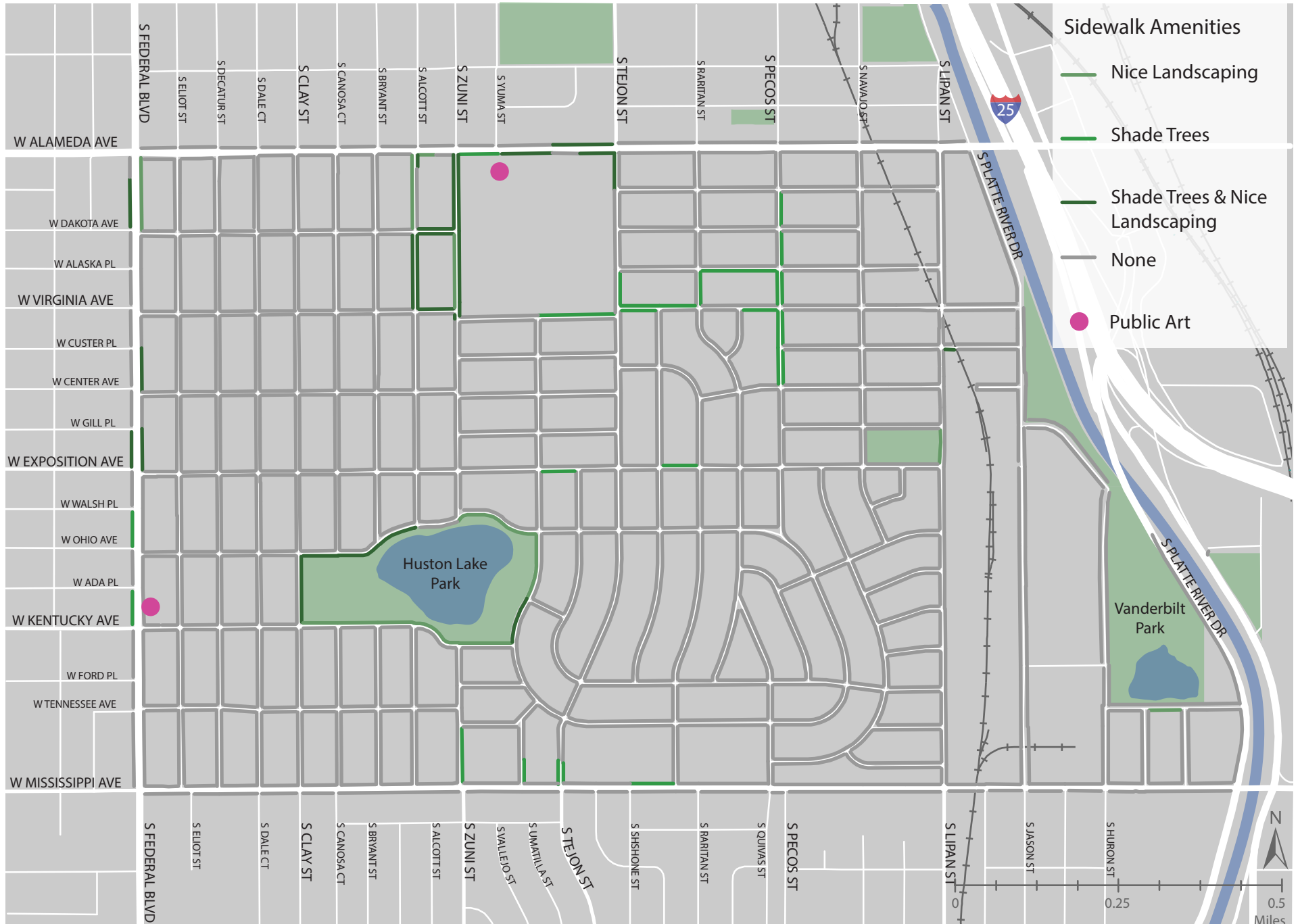
	Shade Trees	Quality Landscaping	Other
<b>Low Quality</b> Sidewalks rated 1 or 2	4%	2%	1%
<b>Medium Quality</b> Sidewalks rated 3	2%	3%	0%
<b>High Quality</b> Sidewalks rated 4 or 5	38%	56%	3%
<b>Total</b>	6%	5%	0%

Data Source: WALKscope.org

*WALKscope users recorded shade trees on only six percent of sidewalks*



# MAP 3.4. SIDEWALK AMENITIES



Data Sources: City and County of Denver; WALKscope.org

## 4. INTERSECTION QUALITY

WALKscope data collectors rated intersections on the quality of their overall pedestrian environment, as well as four additional factors relating to quality. Those factors are traffic controls (such as crosswalks, traffic lights and stop signs), crossing distance (the total number of traffic lanes and turn lanes for the widest street), intersection amenities (such as curb ramps, median islands, and bulb-outs), and driver behavior.

### 4.1. Traffic Controls

Overall, traffic controls are somewhat associated with higher quality intersections. 17 percent of high quality intersections (those rated four or higher) had crosswalks in all directions, compared to only 11 percent of medium quality intersections (those rated three) and eight percent of low quality intersections (those rated two or lower). There is a significant increase in all-way stop signs from low to high quality intersections; only four percent of low quality intersections have stop signs for all directions, compared to 18 percent of medium quality, and 29 percent of high quality intersections. Total, only 16 percent of intersections have painted crosswalks of some kind, and only 20 percent have crossing signals or all-way stops signs. This means that the large majority of intersections in Athmar Park—80 percent—have traffic that is never required to stop for people crossing the road. Table 4.1 lists the percent of traffic control type by intersection quality.

Map 4.1 on the following page illustrates the spatial distribution of traffic controls throughout Athmar Park. The majority of intersections on residential streets have two-way stop signs, and all traffic signals are located on the major roads at the neighborhood boundary, with the exception of one signalized pedestrian crossing at South Tejon Street and West Nevada Place, which is

adjacent to Valverde Elementary School. For the most part, the distance between traffic signals is four blocks, or approximately a quarter mile. Noticeably, there is no traffic signal on West Mississippi Avenue between South Federal Boulevard and South Zuni Street, a distance of nearly half a mile.



*Intersection at S. Federal Blvd. and W. Kentucky Ave.*

***The typical distance between traffic signals on major roads is approximately a quarter mile***

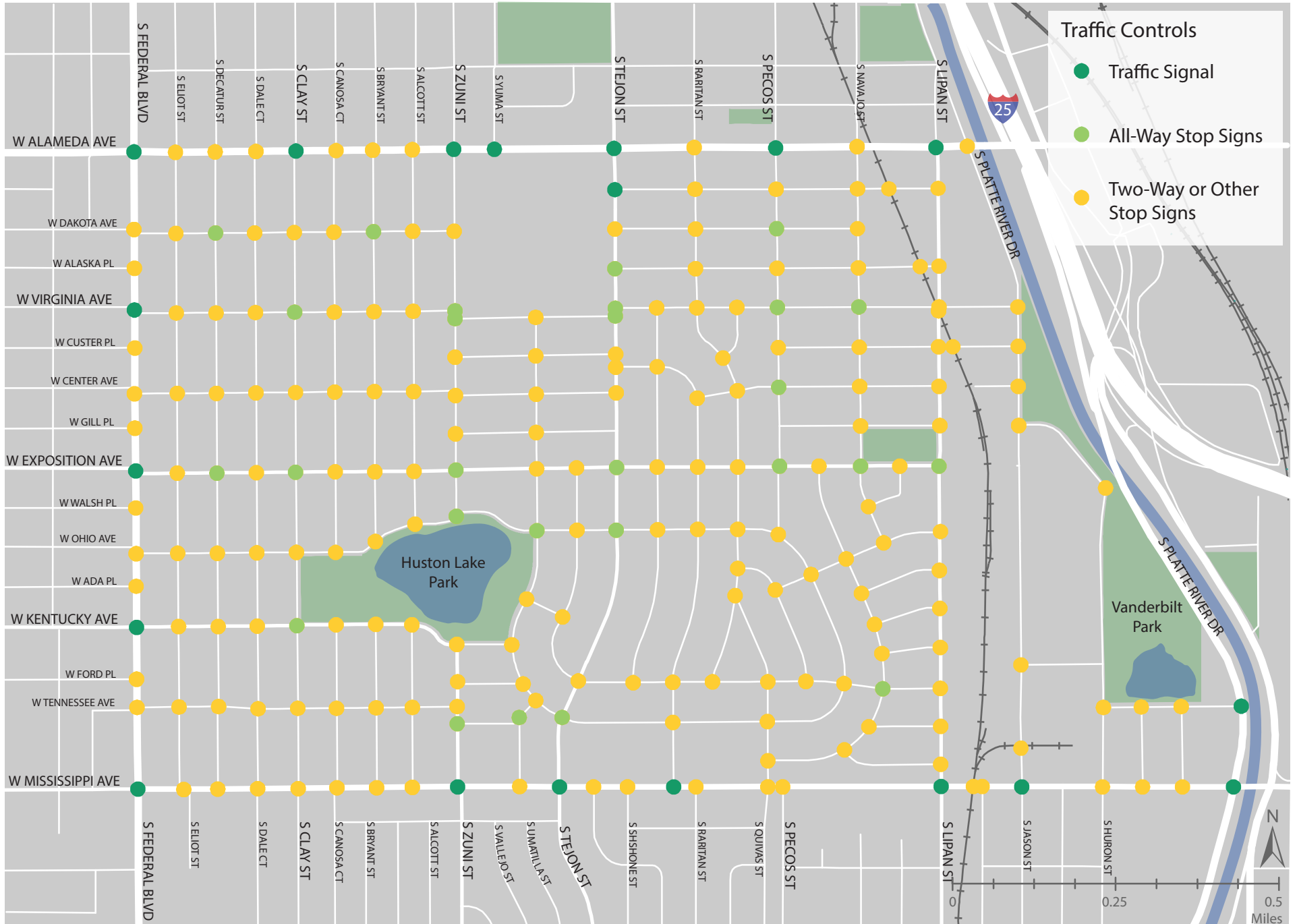
Table 4.1. Percent of Intersections with Traffic Controls

	Crosswalks - All Directions	Crosswalks - Some Directions	Traffic/Pedestrian Crossing Signals	All-Way Stop Signs
<b>Low Quality</b> Sidewalks rated 1 or 2	8%	4%	8%	4%
<b>Medium Quality</b> Sidewalks rated 3	11%	8%	11%	18%
<b>High Quality</b> Sidewalks rated 4 or 5	17%	9%	6%	29%
<b>Total</b>	10%	6%	8%	12%

Data Source: WALKscope.org



# MAP 4.1. TRAFFIC CONTROLS



Data Sources: City and County of Denver; WALKscope.org

## 4.2. Crossing Distance

Longer crossing distances are generally associated with lower intersection quality ratings. Low quality intersections have an average of 3.2 lanes to cross, and high quality intersections have an average of 2 lanes. Table 4.2 lists the average number of lanes by intersection quality.

Map 4.2 on the following page shows the distribution of crossing distances across the neighborhood. Nearly all intersections of residential streets are two lanes, while West Mississippi Avenue has between four and five lanes of traffic. All intersections on South Federal Boulevard, West Alameda Avenue, and South Platte River Drive have at least six lanes of traffic, and often more.

***Pedestrians must cross eight lanes of traffic at the intersection of S. Federal Blvd. and W. Alameda Ave.***



*Pedestrians cross eight lanes of traffic on W. Alameda Ave.*

Table 4.2. Average Crossing Distance

	<b>Average number of lanes to cross</b>
<b>Low Quality</b> Sidewalks rated 1 or 2	3.2
<b>Medium Quality</b> Sidewalks rated 3	2.7
<b>High Quality</b> Sidewalks rated 4 or 5	2.0
<b>Total</b>	2.8

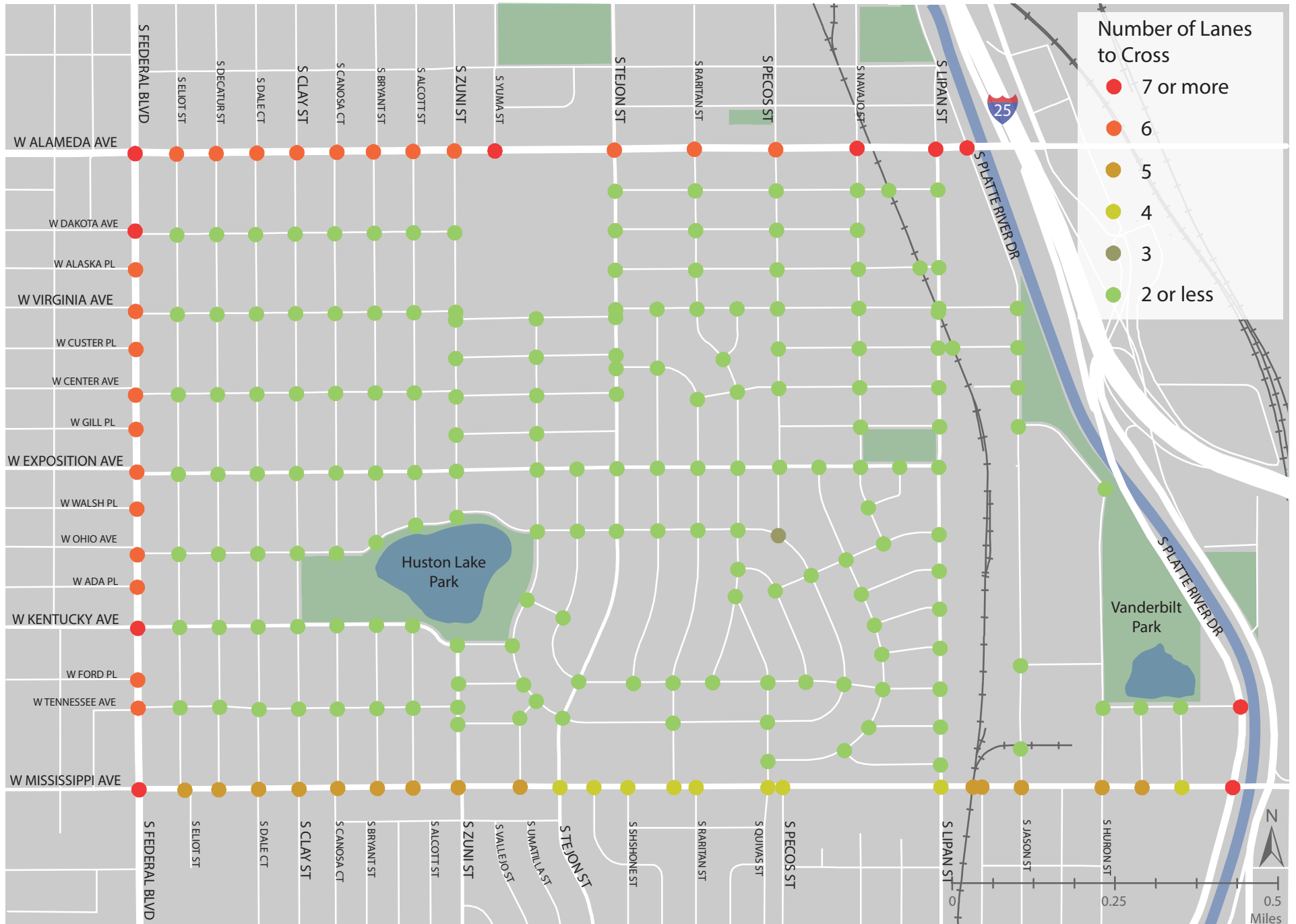
Data Source: WALKscope.org



*Most residential streets are two lanes wide.*



# MAP 4.2. CROSSING DISTANCE



Data Sources: City and County of Denver; WALKscope.org

### 4.3. Intersection Amenities

WALKscope users collected data regarding intersection amenities, including the presence of curb ramps, median islands, and bulb-outs. 75% of intersections have curb ramps in all directions, but very few have median islands or bulb-outs. Table 4.3 lists the percent of intersections with amenities.

The presence of curb ramps is correlated with intersection quality; only 70 percent of low quality intersections have them, compared to 76 percent of medium quality and 91 percent of high quality intersections. The intersections missing a curb ramp in at least one direction are fairly evenly dispersed throughout the neighborhood, which is evident in Map 4.3 on the following page. There is a concentration of missing curb ramps on the east side, where many industrial uses are located and where many of the streets lack sidewalks.

The few median islands in Athmar Park tend to be located at busy intersections on major roads. In most cases they do not appear to be designed as refuges for pedestrians; they are either very narrow or are covered in shrubs, like the median in the middle image on the right. Bulb-outs are similarly few and far between, though they are at least designed to improve pedestrian crossings and are associated with high quality ratings. There are three bulb-outs on West Kentucky Avenue adjacent to Huston Lake Park.



A bulb-out on W. Kentucky Ave. and S. Canosa Ct.

Table 4.2. Percent of Intersections with Amenities

	Curb Ramps	Median Islands	Bulb Outs
<b>Low Quality</b> Sidewalks rated 1 or 2	70%	3%	1%
<b>Medium Quality</b> Sidewalks rated 3	76%	3%	0%
<b>High Quality</b> Sidewalks rated 4 or 5	91%	0%	3%
<b>Total</b>	75%	3%	1%

Data Source: WALKscope.org



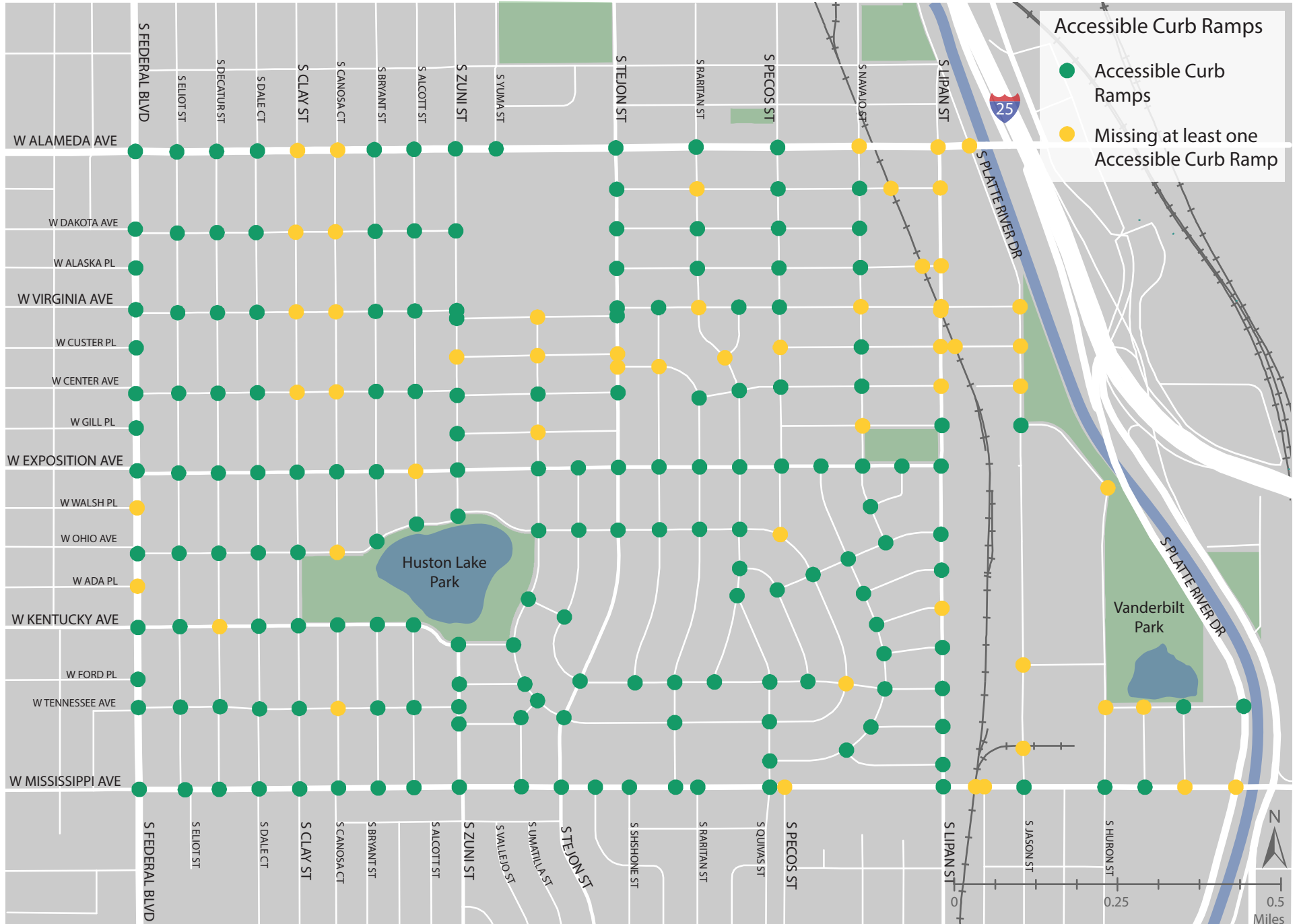
75% of intersections have curb ramps.



The few median islands that exist are not pedestrian-friendly.



# MAP 4.3. ACCESSIBLE CURB RAMP



Data Sources: City and County of Denver; WALKscope.org

#### 4.4. Driver Behavior

WALKscope users recorded observations of poor driver behavior, though it should be noted that such observations were brief. Data collectors reported instances of drivers not obeying the speed limit at over half of low and medium quality intersections, while only 11 percent of high quality intersections had problems with drivers speeding. Data collectors also reported drivers failing to yield to pedestrians at over a quarter of low quality intersections, compared to only three percent of medium and high quality intersections. Interestingly, medium quality intersections had the highest incidence of drivers not obeying traffic controls, at 41 percent of intersections, compared to just 19 and 11 percent of low and high quality intersections, respectively. Since the majority of medium quality intersections are on residential streets, this suggests that drivers are more likely to run stop signs in these areas, where there is less traffic.

Overall, speeding appears to be the most significant issue regarding driver behavior in Athmar Park. WALKscope data collectors reported drivers not obeying the speed limit at nearly half of all intersections. Table 4.4 lists the percent of intersections with poor driver behavior by intersection quality. Map 4.4 on the following page shows where these instances occurred. Many intersections had multiple problems, though there was a concentration in the southwest portion of the neighborhood, and along West Exposition Avenue and West Mississippi Avenue. Incidence of drivers speeding but otherwise obeying traffic laws were most prevalent on South Federal Boulevard, West Alameda Avenue, and South Lipan Street.



*Residential areas have low posted speed limits...*



*...but community members still report speeding and other safety issues.*

**WALKscope users reported drivers speeding at nearly half of all intersections**

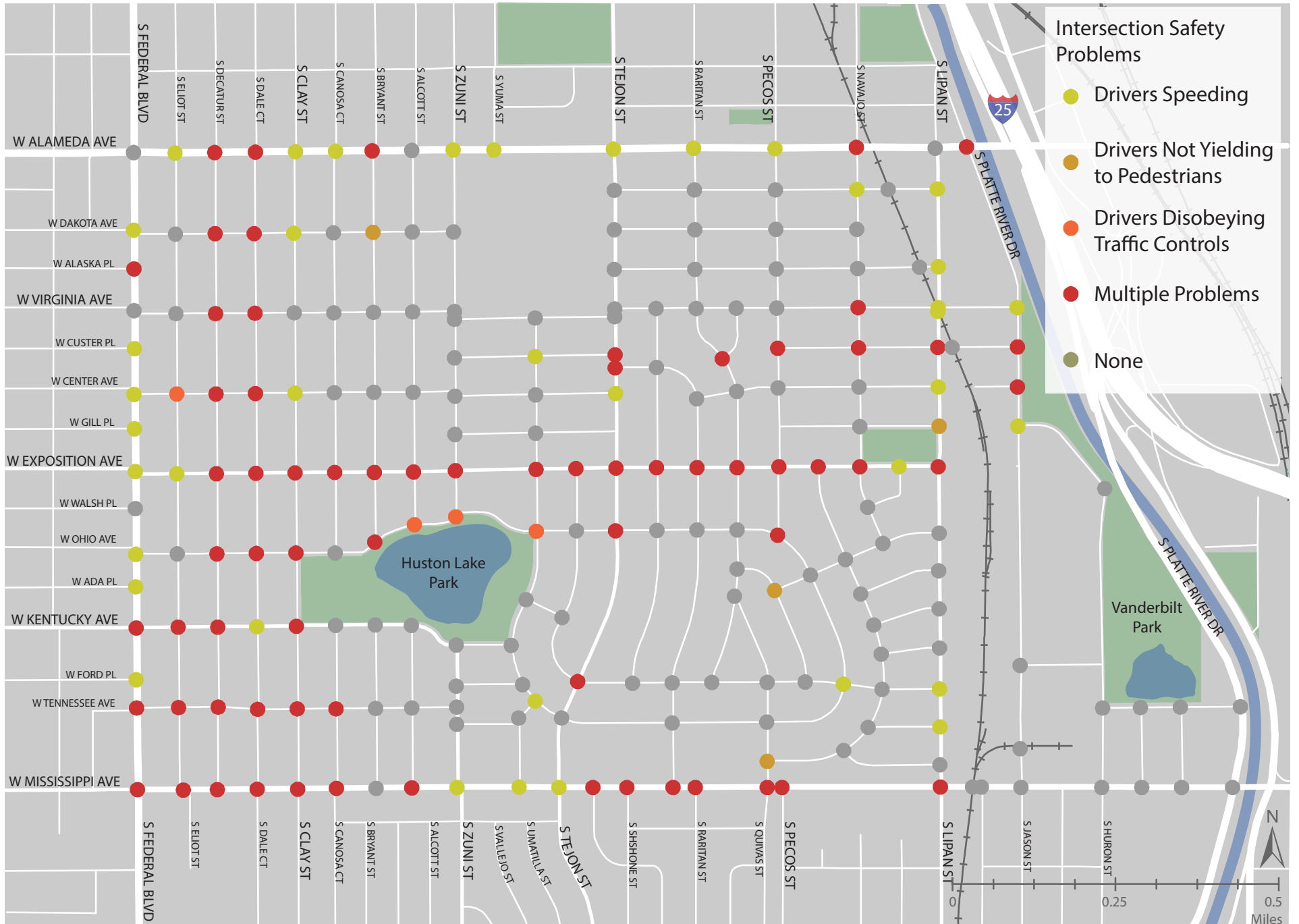
Table 4.2. Percent of Intersections with Poor Driver Behavior

	Speeding	Not Yielding to Pedestrians	Not Obeying Traffic Controls
<b>Low Quality</b> Sidewalks rated 1 or 2	51%	27%	19%
<b>Medium Quality</b> Sidewalks rated 3	59%	3%	41%
<b>High Quality</b> Sidewalks rated 4 or 5	11%	3%	11%
<b>Total</b>	47%	16%	24%

Data Source: WALKscope.org



# MAP 4.4. INTERSECTION SAFETY ISSUES



Data Sources: City and County of Denver; WALKscope.org

## 5. TRANSIT STOPS

In addition to recording sidewalk and intersection data using the WALKscope mobile tool, WalkShop volunteers also gathered data pertaining to transit stops using surveys developed by the Denver Department of Environmental Health's Community Active Living Coalition (CALC). Participants rated the overall quality of the transit stop, and recorded the presence of amenities, including benches, shelter, trash receptacles, lighting, and public art.

### 5.1. Transit Stop Quality

Approximately two-thirds of transit stops in Athmar Park are considered low quality; 37 percent of transit stops received a rating of one and 29 percent received a rating of two. Figure 5.1 illustrates the percent of transit stops by quality rating. Map 5.1 on the following page shows the transit stop locations and their quality ratings. Higher quality stops tend to be located on South Federal Boulevard, while the lowest quality stops are concentrated on West Mississippi Avenue and South Jason Street.

### 5.2. Transit Stop Amenities

Amenities are severely lacking at the majority of transit stops in Athmar Park. Well over half of stops have no seating (see Figure 5.2.1) and 83 percent of stops have no shelter (see Figure 5.2.2). 78 percent of stops lack shade, 66 percent have no container for trash, 60 percent lack sufficient lighting, and only three percent have public art.

Figure 5.1 Percent Transit Stop Quality

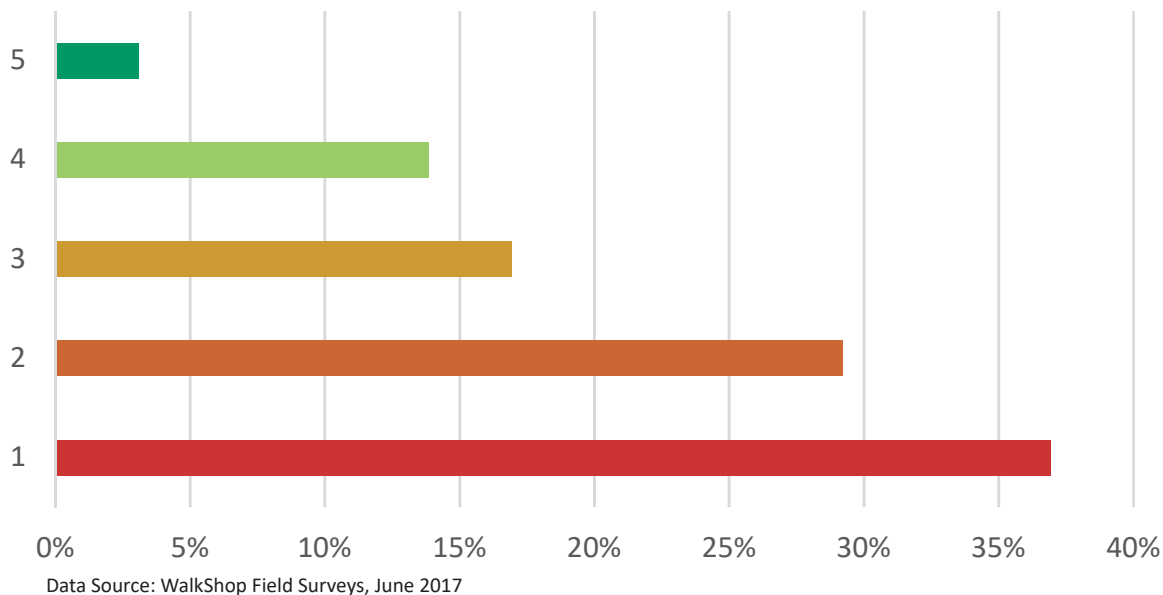


Figure 5.2.1. Percent Transit Stop Seating

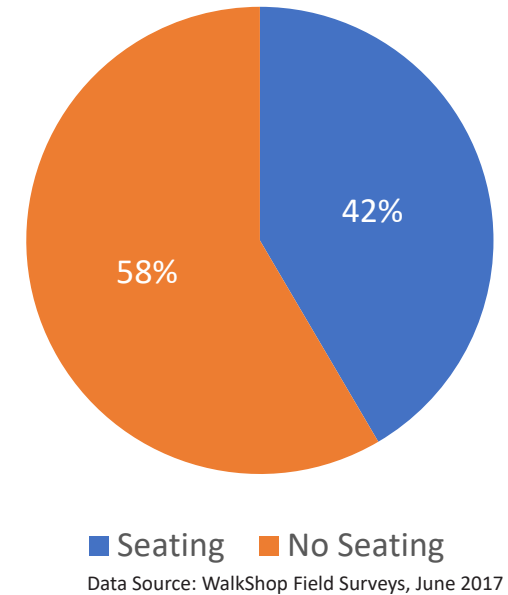
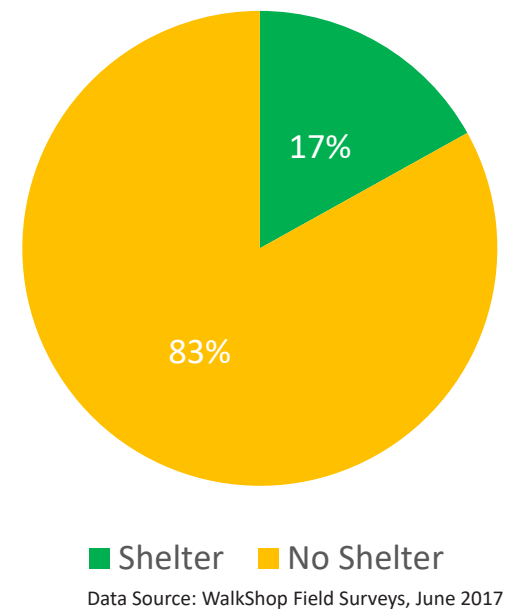
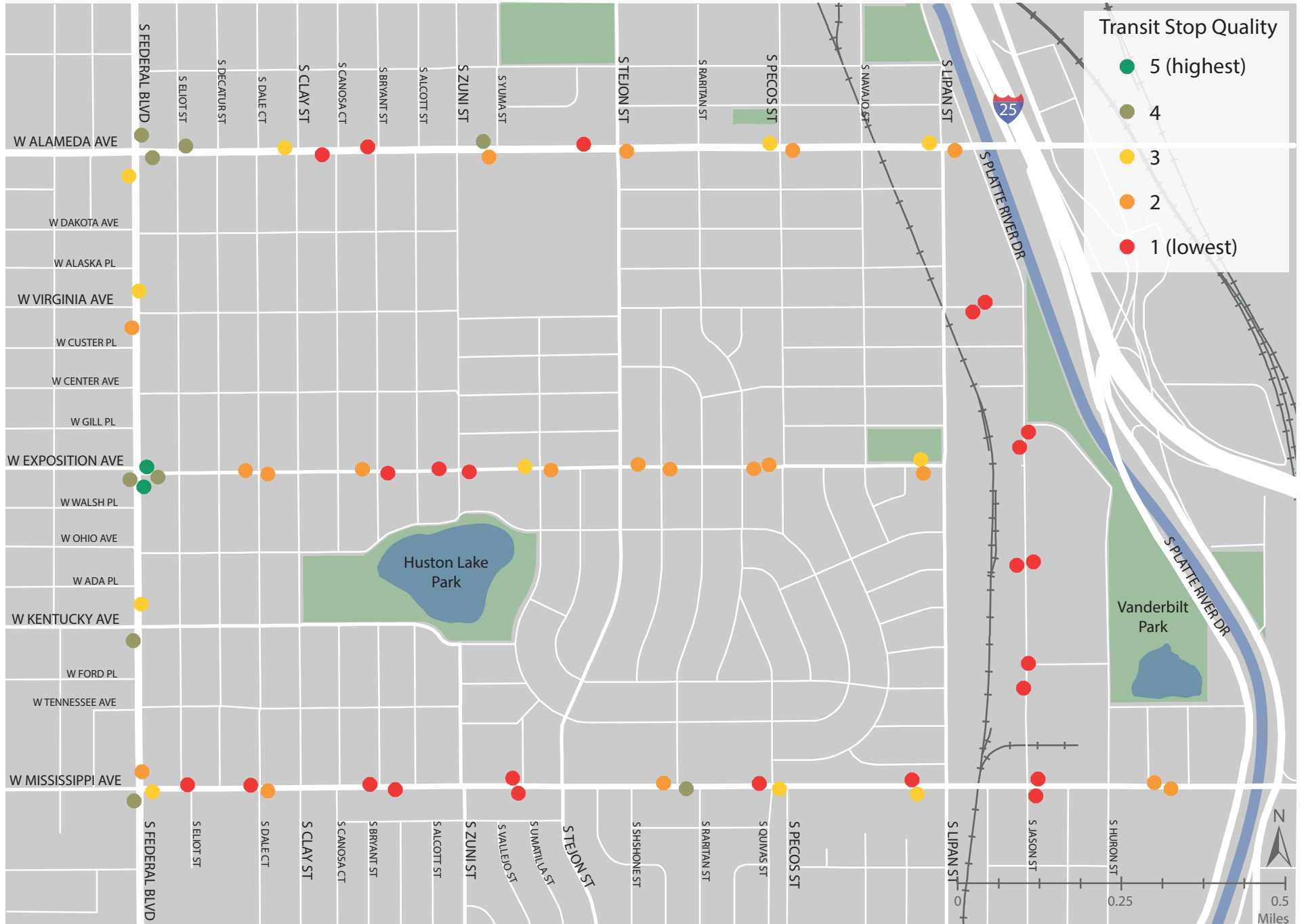


Figure 5.2.2. Percent Transit Stop Shelter





MAP 5.1. TRANSIT STOP OVERALL QUALITY



Data Sources: City and County of Denver; WalkShop Field Surveys, June 2017

## 6. BICYCLE FACILITIES

As part of the WalkShop events, some participants conducted bicycle assessments of three streets in Athmar Park: West Virginia Avenue, West Exposition Avenue, and South Lipan Street. Their comments regarding their experience are incorporated into the assessment of existing bicycle facilities in Athmar Park.

### 6.1. Existing Bicycle Facilities

The only existing bicycle facilities in Athmar Park are signed routes on shared roadways on South Lipan Street, South Jason Street, West Kentucky Avenue/ West Tennessee Avenue, and West Virginia Avenue between South Zuni Street and South Jason Street. The regional South Platte River Trail is just east of the neighborhood on the other side of South Platte River Drive.

WalkShop participants reported a moderate level of comfort while riding bicycles during the bicycle assessments. This was facilitated by a relatively low posted speed limit of 25 miles per hour, though a significant number of vehicles appeared to be going over the speed limit on South Lipan Street, which is consistent with the WALKscope data. Participants also noted that in some locations on South Lipan Street and West Virginia Avenue, the pavement is in poor condition and makes for a poor riding experience. On West Virginia Avenue, stop signs are well positioned to facilitate a continuous flow of travel for bicyclists, though wayfinding is insufficient. There is currently no signage to indicate the direction or distances to the South Platte River Trail or Huston Lake Park as destinations.

Bicyclists found certain intersections to be particularly stressful, such as the intersection of West Virginia Avenue and South Federal Boulevard, due to the high volume and speed of vehicles. At West Virginia and South Lipan Street, the intersection with the railroad tracks and the odd angles and bad sight lines that it creates also makes for an uncomfortable bicycling experience.

### 6.2. Proposed Bicycle Facilities

*Denver Moves: Bicycles* identifies the western portion of West Kentucky Avenue as a potential corridor for bike lanes, and West Virginia Avenue, West Kentucky Avenue, and South Lipan Street as potential Neighborhood Bikeways.

Neighborhood Bikeways are designed to give priority to non-motorized users and to discourage through traffic of motorized vehicles using a combination of traffic calming measures, which negates the need for separate bicycle facilities.<sup>1</sup>

1. Denver Bike Boulevards Design Guidelines. City and County of Denver.

### 6.3. Requested Bicycle Facilities

A lack of sufficient bicycle parking is a common complaint among Athmar Park residents. WalkDenver and the Athmar Park Active Living Coalition set up an online map that allowed people to place points in locations where they would like new or additional bicycle parking.

Map 6.1-2 on the following page presents the existing bicycle facilities in Athmar Park, as well as requested bicycle parking locations.



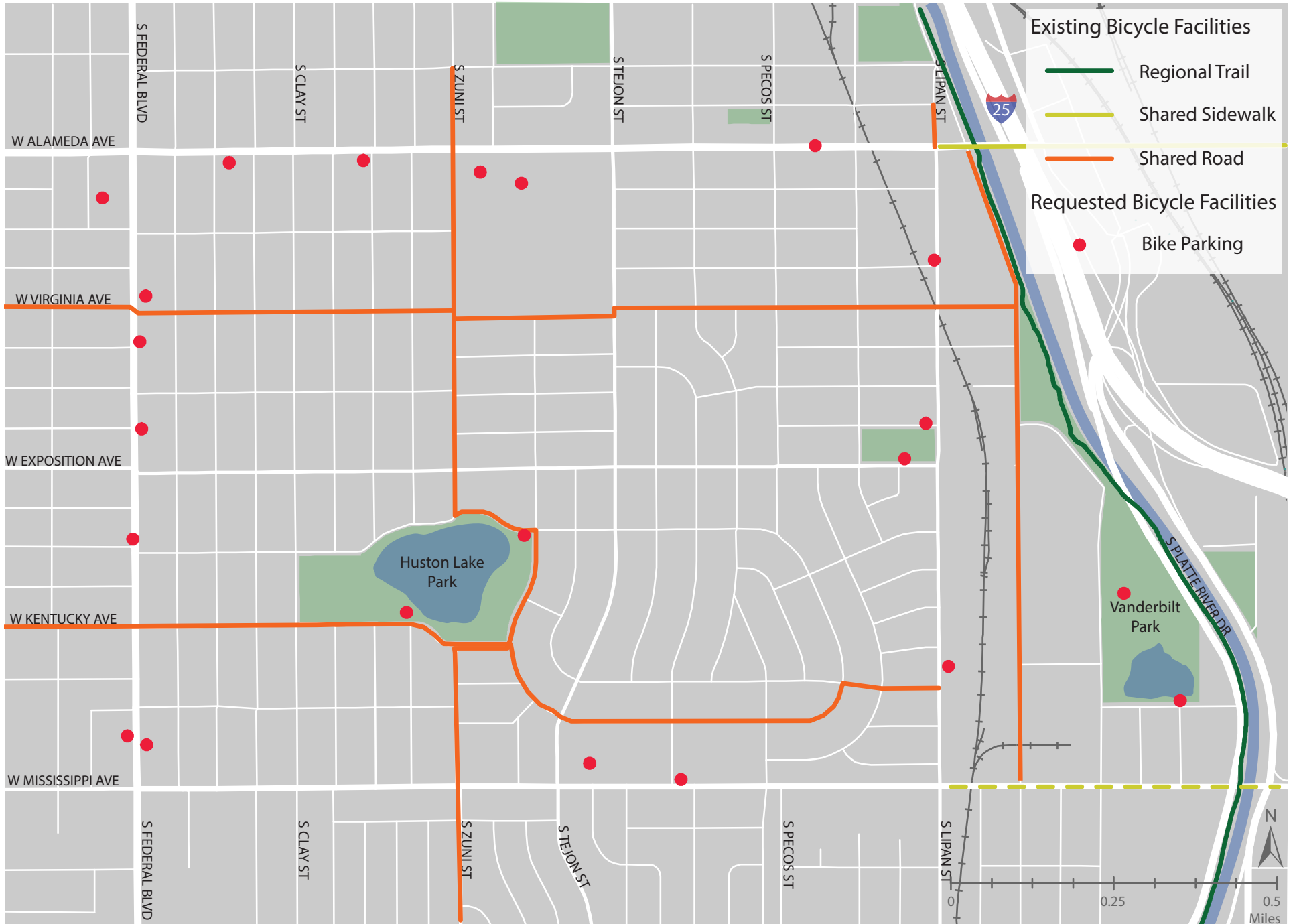
*Existing bicycle route on S. Zuni St.*



*The intersection of W. Virginia Ave, S. Lipan St, and the railroad tracks is difficult for bicyclists to navigate safely.*



# MAP 6. EXISTING AND PROPOSED BICYCLE FACILITIES



Data Sources: City and County of Denver.

## 7. TRAVEL MODE COUNTS

This section summarizes vehicular traffic count data from the Denver Regional Council of Governments (DRCOG), transit ridership data from RTD, and pedestrian count data that was obtained by WalkDenver in partnership with CDOT. Though differences in the types, methods, and durations of data collection make it difficult to make direct comparisons, the datasets still help to provide a picture of volumes and modes of travel throughout Athmar Park.

### 7.1. Transit Ridership Counts

Map 7.1 on the following page depicts transit stops in Athmar Park by average daily boardings (getting on the bus) and alightings (getting off the bus). South Federal Boulevard is clearly the busiest transit corridor in the neighborhood, and the intersection of South Federal Boulevard and West Alameda Avenue has by far the most transit riders of any intersection in the neighborhood, with an average 1,637 daily boardings and alightings across five stops. Figure 7.1 on page 31 illustrates the average boardings and alightings for the ten busiest stops in Athmar Park, four of which are at South Federal Boulevard and West Alameda Avenue. Transit stops on South Federal Boulevard at West Mississippi Avenue, West Kentucky Avenue, and West Exposition Avenue also comprise the top ten.

### 7.2. Vehicle Counts

The volume of traffic varies considerably throughout Athmar Park depending on the street. Map 7.2 on page 30 shows the locations of vehicular traffic counts conducted by DRCOG and pedestrian counts collected by WalkDenver and CDOT. The DRCOG counts were collected between 2008 and 2016, and therefore vary in their relevancy to current traffic volumes. However, they still provide rough estimates of the differing volumes of traffic at certain locations throughout the neighborhood.

Figure 7.2.1 on page 31 depicts the average daily volume of traffic at the locations shown on Map 7.2. West Alameda Avenue west of Interstate 25 has the highest volume of traffic with over 50,000 vehicles a day, followed by South Federal Boulevard south of West Alameda Avenue at nearly 40,000 vehicles a day. Comparatively, South Vallejo Street north of West Kentucky Avenue has an average daily volume of about 1,500 vehicles.

For the sake of comparison, Colorado Boulevard at East Colfax Avenue has approximately 53,000 vehicles per day, East Colfax Avenue at Colorado Boulevard has about 30,500, and Colorado Boulevard at East Alameda Avenue has over 46,000 vehicles per day.

### 7.3. Pedestrian Counts

Due to time constraints, WalkDenver was only able to collect pedestrian counts at four locations in Athmar Park. Locations were chosen based on site constraints (counters had to be installed on poles near the curb with a barrier on the other side of the sidewalk), proximity to the existing DRCOG traffic count locations, where community members reported feeling unsafe (according to a community survey), and other factors (to be near schools, for instance).

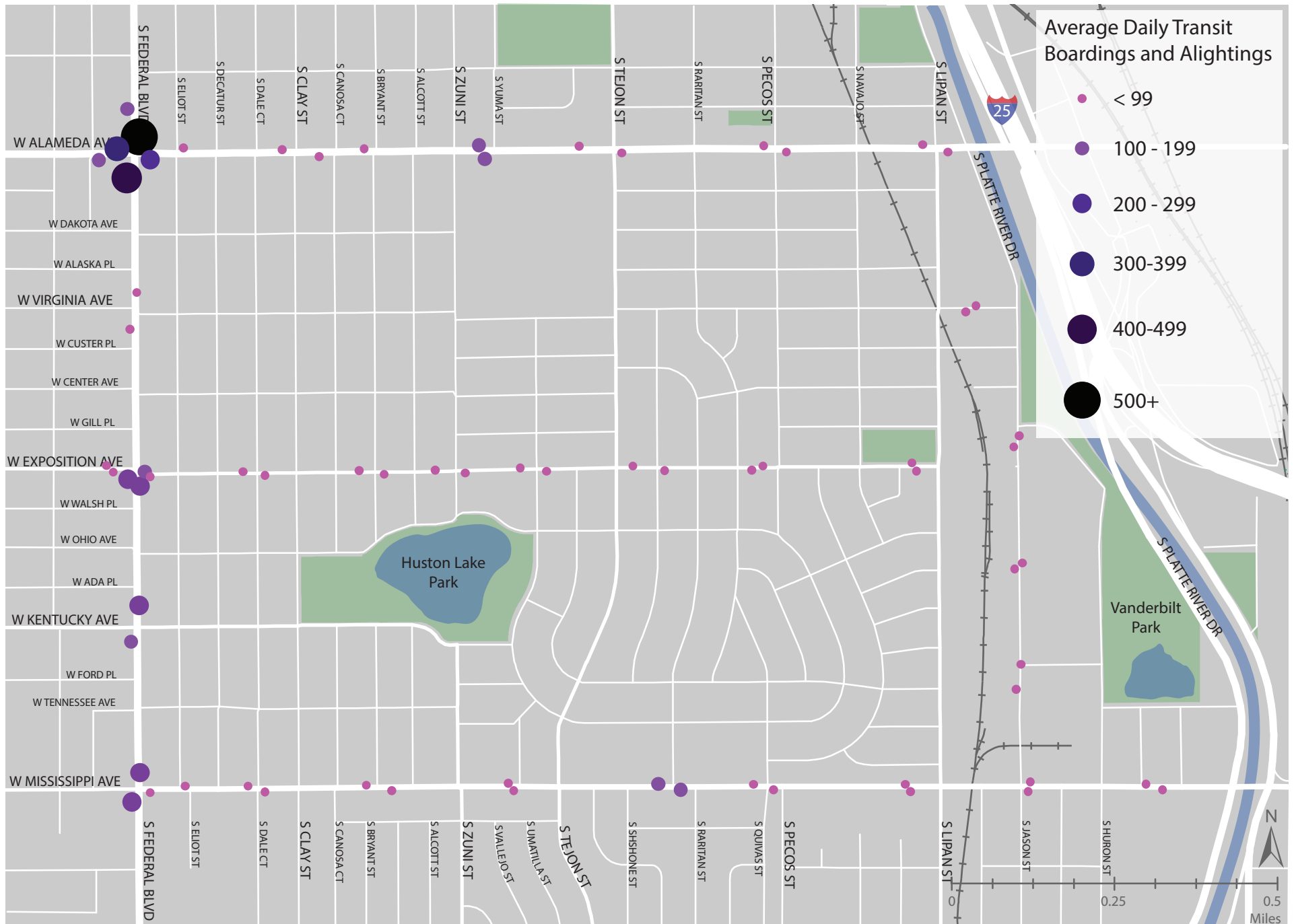
Counts were collected on South Federal Boulevard south of West Alameda Avenue, on South Federal Boulevard south of West Kentucky Avenue, on West Alameda Avenue west of South Tejon Street, and on South Tejon Street south of West Nevada Place. The counts were collected on West Alameda Avenue before school was in session, while the counts on South Tejon Street were collected after the fall semester had begun. (Valverde Elementary School, KIPP Academy, and KIPP High School are located on South Tejon Street near West Alameda Avenue).

Perhaps for this reason there was a significantly higher average number of pedestrians at the South Tejon Street location than the others. An average of 285 people walked past the counter, compared to 147 at South Federal Avenue at West Alameda Avenue, which had the second highest average pedestrian count. West Alameda Avenue at South Tejon Street had an average of 111 pedestrians and South Federal Boulevard at West Kentucky Avenue had 104.



*People board a bus on W. Alameda Ave. and S. Federal Blvd.*

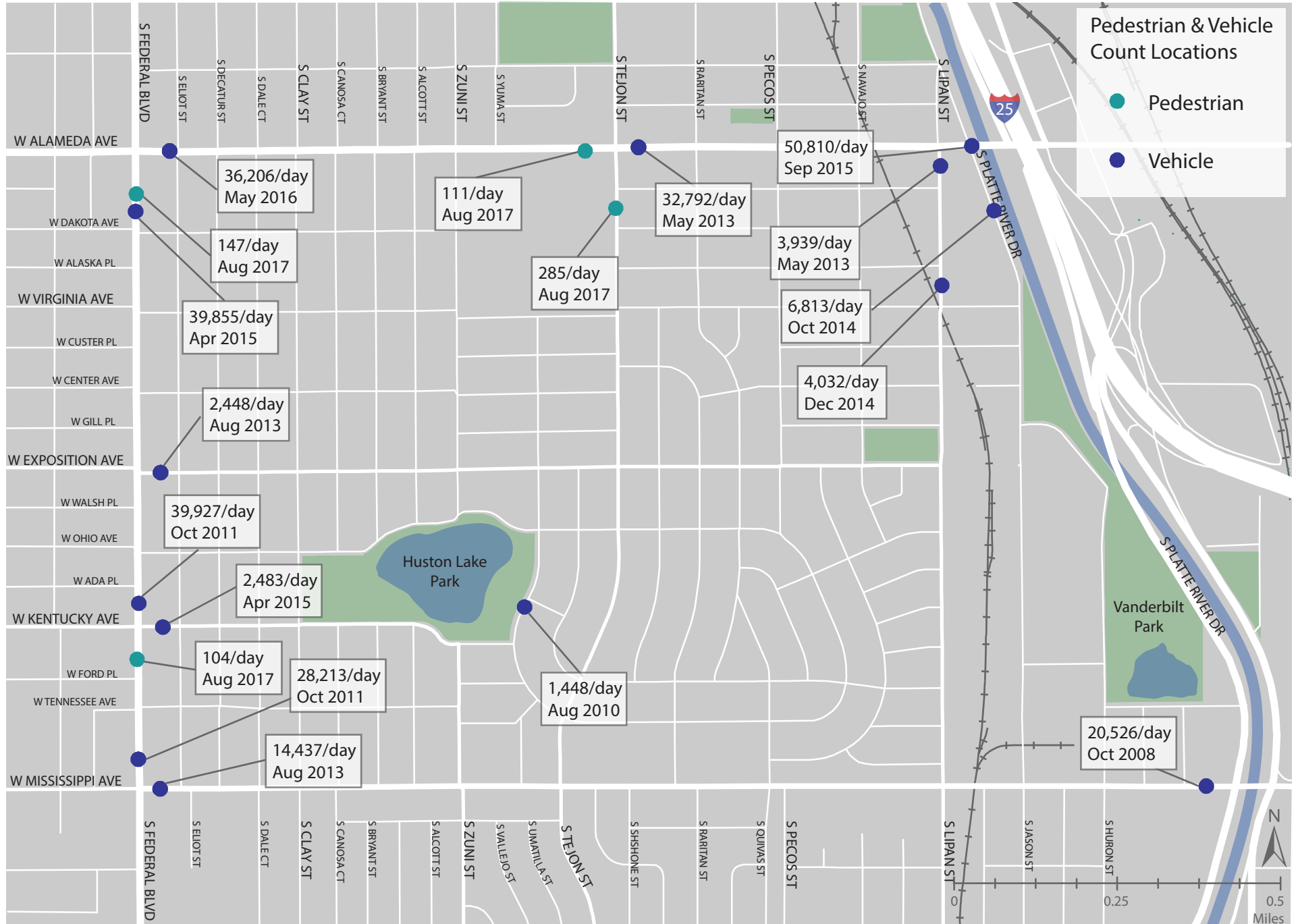
# MAP 7.1. TRANSIT RIDERSHIP COUNTS



Data Sources: RTD; City and County of Denver.



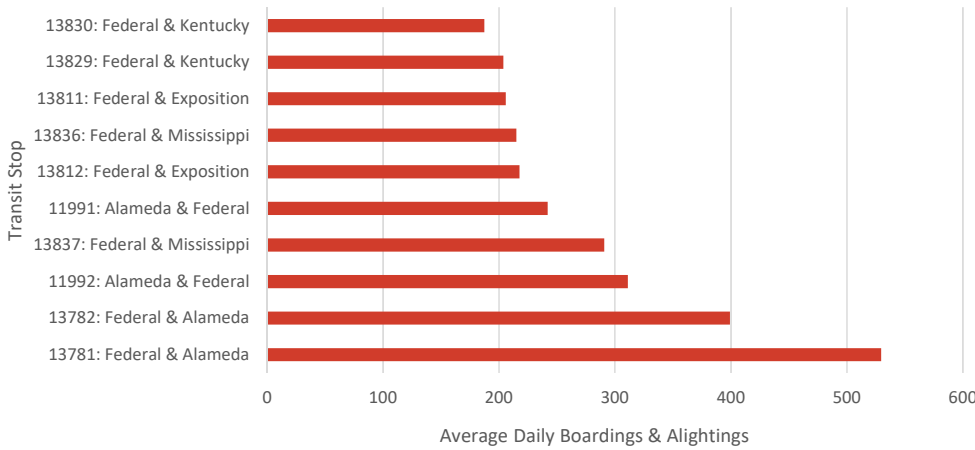
# MAP 7.2-3. PEDESTRIAN AND VEHICLE COUNT LOCATIONS



Data Sources: CDOT; WalkDenver; City and County of Denver.

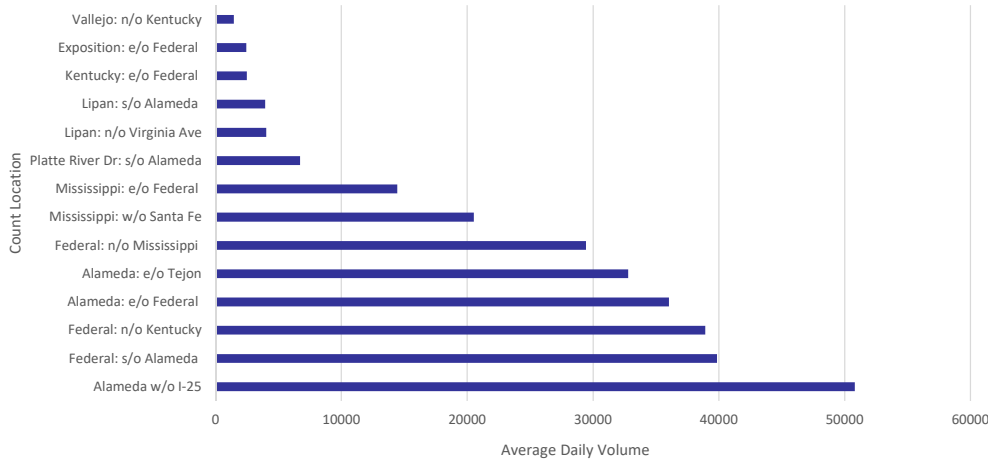
**A daily average of 285 people were recorded walking on S. Tejon St. near W. Nevada Pl.**

Figure 7.1. Transit Ridership\*



\*Top ten stops with highest ridership averages.  
Data Source: RTD

Figure 7.2. Vehicle Counts



Data Source: DRCOG

### 7.3 Travel Hotspots

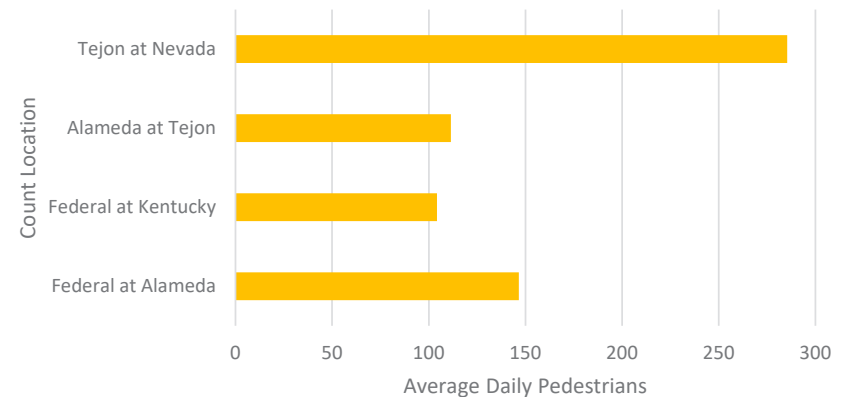
While it is not possible using the available data to make direct comparisons of different travel modes, it is clear that there are significant numbers of pedestrians, transit riders, and vehicles traveling within Athmar Park and along its borders on a daily basis. And with significant volumes come more opportunities for conflicts, particularly when streets are designed to favor vehicles over pedestrians or bicyclists.

West Alameda Avenue west of Interstate 25 sees the highest number of vehicles in the area. Unfortunately, pedestrian counts were not collected at this intersection, so it is unclear how many people walk there. However, it is the closest pedestrian and bicycle connection across the river and interstate to the Alameda light rail station.

South Federal Boulevard and West Alameda Avenue is another significant hotspot for all three travel modes, though with eight lanes of traffic in both directions, vehicles are clearly prioritized. With access to six bus routes and numerous commercial businesses and services, it is possible that more people would walk if they felt safer and more welcomed by the environment.

The location of three schools on South Tejon Street near West Alameda Avenue makes this intersection especially important. With many children walking near a road that has nearly 33,000 vehicles traveling at relatively high speeds each day (the posted speed limit is 35 miles per hour), there may be increased risks for conflicts.

Figure 7.3. Pedestrian Counts



Data Source: CDOT and WalkDenver

## 8. CRASH STATISTICS

According to data obtained from the Denver Vision Zero Crash Dashboard and the Denver Police Department, there were 103 crashes involving pedestrians and/or bicyclists in Athmar Park between January 2012 and May 2017. At least 13 involved serious bodily injuries and five resulted in fatalities. Map 8.1 on the following page illustrates the number of crashes at each location in the neighborhood, as well as the location of crashes that resulted in injuries or fatalities.

All but five of the total 103 crashes occurred on the major roads bordering the neighborhood, and approximately half of all crashes occurred on South Federal Boulevard. All crashes that resulted in injuries or death (with the exception of one fatal crash on West Mississippi Avenue and South Pecos Street) also took place on South Federal Boulevard. The intersections of South Federal Boulevard at West Alameda Avenue, West Kentucky Avenue, and West Mississippi Avenue had the highest number of crashes, as well as the most crashes that resulted in injuries and/or deaths, and therefore stand out as being particularly hazardous to pedestrians and bicyclists.

It is worth noting that both Federal Boulevard and Alameda Avenue are part of the “High Injury Network”, streets that are identified by Denver’s Vision Zero Action Plan as comprising five percent of the city’s streets, but 50 percent of its traffic fatalities. According to the Vision Zero Crash Dashboard, the intersection at South Federal Boulevard and West Alameda Avenue rank fourth in number of traffic accidents citywide, and in the top ten for those involving pedestrians and bicyclists.



*There were 14 crashes involving pedestrians and/or bicyclists at S. Federal Blvd. and W. Alameda Ave. between January 2012 and May 2017.*



*Car crash at S. Federal Blvd. and W. Louisiana Ave.  
Source: Sofia Chavez*

***50% of crashes involving pedestrians and/or bicyclists occurred on S. Federal Blvd.***

### MOST DANGEROUS INTERSECTIONS FOR PEDESTRIANS AND BICYCLISTS



S. Federal Blvd. and W. Alameda Ave.



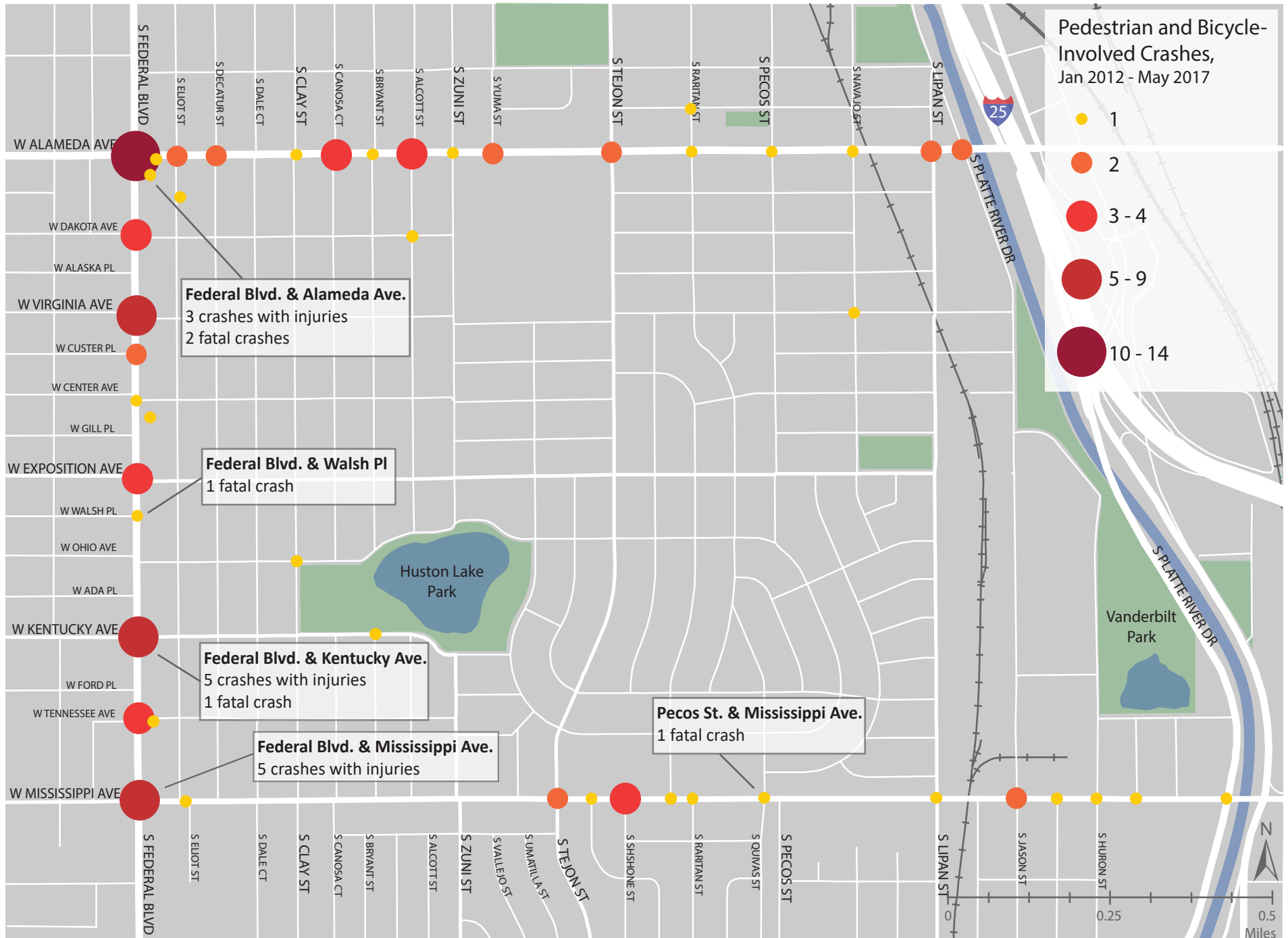
S. Federal Blvd. and W. Kentucky Ave.



S. Federal Blvd. and W. Mississippi Ave.



MAP 8.1. PEDESTRIAN AND BICYCLE-INVOLVED CRASHES, JANUARY 2012 - MAY 2017



Data Sources: City and County of Denver

## 9. COMMUNITY INPUT

The information obtained from Athmar Park community members is particularly valuable because they walk, bicycle, and use wheelchairs in the neighborhood on a regular basis. WalkDenver asked residents to provide input using two participatory maps that were displayed at various community events throughout the summer of 2017.

### 9.1. Destinations

Map 9.1 on the following page is a recreation of a map in which participants placed dots to indicate their destinations (such as work, school, and favorite restaurants), community assets, and areas they feel unsafe. Huston Lake Park, Chain Reaction Brewery, Johnson Habitat Park, the Athmar Park Library, and the Alameda Square Shopping Center stand out as the most popular destinations and assets for residents in the community. Many people report feeling unsafe on West Alameda Avenue and Interstate 25, West Alameda Avenue and South Platte River Drive, West Alameda Avenue and South Tejon Street, West Virginia Avenue and South Lipan Street, as well as the southwest corner of Huston Lake Park.

### 9.2. Routes and Barriers

Map 9.2 on page 36 is recreation of a map in which participants drew routes that they currently like to walk along and routes that they would like to walk along, if improved. They also had the opportunity to place dots to identify barriers or obstacles to walking and bicycling. Participants indicated that they currently like to walk in and around the existing parks. South Federal Boulevard, West Alameda Avenue, West Mississippi Avenue, South Lipan Street, South Platte River Drive/South Jason Street near Johnson-Habitat Park, and West Exposition Avenue between South Lipan Street and South Jason Street (which is currently blocked off) are routes which participants would like to walk, if improved. Obstacles included comments such as insufficient lighting in Huston Lake Park, drivers not obeying traffic controls and speed limits, and a lack of bicycle parking.



*Many community members consider Johnson-Habitat Park to be a community asset, but feel that sufficient connectivity to the neighborhood is lacking.*

## TOP COMMUNITY DESTINATIONS



Huston Lake Park



Chain Reaction Brewery



Johnson-Habitat Park



Athmar Park Library



Alameda Square Shopping Center

## AREAS COMMUNITY MEMBERS FEEL UNSAFE



W. Alameda Ave. & I-25



W. Alameda Ave. & S. Platte River Dr.



Huston Lake Park (SW corner)



W. Alameda Ave. & S. Tejon St.



W. Virginia Ave. & S. Lipan St.

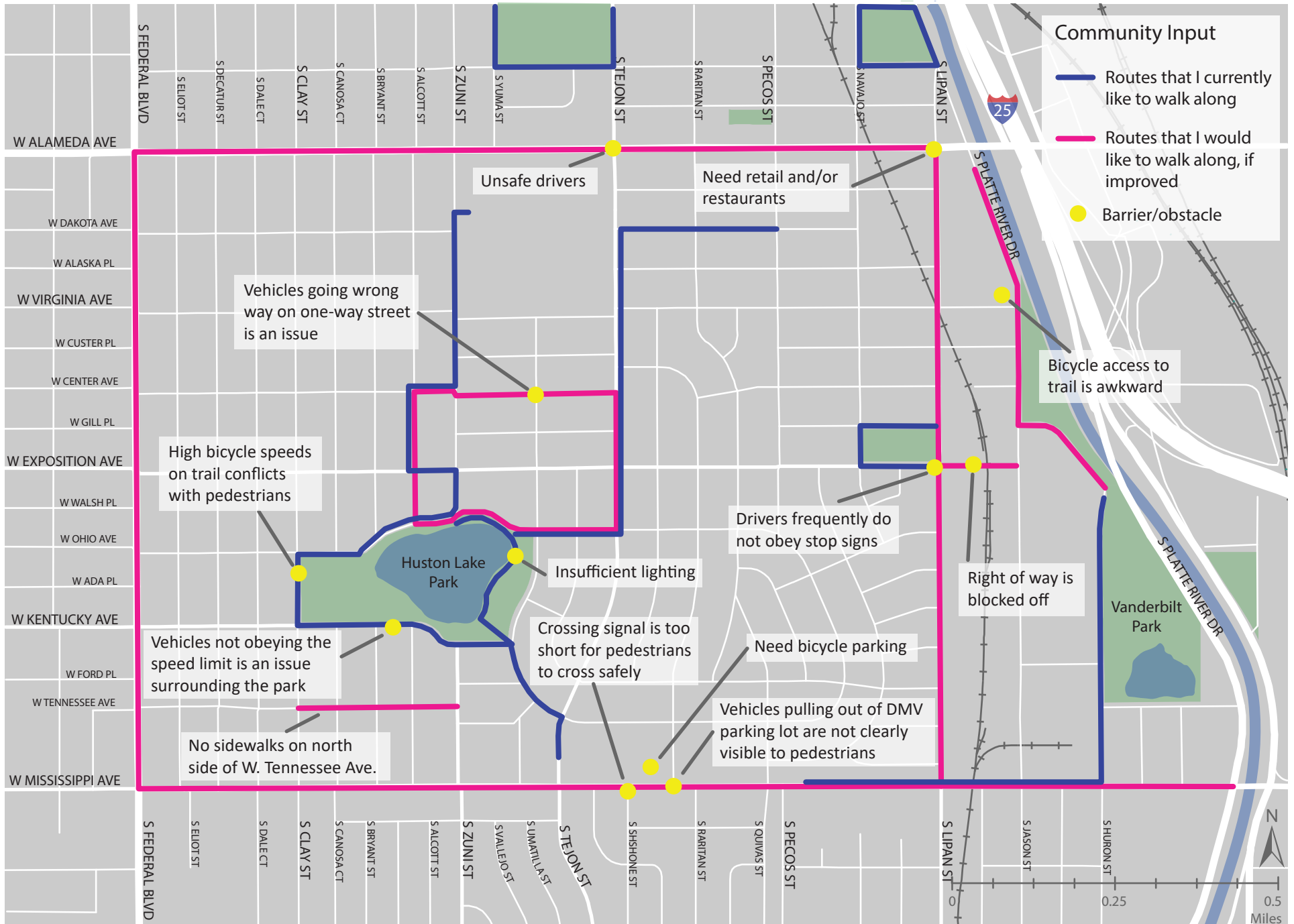
# MAP 9.1. DESTINATIONS



Data Sources: City and County of Denver; Athmar Park Neighborhood Association



# MAP 9.2. ROUTES AND BARRIERS



Data Sources: City and County of Denver; Athmar Park Neighborhood Association

## 10. RECOMMENDATIONS

Based on the data compiled in this report, time spent in the field, and input from the Athmar Park Neighborhood Association and community, WalkDenver offers the following recommendations to improve walking, bicycling, and wheelchair rolling conditions in the neighborhood, and to encourage more community members to use active transportation modes. Map 10.1 on page 41 illustrates the types and locations of the recommendations.

### 1. Add tree lawns, widen sidewalks, and plant trees on residential streets. Install sidewalks and curb ramps where none exist.

The vast majority of the sidewalks in Athmar Park are less than three feet wide and lack tree lawns or any other buffer between the street. Such narrow sidewalks are difficult for people in wheelchairs or with strollers to use; pedestrians were frequently observed walking in the street because the sidewalk was too narrow to accommodate two people side by side. According to the *Denver Streetscape Design Manual*, sidewalks in residential areas should be at least five feet wide. Standards laid out in the *Denver Moves: Pedestrians and Trails* also require sidewalks on local and collector streets to be a minimum of five feet wide and buffers to be at least eight feet wide.

A plan to gradually widen sidewalks to a minimum of five feet and add tree lawns should be put in place. Not only will wider sidewalks create a more comfortable pedestrian experience, tree lawns will provide a buffer between the street, allow space for shade trees to be planted, and will narrow the travel lanes, which will naturally serve to calm traffic.

In November 2017, Denver residents will vote on a bond package that includes approximately \$30 million for sidewalk construction citywide. If approved, Athmar Park may be able to secure some funding to begin a sidewalk replacement/improvement program. Individual blocks should be identified for priority sidewalk improvements and instances of missing sidewalks and curb ramps should be addressed first (see Map 3.1 on page 9 and Map 4.1 on page 17).

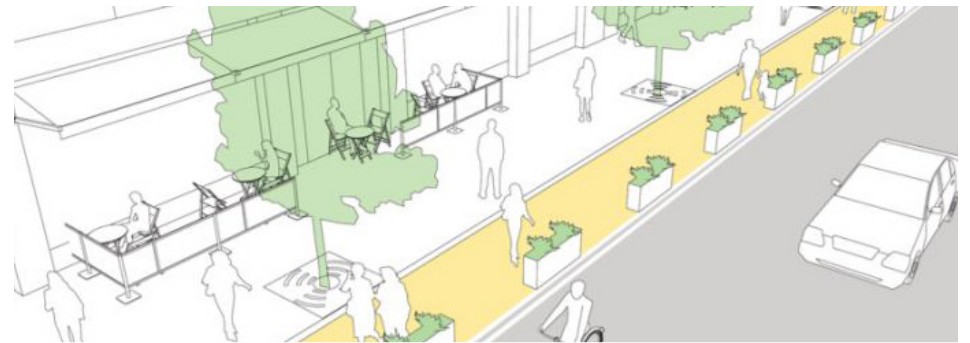
There is also the possibility for Athmar Park property owners to improve sidewalks on their own. At the time of writing, property owners in Denver are responsible for the sidewalks in front of their property. As long as they follow the city's guidelines and permitting process, people are free to improve the

sidewalks in front of their homes or businesses. Individuals wishing to do so should consider installing five foot wide sidewalks and tree lawns.

Recognizing that improving the sidewalks in Athmar Park will be a long-term process, low-cost interim design strategies should be considered to demonstrate the benefits of wider pedestrian zones and narrower travel lanes. For instance, expoxied gravel, planters, and bollards can be used to simulate curb extensions.

West Virginia Avenue between South Zuni Street and South Tejon Street, and South Tejon Street between West Alameda Avenue and West Virginia Avenue are potential locations for an interim demonstration project. Both have narrow sidewalks, border schools, and have sidewalk condition and traffic issues according to the WALKscope data (see Map 3.2 on page 11 and Map 3.3 on page 13). Both have three foot wide sidewalks, and the portion of West Virginia Avenue that has five foot wide sidewalks are attached and obstructed by utility poles. At approximately 33 and 35 feet wide, both streets have enough room within the right of way to add an additional two feet of sidewalk.

Planting street trees is a probably the easiest and most affordable way to improve the pedestrian environment. Where tree lawns are lacking or are infeasible to construct, yard trees adjacent to the sidewalk will still provide shade to pedestrians. The Denver Digs Trees program provides discounted (and sometimes free) street trees to Denver residents. Athmar Park also qualifies for \$10 yard trees under their low-canopy target neighborhood program.<sup>2</sup> Tree planting should be carefully coordinated so that they will not interfere with future sidewalk modifications.



*Interim sidewalk widening strategy. Source: NACTO Urban Street Design Guide.*

2. <http://theparkpeople.org/What-We-Do/Denver-Digs-Trees>

## 2. Improve streetscape and safety on South Federal Boulevard and West Alameda Avenue.

South Federal Boulevard and West Alameda Avenue stand out as being particularly problematic for non-motorized users. While some segments of these streets received high overall quality ratings, many others have low ratings, and the speed and volume of traffic combined with the concentration of pedestrian and bicycle-involved crashes (particularly on South Federal Boulevard) indicate that they need improvements.

Ultimately, all of South Federal Boulevard and West Alameda Avenue should have five foot wide detached sidewalks with trees and other quality landscaping in the tree lawn. Sidewalks should be clearly demarcated from parking lots and driveways and should be free of significant cracks or obstructions.

Intersections with a high number of pedestrian and bicycle-involved crashes, particularly South Federal Avenue at West Alameda, Virginia, Kentucky, and Mississippi Avenues, and those adjacent to schools, such as West Alameda Avenue and South Tejon Street, should be made safer for pedestrians and bicyclists. Enhanced-visibility crosswalks, smaller corner radii, and wider median islands are potential options. Enhanced-visibility crosswalks may help to better capture drivers' attention as they approach the crosswalk. Reducing the size of corner radii will require vehicles to slow before making right-hand turns and



*Light poles and planters on the 16th Street Mall.*

1. Vacarelli, J. (2014, Feb 14). Little Saigon Business District designated as Vietnamese cultural area in west Denver. Retrieved from DenverPost.com: <http://www.denverpost.com/2014/02/18/little-saigon-business-district-designated-as-vietnamese-cultural-area-in-west-denver/>

will also reduce the crossing distance for pedestrians. Wider median islands at South Federal Boulevard and West Alameda Avenue would provide refuges for pedestrians, reduce travel lane widths (and therefore reduce vehicle speeds), and also create space for additional crosswalk signs.

The Athmar Park Active Neighborhood Association should consider partnering with the Little Saigon Business District, which covers South Federal Boulevard between West Alameda Avenue and West Mississippi Avenue, to implement improvements on that corridor. Store owners in the district are eligible to apply for grants for facade improvements from the Denver Urban Renewal Authority,<sup>1</sup> and may have access to other funding sources for streetscape and safety improvements.

The formation of a Business Improvement District would create a continual funding source for the needed streetscape and safety improvements, while also providing an opportunity for the district to further develop its identity. Distinctive planters and street lights are two branding strategies that have been used successfully by the Downtown Denver Partnership, Inc. on the 16th Street Mall.

Additionally or alternatively, a General Improvement District for the whole Athmar Park neighborhood could supply funding for improvements not only to commercial corridors, but to residential streets as well.



*Painted crosswalks on Speer Blvd. and Lawrence St.*



### 3. Encourage transit stop sponsorship.

Over 5,000 transit trips begin or end in Athmar Park each day, yet nearly two-thirds of the transit stops are considered low quality by volunteer data collectors and the majority lack any type of seating or shelter. Luckily, two RTD programs offer the opportunity for local community members and businesses to become involved in improving and maintaining transit stops in their neighborhood.

As part of the Adopt-A-Stop program, adopters agree to pick up litter and dispose of garbage at a transit stop (or stops) for one year. RTD supplies the trash receptacles, can liners, and adoption signs. There is also the potential to install benches or add decorative touches. This is an easy way for individuals or local organizations to contribute to a cleaner, more transit-friendly community and to show their support for the neighborhood.

RTD also has a corporate partnership program for businesses interested in making financial contributions in exchange for marketing benefits. Transit stop amenities could also be funded and maintained through a GID or BID.

### 4. Use traffic calming measures to create more a comfortable environment for bicyclists and pedestrians.

Volunteers who participated in bicycle assessments of Athmar Park found the overall bicycling comfort level to be moderate, though certain intersections and the tendency of drivers to speed were problematic. The Denver Moves Bicycles Plan identifies West Virginia Avenue, West Kentucky/West Tennessee Avenue, South Tejon Street, and South Lipan Street as potential Neighborhood Bikeways (formerly known as Bike Boulevards). Exact treatments have not yet been identified, but according to the *Denver Bike Boulevard Design Guidelines*, this type of facility is a combination of measures that together create low-speed, low-volume streets that are comfortable for bicyclists and pedestrians.

When designing neighborhood bikeways for the Athmar Park neighborhood, planners should focus on treatments that will calm traffic and benefit all non-motorized users. Measures such as chicanes, curb extensions, and traffic circles will help reduce vehicle speeds—a problem cited by many Athmar Park residents—and create a safer environment as well.

As was previously noted, South Federal Boulevard is a particularly hazardous corridor for pedestrians and bicyclists. Intersections with this road should receive special attention. In addition to enhanced visibility crossings, activated signals with leading intervals (which stop all vehicle traffic for pedestrians and



*An adoption sign at a transit stop on E. Colfax Ave.*

bicyclists to cross) and bicycle detection (which allows a bicyclist to trigger a green signal with a push-button or automatic detection) should be considered. Restricting motorized access to South Federal Boulevard from cross-streets is another possibility to improve non-motorized user safety.

The crossing of West Virginia Avenue with South Lipan Street also needs particular attention. Visibility is reduced due to off-set street alignment and the additional intersection with the railroad tracks causes further potential for conflicts. Stop signs should be installed on South Lipan Street, which will also help reduce traffic speeds. A painted crosswalk and additional signage will help alert drivers to the presence of bicyclists and pedestrians.



*Traffic circle and chicane. Source: Denver Bike Boulevard Design Guidelines.*



## 5. Install traffic calming treatments on streets surrounding Huston Lake Park.

Huston Lake Park is one of the most popular destinations in Athmar Park for pedestrians and bicyclists, yet community members frequently report vehicles speeding—and sometimes racing—on the surrounding streets. Though low speed limits have been posted and a few bulb-outs installed on the south side of the park, further measures need to be taken to create a safer and more pedestrian- and bicyclist-friendly environment.

Additional bulb-outs, speed tables, and/or raised crosswalks will require drivers to travel more slowly and alert them that this is an area intended for non-motorized users. Other traffic calming measures such as chicanes and traffic circles would also be appropriate here.



*A raised crosswalk with bulb-outs. Source: Streetswiki.*

## 6. Improve connectivity and access to key destinations for non-motorized users.

One of the greatest strengths of the Athmar Park neighborhood is its proximity to popular destinations. However, traveling to these destinations by foot, bicycle, or wheelchair is often less than easy, comfortable, or safe. One of the biggest improvements that can be made to increase and encourage active transportation in the neighborhood is to improve connectivity and access for non-motorized users.

Johnson-Habitat Park and Vanderbilt Park are two high-quality parks on the east side of the Athmar Park neighborhood, yet they are separated from the residential part of the neighborhood by a stretch of ten blocks—over two-thirds of mile—with no cross-streets. A right-of-way exists at West Exposition Avenue, yet is currently being used to store private vehicles. Public access should be restored at this location with a crossing over the railroad tracks.

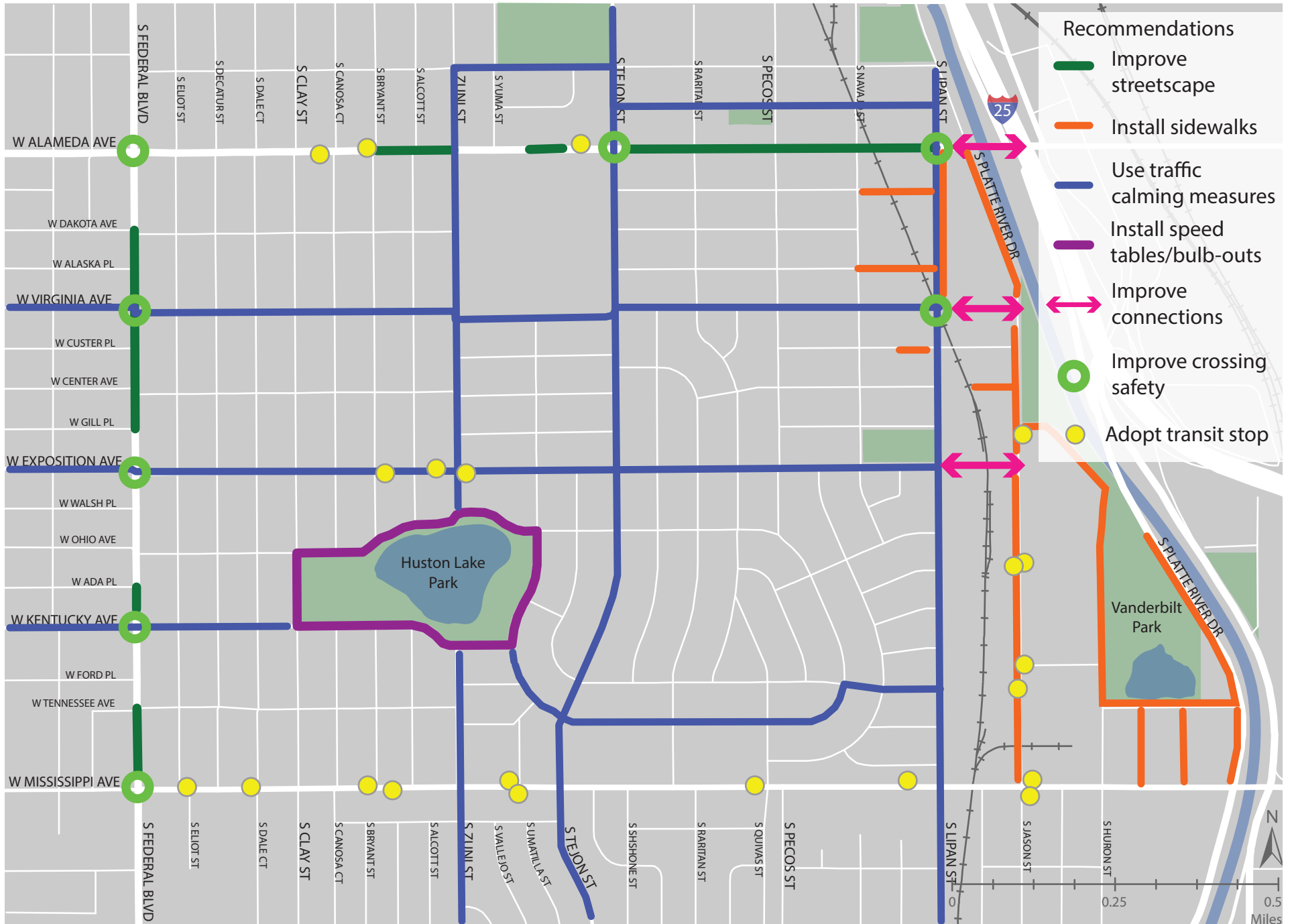
In addition to physical access, wayfinding signage is equally important for guiding people to key destinations. Signage for both pedestrians and bicyclists should be installed throughout the neighborhood to indicate directions and distances to parks and trails.

Finally, the connection to the Alameda Light Rail Station on the opposite of Interstate 25 needs significant improvement. The image below illustrates the current condition of this corridor; it is unsurprising that so many residents reported feeling unsafe here. The West Virginia Avenue bicycle and pedestrian bridges recommended by the *Alameda Station Area Plan* would provide a safe and convenient way to access the station.



*Sidewalk on W. Alameda Ave. across the South Platte River.*

# MAP 10.1. RECOMMENDATIONS



Data Source: City and County of Denver



## 11. RESOURCES

Alameda Station Area Plan

<https://www.denvergov.org/content/denvergov/en/transit-oriented-development/transit-corridors/central-corridor/alameda-station.html>

Denver Bike Boulevard Design Guidelines

<https://www.denvergov.org/content/dam/denvergov/Portals/193/documents/DLP/BikeBlvdDesignGuidelines.pdf>

Denver Moves: Bicycles

<https://www.denvergov.org/content/denvergov/en/bicycling-in-denver/planning.html>

Denver Moves: Pedestrians and Trails

<https://www.denvergov.org/content/denvergov/en/denveright/pedestrians-trails.html>

Denver Moves: Transit

<https://www.denvergov.org/content/denvergov/en/denveright/transit.html>

Denver Open Data Catalog

<https://www.denvergov.org/opendata>

Denver Streetscape Design Manual

[https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/guidelines/PWES-002.0-Streetscape\\_Design\\_Manual.pdf](https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/guidelines/PWES-002.0-Streetscape_Design_Manual.pdf)

DRCOG Regional Data Catalog

<http://gis.drcog.org/datacatalog/>

Denver Vision Zero Crash Dashboard

<https://www.denvergov.org/content/denvergov/en/transportation-mobility/vision-zero/dashboard.html>

Denver Vision Zero Draft Action Plan

<https://www.denvergov.org/content/denvergov/en/transportation-mobility/vision-zero/draft-plan.html>

NACTO Urban Street Design Guide

<https://nacto.org/publication/urban-street-design-guide/>

The Park People (Denver Digs Trees)

<http://theparkpeople.org/>

RTD Adopt-A-Stop

<http://www.rtd-denver.com/AdoptAStop.shtml>

WalkDenver

<http://www.walkdenver.org/>

WALKscope

<http://www.walkscope.org/>