District Department of Transportation

Alabama Avenue SE Corridor Safety Study

Data Collection and Existing Conditions Report

October 2017

ALABAMA AVENUE SE
CORRIDOR SAFETY STUDY

WE ARE WASHINGTON DC

District Department of Transportation

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1.0 INTRODUCTION

The Alabama Avenue SE Corridor Safety Study is part of the Mayor's Vision Zero Initiative to reach zero traffic fatalities and serious injuries by the year 2024 and create a multi-modal environment where transportation safety for pedestrians, bicyclists and vehicles is the number one priority. This project area was identified as one of the 15 corridors throughout the District that had more than one traffic fatality during the period of 2010 – 2014. This Data Collection and Existing Conditions Report presents the results of the data collection and field review effort, along with a comprehensive assessment of existing conditions for all road users along the corridor.

1.1. Study Purpose

The Alabama Avenue SE Corridor Safety Study was conducted to provide a thorough and comprehensive assessment of existing traffic conditions and to propose recommendations to improve safety and quality of life for all road users. The study included a robust public engagement process to solicit information, concerns, and ideas from a broad range of community stakeholders, and to present the community with proposed measures designed to improve traffic operations and safety along the Alabama Avenue corridor. Alabama Avenue carries heavy volumes of passenger cars, trucks, transit buses, and provides access to the Congress Heights Metrorail station. Irregular on-street parking regulations and utilization result in confusion for drivers. Several intersections experience traffic congestion during peak hours.

Although sidewalks and marked crosswalks are installed throughout the corridor, pedestrians may not always feel comfortable walking along, or crossing, Alabama Avenue due to high traffic volumes, frequent speeding, and narrow minimum sidewalk setback in some locations. Furthermore, significant gaps exist along the corridor where there are no marked crosswalks for pedestrians. Bicycle access is sub-optimal in some locations due to a lack of bike lanes.

1.2. Study Area

The Study Area for the Alabama Avenue SE Corridor Safety Study is Alabama Avenue from Martin Luther King, Jr. Avenue (MLK Avenue) SE to Ridge Road SE. This corridor is approximately four miles long and abuts a variety of land uses, as well as a Metrorail station. The posted speed limit along the corridor is 25 miles per hour (mph) south of Pennsylvania Avenue and 30 mph north of Pennsylvania Avenue; however, within the multiple school zones along the corridor, a lower school speed limit of 15 mph is posted. Alabama Avenue generally follows a southwest/northeast alignment; however, for consistency

and simplicity purposes, Alabama Avenue is referred to as a north/south corridor in this document, as it intersects with key east/west routes such as Suitland Parkway and Pennsylvania Avenue.

The study corridor is shown graphically in **Figure 1**.

Figure 1 – Study Area

2.0 LAND USE AND TRANSPORTATION SYSTEM INVENTORY

An understanding of the existing land use and transportation system along Alabama Avenue is necessary to inform the Exiting Conditions portion of this Corridor Safety Study.

2.1. Corridor Land Use

Land uses in the vicinity of the study corridor are shown in **Figure 2**. The existing land use in the corridor is primarily low- and medium-density residential, with an especially lower density north of Good Hope Road. There are several low-density commercial areas – one at Stanton Road, one at Good Hope Road, and one at Pennsylvania Avenue. Many institutional uses are also located on Alabama Avenue, such as schools, churches, recreation centers, a police station, and a library.

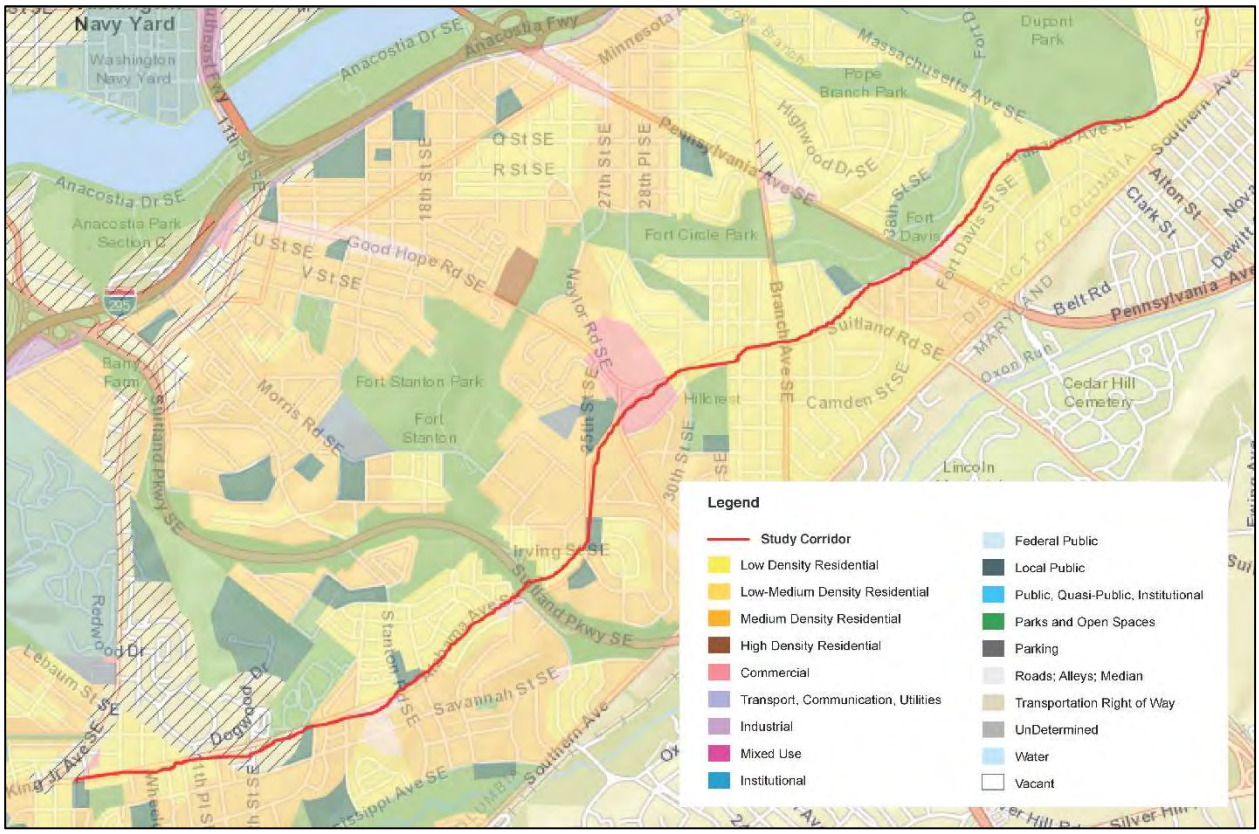


Figure 2 – Existing Land Uses Near Study Corridor (Source: DCGIS)

2.2. Roadway Classifications

Each roadway is classified per its function – for example, whether it is a local street used to access residential land uses or a major thoroughfare for crosstown traffic. Roadway classifications in the study area, including Alabama Avenue itself, are shown in **Figure 3**.

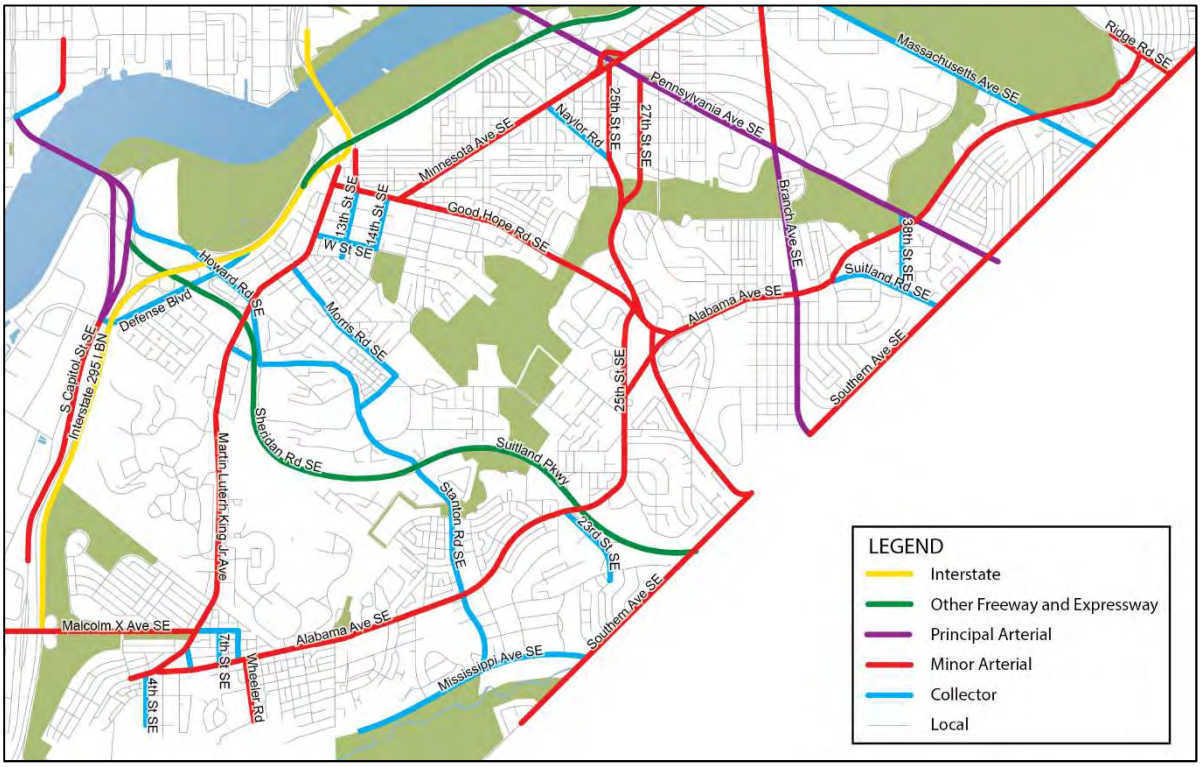


Figure 3 – Study Area Roadway Classifications

Alabama Avenue is classified as a minor arterial roadway. Most of its intersecting roadways are either collector roadways or local roadways, providing access to side streets and residential land uses. Branch Avenue is classified as an arterial, as it is the signed route to the Capital Beltway (I-95/I-495) and connects to Suitland Parkway just over the Maryland border. Pennsylvania Avenue is also classified as an arterial. Suitland Parkway, classified as other freeway/expressway, has an interchange with Alabama Avenue near Irving Street.

2.3. Pedestrian and Bicycle Infrastructure

With the mix of land uses in certain areas along the study corridor, and the large number of institutions such as churches, schools, and a library, bicycle and pedestrian travel on Alabama Avenue should be convenient and safe. However, bicycle and pedestrian mobility and safety in the study area is sometimes sub-optimal, with speeding drivers, long crossings, and the lack of bicycle facilities for most of the corridor. Typical conditions along the corridor are shown in **Figure 4**. Further detail about existing field conditions for pedestrians and bicyclists is included in Chapter 6 of this report (see page 61).

Figure 4 – Typical Bicycle and Pedestrian Infrastructure on Alabama Avenue SE

2.4. Transit Infrastructure

Alabama Avenue has robust transit service and infrastructure. Between MLK Avenue SE and Massachusetts Avenue SE, the corridor is served by several Metrobus "Major Routes", which provide frequent, seven-day bus service. The remainder of Alabama Avenue is served by Metrobus Local Routes, with less frequent service and limited off-peak bus service. Alabama Avenue also has a Metrorail station on the Green Line located across from 13th Place. The transit routes serving Alabama Avenue are shown in **Figure 5**.

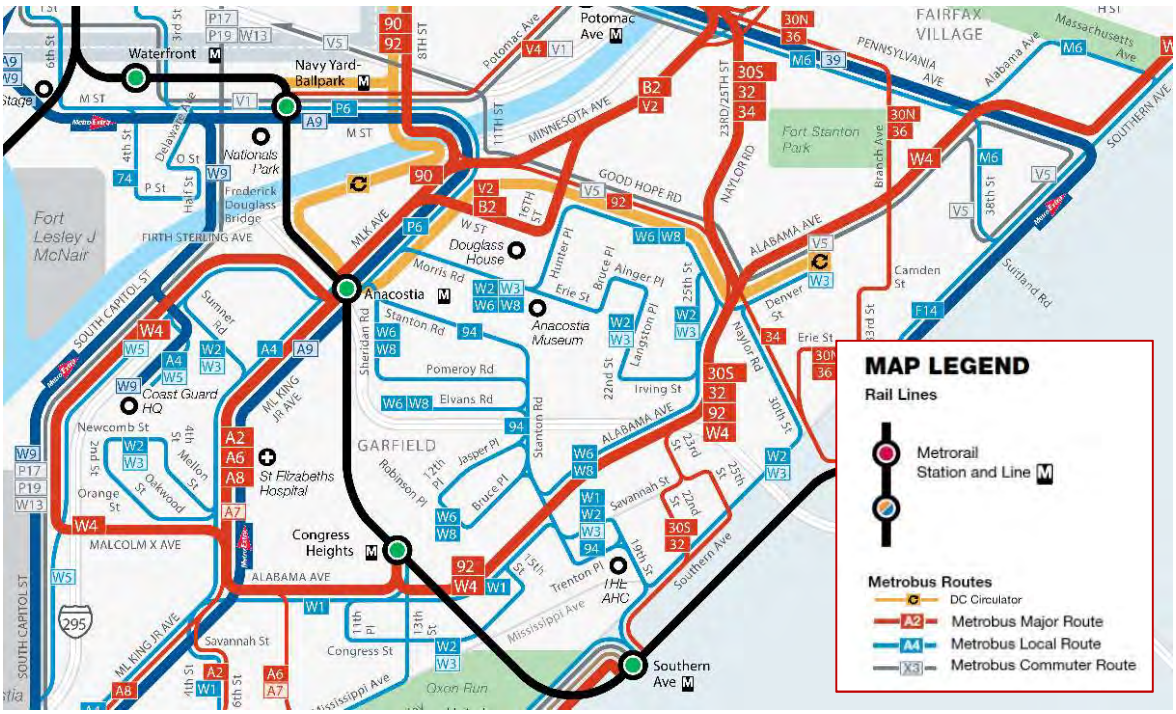


Figure 5 – Existing Transit Routes

2.4.1. Metrobus

Metrobus is the primary bus transit system serving the DC Metro Area and is operated by the Washington Metropolitan Area Transit Authority (WMATA). Several bus lines serve the study corridor, as indicated in **Figure 5**. Some of the bus stops on Alabama Avenue have bus shelters with route schedules for waiting passengers, while some simply have a sign with the applicable route designations.

2.4.2. Metrorail

Metrorail is the rapid transit system serving the Washington DC Metro area and is also operated by WMATA. The Metrorail Green Line runs through the District between the Branch Avenue and Greenbelt stations, both of which are in Prince George's County. The Green Line also provides transfers to all other

Metrorail lines. The Congress Heights station is located along Alabama Avenue at 13th Place. The station allows for transfers to several Metrobus lines and has limited vehicle parking available.

2.4.3. Capital Bikeshare

Capital Bikeshare is the DC Metro Area's bikesharing system. Capital Bikeshare offers daily, three-day, and monthly memberships that allow members to use a bike for up to 30 minutes at no additional charge over the membership cost.

Capital Bikeshare has five stations along Alabama Avenue, listed below:

- MLK Avenue
- 13th Street/Congress Heights Metro
- Stanton Road/Shops at Park Village
- Good Hope Road
- Pennsylvania Avenue.

These stations allow for travel between each other and to the other bike share stations in Southeast Washington, DC.

2.4.4. DC Circulator

The DC Circulator is a bus service operated by a partnership between DDOT, WMATA, and DC Surface Transit, Inc. With a fare of $1, the DC Circulator is operated to directly connect businesses, cultural destinations, and entertainment centers that would otherwise require several transfers between various transit modes. The Potomac Ave Metro – Skyland via Barracks Row route that serves the study area is one of six routes of the DC Circulator. From October through March, this route stops in the study area at Alabama Avenue and 30th Street, and serves this stop every 10 minutes on weekdays between 6 AM and 7 PM. From April through September, the Alabama Avenue and 30th Street stop is served every 10 minutes on weekdays between 6 AM and 9 PM, and on Saturdays between 7 AM and 9 PM.

3.0 CRASH ANALYSIS

This chapter summarizes available crash data from the three most recent years available (2013 through 2015) for the study corridor. Further conclusions and recommendations from this data are included in Chapter 6 – Existing Conditions (see page 61).

3.1. Crash Analysis Locations

The crash history for the study corridor between 2013 and 2015 was reviewed. Crash data was extracted from the DC Open Data Portal and from the R-8 Accident Summary Report provided by DDOT's Traffic Accident Reporting and Analysis System, both of which cover Alabama Avenue between MLK Avenue and Ridge Road. **Table 1** provides the overall number of crashes for the corridor, the number of fatal crashes, the number of injury crashes, and the number of crashes that resulted in property damage only. A total of 875 crashes were reported for the corridor during 2013-2015, nearly two-thirds of which involved property damage only. **Table 1** also provides the number of crashes that involved pedestrians.

Table 1 | Crash Statistics for Alabama Avenue SE Corridor for 2013-2015 (from R-8 Reports)

Total Crashes	875
Fatal Crashes	4 (0.5%)
Injury Crashes	312 (36%)
Property Damage Only Crashes	559 (64%)
Pedestrian Crashes (included in above)	45 (5%)

Many injury crashes involve relatively minor injuries and are recorded by police as "Complaint of Pain, But No Visible Injury". Minor injury crashes often involve rear-end collisions that occur on approaches to intersections at relatively low speeds. To focus safety improvement planning efforts for this project on crashes with serious injuries, the study team examined patterns of more severe crashes along Alabama Avenue using electronic data from the DC Open Data Portal, which includes a variable for "Major Injury". Analyzing locations with major injury crashes provides a larger and more robust data set than simply looking at locations where fatalities occurred.

During 2013-2015 a total of 68 crashes along the Alabama Avenue study corridor were coded as "Major Injury". Examination of the crash locations indicated that about half of the 68 major injury crashes occurred within three relatively small clusters, as shown in **Table 2** and **Figure 6:**

Table 2 | Clusters of Major Injury Crashes

Cluster	Boundaries	Number of Crashes with "Major Injuries"
1	15th Street and Stanton Road	9
2	24th Street and Irving Street	11
3	Pennsylvania Avenue and Burns Street	13

These three clusters of major injury crashes were selected for more detailed crash analysis provided in this report. Cluster analysis allows for examination of concentrated numbers of more severe crashes occurring within relatively small segments of the Alabama Avenue corridor, which can identify collision patterns and contributing factors that might not be apparent from a broader review of overall crash data. Understanding collision patterns and contributing factors for major injury crashes can help identify potential safety improvements, with the goal of preventing fatal and serious injury crashes. Findings from the cluster analysis can be applied to locations along the entire study corridor.

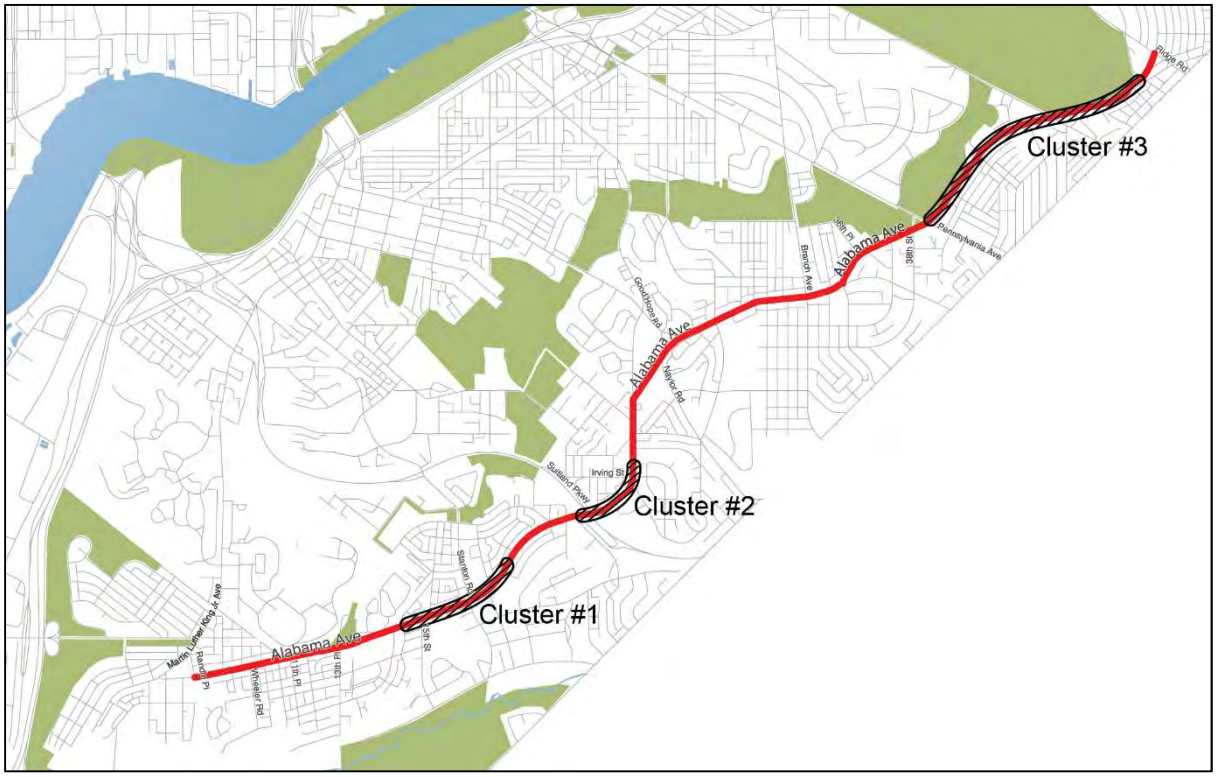


Figure 6 – Clusters of Major Injury Crashes

3.2. Crash Analysis Results

For the three clusters indicated above, the detailed PD10 forms were provided by the Metropolitan Police Department (MPD). Each crash report was reviewed to glean additional information about the crash and its contributing factors that may not be available by looking only at high-level data summaries. This also allowed reports with erroneous locations to be excluded from the crash analysis for this study. These reports were aggregated in several ways to provide detailed crash information.

3.2.1. Crash Severity

The detailed crash reports were aggregated to examine the three analysis clusters and the crash severity at these locations. The results are shown in **Table 3**.

Table 3 | Crash Severity

Cluster	Crashes by Year				Fatal Crashes	Injury Crashes	Number of Injuries	Property Damage Only Crashes
	2013	2014	2015	Total				
#1 – 15th St to Stanton Rd	8	17	21	46	0	32	44	14
#2 – 24th St to Irving St	13	16	23	52	0	17	24	35
#3 – Pennsylvania Ave to Burns St	33	45	32	110	1	49	68	60
Total	54	78	76	208	1	98	136	109

During the three-year period (2013 through 2015) used for this analysis, there were 208 reported crashes. One of these crashes was a fatality, which occurred between Pennsylvania Avenue and Burns Street. Approximately 47 percent of these crashes were injury crashes, resulting in 136 total injuries over a three-year period. The remainder of the crashes involved property or vehicle damage only.

3.2.2. Crash Type

Crash types were analyzed for the three crash analysis clusters combined. The results are shown in **Table 4**.

Table 4 | Crash Type

Crash Type	2013	2014	2015	Total	% of Total
Rear End	19	22	22	63	30%
Sideswiped	8	15	20	43	21%
Pedestrian Struck	**6**	**10**	**6**	**22**	**10%**
Straight Hit Pedestrian	**2**	**6**	**2**	**10**	**5%**
Left Turn Hit Pedestrian	**2**	**4**	**3**	**9**	**4%**
Right Turn Hit Pedestrian	**2**	**0**	**1**	**3**	**1%**
Left Turn	6	9	6	21	10%
Head On	1	7	6	14	7%
Fixed Object	5	5	3	13	6%
Right Angle	3	5	4	12	6%
Right Turn	4	2	4	10	5%
Parked Vehicle	2	0	2	4	2%
U Turn	0	1	2	3	1%
Backing Hit Parked Vehicle	0	2	0	2	1%
Straight Hit Bicycle	0	0	1	1	<1%
Total	**54**	**78**	**76**	**208**	**100%**

The two most common crash types, accounting for half of all reported crashes, were rear-end and sideswipe. Ten (10) percent of crashes involved a pedestrian, and most of these were from vehicles traveling straight and turning left before the collision. Six (6) percent of crashes were fixed object collisions, which were single-vehicle collisions such as running off the roadway into a fence.

3.2.3. Crash Contributing Factors

The crash contributing factors were analyzed for all three crash analysis clusters combined for each analysis year. The results are shown in **Table 5**.

Table 5 | Crash Contributing Factors

Crash Contributing Factor	2013	2014	2015	Total	% of Total
Driver Inattention	10	11	9	30	14%
Following Too Close	5	8	7	20	10%
Changing Lanes without Caution	3	5	4	12	6%
Speed	2	3	6	11	5%
Alcohol/Drug Influence	0	9	1	10	5%
Auto/Ped Right-of-way	4	5	1	10	5%
Improper Passing	3	1	4	8	4%
No Violation	3	1	3	7	3%
Red Light Violation	1	4	2	7	3%
Other Distraction	3	1	2	6	3%
Improper Turn	0	0	4	4	2%
Failed to keep in proper lane	0	0	3	3	1%
Pedestrian Violation	0	2	0	2	1%
Making U-Turn	0	1	0	1	<1%
Failed to Yield Right-of-way	0	0	1	1	<1%
Defective Brakes, Lights, Etc.	0	0	1	1	<1%
Stop Sign	0	0	1	1	<1%
Cell Phone/Other Electronic Device	0	1	0	1	<1%
Other	7	12	13	32	15%
Unknown	13	14	14	41	20%
Total	**54**	**78**	**76**	**208**	**100%**

Thirty-five (35) percent of the crashes did not have a contributing factor recorded, but rather were marked as “Unknown” or “Other.” This can occur when the officer responding to the crash is unsure of what happened (for example, due to conflicting stories from involved parties), or in the case of a hit-and-run crash. After these unknown crashes, the most commonly cited contributing factors were “driver inattention” and “following too close.” Notably, five percent of the crashes were attributed to Alcohol/Drug Influence.

3.2.4. Crash Environmental Conditions

The crash environmental conditions were analyzed for all three crash analysis clusters combined for each analysis year. This includes the roadway surface, illumination, and weather at the time of the crash. The results are in **Table 6**.

Table 6 | Crash Environmental Conditions

Cluster	Roadway Surface					Illumination						Weather							Total
	Dry	Wet	Snow	Ice	Unknown	Daylight	Dark (Not Lighted)	Dark (Lighted)	Dawn	Dusk	Unknown	Clear	Rain	Fog/Mist	Snow	Sleet/Hail	Other	Unknown	
#1 – 15th St to Stanton Rd	35	7	1	1	2	27	1	15	1	1	1	32	8	0	1	1	0	4	46
#2 – 24th St to Irving St	42	9	0	0	1	29	2	18	0	0	3	40	7	0	0	0	0	5	52
#3 – Pennsylvania Ave to Burns St	89	13	3	0	5	58	0	40	0	5	7	89	10	1	3	0	0	7	110
Percent of Total	80 %	14 %	2 %	0 %	4 %	55 %	1%	35 %	0 %	3 %	5 %	77 %	12 %	0 %	2 %	0 %	0 %	8 %	100%

Most (80 percent) of the crashes occurred on a dry roadway surface, and most (77 percent) also occurred during clear weather conditions. While just over half of the crashes happened during daylight conditions (55 percent), approximately one-third of the crashes occurred during dark-lighted conditions.

3.2.5. Crash Analysis by Location

Collision diagrams that map crashes with documented injuries and fatalities only for each of the three analysis clusters are provided as **Figure 7**, **Figure 8**, **Figure 9**, **Figure 10**, and **Figure 11**. The subsequent Existing Conditions chapter will provide further analysis on existing crash patterns and potential contributing factors.

3.2.5.1. 24th Street / Alabama Avenue SE

One pedestrian crash occurred at this intersection, between a vehicle traveling straight and a pedestrian. Furthermore, another crash occurred between a vehicle turning from northbound Alabama Avenue to 24th Street and a bicyclist.

3.2.5.2. Irving Place / Alabama Avenue SE

This intersection is also located within one of the high-crash segments along Alabama Avenue. One pedestrian crash occurred at this location, in which the pedestrian was struck by a vehicle while in the uncontrolled crosswalk located across the south leg of the intersection.

3.2.5.3. Alabama Avenue between Pennsylvania Avenue and Massachusetts Avenue SE

The crash data analyzed for this report, which included the three segments along Alabama Avenue where most of the crashes occurred, shows that all of the studied crashes coded as a fatality or as having a "disabling injury" occurred in the segment between Pennsylvania Avenue and Massachusetts Avenue. Two of these six crashes occurred on side-street approaches – one on Massachusetts Avenue and one on Pennsylvania Avenue. The remainder of the crashes are described below at the recorded location. A collision diagram depicting all of these crashes is in **Figure 12**.

3.2.5.4. R Street / Alabama Avenue SE

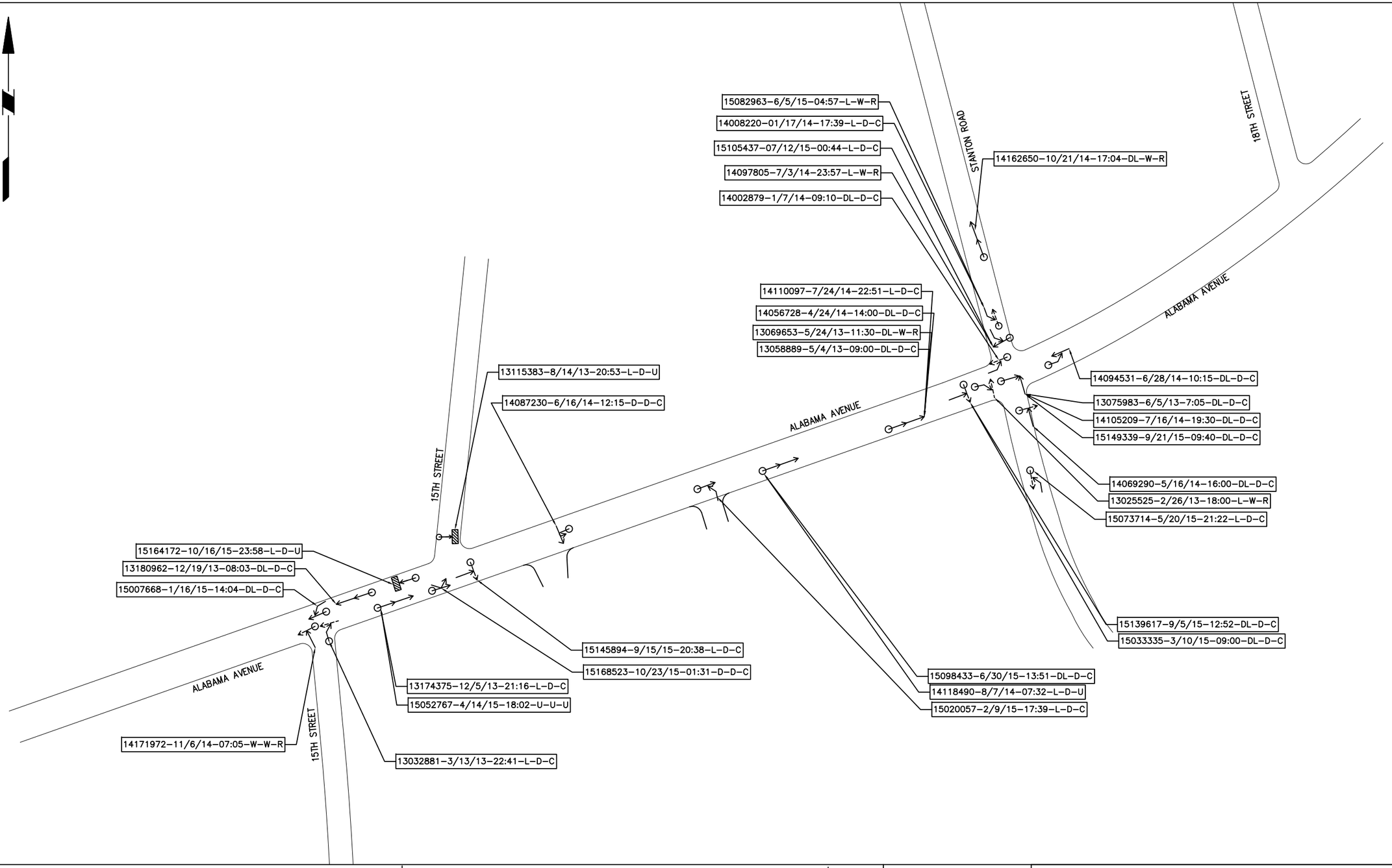
A crash with a disabling injury occurred between two vehicles traveling northbound on Alabama Avenue, south of R Street. One vehicle sideswiped the other and left the scene. As this crash was a hit-and-run, no information on contributing circumstances was available.

3.2.5.5. 41st Street / Alabama Avenue SE

The sole fatality in the study corridor for the time period studied occurred just south of the intersection of 41st Street and Alabama Avenue. A child following her family members entered Alabama Avenue from between parked cars on the west side to cross midblock to the east side, where she was struck by a southbound vehicle. The Fort Davis Recreation Center is located on the east side of Alabama Avenue in this segment. There are crosswalks approximately one-tenth of a mile north and south of the crash site, but none where the crash occurred.

3.2.5.6. Massachusetts Avenue / Alabama Avenue SE

Two crashes with a disabling injury occurred near the intersection of Massachusetts Avenue and Alabama Avenue. These both involved vehicles that ran off the roadway and struck a fixed object. Both of these crashes occurred around midnight. One occurred in dry, clear conditions, while the other occurred in snowy conditions, which may have contributed to the crash.



Legend

COMPLAINT NUMBER – DATE – TIME – ILLUMINATION – SURFACE – WEATHER

ILLUMINATION:
- DL – DAYLIGHT
- N – DARK (NOT LIGHTED)
- L – DARK (LIGHTED)
- W – DAWN
- S – DUSK
- U – UNKNOWN

SURFACE:
- D – DRY
- W – WET
- S – SNOW
- I – ICE
- U – UNKNOWN

WEATHER:
- C – CLEAR
- R – RAIN
- F – FOG/MIST
- S – SNOW
- H – SLEET/HAIL
- O – OTHER
- U – UNKNOWN

REAR END
SIDESWIPE
LEFT TURN
RIGHT TURN
U–TURN
RIGHT ANGLE
HEAD ON
BACKING HIT MOVING VEHICLE
BACKING HIT PARKED VEHICLE
PARKED VEHICLE
FIXED OBJECT
INJURY
FATALITY
LEFT TURN PED
RIGHT TURN PED
STRAIGHT PED
LEFT TURN BIKE
RIGHT TURN BIKE

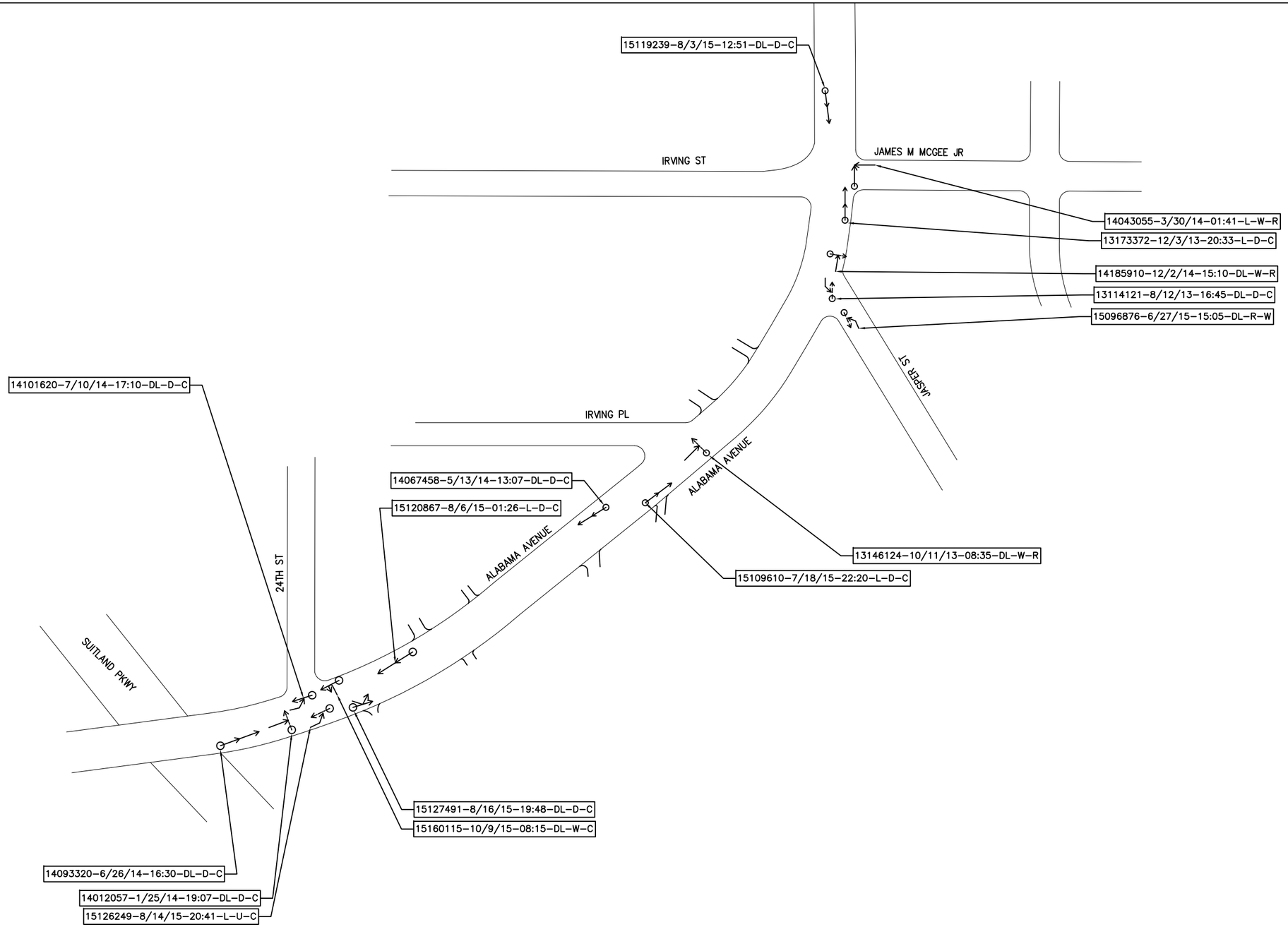
PLOTTED CRASHES: 32

Alabama Avenue Corridor Safety Study
Cluster # 1

COLLISION DIAGRAM

2013–2015

FIGURE 7



Legend

COMPLAINT NUMBER – DATE – TIME – ILLUMINATION – SURFACE – WEATHER

ILLUMINATION:
- DL – DAYLIGHT
- N – DARK (NOT LIGHTED)
- L – DARK (LIGHTED)
- W – DAWN
- S – DUSK
- U – UNKNOWN

SURFACE:
- D – DRY
- W – WET
- S – SNOW
- I – ICE
- U – UNKNOWN

WEATHER:
- C – CLEAR
- R – RAIN
- F – FOG/MIST
- S – SNOW
- H – SLEET/HAIL
- O – OTHER
- U – UNKNOWN

REAR END	BACKING HIT MOVING VEHICLE	LEFT TURN PED
SIDESWIPE	BACKING HIT PARKED VEHICLE	RIGHT TURN PED
LEFT TURN	PARKED VEHICLE	STRAIGHT PED
RIGHT TURN	FIXED OBJECT	LEFT TURN BIKE
U–TURN	INJURY	RIGHT TURN BIKE
RIGHT ANGLE	FATALITY	
HEAD ON		

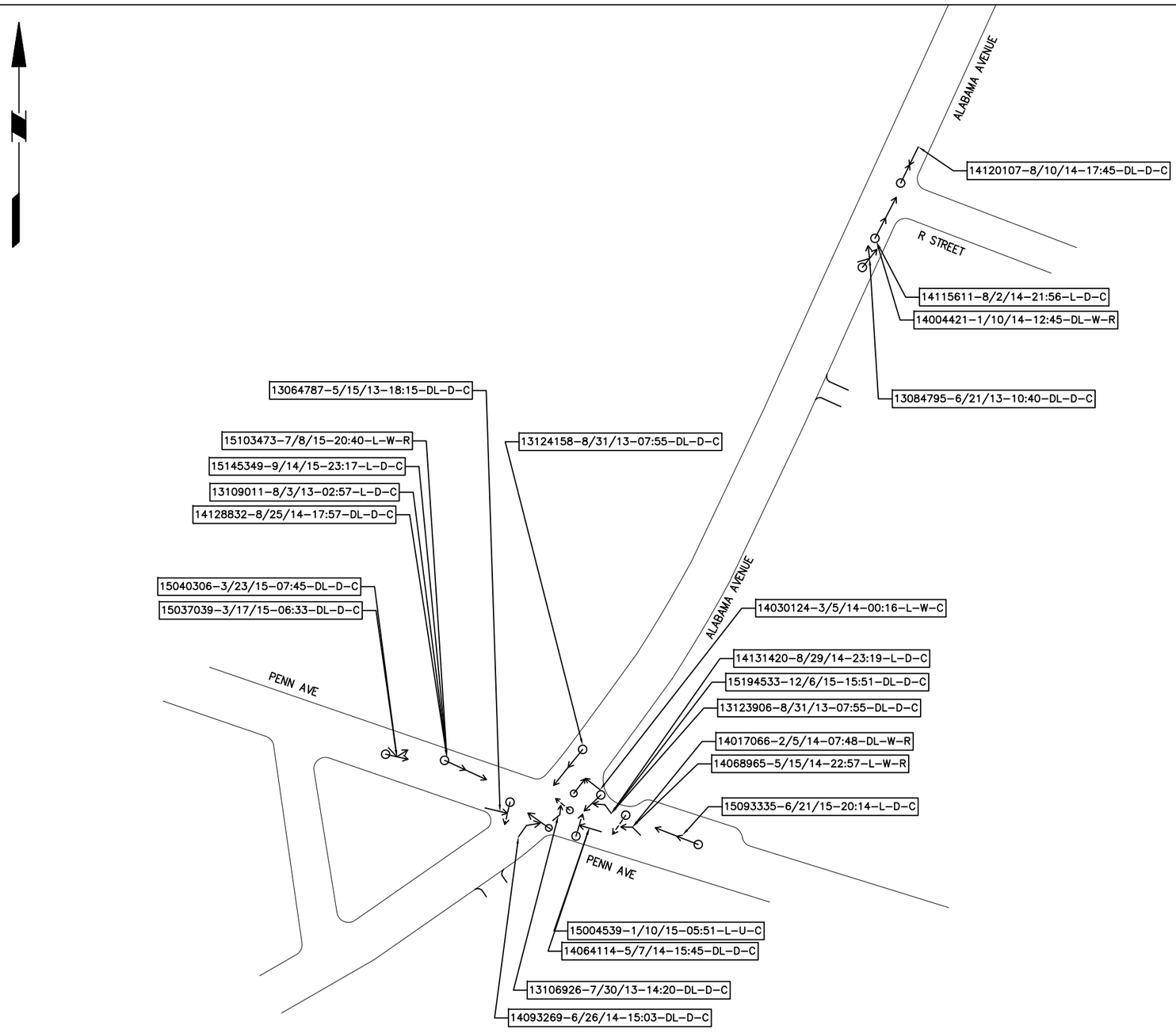
PLOTTED CRASHES: 16

Alabama Avenue Corridor Safety Study Cluster # 2

COLLISION DIAGRAM

2013–2015

FIGURE 8



Legend

COMPLAINT NUMBER – DATE – TIME – ILLUMINATION – SURFACE – WEATHER

ILLUMINATION:
- DL – DAYLIGHT
- N – DARK (NOT LIGHTED)
- L – DARK (LIGHTED)
- W – DAWN
- S – DUSK
- U – UNKNOWN

SURFACE:
- D – DRY
- W – WET
- S – SNOW
- I – ICE
- U – UNKNOWN

WEATHER:
- C – CLEAR
- R – RAIN
- F – FOG/MIST
- S – SNOW
- H – SLEET/HAIL
- O – OTHER
- U – UNKNOWN

REAR END
SIDESWIPE
LEFT TURN
RIGHT TURN
U–TURN
RIGHT ANGLE
HEAD ON

BACKING HIT MOVING VEHICLE
BACKING HIT PARKED VEHICLE
PARKED VEHICLE
FIXED OBJECT
INJURY
FATALITY

LEFT TURN PED
RIGHT TURN PED
STRAIGHT PED
LEFT TURN BIKE
RIGHT TURN BIKE

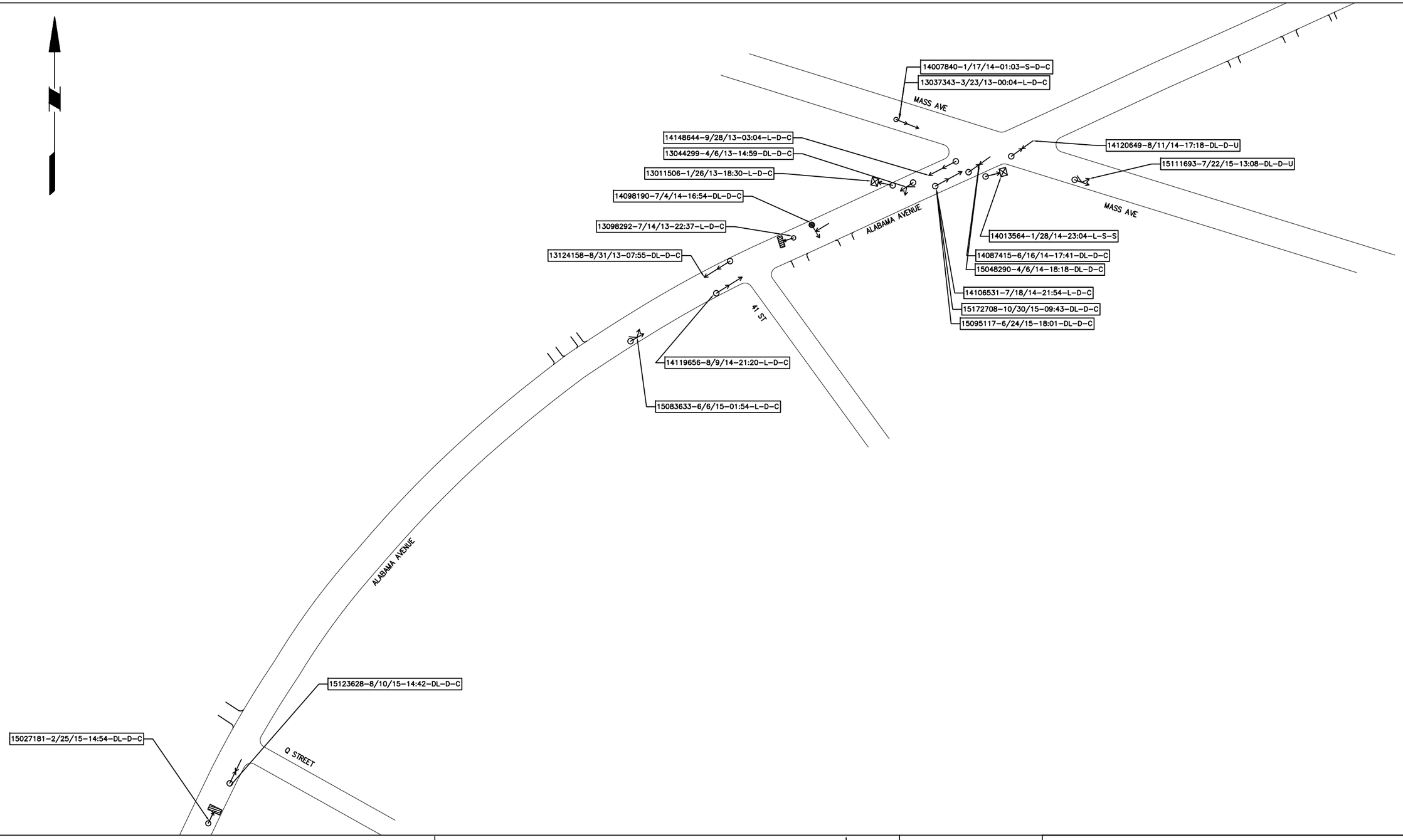
PLOTTED CRASHES: 23

Alabama Avenue Corridor Safety Study
Cluster # 3 Page 1 of 3

COLLISION DIAGRAM

2013–2015

FIGURE 9



Legend

COMPLAINT NUMBER – DATE – TIME – ILLUMINATION – SURFACE – WEATHER

ILLUMINATION:
- DL – DAYLIGHT
- N – DARK (NOT LIGHTED)
- L – DARK (LIGHTED)
- W – DAWN
- S – DUSK
- U – UNKNOWN

SURFACE:
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- W – WET
- S – SNOW
- I – ICE
- U – UNKNOWN

WEATHER:
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- R – RAIN
- F – FOG/MIST
- S – SNOW
- H – SLEET/HAIL
- O – OTHER
- U – UNKNOWN

REAR END
SIDESWIPE
LEFT TURN
RIGHT TURN
U–TURN
RIGHT ANGLE
HEAD ON
BACKING HIT MOVING VEHICLE
BACKING HIT PARKED VEHICLE
PARKED VEHICLE
FIXED OBJECT
INJURY
FATALITY
LEFT TURN PED
RIGHT TURN PED
STRAIGHT PED
LEFT TURN BIKE
RIGHT TURN BIKE

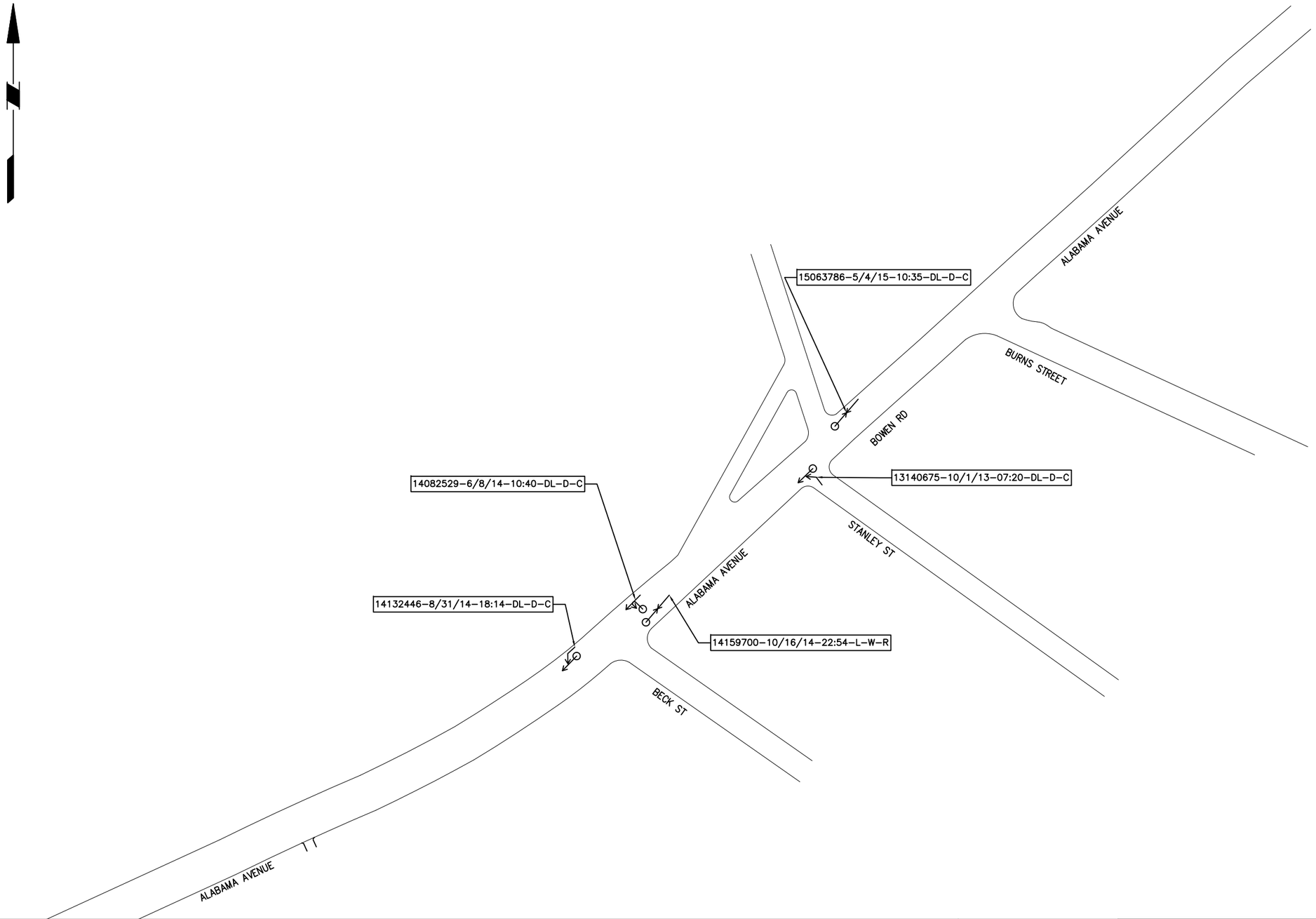
PLOTTED CRASHES 20

Alabama Avenue Corridor Safety Study
Cluster # 3 Page 2 of 3

COLLISION DIAGRAM

2013–2015

FIGURE 10



Legend

COMPLAINT NUMBER – DATE – TIME – ILLUMINATION – SURFACE – WEATHER

ILLUMINATION:
DL – DAYLIGHT
N – DARK (NOT LIGHTED)
L – DARK (LIGHTED)
W – DAWN
S – DUSK
U – UNKNOWN

SURFACE:
D – DRY
W – WET
S – SNOW
I – ICE
U – UNKNOWN

WEATHER:
C – CLEAR
R – RAIN
F – FOG/MIST
S – SNOW
H – SLEET/HAIL
O – OTHER
U – UNKNOWN

REAR END
SIDESWIPE
LEFT TURN
RIGHT TURN
U–TURN
RIGHT ANGLE
HEAD ON
BACKING HIT MOVING VEHICLE
BACKING HIT PARKED VEHICLE
PARKED VEHICLE
FIXED OBJECT
INJURY
FATALITY
LEFT TURN PED
RIGHT TURN PED
STRAIGHT PED
LEFT TURN BIKE
RIGHT TURN BIKE

PLOTTED CRASHES: 5

Alabama Avenue Corridor Safety Study
Cluster # 3 Page 3 of 3

COLLISION DIAGRAM

2013–2015

FIGURE 11

4.0 TRAFFIC DATA

Data was collected to establish a comprehensive understanding of existing travel conditions and traffic operations along Alabama Avenue. This data analysis effort was combined with a field review of existing conditions and observations during peak periods to identify existing issues, inform the traffic analyses, and calibrate the Existing Conditions traffic model.

4.1. Data Collection

Existing traffic data established the baseline conditions (vehicular and pedestrian volumes, intersection and lane geometry, average travel times, etc.) upon which traffic conditions were analyzed and future traffic demand was projected.

New traffic data were collected as follows:

- Video camera data collection (intersection counts)
- Automatic Traffic Recorders (ATRs)
- Travel time runs
- Parking regulations inventory and utilization at selected locations
- Field measurements of roadway geometry and lane configurations
- Traffic signal timings from DDOT
- Site visits and field observations

4.1.1. Intersection Counts

New intersection turning movement (autos, bicycles, and heavy vehicles) and crosswalk pedestrian counts were performed during the weekday morning (6:00 to 9:00 AM) and evening (4:00 to 7:00 PM) peak periods at the following key intersections:

1. Randle Place /Alabama Avenue SE
2. 11th Place / Alabama Avenue SE
3. 13th Street /Alabama Avenue SE
4. Stanton Road /Alabama Avenue SE
5. Irving Street– Jasper Street /Alabama Avenue SE
6. Naylor Road /Alabama Avenue SE
7. Good Hope Road /Alabama Avenue SE
8. Branch Avenue /Alabama Avenue SE
9. 36th Place /Alabama Avenue SE
10. 38th Street /Alabama Avenue SE

11. Pennsylvania Avenue /Alabama Avenue SE
12. Ridge Road /Alabama Avenue SE

These intersections are shown in **Figure 13**.

The weekday counts were performed on Thursday, November 3, 2016, on a typical school day utilizing video cameras. Supplemental counts at 36th Place / Alabama Avenue were collected on Wednesday, December 14, 2016. Supplemental counts at Jasper Street / Alabama Avenue were collected on Tuesday, January 10, 2017. The intersection summary reports are included in Appendix A.

Figure 13 – Study Intersections

4.1.2. Automated Traffic Recorders

ATRs were installed at 10 locations within the study area for a continuous seven-day period to obtain daily and hourly variations in traffic volumes and verify the intersection counts. These ATRs also collected the speed of each vehicle.

Thirteen of the 15 bi-directional ATRs collected data from along Alabama Avenue on Tuesday, November 29, 2016, through Tuesday, December 6, 2016, at the following locations:

- 500 block, between 5th Street and 6th Street SE
- 700 block, between 8th Street (west leg) and 8th Street (east leg) SE
- 800 block, between Wheeler Road and 9th Street SE
- 1200 block, between 12th Street and 13th Street SE
- 1500 block, between 15th Place and Stanton Road SE
- 1700 block, between Stanton Road and 18th Street/Stanton Terrace SE
- 2400 block, between Suitland Parkway and Irving Place SE
- 2800 block, between Good Hope Road and 30th Street SE
- 3200 block, between 32nd Street and 32nd Place SE
- 3300 block, between Branch Avenue and 34th Street SE
- 3700 block, between 37th Street and 38th Street SE
- 4100 block, between 41st Street and Massachusetts Avenue SE
- 4300 block, between Burns Street and Ridge Road SE

The remaining two bi-directional ATRs collected data on Alabama Avenue from Wednesday, December 14, 2016, through Wednesday, December 21, 2016, at the following locations:

- 2100 block, between 21st Street and 22nd Street SE
- 3900 block, between R Street and Q Street SE

The ATR summary reports are included in Appendix B.

4.1.3. Travel Time and Delay Runs

Travel time and delay runs were conducted along Alabama Avenue during the weekday morning and evening peak periods to identify the running time of the traffic and validate the stopped delay at intersections. This data collection was performed on Tuesday, December 20, 2016, and Wednesday, December 21, 2016, with six runs performed in each direction during each time period. The total corridor length is approximately five miles long.

During the AM peak period, the average corridor travel time was 19 minutes in the northbound direction (average travel speed of 16 mph) with a total delay of approximately 8 minutes per vehicle. In

the southbound direction, the average corridor travel time was also 19 minutes (average travel speed of 16 mph), again with a total delay of approximately 8 minutes per vehicle.

During the PM peak period, the average corridor travel time was 20 minutes in the northbound direction (average travel speed of 15 mph) with a total delay of approximately 8 minutes per vehicle. In the southbound direction, the average corridor travel time was 22 minutes (average travel speed of 14 mph), with a total delay of approximately 10 minutes per vehicle.

Overall, both travel directions experienced similar travel times, which shows that there is little directionality with respect to congestion and delays along the corridor. However, the PM peak period experiences slightly more delay and lower average travel speeds than the AM peak period. Detailed backup data for the travel time runs are included in Appendix C.

4.1.4. Parking Inventory and Utilization

Parking regulations vary throughout the study corridor. Street parking is generally allowed, while there are some time-of-day restrictions. The utilization of on-street parking also varies along the corridor, with it being more heavily used in the denser residential areas and near institutional land uses such as schools, recreation centers, and retail. Examples of parking conditions along the corridor are shown in **Figure 14**.

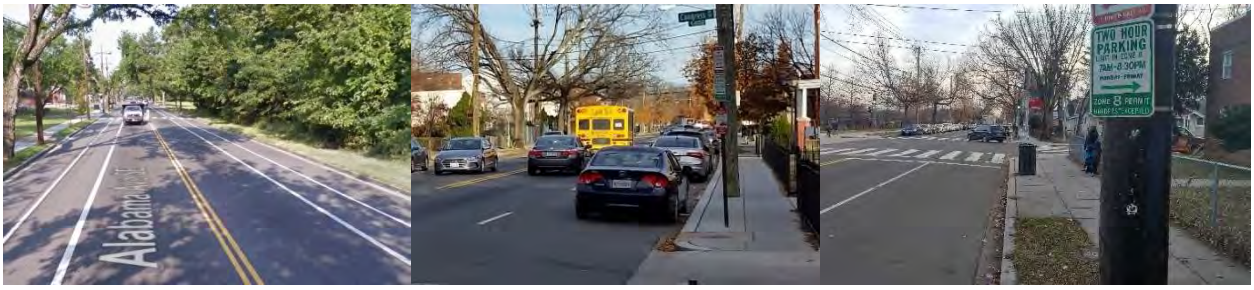


Figure 14 – Examples of Parking Configurations and Signs on Alabama Avenue SE

Planning-level recommendations for parking restrictions to potentially accommodate bike lanes and/or curb extensions require empirical data regarding parking utilization for the entire Alabama Avenue corridor. To accomplish this objective, the project team conducted field observations of parking capacity and parking utilization for segments of Alabama Avenue. The field observations were conducted on weeknights (Thursday June 1, 2017) and (August 19, 2017) beginning at 9:30 pm and 6:30pm, to capture residential parking, and on a Sunday morning (June 4, 2017) beginning at 9:30 am, to capture additional church-related curb parking. Parking capacity was collected for all blocks of Alabama Avenue, but

parking utilization (number of parked vehicles) was only collected on blocks with recommendations that would impact parking.

Based on the field observations, one segment was identified where weeknight parking utilization seems to preclude restricting curb parking – R Street to Q Street. Two other blocks that raise concern in this regard are Congress Place to 15th Street, and 12th Street to 13th Street.

Several blocks have significant parking utilization on Sunday morning and at a few other locations, the observed parking utilization exceeded estimated capacity (e.g., Randle Place to 7th Street) due to illegal parking such as parking in bus stops.

Table 7 | Alabama Avenue SE Parking Utilization Field Survey

	Eastbound			Westbound		
	Capacity	# Vehicles Parked		Capacity	# Vehicles Parked	
		Weeknight	Sunday		Weeknight	Sunday
MLK to 10th Place						
MLK to 5th Street	0	0	0	0	0	0
5th Street to 6th Street	8	1	1	8	1	1
6th Street to Randle Place	0	0	3	0	0	4
Randle Place to 7th Street	11	0	16	21	2	16
7th Street to 8th Street	0	0	0	0	0	0
8th Street to 8th Street	0	0	0	2	1	1
8th Street to Wheeler Road	0	0	0	2	0	0
Wheeler Road to 9th Street	2	0	2	2	0	1
9th Street to 9th Place	1	0	0	0	0	2
9th Place to 10th Place	7	-	-	7	-	-
10th Place to Bruce Place						
10th Place to 11th Place	3	1	3	3	0	0
11th Place to 12th Street	7	2	2	16	1	0
12th Street to 13th Street	30	15	18	10	4	5
13th Street to Congress Street	25	0	0	25	0	2
Congress Street to Congress Place	6	1	0	0	0	0

	Eastbound			Westbound		
	Capacity	# Vehicles Parked		Capacity	# Vehicles Parked	
		Weeknight	Sunday		Weeknight	Sunday
Congress Place to 15th Street	12	7	8	5	4	11
15th Street to 15th Place	0	-	-	0	-	-
15th Place to Stanton Road	8	-	-	24	-	-
Stanton Road to 18th Street	0	-	-	0	-	-
18th Street to Stanton Terr	3	0	0	0	0	0
Stanton Terr to 18th Place	12	0	0	14	3	3
18th Place to Frederick Douglas Place	42	16	16	33	9	8
Frederick Douglas Place to Bruce Place	11	0	0	8	3	2
Bruce Place to 30th Street						
Bruce Place to 22nd Street/Jasper Street	0	0	0	5	0	0
22nd Street/Jasper Street to 23rd Street	0	0	0	0	0	0
23rd Street to 24th Street	24	0	0	3	0	0
24th Street to Irving Place	24	9	8	17	1	4
Irving Place to Jasper Street	3	0	0	2	0	0
Jasper Street to Irving Street/James McGee Jr St	0	0	0	0	0	0
Irving Street/James McGee St to Hartford Street	9	0	5	9	0	2
Hartford Street to Knox Place/Gainesville Street	4	0	0	6	0	0
Knox Place/Gainesville Street to Ainger Place	9	0	6	9	0	8
Ainger Place to Naylor Road	21	-	-	30	-	-
Naylor Road to Good Hope Road	0	-	-	0	-	-
Good Hope Road to 30th Street	0	-	-	0	-	-
30th St to R St						
30th Street to 31st Street	4	0	0	24	0	0
31st Street to 31st Place	11	0	0	7	0	0

	Eastbound			Westbound		
	Capacity	# Vehicles Parked		Capacity	# Vehicles Parked	
		Weeknight	Sunday		Weeknight	Sunday
31st Place to 32nd Street	14	0	0	7	0	0
32nd Street to 32nd Place	2	-	-	2	-	-
32nd Place to 33rd Street	12	-	-	8	-	-
33rd Street to Branch Ave	0	-	-	0	-	-
Branch Ave to 34th Street	0	-	-	0	-	-
34th Street to 36th Street	0	-	-	0	-	-
36th Street to 36th Place	12	-	-	12	-	-
36th Place to 37th Street	8	-	-	16	-	-
37th Street to 38th Street	18	-	-	13	-	-
38th Street to Pennsylvania Ave	0	-	-	0	-	-
Pennsylvania Ave to R Street	16	-	-	15	-	-
R Street to Ridge Road						
R Street to Q Street	24	25	22	27	12	4
Q Street to 41st Street	33	3	3	29	1	0
41st Street to Mass Ave	26	0	4	8	0	3
Mass Ave to Boulevard Lane	11	0	11	16	0	10
Boulevard Lane to Barker Lane	2	0	1	6	0	4
Barker Lane to Beck Street	23	3	4	28	0	1
Beck Street to Stanley Street	8	0	0	10	0	0
Stanley Street to Burns Street	16	0	0	4	0	0
Burns Street to Ridge Road	4	0	0	16	8	6

4.2. Vehicle Volumes

Based on the volume data from the turning movement counts and ATRs, the weekday morning (AM) and evening (PM) peak hours were determined to be the following:

- Weekday AM peak hour: 7:30 to 8:30 AM
- Weekday PM peak hour: 4:45 to 5:45 PM

The 2016 Existing Condition traffic volume diagrams for the AM peak hour are shown in **Figure 15** (southern section) and **Figure 16** (northern section), and the 2016 Existing Condition traffic volume diagrams for the PM peak hour are shown in **Figure 17** (southern section) and **Figure 18** (northern section).

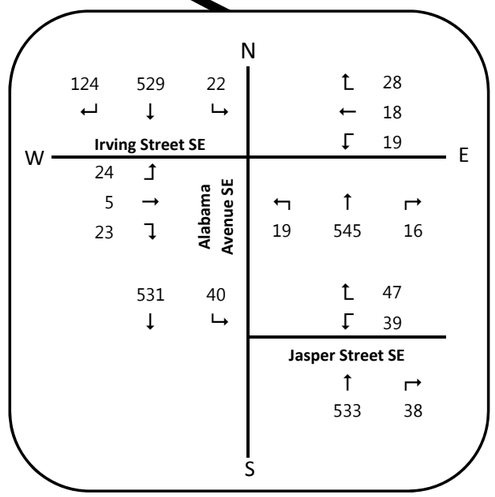
4.3. Bicycle and Pedestrian Volumes

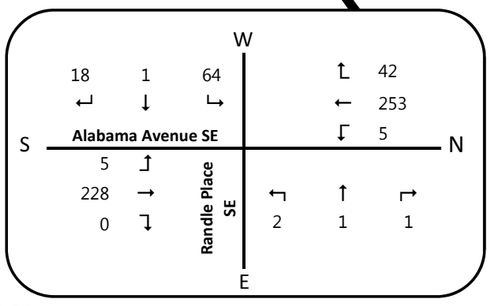
Bicycle turning movement counts and pedestrian crosswalk volumes were collected at the same time as the vehicle turning movement counts. The peak hour volumes used for bicycles and pedestrians were based on the vehicle traffic peak hours. The pedestrian peak hour volumes are shown in **Figure 19**. The bicycle peak hour volumes are shown in **Figure 20** (southern section) and **Figure 21** (northern section). In general, bicycle volumes were very low, with no more than one peak hour bicycle observed at any one intersection approach during the peak hour, and with many intersections having no recorded bicycle activity during the peak periods. Pedestrian volumes peaked near activity centers such as schools. These volumes were used for the existing intersection analysis, described in further detail later in this report.

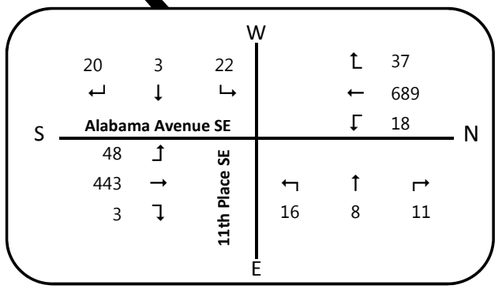
LEGEND

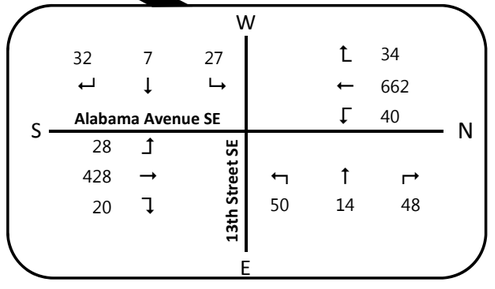
xxxx Vehicles Per Hour

X Intersection Number









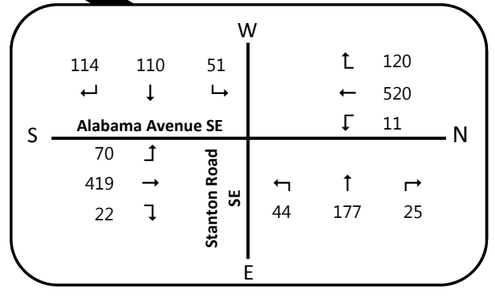


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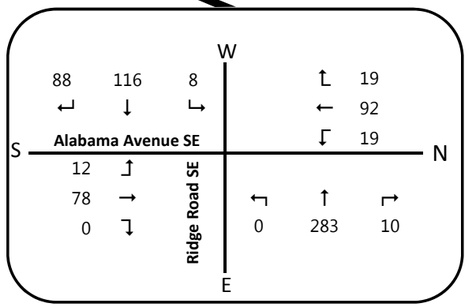
Figure 15

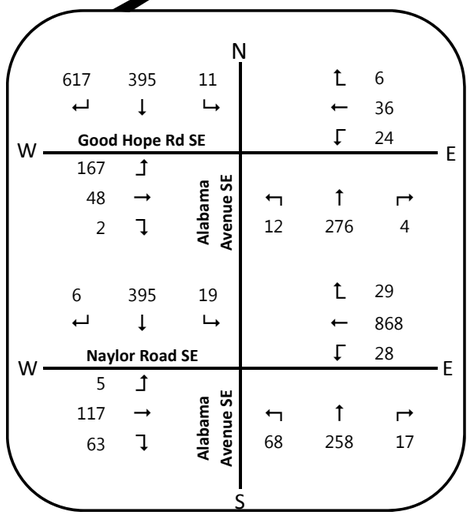
2016 Existing Conditions Traffic Volumes
Weekday AM Peak Hour (7:30 AM to 8:30 AM)

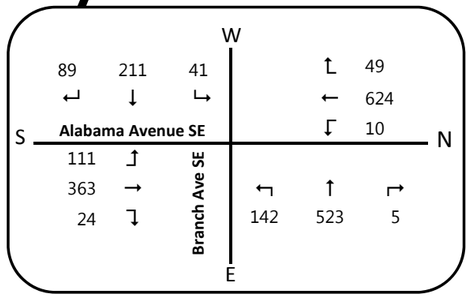
LEGEND

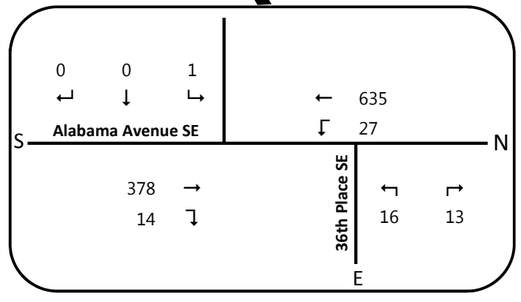
xxxx Vehicles Per Hour

X Intersection Number









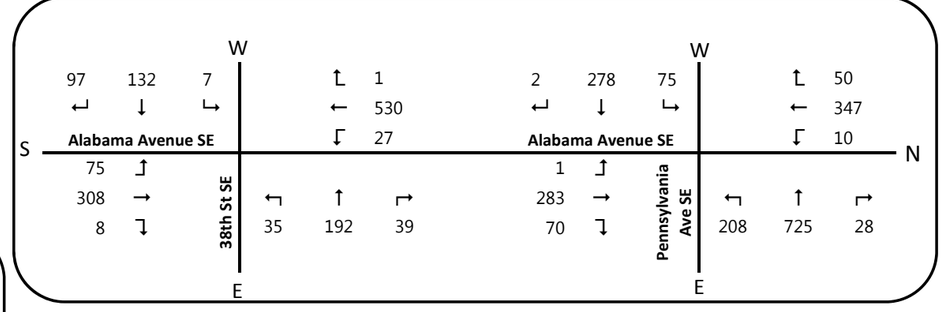


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Figure 16

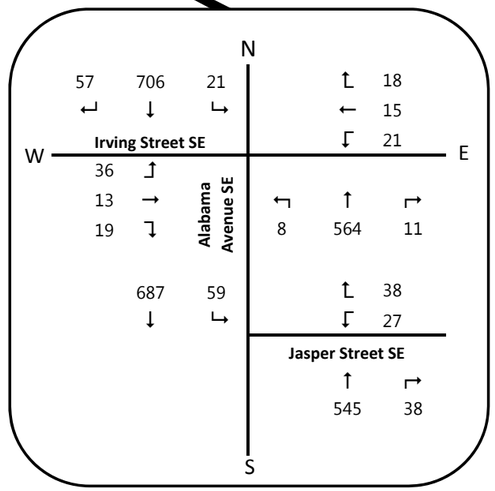
2016 Existing Conditions Traffic Volumes

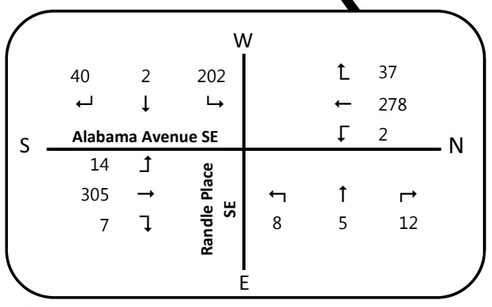
Weekday AM Peak Hour (7:30 AM to 8:30 AM)

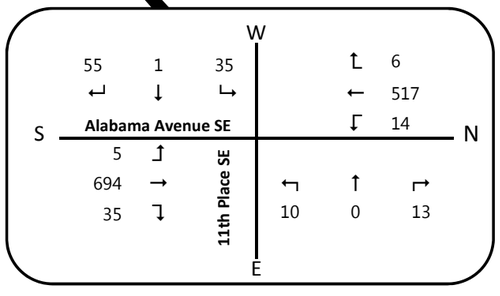
LEGEND

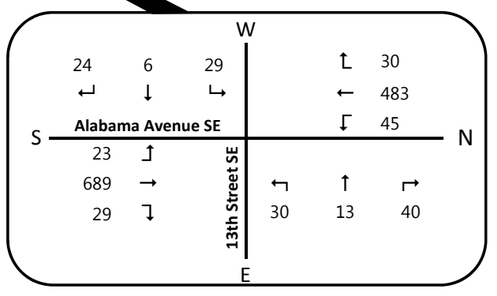
xxxx Vehicles Per Hour

X Intersection Number









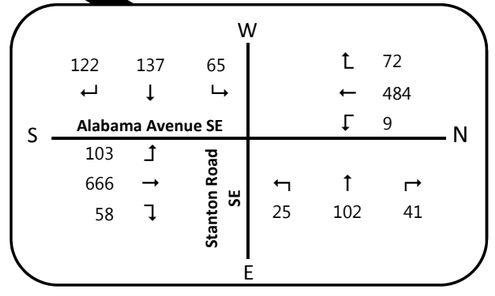


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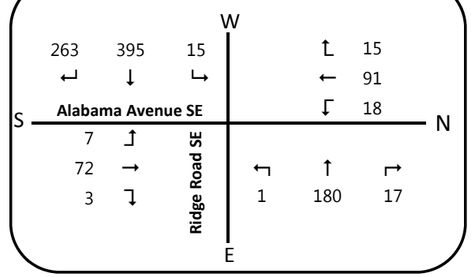
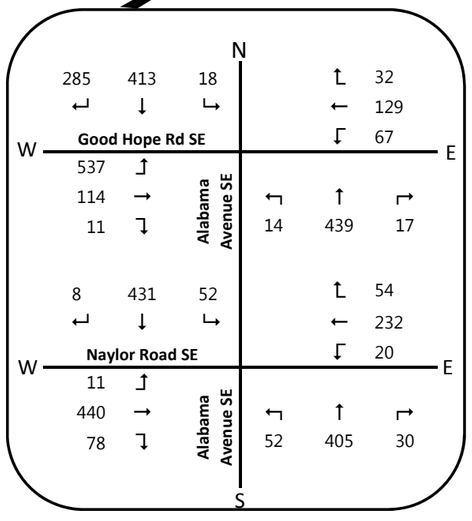
Figure 17
2016 Existing Conditions Traffic Volumes
Weekday PM Peak Hour (4:45 PM to 5:45 PM)

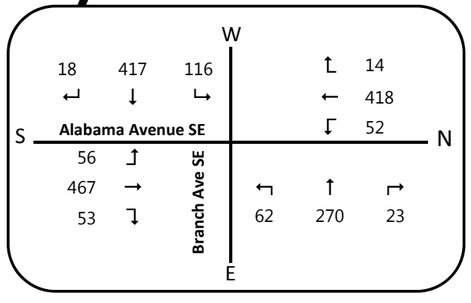
LEGEND

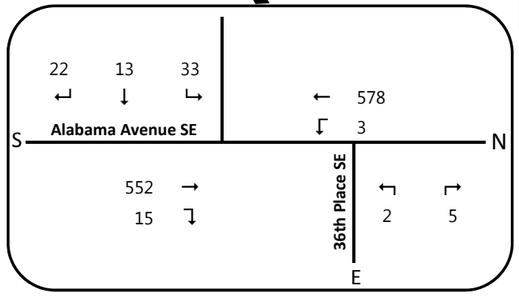
xxxx Vehicles Per Hour

X Intersection Number









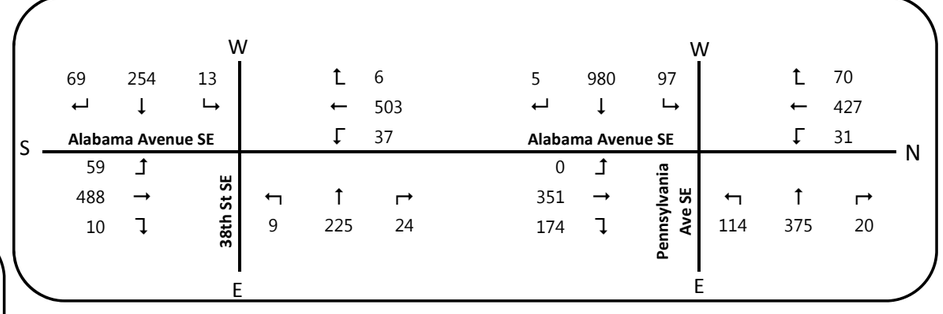


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Figure 18

2016 Existing Conditions Traffic Volumes

Weekday PM Peak Hour (4:45 PM to 5:45 PM)

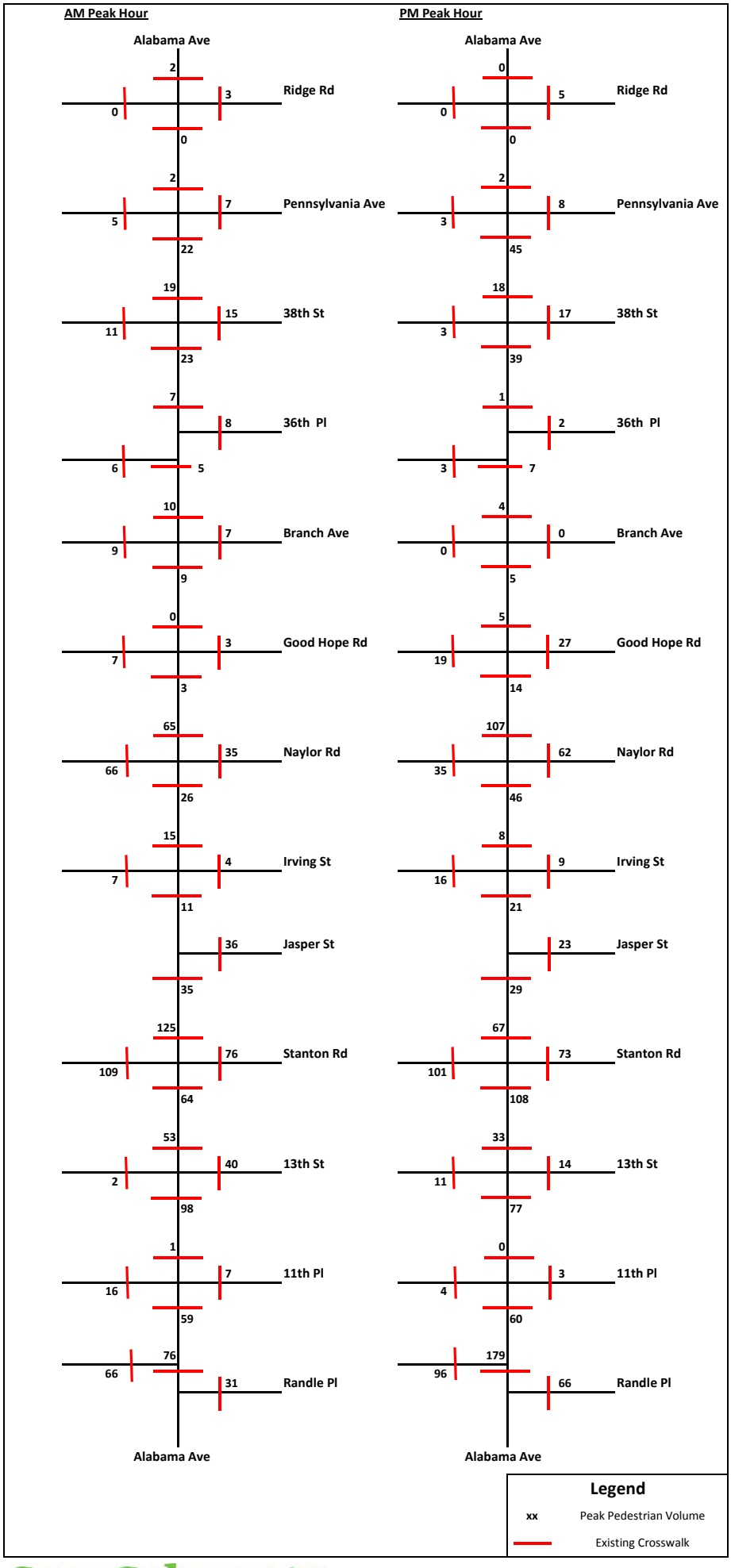

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Figure 19

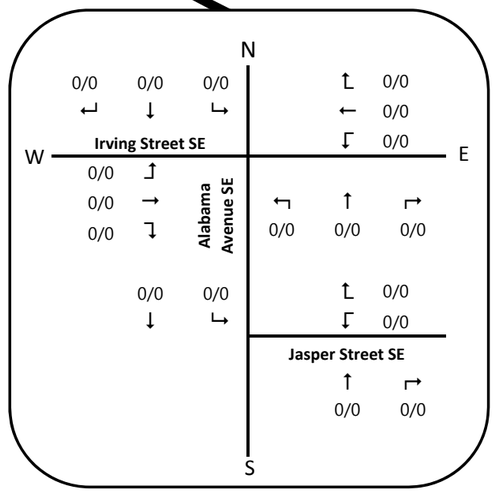
2016 Existing Condition Pedestrian Volumes

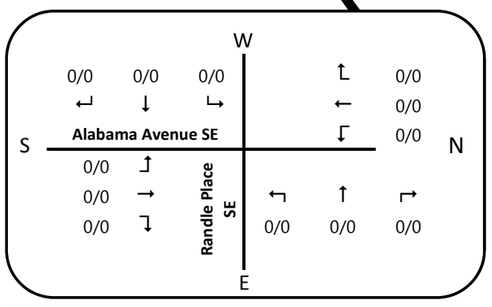
Weekday AM and PM Peak Hours

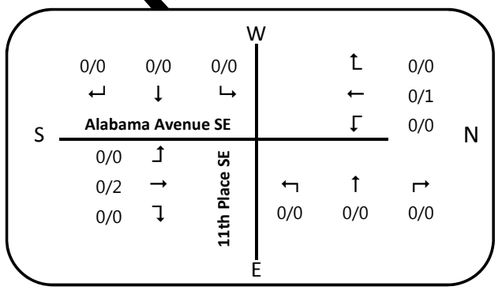
LEGEND

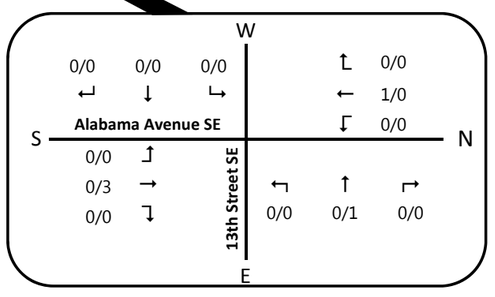
xx/xx AM/PM Peak Hour Volume

X Intersection Number









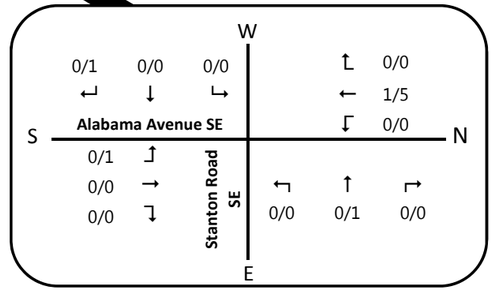


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Figure 20
Weekday AM and PM Peak Hours
2016 Existing Conditions Bicycle Volumes

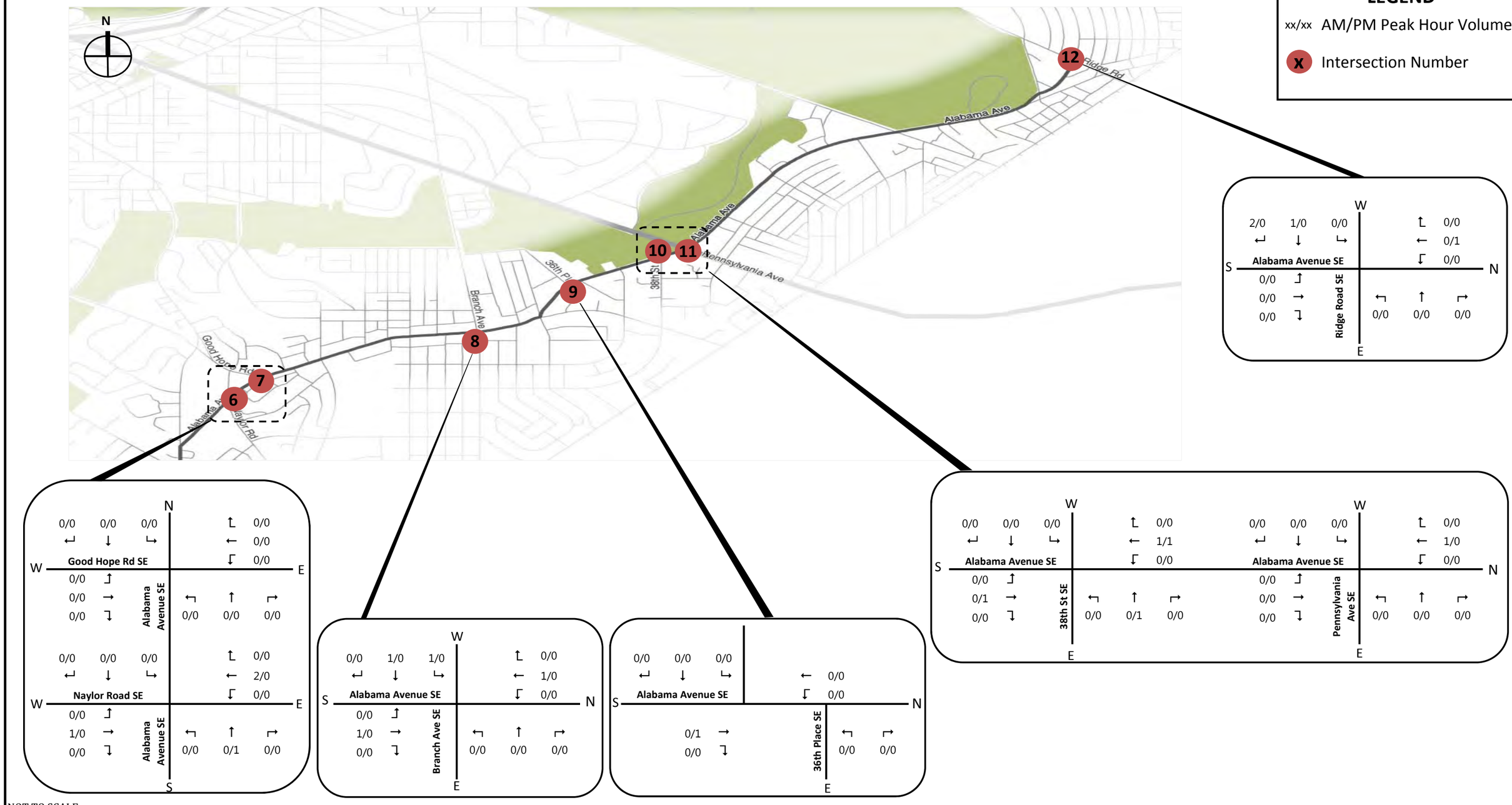

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Figure 21
Weekday AM and PM Peak Hours
2016 Existing Conditions Bicycle Volumes

4.4. Speed Data

Speed data from the Automated Traffic Enforcement Unit (ATEU) was retrieved for the 3100 block of Alabama Avenue. This data is taken from an automated speed enforcement camera and was provided by DDOT. The cameras record the number of passing vehicles and count the vehicles traveling over the speed limit and the vehicles traveling faster than the "trigger speed", which is defined as 11 MPH over the speed limit. Vehicles traveling at the trigger speed or faster are deemed "violations."

Speed data at additional locations were also collected by the ATR machines. This speed data was analyzed in a similar manner to the data received from MPD. This data is summarized in **Table 8**.

Table 8 | Speed Data

Block	Direction	Speed Limit	Above Speed Limit	>10 mph over Speed Limit
500	NB	25	39%	1%
	SB	25	19%	1%
700	NB	25	53%	4%
	SB	25	16%	0%
800	NB	25	52%	3%
	SB	25	46%	9%
1200	NB	25	58%	5%
	SB	25	58%	5%
1500	NB	25	64%	15%
	SB	25	47%	6%
1700	NB	25	56%	3%
	SB	25	45%	2%
2100	NB	25	40%	2%
	SB	25	53%	4%
2400	NB	25	18%	1%
	SB	25	87%	45%
2800	NB	25	50%	6%
	SB	25	65%	19%
3100*	NB	25	55%	5%
	SB	25	69%	7%
3200	NB	25	52%	5%
	SB	25	73%	15%
3300	NB	25	64%	3%
	SB	25	16%	1%
3700	NB	25	38%	2%
	SB	25	53%	4%
3900	NB	30	23%	0%
	SB	30	20%	0%

Block	Direction	Speed Limit	Above Speed Limit	>10 mph over Speed Limit
4100	NB	30	35%	2%
	SB	30	52%	7%
4300	NB	25	71%	6%
	SB	25	71%	3%

Notes: NB = Northbound Alabama Avenue; SB = Southbound Alabama Avenue.
* Indicates location where speed data was collected from ATEU speed camera survey by MPD. All other locations give speed data that was collected by ATR machines.

Speeding vehicles along Alabama Avenue are a concern, as shown in **Table 8**. The posted speed limit for most of the roadway is 25 MPH, but is 30 MPH north of Pennsylvania Avenue where Alabama Avenue narrows to two lanes. Based on the data collection, throughout most of the corridor, more than half of vehicles traveling either northbound or southbound were traveling over the speed limit. The exceptions are in the denser areas in the southern part of the corridor near MLK Avenue and the schools adjacent to that intersection, and in various uphill sections along the corridor.

Another notable area where speeds are relatively lower is in the 3900 Block, measured between Q Street and R Street. This segment is in the two-lane section of Alabama Avenue, and it appears that the road diet has the desired effect of lowering speeds, albeit slightly. Though the posted speed limit is 30 MPH, only three percent of vehicles were traveling faster than 35 MPH, compared with other segments between the 800 and 1500 Blocks and the 2400 and 3200 Blocks where more than five percent of vehicles were traveling faster than 35 MPH.

The downhill, southbound segment in the 2400 Block, measured in front of Garfield Elementary School, was the segment with the most measured speeding violations; 87 percent of vehicles were traveling faster than the 25 MPH speed limit, and nearly half of those were traveling more than 11 MPH over the speed limit. This speeding also occurred during the school drop-off/pick-up times, with more than 80 percent of vehicles speeding during the 8-9 AM and 3-4 PM hours that coincide with school schedules.

High speeds are related to the geometric design of Alabama Avenue, as most of the roadway is a four-lane cross-section with 12-foot wide lanes. Major intersections along the corridor are relatively wide and characteristic of suburban, low-density land uses with multiple turning lanes and long waits and crossings for pedestrians.

For each segment of the corridor studied, the 85th percentile speeds in the northbound and southbound directions were also tabulated. The 85th percentile speed is defined by the *DDOT Performance Measures Toolbox Report* as "the speed at or below which 85 percent of motor vehicles travel". The 85th percentile

speed is an industry standard metric for measuring operating speeds on a roadway. These speeds are also shown on **Figure 22**.

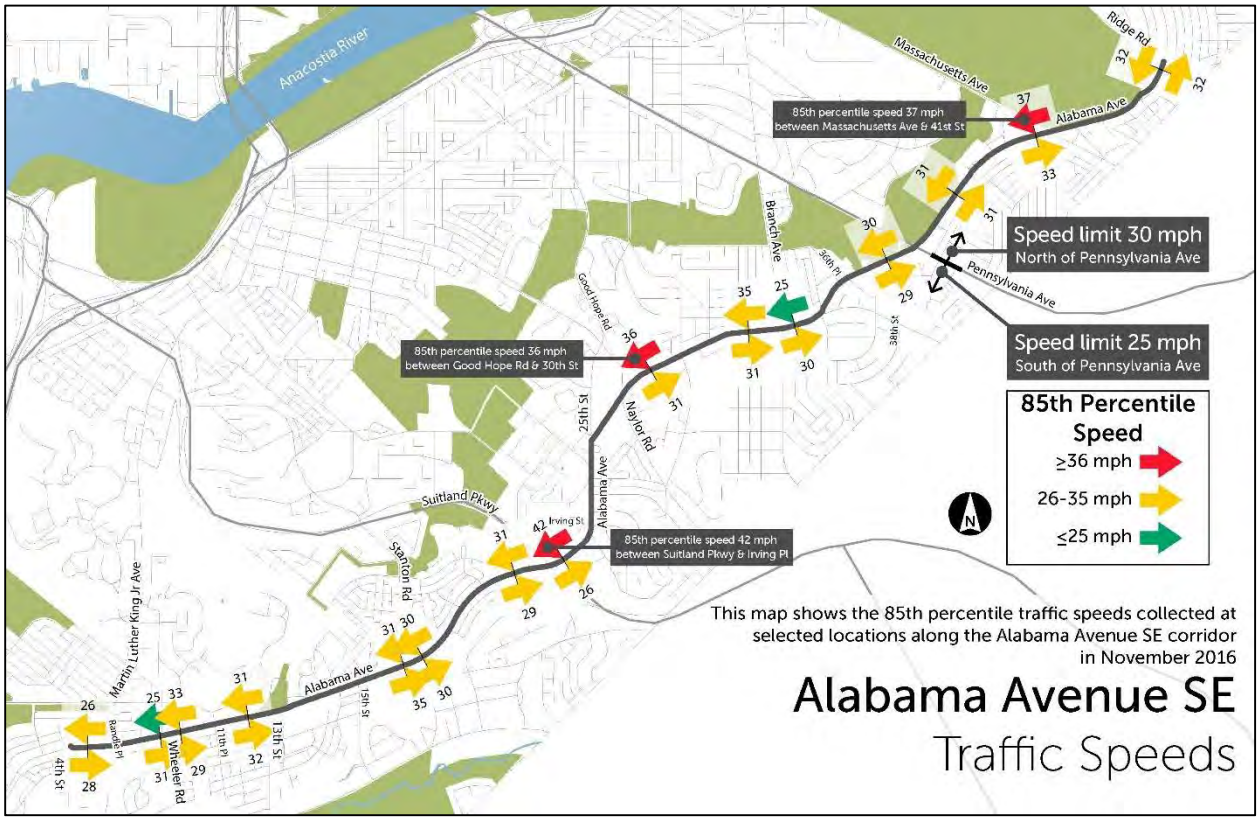


Figure 22 – 85th Percentile Speeds

4.5. Existing Traffic Operations

Intersection capacity analyses were performed at selected locations within the study area using the Synchro 9 software package.

The following 12 intersections were analyzed and are shown in **Figure 13**:

1. Randle Place /Alabama Avenue SE
2. 11th Place / Alabama Avenue SE
3. 13th Street /Alabama Avenue SE
4. Stanton Road /Alabama Avenue SE
5. Irving Street– Jasper Street /Alabama Avenue SE
6. Naylor Road /Alabama Avenue SE
7. Good Hope Road /Alabama Avenue SE
8. Branch Avenue /Alabama Avenue SE
9. 36th Place /Alabama Avenue SE
10. 38th Street /Alabama Avenue SE
11. Pennsylvania Avenue /Alabama Avenue SE
12. Ridge Road /Alabama Avenue SE

These locations were selected because they serve as critical gateways to the study area and/or were identified early-on as locations requiring significant capacity or safety improvements. In advance of the detailed intersection capacity analyses in Synchro, the project team performed site visits during the weekday AM and PM peak periods to observe traffic conditions and record sample queue lengths so that the Synchro models can be calibrated to reflect actual field conditions. Detailed observations, results and discussion are located in Chapter 5 – Traffic Analysis (see page 45). A complete summary of the field observations is included in Appendix D. The traffic analysis sheets from Synchro are available in Appendix E.

5.0 TRAFFIC ANALYSIS

The traffic analysis results, coupled with the field observations, identify existing traffic operational deficiencies along the corridor. The analysis also establishes an Existing Conditions baseline to which geometric changes associated with recommended improvements can be compared to determine their potential impacts on traffic operations. Additionally, a Future Conditions analysis was performed for the 2026 horizon year to determine if future traffic growth would result in new traffic deficiencies not captured in the Existing Conditions analysis.

5.1. Existing Traffic

Intersection capacity analyses were performed at selected locations within the study area using the Synchro 9 software package, which provides average control delay and Level of Service (LOS) for each lane group and for the overall intersection. LOS is an evaluation of the quality of operation of an intersection and represents the average delay a driver experiences while traveling through an intersection. LOS is dependent on a range of factors such as traffic volumes, lane configurations, and traffic control. Mid-LOS D or better (45 seconds of delay or less) is typically considered “acceptable” operating conditions.

5.1.1. Model Calibration and Field Observations

In advance of the detailed intersection capacity analyses in Synchro, the project team performed site visits during the weekday AM and PM peak periods to observe traffic conditions and record sample queue lengths so that the Synchro models can be calibrated to reflect actual field conditions. The observations showed that in general, the cross-street queues were generally insignificant during the AM and PM peak periods, with queued traffic typically clearing the intersection during a single signal cycle. However, some limited queuing both along Alabama Avenue and along some cross-streets was observed at the following locations:

AM Peak Period

- Southbound queues on Alabama Avenue spilled back from Branch Avenue SB, with queues extending back to and affecting traffic operations at 36th Street and Suitland Parkway.
- Northbound queues along Alabama Avenue at 13th Street SE.
- Southbound queues along Alabama Avenue at 25th Street and 23rd Street. The southbound queue at 23rd Street SE mixed with the queue of vehicles turning left from Alabama Avenue SE onto the ramp to southbound Suitland Parkway, immediately upstream.
- Eastbound and westbound queues on Naylor Road at Alabama Avenue, with eastbound queues often extending back to Good Hope Road. These queues generally cleared each cycle.

- Eastbound and westbound queues on Branch Road at Alabama Avenue. These queues often took three or four cycles to clear, and westbound queues extended over a quarter of a mile.

PM Peak Period

- Northbound queues on Alabama Avenue in the right-turn lane at Wheeler Road.
- Northbound queues on Alabama Avenue in both travel lanes at Branch Avenue SE and at 13th Street. These queues spilled over to the next few minor unsignalized intersections on Alabama Avenue SE.
- Northbound queues along Alabama Avenue at Branch Avenue SE.
- Southbound queues along Alabama Avenue at Massachusetts Avenue SE.
- Eastbound and westbound queues on Naylor Road at Alabama Avenue, with eastbound queues often extending back to Good Hope Road. These queues cleared each cycle.
- Eastbound and westbound queues on Branch Road at Alabama Avenue. These queues often took three or four cycles to clear, and eastbound queues extended over a quarter of a mile.
- Eastbound queues on 38th Street at Alabama Avenue. This queue often took two or three cycles to clear and extended back to Pennsylvania Avenue.

The models were also calibrated to reflect the aggressive driver behavior observed in the field, such as frequent red-light running and sudden lane changes. Other changes to the Synchro model were made based on field observations, such as adding left-turn or right-turn pockets on single-lane approaches to represent the ability for vehicles to bypass vehicles waiting to turn left or right. The calibration edits made to each intersection are detailed below in **Table 9**.

Table 9 | Synchro Model Calibration

Intersection	**AM Peak Hour**	**PM Peak Hour**
All intersections	Adjusted lost time to eliminate all-red time due to aggressive driver behavior.	
1. Randle Place SE/Alabama Ave	Converted EB approach to 1 left-turn lane and one shared through/right-turn lane to model aggressive driver behavior.	
4. Stanton Rd SE/Alabama Ave	Added EBL/WBL pockets (30') to model field observations.	
10. 38th St SE/Alabama Ave	Added EBL/WBL pockets (30') to model field observations.	
12. Ridge Rd SE/Alabama Ave	No adjustment needed.	Added WBR pocket (30') to model field observations.

5.1.2. Existing Traffic Capacity Analysis

The intersection capacity analysis results for Existing Conditions are in **Table 10**. Lane groups and intersections that operate at LOS E or F are highlighted.

Table 10 | Existing Traffic LOS Results

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1	**Alabama Avenue SE and Randle Place SE**								
	Eastbound	L	0.17	32.0	C	L	0.64	44.2	D
		TR	0.07	31.5	C	TR	0.15	33.8	C
	Westbound	LTR	0.13	54.2	D	LTR	0.32	48.8	D
	Northbound	LTR	0.17	13.7	B	LTR	0.24	10.5	B
	Southbound	LTR	0.28	8.9	A	LTR	0.27	8.4	A
		Intersection		14.9	B	Intersection		20.3	C
2	**Alabama Avenue SE and 11th Place SE**								
	Eastbound	LTR	0.50	43.6	D	LTR	0.59	31.1	C
	Westbound	LTR	0.40	42.9	D	LTR	0.24	22.1	C
	Northbound	T	0.49	5.5	A	T	0.56	8.2	A
		R	0.01	0.0	A	R	0.05	1.1	A
	Southbound	LT	0.57	6.0	A	LT	0.47	7.1	A
		R	0.05	0.8	A	R	0.01	2.7	A
		Intersection		8.6	A	Intersection		9.6	A
3	**Alabama Ave SE and 13th Street SE**								
	Eastbound	L	0.19	42.4	D	L	0.10	26.6	C
		T	0.03	38.3	D	T	0.04	25.3	C
		R	0.15	4.4	A	R	0.09	0.5	A
	Westbound	LTR	0.56	45.2	D	LTR	0.30	20.0	C
	Northbound	L	0.10	7.4	A	L	0.08	7.0	A
		T	0.48	14.9	B	T	0.83	21.2	C
		R	0.04	2.0	A	R	0.05	0.8	A
	Southbound	L	0.10	4.1	A	L	0.20	8.0	A
		T	0.74	16.5	B	T	0.66	18.1	B
		R	0.05	0.1	A	R	0.06	0.4	A
		Intersection		17.7	B	Intersection		18.2	B
4	**Alabama Avenue SE and Stanton Road SE**								
	Eastbound	L	0.32	37.0	D	L	0.37	33.7	C
		TR	0.63	37.0	D	TR	0.70	36.5	D
	Westbound	L	0.31	37.1	D	L	0.26	33.2	C
		TR	0.48	35.8	D	TR	0.42	27.4	C
	Northbound	LTR	0.56	17.9	B	LTR	0.79	9.3	A

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Southbound	LTR	0.50	16.2	B	LTR	0.42	12.5	B
		Intersection		23.3	C	Intersection		17.0	B
501	**Alabama Avenue SE and Jasper Street SE**								
	Westbound	LR	0.31	29.0	C	LR	0.28	20.1	C
	Northbound	TR	0.29	8.0	A	TR	0.36	10.0	B
	Southbound	LT	0.36	4.4	A	LT	0.50	3.2	A
		Intersection		8.1	A	Intersection		7.4	A
502	**Alabama Avenue SE and Irving Street SE**								
	Eastbound	LTR	0.28	41.9	D	LTR	0.29	34.0	C
	Westbound	LTR	0.31	42.0	D	LTR	0.33	34.4	C
	Northbound	LTR	0.31	2.5	A	LTR	0.37	2.5	A
	Southbound	LTR	0.42	8.4	A	LTR	0.51	12.4	B
		Intersection		10.0	A	Intersection		10.9	B
6	**Alabama Avenue SE and Naylor Road SE**								
	Eastbound	LTR	0.29	11.8	B	LTR	0.73	27.4	C
	Westbound	LTR	1.06	74.9	E	LTR	0.54	21.0	C
	Northbound	LTR	0.86	60.2	E	LTR	0.80	40.3	D
	Southbound	LTR	0.71	47.7	D	LTR	0.82	32.7	C
		Intersection		58.3	E	Intersection		31.3	C
7	**Alabama Avenue SE and Good Hope Road SE**								
	Eastbound	L	0.47	48.8	D	L	0.85	44.8	D
		LT	0.45	47.2	D	LT	0.84	44.1	D
	Westbound	L	0.06	28.1	C	L	0.24	33.1	C
		LTR	0.10	24.9	C	LTR	0.71	45.2	D
	Northbound	L	0.19	34.6	C	L	0.30	37.6	D
		T	0.26	31.3	C	T	0.57	29.9	C
		R	0.01	0.0	A	R	0.07	1.0	A
	Southbound	L	0.06	25.5	C	L	0.22	20.7	C
		TR	0.79	40.9	D	TR	0.84	30.5	C
		R	0.53	17.2	B	R	0.35	5.2	A
		Intersection		34.7	C	Intersection		33.7	C
8	**Alabama Avenue SE and Branch Avenue SE**								
	Eastbound	L	0.28	17.8	B	L	0.42	20.1	C
		TR	0.74	36.6	D	TR	0.86	45.3	D
	Westbound	L	0.46	19.8	B	L	0.33	19.0	B
		TR	0.88	47.6	D	TR	0.60	30.7	C
	Northbound	LTR	1.11	112.0	F	LTR	0.93	64.1	E
	Southbound	LTR	1.07	86.8	F	LTR	0.98	75.8	E
		Intersection		70.4	E	Intersection		53.3	D
901	**Alabama Avenue SE and 36th Place SE (South Side)**								

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Eastbound	LR	0.03	40.0	D	LR	0.44	46.5	D
	Northbound	T	0.18	0.4	A	T	0.24	0.9	A
	Southbound	T	0.30	1.5	A	T	0.28	0.5	A
		Intersection		1.2	A	Intersection		3.6	A
902	**Alabama Avenue SE and 36th Place SE (North Side)**								
	Westbound	LR	0.28	23.1	C	LR	0.07	23.3	C
	Northbound	TR	0.20	0.7	A	TR	0.27	1.2	A
	Southbound	LT	0.36	4.4	A	LT	0.29	0.8	A
		Intersection		3.9	A	Intersection		1.2	A
10	**Alabama Avenue SE and 38th Street SE**								
	Eastbound	L	0.25	44.0	D	L	0.37	44.8	D
		TR	0.83	114.6	F	TR	1.02	121.5	F
	Westbound	L	0.64	68.3	E	L	0.17	37.9	D
		TR	1.04	100.6	F	TR	0.97	81.7	F
	Northbound	LT	0.73	47.6	D	LT	0.85	29.9	C
		R	0.03	22.2	C	R	0.02	6.3	A
	Southbound	LTR	0.35	7.5	A	LTR	0.36	2.6	A
		Intersection		53.1	D	Intersection		47.7	D
11	**Alabama Avenue SE and Pennsylvania Avenue SE**								
	Eastbound	L	0.28	36.1	D	L	0.22	23.8	C
		TR	0.61	40.8	D	TR	1.00	97.5	F
	Westbound	L	0.46	25.6	C	L	0.36	33.4	C
		TR	0.73	30.1	C	TR	0.64	36.7	D
	Northbound	T	0.85	54.8	D	T	0.92	99.4	F
		R	0.11	3.2	A	R	0.30	4.6	A
	Southbound	LTR	0.66	36.0	D	LTR	0.96	64.7	E
		Intersection		34.8	C	Intersection		68.1	E
12	**Alabama Avenue SE and Ridge Road SE**								
	Eastbound	LTR	0.43	12.0	B	LT	0.79	25.7	C
						R	0.60	14.0	B
	Westbound	LTR	0.52	13.9	C	LTR	0.37	12.1	B
	Northbound	LTR	0.21	10.6	B	LTR	0.20	11.2	B
	Southbound	LTR	0.29	11.3	B	LTR	0.28	11.9	B
	Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. Measures of Effectiveness obtained from Synchro, Version 9.1.								

Further observations from the Existing traffic analysis are below:

- Alabama Avenue / Randle Place
  - While the eastbound approach of Randle Place sometimes queues back to MLK Avenue during the PM peak hour, this queue clears each cycle and does not affect intersection operations
- Alabama Avenue / Stanton Road
  - Due to heavy pedestrian volumes, vehicles turning left or right sometimes queue up waiting for the crosswalks to clear, but they clear the intersection each cycle, and vehicles traveling through can go around those waiting to turn.
- Alabama Avenue / Naylor Road
  - Due to closely spaced intersections to the north and west of this intersection, it appears that signals are optimized to keep vehicle traffic flowing southbound and eastbound and to avoid queue spillback to the adjacent intersections.
- Alabama Avenue / Branch Avenue
  - While the Synchro analysis indicates an LOS of E for the AM and PM peak hours, in reality, the intersection likely operates at LOS F. Eastbound and westbound queues were so long and extensive that the actual traffic volume at this intersection could not be fully counted because vehicles were waiting in long queues, sometimes taking several cycles to get through the intersection.
- Alabama Avenue / 38th Street
  - Field observations indicate that the signal timing at this intersection has been optimized to keep northbound and southbound traffic on Alabama Avenue moving, and to keep the next intersection at Pennsylvania Avenue clear. This results in eastbound queues on 38th Street backing up to Pennsylvania Avenue, and down Pennsylvania Avenue to Fort Davis Drive.
  - Westbound queues generally extend back to V Street. These queues were observed both in the AM and PM peak hours.
- Alabama Avenue / Pennsylvania Avenue
  - While the eastbound through movement has some congestion in the PM peak hour related to commuter traffic, queues were observed to clear after one or two cycles. These queues sometimes extended back through the next intersection at Pennsylvania Avenue / 38th Street.
- Alabama Avenue / Ridge Road
  - In the PM peak hour, the eastbound approach sees a spike in traffic, likely related to commuters due to Ridge Road's northwest/southeast orientation from central areas of the District.

5.2. Future Conditions

Traffic volumes were projected to a future design year of 2026, and a Future Conditions traffic analysis was performed for the horizon year to determine if traffic growth would result in any new intersections or lane groups that would operate at a poor LOS. The future growth projections accounted background growth and nearby developments. The design year, growth rates, and included future developments were selected in consultation with DDOT staff.

5.2.1. Traffic Projections and Roadway Network Changes

A design year of 2026, 10 years after the existing conditions traffic counts, was chosen in order to capture background growth in the area. The yearly growth rates in **Table 11** were extracted from the Metropolitan Washington Council of Governments (MWCOG) travel demand model for four segments, based on the groups of intersections studied.

Table 11 | Annual Growth Rates from MWCOG Model

Segment	Annual Growth Rate
At Ridge Road	0.4%
Naylor Road – Pennsylvania Avenue	0.1%
At Jasper Street/Irving Street	0.6%
MLK Ave – Stanton Road	0.8%

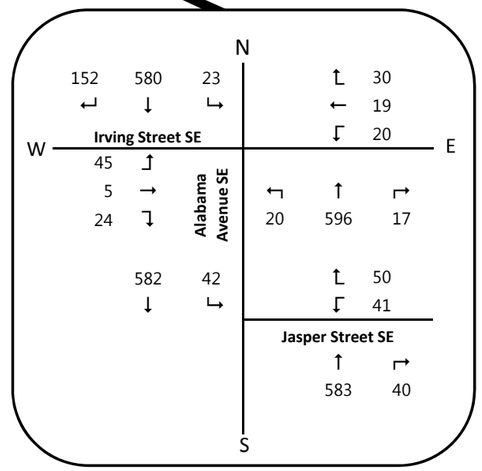
In addition to the background growth, traffic generated by two proposed development projects – the Congress Heights and Skyland Town Center developments – were accounted for in the growth projections. Trip generation and assignment for the two sites were obtained from their respective traffic impact studies. The total growth increment was added to the Existing Conditions traffic volumes to calculate the 2026 Future Conditions traffic volumes. The 2026 Future Conditions traffic volume diagrams for the AM peak hour are shown in **Figure 23** (southern section) and **Figure 24** (northern section), and the 2016 Existing Condition traffic volume diagrams for the PM peak hour are shown in **Figure 25** (southern section) and **Figure 26** (northern section).

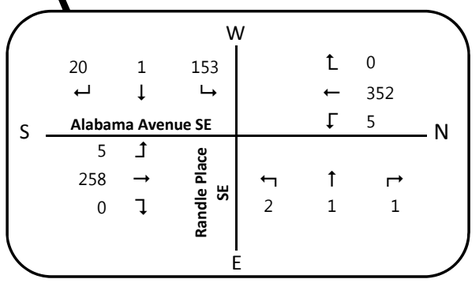
The St. Elizabeth's East Campus Redevelopment project is ongoing and still in the planning stages. Any potential traffic and geometry changes from this project are not finalized. As such, the project will likely not be built and occupied before the 2026 build year for this project, and is not directly considered in these traffic projections. The 2026 Future Conditions traffic volumes do include a background growth rate in addition to the individual projects' traffic projections, so these traffic volumes are conservative.

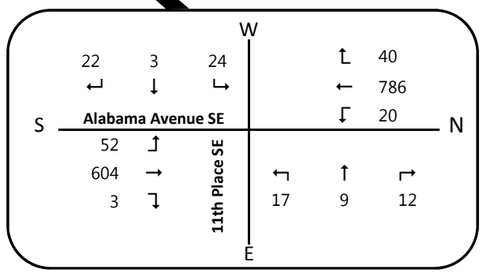
LEGEND

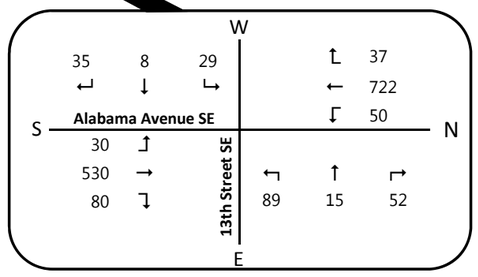
xxxx Vehicles Per Hour

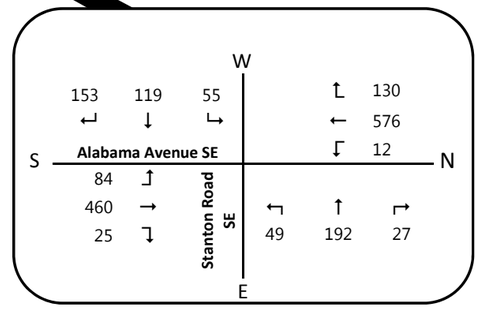
X Intersection Number











NOT TO SCALE

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Alabama Avenue Corridor Safety Study

Figure 23

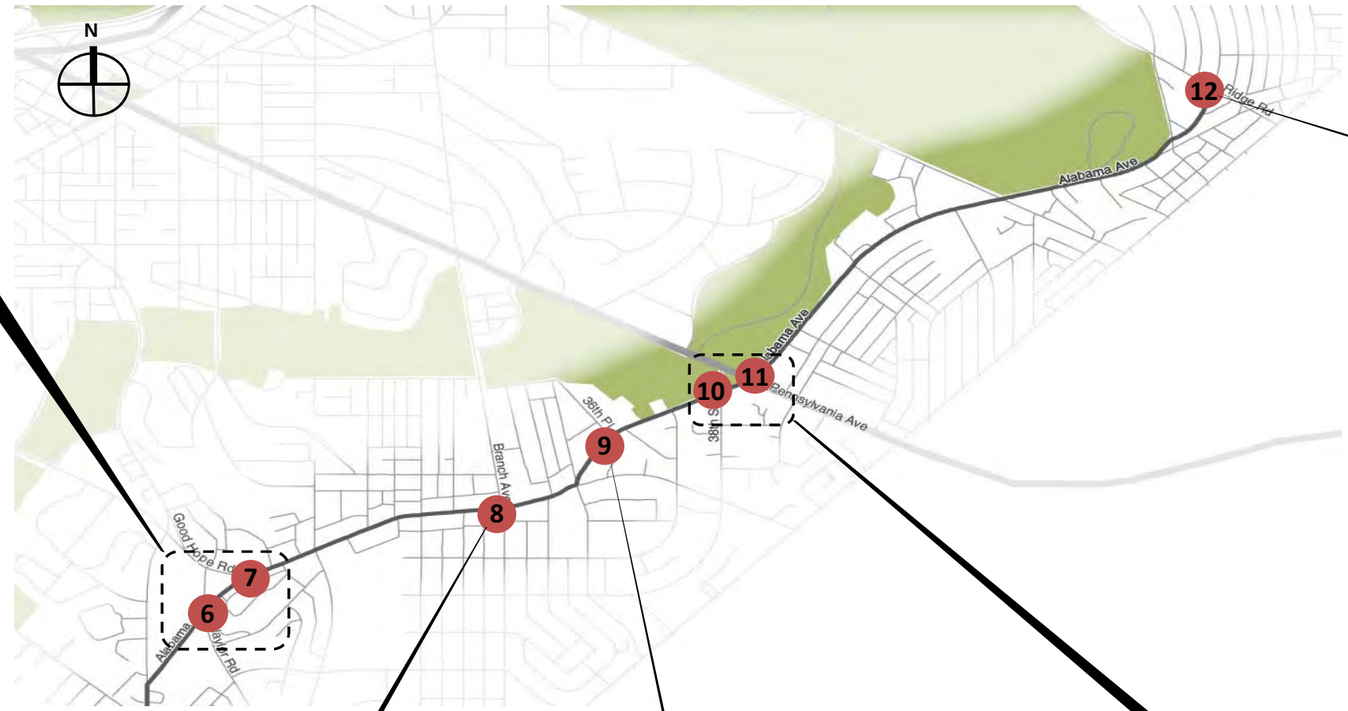
2026 Future Conditions Traffic Volumes

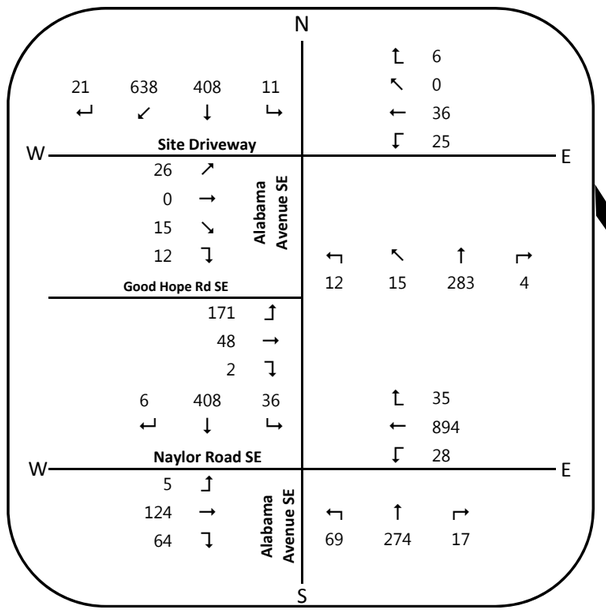
Weekday AM Peak Hour (7:30 AM to 8:30 AM)

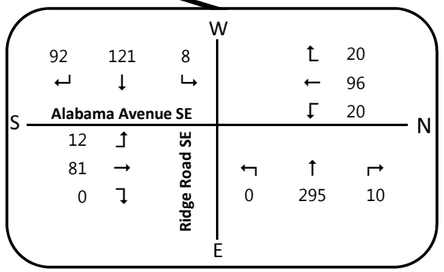
LEGEND

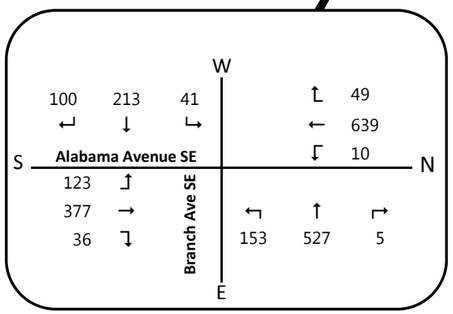
xxxx Vehicles Per Hour

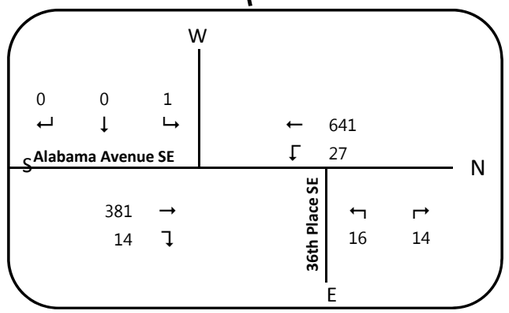
X Intersection Number

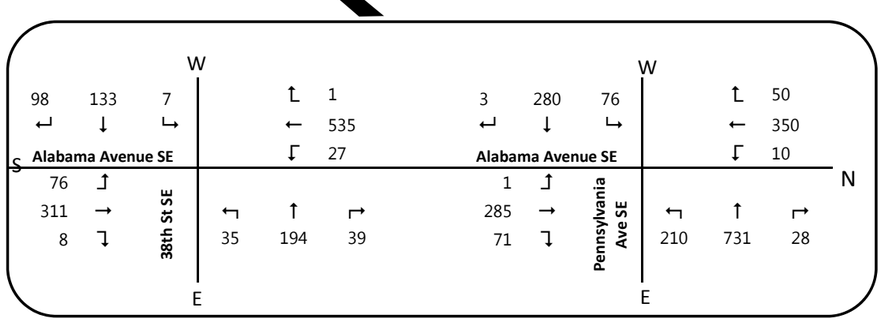












NOT TO SCALE

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Figure 24

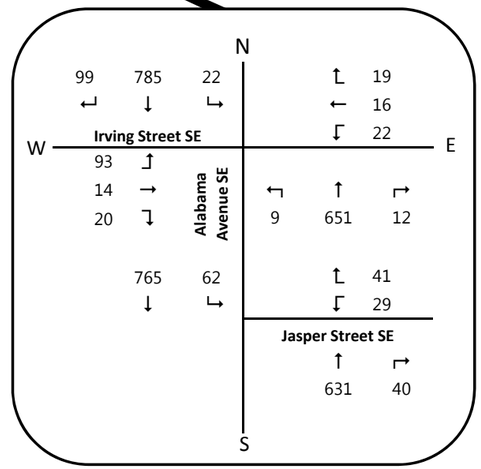
2026 Future Conditions Traffic Volumes

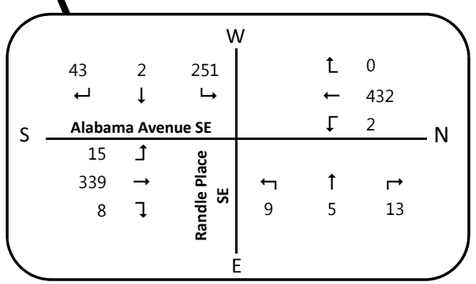
Weekday AM Peak Hour (7:30 AM to 8:30 AM)

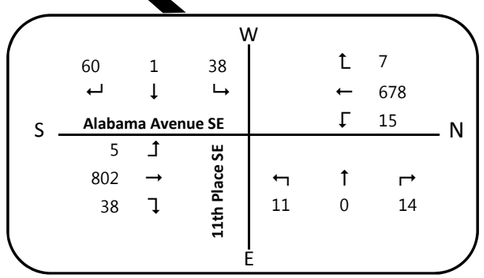
LEGEND

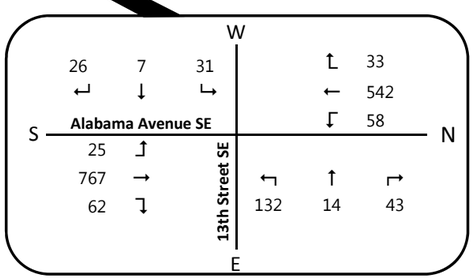
xxxx Vehicles Per Hour

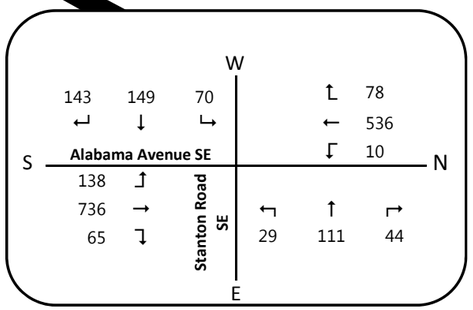
X Intersection Number











NOT TO SCALE

Sam Schwartz

Alabama Avenue Corridor Safety Study

Figure 25

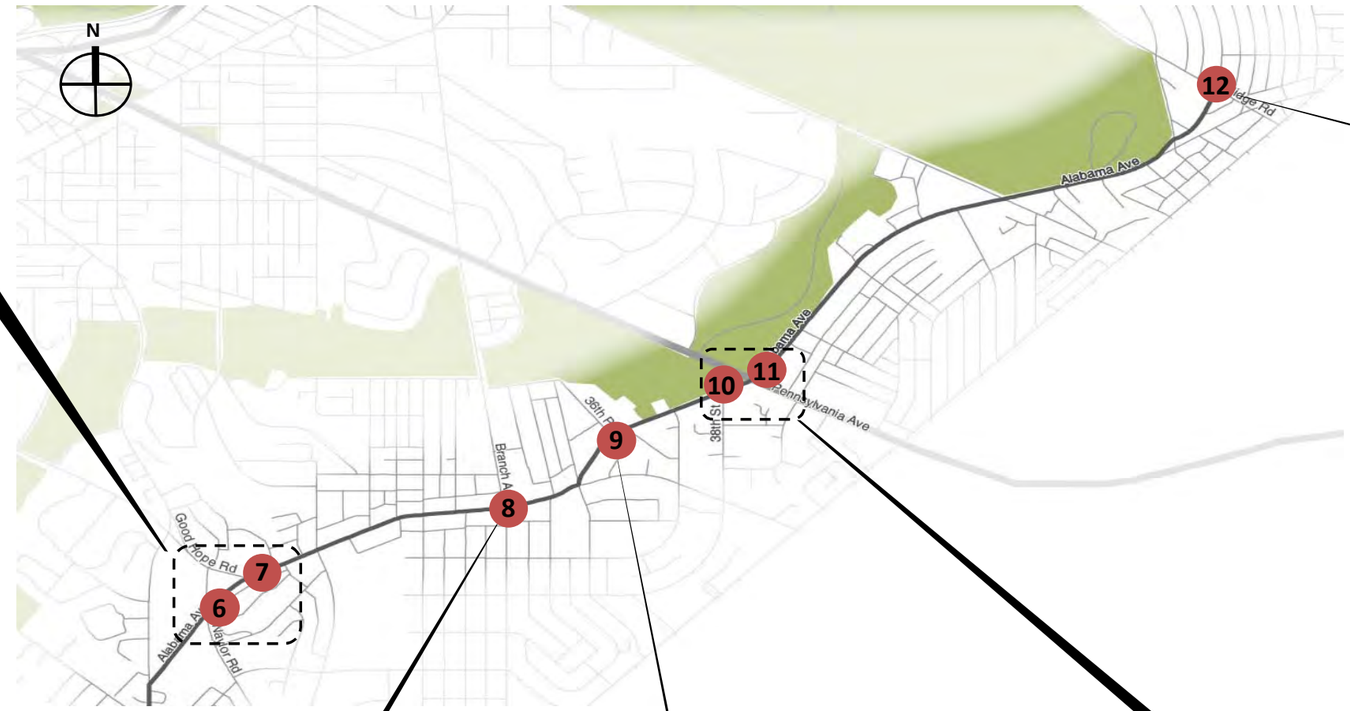
2026 Future Conditions Traffic Volumes

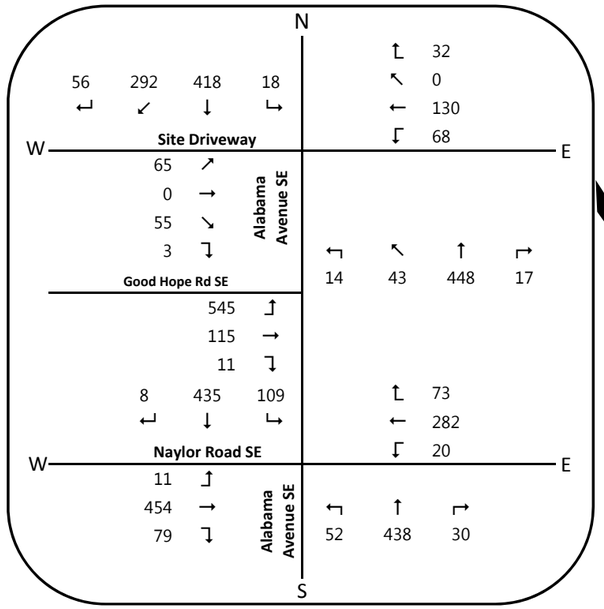
Weekday PM Peak Hour (4:45 PM to 5:45 PM)

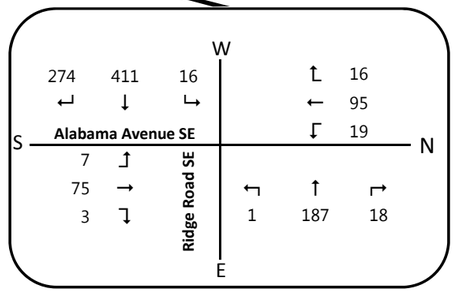
LEGEND

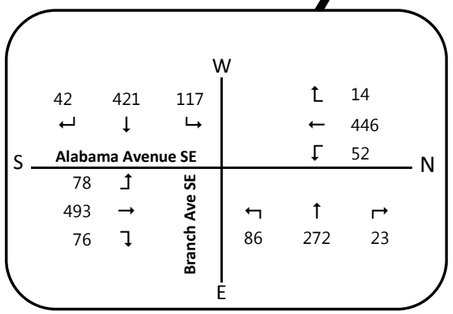
xxxx Vehicles Per Hour

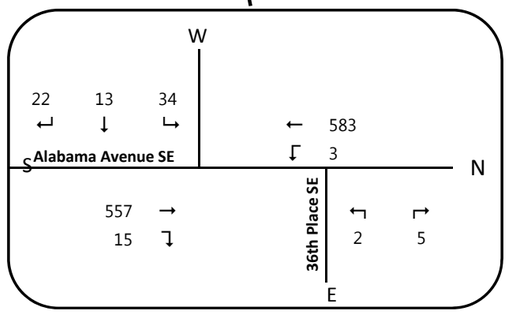
X Intersection Number

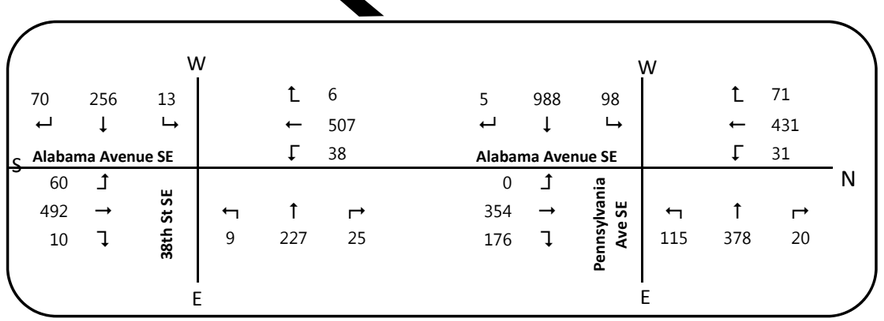












NOT TO SCALE

Sam Schwartz

Alabama Avenue Corridor Safety Study

Figure 26

2026 Future Conditions Traffic Volumes

Weekday PM Peak Hour (4:45 PM to 5:45 PM)

The development projects also introduce changes to the roadway network. The Skyland development will add a new signalized intersection on Alabama Avenue at the existing Safeway driveway, approximately 350 feet north of Good Hope Road. The existing lane configuration will be maintained upon signalization. Furthermore, the signalized intersection of Alabama Avenue and Good Hope Road will have a fifth leg added for access to the Skyland development, and the four-lane Alabama Avenue SB approach will be restriped from one left-turn lane, two through lanes, and one right-turn lane to one left-turn lane, one through lane, and two right-turn lanes. These geometric changes are reflected in the Future Conditions intersection analysis and are shown in **Figure 27**. The Congress Heights development will add an unsignalized intersection north of 13th Street that is not included as part of this study.

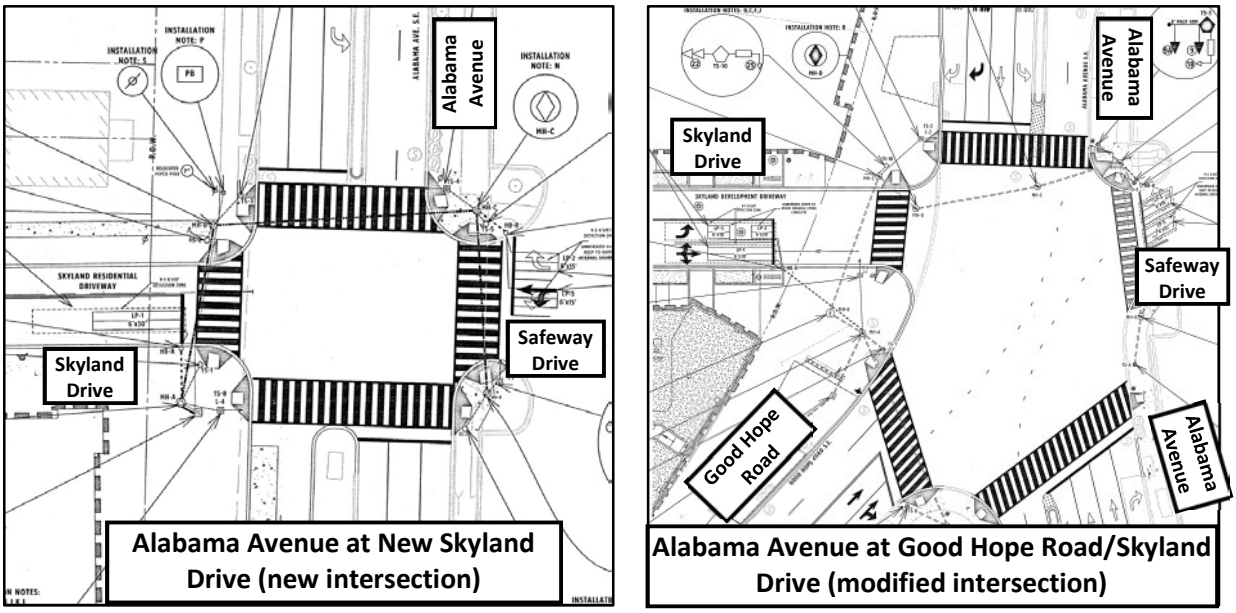


Figure 27 – Future Geometry Changes to Alabama Avenue SE Corridor from Development Projects

MLK Avenue SE intersects with Alabama Avenue south of the project limits. A redesign of MLK Avenue is underway with the *Revitalization of Martin Luther King Jr. Avenue SE Phase II* project. This project proposes to convert Randle Place to one-way eastbound. Therefore, traffic that was previously turning right from southbound Alabama Avenue to westbound Randle Place will instead continue southbound on Alabama Avenue and turn right directly onto MLK Avenue. This new traffic pattern is reflected in the traffic volumes in **Figure 23** and **Figure 25** and is incorporated into the Future Conditions LOS Analysis.

5.2.2. Future Conditions LOS Analysis

The volumes from **Figure 23** and the geometry changes in **Figure 27** were used to analyze the study intersections in Synchro. The LOS results for Future Conditions are in **Table 12**. Lane groups and intersections that operate at LOS E or F are highlighted. The traffic analysis sheets from Synchro are available in Appendix E.

Table 12 | Future Conditions LOS Results

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1	**Alabama Avenue SE and Randle Place SE**								
	Eastbound	L	0.38	32.8	C	L	0.80	53.7	D
		TR	0.07	28.7	C	TR	0.16	34.0	C
	Westbound	LTR	0.14	55.2	E	LTR	0.30	48.3	D
	Northbound	TR	0.17	13.8	B	TR	0.22	10.4	B
	Southbound	LT	0.32	9.4	A	LT	0.33	10.1	B
		Intersection		16.9	B	Intersection		23.0	C
2	**Alabama Avenue SE and 11th Place SE**								
	Eastbound	LTR	0.53	45.4	D	LTR	0.61	32.2	C
	Westbound	LTR	0.41	41.7	D	LTR	0.26	22.8	C
	Northbound	T	0.66	10.5	B	T	0.65	11.6	B
		R	0.01	0.7	A	R	0.05	1.3	A
	Southbound	LT	0.66	7.6	A	LT	0.62	8.3	A
		Intersection		11.1	B	Intersection		11.6	B
3	**Alabama Ave SE and 13th Street SE**								
	Eastbound	L	0.21	42.8	D	L	0.11	26.8	C
		T	0.03	38.4	D	T	0.04	25.4	C
		R	0.17	5.5	A	R	0.09	0.5	A
	Westbound	LTR	0.87	81.9	F	LTR	0.86	56.7	E
	Northbound	L	0.12	7.0	A	L	0.10	8.6	A
		T	0.59	17.6	B	T	0.93	30.9	C
		R	0.18	6.6	A	R	0.12	3.9	A
	Southbound	L	0.14	4.2	A	L	0.32	13.7	B
		T	0.81	18.7	B	T	0.74	21.2	C
		Intersection		23.3	C	Intersection		28.4	C
4	**Alabama Avenue SE and Stanton Road SE**								
	Eastbound	L	0.37	39.1	D	L	0.42	35.6	D
		TR	0.75	43.3	D	TR	0.79	43.0	D
	Westbound	L	0.42	42.7	D	L	0.35	37.8	D

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
		TR	0.53	37.1	D	TR	0.46	28.8	C
	Northbound	LTR	0.68	22.3	C	LTR	1.00	33.8	C
	Southbound	LTR	0.56	17.3	B	LTR	0.47	13.3	B
		Intersection		26.6	C	Intersection		28.9	C
501	**Alabama Avenue SE and Jasper Street SE**								
	Westbound	LR	0.33	29.9	C	LR	0.30	21.0	C
	Northbound	TR	0.31	8.3	A	TR	0.41	10.7	B
	Southbound	LT	0.40	4.4	A	LT	0.58	3.6	A
		Intersection		8.2	A	Intersection		8.0	A
502	**Alabama Avenue SE and Irving Street SE**								
	Eastbound	LTR	0.42	46.1	D	LTR	0.60	44.7	D
	Westbound	LTR	0.33	42.6	D	LTR	0.35	34.8	C
	Northbound	LTR	0.34	2.5	A	LTR	0.43	2.5	A
	Southbound	LTR	0.47	9.0	A	LTR	0.60	13.7	B
		Intersection		10.9	B	Intersection		12.9	B
6	**Alabama Avenue SE and Naylor Road SE**								
	Eastbound	LTR	0.30	12.2	B	LTR	0.76	28.5	C
	Westbound	LTR	1.10	88.6	F	LTR	0.66	24.4	C
	Northbound	LTR	0.92	69.3	E	LTR	0.90	49.7	D
	Southbound	LTR	0.87	86.6	F	LTR	1.12	107.2	F
		Intersection		75.7	E	Intersection		55.4	E
7	**Alabama Avenue SE and Good Hope Road SE**								
	Eastbound	L	0.40	43.2	D	L	1.00	83.1	F
		LTR	0.39	42.4	D	LTR	1.00	81.7	F
	Westbound	L	0.09	41.0	D	L	0.29	44.7	D
		LTR	0.11	0.5	A	LTR	0.54	19.3	B
	Northbound	L	0.35	14.6	B	L	1.09	189.0	F
		T	0.27	8.7	A	T	0.55	39.2	D
		R	0.01	0.0	A	R	0.06	0.3	A
	Southeastbound	LTR	0.20	1.7	A	LTR	0.46	8.2	A
	Southbound	L	0.06	25.5	C	L	0.21	37.4	D
		T	0.85	50.4	D	T	1.23	159.6	F
		R	1.04	78.2	E	R	0.47	20.9	C
		Intersection		49.2	D	Intersection		73.1	E
8	**Alabama Avenue SE and Branch Avenue SE**								
	Eastbound	L	0.28	17.9	B	L	0.43	20.2	C
		TR	0.78	38.7	D	TR	0.96	60.0	E
	Westbound	L	0.52	21.3	C	L	0.55	26.7	C
		TR	0.89	48.5	D	TR	0.60	30.8	C

Int #	Intersection & Approach	AM Peak Hour				PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Northbound	LTR	1.20	144.6	F	LTR	1.06	88.8	F
	Southbound	LTR	1.09	94.9	F	LTR	1.02	86.0	F
		Intersection		81.7	F	Intersection		66.8	E
901	**Alabama Avenue SE and 36th Place SE (South Side)**								
	Eastbound	LR	0.03	40.0	D	LR	0.45	46.4	D
	Northbound	T	0.18	0.4	A	T	0.24	0.8	A
	Southbound	T	0.30	1.5	A	T	0.28	0.5	A
		Intersection		1.2	A	Intersection		3.6	A
902	**Alabama Avenue SE and 36th Place SE (North Side)**								
	Westbound	LR	0.29	22.6	C	LR	0.07	23.1	C
	Northbound	TR	0.20	0.7	A	TR	0.28	1.3	A
	Southbound	LT	0.36	4.5	A	LT	0.30	0.8	A
		Intersection		4.0	A	Intersection		1.3	A
10	**Alabama Avenue SE and 38th Street SE**								
	Eastbound	L	0.25	44.4	D	L	0.38	45.8	D
		TR	0.83	115.2	F	TR	1.03	121.1	F
	Westbound	L	0.65	70.5	E	L	0.17	37.9	D
	Westbound	TR	1.04	102.3	F	TR	0.98	84.6	F
	Northbound	LT	0.74	48.5	D	LT	0.86	32.0	C
		R	0.03	22.2	C	R	0.02	6.2	A
	Southbound	LTR	0.35	7.5	A	LTR	0.36	2.7	A
		Intersection		53.8	D	Intersection		48.8	D
11	**Alabama Avenue SE and Pennsylvania Avenue SE**								
	Eastbound	L	0.28	36.2	D	L	0.23	23.8	C
		TR	0.62	41.0	D	TR	1.01	97.3	F
	Westbound	L	0.46	25.8	C	L	0.37	33.5	C
		TR	0.74	30.4	C	TR	0.64	36.9	D
	Northbound	T	0.85	57.1	E	T	0.93	99.8	F
		R	0.12	3.2	A	R	0.33	4.1	A
	Southbound	LTR	0.66	36.0	D	LTR	0.98	68.7	E
		Intersection		35.3	D	Intersection		68.9	E
12	**Alabama Avenue SE and Ridge Road SE**								
	Eastbound	LTR	0.45	12.5	B	LT	0.83	30.4	D
						R	0.63	15.2	C
	Westbound	LTR	0.55	14.8	B	LTR	0.39	12.6	B
	Northbound	LTR	0.22	10.9	B	LTR	0.21	11.4	B
	Southbound	LTR	0.31	11.7	B	LTR	0.30	12.3	B

Notes: L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service.
Highlighted cells = LOS E or F. Measures of Effectiveness obtained from Synchro, Version 9.1.

Further observations from the Existing Conditions traffic analysis are below:

- Alabama Avenue / 13th Street
  - The westbound approach is projected to degrade from LOS D in Existing Conditions to LOS E during the AM peak hour in Future Conditions. This is largely due to additional traffic from the Congress Heights development.
- Alabama Avenue / Naylor Road
  - Additional trips at this intersection from the Skyland development degrade operates in Future Conditions.
- Alabama Avenue / Good Hope Road
  - Under Future Conditions, operations at this intersection are projected to degrade considerably, especially in the PM peak hour. The addition of a fifth leg at this intersection to serve the new Skyland development would require an additional signal phase, which would take significant green time away from the other intersection approaches.
  - Furthermore, according to the Skyland development traffic study, one of the southbound travel lanes on Alabama Avenue will be converted from a through lane to an exclusive right-turn lane. This would degrade operations for southbound Alabama Avenue significantly; therefore, the proposed changes associated with the Skyland development should be revisited.
- Alabama Avenue / Branch Avenue
  - As with the Existing Conditions analysis, the analysis indicates better operations than what would actually occur.

6.0 EXISTING CONDITIONS ASSESSMENT

The Existing Conditions Assessment is based on a comprehensive review of relevant documents, analysis of multimodal traffic data, and findings from field reviews, and is further informed by outreach to community residents, ANC members, local business owners, and other stakeholders. The Existing Conditions Assessment reports findings which come from field reviews, data collection and analysis, and coordination with stakeholders and the community.

This chapter summarizes of the public input process to-date, presents general corridor-wide issues, and provides a more in-depth assessment of existing conditions along the corridor, moving from south to north.

6.1. Public Meeting Input

The public meeting held on February 11, 2017 revealed several key overall concerns from the community. At this meeting, attendees were asked to note their concerns on a large aerial map of the corridor. Location-specific comments are noted later in this chapter, which breaks down existing traffic and safety issues on a segment- and intersection-specific level.

Figure 28 – Public Input

6.1.1. Traffic

Traffic congestion was attributed to several locations along the corridor, including at Branch Avenue, 38th Street and 5th Street/MLK, Jr. Avenue. Other traffic concerns were related to hazardous pedestrian crossings and long gaps between pedestrian crossings, such as near 32nd Street.

6.1.2. Speeding

As discussed previously in Chapter 4.4 (on page 41), speeding on Alabama Avenue is a significant concern. The public meeting attendees expressed specific concern for speeding in the segment between Q Street and R Street and between Branch Avenue and Pennsylvania Avenue, especially near 36th Place and the Francis A. Gregory Library.

6.1.3. Safety

Safety concerns were noted throughout the corridor. These concerns included lack of enforcement for speeding and stop sign violations, curves on Alabama Avenue that reduce visibility between drivers and pedestrians, and aggressive driver behavior towards pedestrians.

6.1.4. Other

"Other" comments are general comments that are outside the scope of this study. These comments included remarks on amenities at the NPS Parks (Fort Davis Park and Fort Circle Park) and concerns about illegal vehicles, such as all-terrain vehicles (ATVs) using Alabama Avenue in large groups and conflicting with vehicles and pedestrians.

6.2. Corridor-Wide Issues

Overall corridor deficiencies and concerns are noted in this chapter.

6.2.1. Roadway Maintenance and Streetscape

Several general themes regarding roadway maintenance and streetscape emerged after the field reviews and public meeting. An overview of these comments is presented below.

6.2.1.1. ADA Ramps

Several locations along the corridor lack ADA-compliant ramps at crosswalks entirely or have sub-standard ramps that need to be upgraded to meet ADA standards. Examples of these are shown in **Figure 29**, and more detailed photos and locations are provided later in this chapter.

Figure 29 – Examples of Missing/Substandard ADA Ramps at Bruce Place (left) and Naylor Road (right)

6.2.1.2. Utility Cuts

Utility cuts through crosswalks were observed throughout the corridor, which leads to crosswalks being less visible, and in many cases, difficult to navigate for those with limited mobility. An example of this is shown in **Figure 30**, and more detailed photos and locations are provided later in this chapter.

Figure 30 – Example of Utility Cut through Crosswalk (at 15th Place)

6.2.1.3. Roadway and Streetscape Maintenance

Roadway maintenance concerns were noted throughout the corridor and by public meeting attendees. These comments included faded pavement markings (as shown in **Figure 31**) and potholes.

Figure 31 – Example of Worn Pavement Markings (at Randle Place)

6.2.2. Street Lighting

The crash analysis completed in Chapter 3.2 (on page 15) indicates that 36 percent of crashes within the three high-crash clusters occurred during hours of darkness, even though the highest levels of traffic occur during daytime hours. Street lighting should be assessed to improve safety for the corridor as a whole for vehicles, pedestrians, and bicyclists.

6.3. Location-Specific Conditions Assessment by Segment

A full field review of existing pedestrian and bicycle travel conditions was undertaken for the Alabama Avenue Corridor Safety Study. The entire Alabama Avenue study corridor was examined to inventory existing bicycle and pedestrian infrastructure and to identify any operational or safety deficiencies at the intersections. A full field review document is available in Appendix F. The crash analysis/diagrams and these field reviews were reviewed and synthesized for the Existing Conditions Assessment Report. General themes and trends for specific segments and intersections are described below.

The corridor was divided into four segments as follows:

- Segment 1: MLK Avenue to Suitland Parkway
- Segment 2: Suitland Parkway to Branch Avenue
- Segment 3: Branch Avenue to Pennsylvania Avenue
- Segment 4: Pennsylvania Avenue to Ridge Road

The issues along these segments and at selected intersections within these segments are described from south to north in the sections below.

6.3.1. Segment #1 – MLK Avenue to Suitland Parkway

6.3.1.1. Segment Overview

In this segment, Alabama Avenue is a four-lane roadway with a 25 MPH speed limit. A typical cross-section is shown in **Figure 32**, which also shows an example of the scattered on-street parking along this segment. Parking regulations vary within this segment and by time of day, which creates inconsistent use of the right lane and often leads to driver confusion and last-minute merging while traveling the corridor. Major intersections along this segment include Randle Place, Wheeler Road, Stanton Road, and Suitland Parkway. The Congress Heights metro station on the Green Line is located in this segment at 13th Street.

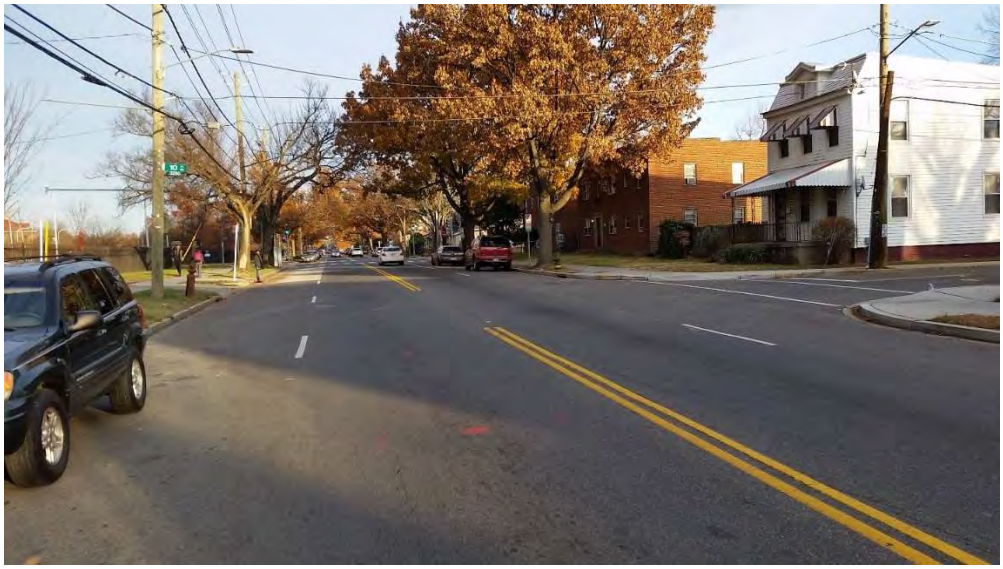


Figure 32 – Alabama Avenue SE at 10th Place, looking North

Existing conditions are shown in **Figure 33**, **Figure 34**, **Figure 35**, and **Figure 36**. Specific locations are described in more detail below when needed, with supplemental photos.

Figure 33
Segment #1 – Sheet 1 of 4:
Martin Luther King Jr Ave SE to 9th Pl SE

0' 100' 200'

- Aggressive driver behavior
- Confusion over right-of-way between drivers & pedestrians
- Traffic bearing right from northbound MLK Avenue onto northbound Alabama Avenue moves fast
- WMATA buses turning from southbound Alabama Avenue onto westbound 5th Street drive over the curb & sidewalk due to tight turn

WMATA buses turning from northbound Alabama Avenue onto eastbound Wheeler Road drive over the curb and sidewalk due to tight turn

Complex traffic control: confusion over right of way

Crosswalk across Randle Place is worn

Legend

Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

Figure 34
Segment #1 – Sheet 2 of 4:
9th Pl SE to Congress Heights Metro

0' 100' 200'

Legend

Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

Figure 35
Segment #1 – Sheet 3 of 4:
Congress St SE to Stanton Terr SE

0' 100' 200'

- Drivers do not yield to the existing RRFB traffic control device
- General safety and traffic concerns

- 2 pedestrian crashes in 3 years, both involving turning vehicles conflicting with pedestrians in crosswalks
- 5 rear-end crashes in 3 years, suggests speeding &/or driver inattention

High volumes of turning vehicles to and from Alabama Avenue at this intersection and across the uncontrolled crosswalks

- Red-light running driver behavior and vehicle speeding observed
- Among the highest recorded peak-hour pedestrian volumes along the corridor

- 3 right-angle crashes in 3 years, suggests red-light running
- 5 rear-end crashes in 3 years, suggests speeding and driver inattention
- 4 pedestrian crashes in 3 years

Speeding vehicles do not properly yield to pedestrians in uncontrolled crosswalk

Legend

Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

Figure 36
Segment #1 – Sheet 4 of 4: Stanton Terr SE to 23rd St SE

0' 100' 200'

Segment (1/3 of a mile) with no pedestrian crossing

Skewed alignment and large corner radii

Legend

- Crash Trend
- Other Condition
- Missing Pedestrian Signal
- Uncontrolled Crosswalk
- Missing Crosswalk
- Utility Cut Through Sidewalk
- Missing Pedestrian Ramp
- Deficient Pedestrian Ramp
- Deficient / Missing Sidewalk
- Challenging Intersection/ Roadway Geometry
- What We Heard (comments received from members of the community)

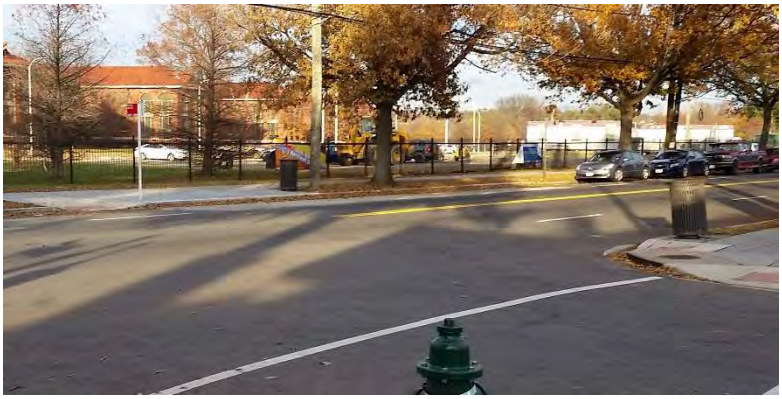
6.3.1.2. Key Segment-Wide Findings

- 85th percentile speeds were generally within 10 MPH of the speed limit, as shown in **Figure 22.**
  - Speeding and aggressive driving still a concern
- Corridor wide, the highest numbers of pedestrians were counted during peak hours within this segment at Randle Place, 13th Street, and Stanton Road
- Bicycle activity was limited, with peak activity measured during PM peak hour at Stanton Road – five bicyclists traveled south on Alabama Avenue
- Particular sub-segment with pedestrian deficiencies – between Bruce Place and Stanton Terrace
  - Cross-section is shown in **Figure 37**
  - No pedestrian crossings for entire segment
  - Downgrade when traveling southbound contributes to high speeds, further worsening pedestrian perception of this segment

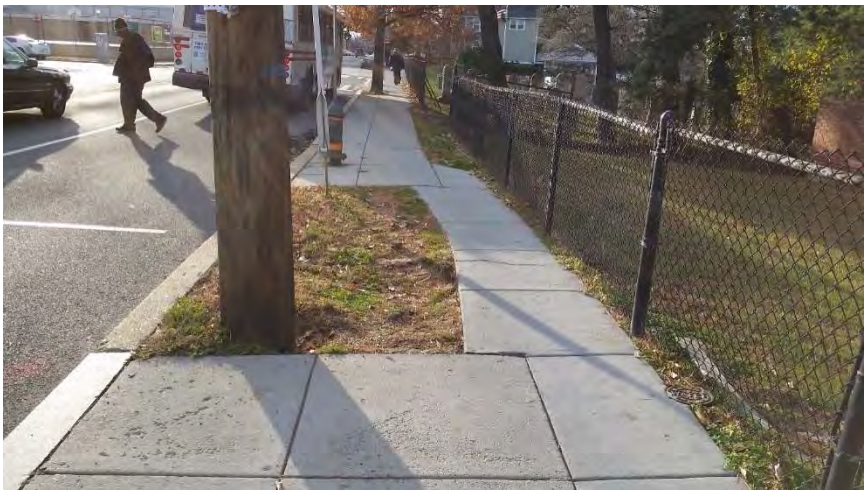
Figure 37 – Alabama Avenue SE at 18th Place, looking North

6.3.1.3. Specific Intersection Findings

- MLK Avenue – 5th Street / Alabama Avenue
  - Complex traffic control – while MLK Avenue and Alabama Avenue intersection legs are controlled by a traffic signal, 5th Street intersection legs are controlled by stop signs, making right-of-way unclear for both vehicles and pedestrians
  - Heavy pedestrian traffic due to nearby bus stops and commercial areas on MLK Avenue
- 12th Street / Alabama Avenue
  - Bus stops at this intersection are heavily served by Metrobus, but no crosswalk across Alabama Avenue at this intersection (see photo below).
    - Nearest crossings are one block away at 11th Place (approximately 320 feet south) and 13th Street (approximately 620 feet north)



- Congress Street / Alabama Avenue
  - West side of Alabama Avenue at Congress Street has narrow segments of sidewalk due to tree pits (see photo below).



- Stanton Road / Alabama Avenue
  - Among highest recorded peak-hour pedestrian volumes along the corridor due to its proximity to schools, shopping, frequently-served bus stops, and medium-density residential areas

- 18th Street / Alabama Avenue
  - The uncontrolled crosswalk (see photo below) is heavily used due to the nearby school, recreation center, and bus routes.

- Suitland Parkway / Alabama Avenue
  - Intersection has skewed alignment and corners with large radii, as shown in photo below.
    - Allows for high turning speeds and makes it more challenging for motorists to yield to pedestrians in the crosswalks (see photo below).

6.3.2. Segment #2 – Suitland Parkway to Branch Avenue

6.3.2.1. Segment Overview

In this segment, Alabama Avenue is a four-lane roadway with a 25 MPH speed limit, and on-street parking is generally prohibited. A typical cross-section is shown in **Figure 38**. There are several major signalized intersections along this segment including 25th Street, Naylor Road, Good Hope Road, and Branch Avenue. These intersections, as shown in the example image in **Figure 39**, are car-centric and lead to long waiting times and long crossings for pedestrians.

Figure 38 – Alabama Avenue SE at 32nd Place, looking South

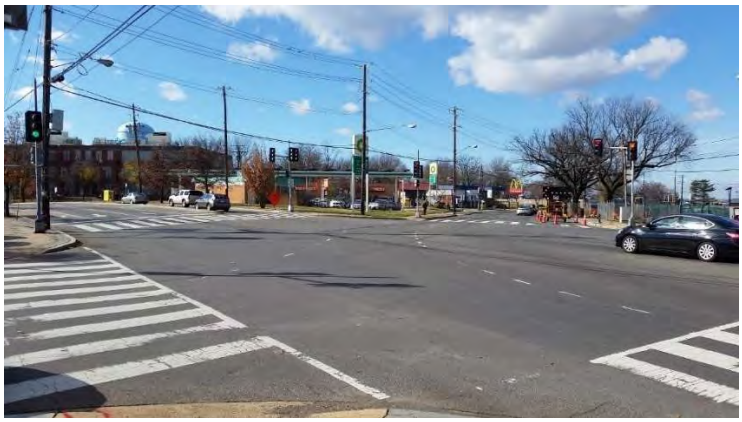


Figure 39 – Alabama Avenue SE at Good Hope Road, looking South

Good Hope Marketplace, a large commercial area with a supermarket and other retail, is located at the intersection with Good Hope Road. Additionally, the Skyland Town Center development is currently under construction and is also adjacent to the intersection of Alabama Avenue and Good Hope Road.

Existing conditions are shown in **Figure 40**, **Figure 41**, and **Figure 42**. Specific locations are described in more detail below when needed, with supplemental photos.

Figure 40
Segment #2 – Sheet 1 of 3:
Suitland Pkwy to Ainger Pl SE

0' 100' 200'

3 pedestrian crashes between vehicles and pedestrians crossing in crosswalk with signal in 3 years

Suitland Pkwy
24th St SE
Irving Pl SE
Irving St SE
Knox Pl SE
Ainger Pl SE
Garfield Elementary School
Alabama Ave SE
Washington Metro Police Dept.
Hartford St SE
Gainesville St SE

Legend

- Crash Trend
- Uncontrolled Crosswalk
- Missing Pedestrian Ramp
- Challenging Intersection/ Roadway Geometry
- Other Condition
- Missing Crosswalk
- Deficient Pedestrian Ramp
- What We Heard (comments received from members of the community)
- Missing Pedestrian Signal
- Utility Cut Through Sidewalk
- Deficient / Missing Sidewalk

Figure 41
Segment #2 – Sheet 2 of 3: 25th St SE to Good Hope Rd SE

0' 100' 200'

- Confusing navigation for drivers
- Wide right-turn lane with large radius

Pedestrians crossing mid-block

Legend

Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

Figure 42
Segment #2 – Sheet 3 of 3: 30th St SE to Branch Av SE

0' 100' 200'

Car-centric signal timings, leading to long waits to cross and insufficient time to cross for some pedestrians

Aggressive driving

Legend

Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

6.3.2.2. Key Segment-Wide Findings

- Speeding vehicles are major concern in this segment – as shown in **Figure 22**, southbound 85th percentile speeds were greater than 10 MPH over posted speed limit
- Several uncontrolled pedestrian crossings across four-lane cross section – Irving Place, Knox Place, and at each block between 30th Street and Branch Avenue.
    - Examples of typical uncontrolled crossings are shown below in **Figure 43**.
    - Public meeting attendees commented on speeding vehicles and drivers not yielding to pedestrians in these uncontrolled crossings, particularly in the segment between 30th Street and Branch Avenue.
- Bicycle activity was very limited, only one or two bicyclists observed during peak hours

Figure 43 – Typical Uncontrolled Crossings, at Irving Place (left) and Knox Place (right)

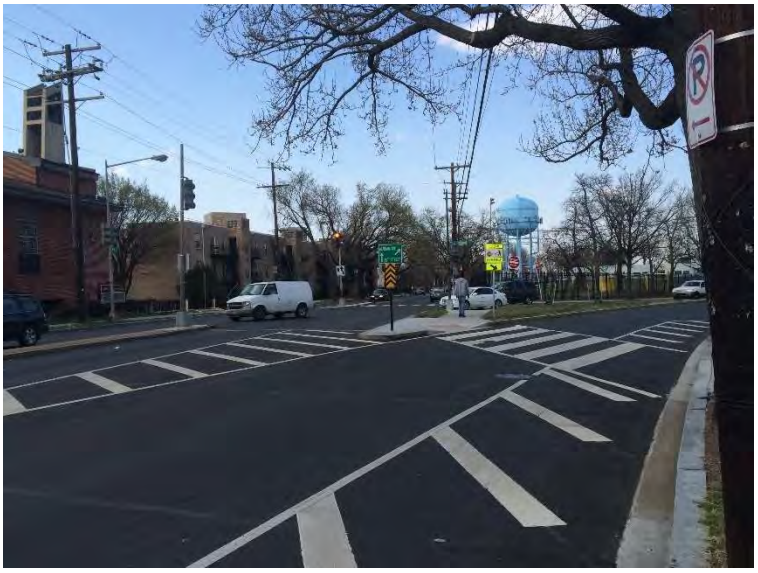
6.3.2.3. Specific Intersection Findings

- 24th Street / Alabama Avenue
    - Bus stops at this intersection are heavily served by Metrobus, but no crosswalk across Alabama Avenue at this intersection (see photo below).
        - Nearest crossings are one block away at Irving Place (approximately 500 feet north) and 22nd Street (approximately 600 feet south), Irving Place crossing is also uncontrolled

- Irving Street – Jasper Street / Alabama Avenue
  - Bus shelter located on east side of Alabama Avenue, south of Jasper Street, creates very narrow pedestrian passage (see photo below).

- Knox Place / Alabama Avenue
  - Intersection has skewed alignment and corners with large radii (see photo below).
    - Allows for high turning speeds and makes it more challenging for motorists to yield to pedestrians in the crosswalks
    - Crosswalk is especially long due to the intersection geometry

- 25th Street / Alabama Avenue
  - Vehicles wishing to stay on Alabama Avenue must bear right, leading to high right-turn volumes and speeding vehicles, and confusing navigation for drivers
  - Right turn has large radius and very wide travel lane, promoting speeding and creating potentially dangerous uncontrolled pedestrian crossing across this leg of the intersection
  - Crosswalk itself has faded pavement markings and is difficult to see among other striping within the gore area and along the roadway edge (see photo below).



- Naylor Road / Alabama Avenue
  - Pedestrians frequently observed crossing midblock between Naylor Road and Good Hope Road (see photo below)
    - Indicates pedestrian desire path across Alabama Avenue not currently accommodated

- Good Hope Road / Alabama Avenue
  - Sidewalk on the east side of Alabama Avenue between Good Hope Road and 30th Street has several narrow and or/obstructed segments (see photo below).
    - Sidewalk is approximately three feet wide in these segments

6.3.3. Segment #3 – Branch Avenue to Pennsylvania Avenue

6.3.3.1. Segment Overview

Between Branch Avenue and Pennsylvania Avenue, Alabama Avenue continues the four-lane cross-section with a posted speed limit of 25 MPH (see **Figure 44**). On-street parking is more prevalent here, especially near the Francis A. Gregory Neighborhood Library near 36th Place. Major signalized intersections along this segment include Suitland Road, 38th Street, and Pennsylvania Avenue.

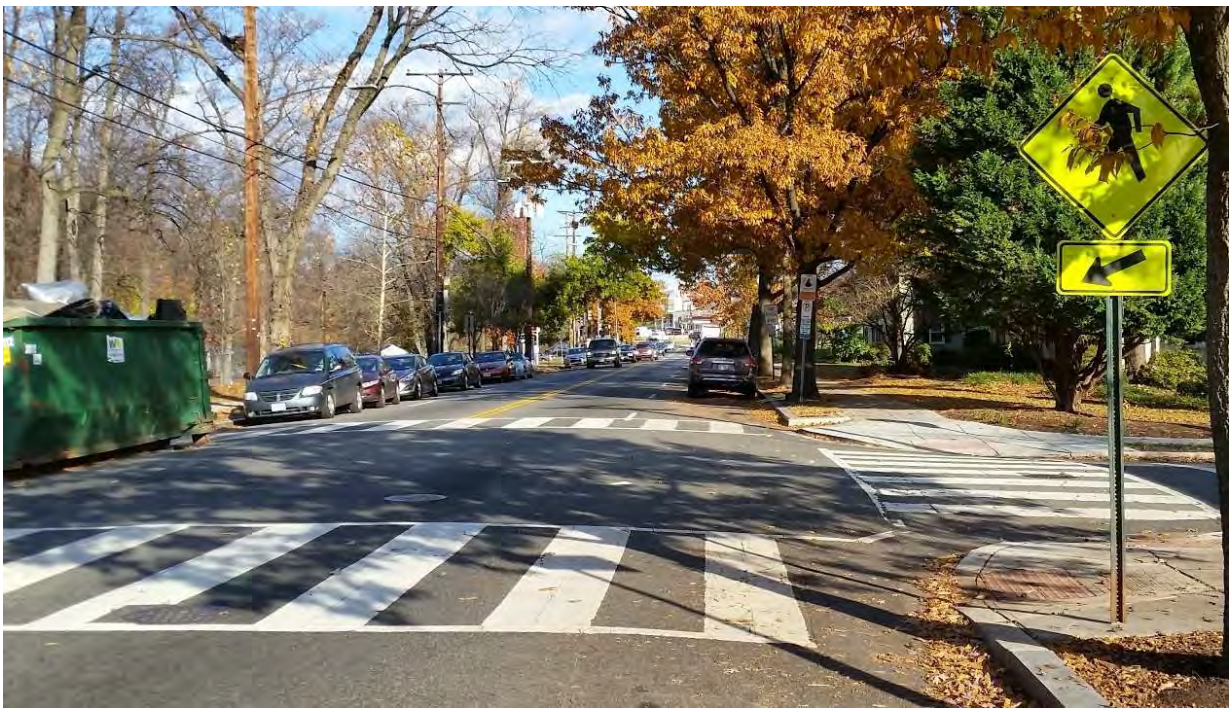


Figure 44 – Alabama Avenue SE at 37th Street, looking North

Adjacent land use is primarily residential, with more single-family homes that are set back from the street than Segment #1 and Segment #2. Bicycle activity in this segment was very limited, with only one or two bicyclists observed during the peak hours. Pedestrian activity was mainly centered around 36th Place and the school and library located near that intersection.

Existing Conditions are shown in **Figure 45**. Specific locations are described in more detail below when needed, with supplemental photos.

District Department of Transportation

Figure 45
Segment #3 – Sheet 1 of 1:
34th St SE to 38th St SE

0' 100' 200'

Horizontal curve decreases visibility for drivers, especially due to speeding

- General safety and traffic concerns
- Drivers speed in this area and do not always yield to pedestrians
- Crosswalk is heavily used due to nearby library and school

Traffic congestion

Legend

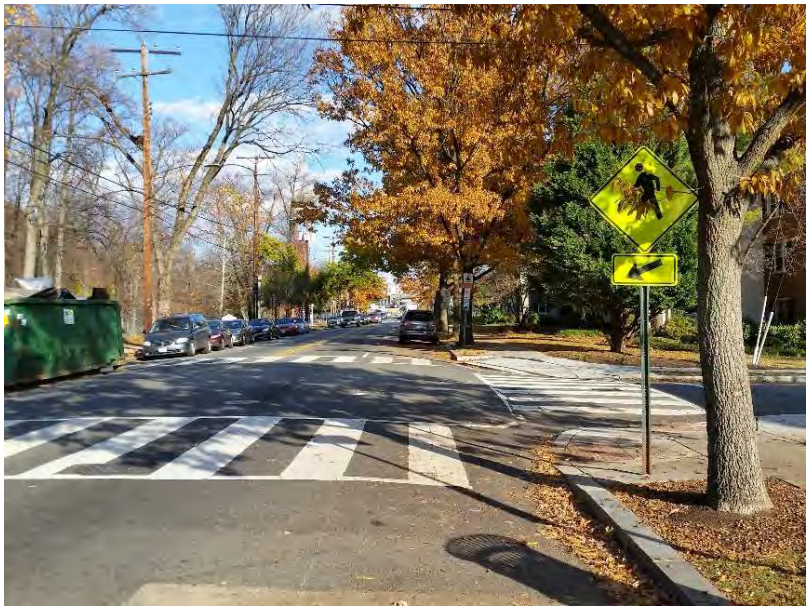
Crash Trend	Uncontrolled Crosswalk	Missing Pedestrian Ramp	Challenging Intersection/ Roadway Geometry
Other Condition	Missing Crosswalk	Deficient Pedestrian Ramp	What We Heard (comments received from members of the community)
Missing Pedestrian Signal	Utility Cut Through Sidewalk	Deficient / Missing Sidewalk	

6.3.3.2. Key Segment-Wide Findings

- Public meeting attendees had significant concerns for pedestrian safety
  - Speeding drivers and drivers not yielding to pedestrians at uncontrolled crosswalks
- Several other comments received at the public meeting were regarding the commuter buses traveling between the District and Prince George's County in Maryland to the south. These buses often cut through side streets (such as 34th Street and 36th Street) to avoid congestion on Branch Avenue, which is the main roadway connecting to Suitland Parkway and the Capital Beltway. The comments expressed concerns about the "reckless" turns to and from Alabama Avenue that these buses make while traveling these cut-through routes.

6.3.3.3. Specific Intersection Findings

- 37th Place / Alabama Avenue
  - Public meeting attendees expressed significant concern over uncontrolled crosswalk (see photo below)



6.3.4. Segment #4 – Pennsylvania Avenue to Ridge Road

6.3.4.1. Segment Overview

North of Pennsylvania Avenue, the character of Alabama Avenue changes significantly. Alabama Avenue is reduced from a four-lane to a two-lane roadway with a bicycle lane in each direction, as shown in **Figure 46**. The posted speed limit along this segment increases to 30 MPH, compared to the 25 MPH posted for the rest of the corridor.

There are several all-way stop-controlled intersections to facilitate pedestrian crossings, and an example of one of these intersections is shown in **Figure 46**. Even with the bicycle lane, bicycle activity in this segment was very limited, with only one or two bicyclists observed during the peak hours. The west side of the roadway is primarily open space and is adjacent to Fort Davis Park and Fort Circle Park, and the east side of the roadway is lined with low-density residences that are set back from the street. At Bowen Road, Alabama Avenue veers off to the north and becomes a two-lane roadway with no bicycle lanes until the end of the study corridor at Ridge Road. There is limited Metrobus service in this segment.

Figure 46 – Alabama Avenue SE at 41st Street, looking South

Existing conditions are shown in **Figure 47**, **Figure 48**, and **Figure 49**. Specific locations are described in more detail below when needed, with supplemental photos.

Figure 47
Segment #4 – Sheet 1 of 3:
38th St SE to Q St SE

0' 100' 200'

- 6 pedestrian crashes in 3 years
- 4 rear-end crashes in 3 years, suggests speeding & driver inattention
- 3 right-angle crashes in 3 years, suggests red-light running
- 42% of crashes occurred during hours of darkness

High speeds and lack of compliance at all-way stop-controlled intersection

High speeds and lack of compliance at all-way stop-controlled intersection

Legend

- Crash Trend
- Other Condition
- Missing Pedestrian Signal
- Uncontrolled Crosswalk
- Missing Crosswalk
- Utility Cut Through Sidewalk
- Missing Pedestrian Ramp
- Deficient Pedestrian Ramp
- Deficient / Missing Sidewalk
- Challenging Intersection/ Roadway Geometry
- What We Heard (comments received from members of the community)

Figure 48
Segment #4 – Sheet 2 of 3:
Q St SE to Barker Ln SE

0' 100' 200'

High speeds and lack of compliance at all-way stop-controlled intersection

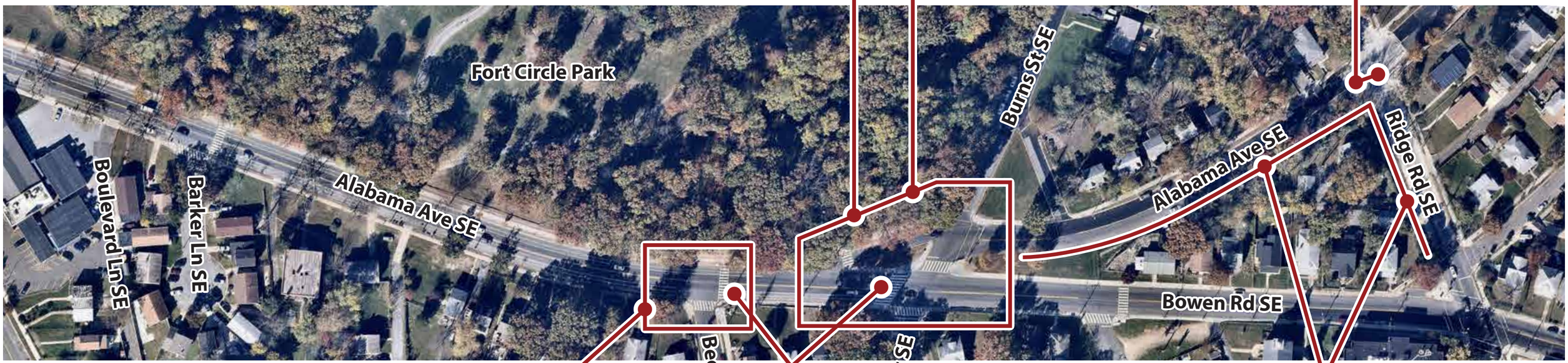
6 rear-end crashes in 3 years, suggests speeding and driver inattention

Legend

- Crash Trend
- Other Condition
- Missing Pedestrian Signal
- Uncontrolled Crosswalk
- Missing Crosswalk
- Utility Cut Through Sidewalk
- Missing Pedestrian Ramp
- Deficient Pedestrian Ramp
- Deficient / Missing Sidewalk
- Challenging Intersection/ Roadway Geometry
- What We Heard (comments received from members of the community)

Figure 49
Segment #4 – Sheet 3 of 3:
Boulevard Ln SE to Ridge Rd SE

0' 100' 200'



General safety and traffic concerns

Drivers speed through crosswalks to get through upstream traffic signal & do not properly yield to peds

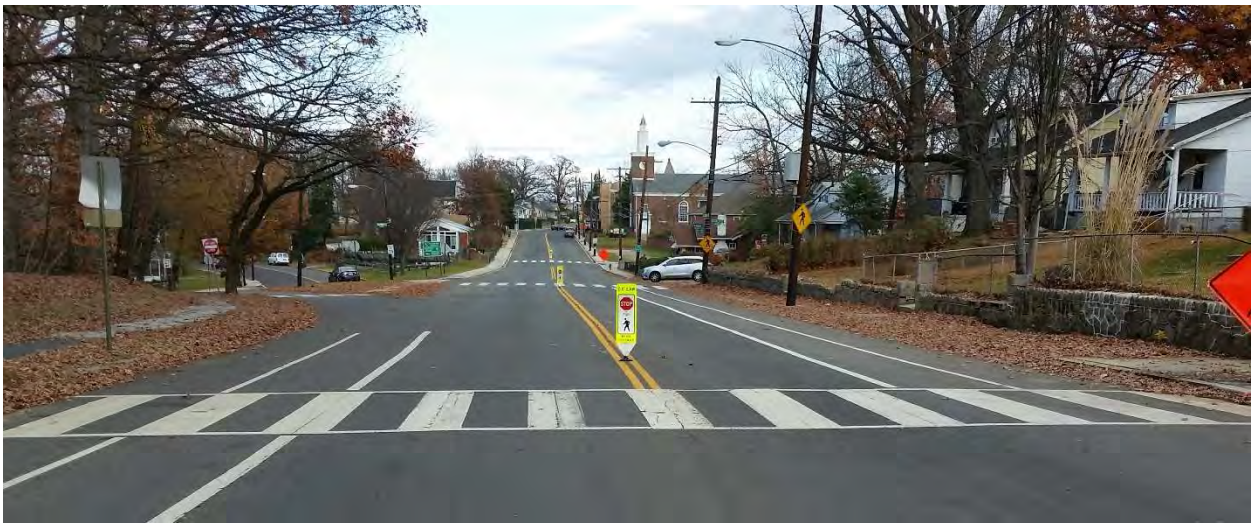
Legend

- Crash Trend
- Other Condition
- Missing Pedestrian Signal
- Uncontrolled Crosswalk
- Missing Crosswalk
- Utility Cut Through Sidewalk
- Missing Pedestrian Ramp
- Deficient Pedestrian Ramp
- Deficient / Missing Sidewalk
- Challenging Intersection/ Roadway Geometry
- What We Heard (comments received from members of the community)

6.3.4.2. Specific Intersection Findings

- 41st Street / Alabama Avenue
  - Unfinished sidewalk next to a tree on the west side of Alabama Avenue (see photo below)
  - Concrete sidewalk also narrows adjacent to mature trees

- Beck Street / Alabama Avenue
  - Intersection is approximately 1,000 feet south and uphill from signalized intersection of Bowen Road and Ridge Road (see photo below).
  - Public meeting attendees noted northbound drivers often speed through uncontrolled crosswalk to try and get through the green light at upstream traffic signal and do not properly yield to pedestrians



- Burns Street / Alabama Avenue
  - Unsignalized intersection, with multiple legs and unclear right-of-way between conflicting vehicles and between vehicles and pedestrians

7.0 NEXT STEPS

Through collaboration with DDOT, community stakeholders, and the public, the existing conditions, safety concerns, and deficiencies presented in this report will be examined and recommendations for safety and mobility improvements will be made. Evaluation criteria will be established and applied to the different alternatives to finalize proposed improvements. These evaluation criteria could include cost, level of service for vehicles/bicycles/pedestrians, constructability, and safety benefits, among others. Once an alternative is chosen for each segment and intersection/crossing, a "Build" traffic analysis will be performed to evaluate traffic operations with the proposed changes.