

FINAL REPORT

Traffic Operations and Safety Study

US Highway 69 / S Ankeny Boulevard Corridor
Ankeny, Iowa

August 2020

HRG Project Number: 181921.01

Prepared For:



Prepared By:



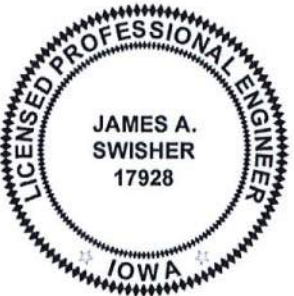
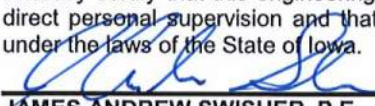
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Introduction

The purpose of this report is to document the findings of a traffic operations and safety study of the US Highway 69/S Ankeny Boulevard corridor from W/E 1st Street to SW Ordance Road in the City of Ankeny, Iowa. It includes the following components:

- Evaluation of crash data along the US Highway 69/S Ankeny Boulevard corridor between 2014 and 2018,
- Review of existing intersection geometry, sight distance, and access management,
- Analysis of traffic signal warrants for the intersections at SW/SE 3rd Street and SE 8th Street,
- Assessment of existing and future operating conditions of study intersection with current and projected 2040 traffic volumes,
- Identification of potential safety countermeasures, and
- Analysis of traffic operations under Build scenarios.

The technical memorandum concludes with a summary of findings and recommendations to address concerns identified along the US Highway 69/S Ankeny Boulevard corridor.

Background

The City of Ankeny, Iowa is located in Polk County along Interstate 35 approximately 8 miles north of Des Moines, Iowa. In 2010, the population of Ankeny was approximately 45,000 people. A 2018 special census estimated the population of Ankeny at 65,000 people. The City of Ankeny is a rapidly growing community of the Des Moines metropolitan area. **Figure 1** shows the project location map.

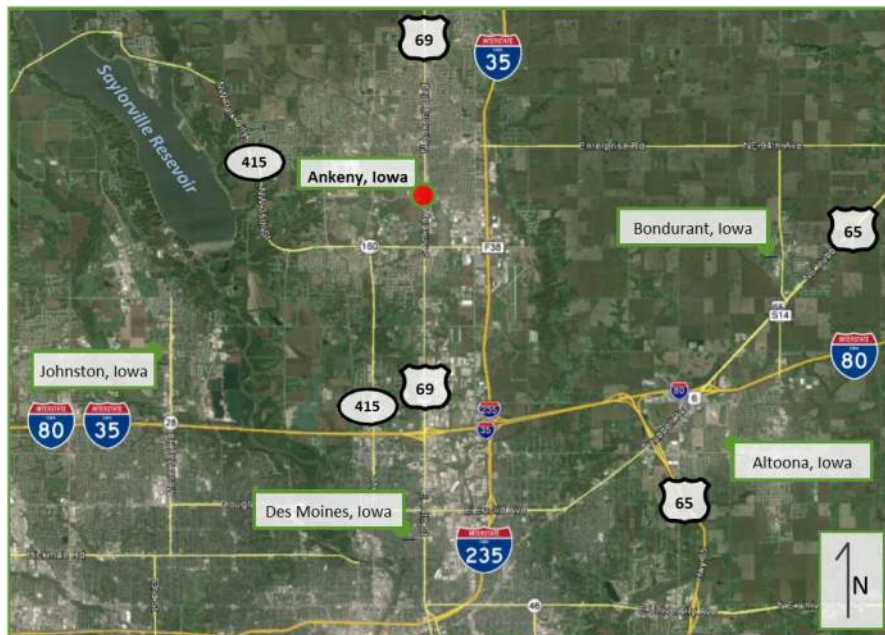


Figure 1: Project Location Map

The study corridor of US Highway 69/S Ankeny Boulevard between W/E 1st Street and SW Ordinance Road can be seen in more detail in **Figure 2**.



Figure 2: Study Corridor

Existing Conditions

US Highway 69 is a major north-south highway across the United States stretching from Minnesota to Texas. US Highway 69 is a four-lane divided roadway through the majority of the City of Ankeny. The roadway transitions to a two-lane roadway outside the Ankeny municipal limits. The roadway carries intra-city traffic within Ankeny as well as providing alternative routes for inter-city traffic between the City of Des Moines and the City of Ames.

Within the study area, US Highway 69 is generally a four-lane, undivided facility with full access to the residential and commercial side streets. At the intersection with W/E 1st Street, a raised median exists, but the median ends at SW 2nd Street where the roadway tapers to the four-lane undivided cross section typical to the rest of the study area. The cross section of US 69 is generally an average of 48 feet between curbs. Four 12' lanes exist with two lanes in each direction, with curbed shoulders on each side. The north and south intersection legs at W/E 1st Street and SW Ordinance Road each have one 12' left-turn lane with varying storage lengths. Street lighting exists along the length of the study corridor. The speed limit on US Highway 69 through the study area is 35 mph.

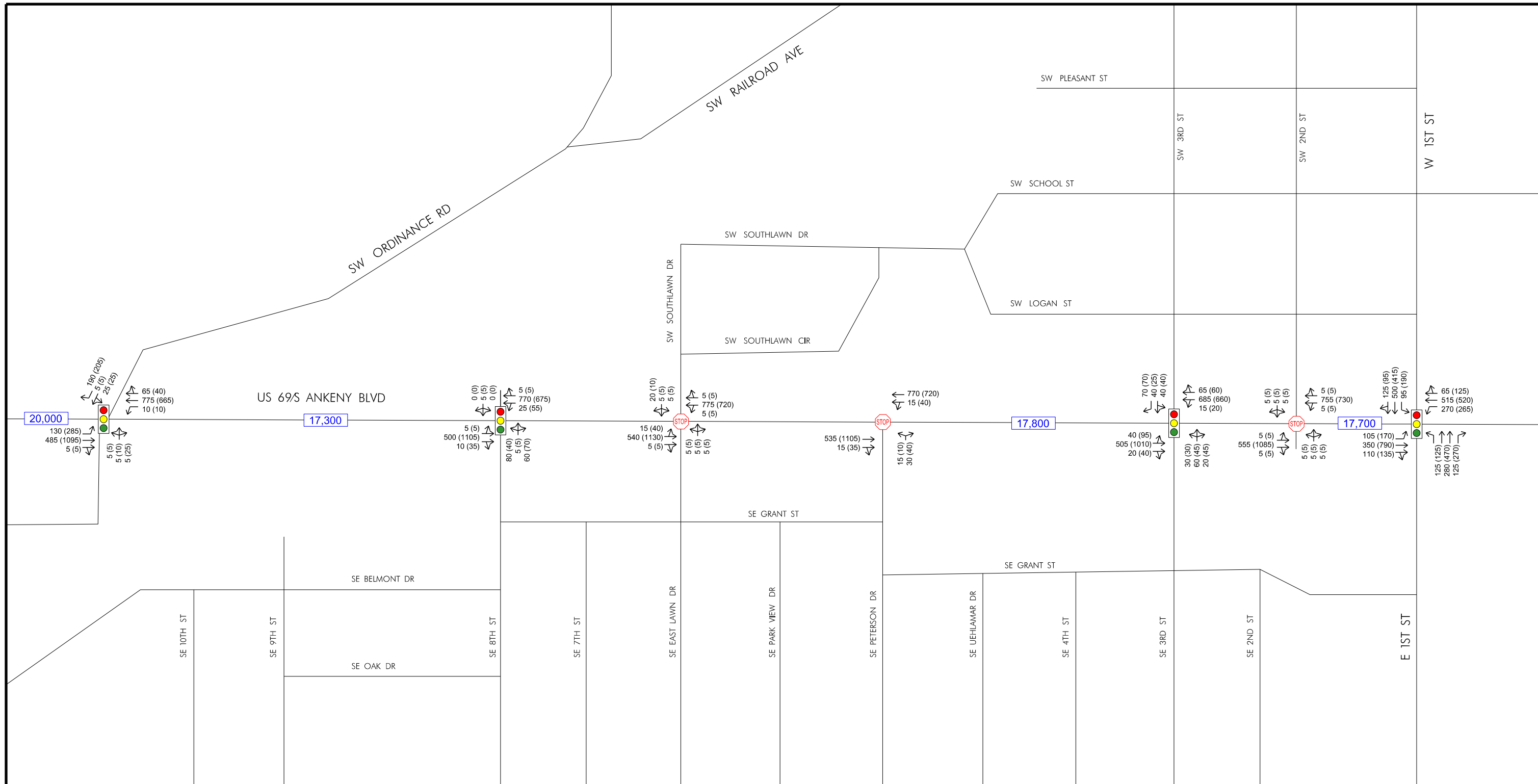
Traffic signals are located at the intersections with W/E 1st Street, SW/SE 3rd Street, SE 8th Street, and SW Ordinance Road. These signals are part of a coordinated system. Protected/permitted left turn phasing is provided for all legs at the W/E 1st Street intersection, and for the northbound and southbound directions at SW Ordinance Road. At SW/SE 3rd Street a protected left turn phase is provided for the northbound left, and at SE 8th Street a protected phase is provided for the southbound left turn, respectively. However, no dedicated left turn lane is provided for these movements, as the current roadway cross section only provides shared through-left lanes at these intersections.

Land use along the study corridor is mostly commercial with some residential. Ankeny High School and the Ankeny Police Department Headquarters are located west of US Highway 69/S Ankeny Boulevard at SW Ordnance Road.

Traffic Volumes

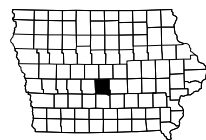
Turning movement counts at each of the study intersections were collected by Traffic Data Inc., a sub-consultant to HR Green. The 24-hour traffic data (15-minute increments by turning movement) was collected on August 6, 2019 and was segmented by heavy vehicle and passenger car vehicle types. There were construction activities occurring at the SW Ordnance Road and SE East Lawn Drive intersections during the traffic counts, which impacted the data on the east legs of both these intersections. The City of Ankeny also provided 13-hour turning movement counts from December 2017 at several of the study intersections. These supplemental counts were used to help project traffic data for the legs that were impacted by construction.

The 24-hour turning movement count data is documented in **Appendix A**. The AM and PM peak hour turning movement counts are shown below in **Figure 3**.



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME
- 7:15-8:15 (4:45-5:45)
- xx.xxx AVERAGE DAILY TRAFFIC
- 2016 IOWA DOT COUNT
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION



NOT TO SCALE



TRAFFIC OPERATIONS & SAFETY STUDY
 EXISTING TRAFFIC VOLUMES
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

AUG 2020
 FIGURE 3
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Crash Analysis

HR Green compiled and reviewed crash data for the study corridor. The crash data of the most recent five calendar years (2014-2018) was compiled using the Iowa Crash Analysis Tool (ICAT) application distributed by the Iowa DOT.

Crash rate per MEV (Million Entering Vehicle) was calculated for the study intersections based on the collected ADT data from the 2019 turning movement traffic counts. Similarly, crash rate per HMVM (Hundred Million Vehicle Miles) was calculated for each roadway segment between intersections.

The following **Figure 4** is a summary of the crash history for the study corridor based on the ICAT data. Crash reports and diagrams obtained from ICAT for the study intersections are contained in **Appendix B**.

INTERSECTION CRASH DATA

	Total Crashes	Fatal	Major Injury Incidents	Minor Injury Incidents	Possible/Unkn own Incidents	PDO Incidents	Crashes per Million Entering Vehicles
US 69 & 1st St	129		2	13	29	85	1.75
US 69 & 2nd St	13			1		12	0.33
US 69 & 3rd St	76		4	6	13	53	1.66
US 69 & Peterson Dr	5					5	0.12
US 69 & Lawn Dr	10					10	0.24
US 69 & 8th St	20		3	1	3	13	0.48
US 69 & Ordinance Rd	15		1		2	12	0.33

	Total Crashes	Angle, oncoming left turn	Broadside (front to side)	Head-on	Non-Collision (Single Vehicle)	Other	Rear-end (front to rear)	Sideswipe, opposite direction	Sideswipe, same direction
US 69 & 1st St	129	56	11	16	4	2	33	2	5
US 69 & 2nd St	13		2				11		
US 69 & 3rd St	76	9	28	1		1	35	1	1
US 69 & Peterson Dr	5		1			1	3		
US 69 & Lawn Dr	10	3					6		1
US 69 & 8th St	20	4	1				15		
US 69 & Ordinance Rd	15	2	3		1	1	7		1

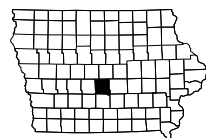
	Total Crashes	Crossed centerline (undivided)	Driver Distraction: Adjusting devices (radio, climate)	Driver Distraction: Exterior distraction	Driver Distraction: Inattentive/lost in thought	Driver Distraction: Other interior distraction	Driver Distraction: Other electronic device	Driver Distraction: Passenger	Driver Distraction: Reaching for objects	Driving too fast for conditions	Exceeded authorized speed	Failed to keep in proper lane	FTYROW: From driveway	FTYROW: At uncontrolled intersection	FTYROW: From stop sign	FTYROW: Making left turn	FTYROW: Making right turn on red signal	FTYROW: Other	FTYROW: To Pedestrian	Followed too close	Improper backing	Improper or erratic lane changing	Lost Control	Made improper turn	Operating vehicle in a reckless, erratic, careless, negligent manner	Operator inexperience	Other: Vision obstructed	Other: Other	Passing: Through/around barrier	Ran off road - left	Ran off road - right	Ran off road - straight	Ran Stop Sign	Ran Traffic Signal	Swerving/Evasive Action	Unknown	
US 69 & 1st St	129	1		1	1	3		2	1	6			1			63	1	2		12			1											8			13
US 69 & 2nd St	13												1							8																	
US 69 & 3rd St	76			3	2	2				8						8		1		13	1			3									23		4		
US 69 & Peterson Dr	5				1	1									1																						
US 69 & Lawn Dr	10			1						1					1	3						1															
US 69 & 8th St	20					1	1			1						4									1								1				
US 69 & Ordinance Rd	15					2				1					1											1		5					2	1	1		

SEGMENT CRASH DATA

	Total Crashes	Fatal	Major Injury Incidents	Minor Injury Incidents	Possible/Unkn own Incidents	PDO Incidents	Crashes per Hundred Million Vehicle Miles
1st St to 2nd St	9			1		8	403.3
2nd St to 3rd St	12				1	11	540.7
3rd St to Peterson Dr	60	1	2	4	13	40	853.6
Peterson Dr to Lawn Dr	6			1		5	134.1
Lawn Dr to 8th St	8				2	6	190.5
8th St to Ordinance Rd	24		1	3	3	17	272.4

	Total Crashes	Angle, oncoming left turn	Broadside (front to side)	Head-on	Non-Collision (Single Vehicle)	Other	Rear-end (front to rear)	Sideswipe, opposite direction	Sideswipe, same direction
1st St to 2nd St	9	1					7		1
2nd St to 3rd St	12						6	1	5
3rd St to Peterson Dr	60	6	8	3	1	2	36		4
Peterson Dr to Lawn Dr	6					1	4		1
Lawn Dr to 8th St	8		1				4		3
8th St to Ordinance Rd	24	1	1	1			18		3

	Total Crashes	Crossed centerline (undivided)	Driver Distraction: Exterior distraction	Driver Distraction: Inattentive/lost in thought	Driver Distraction: Manual operation of an electronic device	Driver Distraction: Other interior distraction	Driver Distraction: Other electronic device	Driver Distraction: Passenger	Driver Distraction: Reaching for objects	Driving too fast for conditions	Equipment failure	Failed to keep in proper lane	FTYROW: From driveway	FTYROW: At uncontrolled intersection	FTYROW: From stop sign	FTYROW: Making left turn	FTYROW: Making right turn on red signal	FTYROW: Other	FTYROW: To Pedestrian	Followed too close	Improper backing	Improper or erratic lane changing	Lost Control	Made improper turn	Operating vehicle in a reckless, erratic, careless, negligent manner	Operator inexperience	Other: Vision obstructed	Other: Other	Other: Improper operation	Ran off road - left	Ran off road - right	Ran off road - straight	Ran Stop Sign	Ran Traffic Signal	Swerving/Evasive Action	Unknown
1st St to 2nd St	9					2										1				1																
2nd St to 3rd St	12				1	2												1		2																
3rd St to Peterson Dr	60	1	1	2		3				4	1		7			6				11			2	2				13	1		1				2	
Peterson Dr to Lawn Dr	6					2														3								1								
Lawn Dr to 8th St	8															1				3								1								
8th St to Ordinance Rd	24				1	1	1						1			1				10		2					5						1	1		



TRAFFIC OPERATIONS & SAFETY STUDY
 CRASH DATA (2014 - 2018)
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

Per the ICAT data, intersections along the study corridor saw varying numbers of crashes between the year 2014 and 2018. Crash rates at the study intersections ranged from 0.12 crashes/MEV to 1.75 crashes/MEV. The statewide average crash rate for a comparable road system is 0.90 Crashes/MEV (Municipal Primary with City Street). Two intersections within the study corridor had crash rates higher than this average: W/E 1st Street (129 crashes, or 1.75 crashes/MEV), and SW/SE 3rd Street (76 crashes, or 1.66 crashes/MEV). The other five intersection crash rates were at 0.48 crashes/MEV or lower.

At W/E 1st Street, the primary cause of crashes was Failure to Yield Right-of-Way while making a left turn (63 crashes), and angle crashes (56) were the most frequent type of crash. 21 of the left turn crashes are noted as being associated with northbound or southbound travel, while the remaining 42 appear to be associated with eastbound or westbound travel on W/E 1st Street. A recently completed construction project in 2019 at the intersection improved the offset for the left turn lanes on W/E 1st Street and added a dedicated westbound right turn lane. It is anticipated that this improvement may cause a reduction in left turn crashes at the intersection, so future accidents at the intersection should be monitored.

At SW/SE 3rd Street, rear-end crashes were the most common type (35 crashes), with a significant amount of broadside crashes (28) as well. Running traffic signal (23) was the most frequently reported cause of crash at SW/SE 3rd Street.

The accident data for each roadway segment between intersections was also studied. The average crash rate for a comparable road system is 263 crashes/HMVM (Municipal US Primary Route). Crash rates for segments in the study area ranged from 134.1 crashes/HMVM to 853.6 crashes/HMVM. Four of the six segments were higher than average: W/E 1st Street to SW 2nd Street (403.3 crashes/HMVM), SW 2nd Street to SW/SE 3rd Street (540.7 crashes/HMVM), SW/SE 3rd Street to SE Peterson Drive (853.6 crashes/HMVM), and SE 8th Street to SW Ordnance Road (272.4 crashes/HMVM). It should be noted that the average crash rate calculation for segments is based on the length of the segment. Segments in this corridor are short (less than a quarter mile), so these crash rates may not be wholly comparable to the statewide average. The crash rates instead can be used to compare segments within the study area to determine where the highest accident rates occur.

The majority of the 119 segment crashes in the study corridor were rear-end crashes (75 crashes). The most commonly reported causes of accidents over the entire corridor were following too closely (30 crashes), other or unknown (26), and other interior distraction (10). In the highest crash rate segment between SW/SE 3rd Street and SE Peterson Drive, failure to yield right-of-way was a cause in a significant number of crashes; 7 crashes were caused by failure to yield from driveways, and another 6 were caused by failure to yield while making a left turn. These failure to yield crashes involving left turns and driveways suggest changes to access management could be a way to mitigate some crashes.

There was one fatal crash in the study corridor, which occurred in the 400 block of S Ankeny Boulevard, between SW/SE 3rd Street and SE Peterson Drive. The crash occurred in August 2018, when a vehicle lost control and veered off the roadway, crashing into a parked car in a parking lot. The major cause listed was operating a vehicle in a reckless, erratic, careless, negligent matter, and alcohol was also reported as a factor. The driver and passenger in the vehicle were both killed.

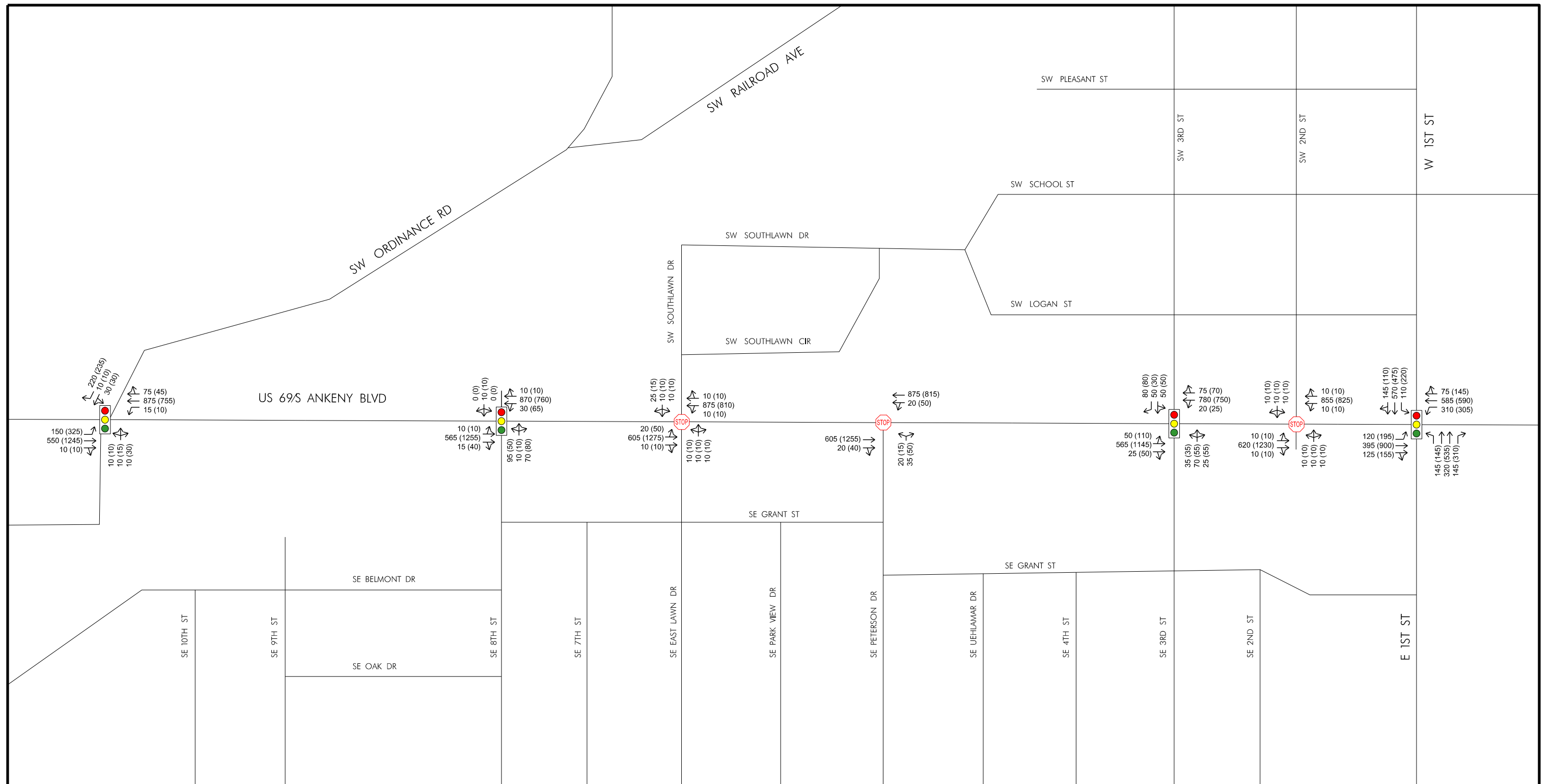
Projected Future Traffic Volumes

Future year peak hour traffic volumes were forecasted for the study area. Projected average daily traffic volumes were obtained from the Des Moines Area Metropolitan Planning Organization (DMAMPO) travel demand model. The DMAMPO provided ADT projections for 2040, as well as model inputs from 2016. The annual growth rate between these two years was calculated, and determined to be approximately 0.6% per year on average throughout the study corridor.




This 0.6% annual growth rate was then applied to the existing 2019 traffic volumes as collected for this study. The resultant volumes were then used as the 2040 design year traffic volumes for the analysis of future scenarios.

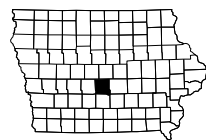
Additionally, historical volumes the Iowa DOT traffic count database were reviewed to determine the past growth rates in the study area. After comparing the 2019 collected volumes with the 2004 historical ADT count, it was determined that the annual growth rate along the S Ankeny Boulevard corridor averaged 0.8%, which is slightly higher than the DMAMPO projected growth rate.

Because past growth rates do not necessarily predict future growth rates accurately, the 0.6% growth rate derived from the DMAMPO travel demand model will be used for the 2040 analyses in the study. However, because the City of Ankeny is experiencing extensive growth, a supplemental analysis of the 5-lane divided alternative will be performed using a growth rate of 1.0% in case the growth rate outpaces DMAMPO projections. The projected 2040 peak hour volume scenarios are depicted in **Figure 5** and **Figure 6**.



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME
7:15-8:15 (4:45-5:45)
-  TRAFFIC SIGNAL CONTROL
-  1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
-  LANE CONFIGURATION



NOT TO SCALE

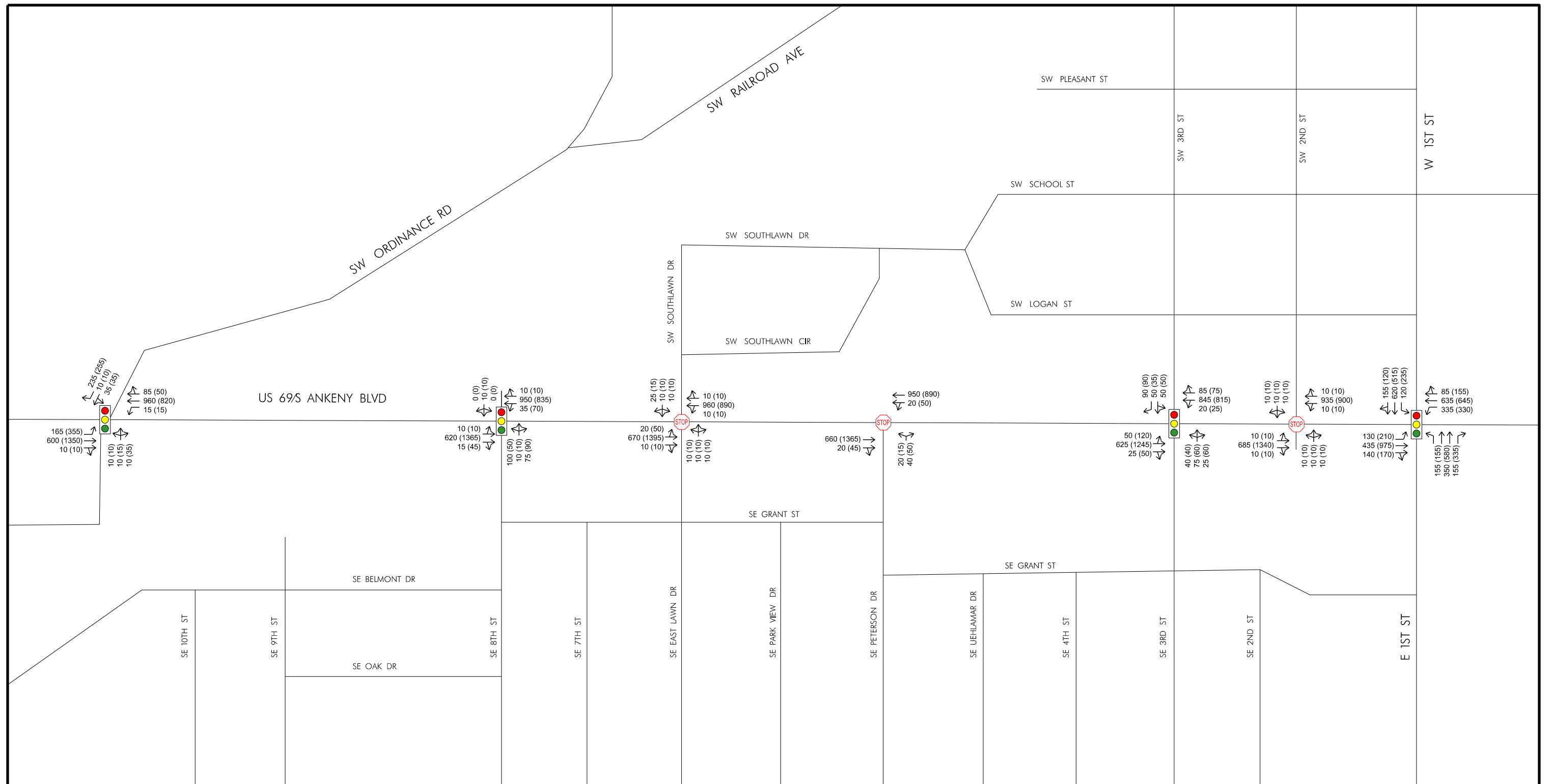


TRAFFIC OPERATIONS & SAFETY STUDY
2040 PROJECTED TRAFFIC VOLUMES
US 69 (S ANKENY BOULEVARD)
ANKENY, IOWA

AUG 2020

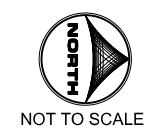
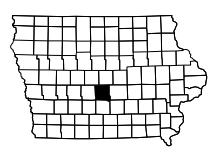
FIGURE 5

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LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME
7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION



TRAFFIC OPERATIONS & SAFETY STUDY
2040 PROJECTED SENSITIVITY TRAFFIC VOLUMES
US 69 (S ANKENY BOULEVARD)
ANKENY, IOWA

Traffic Signal Warrant Evaluation

Traffic signal warrants were evaluated at the S Ankeny Boulevard corridor study intersections with SW/SE 3rd Street and with SE 8th Street according to the *Manual on Uniform Traffic Control Devices (MUTCD)*, 2009 Edition. The 2019 traffic data was utilized for the traffic signal warrant analysis.

The analysis was performed using the Ohio DOT methodology for right turn reductions on minor street approaches. The methodology considers the geometry of the intersection approach, as well as the traffic distribution in order to determine what portion of right turn traffic should be included in the analysis. Below is an overview of the analysis completed at each intersection. **Figure 7** below summarizes the results of the traffic signal warrant evaluation.

Figure 7: MUTCD Traffic Signal Warrant Analysis of the Main Street Corridor

Traffic Signal Warrant	SW/SE 3rd Street	SE 8th Street
Warrant 1	YES	NO
Warrant 2	YES	NO
Warrant 3	YES	NO
Warrant 4	NO	NO
Warrant 5	N/A	N/A
Warrant 6	N/A	N/A
Warrant 7	N/A	N/A
Warrant 8	NO	NO
Warrant 9	N/A	N/A

Explanations of the various warrants and notes regarding the analysis are as follows:

- Warrant 1 (Eight-Hour Vehicular Volume): The 2019 traffic counts show sufficient traffic volume to satisfy Warrant 1 volume criteria at SW/SE 3rd Street, but SE 8th Street does not show sufficient traffic volume to meet Warrant 1 criteria for eight hours of the day.
- Warrant 2 (Four-Hour Vehicular Volume): The 2019 traffic counts indicate the traffic volumes at SW/SE 3rd Street satisfy Warrant 2 criteria, though volumes at SE 8th Street do not satisfy the criteria..
- Warrant 3 (Peak Hour Vehicle): The 2019 counts confirm that traffic volumes at SW/SE 3rd Street do satisfy Warrant 3 volume criteria, while volumes at SE 8th Street do not. MUTCD guidance (Section 4C.04.02) indicates that this warrant is only to be applied to unusual cases like office complexes, manufacturing plants, and other facilities that attract or discharge large volumes of traffic in a short time. Although this criterion does not apply to these intersections, the volumes were still checked.
- Warrant 4 (Pedestrian Volume): Based on traffic volumes at these locations, Warrant 4 would require at least 75 pedestrians per hour for four different hours or greater than 93 pedestrians in a peak hour. The 2019 traffic counts show that pedestrian traffic is not high enough to meet Warrant 4 criteria.

- Warrant 5 (School Crossing): There is not a school crossing located at either of these two study intersections.
- Warrant 6 (Coordinated Signal System): The traffic signals along the US Highway 69 corridor do not require coordination to improve platooning.
- Warrant 7 (Crash Experience): Because traffic signals currently exist at these two intersections, there are not five crashes within a 12-month period that could be prevented with the installation of a new traffic signal.
- Warrant 8 (Roadway Network): This warrant concerns either 5-year projected traffic or weekend traffic volumes at the intersection of two major routes. Neither SW/SE 3rd Street nor SE 8th Street meet the criteria for a “major route” for through traffic flow as defined in the MUTCD. Therefore, the warrant is not satisfied.
- Warrant 9 (Intersection Near a Grade Crossing): There are no grade crossings in the study area.

The current traffic signal control installation at the intersection at SE 8th Street does not satisfy any of the nine traffic signal control warrants as described in the 2009 Manual on Uniform Traffic Control Devices (MUTCD). This signal could be considered for removal pending further traffic analysis to identify the appropriate intersection traffic control device (See Considered Options section) for future use.

Additional details of the study intersection traffic signal warrant evaluation can be found within **Appendix D**.

Traffic Operations Analysis

Intersection level of service (LOS) is primarily a function of peak hour turning movement volumes, intersection lane configuration, and traffic control. For intersection analysis, the Highway Capacity Manual (HCM) defines LOS in terms of the average control delay at the intersection in seconds per vehicle. The results of a HCM analysis are typically presented in the form of a letter grade (A-F) that provides a qualitative estimate of the operational efficiency or effectiveness of the corridor. Much like an academic report card, LOS A represents the best range of operating conditions (i.e., motorists experiencing little delay or congestion) and LOS F represents the worst (i.e., extreme delay or severe congestion).

Table 1 and **Table 2** define the control delay range corresponding to each LOS for signalized and unsignalized intersection locations. LOS E is considered to be at capacity and, typically, LOS D is considered acceptable operations in urban environments.

Table 1: Level of Service vs. Control Delay (Signalized Intersections)

Level Of Service	Delay (sec/veh)
A	0 – 10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

Table 2: Level of Service vs. Control Delay (Unsignalized Intersections)

Level Of Service	Delay (sec/veh)
A	0 – 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

A traffic model for the study intersection was created using Synchro/SimTraffic 10 software. Ten SimTraffic simulations of 60 minutes each were used to obtain the average delay and corresponding Level-of-Service for each intersection approach. SimTraffic was chosen as the preferable output methodology due to the shared through/left lanes at many intersections along the corridor, and to accurately capture the operation of the coordinated signal corridor. Further information for each analysis condition is contained below. Intersection reports from the Synchro and SimTraffic software are available in **Appendix D**.

Existing Condition Analysis

Existing 2019 Traffic Volumes

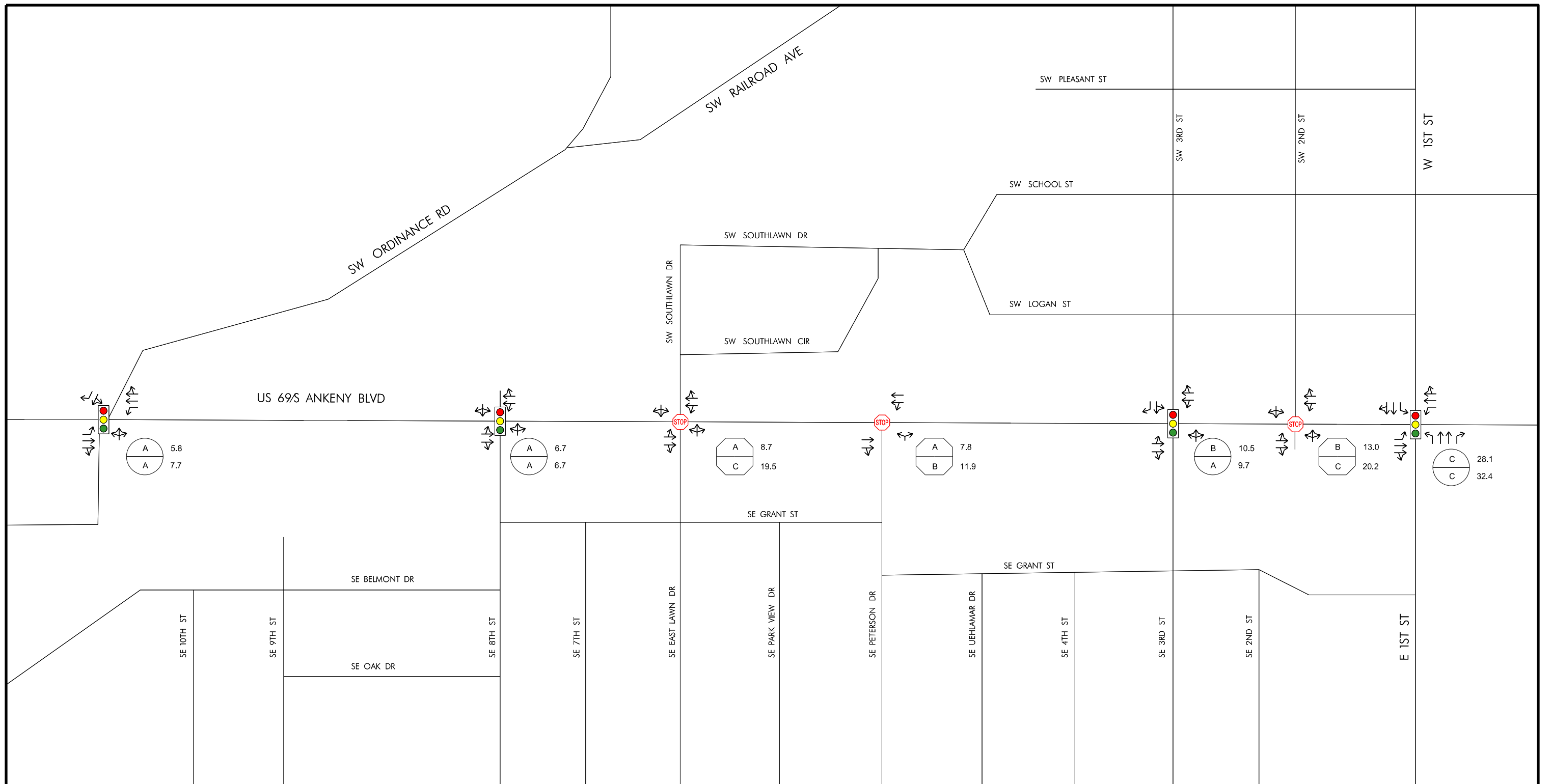
Traffic volume data collected/gathered in the study area was input into the Synchro/SimTraffic 10 software. With respect to traffic volume inputs, peak hour traffic volumes for the AM and PM peak periods were calculated for input as well as peak hour factors, and heavy truck percentages. Existing traffic signal system timing and phasing information was input in the software in an effort to replicate existing conditions as part of a coordinated corridor (S Ankeny Boulevard) as accurately as possible.

Delay values were collected from the SimTraffic simulations, and HCM thresholds were applied to obtain Level-of-Service grades. The Existing Conditions scenario traffic operations in terms of AM and PM LOS are provided in **Table 3** and **Figure 8**. The corresponding Synchro/SimTraffic output reports for the Existing Condition analysis are contained in **Appendix C**.

The results of the Existing Condition analysis show acceptable traffic operations at the study intersections. Minimal delays are experienced at each intersection approach, with no intersection falling below a LOS C. The westbound and eastbound minor street approaches experience higher amounts of delay but no movements experience worse than LOS D. The analysis shows that the PM peak hour displays a slightly higher overall intersection delay than the other times of day. However, the overall intersection levels of service resulted in acceptable levels.

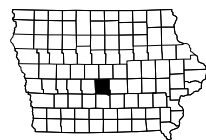
Table 3: 2019 Existing Conditions Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	34.0	43.0	31.8	36.3	34.8	5.1	17.0	25.7	19.5	21.7	22.0	15.9	28.1
	LOS	C	D	C	D	C	A	B	C	B	C	C	B	C
PM	Delay (sec)	50.5	44.0	30.8	39.2	45.1	12.8	19.0	32.0	28.9	32.8	23.4	17.0	32.4
	LOS	D	D	C	D	D	B	B	C	C	C	C	B	C
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	13.0			11.4			8.1	-	-	5.0	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	14.1			20.2			6.2	-	-	11.8	-	-	-
	LOS	B			C			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	46.5	48.2	7.0	52.5	51.6	26.1	8.2	3.6	2.4	9.2	6.7	5.0	10.5
	LOS	D	D	A	D	D	C	A	A	A	A	A	A	B
PM	Delay (sec)	49.9	47.9	6.5	52.1	50.4	27.5	11.1	7.3	5.8	11.8	4.7	3.0	9.7
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			7.8			-	-	-	5.7	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			11.9			-	-	-	13.6	-	-	-
	LOS	-			B			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	8.7			7.9			7.9	-	-	5.0	-	-	-
	LOS	A			A			A	-	-	A	-	-	-
PM	Delay (sec)	13.1			19.5			7.8	-	-	10.2	-	-	-
	LOS	B			C			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	42.1	-	50.0	48.8	27.0	6.3	2.2	1.3	7.8	3.3	2.1	6.7
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	42.3	-	44.6	50.8	22.6	10.3	5.6	4.6	16.3	3.5	1.7	6.7
	LOS	-	D	-	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	51.5	52.5	9.4	45.5	48.2	6.3	14.2	2.9	2.8	8.8	5.3	3.9	5.8
	LOS	D	D	A	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	51.2	49.3	8.3	42.5	49.7	12.1	17.7	4.9	3.0	15.7	5.3	3.8	7.7
	LOS	D	D	A	D	D	B	B	A	A	B	A	A	A



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM xx.X
- AM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM xx.X



NOT TO SCALE



TRAFFIC OPERATIONS & SAFETY STUDY
 EXISTING TRAFFIC OPERATIONS
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FIGURE 8

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As seen in **Table 4**, SimTraffic-simulated travel times in the corridor ranged from 107 seconds in the southbound direction to 154 seconds in the northbound direction. Arterial speeds in the southbound direction were 28mph during both peak periods. In the northbound direction, speeds were 27mph during the AM peak, while speeds slowed to 23mph during the PM peak when volumes are highest.

Table 4: Arterial Travel Time Measurements

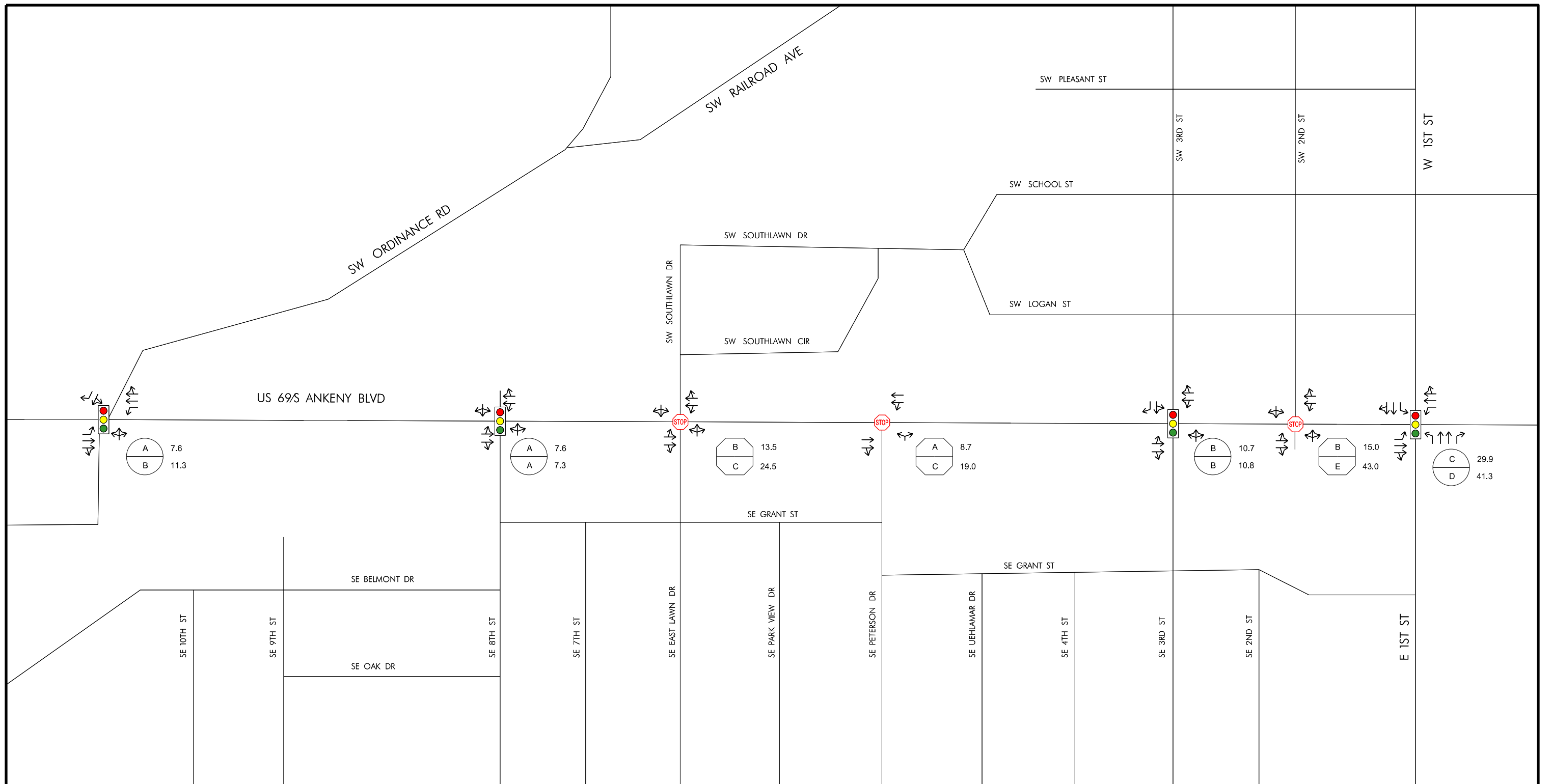
Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	132.5	27
PM	154.1	23
Southbound S Ankeny Boulevard		
AM	107.9	28
PM	107.0	28

Forecasted 2040 Traffic Volumes

The existing roadway network was again analyzed with the projected 2040 volumes. This no-build scenario represents conditions if no geometric modifications were made to the corridor over the next 21 years, highlighting the future needs throughout the study area based on projected traffic patterns. The traffic signals along S Ankeny Boulevard were re-optimized for the AM and PM peak hours, based on the 2040 traffic volumes. Summaries of the SimTraffic delay results are shown in **Table 5** and **Figure 9**.

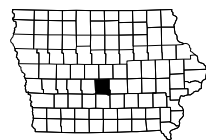
Table 5: 2040 No-Build Conditions Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	34.0	45.7	34.9	37.8	34.9	5.6	23.8	24.1	17.8	26.0	24.8	18.6	29.9
	LOS	C	D	C	D	C	A	C	C	B	C	C	B	C
PM	Delay (sec)	53.6	44.0	32.7	74.9	58.6	16.3	27.2	43.7	42.7	46.4	26.7	21.4	41.3
	LOS	D	D	C	E	E	B	C	D	D	D	C	C	D
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	14.0			15.0			9.5	-	-	6.9	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	31.8			43.0			9.6	-	-	17.5	-	-	-
	LOS	D			E			A	-	-	C	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	43.7	45.9	7.5	48.5	48.1	31.1	11.9	5.1	3.5	8.6	5.8	4.1	10.7
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	51.0	52.9	7.1	49.0	52.3	31.8	14.2	7.2	5.1	17.5	6.1	3.6	10.8
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	B
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			8.7			-	-	-	4.9	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			19.0			-	-	-	10.5	-	-	-
	LOS	-			C			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	12.6			13.5			6.5	-	-	5.1	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	23.0			24.5			6.4	-	-	8.8	-	-	-
	LOS	B			C			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	51.5	-	47.8	53.8	28.3	10.7	3.0	2.4	9.3	3.5	2.3	7.6
	LOS	-	D	-	D	D	C	B	A	A	A	A	A	A
PM	Delay (sec)	-	39.9	-	45.7	46.3	25.1	10.2	4.6	4.1	21.9	5.3	2.5	7.3
	LOS	-	D	-	D	D	C	B	A	A	C	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	55.9	51.3	10.5	54.7	55.0	6.8	15.9	3.4	3.1	8.2	7.4	6.4	7.6
	LOS	E	D	B	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	49.3	53.0	9.7	42.7	48.5	12.9	20.7	6.5	4.8	20.2	12.6	9.7	11.3
	LOS	D	D	A	D	D	B	C	A	A	C	B	A	B



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- AM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY



TRAFFIC OPERATIONS & SAFETY STUDY
 2040 NO BUILD TRAFFIC OPERATIONS
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

The results of the 2040 no-build analysis predicts higher delays than in the existing condition. Overall intersection grades are expected to be LOS D or better with the intersection at W/E 1st Street deteriorating from LOS C under existing volumes to LOS D under the forecasted volumes. The westbound and eastbound minor street approaches are anticipated to experience the highest delays, with some movements and approaches reaching LOS E during either peak hour. The analysis predicts that the PM peak hour will display slightly higher overall intersection delays than the AM peak hour.

As seen in **Table 6**, SimTraffic-simulated travel times in the corridor are predicted to be longer than in the existing condition. AM travel times are predicted to increase by less than 3 seconds, while the PM travel times are expected to increase by 11 to 13 seconds.

Table 6: 2040 No-Build Arterial Travel Time Measurements

Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	135.3	27
PM	167.8	22
Southbound S Ankeny Boulevard		
AM	109.5	28
PM	118.4	26

Considered Improvements

Based on the safety and operations analysis within this report, several strategies to improve traffic flow and safety were considered.

Access Management

The four lane undivided geometry of S Ankeny Boulevard provides full access to each study intersection and each commercial or residential driveway within the corridor. The only place where access is restricted in and out of commercial entrances is between W/E 1st Street and SW 2nd Street where there is a raised median limiting left turns in and out of the driveways. The S Ankeny Boulevard corridor contains many commercial and residential entrances throughout the corridor. Access points increase the number of conflict points throughout the corridor, and as traffic increases, so does the potential for accidents.

Two access points in particular provide access to fast food restaurants, which are high traffic generators. McDonald's and Dairy Queen are both located between SW/SE 3rd Street and SE Peterson Drive, which is the segment with the highest observed crash rate in the study corridor. A traffic analysis of these, or any other mid-block access intersections was not performed as part of this study, however it is acknowledged that the presence of these large traffic generators has an impact on traffic flow and lane changing in the corridor. Access management strategies would likely have a positive impact on the safety of these higher-traffic access points.

A map of the access points and access density throughout the corridor is included in **Figure 10**. The figure indicates that access point density is highest at the northern end of the study corridor, with density decreasing toward Ordinance Road to the south. Overall, there are 42 access points identified along the segment of S Ankeny Boulevard between W/E 1st Street and Ordinance Road which is approximately 0.84 miles in length. This equates to approximately 50 access points per mile.

The operational and safety benefits of access management have been well documented. The Access Management Manual, Second Edition, provides noteworthy comparisons for both operational and safety impacts related to the number of access points per mile. The following tables have been reproduced from this resource.

Table 7: Representative Crash Rates by Type of Median: Urban and Suburban Areas

(Source: Access Management Manual, Second Edition, TRB, 2014, Page 27, Exhibit 2-3)



Total Access Points Per Mile*	Crash Rate (crashes per million VMT)		
	Undivided Median	TWLTL	Nontraversable Median
≤20	3.8	3.4	2.9
20.01 – 40	7.3	5.9	5.1
40.01 – 60	9.4	7.9	6.8
>60	10.6	9.2	8.2

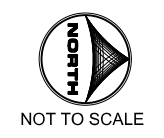
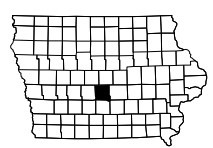
Note: VMT = vehicle miles traveled; TWLTL = two-way left-turn lane.

*Includes both signalized and unsignalized access points



LEGEND

-  TRAFFIC SIGNAL CONTROL
-  1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
-  LANE CONFIGURATION
-  XX ACCESS POINTS
-  (XX) (ACCESS POINTS PER MILE)



TRAFFIC OPERATIONS & SAFETY STUDY
 EXISTING ACCESS POINT DENSITY
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

Table 8: Access Points and Free-Flow Speed

(Source: Access Management Manual, Second Edition, TRB, 2014, Page 32, Exhibit 2-12)

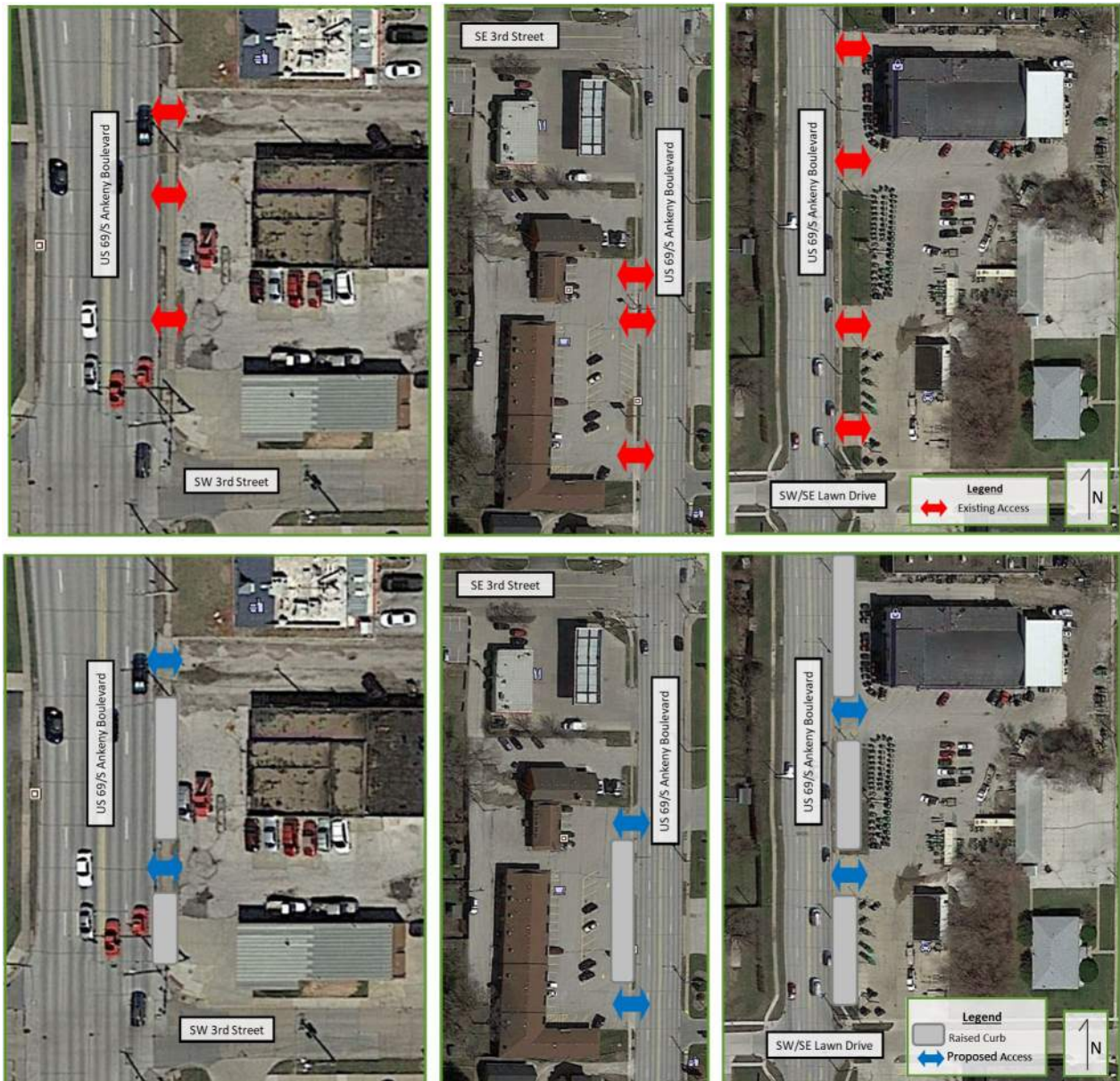
Access Points per Mile	Reduction in Free-Flow Speed (mph)
0	0.0
10	2.5
20	5.0
30	7.5
≥40	10.0

Tables 7 and 8 make clear the benefit that fewer access points per mile has along a corridor with respect to the safety and operations. Access can be managed in several ways. The most restrictive is to install a raised median along S Ankeny Boulevard, and restrict all access points to right-in, right-out. Left turns would be allowed at intersections. Crossing conflicts involving left turn movements to or from entrances would be eliminated, while traffic patterns would likely shift. Vehicles desiring to turn left out of an entrance would be forced to turn right and find another route to their destination, or make a U-turn at an appropriate intersection. **Figure 11** shows the AutoTurn analysis for a passenger car making a U-turn movement at an improved intersection. Some vehicles may elect to use alternate side street routes rather than making the U-turn. Although the restriction of access on S Ankeny Boulevard would provide safety benefits, the potential for additional traffic on these residential side streets may be undesirable for residents and could require increased maintenance on these lower volume roads.

Another strategy for controlling access would be to consolidate entrances where appropriate. In some cases along the S Ankeny Boulevard corridor, business parking lots may be accessed from multiple entrances. Two access drives can provide benefits to traffic flow within and through a parking lot. Lots with more than two access points could be candidates for consolidation, pending discussions with property owners and business owners. Three such locations are illustrated below in **Figure 12**, as well as possible concepts for which access points to maintain and which to eliminate by the addition of raised curb.



Figure 12: Access Drive Consolidation

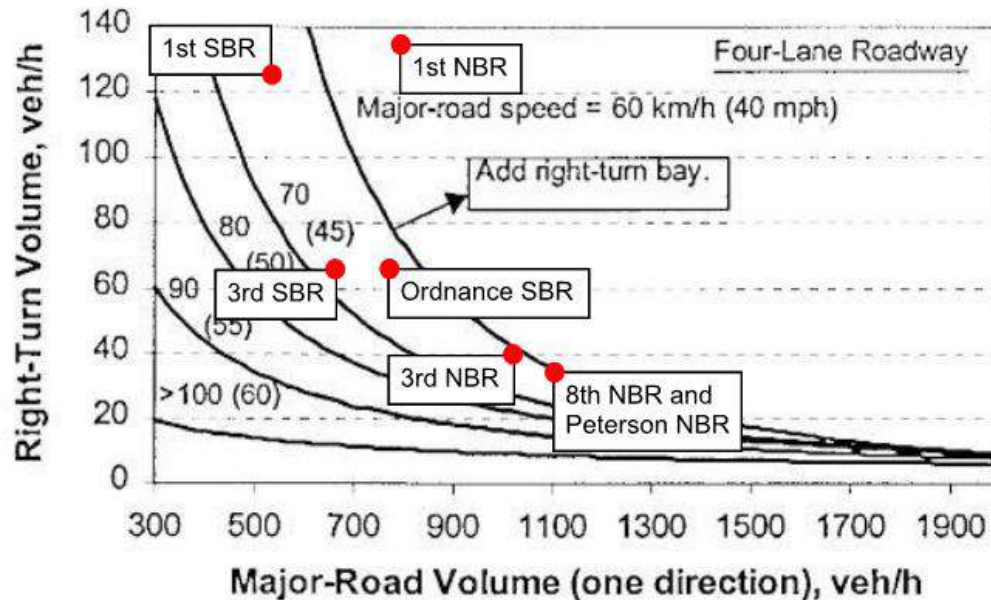


Though not a restriction or change to access points, the addition of a two-way left turn lane (TWLTL) would help alleviate conflicts along the corridor. With the current lane configuration, the left lane in each direction becomes a de-facto left turn lane, as cars may have to stop and wait to turn left. Through vehicles are either stopped behind these left-turning cars, or they must pass on the right to continue through. The TWLTL provides a waiting area for vehicles turning from S Ankeny Boulevard into an access drive, separating turning traffic from the northbound and southbound through traffic. Additionally, for traffic exiting access points, the TWLTL can serve as a refuge during busier traffic periods when there are not sufficient gaps in both the northbound and southbound through traffic to complete a left turn. Vehicles can make a two-stage left turn, crossing one direction of traffic, then waiting in the TWLTL for a gap in the opposite direction of traffic.

The build alternatives analyzed in the next section will consider various access management treatments mentioned above.

Potential Addition of Right-Turn Lanes

The existing study corridor lacks dedicated right turn lanes on S Ankeny Boulevard. The addition of dedicated right turn lanes at intersections could be advantageous for improving traffic flow and safety if the traffic volumes warrant an additional lane. NCHRP Report 457, titled “Evaluating Intersection Improvements: An Engineering Study Guide” presents guidelines for considering the addition of a dedicated right turn lane on a major road. **Figure 13** shows the relevant figure from the report, with points plotted from the study intersections that are nearing the threshold. Note that the last curve plotted represents volumes corresponding to an 85th percentile speed of 40mph. MUTCD Section 2B.13 states that the posted speed limit should be within 5mph of the 85th percentile speed. S Ankeny Boulevard is signed with a speed limit of 35mph, so it was conservatively assumed that the 85th percentile speed along S Ankeny Boulevard is 40mph. **Table 9** summarizes the volumes and analysis.



Source: NCHRP Report 457, Figure 2-6b

Figure 13: NCHRP Right Turn Lane Guidance

Table 9: 2019 Right Turn Volumes for Warrant Analysis

Right Turn Approach	Major Road Thru Volume	Right Turn Volume	Worst Case Peak Hour	Right Turn Lane Warranted
SB Right at 1 st St	520	125	PM	NO
NB Right at 1 st St	790	135	PM	YES
SB Right at 2 nd St	755	5	AM	NO
NB Right at 2 nd St	1085	5	PM	NO
SB Right at 3 rd St	685	65	AM	NO
NB Right at 3 rd St	1010	40	PM	YES
NB Right at Peterson Dr	1105	35	PM	YES
SB Right at Lawn Dr	775	5	AM	NO
NB Right at Lawn Dr	1130	5	PM	NO
SB Right at 8 th St	770	5	AM	NO
NB Right at 8 th St	1105	35	PM	YES
SB Right at Ordnance Rd	775	65	AM	NO
NB Right at Ordnance Rd	1095	5	PM	NO

Four locations on S Ankeny Boulevard are identified as candidates for an auxiliary lane. The northbound right turn at W/E 1st Street falls far to the right of the 40mph curve. The volumes corresponding to the northbound right turns at SW/SE 3rd Street, SE Peterson Drive, and SW/SE 8th Street fall on the 40mph curve, indicating that any growth will push the point past the line and into auxiliary turn lane consideration. In order to maintain safe and efficient operations along the study corridor for current and future traffic volumes, right turn lanes are recommended at each of these four locations. Dedicated right turn lanes on some minor street approaches, particularly at signalized intersections could also provide some signal timing benefits to the study corridor.

Dual Left Turn Lanes

Projected 2040 traffic volumes indicate that left turn volumes will be nearing the capacity for a single left turn lane. As recommended within NCHRP Report 457, dual left-turns are recommended when the left-turn movements are greater than 300 vehicles per hour when opposing through movements are greater than 450 vehicles per hour.

The number of left-turn movements and opposing through movements for the 2040 design year are shown below in **Table 10**.

Table 10: Selected 2040 Left-Turn Volumes

Intersection	Turn Lane	Left-Turn Movements (vehicles)	Opposing Through Movements (vehicles)
W/E 1st Street	Southbound Left	305	900
Ordnance Road	Northbound Left	325	755

With the use of dual left-turn lanes, the traffic signal phasing is operated as a protected-only movement for the left-turn movements. The use of protected-only left-turn movement signal phasing results in safety benefits. Even though the number of rear-end crashes may increase along S Ankeny Boulevard, the number of more severe broadside accidents involving left-turning motorists should be reduced more so.

Dual left turn lanes require two receiving lanes on the destination leg. The potential southbound left turn at W/E 1st Street already has two receiving lanes on E 1st Street. There is currently only one lane on the west leg of Ordnance Road, so if dual left turn lanes were used for this movement, Ordnance would have to be widened to two lanes immediately west of S Ankeny Boulevard.

The projected turning volumes are just over the threshold for consideration of a dual left turn lane. Analysis of the 2040 peak hour volumes in SimTraffic indicated that the existing intersection geometry and phasing functions acceptably. A brief analysis of the corridor incorporating dual left turn lanes at these two locations did not predict an obvious improvement to level of service for the left turn movements when changing from single lane protected-permitted phasing to dual lane protected only phasing.

Because the current left turn volumes are below the threshold value, and because the future analysis does not predict major improvements with the use of dual left turn lanes, it is recommended that the existing single left turn lane geometry be preserved. These intersections should be monitored for future traffic growth and for increases in left turn accidents occurring in these particular movements. If operations or safety diminish at these movements due to higher traffic volumes, dual left turn lanes should be considered.

Removal of SE 8th Street Traffic Signal

As stated previously, the traffic signal warrant analysis indicated that traffic volumes at SE 8th Street do not satisfy the MUTCD warrant criteria for a traffic signal. A brief analysis of the traffic volumes at the intersection under two-way stop control indicates that the SE 8th Street approaches would both operate at LOS F. This level of service on the minor street approach is not acceptable. Because the current signalized intersection operates well, with good coordination along S Ankeny Boulevard, it is not recommended to remove the traffic signal and introduce significant delays to the SE 8th Street approaches.

Build Alternatives

Three build alternatives were selected for further traffic operations analysis. The first alternative includes only spot improvements to the existing cross section at intersections. The other two involve widening the cross section throughout the corridor and managing access points. They are described and analyzed in the following sub-sections.

Four-Lane Roadway Cross Section with Spot Improvements

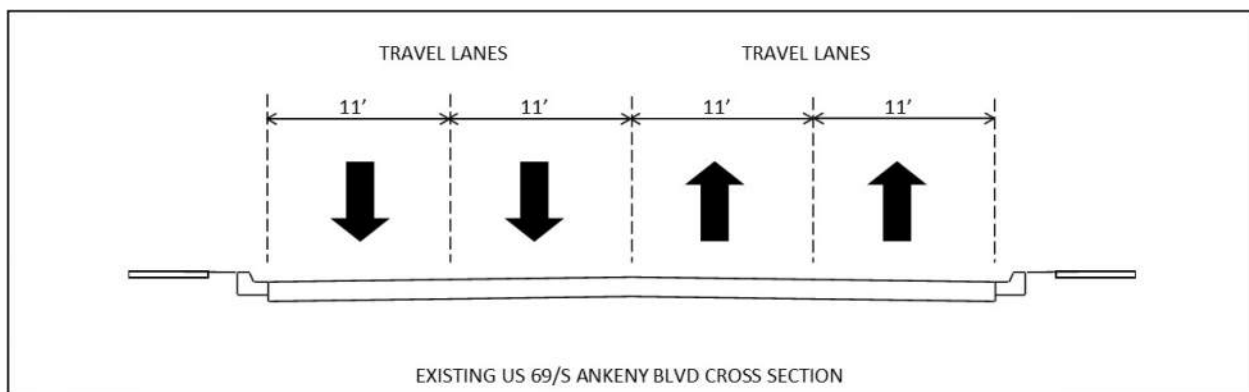
This alternative includes the addition of a few minor improvements at intersections, while maintaining the existing cross section through the majority of the study corridor. Throughout the corridor, the roadway maintains a four-lane cross section from SW/SE 3rd Street through SE 8th Street. The limited roadway width results in shared left turn lanes on S Ankeny Boulevard at each intersection.

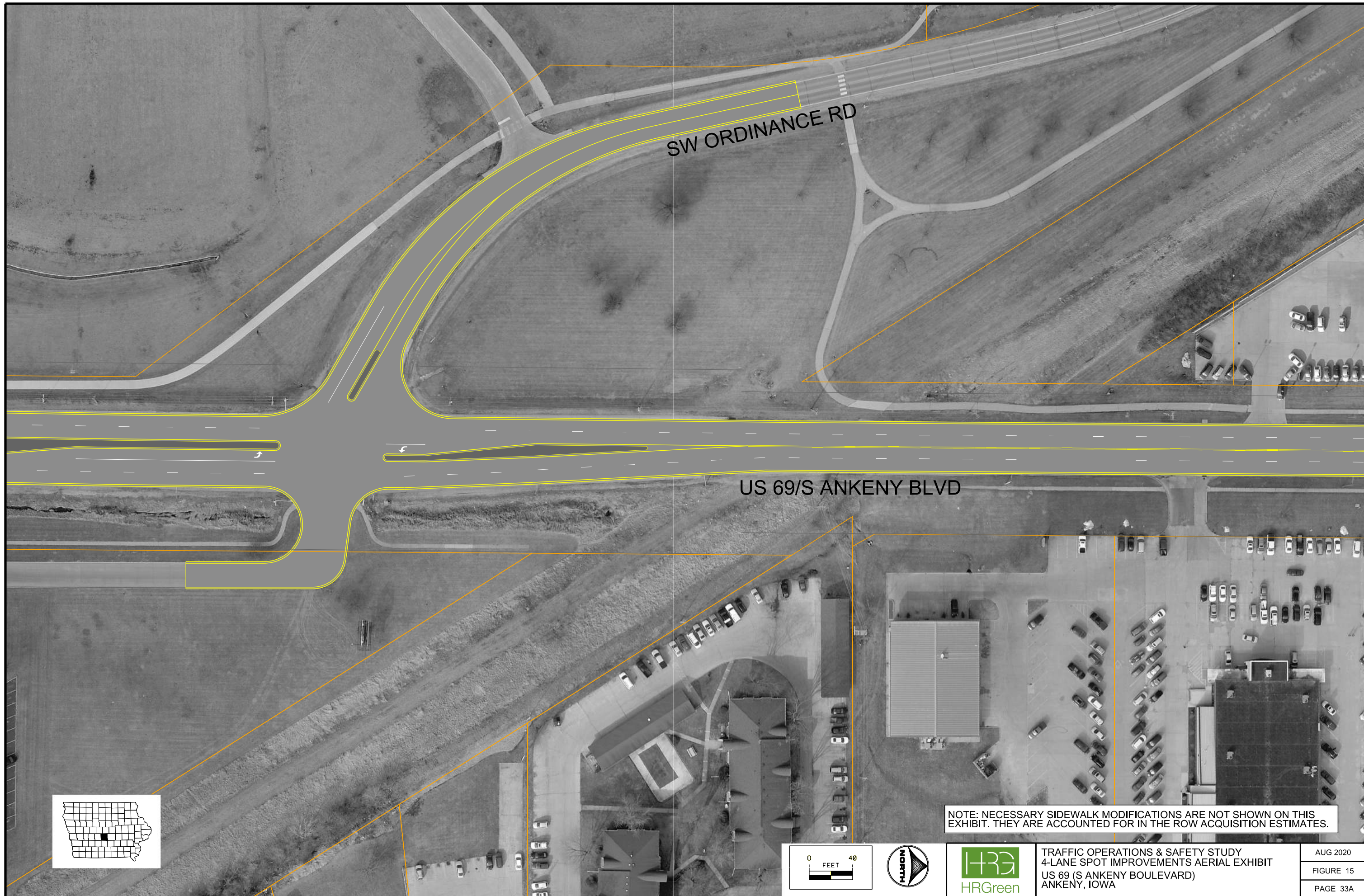
The primary improvement considered in this alternative is the addition of dedicated left turn lanes at the signalized intersections of SW/SE 3rd Street and SE 8th Street. This turn lane allows for the signals to operate with a more typical protected-permissive phasing, reducing the safety concerns associated with a shared left-through lane and satisfying driver expectancy with a protected left turn phase. The alternative also includes the addition of dedicated right turn lanes at the locations identified previously.

Aside from at signalized intersections, the cross section in the corridor remains the same as in existing. The safety benefits of this alternative are solely related to the intersection improvements. The addition of a dedicated left turn lane at a signalized intersection carries a Crash Modification Factor (CMF) of 0.58, predicting a 42% decrease in intersection-related crashes. Because this alternative does not change the existing cross section between intersections, the segment crash rates is not expected to improve. Details of the CMFs cited in this report are included in **Appendix E**.

This alternative’s typical cross section is shown in **Figure 14**, and an aerial plan view of the corridor improvements is outlined in **Figure 15**.

Figure 14: Four-Lane Cross Section

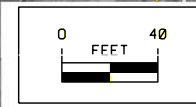
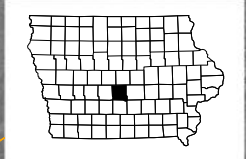




SW ORDINANCE RD

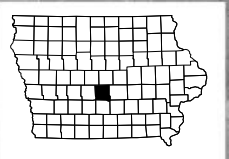
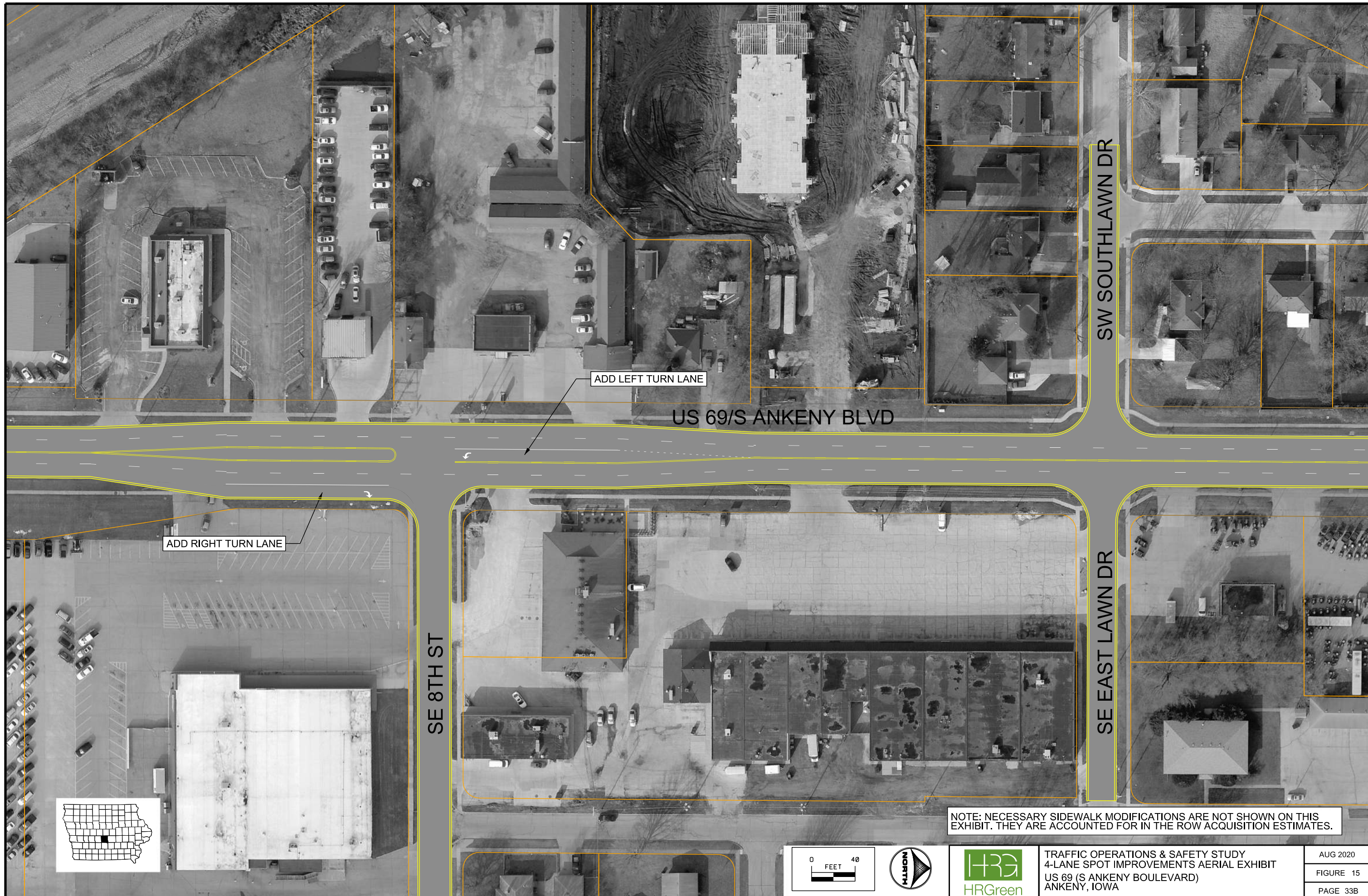
US 69/S ANKENY BLVD

NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.

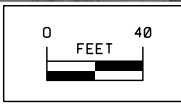


TRAFFIC OPERATIONS & SAFETY STUDY
 4-LANE SPOT IMPROVEMENTS AERIAL EXHIBIT
 US 69 (S ANKENY BOULEVARD)
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 FIGURE 15
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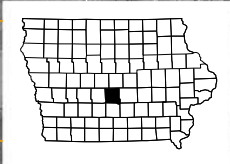
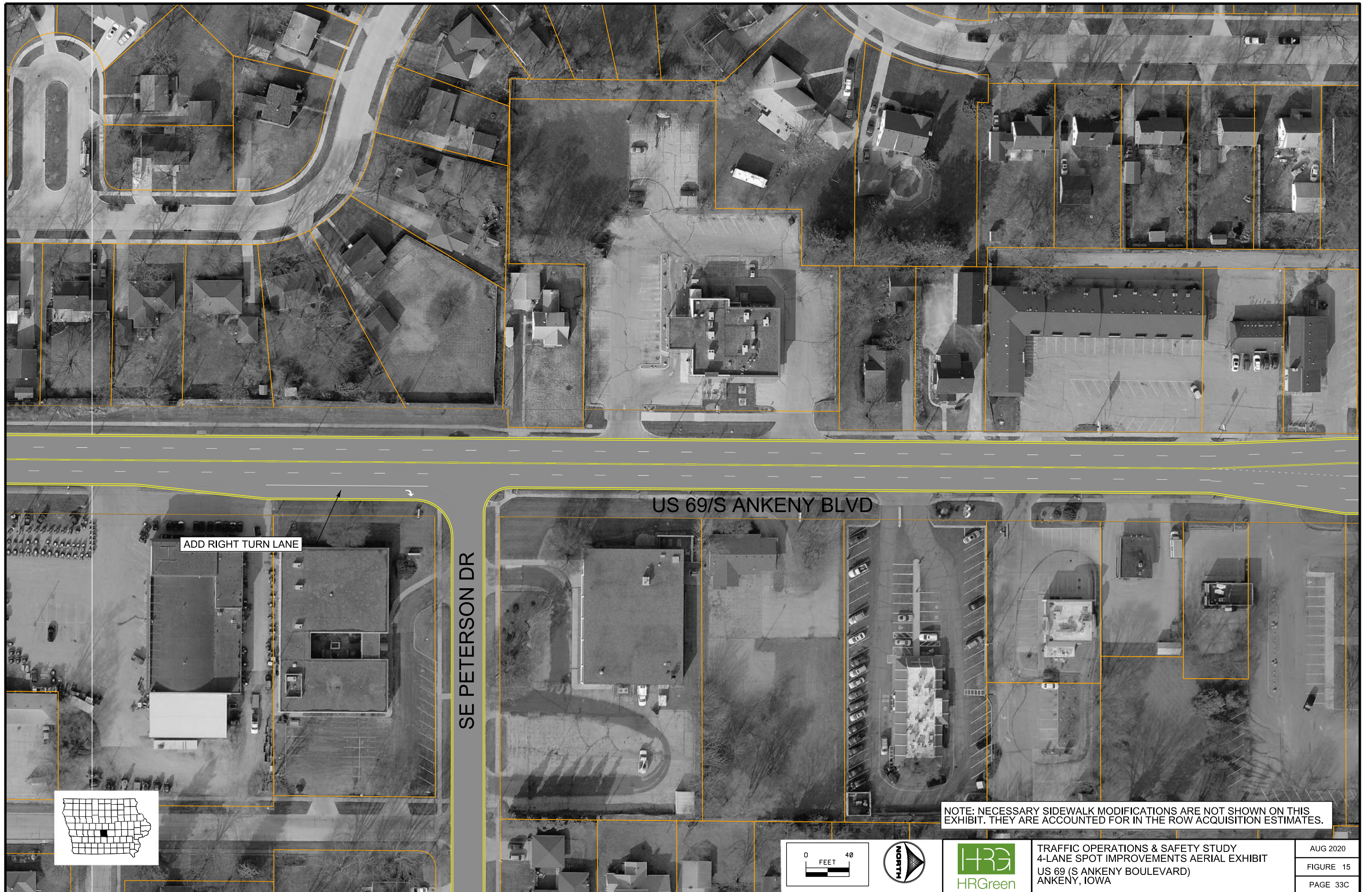


NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.

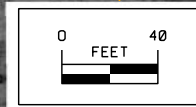


TRAFFIC OPERATIONS & SAFETY STUDY
 4-LANE SPOT IMPROVEMENTS AERIAL EXHIBIT
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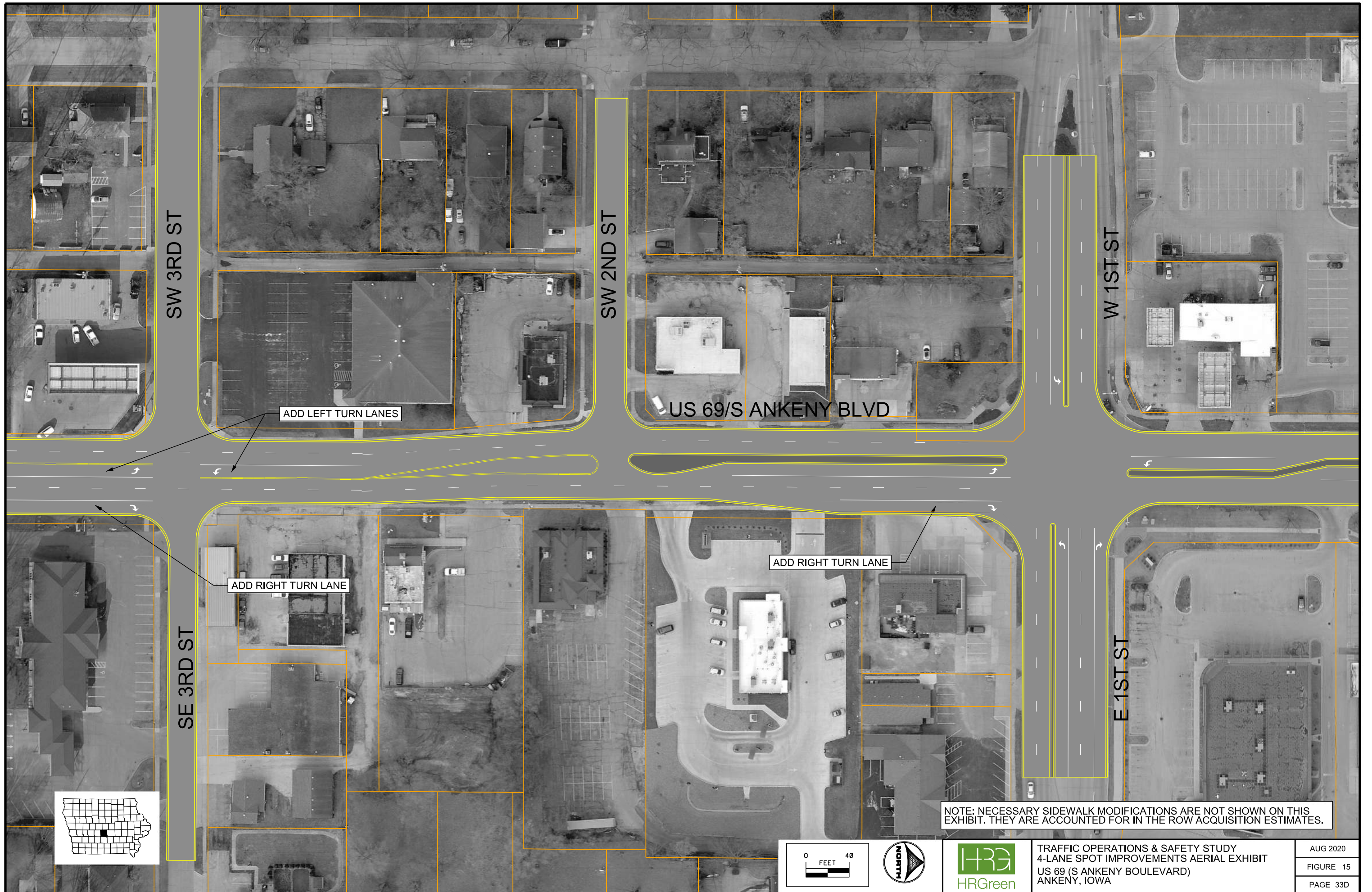


NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.

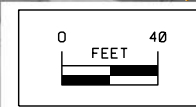
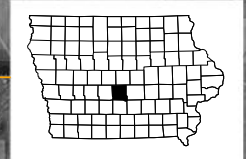


TRAFFIC OPERATIONS & SAFETY STUDY
 4-LANE SPOT IMPROVEMENTS AERIAL EXHIBIT
 US 69 (S ANKENY BOULEVARD)
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NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



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 4-LANE SPOT IMPROVEMENTS AERIAL EXHIBIT
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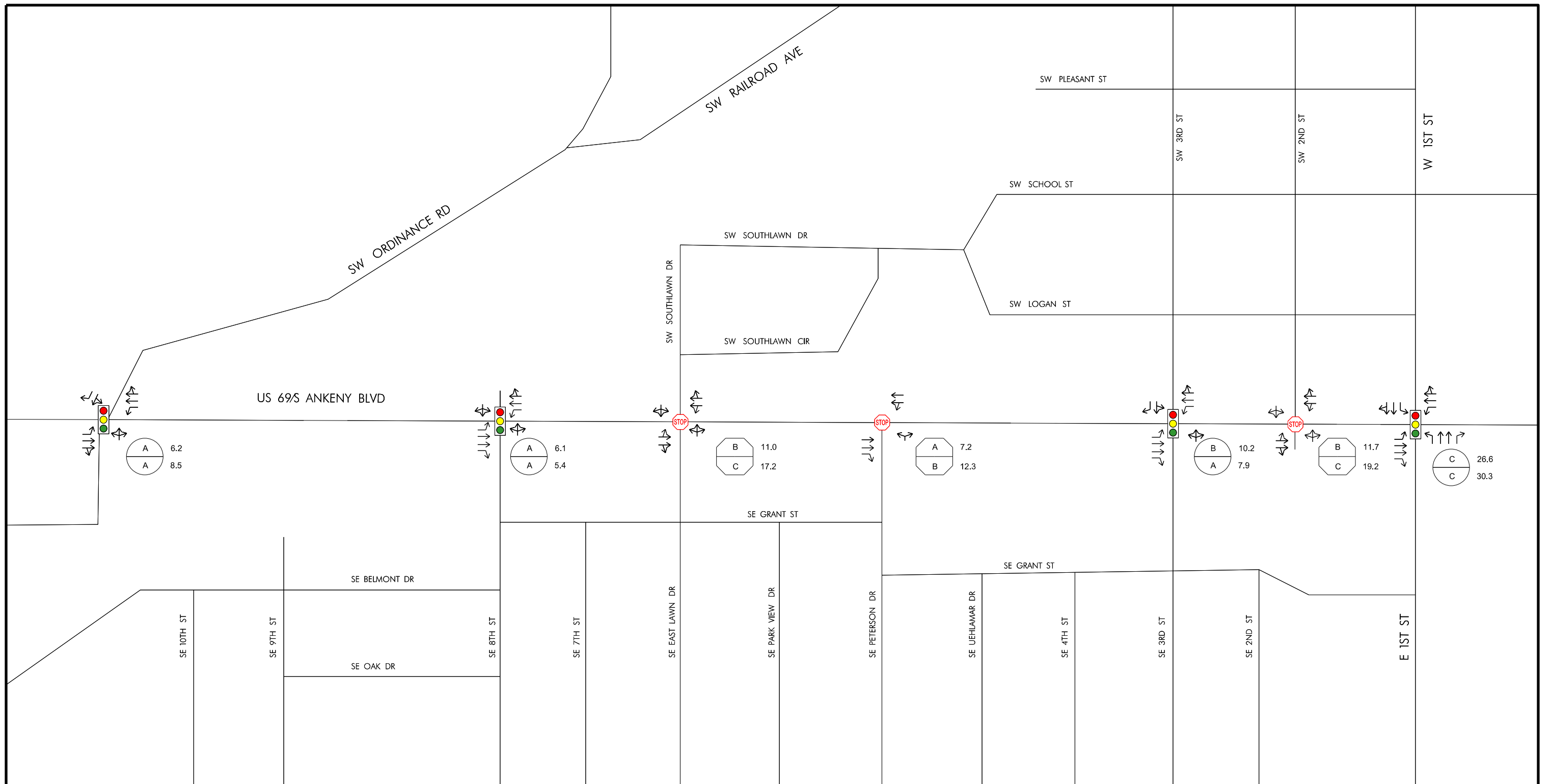
2019 Traffic Volumes – Operations Analysis

The corridor Synchro model was modified to include the improvements, while maintaining the same traffic volume data as in the existing model. The traffic signal timings were then re-optimized based on the new intersection geometry and signal phasing.

As in the existing condition, delay values were collected from the SimTraffic simulations, and Level-of-Service grades were applied. The traffic operations in terms of AM and PM LOS are provided in **Table 11** and **Figure 16**. The corresponding Synchro/SimTraffic output reports for the 4-Lane Spot Improvements analysis are contained in **Appendix C**.

Table 11: 2019 4-Lane Spot Improvements Level of Service Results

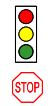
Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	35.8	44.7	31.0	37.6	33.4	5.5	17.7	18.1	3.6	22.1	21.2	14.3	26.6
	LOS	D	D	C	D	C	A	B	B	A	C	C	B	C
PM	Delay (sec)	40.0	42.4	26.8	42.0	47.0	14.7	22.7	28.4	5.2	28.4	24.1	17.8	30.3
	LOS	D	D	C	D	D	B	C	C	A	C	C	B	C
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	11.7			10.1			7.3	-	-	4.8	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	16.1			19.2			4.6	-	-	13.9	-	-	-
	LOS	C			C			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	46.8	50.7	6.2	45.5	48.6	21.1	9.1	4.2	1.5	5.7	6.5	4.9	10.2
	LOS	D	D	A	D	D	C	A	A	A	A	A	A	B
PM	Delay (sec)	44.3	50.4	5.5	43.9	56.2	24.8	11.1	3.3	1.8	12.1	5.3	3.3	7.9
	LOS	D	D	A	D	E	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			7.2			-	-	-	4.8	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			12.3			-	-	-	9.9	-	-	-
	LOS	-			B			-	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	7.9			11.0			5.4	-	-	4.3	-	-	-
	LOS	A			B			A	-	-	A	-	-	-
PM	Delay (sec)	14.1			17.2			4.7	-	-	8.0	-	-	-
	LOS	B			C			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	49.3	-	49.6	53.0	27.7	8.0	2.0	1.5	5.9	1.8	1.0	6.1
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	49.3	-	49.1	49.8	23.8	6.0	3.2	2.4	14.3	3.0	3.0	5.4
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordnance Rd (Signalized)														
AM	Delay (sec)	49.9	62.1	9.1	56.3	63.8	5.4	14.5	3.2	4.1	7.1	5.7	4.9	6.2
	LOS	D	E	A	E	E	A	B	A	A	A	A	A	A
PM	Delay (sec)	52.1	39.4	8.5	49.6	43.6	10.7	19.2	5.2	2.5	11.9	6.8	4.8	8.5
	LOS	D	D	A	D	D	B	B	A	A	B	A	A	A



LEGEND

xxx (xxx)

AM (PM) PEAK HOUR VOLUME
7:15-8:15 (4:45-5:45)



TRAFFIC SIGNAL CONTROL
1-WAY OR 2-WAY STOP CONTROL
(ALONG EAST/WEST APPROACHES)



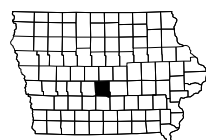
LANE CONFIGURATION



AM xx.X SIGNALIZED INTERSECTION
PM xx.X LEVEL-OF-SERVICE / DELAY



AM xx.X WORST CASE
PM xx.X STOP CONTROLLED APPROACH
LEVEL-OF-SERVICE / DELAY



NOT TO SCALE



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FIGURE 16

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The results of the 4-Lane Spot Improvements analysis show acceptable traffic operations at the study intersections. Overall intersection results are again predicted at LOS C or better, and are generally very close to the existing condition. The westbound and eastbound minor street approaches are expected to experience LOS D or LOS E in some cases; changes in LOS grades are mainly due to the differences in phasing and signal timings.

As seen in **Table 12**, SimTraffic-simulated travel times in the corridor ranged from 106 seconds in the southbound direction to 142 seconds in the northbound direction. Travel times were predicted to be slightly faster than in the existing condition, with the exception of the southbound direction during the PM peak, which was predicted to be 1 second slower.

Table 12: 2019 4-Lane Spot Improvements Arterial Travel Time Measurements

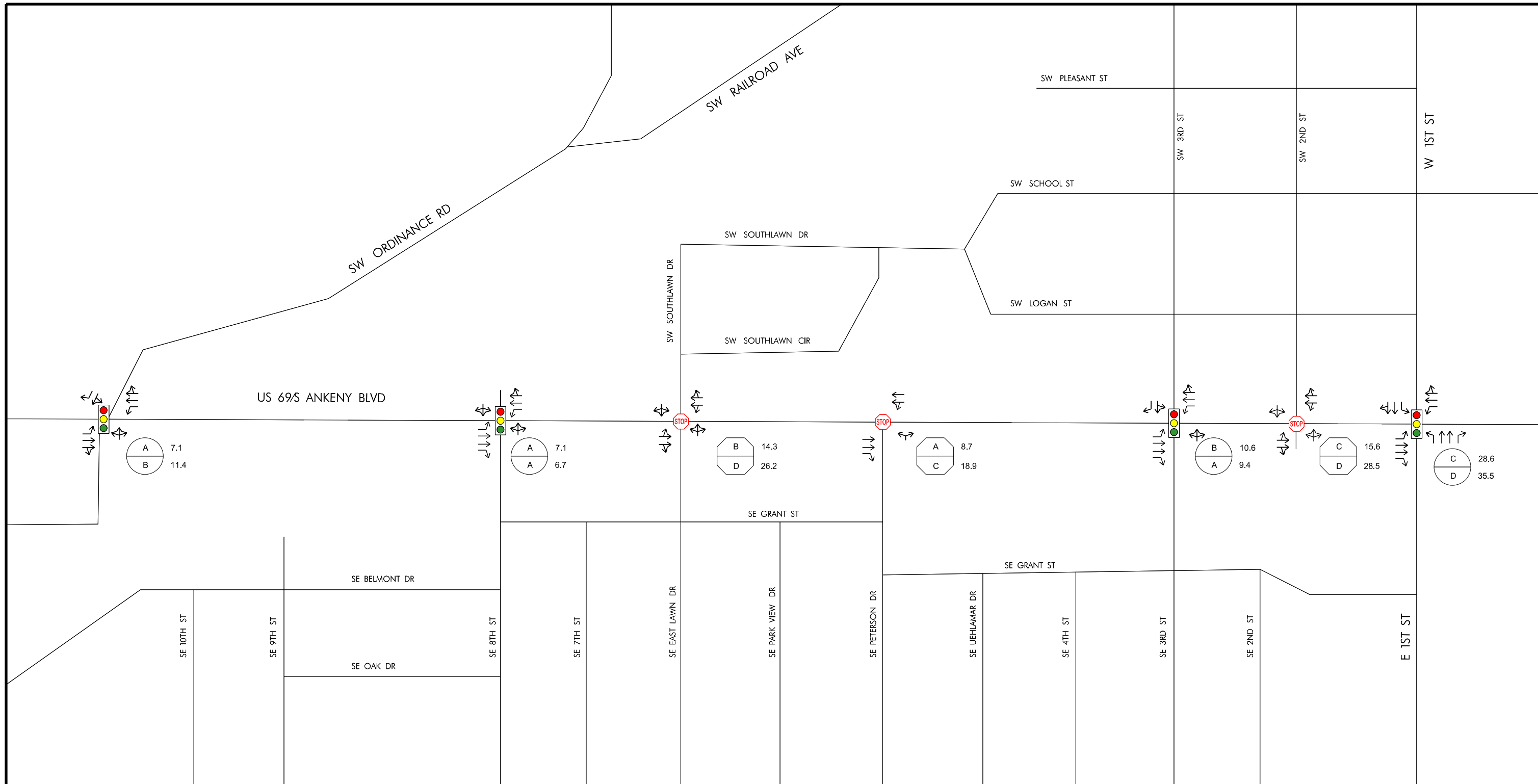
Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	126.3	29
PM	142.0	25
Southbound S Ankeny Boulevard		
AM	106.0	29
PM	108.1	28

2040 Traffic Volumes – Operations Analysis








The Spot Improvements Synchro model was updated to consider the 2040 forecasted traffic volumes. The traffic signal timings were re-optimized based on the new volumes. The traffic operations results are provided in **Table 13** and **Figure 17**.

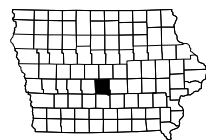
Table 13: 2040 4-Lane Spot Improvements Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	31.6	42.6	30.7	35.6	32.2	6.1	23.3	25.6	4.9	26.3	25.9	20.0	28.6
	LOS	C	D	C	D	C	A	C	C	A	C	C	B	C
PM	Delay (sec)	46.1	45.8	33.4	45.5	51.9	16.9	30.8	35.7	8.8	37.4	27.1	19.7	35.5
	LOS	D	D	C	D	D	B	C	D	A	D	C	B	D
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	15.6			12.1			6.8	-	-	6.7	-	-	-
	LOS	C			B			A	-	-	A	-	-	-
PM	Delay (sec)	24.4			28.5			6.7	-	-	14.0	-	-	-
	LOS	C			D			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	47.3	49.4	6.7	43.7	48.2	22.6	12.0	4.3	1.5	7.8	6.3	4.4	10.6
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	44.8	50.4	6.1	49.0	52.5	27.5	14.1	5.3	2.2	12.9	5.9	3.7	9.4
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			8.7			-	-	-	4.8	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			18.9			-	-	-	11.1	-	-	-
	LOS	-			C			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	11.7			14.3			6.9	-	-	4.8	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	19.7			26.2			7.0	-	-	10.1	-	-	-
	LOS	C			D			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	44.6	-	48.6	56.6	30.2	9.2	3.3	1.5	7.1	2.3	1.2	7.1
	LOS	-	D	-	D	E	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	50.2	-	47.9	51.3	25.2	9.0	5.3	3.1	13.7	2.9	2.5	6.7
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	57.0	56.9	9.5	50.4	48.2	6.0	18.3	3.5	3.4	8.5	6.0	4.6	7.1
	LOS	E	E	A	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	51.9	55.4	9.1	47.7	54.2	12.8	24.4	6.9	4.3	20.9	10.7	8.1	11.4
	LOS	D	E	A	D	D	B	C	A	A	C	B	A	B



LEGEND

- | | | | |
|---|---|---|--------------------------|
| xxx (xxx) | AM (PM) PEAK HOUR VOLUME
7:15-8:15 (4:45-5:45) | AM  xx.X | SIGNALIZED INTERSECTION |
| | | PM  xx.X | LEVEL-OF-SERVICE / DELAY |
|  | TRAFFIC SIGNAL CONTROL | AM  xx.X | WORST CASE |
|  | 1-WAY OR 2-WAY STOP CONTROL
(ALONG EAST/WEST APPROACHES) | PM  xx.X | STOP CONTROLLED APPROACH |
|  | LANE CONFIGURATION | | |



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FIGURE 17
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The results of the 2040 4-Lane Spot Improvements analysis predict acceptable traffic operations at the study intersections. Overall intersection grades of LOS D or better are expected at all study intersections. Again, higher delays on the minor streets are predicted, while the traffic flow on S Ankeny Boulevard is expected to operate with lower delays through traffic signal timing and coordination.

As seen in **Table 14**, SimTraffic-simulated travel times in the corridor ranged from 107 seconds in the southbound direction to 156 seconds in the northbound direction. Expected travel times are shorter than the 2040 No Build travel times during the PM peak hour by approximately 5-12 seconds, and slightly longer during the AM peak hour by approximately 0.5-3 seconds.

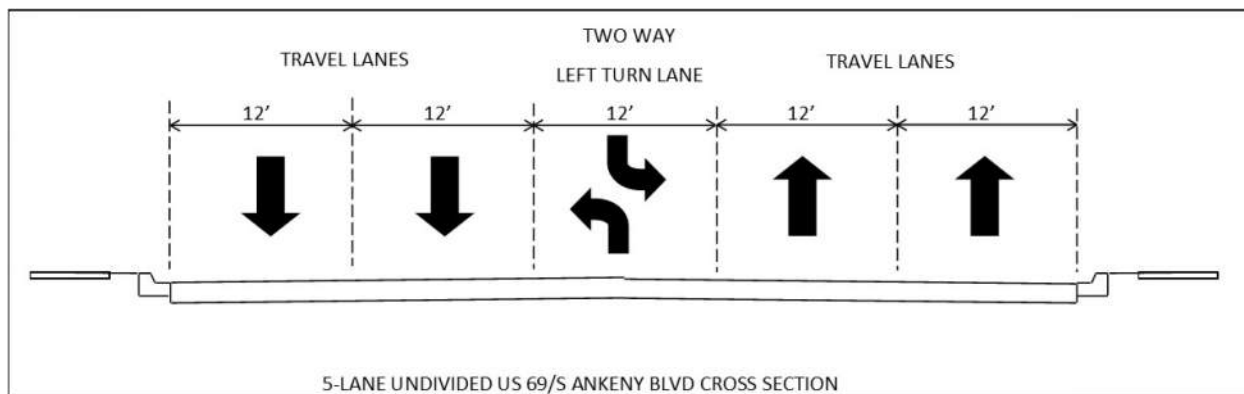
Table 14: 2040 4-Lane Spot Improvements Arterial Travel Time Measurements

Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	135.8	27
PM	156.0	23
Southbound S Ankeny Boulevard		
AM	106.8	29
PM	113.1	27

Five-Lane Undivided Roadway Cross Section

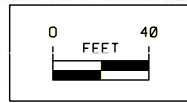
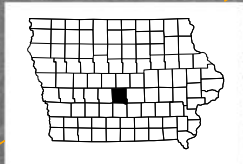
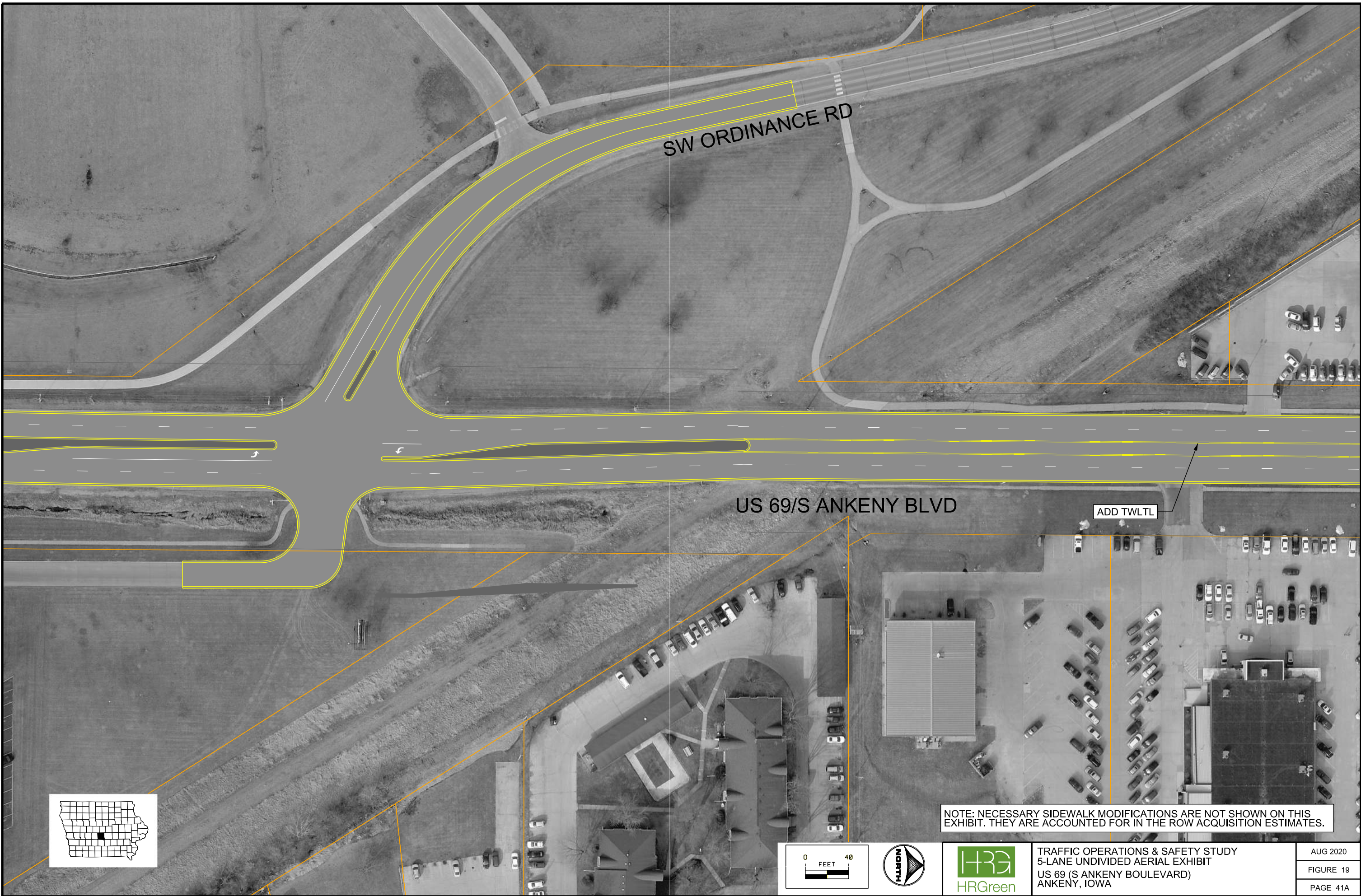
The five-lane undivided alternative includes the addition of a 12' center left turn lane throughout the corridor. At intersections, a 12' left turn lane will be provided. Between intersections, the median will be used as a two-way left turn lane. The cross section is depicted in **Figure 18**.

Figure 18: Five-Lane Undivided Cross Section



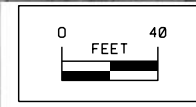
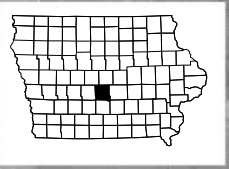
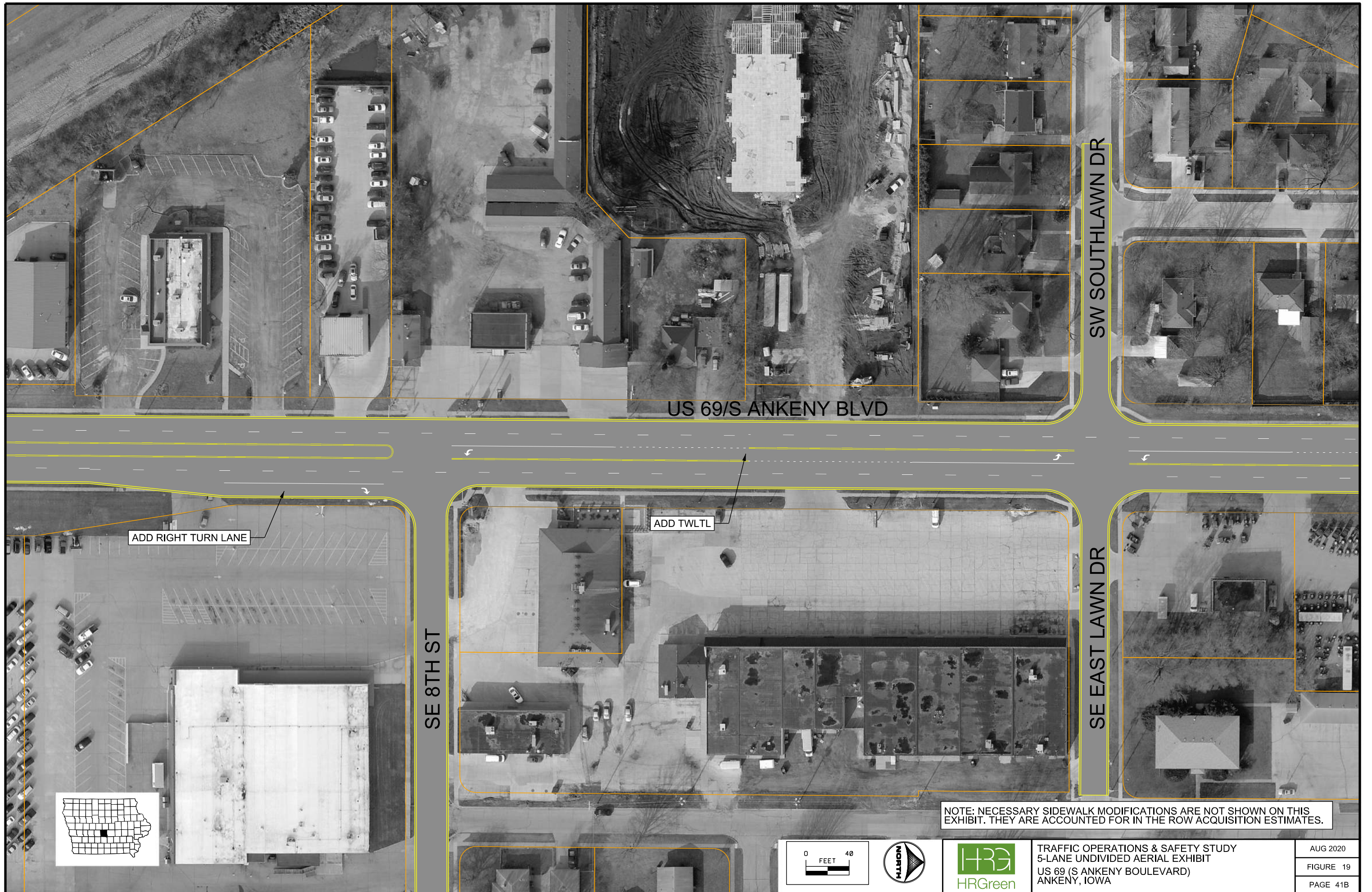
This alternative maintains access to all residential and commercial entrances within the study corridor. The addition of the TWLTL requires widening of pavement to accommodate the new 12' center lane. All lanes were assumed to be 12' wide for analysis purposes. However, this alternative could be implemented with 11' or even 10' lanes to reduce right-of-way requirements.

The addition of a TWLTL to a four-lane undivided roadway carries a CMF of 0.758, predicting a 24.2% reduction in all segment crashes. Because this alternative also includes the spot intersection improvements in the previous alternative, the predicted improvements to signalized intersection crash rates would also apply. Additionally, the center turn lane in this alternative becomes a dedicated left turn lane at the unsignalized intersections with SE Peterson Drive and Lawn Drive. The addition of these left turn lanes has a CMF of 0.53, corresponding to an expected 47% reduction in intersection crashes at these locations. **Figure 19** depicts a plan view of the proposed alternative.



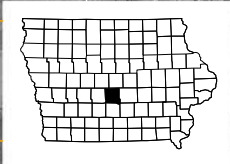
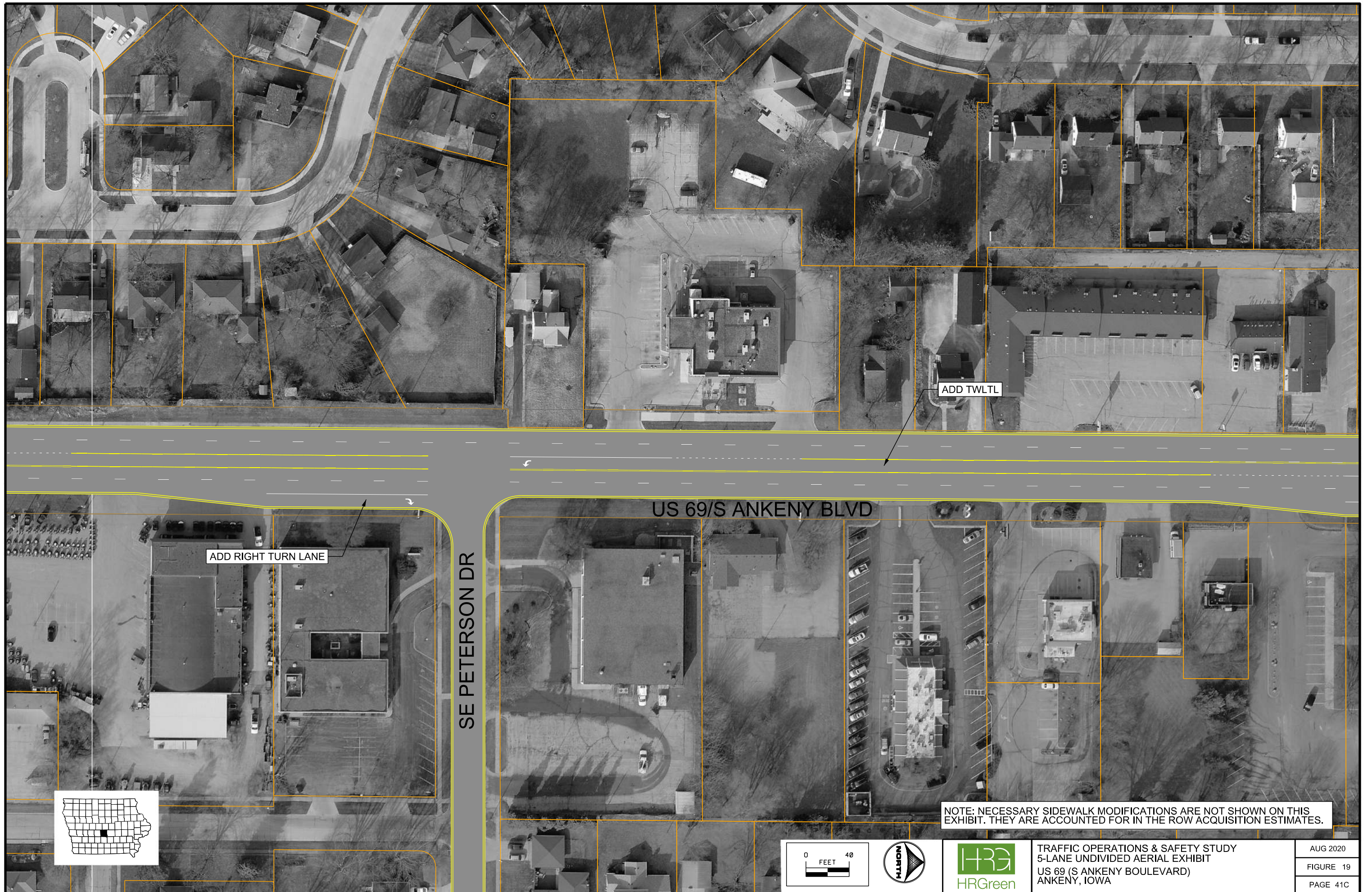
TRAFFIC OPERATIONS & SAFETY STUDY
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 FIGURE 19
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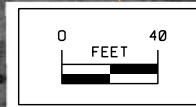


TRAFFIC OPERATIONS & SAFETY STUDY
 5-LANE UNDIVIDED AERIAL EXHIBIT
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 FIGURE 19
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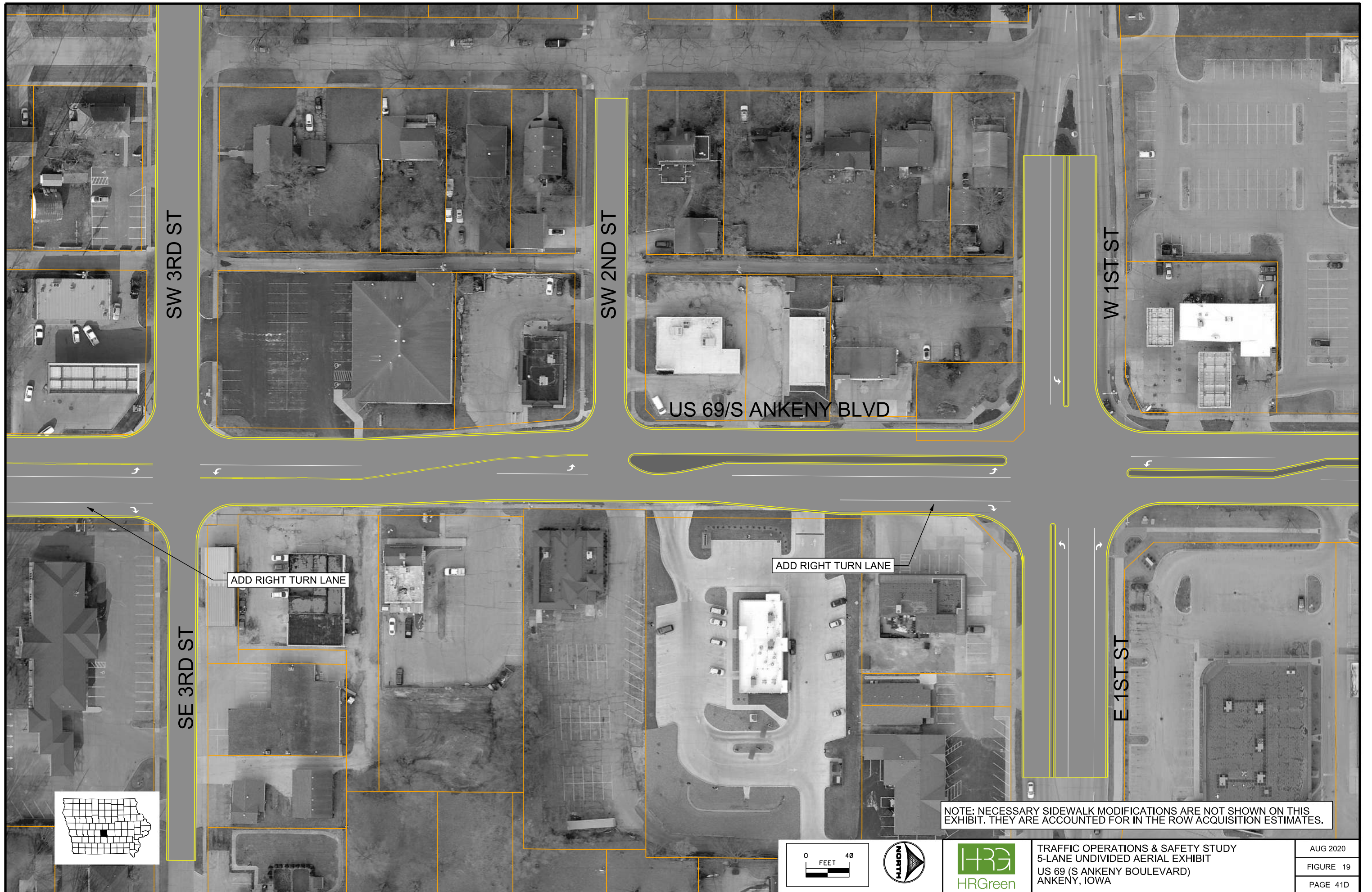


NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



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 5-LANE UNDIVIDED AERIAL EXHIBIT
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 FIGURE 19
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SW 3RD ST

SW 2ND ST

W 1ST ST

US 69/S ANKENY BLVD

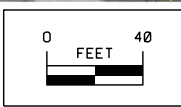
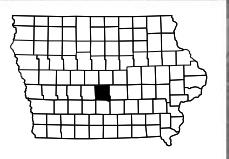
SE 3RD ST

E 1ST ST

ADD RIGHT TURN LANE

ADD RIGHT TURN LANE

NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



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5-LANE UNDIVIDED AERIAL EXHIBIT
US 69 (S ANKENY BOULEVARD)
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FIGURE 19
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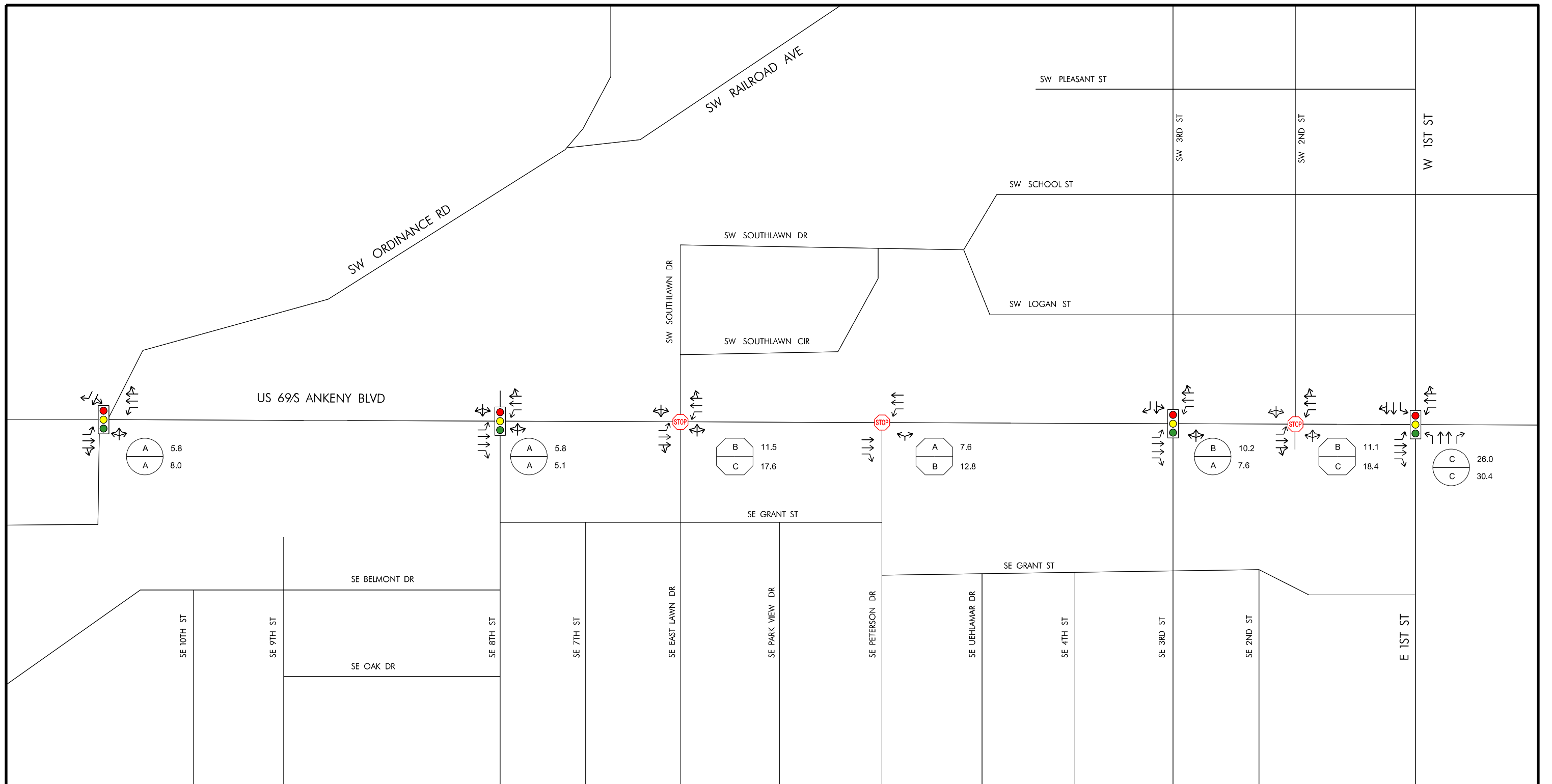
2019 Traffic Volumes – Operations Analysis

The 5-lane undivided roadway cross section was analyzed in Synchro with the 2019 traffic volumes. The traffic signal timings were again re-optimized based on the new intersection geometry and signal phasing.

The traffic operations results are provided in **Table 15** and **Figure 20**. The corresponding Synchro/SimTraffic output reports for the 5-Lane Undivided analysis are contained in **Appendix C**.

Table 15: 2019 5-Lane Undivided Level of Service Results

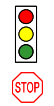
Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	34.0	43.3	29.6	36.1	33.6	5.4	17.6	18.5	3.4	22.0	20.8	13.4	26.0
	LOS	C	D	C	D	C	A	B	B	A	C	C	B	C
PM	Delay (sec)	41.0	42.0	28.2	41.8	46.8	15.7	21.9	28.3	5.4	30.7	23.6	16.1	30.4
	LOS	D	D	C	D	D	B	C	C	A	C	C	B	C
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	11.1			9.5			8.3	-	-	4.6	-	-	-
	LOS	B			A			A	-	-	A	-	-	-
PM	Delay (sec)	14.4			18.4			6.1	-	-	12.3	-	-	-
	LOS	B			C			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	43.6	52.1	6.1	47.5	51.0	19.4	10.1	4.1	1.3	7.1	6.2	4.1	10.2
	LOS	D	D	A	D	D	B	B	A	A	A	A	A	B
PM	Delay (sec)	47.0	52.2	5.5	45.7	52.4	24.5	10.8	3.1	1.6	12.7	5.1	3.3	7.6
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			7.6			-	-	-	4.2	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			12.8			-	-	-	8.0	-	-	-
	LOS	-			B			-	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	9.1			11.5			5.8	-	-	4.5	-	-	-
	LOS	A			B			A	-	-	A	-	-	-
PM	Delay (sec)	12.3			17.6			4.4	-	-	6.7	-	-	-
	LOS	B			C			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	47.6	-	49.5	50.0	27.8	8.8	1.8	1.2	6.0	1.8	0.8	5.8
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	39.3	-	46.2	47.1	21.5	5.3	3.3	2.4	14.3	2.8	1.1	5.1
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	50.5	50.2	8.3	55.5	58.9	6.1	14.1	3.1	2.6	5.6	5.2	3.7	5.8
	LOS	D	D	A	E	E	A	B	A	A	A	A	A	A
PM	Delay (sec)	47.1	56.3	7.9	46.7	54.5	10.7	17.7	4.9	3.2	12.9	6.3	4.4	8.0
	LOS	D	E	A	D	D	B	B	A	A	B	A	A	A



LEGEND

xxx (xxx)

AM (PM) PEAK HOUR VOLUME
7:15-8:15 (4:45-5:45)



TRAFFIC SIGNAL CONTROL
1-WAY OR 2-WAY STOP CONTROL
(ALONG EAST/WEST APPROACHES)



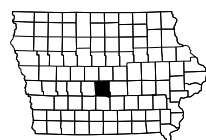
LANE CONFIGURATION



AM xx.X SIGNALIZED INTERSECTION
PM xx.X LEVEL-OF-SERVICE / DELAY



AM xx.X WORST CASE
PM xx.X STOP CONTROLLED APPROACH
LEVEL-OF-SERVICE / DELAY



NOT TO SCALE



TRAFFIC OPERATIONS & SAFETY STUDY
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FIGURE 20

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The 5-Lane Undivided analysis again predicts acceptable traffic operations at the study intersections. Similar to the existing conditions analysis, overall intersection results are predicted at LOS C or better. The S Ankeny Road movements are expected to experience mostly LOS A and B, with some movements at LOS C at W/E 1st Street. Some of the minor street movements are projected at LOS D or better, with some movements at LOS E at Ordinance Road.

As seen in **Table 16**, SimTraffic-simulated travel times in the corridor ranged from 105 seconds in the southbound direction to 141 seconds in the northbound direction. Travel times were predicted to be slightly faster than in the existing condition, likely due to the removal of left-turning vehicles from the through lanes.

Table 16: 2019 5-Lane Undivided Arterial Travel Time Measurements

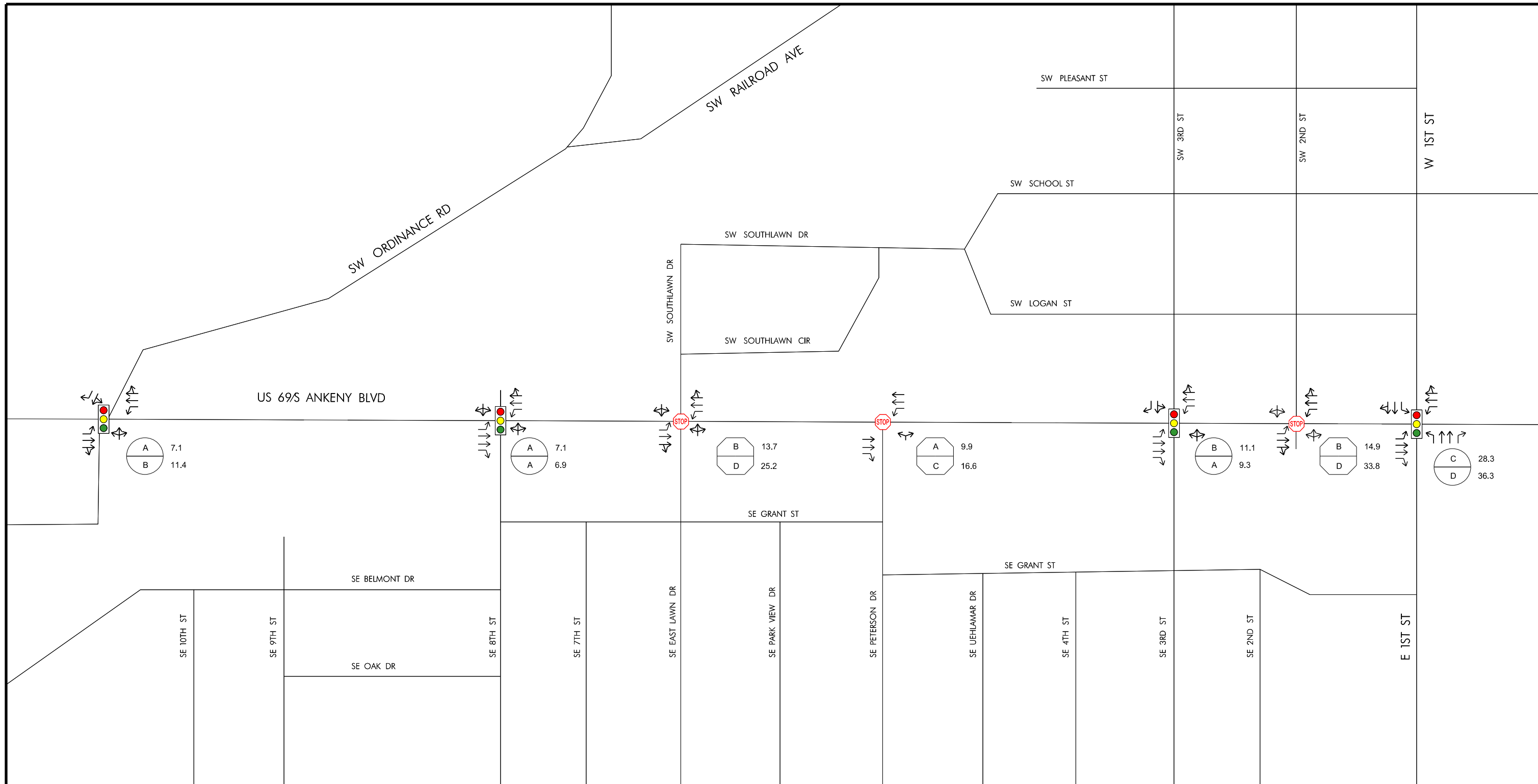
Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	125.3	29
PM	141.1	26
Southbound S Ankeny Boulevard		
AM	104.8	29
PM	106.1	29

2040 Traffic Volumes – Operations Analysis

The 5-Lane Undivided Synchro model was updated to consider the 2040 forecasted traffic volumes. The traffic signal timings were re-optimized based on the new volumes. The traffic operations results are provided in **Table 17** and **Figure 21**.

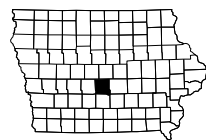
Table 17: 2040 5-Lane Undivided Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	32.5	42.8	31.9	35.5	31.8	5.7	22.7	24.8	4.7	26.1	26.0	19.3	28.3
	LOS	C	D	C	D	C	A	C	C	A	C	C	B	C
PM	Delay (sec)	45.9	47.0	36.9	49.8	50.8	17.8	29.8	38.0	8.8	39.2	26.9	19.8	36.3
	LOS	D	D	D	D	D	B	C	D	A	D	C	B	D
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	14.9			14.3			9.4	-	-	6.1	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	23.5			33.8			6.3	-	-	13.3	-	-	-
	LOS	C			D			A	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	46.5	46.4	6.9	46.0	51.2	26.9	12.8	4.7	1.6	9.3	6.6	4.9	11.1
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	47.9	52.4	6.2	46.5	53.1	27.4	12.2	5.2	2.3	12.8	5.7	4.2	9.3
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			9.9			-	-	-	4.8	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			16.6			-	-	-	10.2	-	-	-
	LOS	-			C			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	13.7			13.7			6.3	-	-	4.2	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	22.7			25.2			7.1	-	-	8.9	-	-	-
	LOS	C			D			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	42.2	-	48.8	53.4	28.8	9.7	3.3	1.8	6.9	2.3	1.6	7.1
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	44.6	-	48.2	52.7	24.8	7.9	5.5	3.4	12.9	3.3	2.2	6.9
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	53.4	53.4	10.5	49.0	54.5	6.8	16.9	3.4	2.5	8.1	6.3	4.7	7.1
	LOS	D	D	B	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	49.2	53.8	9.1	51.7	48.8	12.6	24.1	6.7	4.0	18.3	10.6	7.7	11.4
	LOS	D	D	A	D	D	B	C	A	A	B	B	A	B



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM A xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM A xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- AM A xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM A xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY



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FIGURE 21
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The results of the 2040 5-Lane Undivided analysis predict acceptable traffic operations at the study intersections. Overall intersection grades of LOS D or better are expected at all study intersections. Additionally, all movements at each intersection are predicted at LOS D or better.

As seen in **Table 18**, SimTraffic-simulated travel times in the corridor ranged from 107 seconds in the southbound direction to 158 seconds in the northbound direction. Expected travel times are shorter than the 2040 No Build travel times by approximately 0.3-10 seconds in the northbound direction, and 2.5-6 seconds in the southbound direction.

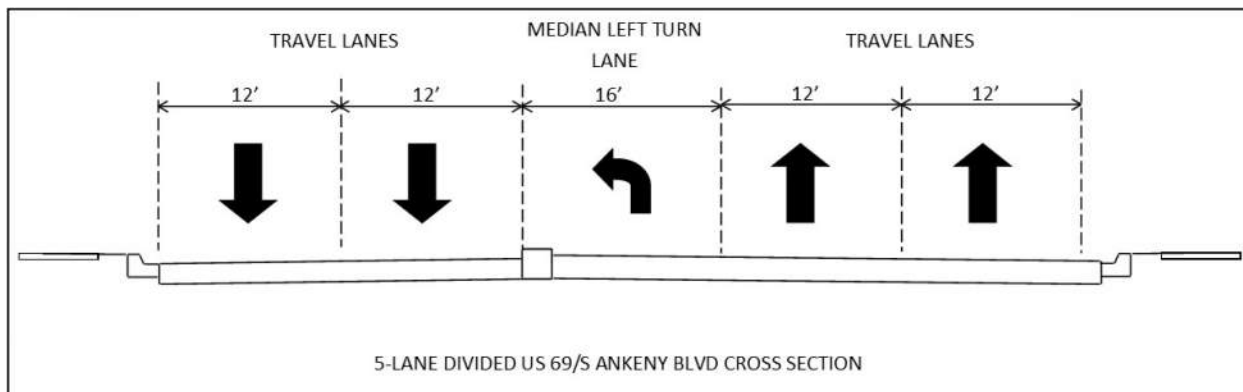
Table 18: 2040 5-Lane Undivided Arterial Travel Time Measurements

Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	135.0	27
PM	157.9	23
Southbound S Ankeny Boulevard		
AM	107.0	29
PM	112.4	27

Five-Lane Divided Roadway Cross Section

The five-lane divided alternative includes the addition of a 16’ median throughout the corridor. At intersections, there is a 4’ median with a 12’ left turn lane. This alternative requires the most widening and right-of-way acquisition, as well as the most restriction to access. Again, lane widths could be 10’ or 11’ to reduce right-of-way needs. The cross section is depicted in **Figure 22**.

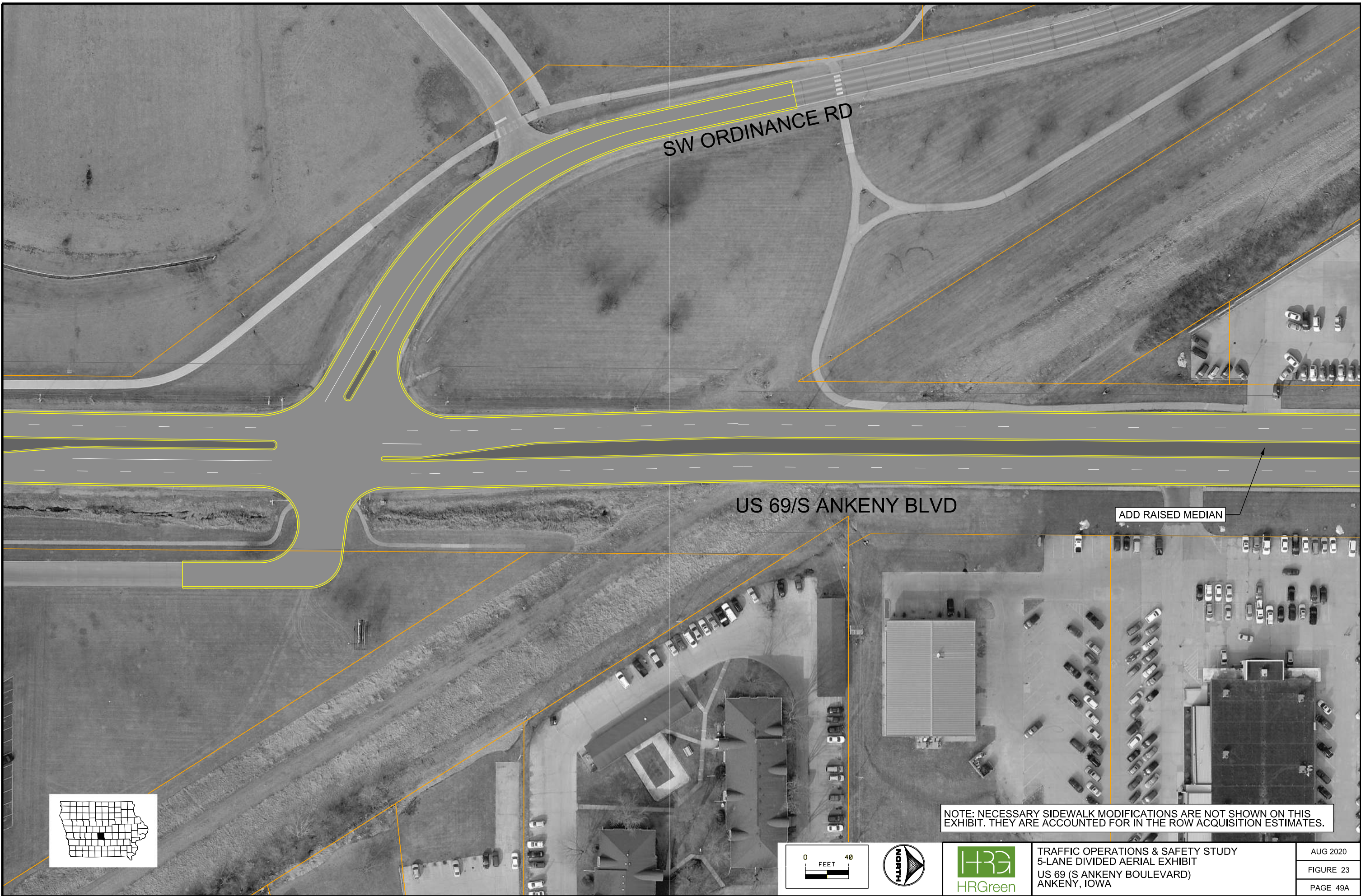
Figure 22: Five-Lane Divided Cross Section



Between intersections, the median is raised, restricting access at entrances to right-in, right-out. Because of this change to access, some traffic patterns within the corridor would change, as vehicles turning left out of entrances would be forced to turn right and find another route to their destination. This was approximated by reviewing the raw traffic counts at the study intersection, determining the volume difference between intersections due to vehicles entering and exiting access points, and estimating that a portion of that volume difference would be added to the next available left turn movement.

Crash modification factors suggest that the addition of a median will reduce the number of crashes in the corridor. One CMF predicts a 30% reduction in all crashes with the installation of a raised median. However, this factor assumes the median would be added to a roadway cross section that already includes a TWLTL, indicating an improvement over the 5-lane undivided alternative. This increased reduction in crashes over the TWLTL alternative can be rationalized by considering the elimination of conflict points at driveways. By restricting left turns in and out of driveways, a raised median eliminates turning conflict points. In addition to the cross section improvements, the turn lane improvements at intersections mentioned in the previous alternatives would also bring reductions in crash rates. However, the potential for added u-turn movements or traffic diverted to residential side streets could pose new safety concerns.

Additionally, this alternative assumes the restriction of access at SW 2nd Street due to the addition of the raised median. SW 2nd Street is in close proximity to both W/E 1st Street and SW/SE 3rd Street, restricting the available space to develop a full access intersection. Left and through volumes from SW 2nd Street were assigned to the right turn movement, and a portion of these vehicles were then assigned to the next available left turn. A plan view of the alternative is shown in **Figure 23**.

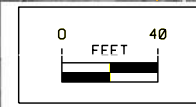
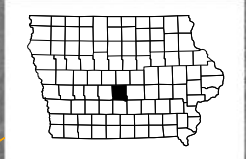


SW ORDINANCE RD

US 69/S ANKENY BLVD

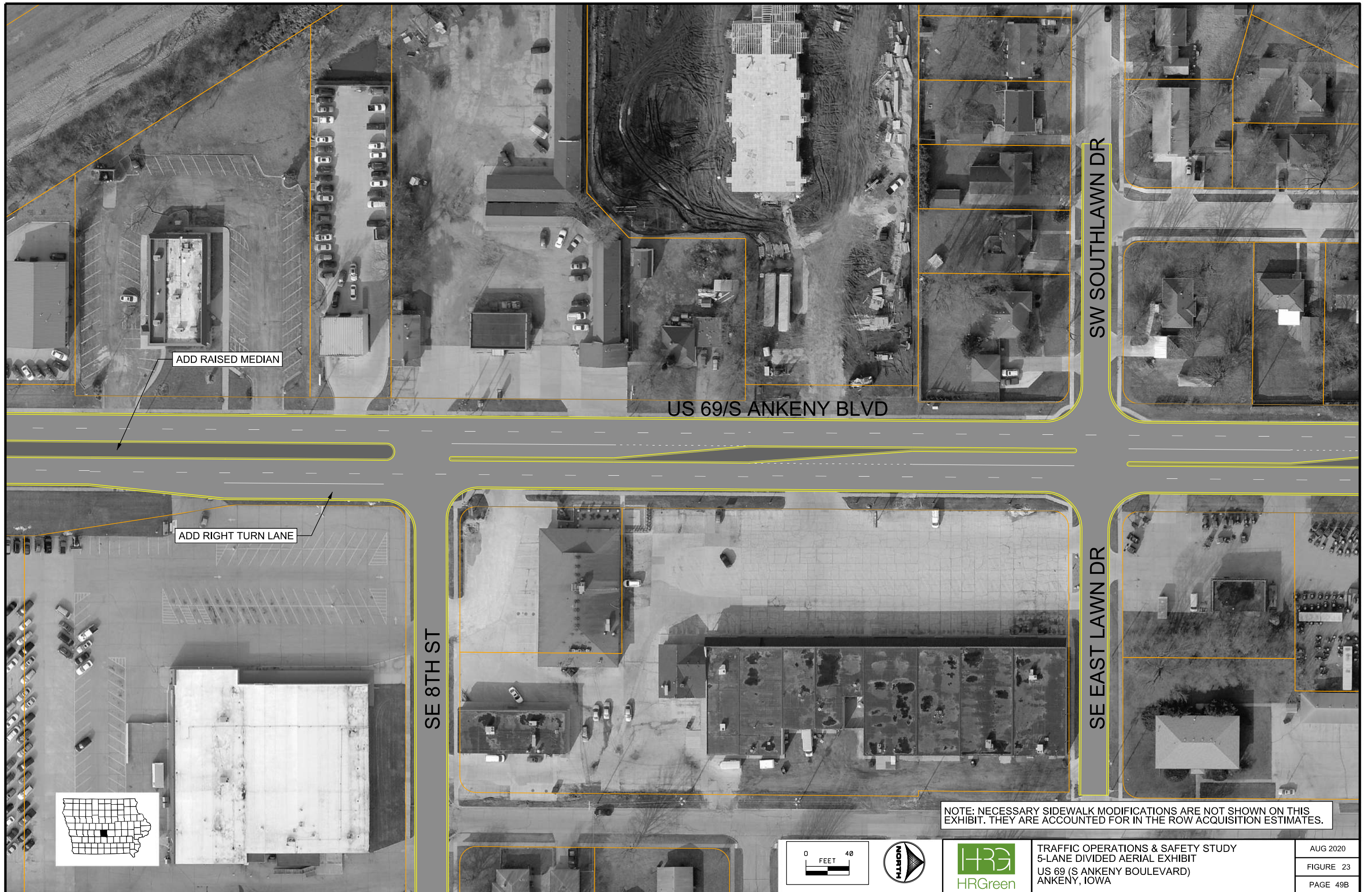
ADD RAISED MEDIAN

NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



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 FIGURE 23
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ADD RAISED MEDIAN

ADD RIGHT TURN LANE

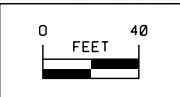
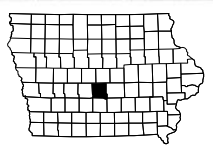
US 69/S ANKENY BLVD

SW SOUTHLAWN DR

SE 8TH ST

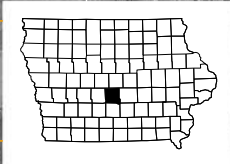
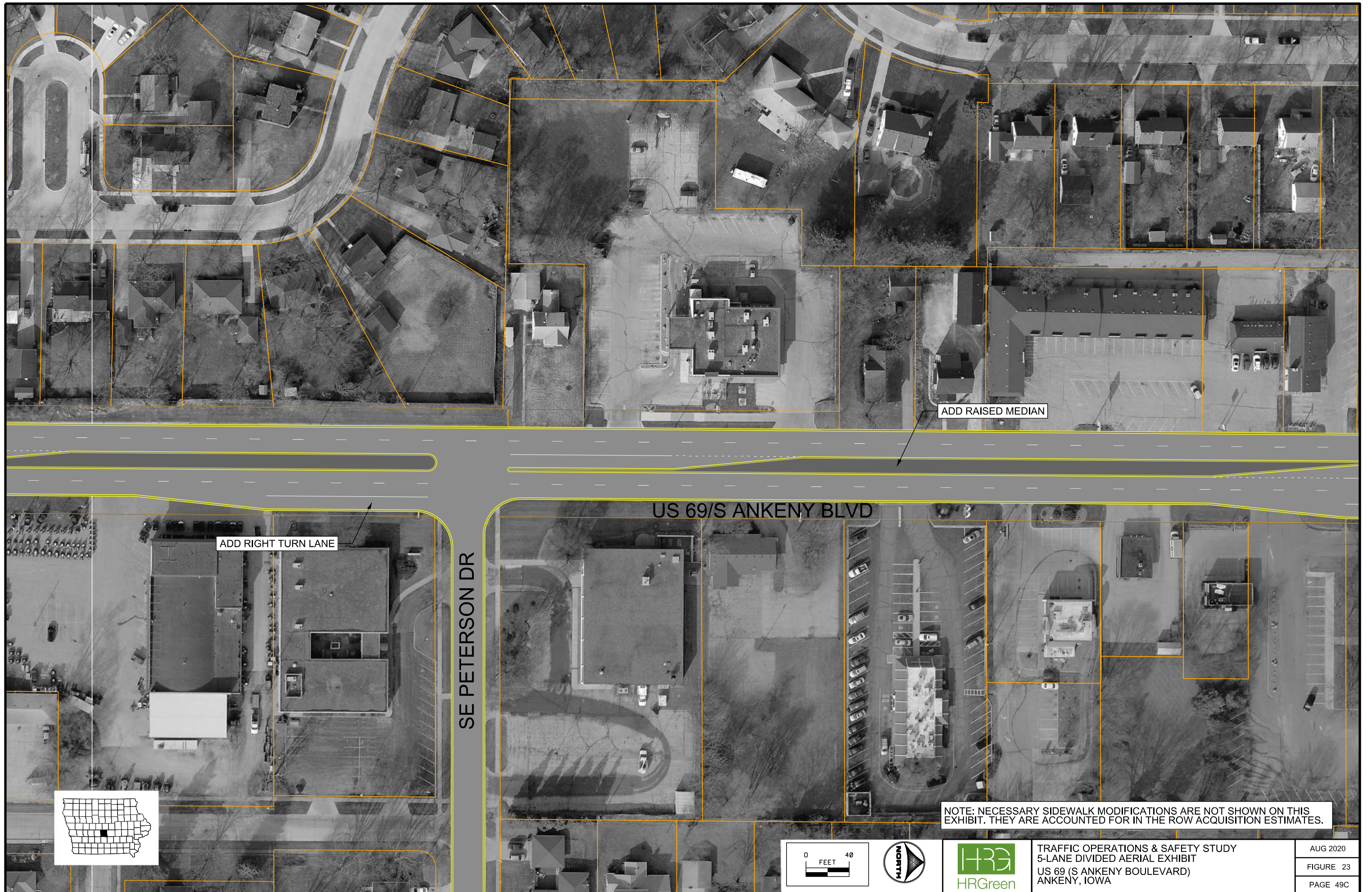
SE EAST LAWN DR

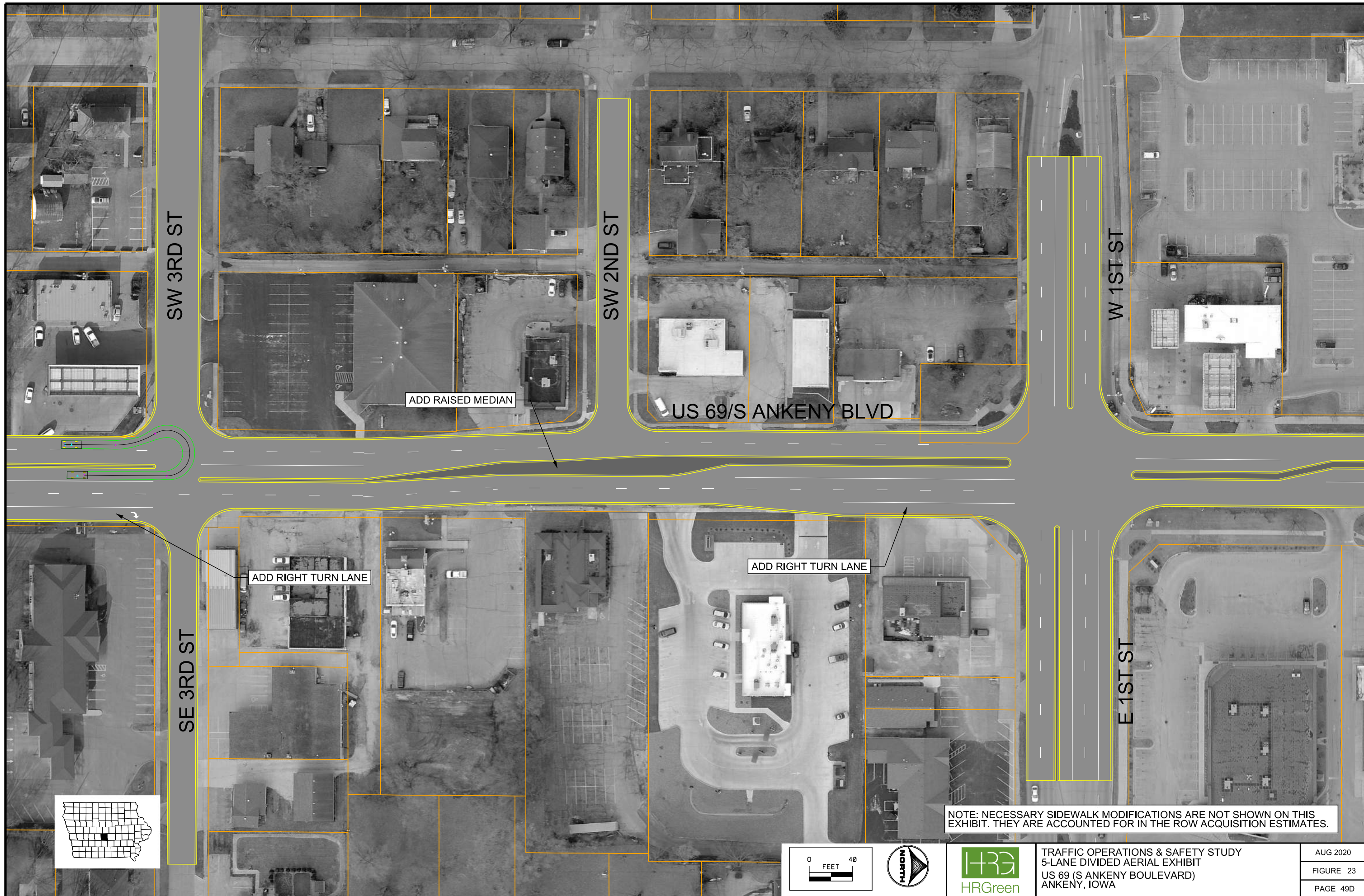
NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



TRAFFIC OPERATIONS & SAFETY STUDY
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FIGURE 23
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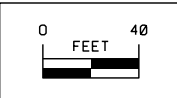
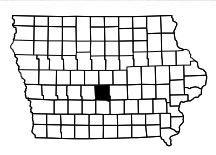
ADD RAISED MEDIAN

US 69/S ANKENY BLVD

ADD RIGHT TURN LANE

ADD RIGHT TURN LANE

NOTE: NECESSARY SIDEWALK MODIFICATIONS ARE NOT SHOWN ON THIS EXHIBIT. THEY ARE ACCOUNTED FOR IN THE ROW ACQUISITION ESTIMATES.



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FIGURE 23
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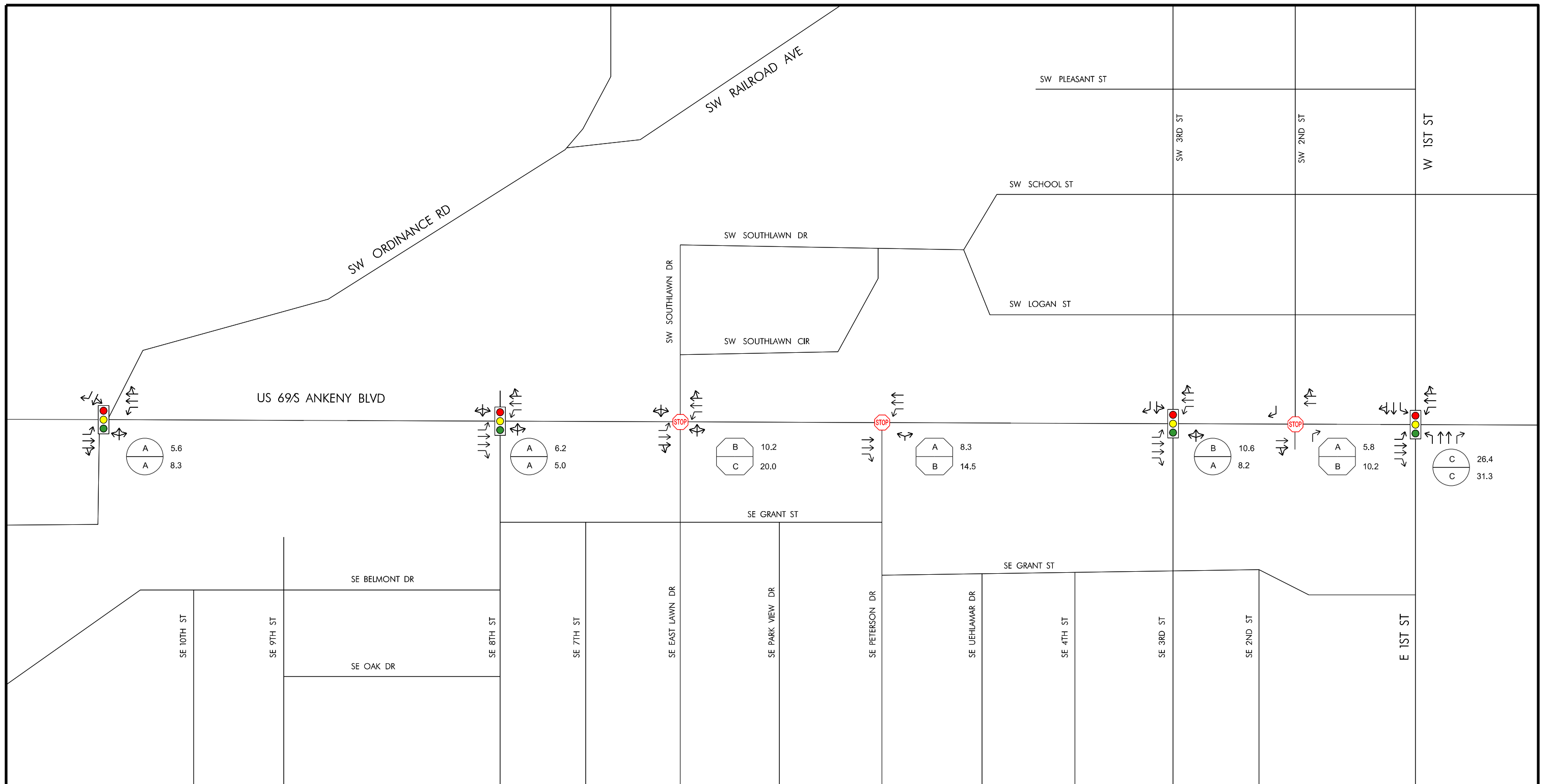
2019 Traffic Volumes – Operations Analysis

The 5-lane divided roadway cross section was analyzed in Synchro with the 2019 traffic volumes and the volume adjustments due to access restrictions as described. The traffic signal timings were re-optimized based on the changes to volumes, intersection geometry, and signal phasing.

The traffic operations results are provided in **Table 19** and **Figure 24**. The corresponding Synchro/SimTraffic output reports for the analysis are contained in **Appendix C**.

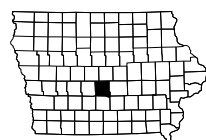
Table 19: 2019 5-Lane Divided Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	36.0	44.3	30.1	36.1	34.7	5.4	18.4	17.9	3.7	21.5	21.0	14.1	26.4
	LOS	D	D	C	D	C	A	B	B	A	C	C	B	C
PM	Delay (sec)	41.8	41.9	27.4	46.5	47.3	14.9	23.3	29.8	6.8	30.6	25.1	16.8	31.3
	LOS	D	D	C	D	D	B	C	C	A	C	C	B	C
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	5.8			4.0			-	-	-	-	-	-	-
	LOS	A			A			-	-	-	-	-	-	-
PM	Delay (sec)	5.3			10.2			-	-	-	-	-	-	-
	LOS	A			B			-	-	-	-	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	46.3	48.9	6.1	46.2	51.2	24.2	11.3	4.3	1.4	7.2	6.4	4.3	10.6
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	49.2	48.4	5.9	49.9	53.0	25.2	11.7	3.4	2.0	12.7	5.8	3.2	8.2
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			8.3			-	-	-	4.6	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			14.5			-	-	-	8.4	-	-	-
	LOS	-			B			-	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	8.6			10.2			4.6	-	-	4.9	-	-	-
	LOS	A			B			A	-	-	A	-	-	-
PM	Delay (sec)	14.6			20.0			4.8	-	-	8.4	-	-	-
	LOS	B			C			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	47.3	-	50.7	39.5	29.4	6.5	2.1	1.2	6.1	1.9	1.4	6.2
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	51.0	-	50.8	50.0	23.2	7.3	2.9	2.2	14.2	2.7	1.5	5.0
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	50.7	58.6	8.6	41.6	50.5	5.1	14.4	3.1	2.9	6.8	4.8	3.5	5.6
	LOS	D	E	A	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	49.7	53.0	8.0	52.4	56.7	11.1	19.0	4.8	3.3	14.9	6.8	4.9	8.3
	LOS	D	D	A	D	E	B	B	A	A	B	A	A	A



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- AM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY



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FIGURE 24
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The 5-Lane Divided analysis again predicts acceptable traffic operations at the study intersections. Again, overall intersection results are predicted at LOS C or better. Individual movements are expected to be LOS C or better on S Ankeny Boulevard, while some movements on minor streets are predicted at LOS D, and two Ordance Road movements predicted just over the threshold for LOS E.

As seen in **Table 20**, SimTraffic-simulated travel times in the corridor ranged from 105 seconds in the southbound direction to 142 seconds in the northbound direction. Travel times were predicted to be very close to the 5-Lane Undivided scenario, within 1 second for each direction and each peak hour.

Table 20: 2019 5-Lane Divided Arterial Travel Time Measurements

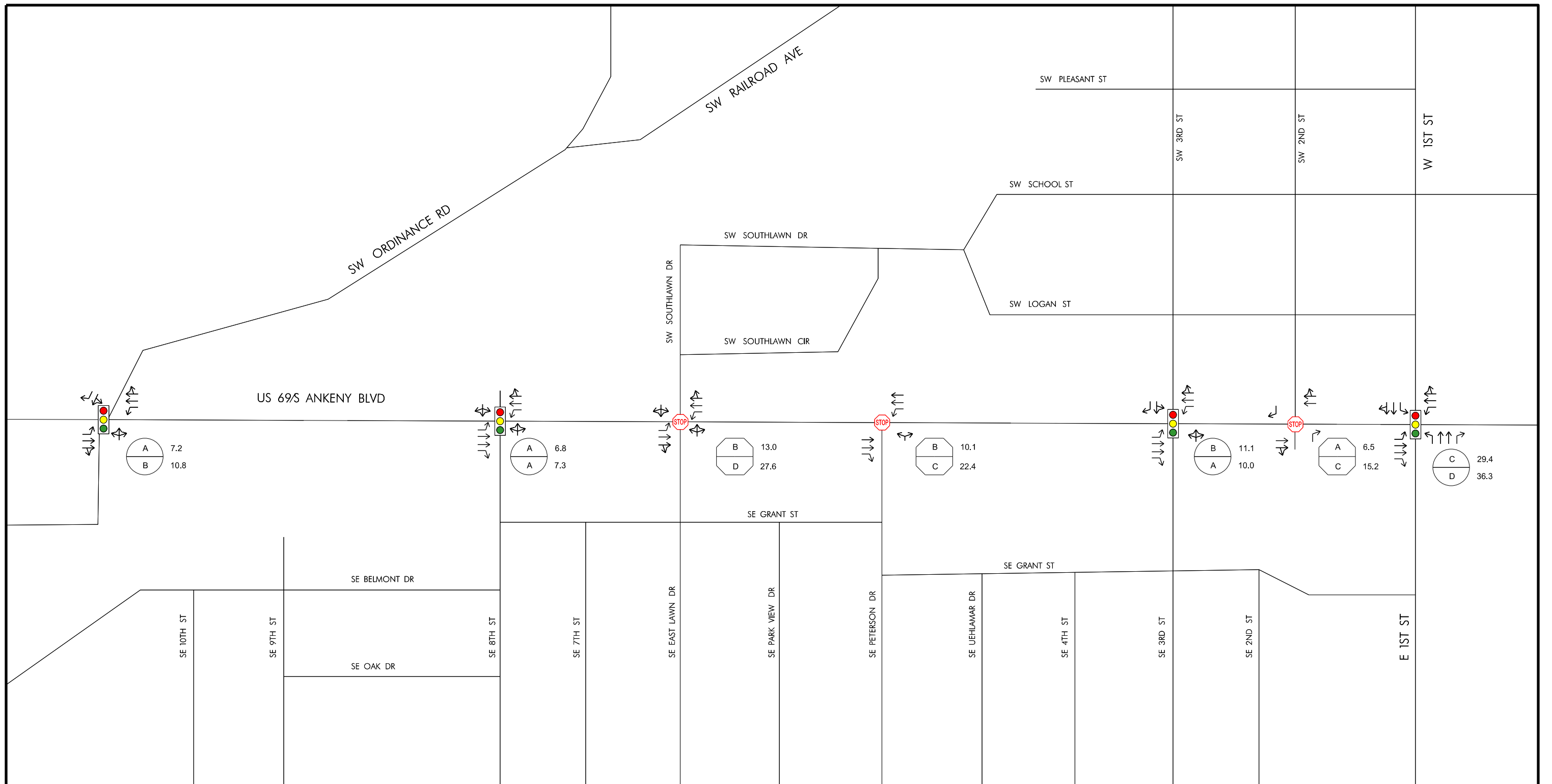
Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	125.6	29
PM	142.1	25
Southbound S Ankeny Boulevard		
AM	104.6	29
PM	107.1	28

2040 Traffic Volumes – Operations Analysis

The Synchro model was updated to consider the 2040 forecasted traffic volumes. The traffic signal timings were re-optimized based on the new volumes. The traffic operations results are provided in **Table 19** and **Figure 25**.

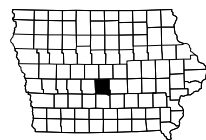
Table 21: 2040 5-Lane Divided Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	33.8	44.2	33.8	36.2	32.8	5.7	24.0	24.8	4.6	27.4	27.3	20.8	29.4
	LOS	C	D	C	D	C	A	C	C	A	C	C	C	C
PM	Delay (sec)	50.0	46.2	35.3	54.2	51.0	18.3	31.7	35.7	9.3	36.3	28.6	21.6	36.3
	LOS	D	D	D	D	D	B	C	D	A	D	C	C	D
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	6.5			4.5			-	-	-	-	-	-	-
	LOS	A			A			-	-	-	-	-	-	-
PM	Delay (sec)	6.6			15.2			-	-	-	-	-	-	-
	LOS	A			C			-	-	-	-	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	44.8	49.6	6.3	46.8	49.9	26.1	12.5	5.1	1.6	8.0	6.8	5.2	11.1
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	48.5	53.0	7.0	46.2	53.8	29.4	14.3	5.7	2.6	16.2	6.2	4.2	10.0
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			10.1			-	-	-	5.1	-	-	-
	LOS	-			B			-	-	-	A	-	-	-
PM	Delay (sec)	-			22.4			-	-	-	11.5	-	-	-
	LOS	-			C			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	12.8			13.0			4.9	-	-	4.2	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	19.4			27.6			6.8	-	-	9.1	-	-	-
	LOS	C			D			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	41.7	-	47.6	46.8	28.0	9.5	3.3	1.8	6.6	2.2	1.0	6.8
	LOS	-	D	-	D	D	C	A	A	A	A	A	A	A
PM	Delay (sec)	-	49.5	-	52.2	50.7	28.1	9.2	5.8	3.3	14.0	3.3	1.5	7.3
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	52.5	57.7	10.5	53.0	53.2	5.9	18.1	3.5	3.0	7.4	6.0	4.9	7.2
	LOS	D	E	B	D	D	A	B	A	A	A	A	A	A
PM	Delay (sec)	51.1	46.7	9.3	51.5	46.8	12.0	23.1	6.6	4.0	15.7	9.8	8.4	10.8
	LOS	D	D	A	D	D	B	C	A	A	B	A	A	B



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- AM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY



TRAFFIC OPERATIONS & SAFETY STUDY
 2040 5-LANE DIVIDED TRAFFIC OPERATIONS
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

The results of the 2040 5-Lane Divided analysis again predict acceptable traffic operations at the study intersections. Overall intersection grades of LOS D or better are expected at all study intersections. Additionally, all movements at each intersection are predicted at LOS D or better, except for the eastbound through movement of Ordance Road, which is just over the threshold for LOS E.

As seen in **Table 22**, SimTraffic-simulated travel times in the corridor ranged from 107 seconds in the southbound direction to 156 seconds in the northbound direction. Expected travel times are very similar to the 5-Lane Undivided results – within 2 seconds in each direction and each peak hour.

Table 22: 2040 5-Lane Divided Arterial Travel Time Measurements

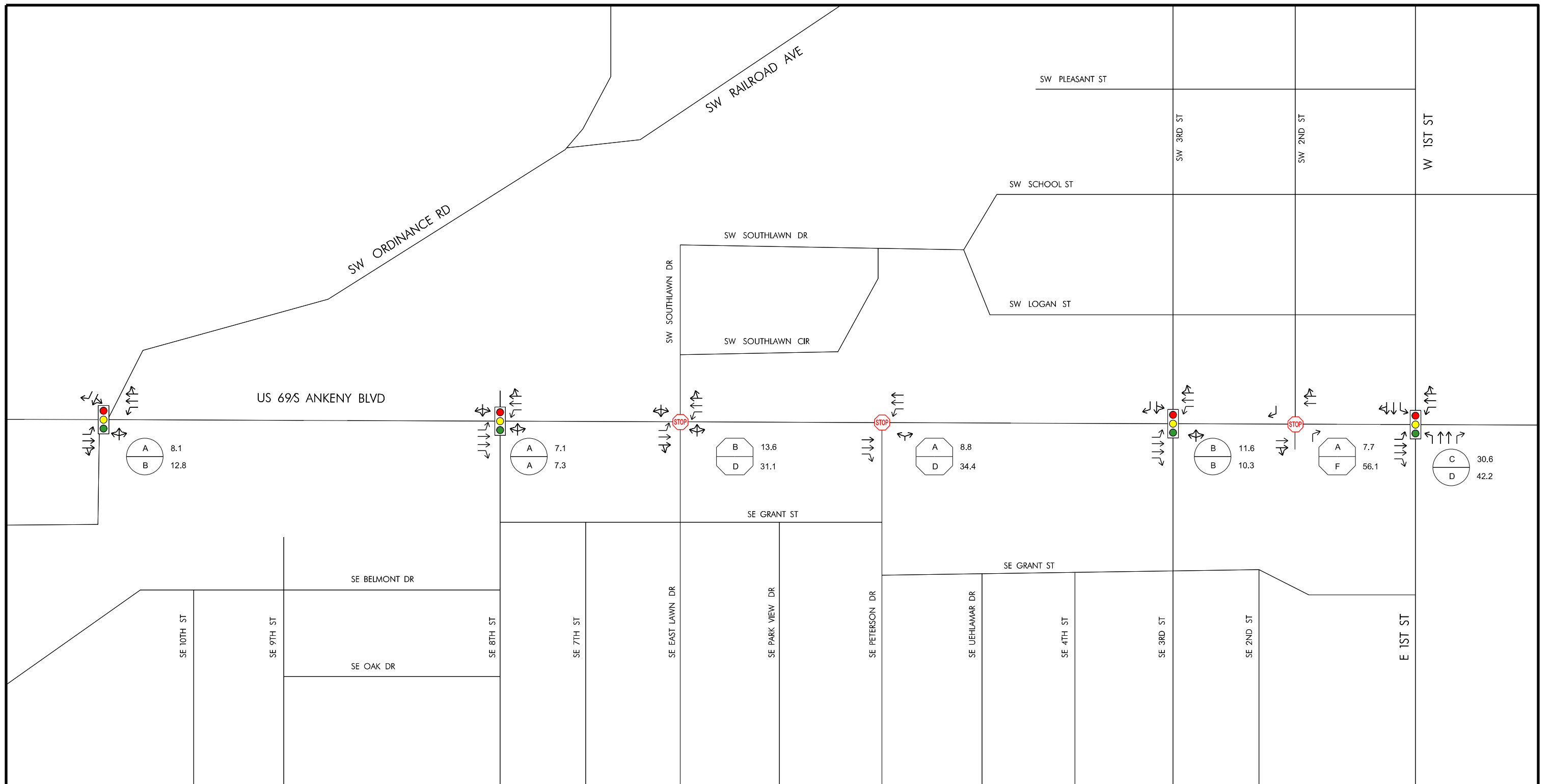
Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	135.5	27
PM	156.2	23
Southbound S Ankeny Boulevard		
AM	106.9	29
PM	111.8	27

2040 Sensitivity Traffic Volumes – Operations Analysis

Because this alternative is the most restrictive in terms of access and right-of-way acquisition, a sensitivity analysis was performed to consider the potential effects of a higher forecasted 2040 volume. A 1% growth rate was applied to the study corridor to evaluate the effects of a larger growth rate. The traffic signal timings were re-optimized based on the new volumes. The traffic operations results are provided in **Table 23** and **Figure 26**.

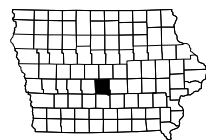
Table 23: 2040 Sensitivity 5-Lane Divided Level of Service Results

Peak Hour	Measure of Effectiveness	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Overall
US Highway 69/S Ankeny Blvd & W/E 1st St (Signalized)														
AM	Delay (sec)	34.0	44.7	34.7	37.0	32.6	6.7	28.5	26.1	4.8	28.6	29.4	22.0	30.6
	LOS	C	D	C	D	C	A	C	C	A	C	C	C	C
PM	Delay (sec)	51.8	45.3	36.0	73.5	59.1	19.8	37.8	44.4	12.9	49.4	32.7	25.5	42.2
	LOS	D	D	D	E	E	B	D	D	B	D	C	C	D
US Highway 69/S Ankeny Blvd & SW 2nd St (Unsignalized)														
AM	Delay (sec)	7.7			4.9			-	-	-	-	-	-	-
	LOS	A			A			-	-	-	-	-	-	-
PM	Delay (sec)	6.2			56.1			-	-	-	-	-	-	-
	LOS	A			F			-	-	-	-	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 3rd St (Signalized)														
AM	Delay (sec)	44.7	50.9	7.6	42.8	49.1	26.5	15.1	5.8	1.6	7.7	7.1	4.6	11.6
	LOS	D	D	A	D	D	C	B	A	A	A	A	A	B
PM	Delay (sec)	49.4	53.4	7.4	45.3	51.5	29.5	15.9	6.2	2.9	16.4	6.1	4.1	10.3
	LOS	D	D	A	D	D	C	B	A	A	B	A	A	B
US Highway 69/S Ankeny Blvd & SE Peterson Dr (Unsignalized)														
AM	Delay (sec)	-			8.8			-	-	-	5.9	-	-	-
	LOS	-			A			-	-	-	A	-	-	-
PM	Delay (sec)	-			34.4			-	-	-	11.5	-	-	-
	LOS	-			D			-	-	-	B	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE Lawn Dr (Unsignalized)														
AM	Delay (sec)	13.6			12.9			5.9	-	-	4.6	-	-	-
	LOS	B			B			A	-	-	A	-	-	-
PM	Delay (sec)	26.8			31.1			6.8	-	-	9.6	-	-	-
	LOS	D			D			A	-	-	A	-	-	-
US Highway 69/S Ankeny Blvd & SW/SE 8th St (Signalized)														
AM	Delay (sec)	-	48.9	-	47.7	46.8	27.6	11.6	4.0	2.1	6.5	2.4	2.0	7.1
	LOS	-	D	-	D	D	C	B	A	A	A	A	A	A
PM	Delay (sec)	-	38.5	-	49.2	42.3	26.8	10.0	6.2	4.2	16.1	3.1	2.0	7.3
	LOS	-	D	-	D	D	C	A	A	A	B	A	A	A
US Highway 69/S Ankeny Blvd & Ordinance Rd (Signalized)														
AM	Delay (sec)	52.3	47.5	11.8	52.3	52.9	6.4	21.9	3.7	3.0	8.1	6.9	5.2	8.1
	LOS	D	D	B	D	D	A	C	A	A	A	A	A	A
PM	Delay (sec)	46.9	50.5	10.9	47.1	44.7	13.8	26.9	8.0	5.3	16.8	12.8	9.9	12.8
	LOS	D	D	B	D	D	B	C	A	A	B	B	A	B



LEGEND

- xxx (xxx) AM (PM) PEAK HOUR VOLUME 7:15-8:15 (4:45-5:45)
- TRAFFIC SIGNAL CONTROL
- 1-WAY OR 2-WAY STOP CONTROL (ALONG EAST/WEST APPROACHES)
- LANE CONFIGURATION
- AM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- PM xx.X SIGNALIZED INTERSECTION LEVEL-OF-SERVICE / DELAY
- AM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY
- PM xx.X WORST CASE STOP CONTROLLED APPROACH LEVEL-OF-SERVICE / DELAY



NOT TO SCALE



TRAFFIC OPERATIONS & SAFETY STUDY
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FIGURE 26

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The results of the 2040 Sensitivity 5-Lane Divided analysis predict increased delays at the study intersections. Overall intersection grades of LOS D or better are expected at all study intersections. However, the westbound approach at SW 2nd Street is expected to deteriorate to LOS F during the PM peak hour. Although this approach is restricted to right turns only, queueing from the northbound approach of S Ankeny Boulevard at W/E 1st Street is predicted to impact these vehicles. Two westbound movements at W/E 1st Street are predicted at LOS E. All other movements at each intersection are predicted at LOS D or better.

As seen in **Table 24**, SimTraffic-simulated travel times in the corridor ranged from 108 seconds in the southbound direction to 170 seconds in the northbound direction. The additional traffic slowed arterial speeds as compared to the 2040 5-Lane Divided analysis. Travel times increased by up to 14 seconds, with the greatest increase in the northbound direction during the PM peak hour.

Table 24: 2040 Sensitivity 5-Lane Divided Arterial Travel Time Measurements

Peak Hour	Travel Time (sec)	Average Arterial Speed (mph)
Northbound S Ankeny Boulevard		
AM	139.0	26
PM	170.1	21
Southbound S Ankeny Boulevard		
AM	107.9	28
PM	115.0	27

Right-of-Way Acquisition

The three alternatives will have different right-of-way requirements. The 5-lane divided alternative will require the acquisition of the most right-of-way, while the 4-lane spot improvements alternative will require the least. The widening associated with both of the 5-lane alternatives will impact five parking spaces for the Boulevard Village shopping center south of SW/SE 3rd Street. Other than that, impacts to businesses is expected to be minimal. A preliminary estimate of required right-of-way is presented in **Figure 27** and **Table 25**. Although the build alternatives did not include the previously mentioned dual left turn lane improvements, the right-of-way required was included in the estimates, as an upper bound to account for potential future improvements. The existing right-of-way lines are an approximation only based on as-built construction plans for the corridor, and are subject to detailed preliminary design and survey.

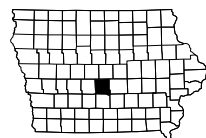
Table 25: Right-of-Way Acquisition Estimates

Alternative	ROW Required (sf)
4-Lane Spot Improvements	6,300
5-Lane Undivided	12,700
5-Lane Divided	17,700



LEGEND

- EXISTING ROW (APPROXIMATE)
- ROW REQUIRED FOR 4-LANE SPOT IMPROVEMENTS ALTERNATIVE (APPROX. 6,300 SF)
- ROW REQUIRED FOR 5-LANE UNDIVIDED ALTERNATIVE (APPROX. 12,700 SF)
- ROW REQUIRED FOR 5-LANE DIVIDED ALTERNATIVE (APPROX. 17,700 SF)



TRAFFIC OPERATIONS & SAFETY STUDY
 RIGHT-OF-WAY ACQUISITION ESTIMATE
 US 69 (S ANKENY BOULEVARD)
 ANKENY, IOWA

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FIGURE 27

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Safety Comparison of Alternatives

Because the traffic operations results among the three alternatives are similar, it is important to understand the safety differences among them. The following **Table 26** summarizes the high-level predicted safety improvements of each alternative. These crash reduction estimates are solely a predictive analysis of the proposed improvements based upon past studies.

Table 26: Comparison of Predicted Safety Improvements

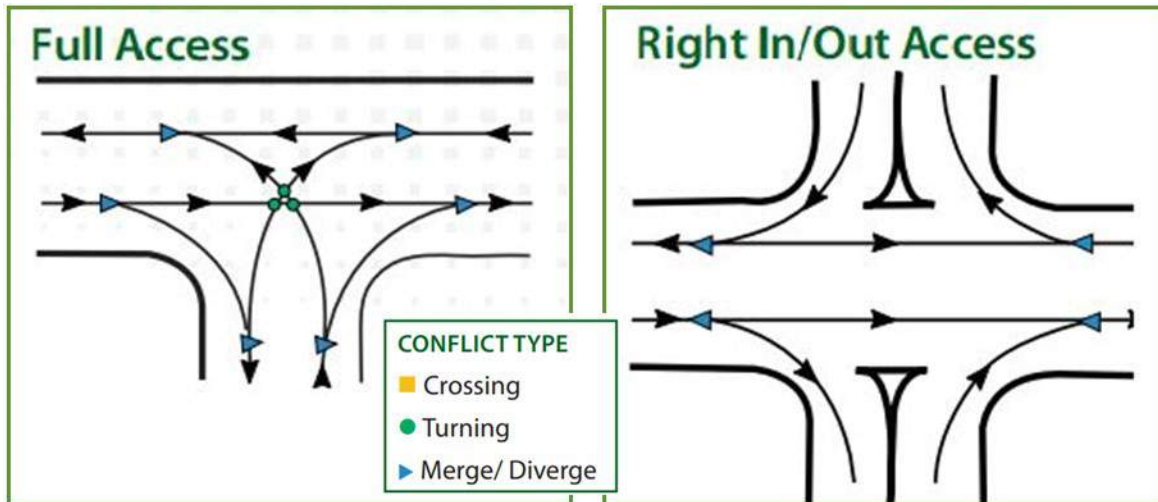
Peak Hour	4-Lane Spot Improvements	5-Lane Undivided	5-Lane Divided
Signalized Intersections			
CRF	42%	42%	42%
Unsignalized Intersections			
CRF	0%	47%	47%
Segments			
CRF	0%	24%	47%*
Driveway Conflict Points	378	378	84

* Denotes the combination of two CRFs

The safety improvements in the table are shown in terms of Crash Reduction Factors (CRF), the percentage reduction in crashes predicted by the CMFs mentioned earlier in the report. The 5-Lane Divided CRF is a combination of the 24% reduction predicted by converting a 4-lane undivided segment to a 5-lane with TWLTL, plus an additional 30% reduction for converting the 5-lane TWLTL cross section to 5-lane with raised median. As previously stated, safety impacts due to increased U-turn movements or diverted traffic in the 5-Lane Divided alternative are not considered in this table. Further information on all CMFs can be found in **Appendix E**.

The table also quantifies the overall reduction in conflict points at driveways achieved by the 5-Lane Divided alternative. A full-access driveway includes 9 total conflict points – three turning conflicts and six merge/diverge conflicts. The installation of a raised median converts these full-access driveways to right-in, right-out driveways, which include only two merge/diverge conflicts. This conflict point layout is depicted in **Figure 28**. The values in the above table simply take the number of access driveways in the whole corridor (42, as outlined in **Figure 10**), and applies the corresponding number of conflicts, according to the alternative. These figures do not consider the effects of potential driveway consolidation.

Figure 28: Conflict Point Reduction



Source: MnDOT Best Practices and Policies for Safety Strategies on Highways and Local Roads – Intersection Treatments (September 2011)

Planning Level Opinion of Probable Cost

An order of magnitude opinion of probable cost for the recommended improvements is included below. A more detailed opinion of probable cost for the long-term improvements can be found in **Appendix F** of this report.

Table 27: Comparison of Predicted Safety Improvements

Alternative	Cost
4-Lane Spot Improvements	\$1,616,000
5-Lane Undivided	\$3,292,000
5-Lane Divided	\$4,033,000

Notes:

- This opinion represents approximate construction costs only, and does not provide a detailed list of expected pay items. The opinion is to be used as a planning number only. Actual costs may vary, as detailed design plans are prepared.
- Costs do not include any permanent right-of-way and temporary construction easement costs.
- Costs represent inflation-adjusted dollars for an assumed 2023 construction year

Summary

The US 69/S Ankeny Boulevard Traffic Operations and Safety Study examined the S Ankeny Boulevard corridor between W/E 1st Street and SW Ordinance Road. The study reviewed traffic volumes, crash history, and access concerns throughout the study area.

The crash history indicated that most intersections fall below the statewide average values for crashes per million entering vehicles. For the two intersections that reported crash rates above average, left turn crashes were the most common type of crash at the W/E 1st Street intersection, while rear-end crashes were most common at SW/SE 3rd Street. The majority of segment-related crashes were rear-end crashes as well.

The traffic operations analysis indicates that the intersections along the study corridor currently operate at acceptable levels of service. When projected 2040 volumes are applied, delays and queues are expected to increase slightly, though the intersection levels of service are projected to remain acceptable. Some side street movements and approaches are projected to experience LOS E, though the arterial movements are expected to remain acceptable.

A review of the commercial and residential access point density throughout the study corridor was also completed. The corridor has a relatively high number of access points per mile, particularly in the northern part of the study area. Higher access point density is shown to be associated with slower travel speeds and higher accident rates. To that end, three corridor alternatives were developed to address access management and safety concerns in the corridor.

The three build alternatives include a range of improvements and access management strategies. The 4-lane spot improvements alternative primarily addresses intersection operations with the addition of dedicated left turn lanes at signalized intersections, and dedicated right turn lanes where warranted by volume. The 5-lane undivided alternative includes the addition of a continuous two-way left turn lane throughout the corridor to promote safer access to the residential and commercial access points in the study area. The 5-lane divided alternative adds a raised median to the corridor, providing dedicated left turn lanes at intersections while restricting access to residential and commercial entrances.

Each alternative is predicted to operate with similar operations results to the existing geometry, with some small differences due to the changes in intersection geometry. Travel times through the corridor are expected to improve modestly in the build alternatives.

The main differences among the alternatives relate to access management, right-of-way acquisition, and safety benefits. The preferred alternative will need to be determined by the feasibility and cost of acquiring property to accommodate the roadway widening, and the desire to maintain or restrict commercial and residential access points. The 4-lane spot improvements alternative requires the smallest amount of roadway widening, and thus requires the least right-of-way acquisition. The 5-lane divided alternative requires the most land acquisition for the extensive widening throughout the corridor.

Appendix A – Traffic Data

Location:	US 69 & 1st St
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	4	0	39	0	13	1	0	9	1	20	1	9	0	0	7	0	21	2	6	1	0	24	1	36	1	8	0				
6:15 AM	0	8	0	51	0	14	0	0	8	0	34	0	8	1	0	9	2	34	1	11	3	0	34	2	35	2	9	0				
6:30 AM	0	8	0	73	0	11	0	0	12	0	34	3	14	0	0	12	2	40	3	14	2	0	37	0	73	1	8	0				
6:45 AM	0	13	0	108	0	16	0	0	18	0	52	1	19	1	0	13	1	48	1	23	1	0	45	0	71	1	17	0				
7:00 AM	0	24	0	116	0	16	1	0	16	1	50	3	20	1	0	20	0	46	2	12	1	0	57	0	82	0	11	0				
7:15 AM	0	16	0	111	1	15	1	0	14	0	60	0	19	1	1	18	2	78	3	17	2	0	65	0	129	1	27	1				
7:30 AM	0	22	0	117	0	16	0	0	25	0	57	5	17	0	0	23	2	75	3	22	1	0	77	0	93	5	23	0				
7:45 AM	0	29	0	112	3	18	0	0	23	0	53	1	23	0	0	27	1	95	3	13	2	0	62	0	129	1	18	0				
8:00 AM	0	29	0	96	5	12	0	0	20	0	35	3	24	1	0	20	2	75	3	25	1	0	58	0	83	1	17	0				
8:15 AM	0	23	1	83	2	15	0	0	22	4	46	3	19	1	0	22	1	77	2	14	0	0	39	3	80	2	14	1				
8:30 AM	0	14	0	85	0	11	0	0	30	1	47	2	37	2	0	17	1	92	2	21	2	0	42	1	97	1	19	1				
8:45 AM	0	32	0	82	6	23	0	0	23	1	62	1	36	0	0	34	2	90	3	25	1	0	37	1	102	1	23	1				
Total:	0	222	1	1073	17	180	3	0	220	8	550	23	245	8	1	222	16	771	28	203	17	0	577	8	1010	17	194	4				
TOTAL ENTERING VEH.	1496								1054								1257								1810							
% OF ENTERING VEH.	26.63%								18.76%								22.38%								32.22%							
TURN MOVEMENT %	14.91%		72.86%		12.23%				21.63%		54.36%		24.00%				18.93%		63.56%		17.50%				32.32%		56.74%		10.94%			
PEAK HOUR TRUCK VOL.	0		9		1				0		9		2				7		12		6				0		8		1			
PEAK HOUR TOTAL VOL.	96		445		62				82		214		85				95		335		83				262		442		86			
MAX PERIOD	29		117		18				25		62		25				28		98		26				77		130		28			
PEAK HOUR FACTOR	0.83		0.95		0.86				0.82		0.86		0.85				0.85		0.85		0.80				0.85		0.85		0.77			
% TRUCKS - PEAK HOUR	0.00%		2.02%		1.61%				0.00%		4.21%		2.35%				7.37%		3.58%		7.23%				0.00%		1.81%		1.16%			

Location:	US 69 & 1st St
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	38	0	71	2	23	0	0	28	0	50	2	50	1	0	23	0	150	2	37	1	0	47	0	114	4	16	1				
3:15 PM	0	35	0	84	4	20	1	0	15	0	63	1	47	1	0	40	0	121	1	23	1	0	50	0	117	4	21	0				
3:30 PM	0	22	3	101	1	19	0	0	20	1	78	2	50	1	1	45	1	155	1	23	0	0	44	1	110	1	22	1				
3:45 PM	0	44	0	102	2	18	0	0	30	0	73	1	55	1	0	27	0	152	1	15	0	0	53	0	102	1	26	0				
4:00 PM	1	47	0	94	2	19	0	1	28	1	77	1	43	1	0	43	1	185	0	39	0	1	53	0	107	2	39	0				
4:15 PM	1	47	0	96	1	23	0	0	35	1	86	6	50	0	0	54	1	196	2	36	0	0	36	1	105	0	26	0				
4:30 PM	1	35	0	99	1	27	0	0	37	0	82	3	56	0	0	53	1	187	0	30	0	0	51	1	138	1	34	0				
4:45 PM	0	49	0	124	0	28	0	0	30	0	92	1	59	0	0	46	0	176	1	31	0	0	78	0	125	0	28	0				
5:00 PM	0	50	0	106	2	21	0	0	32	0	94	1	54	0	0	40	0	212	0	33	0	1	64	1	141	1	33	0				
5:15 PM	0	45	0	111	2	20	0	0	28	1	128	2	64	0	0	60	0	181	0	32	0	1	60	0	106	0	27	0				
5:30 PM	0	55	0	109	2	32	0	0	30	0	97	1	48	1	0	46	0	230	1	39	0	1	61	0	118	0	41	0				
5:45 PM	0	39	0	78	0	19	0	0	27	0	98	1	75	0	0	61	0	176	0	25	0	0	52	0	122	0	34	0				
Total:	3	506	3	1175	19	269	1	1	340	4	1018	22	651	6	1	538	4	2121	9	363	2	4	649	4	1405	14	347	2				
TOTAL ENTERING VEH.	1973								2041								3037								2421							
% OF ENTERING VEH.	20.83%								21.55%								32.06%								25.56%							
TURN MOVEMENT %	25.80%		60.52%		13.68%				16.85%		50.96%		32.19%				17.85%		70.14%		12.02%				26.97%		58.61%		14.42%			
PEAK HOUR TRUCK VOL.	0		6		0				1		5		1				0		2		0				1		1		0			
PEAK HOUR TOTAL VOL.	199		456		101				121		416		226				192		801		135				264		491		129			
MAX PERIOD	55		124		32				32		130		64				60		231		39				78		142		41			
PEAK HOUR FACTOR	0.90		0.92		0.79				0.95		0.80		0.88				0.80		0.87		0.87				0.85		0.86		0.79			
% TRUCKS - PEAK HOUR	0.00%		1.32%		0.00%				0.83%		1.20%		0.44%				0.00%		0.25%		0.00%				0.38%		0.20%		0.00%			

Location:	US 69 & 2nd St
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	3	0	0	0	0	0	58	3	0	0		
6:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	4	0	0	0	0	0	60	2	0	0		
6:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	67	8	0	0	0	0	0	96	1	0	0		
6:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	87	3	0	0	0	0	0	104	1	0	0		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	82	2	0	0	1	0	0	112	2	0	0		
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	111	6	0	0	0	0	0	152	1	0	0		
7:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	128	4	0	0	0	0	0	142	5	0	0		
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	126	4	0	0	0	0	0	168	1	0	0		
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	114	6	0	0	0	2	0	110	1	2	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118	3	0	0	0	0	0	114	6	0	0		
8:30 AM	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	124	2	0	0	0	0	0	139	3	2	0		
8:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	141	6	0	0	0	0	0	140	3	0	0		
Total:	0	5	0	1	1	8	2	0	0	1	0	0	0	0	1	0	0	5	0	1185	51	0	0	1	2	0	1395	29	4	0		
TOTAL ENTERING VEH.	17								2								1241								1430							
% OF ENTERING VEH.	0.63%								0.07%								46.13%								53.16%							
TURN MOVEMENT %	29.41%		11.76%		58.82%				50.00%		0.00%		50.00%				0.40%		99.60%		0.00%				0.14%		99.58%		0.28%			
PEAK HOUR TRUCK VOL.	0		1		2				0		0		0				0		20		0				0		8		0			
PEAK HOUR TOTAL VOL.	1		1		3				1		0		0				1		499		0				2		580		2			
MAX PERIOD	1		1		1				1		0		0				1		132		0				2		169		2			
PEAK HOUR FACTOR	0.25		0.25		0.75				0.25		0.00		0.00				0.25		0.95		0.00				0.25		0.86		0.25			
% TRUCKS - PEAK HOUR	0.00%		100.00%		66.67%				0.00%		0.00%		0.00%				0.00%		4.01%		0.00%				0.00%		1.38%		0.00%			

Location:	US 69 & 2nd St
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	203	3	0	0	0	0	0	163	4	2	0			
3:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	192	2	1	0	0	0	0	152	5	1	0			
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	2	0	0	0	0	0	155	2	1	0			
3:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	207	1	0	0	0	0	0	151	1	0	0			
4:00 PM	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	260	1	0	0	0	0	0	152	3	2	0				
4:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	272	3	0	0	0	0	0	160	1	1	0				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	262	1	0	0	0	0	0	192	1	4	0				
4:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	267	0	0	0	0	0	0	182	0	3	0				
5:00 PM	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	276	0	0	0	0	0	0	192	1	1	0				
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279	0	0	0	0	0	0	154	2	0	0				
5:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0	296	1	0	0	0	0	0	183	0	3	0				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	252	0	0	0	0	0	0	159	0	3	0				
Total:	4	2	0	0	0	11	0	0	1	0	0	0	1	0	0	25	0	2980	14	1	0	0	0	0	1995	20	21	0				
TOTAL ENTERING VEH.	13								2								3020								2036							
% OF ENTERING VEH.	0.26%								0.04%								59.55%								40.15%							
TURN MOVEMENT %	15.38%		0.00%		84.62%				50.00%		0.00%		50.00%				0.83%		99.14%		0.03%				0.00%		98.97%		1.03%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		1		0				0		3		0			
PEAK HOUR TOTAL VOL.	2		0		5				0		0		0				6		1119		0				0		714		7			
MAX PERIOD	1		0		2				0		0		0				4		297		0				0		193		3			
PEAK HOUR FACTOR	0.50		0.00		0.63				0.00		0.00		0.00				0.38		0.94		0.00				0.00		0.92		0.58			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		0.09%		0.00%				0.00%		0.42%		0.00%			

Location:	US 69 & 3rd St
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	0	0	0	0	2	0	0	2	0	1	0	2	0	0	3	1	31	3	0	0	0	2	0	55	3	3	0				
6:15 AM	0	1	1	2	0	10	0	0	2	0	3	0	2	0	0	7	0	50	3	4	0	2	0	0	59	2	2	0				
6:30 AM	0	1	1	4	0	6	3	0	1	0	1	0	1	0	0	7	0	66	7	1	0	0	0	0	92	1	2	0				
6:45 AM	0	4	2	0	0	7	0	0	0	0	2	0	5	0	0	7	0	72	1	0	0	0	3	0	93	1	10	0				
7:00 AM	0	4	0	1	0	8	0	0	7	0	7	0	5	0	0	14	1	73	3	3	0	0	2	0	102	1	8	1				
7:15 AM	0	3	1	4	0	11	1	0	3	0	4	0	1	0	0	12	0	103	5	0	0	0	1	0	140	1	7	0				
7:30 AM	0	8	1	3	0	17	0	0	4	0	1	0	1	0	0	13	0	118	3	4	0	0	3	0	129	6	8	0				
7:45 AM	0	8	1	7	0	20	0	0	7	0	5	0	5	0	2	13	0	115	3	7	0	1	2	0	149	0	7	0				
8:00 AM	0	11	0	6	0	12	0	0	6	0	7	0	4	0	0	14	0	104	5	6	0	0	2	0	108	0	11	0				
8:15 AM	0	4	2	7	0	15	0	0	5	1	4	0	5	0	0	12	0	104	2	5	0	0	4	0	103	6	9	0				
8:30 AM	0	10	0	4	0	12	0	0	5	0	4	0	3	0	0	11	0	111	3	4	0	0	1	0	134	1	6	0				
8:45 AM	0	11	1	8	0	8	0	0	6	0	10	0	6	0	2	22	0	128	5	4	0	0	1	0	136	2	8	0				
Total:	0	65	10	46	0	128	4	0	48	1	49	0	40	0	4	135	2	1075	43	38	0	3	21	0	1300	24	81	1				
TOTAL ENTERING VEH.	253								138								1293								1427							
% OF ENTERING VEH.	8.13%								4.44%								41.56%								45.87%							
TURN MOVEMENT %	29.64%		18.18%		52.17%				35.51%		35.51%		28.99%				10.60%		86.47%		2.94%				1.47%		92.78%		5.75%			
PEAK HOUR TRUCK VOL.	3		0		1				0		0		0				0		16		0				0		7		0			
PEAK HOUR TOTAL VOL.	33		20		61				20		17		11				52		456		17				8		533		33			
MAX PERIOD	11		7		20				7		7		5				14		121		7				3		149		11			
PEAK HOUR FACTOR	0.75		0.71		0.76				0.71		0.61		0.55				0.93		0.94		0.61				0.67		0.89		0.75			
% TRUCKS - PEAK HOUR	9.09%		0.00%		1.64%				0.00%		0.00%		0.00%				0.00%		3.51%		0.00%				0.00%		1.31%		0.00%			

Location:	US 69 & 3rd St
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	9	0	5	0	21	0	0	2	0	3	0	6	0	0	26	0	185	3	3	0	1	4	0	149	3	9	1				
3:15 PM	0	10	0	6	0	19	0	0	2	0	4	0	7	0	1	21	0	180	3	10	0	0	2	0	136	5	14	0				
3:30 PM	0	7	0	8	0	18	0	0	10	0	9	0	7	0	0	29	0	198	3	6	0	0	3	0	138	2	11	0				
3:45 PM	0	10	0	12	0	25	1	0	6	0	8	0	9	0	0	36	0	196	2	6	0	0	3	0	141	1	11	0				
4:00 PM	1	13	0	6	0	18	0	0	2	0	13	0	9	0	0	27	0	233	1	9	0	0	7	0	134	3	11	0				
4:15 PM	1	13	0	5	0	21	0	0	5	0	7	0	11	0	0	23	0	247	3	11	0	0	4	0	141	1	11	0				
4:30 PM	1	10	0	8	0	21	0	0	10	0	12	0	15	0	0	28	0	248	2	10	0	0	8	0	170	1	16	0				
4:45 PM	0	12	0	8	0	21	1	0	9	0	11	0	8	0	0	29	0	258	1	10	0	0	5	0	165	0	15	0				
5:00 PM	1	12	0	10	0	24	0	0	5	0	16	0	9	0	0	33	0	256	0	10	0	0	5	0	173	1	14	0				
5:15 PM	0	5	0	7	0	25	1	0	8	0	11	0	6	0	0	30	0	281	0	11	0	1	6	0	135	2	13	0				
5:30 PM	0	13	0	4	0	19	0	0	6	0	6	0	5	0	0	42	0	279	1	13	0	0	5	0	162	0	18	0				
5:45 PM	0	16	0	6	0	15	1	0	5	0	3	0	5	0	0	32	0	237	0	9	0	2	4	0	141	0	13	0				
Total:	4	130	0	85	0	247	4	0	70	0	103	0	97	0	1	356	0	2798	19	108	0	4	56	0	1785	19	156	1				
TOTAL ENTERING VEH.	466								270								3281								2017							
% OF ENTERING VEH.	7.72%								4.47%								54.38%								33.43%							
TURN MOVEMENT %	27.90%		18.24%		53.86%				25.93%		38.15%		35.93%				10.85%		85.86%		3.29%				2.78%		89.44%		7.78%			
PEAK HOUR TRUCK VOL.	0		0		2				0		0		0				0		2		0				0		3		0			
PEAK HOUR TOTAL VOL.	42		29		91				28		44		28				134		1076		44				21		638		60			
MAX PERIOD	13		10		26				9		16		9				42		281		13				6		174		18			
PEAK HOUR FACTOR	0.81		0.73		0.88				0.78		0.69		0.78				0.80		0.96		0.85				0.88		0.92		0.83			
% TRUCKS - PEAK HOUR	0.00%		0.00%		2.20%				0.00%		0.00%		0.00%				0.00%		0.19%		0.00%				0.00%		0.47%		0.00%			

Location:	US 69 & Peterson Dr
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg	Left		Thru		Right		Across Leg	Left		Thru		Right		Across Leg	Left		Thru		Right		Across Leg	Left		Thru		Right					
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks				
6:00 AM								0	2	0			1	0	0			32	4	0	0	0	0	0	51	3						
6:15 AM								0	7	0			9	0	0			53	3	1	0	0	2	0	65	2						
6:30 AM								0	7	0			5	0	0			64	7	0	0	0	1	0	92	3						
6:45 AM								0	7	0			2	0	0			69	2	1	0	0	5	0	87	2						
7:00 AM								0	8	0			5	0	0			88	3	1	0	0	3	0	110	1						
7:15 AM								0	8	0			8	0	0			113	5	1	0	0	3	0	152	3						
7:30 AM								0	1	0			5	1	0			123	2	1	0	0	3	0	135	5						
7:45 AM								0	1	0			11	0	0			139	5	5	1	0	2	0	173	1						
8:00 AM								0	3	0			3	0	0			114	5	4	0	0	4	0	116	1						
8:15 AM								0	4	0			4	0	0			121	1	2	0	0	0	0	117	7						
8:30 AM								0	3	0			3	0	0			118	3	1	0	0	1	0	139	3						
8:45 AM								0	3	0			9	0	0			148	6	2	0	0	2	0	132	2						
Total:	0	0	0	0	0	0	0	0	54	0	0	0	65	1	0	0	0	1182	46	19	1	0	26	0	1369	33	0	0				
TOTAL ENTERING VEH.	0								120								1248								1428							
% OF ENTERING VEH.	0.00%								4.29%								44.64%								51.07%							
TURN MOVEMENT %	0.00%		0.00%		0.00%				45.00%		0.00%		55.00%				0.00%		98.40%		1.60%				1.82%		98.18%		0.00%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		1				0		17		1				0		10		0			
PEAK HOUR TOTAL VOL.	0		0		0				13		0		28				0		506		12				12		586		0			
MAX PERIOD	0		0		0				8		0		11				0		144		6				4		174		0			
PEAK HOUR FACTOR	0.00		0.00		0.00				0.41		0.00		0.64				0.00		0.88		0.50				0.75		0.84		0.00			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		3.57%				0.00%		3.36%		8.33%				0.00%		1.71%		0.00%			

Location:	US 69 & Peterson Dr
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM									0	3	0				6	0	0						208	3	6	1	0	11	0	162	3	
3:15 PM									0	4	0				8	0	0						208	3	5	0	0	5	0	155	5	
3:30 PM									0	5	0				4	0	0						224	2	11	0	0	5	0	162	2	
3:45 PM									0	2	0				7	0	0						237	1	4	0	0	2	0	168	2	
4:00 PM									0	6	0				8	0	0						252	1	8	0	0	7	0	136	3	
4:15 PM									1	2	0				5	0	0						287	4	12	0	0	6	0	156	3	
4:30 PM									0	3	0				17	0	0						269	0	7	0	0	10	0	183	2	
4:45 PM									0	1	0				5	0	0						288	0	6	0	0	12	0	189	1	
5:00 PM									0	0	0				13	0	0						282	0	7	0	0	10	0	180	2	
5:15 PM									0	5	0				11	0	0						292	0	11	0	0	8	0	149	3	
5:30 PM									0	4	0				9	0	0						316	1	9	0	0	10	0	170	1	
5:45 PM									0	2	0				8	0	0						271	0	9	0	0	7	0	151	1	
Total:	0	0	0	0	0	0	0	0	1	37	0	0	0	101	0	0	0	0	3134	15	95	1	0	93	0	1961	28	0	0			
TOTAL ENTERING VEH.	0								138								3245								2082							
% OF ENTERING VEH.	0.00%								2.53%								59.38%								38.10%							
TURN MOVEMENT %	0.00%		0.00%		0.00%				26.81%		0.00%		73.19%				0.00%		97.04%		2.96%				4.47%		95.53%		0.00%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		1		0				0		7		0			
PEAK HOUR TOTAL VOL.	0		0		0				10		0		38				0		1179		33				40		695		0			
MAX PERIOD	0		0		0				5		0		13				0		317		11				12		190		0			
PEAK HOUR FACTOR	0.00		0.00		0.00				0.50		0.00		0.73				0.00		0.93		0.75				0.83		0.91		0.00			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		0.08%		0.00%				0.00%		1.01%		0.00%			

Location:	US 69 & Southlawn/East Lawn Dr
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	0	31	2	0	0	0	0	0	53	2	1	0			
6:15 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	3	0	55	4	0	0	0	0	0	75	2	0	0			
6:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	63	6	0	0	0	0	0	99	3	1	0			
6:45 AM	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	5	0	72	1	0	0	0	0	0	98	2	0	0			
7:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	89	3	0	0	0	0	0	116	1	0	0			
7:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	3	0	109	5	0	0	0	0	0	161	1	0	0			
7:30 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	2	0	124	2	0	0	0	0	0	133	5	0	0			
7:45 AM	0	0	0	0	0	6	0	1	0	0	0	0	0	0	0	0	6	0	145	4	0	0	0	0	0	176	1	0	0			
8:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	0	121	5	0	0	1	0	0	122	1	0	0			
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	7	1	120	1	0	0	0	0	0	119	7	1	0			
8:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	2	0	121	1	0	0	0	0	0	140	2	1	0			
8:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	9	0	149	6	0	0	0	0	0	138	2	0	0			
Total:	0	2	0	0	0	45	0	1	0	0	0	0	1	1	0	55	1	1199	40	0	0	1	0	0	1430	29	4	0				
TOTAL ENTERING VEH.	47								2								1295								1463							
% OF ENTERING VEH.	1.67%								0.07%								46.13%								52.12%							
TURN MOVEMENT %	4.26%		0.00%		95.74%		0.00%		0.00%		100.00%		4.32%		95.68%		0.00%		0.00%		99.73%		0.27%									
PEAK HOUR TRUCK VOL.	0		0		0		0		0		0		0		0		0		0		8		0									
PEAK HOUR TOTAL VOL.	0		0		18		0		0		0		0		0		0		0		600		0									
MAX PERIOD	0		0		6		0		0		0		0		0		0		0		177		0									
PEAK HOUR FACTOR	0.00		0.00		0.75		0.00		0.00		0.00		0.00		0.71		0.86		0.00		0.00		0.85		0.00							
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		3.11%		0.00%		0.00%		1.33%		0.00%							

Location:	US 69 & Southlawn/East Lawn Dr
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	0	0	0	0	3	0	0	0	1	0	0	0	1	0	5	0	212	3	0	0	0	0	0	158	3	1	0				
3:15 PM	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	7	0	210	2	0	0	0	0	0	162	4	0	0				
3:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	12	1	238	1	0	0	0	0	0	167	2	1	0				
3:45 PM	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	9	0	236	1	0	0	0	0	0	176	2	0	0				
4:00 PM	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	6	0	267	1	1	0	0	0	0	141	3	1	0				
4:15 PM	0	0	0	0	0	5	0	1	0	0	0	0	0	0	0	3	0	299	4	0	0	0	0	0	159	3	4	0				
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	263	0	0	0	0	0	0	178	1	0	0				
4:45 PM	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	8	0	293	0	0	0	0	0	0	195	1	3	0				
5:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	18	0	290	0	0	0	0	0	0	177	2	0	0				
5:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	311	0	0	0	0	0	0	160	1	1	0				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	322	1	0	0	0	0	0	169	1	1	0				
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0	277	0	0	0	0	0	0	157	1	1	0				
Total:	1	3	0	0	0	33	2	1	0	2	0	0	0	1	0	90	1	3218	13	1	0	0	0	0	1999	24	13	0				
TOTAL ENTERING VEH.	38								3								3323								2036							
% OF ENTERING VEH.	0.70%								0.06%								61.54%								37.70%							
TURN MOVEMENT %	7.89%		0.00%		92.11%				66.67%		0.00%		33.33%				2.74%		97.23%		0.03%				0.00%		99.36%		0.64%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		1		0				0		5		0			
PEAK HOUR TOTAL VOL.	1		0		12				0		0		0				39		1217		0				0		706		5			
MAX PERIOD	1		0		5				0		0		0				18		323		0				0		196		3			
PEAK HOUR FACTOR	0.25		0.00		0.60				0.00		0.00		0.00				0.54		0.94		0.00				0.00		0.90		0.42			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		0.08%		0.00%				0.00%		0.71%		0.00%			

Location:	US 69 & 8th St
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	0	0	34	3	2	0	0	4	0	50	3	0	0			
6:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	53	3	1	0	0	6	0	79	2	0	0			
6:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	8	1	0	0	0	55	5	1	0	0	2	0	100	2	0	0			
6:45 AM	0	0	0	0	0	1	0	0	0	3	0	0	0	5	0	0	0	0	74	1	3	0	0	4	0	102	2	0	0			
7:00 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	88	3	4	0	0	6	0	106	1	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	17	0	0	0	0	100	5	1	0	1	3	0	164	1	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	14	0	0	0	7	0	0	0	0	118	4	2	0	1	6	0	137	5	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	17	0	0	0	0	137	6	3	0	0	6	0	171	1	0	0			
8:00 AM	0	0	0	0	0	1	0	0	0	4	0	0	0	6	0	0	0	0	116	5	2	0	0	5	0	115	1	0	0			
8:15 AM	0	0	0	0	0	0	0	0	0	9	1	0	0	8	0	0	0	0	117	5	6	0	0	2	0	118	7	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	5	0	0	0	0	114	3	3	0	0	8	0	142	2	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	8	0	0	0	0	146	7	2	2	0	9	0	130	2	0	0			
Total:	0	0	0	0	0	2	0	0	0	64	2	0	0	89	1	1	0	0	1152	50	30	2	2	61	0	1414	29	0	0			
TOTAL ENTERING VEH.	2								156								1234								1504							
% OF ENTERING VEH.	0.07%								5.39%								42.61%								51.93%							
TURN MOVEMENT %	0.00%		0.00%		100.00%				42.31%		0.00%		57.69%				0.00%		97.41%		2.59%				4.06%		95.94%		0.00%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		20		0				0		8		0			
PEAK HOUR TOTAL VOL.	0		0		1				28		0		47				0		491		8				20		595		0			
MAX PERIOD	0		0		1				14		0		17				0		143		3				6		172		0			
PEAK HOUR FACTOR	0.00		0.00		0.25				0.50		0.00		0.69				0.00		0.86		0.67				0.83		0.86		0.00			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		4.07%		0.00%				0.00%		1.34%		0.00%			

Location:	US 69 & 8th St
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	13	0	0	0	0	199	5	7	0	0	13	0	138	4	0	0			
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	13	0	0	0	0	200	3	9	0	0	10	0	145	5	0	0			
3:30 PM	0	1	0	1	0	0	0	0	0	9	0	1	0	20	0	0	1	0	226	2	3	0	2	4	0	166	1	0	0			
3:45 PM	0	0	0	0	1	0	0	0	0	16	0	0	0	8	0	0	0	0	229	2	3	0	0	14	0	162	5	0	0			
4:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	10	0	0	1	0	256	1	3	0	0	10	0	134	2	0	0			
4:15 PM	1	0	0	0	0	1	0	0	0	12	0	0	0	13	0	0	0	0	284	4	6	0	1	11	0	149	4	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	10	0	0	0	0	254	0	5	0	0	18	0	161	1	0	0			
4:45 PM	0	0	0	0	0	1	0	0	0	9	0	0	0	18	0	0	0	0	277	1	8	0	0	20	0	174	1	0	0			
5:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	13	0	0	0	0	296	0	10	0	0	18	0	167	2	0	0			
5:15 PM	0	0	0	0	0	1	0	0	0	9	0	0	0	21	0	0	0	0	303	0	10	0	0	10	0	148	3	1	0			
5:30 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	22	0	0	0	0	307	1	4	0	0	9	0	155	1	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	15	0	0	0	0	253	0	6	0	0	22	0	144	1	0	0			
Total:	1	1	0	1	1	3	0	0	0	100	0	1	0	176	0	0	2	0	3084	19	74	0	3	159	0	1843	30	1	0			
TOTAL ENTERING VEH.	6								277								3179								2033							
% OF ENTERING VEH.	0.11%								5.04%								57.85%								37.00%							
TURN MOVEMENT %	16.67%		33.33%		50.00%				36.10%		0.36%		63.54%				0.06%		97.61%		2.33%				7.82%		92.13%		0.05%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		2		0				0		7		0			
PEAK HOUR TOTAL VOL.	0		0		2				31		0		74				0		1185		32				57		651		1			
MAX PERIOD	0		0		1				9		0		22				0		308		10				20		175		1			
PEAK HOUR FACTOR	0.00		0.00		0.50				0.86		0.00		0.84				0.00		0.96		0.80				0.71		0.93		0.25			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		0.17%		0.00%				0.00%		1.08%		0.00%			

Location:	US 69 & SW Ordinance Rd
Start Date:	8/6/2019
Start Time:	6:00 AM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	3	0	0	0	0	0	54	2	0	0		
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	3	1	0	0	2	0	74	2	0	0			
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	57	4	0	0	0	0	0	109	1	0	0			
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	1	0	0	0	1	0	103	2	0	0			
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	3	0	0	0	2	0	114	2	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	113	6	0	0	0	0	0	171	2	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	112	3	1	0	0	2	0	140	5	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	141	5	0	0	0	5	0	179	1	0	0			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	116	4	0	0	0	3	0	115	1	0	0			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	4	0	0	0	3	0	132	9	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	122	2	0	0	0	3	0	149	2	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	161	8	2	0	0	1	0	138	2	0	0			
Total:	0	0	0	0	0	0	0	0	0	3	0	0	0	15	0	0	0	0	1222	46	4	0	0	22	0	1478	31	0	0			
TOTAL ENTERING VEH.	0								18								1272								1531							
% OF ENTERING VEH.	0.00%								0.64%								45.09%								54.27%							
TURN MOVEMENT %	0.00%		0.00%		0.00%				16.67%		0.00%		83.33%				0.00%		99.69%		0.31%				1.44%		98.56%		0.00%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		15		0				0		13		0			
PEAK HOUR TOTAL VOL.	0		0		0				1		0		8				0		523		0				14		588		0			
MAX PERIOD	0		0		0				1		0		4				0		146		0				5		180		0			
PEAK HOUR FACTOR	0.00		0.00		0.00				0.25		0.00		0.50				0.00		0.90		0.00				0.70		0.82		0.00			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		2.87%		0.00%				0.00%		2.21%		0.00%			

Location:	US 69 & SW Ordinance Rd
Start Date:	8/6/2019
Start Time:	3:00 PM
Site Code:	-

TURNING MOVEMENT COUNT



Start Time	Eastbound								Westbound								Northbound								Southbound							
	Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right		Across Leg		Left		Thru		Right	
	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks	Pedestrians	Cars	Trucks	Cars	Trucks	Cars	Trucks		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	212	4	1	0	0	4	0	141	5	0	0			
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	223	3	2	0	0	2	0	146	5	0	0			
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	0	0	0	236	1	0	0	0	2	0	176	1	0	0			
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	234	1	2	0	0	6	0	183	5	0	0			
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	9	0	0	0	0	270	1	0	0	0	5	0	139	2	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	12	0	0	0	0	283	4	0	0	0	3	0	151	4	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	260	0	0	0	0	4	0	169	2	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	272	0	0	0	0	3	0	174	2	0	0			
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	317	0	0	0	0	3	0	175	2	0	0			
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	316	0	1	0	0	3	0	147	2	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	321	1	0	0	0	1	0	160	1	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	258	0	0	0	0	0	0	155	1	0	0			
Total:	0	0	0	0	0	0	0	0	0	9	0	0	0	65	0	0	0	0	3202	15	6	0	0	36	0	1916	32	0	0			
TOTAL ENTERING VEH.	0								74								3223								1984							
% OF ENTERING VEH.	0.00%								1.40%								61.03%								37.57%							
TURN MOVEMENT %	0.00%		0.00%		0.00%				12.16%		0.00%		87.84%				0.00%		99.81%		0.19%				1.81%		98.19%		0.00%			
PEAK HOUR TRUCK VOL.	0		0		0				0		0		0				0		1		0				0		7		0			
PEAK HOUR TOTAL VOL.	0		0		0				2		0		15				0		1227		1				10		663		0			
MAX PERIOD	0		0		0				1		0		6				0		322		1				3		177		0			
PEAK HOUR FACTOR	0.00		0.00		0.00				0.50		0.00		0.63				0.00		0.95		0.25				0.83		0.94		0.00			
% TRUCKS - PEAK HOUR	0.00%		0.00%		0.00%				0.00%		0.00%		0.00%				0.00%		0.08%		0.00%				0.00%		1.06%		0.00%			

**US 69 & 1st St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound E 1st St					Northbound US 69					Eastbound W 1st St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	2	10	2	0	0	2	4	3	0	0	5	4	3	0	0	2	12	2	0	51
12:15 AM	0	9	3	4	0	0	0	3	3	0	0	3	14	2	0	0	2	9	3	0	55
12:30 AM	0	5	3	0	0	0	4	6	2	0	0	4	8	2	0	0	2	5	1	0	42
12:45 AM	0	3	5	2	0	0	1	1	2	0	0	4	7	3	0	0	0	5	0	0	33
Hourly Total	0	19	21	8	0	0	7	14	10	0	0	16	33	10	0	0	6	31	6	0	181
1:00 AM	0	1	2	3	1	0	0	1	1	0	0	0	4	1	0	0	1	4	1	0	19
1:15 AM	0	0	2	0	0	0	0	2	2	0	0	3	3	0	0	0	0	3	0	0	15
1:30 AM	0	0	2	0	0	0	2	0	1	0	0	5	7	2	0	0	0	4	0	0	23
1:45 AM	0	2	4	0	0	0	0	1	0	0	0	0	5	1	0	0	0	2	2	0	17
Hourly Total	0	3	10	3	1	0	2	4	4	0	0	8	19	4	0	0	1	13	3	0	74
2:00 AM	0	2	6	0	0	0	0	0	1	0	0	2	6	1	0	0	1	2	0	0	21
2:15 AM	0	3	1	0	0	0	0	4	1	0	0	3	8	0	0	0	0	0	1	0	21
2:30 AM	0	0	3	1	0	0	0	0	2	0	0	0	0	0	1	0	0	2	1	1	9
2:45 AM	0	5	1	0	0	0	0	2	2	0	0	0	1	0	0	0	1	2	1	0	15
Hourly Total	0	10	11	1	0	0	0	6	6	0	0	5	15	1	1	0	2	6	3	1	66
3:00 AM	0	3	3	1	0	0	0	1	1	0	0	1	2	4	0	0	0	3	0	0	19
3:15 AM	0	0	6	0	0	0	1	2	2	0	0	1	3	1	0	0	0	1	1	0	18
3:30 AM	0	6	6	0	0	0	0	0	0	0	0	0	7	2	0	0	0	7	0	0	28
3:45 AM	0	3	4	0	0	0	1	2	3	0	0	1	5	2	0	0	0	7	2	0	30
Hourly Total	0	12	19	1	0	0	2	5	6	0	0	3	17	9	0	0	0	18	3	0	95
4:00 AM	0	1	3	0	0	0	1	1	3	0	0	2	4	1	0	0	1	7	0	0	24
4:15 AM	0	3	5	1	0	0	1	4	5	0	0	0	2	1	0	0	0	8	0	0	30
4:30 AM	0	7	8	1	0	0	2	4	1	0	0	2	5	2	0	0	0	10	1	0	43
4:45 AM	0	9	14	1	0	0	2	6	7	0	0	1	12	1	0	0	4	17	6	0	80
Hourly Total	0	20	30	3	0	0	6	15	16	0	0	5	23	5	0	0	5	42	7	0	177
5:00 AM	0	9	15	2	0	0	3	4	3	0	0	2	13	3	0	0	5	21	2	0	82
5:15 AM	0	12	16	4	0	0	0	12	5	0	0	6	16	0	0	0	4	18	3	0	96
5:30 AM	0	11	36	7	1	0	5	35	5	0	0	12	16	6	0	0	4	32	9	0	178
5:45 AM	0	25	37	5	0	0	9	30	3	0	0	13	26	8	0	0	6	42	6	0	210
Hourly Total	0	57	104	18	1	0	17	81	16	0	0	33	71	17	0	0	19	113	20	0	566
6:00 AM	0	25	37	8	0	0	10	21	9	0	0	7	23	7	0	0	4	39	14	0	204
6:15 AM	0	36	37	9	0	0	8	34	9	0	0	11	35	14	0	0	8	51	14	0	266
6:30 AM	0	37	74	8	0	0	12	37	14	0	0	14	43	16	0	0	8	73	11	0	347
6:45 AM	0	45	72	17	0	0	18	53	20	0	0	14	49	24	0	0	13	108	16	0	449
Hourly Total	0	143	220	42	0	0	48	145	52	0	0	46	150	61	0	0	33	271	55	0	1266
7:00 AM	0	57	82	11	0	0	17	53	21	0	0	20	48	13	0	0	24	116	17	0	479
7:15 AM	0	65	130	28	0	0	14	60	20	0	0	20	81	19	1	0	16	112	16	0	581
7:30 AM	0	77	98	23	0	0	25	62	17	0	0	25	78	23	0	0	22	117	16	0	583
7:45 AM	0	62	130	18	0	0	23	54	23	0	0	28	98	15	0	0	29	115	18	0	613
Hourly Total	0	261	440	80	0	0	79	229	81	0	0	93	305	70	1	0	91	460	67	0	2256

**US 69 & 1st St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound E 1st St					Northbound US 69					Eastbound W 1st St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	58	84	17	0	0	20	38	25	0	0	22	78	26	0	0	29	101	12	0	510
8:15 AM	0	42	82	15	0	0	26	49	20	0	0	23	79	14	0	0	24	85	15	0	474
8:30 AM	0	43	98	20	0	0	31	49	39	0	0	18	94	23	0	0	14	85	11	0	525
8:45 AM	0	38	103	24	0	0	24	63	36	0	0	36	93	26	0	0	32	88	23	0	586
Hourly Total	0	181	367	76	0	0	101	199	120	0	0	99	344	89	0	0	99	359	61	0	2095
9:00 AM	0	45	79	13	0	0	27	45	37	1	0	24	105	21	0	0	23	72	18	0	509
9:15 AM	0	40	106	24	0	0	24	49	33	1	0	24	97	25	0	0	33	75	19	0	549
9:30 AM	0	48	87	24	0	0	22	48	38	1	0	27	100	21	0	0	22	77	15	0	529
9:45 AM	0	53	91	24	0	0	22	55	43	0	0	20	134	25	0	0	25	63	16	0	571
Hourly Total	0	186	363	85	0	0	95	197	151	3	0	95	436	92	0	0	103	287	68	0	2158
10:00 AM	0	45	124	23	0	0	23	45	36	0	0	15	96	22	0	0	27	63	18	0	537
10:15 AM	0	49	131	29	0	0	16	45	44	0	0	30	96	19	0	0	35	63	23	0	580
10:30 AM	0	48	112	24	0	0	32	48	41	0	0	26	104	27	0	0	28	82	12	0	584
10:45 AM	0	58	138	29	0	0	22	63	44	0	0	32	130	27	0	0	31	81	22	0	677
Hourly Total	0	200	505	105	0	0	93	201	165	0	0	103	426	95	0	0	121	289	75	0	2378
11:00 AM	0	63	115	31	0	0	29	52	41	0	0	29	151	34	0	0	39	92	16	0	692
11:15 AM	0	55	108	27	0	0	36	47	57	0	0	38	154	30	0	0	40	74	29	0	695
11:30 AM	0	72	135	25	0	0	25	48	46	0	0	41	128	42	0	0	36	69	19	0	686
11:45 AM	0	59	128	28	1	0	32	70	51	0	0	46	142	29	0	0	28	61	33	0	707
Hourly Total	0	249	486	111	1	0	122	217	195	0	0	154	575	135	0	0	143	296	97	0	2780
12:00 PM	0	58	128	24	0	0	23	60	68	0	0	40	156	23	0	0	38	93	31	0	742
12:15 PM	0	56	132	26	0	0	22	66	53	0	1	41	152	36	0	0	30	76	25	0	716
12:30 PM	0	48	122	33	1	0	22	57	53	0	0	35	141	32	0	0	35	69	23	0	670
12:45 PM	0	68	155	28	0	0	32	72	54	0	0	44	162	25	0	0	31	69	30	1	770
Hourly Total	0	230	537	111	1	0	99	255	228	0	1	160	611	116	0	0	134	307	109	1	2898
1:00 PM	0	66	122	30	1	0	31	62	50	0	0	31	132	43	0	0	36	68	19	0	690
1:15 PM	0	56	122	19	0	0	39	50	52	0	0	28	146	32	0	0	29	73	25	1	671
1:30 PM	0	62	107	26	0	0	30	53	44	0	0	42	146	26	0	0	31	86	30	0	683
1:45 PM	0	44	107	19	0	0	29	56	49	0	0	38	142	34	0	0	41	59	28	0	646
Hourly Total	0	228	458	94	1	0	129	221	195	0	0	139	566	135	0	0	137	286	102	1	2690
2:00 PM	0	61	106	30	0	0	22	64	54	0	0	38	128	20	0	0	34	72	18	0	647
2:15 PM	0	50	113	30	1	0	23	51	43	0	0	46	141	40	0	0	40	74	30	0	681
2:30 PM	0	50	134	33	0	0	40	74	51	0	0	30	146	37	0	0	38	80	29	0	742
2:45 PM	0	51	121	32	0	0	27	58	56	0	0	42	139	27	0	0	29	72	31	0	685
Hourly Total	0	212	474	125	1	0	112	247	204	0	0	156	554	124	0	0	141	298	108	0	2755
3:00 PM	0	47	118	17	0	0	28	52	51	0	0	23	152	38	0	0	38	73	23	0	660
3:15 PM	0	50	121	21	0	0	15	64	48	0	0	40	122	24	0	0	35	88	21	0	649
3:30 PM	0	45	111	23	0	0	21	80	51	0	0	46	156	23	1	0	25	102	19	0	702
3:45 PM	0	53	103	26	0	0	30	74	56	0	0	27	153	15	0	0	44	104	18	0	703
Hourly Total	0	195	453	87	0	0	94	270	206	0	0	136	583	100	1	0	142	367	81	0	2714

**US 69 & 1st St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound E 1st St					Northbound US 69					Eastbound W 1st St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:00 PM	0	53	109	39	1	0	29	78	44	1	1	44	185	39	0	0	47	96	19	1	783
4:15 PM	0	37	105	26	0	0	36	92	50	0	0	55	198	36	0	0	47	97	23	1	802
4:30 PM	0	52	139	34	0	0	37	85	56	0	0	54	187	30	0	0	35	100	27	1	836
4:45 PM	0	78	125	28	0	0	30	93	59	0	0	46	177	31	0	0	49	124	28	0	868
Hourly Total	0	220	478	127	1	0	132	348	209	1	1	199	747	136	0	0	178	417	97	3	3289
5:00 PM	0	65	142	33	1	0	32	95	54	0	0	40	212	33	0	0	50	108	21	0	885
5:15 PM	0	60	106	27	1	0	29	130	64	0	0	60	181	32	0	0	45	113	20	0	867
5:30 PM	0	61	118	41	1	0	30	98	49	0	0	46	231	39	0	0	55	111	32	0	911
5:45 PM	0	52	122	34	0	0	27	99	75	0	0	61	176	25	0	0	39	78	19	0	807
Hourly Total	0	238	488	135	3	0	118	422	242	0	0	207	800	129	0	0	189	410	92	0	3470
6:00 PM	0	50	99	27	0	0	32	76	56	0	0	49	162	33	0	0	31	65	22	0	702
6:15 PM	0	55	83	21	0	0	26	75	66	0	0	40	125	23	0	0	38	83	16	0	651
6:30 PM	0	54	94	24	0	0	20	62	46	0	0	48	141	24	0	1	35	78	20	0	647
6:45 PM	0	52	95	29	0	0	27	75	43	0	0	41	120	24	0	0	27	82	14	2	629
Hourly Total	0	211	371	101	0	0	105	288	211	0	0	178	548	104	0	1	131	308	72	2	2629
7:00 PM	0	51	90	18	0	0	16	63	33	0	0	42	102	27	0	0	34	81	33	1	590
7:15 PM	0	52	89	18	0	0	10	60	46	0	0	36	95	28	1	0	29	75	15	0	553
7:30 PM	0	43	75	19	0	0	14	58	28	0	0	44	97	22	0	0	18	50	13	0	481
7:45 PM	0	29	85	26	1	0	17	60	35	0	1	32	111	22	0	0	36	56	16	0	526
Hourly Total	0	175	339	81	1	0	57	241	142	0	1	154	405	99	1	0	117	262	77	1	2150
8:00 PM	0	23	65	19	0	0	11	56	39	0	0	29	97	30	0	0	20	68	17	0	474
8:15 PM	0	31	72	17	1	0	22	45	26	1	0	33	77	18	0	0	18	73	23	1	455
8:30 PM	0	24	47	23	3	0	18	56	36	0	0	40	78	16	0	0	16	61	16	0	431
8:45 PM	0	34	66	15	0	0	11	44	22	1	0	24	88	18	0	0	13	48	9	0	392
Hourly Total	0	112	250	74	4	0	62	201	123	2	0	126	340	82	0	0	67	250	65	1	1752
9:00 PM	0	29	55	10	0	0	6	39	20	0	0	25	67	11	0	0	24	35	18	0	339
9:15 PM	0	25	41	18	0	0	3	30	21	0	0	20	65	10	0	0	8	36	8	1	285
9:30 PM	0	16	26	9	0	0	6	19	18	0	0	19	60	6	0	0	13	24	7	0	223
9:45 PM	0	19	36	9	0	0	13	26	15	0	0	12	39	15	0	0	9	41	5	0	239
Hourly Total	0	89	158	46	0	0	28	114	74	0	0	76	231	42	0	0	54	136	38	1	1086
10:00 PM	0	16	36	7	0	0	8	28	15	0	0	7	44	5	0	0	8	29	12	0	215
10:15 PM	0	15	21	4	0	0	3	18	13	0	0	13	27	7	0	0	13	14	7	0	155
10:30 PM	0	13	19	5	0	0	5	22	10	0	0	8	25	7	0	0	5	13	9	0	141
10:45 PM	0	7	20	5	0	0	1	14	7	0	0	5	25	3	0	0	6	7	7	0	107
Hourly Total	0	51	96	21	0	0	17	82	45	0	0	33	121	22	0	0	32	63	35	0	618
11:00 PM	0	10	12	1	0	0	3	7	4	0	0	5	14	6	0	0	4	15	4	0	85
11:15 PM	0	2	9	5	0	0	2	7	3	0	0	5	16	5	0	0	3	8	4	0	69
11:30 PM	0	2	10	5	0	0	1	9	3	0	0	7	17	4	0	0	3	5	3	0	69
11:45 PM	0	4	7	0	0	0	0	8	5	0	0	0	8	3	0	0	6	4	4	0	49
Hourly Total	0	18	38	11	0	0	6	31	15	0	0	17	55	18	0	0	16	32	15	0	272
DAILY TOTAL	0	3320	6716	1546	15	0	1531	4033	2716	6	3	2241	7975	1695	4	1	1961	5321	1356	11	40415
Cars	0	3284	6635	1533	15	0	1508	3932	2684	2	3	2194	7870	1657	4	1	1946	5234	1337	11	39818
Heavy Vehicles	0	36	81	13	0	0	23	101	32	4	0	47	105	38	0	0	15	87	19	0	597
Heavy Vehicle %	0.00%	1.08%	1.21%	0.84%	0.00%	0.00%	1.50%	2.50%	1.18%	66.67%	0.00%	2.10%	1.32%	2.24%	0.00%	0.00%	0.76%	1.64%	1.40%	0.00%	1.48%

**US 69 & 1st St
Ankeny IA
Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	0	63	115	31	0	0	29	52	41	0	0	29	151	34	0	0	39	92	16	0	692
11:15 AM	0	55	108	27	0	0	36	47	57	0	0	38	154	30	0	0	40	74	29	0	695
11:30 AM	0	72	135	25	0	0	25	48	46	0	0	41	128	42	0	0	36	69	19	0	686
11:45 AM	0	59	128	28	1	0	32	70	51	0	0	46	142	29	0	0	28	61	33	0	707
Peak Hour Total	0	249	486	111	1	0	122	217	195	0	0	154	575	135	0	0	143	296	97	0	2780
PHF	0.000	0.865	0.900	0.895	0.250	0.000	0.847	0.775	0.855	0.000	0.000	0.837	0.933	0.804	0.000	0.000	0.894	0.804	0.735	0.000	0.983
Heavy Vehicle %	0.00%	0.80%	1.44%	0.00%	0.00%	0.00%	0.82%	2.30%	0.51%	0.00%	0.00%	3.90%	1.91%	1.48%	0.00%	0.00%	0.70%	1.69%	2.06%	0.00%	1.55%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	78	125	28	0	0	30	93	59	0	0	46	177	31	0	0	49	124	28	0	868
5:00 PM	0	65	142	33	1	0	32	95	54	0	0	40	212	33	0	0	50	108	21	0	885
5:15 PM	0	60	106	27	1	0	29	130	64	0	0	60	181	32	0	0	45	113	20	0	867
5:30 PM	0	61	118	41	1	0	30	98	49	0	0	46	231	39	0	0	55	111	32	0	911
Peak Hour Total	0	264	491	129	3	0	121	416	226	0	0	192	801	135	0	0	199	456	101	0	3531
PHF	0.000	0.846	0.864	0.787	0.750	0.000	0.945	0.800	0.883	0.000	0.000	0.800	0.867	0.865	0.000	0.000	0.905	0.919	0.789	0.000	0.969
Heavy Vehicle %	0.00%	0.38%	0.20%	0.00%	0.00%	0.00%	0.83%	1.20%	0.44%	0.00%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	0.00%	0.48%

Total Vehicles On Leg 24234					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
11582			12652		
Southbound					
Cars	1533	6635	3284	0	15
Heavy	13	81	36	0	0
Total	1546	6716	3320	0	15



Total Vehicles on Leg 16460	Vehicles Entering Intersection 8639	Eastbound	Cars	Heavy	Total	
			11	0	11	
	1		0	1		
	1946		15	1961		
	Vehicles Exiting Intersection 7821		5234	87	5321	
		1337	19	1356		

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 8280	Total Vehicles on Leg 18616
2684	32	2716			
3932	101	4033			
1508	23	1531			
Vehicles Exiting Intersection 10336	0	0			
	2	4	6		



Cars	4	3	2194	7870	1657
Heavy	0	0	47	105	38
Total	4	3	2241	7975	1695
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
11914			9606		
Total Vehicles On Leg 21520					

**US 69 & SW 2nd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 2nd St					Northbound US 69					Eastbound SW 2nd St					TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles		
12:00 AM	0	0	14	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	27
12:15 AM	0	0	6	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	26
12:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	21
12:45 AM	0	0	6	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	20
Hourly Total	0	0	34	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	94
1:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	8
1:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
1:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	18
1:45 AM	0	0	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	12
Hourly Total	0	0	15	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	46
2:00 AM	0	0	6	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	15
2:15 AM	0	0	2	0	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	14
2:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
Hourly Total	0	0	14	0	0	0	0	0	0	0	0	1	21	0	0	0	0	0	0	0	0	36
3:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	10
3:15 AM	0	0	8	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	13
3:30 AM	0	0	6	0	0	0	0	0	0	0	0	0	8	0	0	0	1	0	0	0	0	15
3:45 AM	0	0	7	0	0	0	0	0	0	0	0	1	8	0	0	0	1	0	0	0	0	17
Hourly Total	0	0	24	0	0	0	0	0	0	0	0	1	28	0	0	0	2	0	0	0	0	55
4:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	11
4:15 AM	0	0	6	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	9
4:30 AM	0	0	11	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	20
4:45 AM	0	0	21	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	35
Hourly Total	0	0	42	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0	0	75
5:00 AM	0	0	19	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	36
5:15 AM	0	0	20	0	0	0	0	0	0	0	0	1	23	0	0	0	0	0	0	0	0	44
5:30 AM	0	0	46	0	0	0	0	0	0	0	0	0	32	0	0	0	2	0	1	0	0	81
5:45 AM	0	0	56	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	103
Hourly Total	0	0	141	0	0	0	0	0	0	0	0	1	119	0	0	0	2	0	1	0	0	264
6:00 AM	0	0	61	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	98
6:15 AM	0	0	62	0	0	0	0	0	0	0	0	0	57	0	0	0	2	0	0	0	0	121
6:30 AM	0	0	97	0	0	0	0	0	0	0	0	0	75	0	0	0	0	0	1	0	0	173
6:45 AM	0	0	105	0	0	0	0	0	0	0	0	0	90	0	0	0	1	0	1	0	0	197
Hourly Total	0	0	325	0	0	0	0	0	0	0	0	0	259	0	0	0	3	0	2	0	0	589
7:00 AM	0	0	114	0	1	0	0	0	1	0	0	1	84	0	0	0	0	0	0	0	0	200
7:15 AM	0	0	153	0	0	0	0	0	0	0	0	0	117	0	0	0	0	0	1	0	0	271
7:30 AM	0	0	147	0	0	0	0	0	0	0	0	0	132	0	0	0	0	1	1	0	0	281
7:45 AM	0	0	169	0	0	0	0	0	0	0	0	1	130	0	0	0	1	0	0	0	0	301
Hourly Total	0	0	583	0	1	0	0	0	1	0	0	2	463	0	0	0	1	1	2	0	0	1053

**US 69 & SW 2nd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 2nd St					Northbound US 69					Eastbound SW 2nd St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	2	111	2	0	0	1	0	0	0	0	0	120	0	0	0	0	0	1	0	237
8:15 AM	0	0	120	0	0	0	0	0	0	0	0	0	121	0	0	0	0	0	0	0	241
8:30 AM	0	0	142	2	0	0	0	0	0	0	0	2	126	0	0	0	1	1	2	0	276
8:45 AM	0	0	143	0	0	0	0	0	0	0	0	1	147	0	0	0	0	0	3	0	294
Hourly Total	0	2	516	4	0	0	1	0	0	0	0	3	514	0	0	0	1	1	6	0	1048
9:00 AM	0	0	118	0	0	0	0	0	0	1	0	0	152	0	1	0	0	0	1	0	271
9:15 AM	0	1	150	4	0	0	1	0	0	1	0	0	147	0	0	0	2	0	1	0	306
9:30 AM	0	0	123	1	0	0	1	0	0	1	0	0	158	0	0	0	0	0	0	0	283
9:45 AM	0	1	129	0	0	0	0	0	0	0	0	2	176	0	0	0	1	0	1	0	310
Hourly Total	0	2	520	5	0	0	2	0	0	3	0	2	633	0	1	0	3	0	3	0	1170
10:00 AM	0	2	163	0	0	0	0	0	1	0	0	0	128	0	0	0	0	0	1	0	295
10:15 AM	0	1	164	0	0	0	0	0	0	0	0	0	142	0	0	0	0	0	1	0	308
10:30 AM	0	0	162	0	0	0	1	0	1	0	0	0	153	2	0	0	1	0	0	1	320
10:45 AM	0	0	172	2	0	0	0	0	0	0	0	2	195	0	0	0	1	0	2	0	374
Hourly Total	0	3	661	2	0	0	1	0	2	0	0	2	618	2	0	0	2	0	4	1	1297
11:00 AM	2	0	165	4	0	0	1	0	0	0	0	4	207	1	0	0	0	0	0	0	384
11:15 AM	0	0	168	4	0	0	0	0	0	0	0	4	215	0	0	0	0	0	1	0	392
11:30 AM	0	0	179	3	0	0	0	0	1	0	0	3	214	0	0	0	0	0	2	0	402
11:45 AM	0	1	189	4	0	0	2	0	0	0	0	4	205	0	0	0	1	0	0	0	406
Hourly Total	2	1	701	15	0	0	3	0	1	0	0	15	841	1	0	0	1	0	3	0	1584
12:00 PM	1	0	177	7	0	0	0	0	0	0	0	2	218	0	0	0	0	0	1	0	406
12:15 PM	0	0	177	0	0	0	0	0	0	0	0	0	217	0	0	0	0	0	2	0	396
12:30 PM	0	0	162	5	1	0	0	0	1	1	0	4	217	0	0	0	2	0	2	0	393
12:45 PM	0	0	214	3	0	0	1	0	0	1	0	2	223	1	0	0	0	0	0	0	444
Hourly Total	1	0	730	15	1	0	1	0	1	2	0	8	875	1	0	0	2	0	5	0	1639
1:00 PM	0	0	170	3	0	0	0	0	0	0	0	4	209	0	0	0	0	0	0	0	386
1:15 PM	0	0	176	3	0	0	0	0	0	0	0	2	200	0	0	0	0	0	4	0	385
1:30 PM	2	0	171	2	0	0	0	0	0	0	0	1	205	1	0	0	3	0	3	0	388
1:45 PM	0	0	158	1	0	0	0	0	0	0	0	2	209	0	0	0	0	0	0	0	370
Hourly Total	2	0	675	9	0	0	0	0	0	0	0	9	823	1	0	0	3	0	7	0	1529
2:00 PM	0	0	147	2	0	0	0	0	0	0	0	1	187	0	0	0	0	0	0	0	337
2:15 PM	1	0	163	1	0	0	0	0	1	0	0	0	220	0	0	0	1	0	0	0	387
2:30 PM	0	0	195	3	0	0	0	0	0	0	0	2	205	0	0	0	0	0	2	0	407
2:45 PM	0	0	176	2	0	0	0	0	0	0	0	2	207	0	0	0	0	0	1	0	388
Hourly Total	1	0	681	8	0	0	0	0	1	0	0	5	819	0	0	0	1	0	3	0	1519
3:00 PM	0	0	167	2	0	0	0	0	0	0	0	2	206	0	0	0	0	0	1	0	378
3:15 PM	0	0	157	1	0	0	1	0	0	0	0	3	194	1	0	0	0	0	0	0	357
3:30 PM	0	0	157	1	0	0	0	0	0	0	0	0	216	0	0	0	0	0	0	0	374
3:45 PM	0	0	152	0	0	0	0	0	0	0	0	3	208	0	0	0	0	0	3	0	366
Hourly Total	0	0	633	4	0	0	1	0	0	0	0	8	824	1	0	0	0	0	4	0	1475

**US 69 & SW 2nd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 2nd St					Northbound US 69					Eastbound SW 2nd St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:00 PM	0	0	155	2	0	0	0	0	1	0	0	1	261	0	0	0	0	0	1	2	421
4:15 PM	0	0	161	1	0	0	0	0	0	0	0	2	275	0	0	0	0	0	1	1	440
4:30 PM	1	0	193	4	0	0	0	0	0	0	0	6	263	0	0	0	0	0	0	0	467
4:45 PM	0	0	182	3	0	0	0	0	0	0	0	0	267	0	0	0	0	0	2	0	454
Hourly Total	1	0	691	10	0	0	0	0	1	0	0	9	1066	0	0	0	0	0	4	3	1782
5:00 PM	1	0	193	1	0	0	0	0	0	0	0	2	276	0	0	0	1	0	1	1	475
5:15 PM	0	0	156	0	0	0	0	0	0	0	0	0	279	0	0	0	1	0	0	0	436
5:30 PM	1	0	183	3	0	0	0	0	0	0	0	4	297	0	0	0	0	0	2	0	490
5:45 PM	0	0	159	3	0	0	0	0	0	0	0	2	252	0	0	0	0	0	0	0	416
Hourly Total	2	0	691	7	0	0	0	0	0	0	0	8	1104	0	0	0	2	0	3	1	1817
6:00 PM	0	0	157	2	0	0	0	0	0	0	0	5	232	0	0	0	1	0	2	0	399
6:15 PM	0	0	124	1	0	0	0	0	0	0	0	5	197	0	0	0	0	0	1	0	328
6:30 PM	0	0	132	3	0	0	0	0	0	0	0	0	200	0	0	0	1	0	2	0	338
6:45 PM	0	0	132	1	0	0	0	0	0	0	0	0	183	0	0	0	0	0	0	2	316
Hourly Total	0	0	545	7	0	0	0	0	0	0	0	10	812	0	0	0	2	0	5	2	1381
7:00 PM	0	0	141	1	0	0	0	0	0	0	0	2	164	0	0	0	1	0	1	1	310
7:15 PM	0	0	112	0	0	0	0	0	0	0	0	2	165	0	0	0	0	0	0	0	279
7:30 PM	0	0	100	1	0	0	0	0	0	0	0	2	156	0	0	0	0	0	1	0	260
7:45 PM	0	0	121	1	0	0	0	0	0	0	0	2	151	0	0	0	1	0	1	0	277
Hourly Total	0	0	474	3	0	0	0	0	0	0	0	8	636	0	0	0	2	0	3	1	1126
8:00 PM	0	0	93	4	0	0	0	0	0	1	0	0	156	0	0	0	0	0	2	0	255
8:15 PM	0	0	112	3	0	0	0	0	0	1	0	0	126	0	0	0	0	0	0	1	241
8:30 PM	0	0	78	2	0	0	0	0	0	0	0	1	142	0	0	0	0	0	2	0	225
8:45 PM	0	0	85	3	0	0	0	0	0	2	0	3	122	0	0	0	0	0	1	0	214
Hourly Total	0	0	368	12	0	0	0	0	0	4	0	4	546	0	0	0	0	0	5	1	935
9:00 PM	0	0	78	0	0	0	0	0	0	0	0	0	106	0	0	0	0	0	0	0	184
9:15 PM	0	0	53	1	0	0	0	0	0	0	0	0	92	0	0	0	0	0	0	0	146
9:30 PM	0	0	39	0	0	0	0	0	0	0	0	1	85	0	0	0	0	0	2	0	127
9:45 PM	0	0	55	0	0	0	0	0	0	0	0	1	68	0	0	0	0	0	1	0	125
Hourly Total	0	0	225	1	0	0	0	0	0	0	0	2	351	0	0	0	0	0	3	0	582
10:00 PM	0	0	56	0	0	0	0	0	0	0	0	0	55	0	0	0	0	0	0	0	111
10:15 PM	0	0	31	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	81
10:30 PM	0	0	32	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	70
10:45 PM	0	0	29	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0	62
Hourly Total	0	0	148	0	0	0	0	0	0	0	0	0	176	0	0	0	0	0	0	0	324
11:00 PM	0	0	19	0	0	0	0	0	0	0	0	1	26	0	0	0	0	0	0	0	46
11:15 PM	0	0	13	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	38
11:30 PM	0	0	13	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	32
11:45 PM	0	0	12	0	0	0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	23
Hourly Total	0	0	57	0	0	0	0	0	0	0	0	2	80	0	0	0	0	0	0	0	139
DAILY TOTAL	9	8	9494	102	2	0	9	0	7	9	0	100	11732	6	1	0	27	2	63	9	21559
Cars	9	8	9368	102	1	0	8	0	6	8	0	99	11560	6	1	0	27	1	61	9	21255
Heavy Vehicles	0	0	126	0	1	0	1	0	1	1	0	1	172	0	0	0	0	1	2	0	304
Heavy Vehicle %	0.00%	0.00%	1.33%	0.00%	50.00%	0.00%	11.11%	0.00%	14.29%	11.11%	0.00%	1.00%	1.47%	0.00%	0.00%	0.00%	0.00%	50.00%	3.17%	0.00%	1.41%

**US 69 & SW 2nd St
Ankeny IA
Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	2	0	165	4	0	0	1	0	0	0	0	4	207	1	0	0	0	0	0	0	0
11:15 AM	0	0	168	4	0	0	0	0	0	0	0	4	215	0	0	0	0	0	1	0	0
11:30 AM	0	0	179	3	0	0	0	0	1	0	0	3	214	0	0	0	0	0	2	0	0
11:45 AM	0	1	189	4	0	0	2	0	0	0	0	4	205	0	0	0	1	0	0	0	0
Peak Hour Total	2	1	701	15	0	0	3	0	1	0	0	15	841	1	0	0	1	0	3	0	1584
PHF	0.250	0.250	0.927	0.938	0.000	0.000	0.375	0.000	0.250	0.000	0.000	0.938	0.978	0.250	0.000	0.000	0.250	0.000	0.375	0.000	0.975
Heavy Vehicle %	0.00%	0.00%	1.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.67%	2.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.70%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	0	182	3	0	0	0	0	0	0	0	0	267	0	0	0	0	0	2	0	0
5:00 PM	1	0	193	1	0	0	0	0	0	0	0	2	276	0	0	0	1	0	1	1	0
5:15 PM	0	0	156	0	0	0	0	0	0	0	0	0	279	0	0	0	1	0	0	0	0
5:30 PM	1	0	183	3	0	0	0	0	0	0	0	4	297	0	0	0	0	0	2	0	0
Peak Hour Total	2	0	714	7	0	0	0	0	0	0	0	6	1119	0	0	0	2	0	5	1	1855
PHF	0.500	0.000	0.925	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.942	0.000	0.000	0.000	0.500	0.000	0.625	0.250	0.946
Heavy Vehicle %	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.22%

Total Vehicles On Leg 21388					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
9613			11775		
Southbound					
Cars	102	9368	8	9	1
Heavy	0	126	0	0	1
Total	102	9494	8	9	2

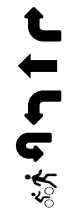


Total Vehicles on Leg 294	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
			9	0	9
	0		0	0	
	Vehicles Exiting Intersection		27	0	27
	1		1	2	
61	2	63			



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 32
6	1	7		16	
0	0	0			
8	1	9			
0	0	0		Vehicles Exiting Intersection	
8	1	9	16		



Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
11838			9566		
Total Vehicles On Leg 21404					



**US 69 & 3rd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 3rd St					Northbound US 69					Eastbound SW 3rd St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	0	15	2	0	0	1	0	0	0	0	3	11	0	0	0	0	0	1	0	33
12:15 AM	1	0	5	0	0	0	0	0	0	0	0	1	18	0	0	0	1	1	2	0	29
12:30 AM	0	0	7	1	0	0	0	0	0	0	0	2	13	0	0	0	0	0	0	0	23
12:45 AM	0	0	5	1	0	0	0	0	0	0	0	1	14	0	0	0	0	0	2	0	23
Hourly Total	1	0	32	4	0	0	1	0	0	0	0	7	56	0	0	0	1	1	5	0	108
1:00 AM	0	1	2	0	0	0	0	0	1	0	0	2	4	0	0	0	0	0	0	0	10
1:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:30 AM	0	0	3	1	0	0	0	0	0	0	0	2	12	0	0	0	1	0	0	0	19
1:45 AM	0	1	4	1	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	0	12
Hourly Total	0	2	11	2	0	0	1	0	1	0	0	4	28	0	0	0	2	0	0	0	51
2:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	14
2:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	14
2:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
Hourly Total	0	1	12	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	35
3:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
3:15 AM	0	0	8	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	1	0	14
3:30 AM	0	0	6	0	0	0	0	1	0	0	0	0	7	0	0	0	0	1	1	0	16
3:45 AM	0	0	6	1	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	15
Hourly Total	0	0	23	1	0	0	0	1	0	0	0	0	27	0	0	0	0	0	1	2	55
4:00 AM	0	0	4	0	0	0	0	1	0	0	0	0	6	0	0	0	1	0	0	0	12
4:15 AM	0	0	6	0	0	0	1	0	0	0	0	1	2	0	0	0	1	0	0	0	11
4:30 AM	0	0	11	0	0	0	0	0	0	0	0	2	9	0	0	0	0	0	2	0	24
4:45 AM	0	0	20	1	0	0	2	0	2	0	0	1	13	1	0	0	0	0	0	0	40
Hourly Total	0	0	41	1	0	0	3	1	2	0	0	4	30	1	0	0	2	0	2	0	87
5:00 AM	0	1	15	2	0	0	0	0	0	0	0	3	16	0	0	0	0	1	3	0	41
5:15 AM	0	1	18	0	0	0	0	0	1	0	0	1	22	1	0	0	2	2	1	1	49
5:30 AM	0	0	44	2	0	0	0	1	2	0	0	2	30	1	0	0	0	0	4	1	86
5:45 AM	0	0	52	3	0	0	1	2	0	0	0	3	43	0	0	0	2	0	7	0	113
Hourly Total	0	2	129	7	0	0	1	3	3	0	0	9	111	2	0	0	4	3	15	2	289
6:00 AM	0	2	58	3	0	0	2	1	2	0	0	4	34	0	0	0	0	0	2	0	108
6:15 AM	0	0	61	2	2	0	2	3	2	0	0	7	53	4	0	0	2	2	10	0	148
6:30 AM	0	0	93	2	0	0	1	1	1	0	0	7	73	1	0	0	2	4	9	0	194
6:45 AM	0	3	94	10	0	0	0	2	5	0	0	7	73	0	0	0	6	0	7	0	207
Hourly Total	0	5	306	17	2	0	5	7	10	0	0	25	233	5	0	0	10	6	28	0	657
7:00 AM	0	2	103	9	0	0	7	7	5	0	0	15	76	3	0	0	4	1	8	0	240
7:15 AM	0	1	141	7	0	0	3	4	1	0	0	12	108	0	0	0	4	4	12	0	297
7:30 AM	0	3	135	8	0	0	4	1	1	0	0	13	121	4	0	0	9	3	17	0	319
7:45 AM	0	2	149	7	1	0	7	5	5	0	0	13	118	7	2	0	9	7	20	0	349
Hourly Total	0	8	528	31	1	0	21	17	12	0	0	53	423	14	2	0	26	15	57	0	1205

**US 69 & 3rd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 3rd St					Northbound US 69					Eastbound SW 3rd St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	2	108	11	0	0	6	7	4	0	0	14	109	6	0	0	11	6	12	0	296
8:15 AM	0	4	109	9	0	0	6	4	5	0	0	12	106	5	0	0	6	7	15	0	288
8:30 AM	0	1	135	6	0	0	5	4	3	0	0	11	114	4	0	0	10	4	12	0	309
8:45 AM	0	1	138	8	0	0	6	10	6	0	0	22	133	4	2	0	12	8	8	0	356
Hourly Total	0	8	490	34	0	0	23	25	18	0	0	59	462	19	2	0	39	25	47	0	1249
9:00 AM	0	8	97	11	0	0	4	7	8	1	0	15	137	3	0	0	5	3	6	0	304
9:15 AM	0	5	137	10	2	0	6	6	8	1	0	18	131	2	3	0	5	3	22	0	353
9:30 AM	0	4	114	7	1	0	6	3	9	0	0	16	138	1	0	0	10	3	6	0	317
9:45 AM	0	5	110	14	0	0	7	6	9	0	0	16	165	5	0	0	5	11	21	0	374
Hourly Total	0	22	458	42	3	0	23	22	34	2	0	65	571	11	3	0	25	20	55	0	1348
10:00 AM	0	7	151	8	0	0	5	5	3	0	0	17	117	4	0	0	7	2	14	0	340
10:15 AM	0	4	144	11	0	0	8	5	14	0	0	19	121	3	0	0	9	8	20	0	366
10:30 AM	0	3	159	6	0	0	2	5	4	0	0	18	144	6	0	0	5	6	17	1	375
10:45 AM	0	6	151	12	0	0	3	4	11	0	0	22	173	6	1	0	7	10	22	0	427
Hourly Total	0	20	605	37	0	0	18	19	32	0	0	76	555	19	1	0	28	26	73	1	1508
11:00 AM	0	8	149	11	0	0	12	12	9	0	0	22	182	6	0	0	19	3	31	0	464
11:15 AM	0	7	141	16	0	0	6	7	12	0	0	25	195	9	2	0	8	11	21	0	458
11:30 AM	0	7	161	11	0	0	8	9	9	0	0	25	197	5	1	0	11	7	21	0	471
11:45 AM	0	5	171	12	0	0	7	2	8	0	0	22	183	7	1	0	11	11	23	0	462
Hourly Total	0	27	622	50	0	0	33	30	38	0	0	94	757	27	4	0	49	32	96	0	1855
12:00 PM	0	2	168	8	0	0	6	12	10	0	0	25	189	6	1	0	13	8	31	0	478
12:15 PM	0	4	155	17	0	0	6	8	7	0	0	26	204	6	0	0	14	7	28	0	482
12:30 PM	0	5	155	10	0	0	8	9	3	0	0	28	185	10	0	0	8	5	24	0	450
12:45 PM	0	9	199	9	0	0	10	6	9	0	0	27	202	11	0	0	11	7	19	0	519
Hourly Total	0	20	677	44	0	0	30	35	29	0	0	106	780	33	1	0	46	27	102	0	1929
1:00 PM	0	4	155	10	0	0	8	4	14	0	0	27	183	11	0	0	12	4	22	0	454
1:15 PM	0	6	159	15	0	0	4	6	7	0	0	20	192	5	1	0	6	4	15	0	439
1:30 PM	0	9	156	7	0	0	5	5	3	0	0	19	194	5	0	0	8	8	28	0	447
1:45 PM	0	5	152	8	0	0	7	8	9	0	0	26	181	8	0	0	12	4	18	0	438
Hourly Total	0	24	622	40	0	0	24	23	33	0	0	92	750	29	1	0	38	20	83	0	1778
2:00 PM	0	6	136	6	0	0	1	5	1	0	0	24	182	6	0	0	7	4	19	0	397
2:15 PM	0	6	142	13	0	0	3	11	5	0	0	21	209	9	0	0	3	6	19	0	447
2:30 PM	0	5	177	14	0	0	3	4	11	0	0	17	190	7	1	0	7	8	14	0	457
2:45 PM	0	5	163	8	1	0	4	3	8	0	0	24	193	11	2	0	8	13	16	0	456
Hourly Total	0	22	618	41	1	0	11	23	25	0	0	86	774	33	3	0	25	31	68	0	1757
3:00 PM	0	4	152	10	1	0	2	3	6	0	0	26	188	3	0	0	9	5	21	0	429
3:15 PM	0	2	141	14	0	0	2	4	7	0	0	21	183	10	1	0	10	6	19	0	419
3:30 PM	0	3	140	11	0	0	10	9	7	0	0	29	201	6	0	0	7	8	18	0	449
3:45 PM	0	3	142	11	0	0	6	8	9	0	0	36	198	6	0	0	10	12	26	0	467
Hourly Total	0	12	575	46	1	0	20	24	29	0	0	112	770	25	1	0	36	31	84	0	1764

**US 69 & 3rd St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW 3rd St					Northbound US 69					Eastbound SW 3rd St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:00 PM	0	7	137	11	0	0	2	13	9	0	0	27	234	9	0	0	13	6	18	1	486
4:15 PM	0	4	142	11	0	0	5	7	11	0	0	23	250	11	0	0	13	5	21	1	503
4:30 PM	0	8	171	16	0	0	10	12	15	0	0	28	250	10	0	0	10	8	21	1	559
4:45 PM	0	5	165	15	0	0	9	11	8	0	0	29	259	10	0	0	12	8	22	0	553
Hourly Total	0	24	615	53	0	0	26	43	43	0	0	107	993	40	0	0	48	27	82	3	2101
5:00 PM	0	5	174	14	0	0	5	16	9	0	0	33	256	10	0	0	12	10	24	1	568
5:15 PM	0	6	137	13	1	0	8	11	6	0	0	30	281	11	0	0	5	7	26	0	541
5:30 PM	0	5	162	18	0	0	6	6	5	0	0	42	280	13	0	0	13	4	19	0	573
5:45 PM	0	4	141	13	2	0	5	3	5	0	0	32	237	9	0	0	16	6	16	0	487
Hourly Total	0	20	614	58	3	0	24	36	25	0	0	137	1054	43	0	0	46	27	85	1	2169
6:00 PM	0	2	151	8	0	0	5	10	3	0	0	25	219	13	0	0	6	11	24	0	477
6:15 PM	0	3	110	13	1	0	3	8	4	0	0	24	188	11	1	0	5	6	12	0	387
6:30 PM	0	2	116	14	1	0	1	13	4	0	0	23	188	4	0	0	7	1	20	0	393
6:45 PM	0	7	114	9	0	0	3	5	1	0	0	19	173	8	0	0	8	4	10	2	361
Hourly Total	0	14	491	44	2	0	12	36	12	0	0	91	768	36	1	0	26	22	66	2	1618
7:00 PM	0	4	135	6	0	0	4	3	3	0	0	22	159	5	0	0	5	6	15	1	367
7:15 PM	0	3	102	7	0	0	1	8	2	0	0	20	158	4	2	0	3	5	11	0	324
7:30 PM	0	2	96	4	1	0	3	0	5	0	0	24	150	3	0	0	3	7	12	0	309
7:45 PM	0	4	108	10	0	0	2	0	2	0	0	19	146	6	0	0	4	5	9	0	315
Hourly Total	0	13	441	27	1	0	10	11	12	0	0	85	613	18	2	0	15	23	47	1	1315
8:00 PM	0	1	85	6	0	0	3	5	3	1	0	13	140	5	1	0	9	6	11	0	287
8:15 PM	0	2	112	3	1	0	1	4	4	0	0	10	118	3	7	0	4	1	19	0	281
8:30 PM	0	1	72	7	0	0	2	3	1	0	0	10	128	2	0	0	9	5	7	0	247
8:45 PM	0	0	74	7	0	0	1	6	2	0	0	10	110	2	1	0	8	1	7	0	228
Hourly Total	0	4	343	23	1	0	7	18	10	1	0	43	496	12	9	0	30	13	44	0	1043
9:00 PM	0	1	73	5	0	0	2	1	0	0	0	7	93	3	0	0	7	3	9	0	204
9:15 PM	0	1	48	5	0	0	0	2	2	0	0	8	83	0	0	0	5	1	10	0	165
9:30 PM	0	0	40	4	0	0	0	0	2	0	0	12	78	3	0	0	3	2	8	0	152
9:45 PM	0	1	53	1	0	0	0	0	1	0	0	9	64	2	0	0	2	1	5	0	139
Hourly Total	0	3	214	15	0	0	2	3	5	0	0	36	318	8	0	0	17	7	32	0	660
10:00 PM	0	0	51	6	0	0	2	2	0	0	0	8	52	1	0	0	4	4	7	0	137
10:15 PM	0	2	29	1	0	0	1	1	3	0	0	3	46	1	0	0	1	0	3	0	91
10:30 PM	0	2	28	2	0	0	0	0	1	0	0	4	35	2	0	0	0	1	5	0	80
10:45 PM	0	0	29	1	0	0	1	0	0	0	0	3	30	1	0	0	3	1	3	0	72
Hourly Total	0	4	137	10	0	0	4	3	4	0	0	18	163	5	0	0	8	6	18	0	380
11:00 PM	0	2	16	1	0	0	0	0	0	0	0	2	25	2	0	0	2	1	2	0	53
11:15 PM	0	1	11	1	0	0	0	0	1	0	0	3	21	1	0	0	2	0	1	0	42
11:30 PM	0	0	12	0	0	0	0	0	0	0	0	3	28	3	0	0	0	0	4	0	50
11:45 PM	0	1	11	0	0	0	2	1	0	0	0	1	10	0	0	0	0	3	2	0	31
Hourly Total	0	4	50	2	0	0	2	1	1	0	0	9	84	6	0	0	4	4	9	0	176
DAILY TOTAL	1	259	8654	629	15	0	301	381	378	3	0	1318	10838	386	30	0	525	367	1100	10	25137
Cars	1	259	8542	623	7	0	300	381	378	3	0	1309	10679	385	18	0	508	367	1083	10	24815
Heavy Vehicles	0	0	112	6	8	0	1	0	0	0	0	9	159	1	12	0	17	0	17	0	322
Heavy Vehicle %	0.00%	0.00%	1.29%	0.95%	53.33%	0.00%	0.33%	0.00%	0.00%	0.00%	0.00%	0.68%	1.47%	0.26%	40.00%	0.00%	3.24%	0.00%	1.55%	0.00%	1.28%

**US 69 & 3rd St
Ankeny IA
Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	0	8	149	11	0	0	12	12	9	0	0	22	182	6	0	0	19	3	31	0	464
11:15 AM	0	7	141	16	0	0	6	7	12	0	0	25	195	9	2	0	8	11	21	0	458
11:30 AM	0	7	161	11	0	0	8	9	9	0	0	25	197	5	1	0	11	7	21	0	471
11:45 AM	0	5	171	12	0	0	7	2	8	0	0	22	183	7	1	0	11	11	23	0	462
Peak Hour Total	0	27	622	50	0	0	33	30	38	0	0	94	757	27	4	0	49	32	96	0	1855
PHF	0.000	0.844	0.909	0.781	0.000	0.000	0.688	0.625	0.792	0.000	0.000	0.940	0.961	0.750	0.500	0.000	0.645	0.727	0.774	0.000	0.985
Heavy Vehicle %	0.00%	0.00%	0.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.06%	1.72%	0.00%	0.00%	0.00%	4.08%	0.00%	1.04%	0.00%	1.24%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	5	165	15	0	0	9	11	8	0	0	29	259	10	0	0	12	8	22	0	553
5:00 PM	0	5	174	14	0	0	5	16	9	0	0	33	256	10	0	0	12	10	24	1	568
5:15 PM	0	6	137	13	1	0	8	11	6	0	0	30	281	11	0	0	5	7	26	0	541
5:30 PM	0	5	162	18	0	0	6	6	5	0	0	42	280	13	0	0	13	4	19	0	573
Peak Hour Total	0	21	638	60	1	0	28	44	28	0	0	134	1076	44	0	0	42	29	91	1	2235
PHF	0.000	0.875	0.917	0.833	0.250	0.000	0.778	0.688	0.778	0.000	0.000	0.798	0.957	0.846	0.000	0.000	0.808	0.725	0.875	0.250	0.975
Heavy Vehicle %	0.00%	0.00%	0.47%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	2.20%	0.00%	0.31%

Total Vehicles On Leg 21285					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
9543			11742		
Southbound					
Cars	623	8542	259	1	7
Heavy	6	112	0	0	8
Total	629	8654	259	1	15



Total Vehicles on Leg 4320	Vehicles Entering Intersection 1992	Eastbound	Cars	Heavy	Total	
			10	0	10	
	0		0	0		
	508		17	525		
	367		0	367		
Vehicles Exiting Intersection 2328	1083	17	1100			

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 1060	Total Vehicles on Leg 2072
378	0	378			
381	0	381			
300	1	301			
0	0	0			
Vehicles Exiting Intersection 1012	3	0	3		



Cars	18	0	1309	10679	385
Heavy	12	0	9	159	1
Total	30	0	1318	10838	386
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
12542			10055		
Total Vehicles On Leg 22597					



**US 69 & SE Peterson Dr
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SE Peterson Dr					Northbound US 69					Eastbound n/a					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	1	16	0	1	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	31
12:15 AM	0	0	10	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	28
12:30 AM	0	0	7	0	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	19
12:45 AM	0	0	8	0	0	0	0	0	1	0	0	0	12	0	0	0	0	0	0	0	21
Hourly Total	0	1	41	0	1	0	1	0	1	0	0	0	54	1	0	0	0	0	0	0	99
1:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	9
1:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	16
1:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	11
Hourly Total	0	0	14	0	0	0	0	0	0	0	0	0	31	1	0	0	0	0	0	0	46
2:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	13
2:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	14
2:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
Hourly Total	0	0	12	0	0	0	0	0	0	0	0	0	20	1	0	0	0	0	0	0	33
3:00 AM	0	0	3	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	11
3:15 AM	0	0	9	0	0	0	1	0	1	0	0	0	4	0	0	0	0	0	0	0	15
3:30 AM	0	0	7	0	0	0	1	0	0	0	0	0	7	1	0	0	0	0	0	0	16
3:45 AM	0	0	6	0	0	0	0	0	2	0	0	0	9	0	0	0	0	0	0	0	17
Hourly Total	0	0	25	0	0	0	3	0	3	0	0	0	27	1	0	0	0	0	0	0	59
4:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	9
4:15 AM	0	0	7	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	11
4:30 AM	0	0	13	0	0	0	2	0	0	0	0	0	10	0	0	0	0	0	0	0	25
4:45 AM	0	0	21	0	0	0	1	0	0	0	0	0	14	0	0	0	0	0	0	0	36
Hourly Total	0	0	44	0	0	0	3	0	0	0	0	0	34	0	0	0	0	0	0	0	81
5:00 AM	0	0	18	0	0	0	1	0	0	0	0	0	16	0	0	0	0	0	0	0	35
5:15 AM	0	2	18	0	0	0	1	0	4	0	0	0	22	0	0	0	0	0	0	0	47
5:30 AM	0	0	42	0	0	0	2	0	0	0	0	0	30	0	0	0	0	0	0	0	74
5:45 AM	0	0	55	0	0	0	7	0	1	0	0	0	46	1	0	0	0	0	0	0	110
Hourly Total	0	2	133	0	0	0	11	0	5	0	0	0	114	1	0	0	0	0	0	0	266
6:00 AM	0	0	54	0	0	0	2	0	1	0	0	0	36	0	0	0	0	0	0	0	93
6:15 AM	0	2	67	0	0	0	7	0	9	0	0	0	56	1	0	0	0	0	0	0	142
6:30 AM	0	1	95	0	0	0	7	0	5	0	0	0	71	0	0	0	0	0	0	0	179
6:45 AM	0	5	89	0	0	0	7	0	2	0	0	0	71	1	0	0	0	0	0	0	175
Hourly Total	0	8	305	0	0	0	23	0	17	0	0	0	234	2	0	0	0	0	0	0	589
7:00 AM	0	3	111	0	0	0	8	0	5	0	0	0	91	1	0	0	0	0	0	0	219
7:15 AM	0	3	155	0	0	0	8	0	8	0	0	0	118	1	0	0	0	0	0	0	293
7:30 AM	0	3	140	0	0	0	1	0	6	0	0	0	125	1	0	0	0	0	0	0	276
7:45 AM	0	2	174	0	0	0	1	0	11	0	0	0	144	6	0	0	0	0	0	0	338
Hourly Total	0	11	580	0	0	0	18	0	30	0	0	0	478	9	0	0	0	0	0	0	1126

**US 69 & SE Peterson Dr
Ankeny IA**

**Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	0	6	161	0	0	0	1	0	13	0	0	0	214	3	0	0	0	0	0	0	398
11:15 AM	1	6	160	0	0	0	4	0	10	0	0	0	198	4	0	0	0	0	0	0	383
11:30 AM	0	5	166	0	0	0	6	0	8	0	0	0	214	6	0	0	0	0	0	0	405
11:45 AM	0	6	184	0	0	0	7	0	11	0	0	0	192	3	0	0	0	0	0	0	403
Peak Hour Total	1	23	671	0	0	0	18	0	42	0	0	0	818	16	0	0	0	0	0	0	1589
PHF	0.250	0.958	0.912	0.000	0.000	0.000	0.643	0.000	0.808	0.000	0.000	0.000	0.956	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.981
Heavy Vehicle %	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.70%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	12	190	0	0	0	1	0	5	0	0	0	288	6	0	0	0	0	0	0	502
5:00 PM	0	10	182	0	0	0	0	0	13	0	0	0	282	7	0	0	0	0	0	0	494
5:15 PM	0	8	152	0	0	0	5	0	11	0	0	0	292	11	0	0	0	0	0	0	479
5:30 PM	0	10	171	0	0	0	4	0	9	0	0	0	317	9	0	0	0	0	0	0	520
Peak Hour Total	0	40	695	0	0	0	10	0	38	0	0	0	1179	33	0	0	0	0	0	0	1995
PHF	0.000	0.833	0.914	0.000	0.000	0.000	0.500	0.000	0.731	0.000	0.000	0.000	0.930	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.959
Heavy Vehicle %	0.00%	0.00%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%

Total Vehicles On Leg 21860					
Vehicles Entering Intersection 9588			Vehicles Exiting Intersection 12272		
Southbound					
Cars	0	9111	329	2	0
Heavy	0	144	2	0	2
Total	0	9255	331	2	2



Total Vehicles on Leg 0	Vehicles Entering Intersection 0	Eastbound	Cars	Heavy	Total	
			0	0	0	
	0		0	0		
	Vehicles Exiting Intersection 0		Cars	Heavy	Total	
	0		0	0		

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 660	Total Vehicles on Leg 1266
441	4	445			
0	0	0			
214	1	215			
0	0	0			
6	1	7	Vehicles Exiting Intersection 606		



Cars	0	0	0	11661	269
Heavy	0	0	0	164	6
Total	0	0	0	11825	275
Northbound					
Vehicles Entering Intersection 12100			Vehicles Exiting Intersection 9470		
Total Vehicles On Leg 21570					

**US 69 & Lawn Dr
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound Lawn Dr					Northbound US 69					Eastbound Lawn Dr					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	0	15	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	29
12:15 AM	0	0	10	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	1	0	29
12:30 AM	0	0	6	0	0	0	0	0	0	0	0	1	12	0	0	0	0	0	0	0	19
12:45 AM	0	0	8	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	20
Hourly Total	0	0	39	0	0	0	0	0	0	0	0	1	56	0	0	0	0	0	1	0	97
1:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	16
1:45 AM	0	0	4	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	12
Hourly Total	0	0	14	0	0	0	0	0	0	0	0	1	33	0	0	0	0	0	0	0	48
2:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	13
2:15 AM	0	0	2	0	0	0	0	0	0	0	0	1	12	0	0	0	0	0	0	0	15
2:30 AM	0	0	4	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	7
2:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
Hourly Total	0	0	13	0	0	0	0	0	0	0	0	2	22	0	0	0	0	0	1	0	38
3:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	10
3:15 AM	0	0	10	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	14
3:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	17
3:45 AM	0	0	6	0	0	0	0	0	0	0	0	0	8	0	0	0	1	0	0	0	15
Hourly Total	0	0	28	0	0	0	0	0	0	0	0	0	27	0	0	0	1	0	0	0	56
4:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	11
4:15 AM	0	0	7	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	10
4:30 AM	0	0	14	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	1	0	25
4:45 AM	0	0	20	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	3	0	39
Hourly Total	0	0	44	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	5	0	85
5:00 AM	0	0	20	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	3	0	39
5:15 AM	0	0	16	0	0	0	0	0	0	0	0	1	24	0	0	0	0	0	0	0	41
5:30 AM	0	0	47	0	0	0	0	0	0	0	0	1	31	0	0	0	0	0	0	0	79
5:45 AM	0	0	65	0	0	0	0	0	0	0	0	2	49	0	0	0	1	0	2	0	119
Hourly Total	0	0	148	0	0	0	0	0	0	0	0	4	120	0	0	0	1	0	5	0	278
6:00 AM	0	0	55	1	0	0	0	0	0	0	0	5	33	0	0	0	1	0	2	0	97
6:15 AM	0	0	77	0	0	0	0	0	0	0	0	3	59	0	0	0	0	0	6	0	145
6:30 AM	0	0	102	1	0	0	0	0	0	0	0	1	69	0	0	0	0	0	4	0	177
6:45 AM	0	0	100	0	0	0	0	0	0	0	0	5	73	0	0	0	1	0	6	0	185
Hourly Total	0	0	334	2	0	0	0	0	0	0	0	14	234	0	0	0	2	0	18	0	604
7:00 AM	0	0	117	0	0	0	0	0	0	0	0	6	92	0	0	0	0	0	2	0	217
7:15 AM	0	0	162	0	0	0	0	0	0	0	0	3	114	0	0	0	0	0	4	0	283
7:30 AM	0	0	138	0	0	0	0	0	0	0	0	2	126	0	0	0	0	0	5	0	271
7:45 AM	0	0	177	0	0	0	0	0	0	1	0	6	149	0	0	0	0	0	6	0	338
Hourly Total	0	0	594	0	0	0	0	0	0	1	0	17	481	0	0	0	0	0	17	0	1109

**US 69 & Lawn Dr
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound Lawn Dr					Northbound US 69					Eastbound Lawn Dr					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	0	123	0	1	0	0	0	0	0	0	6	126	0	0	0	0	0	3	0	258
8:15 AM	0	0	126	1	0	0	0	0	1	0	0	8	121	0	0	0	0	0	1	0	258
8:30 AM	0	0	142	1	0	0	0	0	1	0	0	2	122	0	0	0	0	0	4	0	272
8:45 AM	0	0	140	0	0	0	0	0	0	0	0	9	155	0	0	0	0	0	2	0	306
Hourly Total	0	0	531	2	1	0	0	0	2	0	0	25	524	0	0	0	0	0	10	0	1094
9:00 AM	0	0	107	1	0	0	0	0	0	1	0	3	160	0	0	0	1	0	1	0	273
9:15 AM	0	0	157	0	0	0	0	0	0	0	0	4	157	0	0	0	0	0	3	0	321
9:30 AM	0	0	121	0	0	0	0	0	0	0	0	8	163	0	0	0	0	0	2	0	294
9:45 AM	0	0	125	0	0	0	0	0	0	0	0	8	161	0	0	0	0	0	6	0	300
Hourly Total	0	0	510	1	0	0	0	0	0	1	0	23	641	0	0	0	1	0	12	0	1188
10:00 AM	0	0	160	1	0	0	0	0	0	0	0	6	145	0	0	0	0	0	6	0	318
10:15 AM	0	0	168	1	0	0	0	0	0	0	0	3	147	0	0	0	0	0	0	0	319
10:30 AM	0	0	171	0	0	0	2	0	0	0	0	4	174	0	0	0	1	0	4	1	356
10:45 AM	0	0	150	0	0	0	1	0	0	0	0	6	190	0	0	0	0	0	2	0	349
Hourly Total	0	0	649	2	0	0	3	0	0	0	0	19	656	0	0	0	1	0	12	1	1342
11:00 AM	0	0	167	2	0	0	1	0	0	0	0	9	219	0	0	0	0	0	4	0	402
11:15 AM	0	1	164	0	0	0	0	0	0	1	0	8	208	1	0	0	0	0	2	0	384
11:30 AM	0	0	170	0	0	0	0	0	0	1	0	7	216	0	0	0	0	0	7	0	400
11:45 AM	0	0	190	1	0	0	2	0	0	0	0	6	195	0	0	0	0	0	5	0	399
Hourly Total	0	1	691	3	0	0	3	0	0	2	0	30	838	1	0	0	0	0	18	0	1585
12:00 PM	0	0	180	2	0	0	0	0	0	0	0	3	223	0	0	0	1	0	8	0	417
12:15 PM	0	0	173	1	0	0	0	0	0	0	0	7	229	0	0	0	0	0	0	0	410
12:30 PM	0	0	156	1	0	0	0	0	0	0	0	7	202	0	0	0	0	0	8	0	374
12:45 PM	0	0	209	0	0	0	0	0	0	0	0	5	206	0	0	0	0	0	2	0	422
Hourly Total	0	0	718	4	0	0	0	0	0	0	0	22	860	0	0	0	1	0	18	0	1623
1:00 PM	0	0	177	2	0	0	0	0	1	0	0	6	206	0	0	0	0	0	3	0	395
1:15 PM	0	0	175	1	0	0	1	0	1	0	0	7	217	0	0	0	1	0	2	0	405
1:30 PM	0	0	187	2	0	0	2	0	0	0	0	10	213	0	0	0	0	0	2	0	416
1:45 PM	0	0	170	3	0	0	1	0	0	0	0	4	213	0	0	0	2	0	6	0	399
Hourly Total	0	0	709	8	0	0	4	0	2	0	0	27	849	0	0	0	3	0	13	0	1615
2:00 PM	0	0	149	1	0	0	2	0	0	0	0	0	216	1	0	0	0	0	3	0	372
2:15 PM	0	0	151	1	0	0	2	0	0	1	0	5	208	0	0	0	1	0	4	0	372
2:30 PM	0	0	167	5	0	0	0	0	0	0	0	8	206	0	0	0	1	0	2	0	389
2:45 PM	0	0	188	0	0	0	0	0	1	0	0	6	232	1	0	0	1	0	10	1	439
Hourly Total	0	0	655	7	0	0	4	0	1	1	0	19	862	2	0	0	3	0	19	1	1572
3:00 PM	0	0	161	1	0	0	1	0	1	0	0	5	215	0	0	0	0	0	3	0	387
3:15 PM	0	0	166	0	0	0	0	0	0	0	0	7	212	0	0	0	0	0	3	1	388
3:30 PM	0	0	169	1	0	0	0	0	0	0	0	13	239	0	0	0	0	0	1	0	423
3:45 PM	0	0	178	0	0	0	1	0	0	0	0	9	237	0	0	0	0	0	2	0	427
Hourly Total	0	0	674	2	0	0	2	0	1	0	0	34	903	0	0	0	0	0	9	1	1625

**US 69 & Lawn Dr
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound Lawn Dr					Northbound US 69					Eastbound Lawn Dr					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:00 PM	0	0	144	1	0	0	0	0	0	0	0	6	268	1	0	0	1	0	6	0	427
4:15 PM	0	0	162	4	0	0	0	0	0	1	0	3	303	0	0	0	0	0	5	0	477
4:30 PM	0	0	179	0	0	0	0	0	0	0	0	4	263	0	0	0	1	0	1	0	448
4:45 PM	0	0	196	3	0	0	0	0	0	0	0	8	293	0	0	0	1	0	5	0	506
Hourly Total	0	0	681	8	0	0	0	0	0	1	0	21	1127	1	0	0	3	0	17	0	1858
5:00 PM	0	0	179	0	0	0	0	0	0	0	0	18	290	0	0	0	0	0	4	0	491
5:15 PM	0	0	161	1	0	0	0	0	0	0	1	3	311	0	0	0	0	0	3	0	480
5:30 PM	0	0	170	1	0	0	0	0	0	0	0	10	323	0	0	0	0	0	0	0	504
5:45 PM	0	0	158	1	0	0	0	0	0	0	0	5	277	0	0	0	0	0	2	0	443
Hourly Total	0	0	668	3	0	0	0	0	0	0	1	36	1201	0	0	0	0	0	9	0	1918
6:00 PM	0	0	156	0	0	0	0	0	0	0	0	3	246	0	0	0	1	0	0	0	406
6:15 PM	0	0	116	1	0	0	0	0	0	0	0	7	211	0	0	0	0	0	1	0	336
6:30 PM	0	0	133	2	0	0	0	0	0	0	0	5	201	0	0	0	1	0	2	0	344
6:45 PM	0	0	123	0	0	0	0	0	0	0	0	9	189	0	0	0	1	0	4	0	326
Hourly Total	0	0	528	3	0	0	0	0	0	0	0	24	847	0	0	0	3	0	7	0	1412
7:00 PM	0	0	123	0	0	0	0	0	0	2	0	4	175	0	0	0	0	0	4	0	306
7:15 PM	0	0	111	1	0	0	0	0	0	0	0	4	164	0	0	0	0	0	4	2	284
7:30 PM	0	0	93	1	0	0	0	0	0	0	0	2	165	0	0	0	0	0	3	2	264
7:45 PM	0	0	117	0	0	0	0	0	0	0	0	5	153	0	0	0	0	0	2	0	277
Hourly Total	0	0	444	2	0	0	0	0	0	2	0	15	657	0	0	0	0	0	13	4	1131
8:00 PM	0	0	91	0	0	0	0	0	0	1	0	2	144	0	0	0	0	0	1	0	238
8:15 PM	0	0	107	4	0	0	0	0	0	0	0	2	115	0	0	0	1	0	2	0	231
8:30 PM	0	0	67	2	0	0	0	0	0	0	0	5	131	0	0	0	1	0	1	0	207
8:45 PM	0	0	85	1	0	0	0	0	0	0	0	3	114	0	0	0	3	0	0	0	206
Hourly Total	0	0	350	7	0	0	0	0	0	1	0	12	504	0	0	0	5	0	4	0	882
9:00 PM	0	0	68	1	0	0	0	0	0	0	0	3	95	0	0	0	0	0	0	0	167
9:15 PM	0	0	49	0	0	0	0	0	0	0	0	1	85	0	0	0	0	0	1	0	136
9:30 PM	0	0	45	0	0	0	0	0	0	0	0	1	80	0	0	0	1	0	2	0	129
9:45 PM	0	0	48	0	0	0	0	0	0	1	0	0	72	0	0	0	0	0	0	0	120
Hourly Total	0	0	210	1	0	0	0	0	0	1	0	5	332	0	0	0	1	0	3	0	552
10:00 PM	0	0	62	2	0	0	0	0	0	0	0	3	57	0	0	0	1	0	1	0	126
10:15 PM	0	0	28	0	0	0	0	0	0	0	0	1	37	0	0	0	0	0	0	0	66
10:30 PM	0	0	30	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	68
10:45 PM	0	0	27	2	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	60
Hourly Total	0	0	147	4	0	0	0	0	0	0	0	4	163	0	0	0	1	0	1	0	320
11:00 PM	0	0	19	0	0	0	0	0	0	0	0	1	27	0	0	0	0	0	0	0	47
11:15 PM	0	0	12	1	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	38
11:30 PM	0	0	16	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	40
11:45 PM	0	0	14	0	0	0	0	0	0	0	0	1	12	0	0	0	0	0	0	0	27
Hourly Total	0	0	61	1	0	0	0	0	0	0	0	2	88	0	0	0	0	0	0	0	152
DAILY TOTAL	0	1	9440	60	1	0	16	0	6	10	1	357	12061	4	0	0	26	0	212	7	22184
Cars	0	1	9307	60	1	0	1	0	1	10	1	345	11891	3	0	0	25	0	207	7	21842
Heavy Vehicles	0	0	133	0	0	0	15	0	5	0	0	12	170	1	0	0	1	0	5	0	342
Heavy Vehicle %	0.00%	0.00%	1.41%	0.00%	0.00%	0.00%	93.75%	0.00%	83.33%	0.00%	0.00%	3.36%	1.41%	25.00%	0.00%	0.00%	3.85%	0.00%	2.36%	0.00%	1.54%

**US 69 & Lawn Dr
Ankeny IA
Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	0	0	167	2	0	0	1	0	0	2	0	9	219	0	0	0	0	0	4	0	402
11:15 AM	0	1	164	0	0	0	0	0	0	1	0	8	208	1	0	0	0	0	2	0	384
11:30 AM	0	0	170	0	0	0	0	0	0	1	0	7	216	0	0	0	0	0	7	0	400
11:45 AM	0	0	190	1	0	0	2	0	0	0	0	6	195	0	0	0	0	0	5	0	399
Peak Hour Total	0	1	691	3	0	0	3	0	0	2	0	30	838	1	0	0	0	0	18	0	1585
PHF	0.000	0.250	0.909	0.375	0.000	0.000	0.375	0.000	0.000	0.500	0.000	0.833	0.957	0.250	0.000	0.000	0.000	0.000	0.643	0.000	0.986
Heavy Vehicle %	0.00%	0.00%	1.74%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.91%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.21%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	0	196	3	0	0	0	0	0	0	0	8	293	0	0	0	1	0	5	0	506
5:00 PM	0	0	179	0	0	0	0	0	0	0	0	18	290	0	0	0	0	0	4	0	491
5:15 PM	0	0	161	1	0	0	0	0	0	0	1	3	311	0	0	0	0	0	3	0	480
5:30 PM	0	0	170	1	0	0	0	0	0	0	0	10	323	0	0	0	0	0	0	0	504
Peak Hour Total	0	0	706	5	0	0	0	0	0	0	1	39	1217	0	0	0	1	0	12	0	1981
PHF	0.000	0.000	0.901	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.542	0.942	0.000	0.000	0.000	0.250	0.000	0.600	0.000	0.979
Heavy Vehicle %	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%

Total Vehicles On Leg 21594					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
9501			12093		
Southbound					
Cars	60	9307	1	0	1
Heavy	0	133	0	0	0
Total	60	9440	1	0	1



Total Vehicles on Leg 655	Vehicles Entering Intersection 238	Eastbound	Cars	Heavy	Total	
			7	0	7	
	0		0	0		
	25		1	26		
	0		0	0		
Vehicles Exiting Intersection 417		207	5	212		

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 22	Total Vehicles on Leg 27
1	5	6			
0	0	0			
1	15	16			
0	0	0			
10	0	10	Vehicles Exiting Intersection 5		



Cars	0	1	345	11891	3
Heavy	0	0	12	170	1
Total	0	1	357	12061	4
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
12423			9669		
Total Vehicles On Leg 22092					



**US 69 & SE 8th St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SE 8th St					Northbound US 69					Eastbound SE 8th St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	4	10	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	29
12:15 AM	0	0	11	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	28
12:30 AM	0	0	7	0	0	0	0	0	2	0	0	0	10	0	0	0	0	0	0	0	19
12:45 AM	0	1	7	0	0	0	0	0	1	0	0	0	11	0	0	0	0	0	0	0	20
Hourly Total	0	5	35	0	0	0	0	0	3	0	0	0	53	0	0	0	0	0	0	0	96
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:30 AM	0	0	4	0	0	0	0	0	1	0	0	0	11	0	0	0	0	0	0	0	16
1:45 AM	0	0	4	0	0	0	0	0	1	0	0	0	7	0	0	0	0	0	0	0	12
Hourly Total	0	1	13	0	0	0	0	0	2	0	0	0	32	0	0	0	0	0	0	0	48
2:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	13
2:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	16
2:30 AM	0	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8
2:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	9
Hourly Total	0	0	16	0	0	0	1	0	0	0	0	0	29	0	0	0	0	0	0	0	46
3:00 AM	0	1	10	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	15
3:15 AM	0	0	7	0	0	0	1	0	0	0	0	0	9	0	0	0	0	0	0	0	17
3:30 AM	0	0	7	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	15
3:45 AM	0	0	7	0	0	0	0	0	1	0	0	0	7	0	0	0	0	0	0	0	15
Hourly Total	0	1	31	0	0	0	1	0	1	0	0	0	28	0	0	0	0	0	0	0	62
4:00 AM	0	0	4	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	11
4:15 AM	0	0	7	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	11
4:30 AM	0	0	14	0	0	0	0	0	1	0	0	0	8	0	0	0	0	0	0	0	23
4:45 AM	0	0	23	0	0	0	3	0	0	0	0	0	17	0	0	0	0	0	0	0	43
Hourly Total	0	0	48	0	0	0	3	0	2	0	0	0	35	0	0	0	0	0	0	0	88
5:00 AM	0	0	22	0	0	0	1	0	0	0	0	0	14	1	0	0	0	0	0	0	38
5:15 AM	0	1	17	0	0	0	3	0	0	0	0	0	25	1	0	0	0	0	0	0	47
5:30 AM	0	1	46	0	0	0	0	0	2	0	0	0	28	1	0	0	0	0	0	0	78
5:45 AM	0	0	66	0	0	0	2	0	0	0	0	0	51	1	0	0	0	0	0	0	120
Hourly Total	0	2	151	0	0	0	6	0	2	0	0	0	118	4	0	0	0	0	0	0	283
6:00 AM	0	4	53	0	0	0	1	0	2	0	0	0	37	2	1	0	0	0	0	0	99
6:15 AM	0	6	81	0	0	0	1	0	3	0	0	0	56	1	0	0	0	0	0	0	148
6:30 AM	0	2	102	0	0	0	5	0	9	0	0	0	60	1	0	0	0	0	0	0	179
6:45 AM	0	4	104	0	0	0	3	0	5	0	0	0	75	3	0	0	0	0	1	0	195
Hourly Total	0	16	340	0	0	0	10	0	19	0	0	0	228	7	1	0	0	0	1	0	621
7:00 AM	0	6	107	0	0	0	3	0	3	0	0	0	91	4	0	0	0	0	0	0	214
7:15 AM	0	3	165	0	1	0	7	0	17	0	0	0	105	1	0	0	0	0	0	0	298
7:30 AM	0	6	142	0	1	0	14	0	7	0	0	0	122	2	0	0	0	0	0	0	293
7:45 AM	0	6	172	0	0	0	3	0	17	0	0	0	143	3	0	0	0	0	0	0	344
Hourly Total	0	21	586	0	2	0	27	0	44	0	0	0	461	10	0	0	0	0	0	0	1149

**US 69 & SE 8th St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SE 8th St					Northbound US 69					Eastbound SE 8th St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	5	116	0	0	0	4	0	6	0	0	0	121	2	0	0	0	0	1	0	255
8:15 AM	0	2	125	0	0	0	10	0	8	0	0	0	122	6	0	0	0	0	0	0	273
8:30 AM	0	8	144	0	0	0	10	0	5	0	0	0	117	3	0	0	0	0	0	0	287
8:45 AM	0	9	132	0	0	0	5	0	8	0	0	0	153	4	0	0	0	0	0	0	311
Hourly Total	0	24	517	0	0	0	29	0	27	0	0	0	513	15	0	0	0	0	1	0	1126
9:00 AM	0	3	105	0	0	0	4	0	6	0	0	0	166	3	0	0	0	0	0	0	287
9:15 AM	0	10	145	0	0	0	1	0	14	0	0	0	140	3	0	0	0	0	0	0	313
9:30 AM	0	12	118	0	2	0	8	0	9	0	0	0	158	4	0	0	0	0	0	2	309
9:45 AM	0	7	126	0	0	0	5	0	14	0	0	0	156	4	1	0	0	0	0	0	312
Hourly Total	0	32	494	0	2	0	18	0	43	0	0	0	620	14	1	0	0	0	0	2	1221
10:00 AM	0	8	162	0	0	0	3	0	10	0	0	0	143	2	0	0	0	0	0	0	328
10:15 AM	0	13	150	0	0	0	6	0	12	0	0	0	138	1	0	0	0	0	0	0	320
10:30 AM	0	12	159	0	0	0	2	0	11	0	0	0	162	4	0	0	0	0	0	1	350
10:45 AM	0	8	137	0	1	0	5	0	13	0	0	0	184	6	0	0	0	0	0	1	353
Hourly Total	0	41	608	0	1	0	16	0	46	0	0	0	627	13	0	0	0	0	0	2	1351
11:00 AM	0	10	157	1	1	0	10	0	9	1	0	0	210	6	0	0	0	0	0	1	403
11:15 AM	0	12	151	0	0	0	13	0	16	0	0	1	191	7	0	0	0	0	0	0	391
11:30 AM	0	7	172	0	0	0	5	1	17	0	0	0	202	8	0	0	2	0	1	0	415
11:45 AM	0	11	179	0	0	0	11	0	16	0	0	0	187	2	0	0	0	0	0	0	406
Hourly Total	0	40	659	1	1	0	39	1	58	1	0	1	790	23	0	0	2	0	1	1	1615
12:00 PM	0	15	170	0	0	0	7	0	14	0	0	0	213	6	0	0	0	0	0	0	425
12:15 PM	0	10	158	0	0	0	7	0	6	0	0	0	221	5	0	0	0	0	0	0	407
12:30 PM	0	9	157	0	0	0	8	0	6	0	0	1	214	2	0	0	0	0	0	0	397
12:45 PM	0	9	200	0	0	0	2	0	8	0	0	0	199	5	0	0	1	0	0	0	424
Hourly Total	0	43	685	0	0	0	24	0	34	0	0	1	847	18	0	0	1	0	0	0	1653
1:00 PM	0	10	175	0	0	0	12	0	9	0	0	1	207	1	0	0	0	0	0	0	415
1:15 PM	0	15	165	0	0	0	6	0	12	0	0	0	200	6	0	0	0	0	0	0	404
1:30 PM	0	6	182	0	1	0	6	0	16	0	0	1	202	9	0	0	1	0	1	0	424
1:45 PM	0	4	176	0	0	0	5	0	16	0	0	1	198	2	1	0	0	0	0	0	402
Hourly Total	0	35	698	0	1	0	29	0	53	0	0	3	807	18	1	0	1	0	1	0	1645
2:00 PM	0	8	148	0	0	0	7	1	9	0	0	0	201	5	0	0	1	0	1	0	381
2:15 PM	0	10	146	0	0	0	4	0	18	0	0	2	188	5	0	0	0	0	0	0	373
2:30 PM	0	12	157	0	0	0	8	0	6	0	0	0	207	4	0	0	0	0	0	0	394
2:45 PM	0	16	181	0	2	0	9	0	10	0	0	0	221	3	0	0	0	0	0	1	440
Hourly Total	0	46	632	0	2	0	28	1	43	0	0	2	817	17	0	0	1	0	1	1	1588
3:00 PM	0	13	142	0	0	0	2	0	13	0	0	0	204	7	0	0	0	0	0	0	381
3:15 PM	0	10	150	0	0	0	2	0	13	0	0	0	203	9	0	0	0	0	0	0	387
3:30 PM	0	4	167	0	2	0	9	1	20	0	0	1	228	3	0	0	1	1	0	0	435
3:45 PM	0	14	167	0	0	0	16	0	8	0	0	0	231	3	0	0	0	1	0	0	440
Hourly Total	0	41	626	0	2	0	29	1	54	0	0	1	866	22	0	0	1	2	0	0	1643

**US 69 & SE 8th St
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SE 8th St					Northbound US 69					Eastbound SE 8th St					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:00 PM	0	10	136	0	0	0	11	0	10	0	0	1	257	3	0	0	0	0	0	0	428
4:15 PM	0	11	153	0	1	0	12	0	13	0	0	0	288	6	0	0	0	0	1	1	484
4:30 PM	0	18	162	0	0	0	9	0	10	0	0	0	254	5	0	0	0	0	0	0	458
4:45 PM	0	20	175	0	0	0	9	0	18	0	0	0	278	8	0	0	0	0	1	0	509
Hourly Total	0	59	626	0	1	0	41	0	51	0	0	1	1077	22	0	0	0	0	2	1	1879
5:00 PM	0	18	169	0	0	0	6	0	13	0	0	0	296	10	0	0	0	0	0	0	512
5:15 PM	0	10	151	1	0	0	9	0	21	0	0	0	303	10	0	0	0	0	1	0	506
5:30 PM	0	9	156	0	0	0	7	0	22	0	0	0	308	4	0	0	0	0	0	0	506
5:45 PM	0	22	145	0	0	0	8	0	15	0	0	0	253	6	0	0	0	0	0	0	449
Hourly Total	0	59	621	1	0	0	30	0	71	0	0	0	1160	30	0	0	0	0	1	0	1973
6:00 PM	0	18	137	0	0	0	13	0	14	0	0	0	234	5	0	0	0	0	0	0	421
6:15 PM	0	8	114	0	0	0	7	0	10	0	0	0	199	4	0	0	0	0	0	0	342
6:30 PM	0	11	123	1	0	0	5	0	12	0	0	0	192	5	0	0	0	0	0	0	349
6:45 PM	0	12	109	0	0	0	5	0	14	0	0	0	179	4	0	0	0	0	0	0	323
Hourly Total	0	49	483	1	0	0	30	0	50	0	0	0	804	18	0	0	0	0	0	0	1435
7:00 PM	0	9	124	0	0	0	5	0	14	2	0	0	171	1	0	0	0	0	0	0	324
7:15 PM	0	11	106	0	2	0	6	0	9	2	0	0	155	5	0	0	0	0	0	0	292
7:30 PM	0	12	82	0	0	0	3	0	11	0	0	1	153	2	0	0	0	0	0	2	264
7:45 PM	0	7	113	0	0	0	5	0	13	0	0	0	145	4	0	0	0	0	0	0	287
Hourly Total	0	39	425	0	2	0	19	0	47	4	0	1	624	12	0	0	0	0	0	2	1167
8:00 PM	0	9	84	0	2	0	3	0	10	1	0	1	132	2	0	0	0	0	0	2	241
8:15 PM	0	12	99	0	0	0	2	0	10	0	0	0	108	4	0	0	0	0	0	0	235
8:30 PM	0	9	62	0	0	0	1	0	8	1	0	0	126	3	0	0	0	0	0	0	209
8:45 PM	0	6	81	0	0	0	2	0	7	0	0	0	111	3	0	0	0	0	0	0	210
Hourly Total	0	36	326	0	2	0	8	0	35	2	0	1	477	12	0	0	0	0	0	2	895
9:00 PM	0	8	60	0	0	0	0	0	4	0	0	0	89	1	0	0	0	0	0	0	162
9:15 PM	0	6	40	0	1	0	1	0	5	0	0	1	85	4	0	0	0	0	0	0	142
9:30 PM	0	9	39	0	0	0	1	0	3	0	0	1	71	2	0	0	0	0	0	0	126
9:45 PM	0	3	44	0	0	0	0	0	5	0	0	0	66	3	0	0	0	0	0	0	121
Hourly Total	0	26	183	0	1	0	2	0	17	0	0	2	311	10	0	0	0	0	0	0	551
10:00 PM	0	8	51	0	0	0	1	0	9	0	0	0	50	1	0	0	0	0	0	0	120
10:15 PM	0	4	29	0	0	0	1	0	3	0	0	0	35	1	0	0	0	0	0	0	73
10:30 PM	0	2	31	0	0	0	1	0	0	0	0	0	36	0	0	0	0	0	0	0	70
10:45 PM	0	2	27	0	0	0	0	0	0	2	0	0	29	0	0	0	0	0	0	0	58
Hourly Total	0	16	138	0	0	0	3	0	12	2	0	0	150	2	0	0	0	0	0	0	321
11:00 PM	0	0	18	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	47
11:15 PM	0	0	11	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	37
11:30 PM	0	2	14	0	0	0	0	0	1	0	0	0	23	1	0	0	0	0	0	0	41
11:45 PM	0	2	12	0	0	0	0	0	1	0	0	0	12	1	0	0	0	0	0	0	28
Hourly Total	0	4	55	0	0	0	0	0	2	0	0	0	90	2	0	0	0	0	0	0	153
DAILY TOTAL	0	636	8996	3	17	0	393	3	716	9	0	13	11564	269	3	0	6	2	8	11	22609
Cars	0	630	8847	3	16	0	383	3	708	9	0	13	11363	260	3	0	5	1	8	11	22224
Heavy Vehicles	0	6	149	0	1	0	10	0	8	0	0	0	201	9	0	0	1	1	0	0	385
Heavy Vehicle %	0.00%	0.94%	1.66%	0.00%	5.88%	0.00%	2.54%	0.00%	1.12%	0.00%	0.00%	0.00%	1.74%	3.35%	0.00%	0.00%	16.67%	50.00%	0.00%	0.00%	1.70%

**US 69 & SE 8th St
Ankeny IA
Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
11:00 AM	0	10	157	1	1	0	10	0	9	1	0	0	210	6	0	0	0	0	0	1	403
11:15 AM	0	12	151	0	0	0	13	0	16	0	0	1	191	7	0	0	0	0	0	0	391
11:30 AM	0	7	172	0	0	0	5	1	17	0	0	0	202	8	0	0	2	0	1	0	415
11:45 AM	0	11	179	0	0	0	11	0	16	0	0	0	187	2	0	0	0	0	0	0	406
Peak Hour Total	0	40	659	1	1	0	39	1	58	1	0	1	790	23	0	0	2	0	1	1	1615
PHF	0.000	0.833	0.920	0.250	0.250	0.000	0.750	0.250	0.853	0.250	0.000	0.250	0.940	0.719	0.000	0.000	0.250	0.000	0.250	0.250	0.973
Heavy Vehicle %	0.00%	2.50%	2.12%	0.00%	0.00%	0.00%	5.13%	0.00%	1.72%	0.00%	0.00%	0.00%	2.53%	4.35%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	2.48%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
4:45 PM	0	20	175	0	0	0	9	0	18	0	0	0	278	8	0	0	0	0	1	0	509
5:00 PM	0	18	169	0	0	0	6	0	13	0	0	0	296	10	0	0	0	0	0	0	512
5:15 PM	0	10	151	1	0	0	9	0	21	0	0	0	303	10	0	0	0	0	1	0	506
5:30 PM	0	9	156	0	0	0	7	0	22	0	0	0	308	4	0	0	0	0	0	0	506
Peak Hour Total	0	57	651	1	0	0	31	0	74	0	0	0	1185	32	0	0	0	0	2	0	2033
PHF	0.000	0.713	0.930	0.250	0.000	0.000	0.861	0.000	0.841	0.000	0.000	0.000	0.962	0.800	0.000	0.000	0.000	0.000	0.500	0.000	0.993
Heavy Vehicle %	0.00%	0.00%	1.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%

Total Vehicles On Leg 21921					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
9635			12286		
Southbound					
Cars	3	8847	630	0	16
Heavy	0	149	6	0	1
Total	3	8996	636	0	17



Total Vehicles on Leg 35	Vehicles Entering Intersection 16	Eastbound	Cars	Heavy	Total	
			11	0	11	
	0		0	0		
	5		1	6		
	Vehicles Exiting Intersection 19		1	1	2	
8	0	8				

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 1112	Total Vehicles on Leg 2019
708	8	716			
3	0	3			
383	10	393			
Vehicles Exiting Intersection 907	0	0			
9	0	9			



Cars	3	0	13	11363	260
Heavy	0	0	0	201	9
Total	3	0	13	11564	269
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
11846			9397		
Total Vehicles On Leg 21243					



**US 69 & SW Ordnance Rd
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW Ordnance Rd					Northbound US 69					Eastbound SW Ordnance Rd					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
12:00 AM	0	0	10	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	26
12:15 AM	0	0	9	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	25
12:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	18
12:45 AM	0	0	5	0	0	0	0	0	1	0	0	0	12	0	0	0	0	0	0	0	18
Hourly Total	0	0	32	0	0	0	0	0	1	0	0	0	54	0	0	0	0	0	0	0	87
1:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	9
1:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	10
1:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	17
1:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	9
Hourly Total	0	0	14	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	45
2:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	15
2:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	16
2:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5
2:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Hourly Total	0	0	13	0	0	0	0	0	0	0	0	0	24	1	0	0	0	0	0	0	38
3:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	10
3:15 AM	0	1	9	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	17
3:30 AM	0	0	9	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	17
3:45 AM	0	0	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	14
Hourly Total	0	1	29	0	0	0	0	0	1	0	0	0	27	0	0	0	0	0	0	0	58
4:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	11
4:15 AM	0	0	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	11
4:30 AM	0	1	14	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	24
4:45 AM	0	0	27	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	43
Hourly Total	0	1	53	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	89
5:00 AM	0	0	23	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	38
5:15 AM	0	0	20	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	44
5:30 AM	0	0	46	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	78
5:45 AM	0	0	69	0	0	0	0	0	1	0	0	0	54	0	0	0	0	0	0	0	124
Hourly Total	0	0	158	0	0	0	0	0	1	0	0	0	125	0	0	0	0	0	0	0	284
6:00 AM	0	0	56	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	93
6:15 AM	1	2	76	0	0	0	0	0	0	0	1	0	54	1	0	0	0	0	0	0	135
6:30 AM	0	0	110	0	0	0	0	0	3	0	2	0	61	0	0	0	0	0	0	0	176
6:45 AM	0	1	105	0	0	0	0	0	0	0	1	0	92	0	0	0	0	0	0	0	199
Hourly Total	1	3	347	0	0	0	0	0	3	0	4	0	244	1	0	0	0	0	0	0	603
7:00 AM	0	2	116	0	0	0	0	0	0	0	0	0	98	0	0	0	0	0	0	0	216
7:15 AM	0	0	173	0	0	0	1	0	1	0	0	0	119	0	0	0	0	0	0	0	294
7:30 AM	0	2	145	0	0	0	1	0	0	0	0	0	115	1	0	0	0	0	0	0	264
7:45 AM	0	5	180	0	0	0	1	0	3	0	0	0	146	0	0	0	0	0	0	0	335
Hourly Total	0	9	614	0	0	0	3	0	4	0	0	0	478	1	0	0	0	0	0	0	1109

**US 69 & SW Ordnance Rd
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW Ordnance Rd					Northbound US 69					Eastbound SW Ordnance Rd					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/ Bicycles	
8:00 AM	0	3	116	0	0	0	0	0	1	0	0	0	120	0	0	0	0	0	0	0	240
8:15 AM	0	3	141	0	0	0	0	0	0	0	0	0	133	0	0	0	0	0	0	0	277
8:30 AM	0	3	151	0	0	0	0	0	4	0	0	0	124	0	0	0	0	0	0	0	282
8:45 AM	0	1	140	0	0	0	0	0	3	0	0	0	169	2	0	0	0	0	0	0	315
Hourly Total	0	10	548	0	0	0	0	0	8	0	0	0	546	2	0	0	0	0	0	0	1114
9:00 AM	0	0	111	0	0	0	0	0	2	0	0	0	158	0	0	0	0	0	0	0	271
9:15 AM	0	1	145	0	0	0	1	0	2	0	0	0	142	0	0	0	0	0	0	0	291
9:30 AM	0	3	123	0	0	0	2	0	1	0	0	0	171	1	0	0	0	0	0	0	301
9:45 AM	0	4	129	0	0	0	0	0	1	0	0	0	169	0	0	0	0	0	0	0	303
Hourly Total	0	8	508	0	0	0	3	0	6	0	0	0	640	1	0	0	0	0	0	0	1166
10:00 AM	0	5	160	0	0	0	1	0	2	0	0	0	142	0	1	0	0	0	0	0	310
10:15 AM	0	5	138	0	0	0	0	0	1	0	0	0	143	0	0	0	0	0	0	0	287
10:30 AM	0	3	162	0	0	0	0	0	5	0	0	0	172	1	0	0	0	0	0	1	343
10:45 AM	0	2	144	0	0	0	0	0	4	0	0	0	192	0	0	0	0	0	0	0	342
Hourly Total	0	15	604	0	0	0	1	0	12	0	0	0	649	1	1	0	0	0	0	1	1282
11:00 AM	0	3	163	0	0	0	1	0	7	0	0	0	204	1	0	0	0	0	0	0	379
11:15 AM	0	4	159	0	0	0	1	0	13	0	0	0	203	0	0	0	0	0	0	0	380
11:30 AM	0	3	176	0	0	0	0	0	3	0	0	0	207	0	0	0	0	0	0	0	389
11:45 AM	0	2	188	0	0	0	1	0	6	0	0	0	189	2	0	0	0	0	0	0	388
Hourly Total	0	12	686	0	0	0	3	0	29	0	0	0	803	3	0	0	0	0	0	0	1536
12:00 PM	0	9	168	0	0	0	3	0	8	0	0	0	224	0	0	0	0	0	0	0	412
12:15 PM	0	3	171	0	0	0	1	0	7	0	0	0	217	1	0	0	0	0	0	0	400
12:30 PM	0	3	163	0	0	0	6	0	6	0	1	0	217	0	0	0	0	0	0	0	396
12:45 PM	0	4	201	0	0	0	2	0	4	0	0	0	201	1	0	0	0	0	0	0	413
Hourly Total	0	19	703	0	0	0	12	0	25	0	1	0	859	2	0	0	0	0	0	0	1621
1:00 PM	0	3	169	0	0	0	1	0	7	0	0	0	205	1	0	0	0	0	0	0	386
1:15 PM	0	2	170	0	0	0	3	0	6	0	0	0	208	0	0	0	0	0	0	0	389
1:30 PM	0	5	180	0	0	0	1	0	5	0	0	0	204	2	0	0	0	0	0	0	397
1:45 PM	0	4	178	0	0	0	0	0	5	0	0	0	205	1	0	0	0	0	0	0	393
Hourly Total	0	14	697	0	0	0	5	0	23	0	0	0	822	4	0	0	0	0	0	0	1565
2:00 PM	0	5	155	0	0	0	1	0	6	0	0	0	210	0	0	0	0	0	0	0	377
2:15 PM	0	2	154	0	0	0	0	0	6	0	0	1	191	0	0	0	0	0	0	0	354
2:30 PM	1	4	162	0	0	0	1	0	4	0	0	0	214	0	0	0	0	0	1	0	387
2:45 PM	0	4	185	0	0	0	0	0	6	0	0	0	235	0	0	0	0	0	0	0	430
Hourly Total	1	15	656	0	0	0	2	0	22	0	0	1	850	0	0	0	0	0	1	0	1548
3:00 PM	1	4	146	0	0	0	0	0	2	0	1	0	216	1	0	0	0	0	0	0	371
3:15 PM	0	2	151	0	0	0	0	0	8	0	0	0	226	2	0	0	0	0	0	0	389
3:30 PM	0	2	177	0	0	0	1	0	7	0	1	0	237	0	0	0	0	0	0	0	425
3:45 PM	0	6	188	0	0	0	0	0	3	0	0	0	235	2	0	0	0	0	0	0	434
Hourly Total	1	14	662	0	0	0	1	0	20	0	2	0	914	5	0	0	0	0	0	0	1619

**US 69 & SW Ordnance Rd
Ankeny IA
Tuesday, August 6, 2019**

Time	Southbound US 69					Westbound SW Ordnance Rd					Northbound US 69					Eastbound SW Ordnance Rd					TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:00 PM	0	5	141	0	0	0	3	0	9	0	0	0	271	0	0	0	0	0	0	0	429
4:15 PM	0	3	155	0	0	0	1	0	12	0	0	0	287	0	0	0	0	0	0	0	458
4:30 PM	0	4	171	0	0	0	1	0	5	0	0	0	260	0	0	0	0	0	0	0	441
4:45 PM	0	3	176	0	0	0	0	0	3	0	0	0	272	0	0	0	0	0	0	0	454
Hourly Total	0	15	643	0	0	0	5	0	29	0	0	0	1090	0	0	0	0	0	0	0	1782
5:00 PM	0	3	177	0	0	0	1	0	5	0	0	0	317	0	0	0	0	0	0	0	503
5:15 PM	0	3	149	0	0	0	0	0	6	0	0	0	316	1	0	0	0	0	0	0	475
5:30 PM	0	1	161	0	0	0	1	0	1	0	0	0	322	0	0	0	0	0	0	0	486
5:45 PM	0	0	156	0	0	0	1	0	4	0	1	0	258	0	0	0	0	0	0	0	420
Hourly Total	0	7	643	0	0	0	3	0	16	0	1	0	1213	1	0	0	0	0	0	0	1884
6:00 PM	0	0	147	0	0	0	1	0	2	0	0	0	238	0	1	0	0	0	0	0	388
6:15 PM	0	0	113	0	0	0	0	0	0	0	0	0	194	1	0	0	0	0	0	0	308
6:30 PM	0	1	128	0	0	0	0	0	5	0	0	0	201	0	0	0	0	0	0	0	335
6:45 PM	0	1	100	0	0	0	0	0	7	0	0	0	176	0	0	0	0	0	0	0	284
Hourly Total	0	2	488	0	0	0	1	0	14	0	0	0	809	1	1	0	0	0	0	0	1315
7:00 PM	0	2	123	0	0	0	1	0	2	2	0	0	169	0	0	0	0	0	0	0	297
7:15 PM	0	1	117	0	0	0	1	0	3	0	0	0	152	0	0	0	0	0	0	0	274
7:30 PM	0	1	85	0	0	0	0	0	1	0	1	0	155	0	0	0	0	0	0	0	243
7:45 PM	0	0	119	0	0	0	0	0	2	0	0	0	140	0	0	0	0	0	0	0	261
Hourly Total	0	4	444	0	0	0	2	0	8	2	1	0	616	0	0	0	0	0	0	0	1075
8:00 PM	0	1	91	0	0	0	1	0	1	0	0	0	129	1	0	0	0	0	0	0	224
8:15 PM	0	1	94	0	0	0	0	0	1	0	0	0	116	0	0	0	0	0	0	0	212
8:30 PM	0	0	69	0	0	0	0	0	3	0	0	0	121	0	0	0	0	0	0	0	193
8:45 PM	0	0	82	0	0	0	0	0	1	0	1	0	110	0	0	0	0	0	0	0	194
Hourly Total	0	2	336	0	0	0	1	0	6	0	1	0	476	1	0	0	0	0	0	0	823
9:00 PM	0	1	60	0	0	0	0	0	0	0	1	0	87	0	0	0	0	0	0	0	149
9:15 PM	0	0	42	0	0	0	0	0	0	0	0	0	91	0	0	0	0	0	0	0	133
9:30 PM	0	0	39	0	0	0	0	0	0	0	0	0	76	0	0	0	0	0	0	0	115
9:45 PM	0	2	45	0	0	0	0	0	2	0	0	0	64	0	0	0	0	0	0	0	113
Hourly Total	0	3	186	0	0	0	0	0	2	0	1	0	318	0	0	0	0	0	0	0	510
10:00 PM	0	0	50	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	0	99
10:15 PM	0	0	31	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	68
10:30 PM	0	0	28	0	0	0	0	0	2	0	0	0	34	0	0	0	0	0	0	0	64
10:45 PM	0	0	27	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	52
Hourly Total	0	0	136	0	0	0	0	0	2	0	0	0	145	0	0	0	0	0	0	0	283
11:00 PM	0	0	19	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	49
11:15 PM	0	2	9	0	0	0	0	0	2	0	0	0	23	0	0	0	0	0	0	0	36
11:30 PM	0	0	12	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	36
11:45 PM	0	0	13	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	26
Hourly Total	0	2	53	0	0	0	0	0	2	0	0	0	90	0	0	0	0	0	0	0	147
DAILY TOTAL	3	156	9253	0	0	0	42	0	234	2	11	1	11858	24	2	0	0	0	1	1	21583
Cars	3	156	9091	0	0	0	42	0	233	2	11	0	11667	24	1	0	0	0	0	1	21227
Heavy Vehicles	0	0	162	0	0	0	0	0	1	0	0	1	191	0	1	0	0	0	1	0	356
Heavy Vehicle %	0.00%	0.00%	1.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	100.00%	1.61%	0.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	1.65%

**US 69 & SW Ordnance Rd
Ankeny IA**

**Tuesday, August 6, 2019
AM Peak Hour**

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
11:00 AM	0	3	163	0	0	0	1	0	7	0	0	0	204	1	0	0	0	0	0	0	379
11:15 AM	0	4	159	0	0	0	1	0	13	0	0	0	203	0	0	0	0	0	0	0	380
11:30 AM	0	3	176	0	0	0	0	0	3	0	0	0	207	0	0	0	0	0	0	0	389
11:45 AM	0	2	188	0	0	0	1	0	6	0	0	0	189	2	0	0	0	0	0	0	388
Peak Hour Total	0	12	686	0	0	0	3	0	29	0	0	0	803	3	0	0	0	0	0	0	1536
PHF	0.000	0.750	0.912	0.000	0.000	0.000	0.750	0.000	0.558	0.000	0.000	0.000	0.970	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.987
Heavy Vehicle %	0.00%	0.00%	2.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.21%

PM Peak Hour

Time	Southbound					Westbound					Northbound					Eastbound					VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	U Turns	Left Turns	Straight Through	Right Turns	Peds/Bicycles	
4:45 PM	0	3	176	0	0	0	0	0	3	0	0	0	272	0	0	0	0	0	0	0	454
5:00 PM	0	3	177	0	0	0	1	0	5	0	0	0	317	0	0	0	0	0	0	0	503
5:15 PM	0	3	149	0	0	0	0	0	6	0	0	0	316	1	0	0	0	0	0	0	475
5:30 PM	0	1	161	0	0	0	1	0	1	0	0	0	322	0	0	0	0	0	0	0	486
Peak Hour Total	0	10	663	0	0	0	2	0	15	0	0	0	1227	1	0	0	0	0	0	0	1918
PHF	0.000	0.833	0.936	0.000	0.000	0.000	0.500	0.000	0.625	0.000	0.000	0.000	0.953	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.953
Heavy Vehicle %	0.00%	0.00%	1.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.42%

Total Vehicles On Leg 21507					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
9412			12095		
Southbound					
Cars	0	9091	156	3	0
Heavy	0	162	0	0	0
Total	0	9253	156	3	0



Total Vehicles on Leg 2	Vehicles Entering Intersection 1	Eastbound	Cars	Heavy	Total	
			1	0	1	
	0		0	0		
	Vehicles Exiting Intersection 1		0	0	0	
			0	1	1	

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 456
233	1	234			
0	0	0		Vehicles Exiting Intersection	
42	0	42			
0	0	0			
2	0	2	180		



Cars	1	11	0	11667	24
Heavy	1	0	1	191	0
Total	2	11	1	11858	24
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
11894			9307		
Total Vehicles On Leg 21201					

Appendix B – Crash Reports



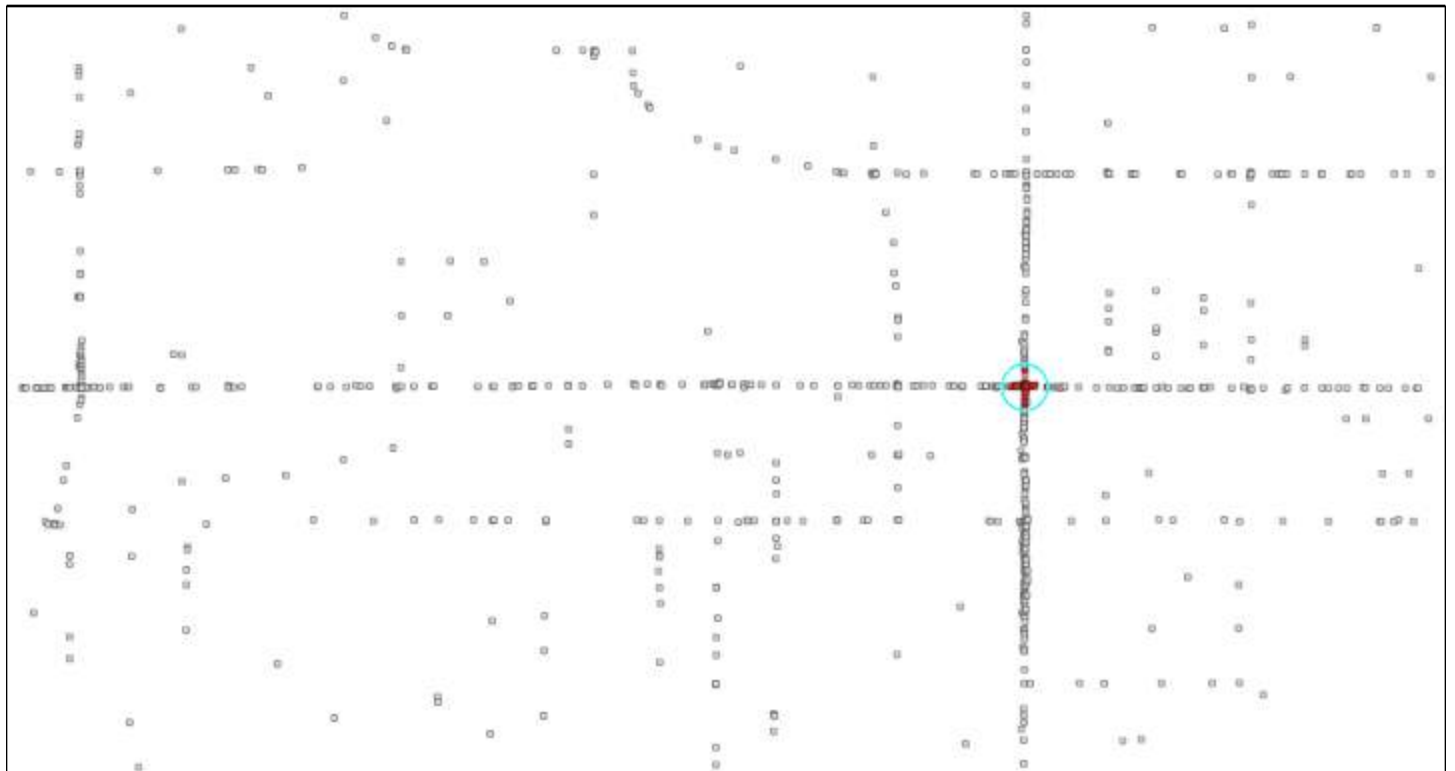
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	129
Fatal Crash	0
Suspected Serious Injury Crash	2
Suspected Minor Injury Crash	13
Possible/Unknown Injury Crash	29
Property Damage Only	85

Injury Status Summary	66
Fatal	0
Suspected serious/incapacitating	2
Suspected minor/non-incapacitating	17
Possible (complaint of pain/injury)	45
Unknown	2
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	779,635.00
Average (per crash dollars):	6,043.68
Total Vehicles:	269.00
Average (per crash):	2.09
Total Occupants:	379.00
Average (per crash):	2.94

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.50
Major Injuries/Crash:	0.02
Minor Injuries/Crash:	0.13
Possible/Unknown Injuries/Crash:	0.35





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			128
Animal	0	Ran traffic signal	8
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	1
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	63	FTYROW: From driveway	1
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	2	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	1
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	6
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	12
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	2
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	1
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	3
Driver Distraction: Exterior distraction	1	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	1	Other	12
Unknown	12	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	1	2	3	0	2	3	0	1	0	0	12
Monday	0	0	0	2	1	0	3	4	8	3	0	0	0	21
Tuesday	0	0	0	2	1	0	1	1	1	4	0	0	0	10
Wednesday	0	0	1	1	3	1	2	6	3	4	4	2	0	27
Thursday	0	0	0	0	0	4	3	2	7	2	3	2	0	23
Friday	0	0	0	1	0	2	6	2	3	2	3	2	0	21
Saturday	0	0	1	0	1	4	2	1	3	3	0	0	0	15
Total	0	0	2	7	8	14	17	18	28	18	11	6	0	129

Manner of Crash Collision	129
Non-collision (single vehicle)	4
Head-on (front to front)	16
Rear-end (front to rear)	33
Angle, oncoming left turn	56
Broadside (front to side)	11
Sideswipe, same direction	5
Sideswipe, opposite direction	2
Rear to rear	0
Rear to side	0
Not reported	0
Other	2
Unknown	0

Surface Conditions	129
Dry	99
Wet	18
Ice/frost	3
Snow	8
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	1

Fixed Object Struck	269		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	1	Culvert/pipe opening	0
Guardrail - face	1	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	1	Traffic sign support	1
Traffic signal support	1	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	264



Iowa Crash Analysis Tool
Quick Report
2014-2018

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	1	0	0	1
= 15	3	2	0	0	5
= 16	4	6	0	0	10
= 17	3	4	0	0	7
= 18	7	5	0	0	12
= 19	4	6	0	0	10
= 20	7	5	1	0	13
>= 21 and <= 24	13	14	0	0	27
>= 25 and <= 29	7	16	0	0	23
>= 30 and <= 34	20	14	1	0	35
>= 35 and <= 39	10	14	0	0	24
>= 40 and <= 44	10	7	0	0	17
>= 45 and <= 49	2	9	0	0	11
>= 50 and <= 54	5	3	1	0	9
>= 55 and <= 59	10	7	0	0	17
>= 60 and <= 64	8	3	0	0	11
>= 65 and <= 69	6	6	0	0	12
>= 70 and <= 74	6	3	0	0	9
>= 75 and <= 79	2	3	0	0	5
>= 80 and <= 84	2	4	0	0	6
>= 85 and <= 89	0	2	1	0	3
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	129	134	5	0	268

Alcohol Test Given	269
None	266
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	1
Not reported	2

Drug Test Given	269
None	266
Blood	0
Urine	1
Breath	0
Vitreous	0
Refused	0
Not reported	2

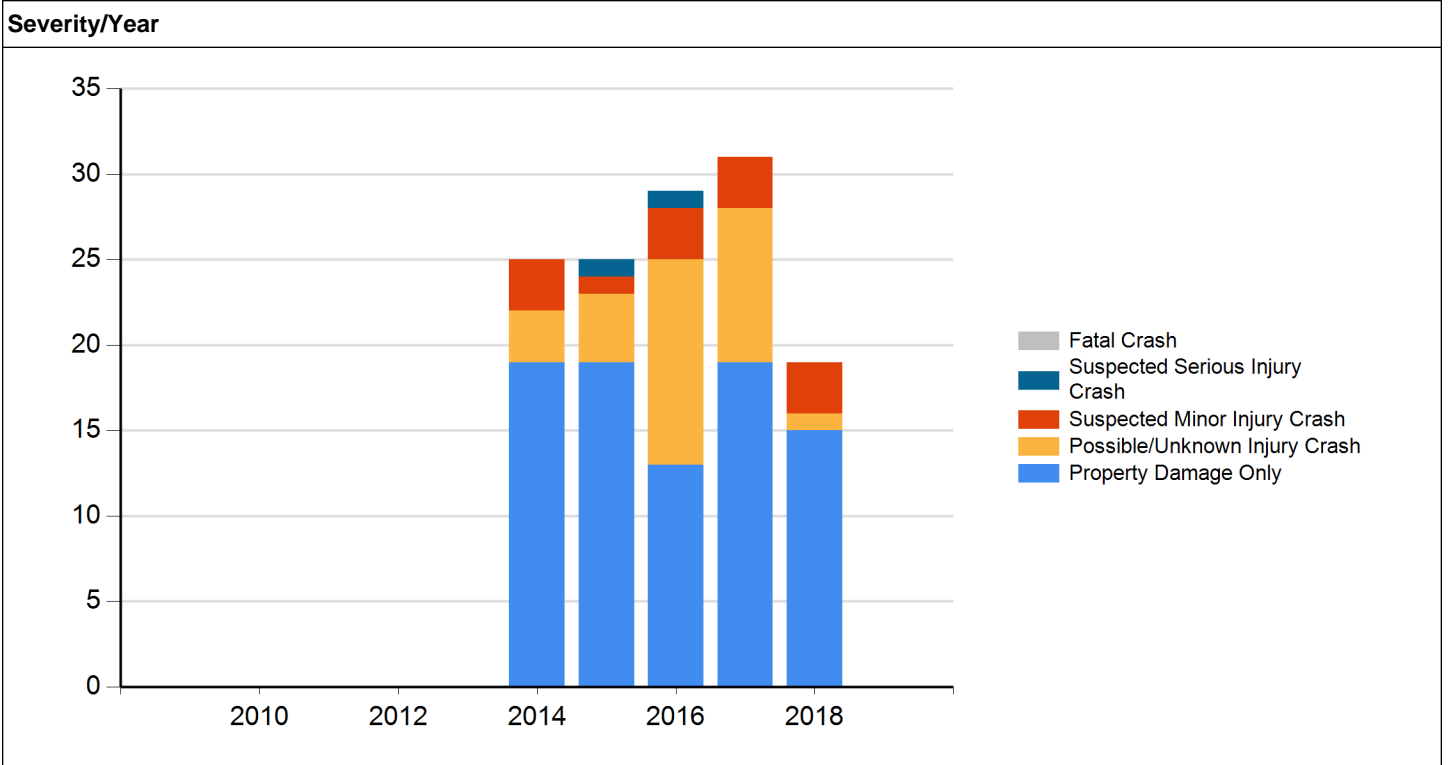
Drug Test Result	269
Negative	1
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	268
Other	0

Drug/Alcohol Related	129
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	1
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	128



Iowa Crash Analysis Tool
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2014-2018

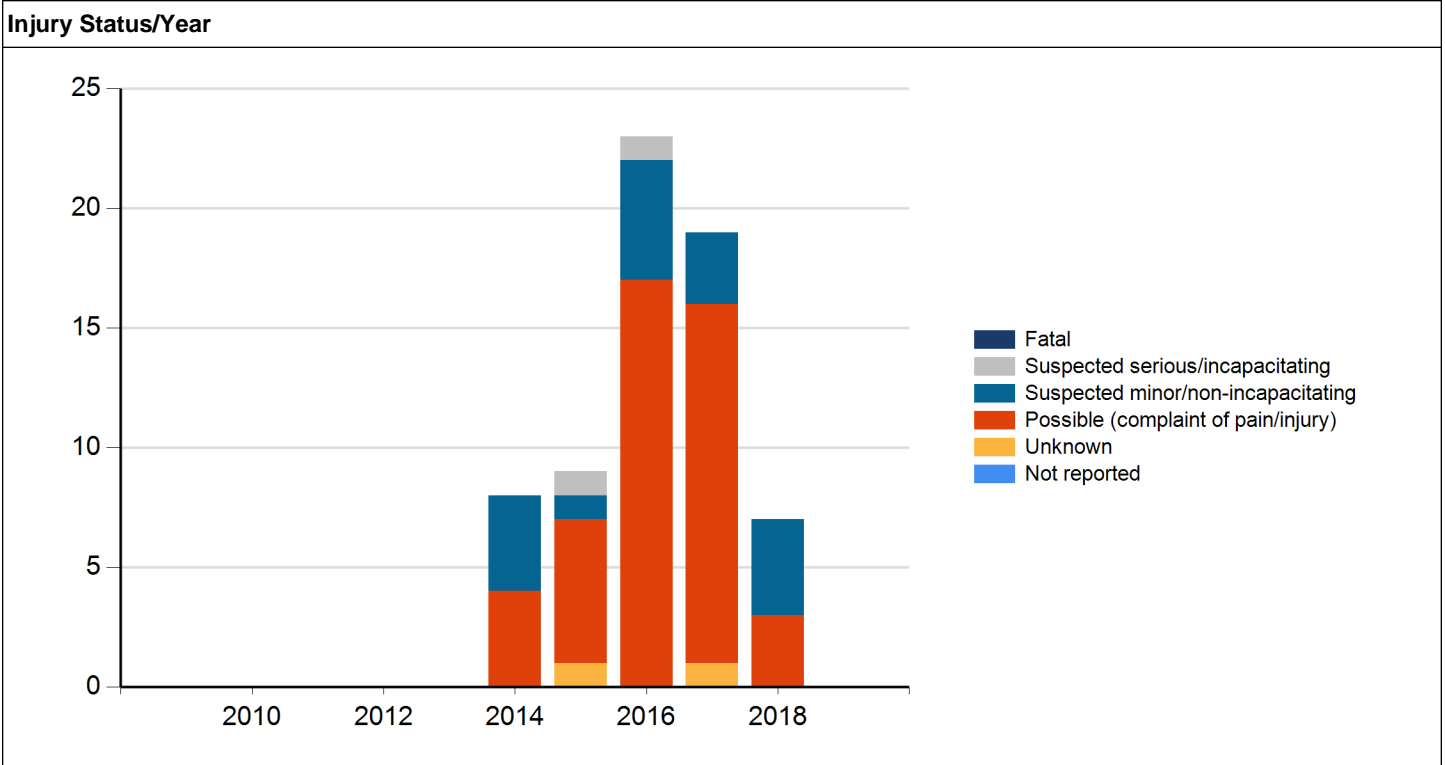
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	3	3	19	25
2015	0	1	1	4	19	25
2016	0	1	3	12	13	29
2017	0	0	3	9	19	31
2018	0	0	3	1	15	19
2019	0	0	0	0	0	0
Total	0	2	13	29	85	129





Iowa Crash Analysis Tool
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	4	4	0	0	8
2015	0	1	1	6	1	0	9
2016	0	1	5	17	0	0	23
2017	0	0	3	15	1	0	19
2018	0	0	4	3	0	0	7
2019	0	0	0	0	0	0	0
Total	0	2	17	45	2	0	66





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	13
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	12

Injury Status Summary	1
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	55,000.00
Average (per crash dollars):	4,230.77
Total Vehicles:	30.00
Average (per crash):	2.31
Total Occupants:	42.00
Average (per crash):	3.23

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.08
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.08
Possible/Unknown Injuries/Crash:	0.00





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			13
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	1
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	8
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	4
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	2	1	1	0	0	0	4
Wednesday	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Friday	0	0	0	0	0	0	1	0	2	0	0	0	0	3
Saturday	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Total	0	0	0	0	2	0	2	4	4	1	0	0	0	13

Manner of Crash Collision	13
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	11
Angle, oncoming left turn	0
Broadside (front to side)	2
Sideswipe, same direction	0
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	13
Dry	10
Wet	2
Ice/frost	0
Snow	1
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	30
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	30



Iowa Crash Analysis Tool
Quick Report
2014-2018

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	3	0	0	0	3
= 18	1	2	0	0	3
= 19	2	1	0	0	3
= 20	0	0	0	0	0
>= 21 and <= 24	2	2	0	0	4
>= 25 and <= 29	2	2	0	0	4
>= 30 and <= 34	2	1	0	0	3
>= 35 and <= 39	2	0	0	0	2
>= 40 and <= 44	0	1	0	0	1
>= 45 and <= 49	0	2	0	0	2
>= 50 and <= 54	1	0	0	0	1
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	2	1	0	0	3
>= 65 and <= 69	0	1	0	0	1
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	17	13	0	0	30

Alcohol Test Given	30
None	29
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	1
Not reported	0

Drug Test Given	30
None	30
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

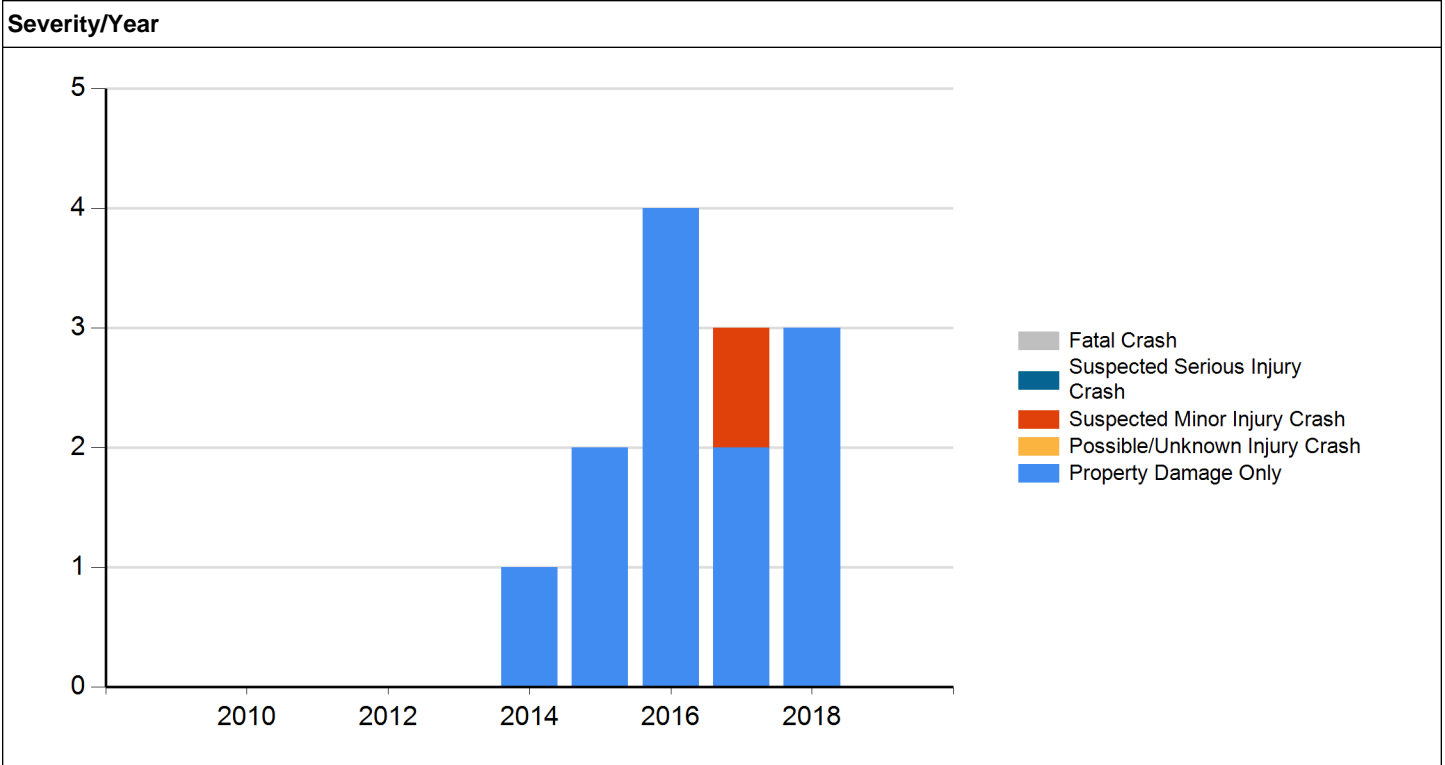
Drug Test Result	30
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	30
Other	0

Drug/Alcohol Related	13
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	1
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	12



Iowa Crash Analysis Tool
Quick Report
2014-2018

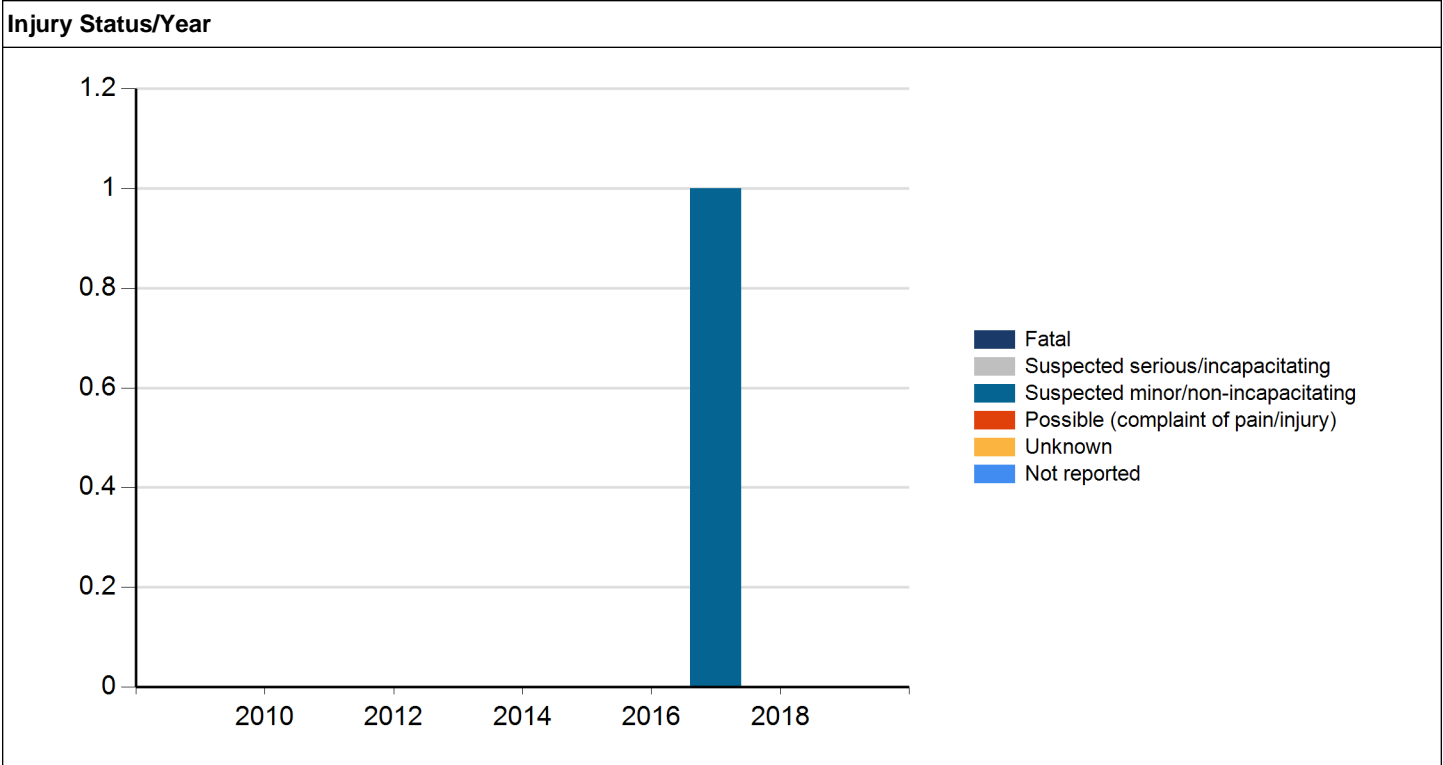
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	1	1	1
2015	0	0	0	0	2	2	2
2016	0	0	0	0	4	4	4
2017	0	0	1	0	2	3	3
2018	0	0	0	0	3	3	3
2019	0	0	0	0	0	0	0
Total	0	0	1	0	12	13	





Iowa Crash Analysis Tool
Quick Report
2014-2018

Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	1	0	0	0	1
2018	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



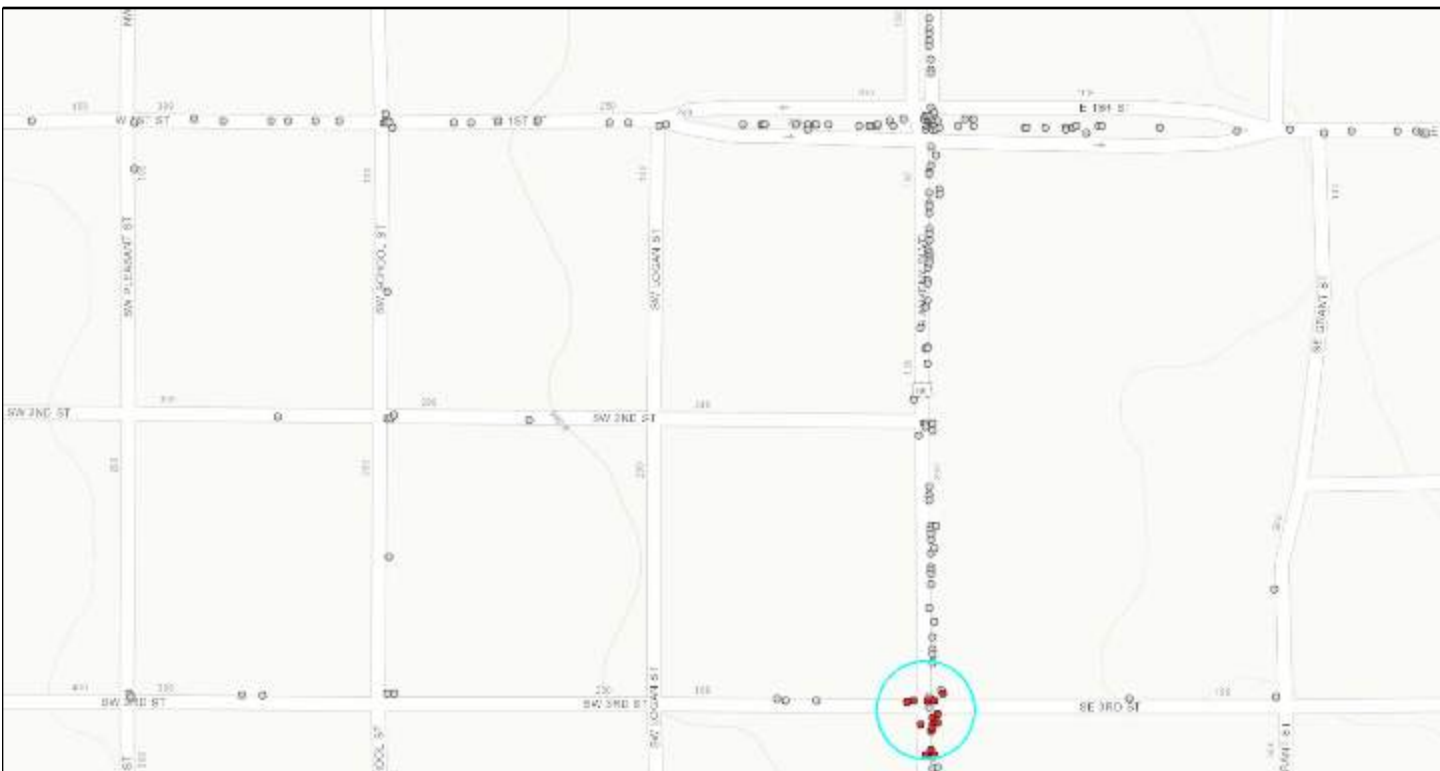
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	76
Fatal Crash	0
Suspected Serious Injury Crash	4
Suspected Minor Injury Crash	6
Possible/Unknown Injury Crash	13
Property Damage Only	53

Injury Status Summary	35
Fatal	0
Suspected serious/incapacitating	4
Suspected minor/non-incapacitating	8
Possible (complaint of pain/injury)	23
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	455,801.00
Average (per crash dollars):	5,997.38
Total Vehicles:	161.00
Average (per crash):	2.12
Total Occupants:	211.00
Average (per crash):	2.78

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.46
Major Injuries/Crash:	0.05
Minor Injuries/Crash:	0.11
Possible/Unknown Injuries/Crash:	0.30





Iowa Crash Analysis Tool
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2014-2018

Major Cause			76
Animal	0	Ran traffic signal	23
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	8	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	1	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	8
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	13
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	3
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	2	Driver Distraction: Other interior distracti...	2
Driver Distraction: Exterior distraction	3	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	1	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	8
Unknown	4	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	1	0	0	0	1	0	0	0	2
Monday	0	0	0	1	2	3	2	1	0	2	0	0	0	11
Tuesday	0	0	0	0	2	2	3	3	4	2	0	0	0	16
Wednesday	0	0	0	0	5	1	3	0	4	2	0	0	0	15
Thursday	0	0	0	0	0	4	3	3	1	1	2	0	0	14
Friday	0	0	0	0	1	1	3	1	1	1	1	0	0	9
Saturday	0	0	0	0	0	1	2	1	2	1	1	1	0	9
Total	0	0	0	1	10	13	16	9	12	10	4	1	0	76

Manner of Crash Collision	76
Non-collision (single vehicle)	0
Head-on (front to front)	1
Rear-end (front to rear)	35
Angle, oncoming left turn	9
Broadside (front to side)	28
Sideswipe, same direction	1
Sideswipe, opposite direction	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	76
Dry	47
Wet	25
Ice/frost	1
Snow	3
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	161		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	1	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	1	None (no fixed object struck)	159



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	2	1	0	0	3
= 16	2	3	0	0	5
= 17	4	1	0	0	5
= 18	2	2	0	0	4
= 19	4	8	0	0	12
= 20	3	2	0	0	5
>= 21 and <= 24	10	9	0	0	19
>= 25 and <= 29	7	6	0	0	13
>= 30 and <= 34	14	8	0	0	22
>= 35 and <= 39	4	5	0	0	9
>= 40 and <= 44	2	1	0	0	3
>= 45 and <= 49	7	4	0	0	11
>= 50 and <= 54	7	4	0	0	11
>= 55 and <= 59	1	3	0	0	4
>= 60 and <= 64	4	3	0	0	7
>= 65 and <= 69	4	3	0	0	7
>= 70 and <= 74	7	2	0	0	9
>= 75 and <= 79	2	2	0	0	4
>= 80 and <= 84	3	3	0	0	6
>= 85 and <= 89	1	0	0	0	1
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	90	70	1	0	161

Alcohol Test Given	161
None	159
Blood	0
Urine	0
Breath	1
Vitreous	0
Refused	0
Not reported	1

Drug Test Given	161
None	160
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

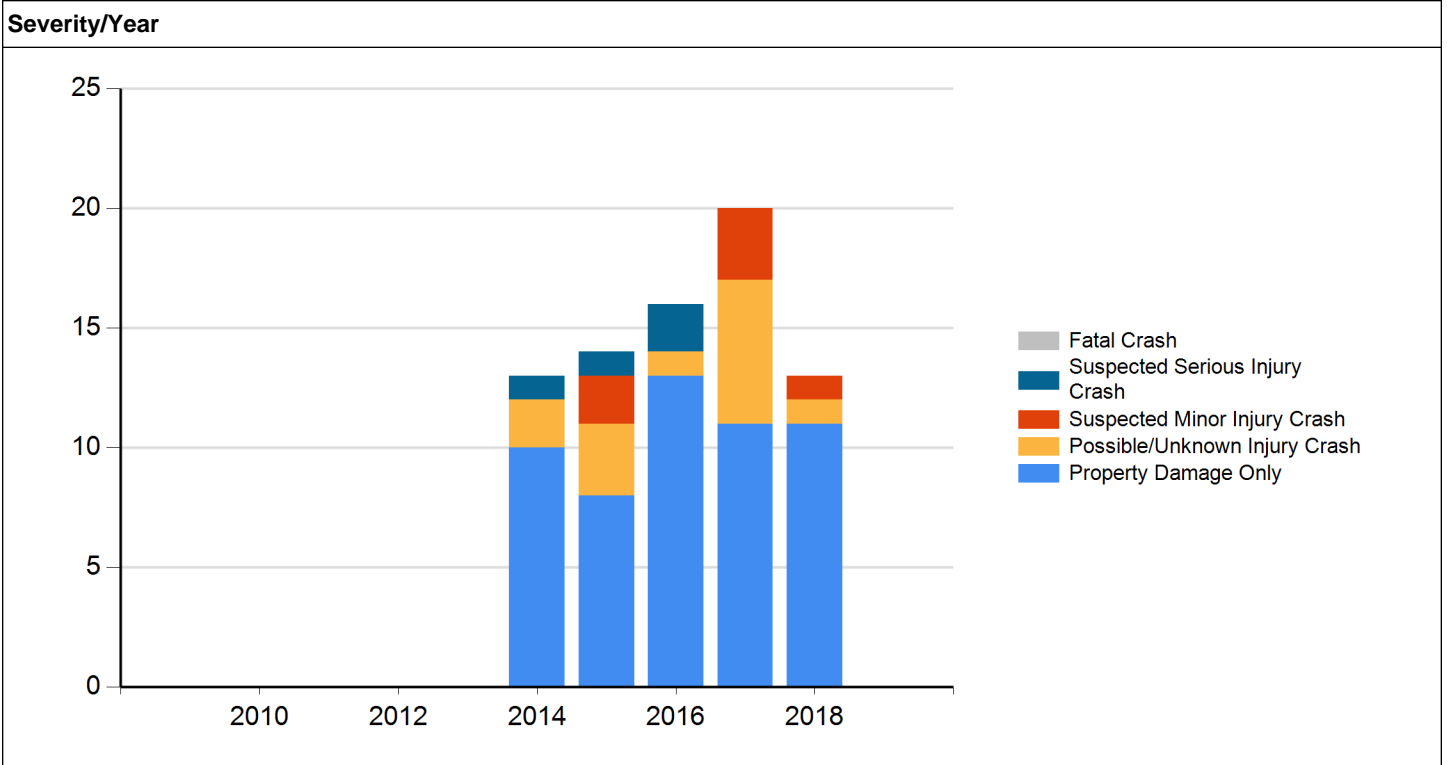
Drug Test Result	161
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	161
Other	0

Drug/Alcohol Related	76
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	1
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	75



Iowa Crash Analysis Tool
Quick Report
2014-2018

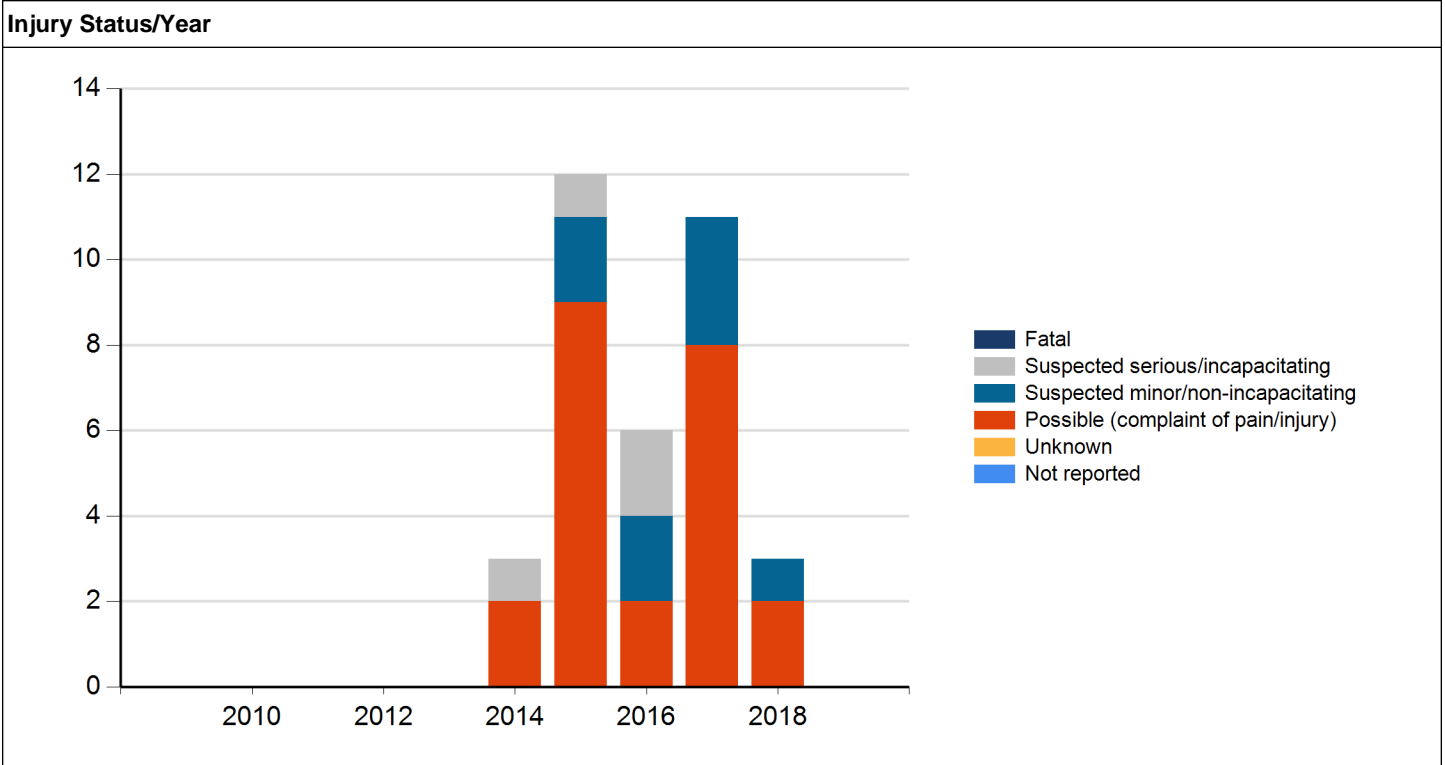
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	1	0	2	10	13
2015	0	1	2	3	8	14
2016	0	2	0	1	13	16
2017	0	0	3	6	11	20
2018	0	0	1	1	11	13
2019	0	0	0	0	0	0
Total	0	4	6	13	53	76





Iowa Crash Analysis Tool
Quick Report
2014-2018

Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	1	0	2	0	0	3
2015	0	1	2	9	0	0	12
2016	0	2	2	2	0	0	6
2017	0	0	3	8	0	0	11
2018	0	0	1	2	0	0	3
2019	0	0	0	0	0	0	0
Total	0	4	8	23	0	0	35





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



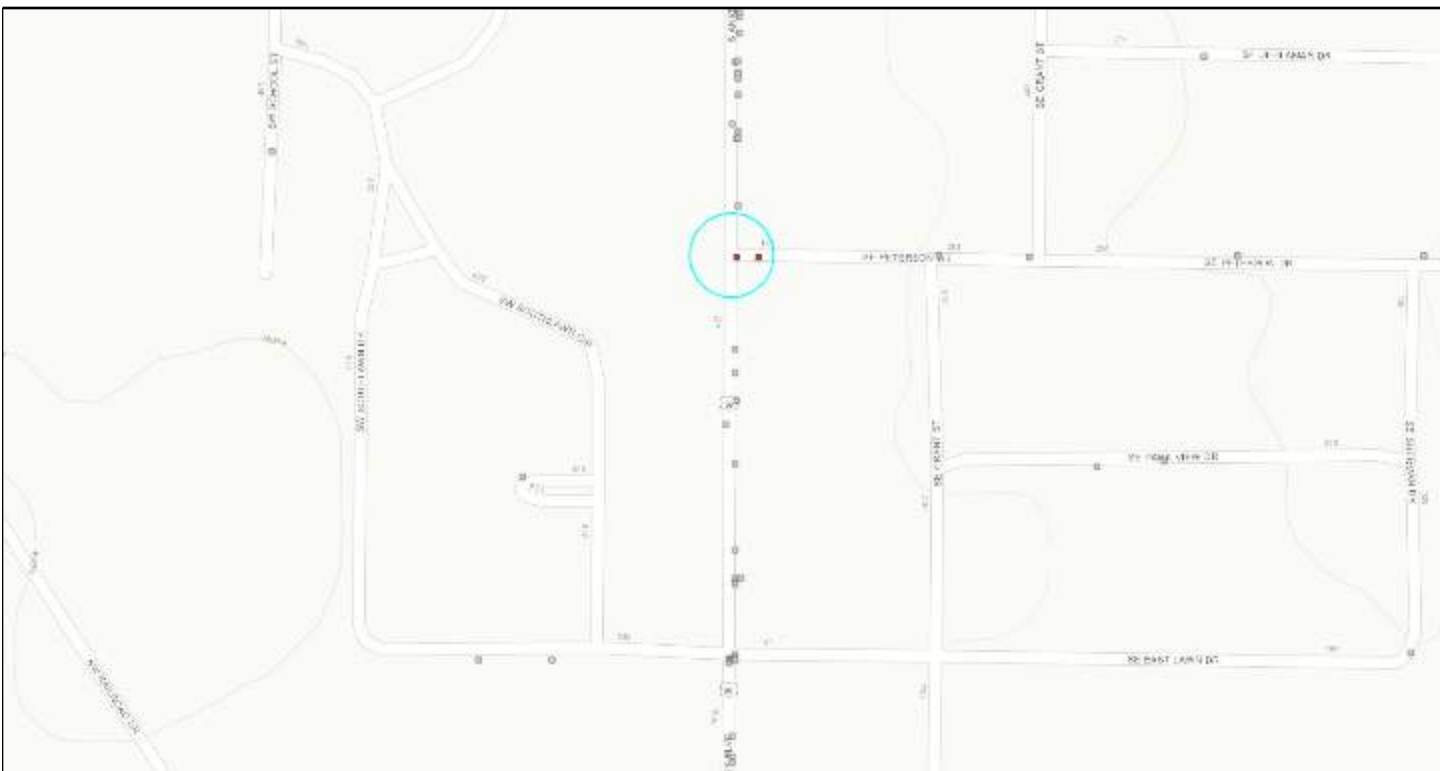
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	5
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	0
Property Damage Only	5

Injury Status Summary	0
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	0
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	20,635.00
Average (per crash dollars):	4,127.00
Total Vehicles:	12.00
Average (per crash):	2.40
Total Occupants:	15.00
Average (per crash):	3.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.00





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			5
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	1
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	1	0	0	0	0	1	0	0	0	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	1	1	1	0	0	0	0	5

Manner of Crash Collision	5
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	3
Angle, oncoming left turn	0
Broadside (front to side)	1
Sideswipe, same direction	0
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	5
Dry	5
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	12
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...)	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	1
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	11



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	1	0	0	1
= 18	1	0	0	0	1
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	2	0	0	0	2
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	1	1	0	0	2
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	1	0	0	0	1
>= 80 and <= 84	1	0	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	9	2	1	0	12

Alcohol Test Given	12
None	11
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Given	12
None	11
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

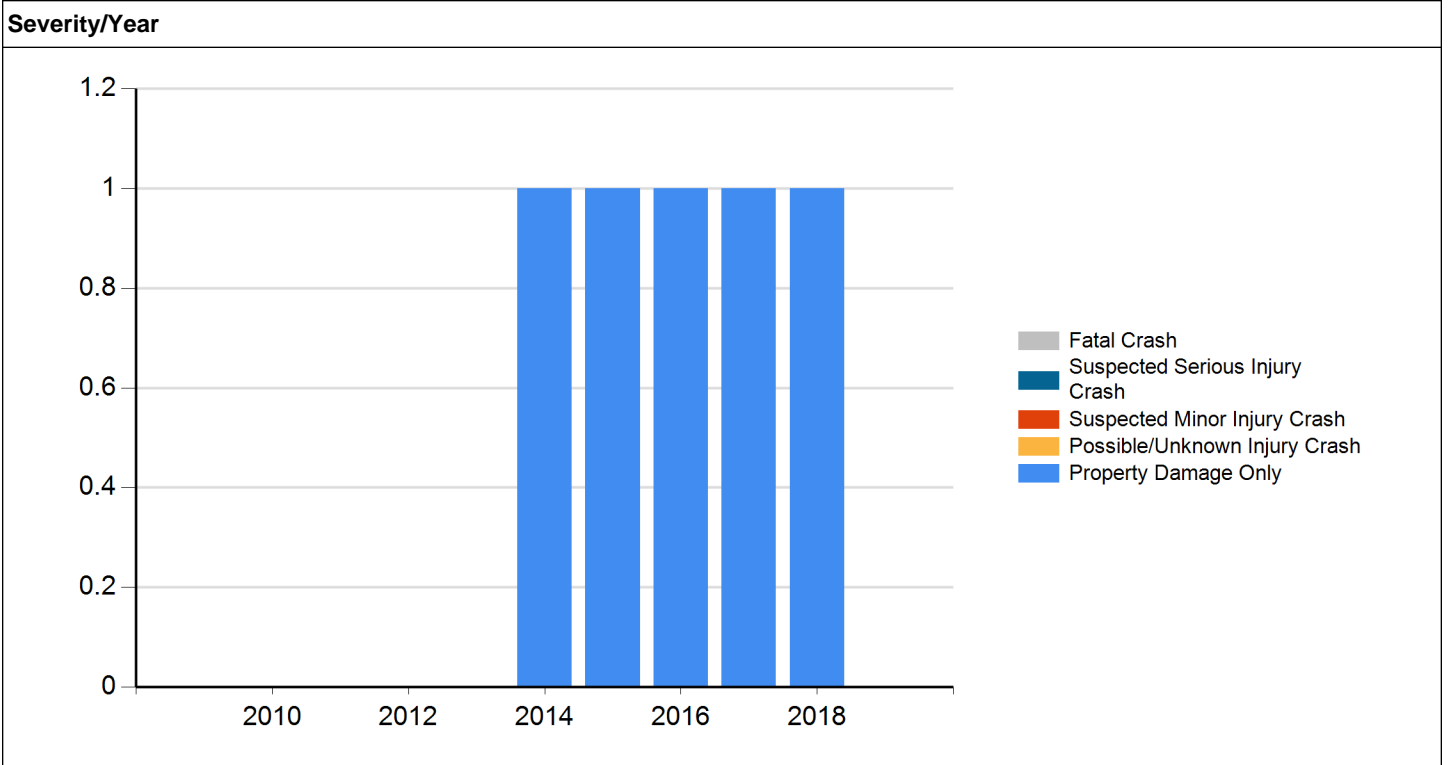
Drug Test Result	12
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	12
Other	0

Drug/Alcohol Related	5
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	5



Iowa Crash Analysis Tool
Quick Report
2014-2018

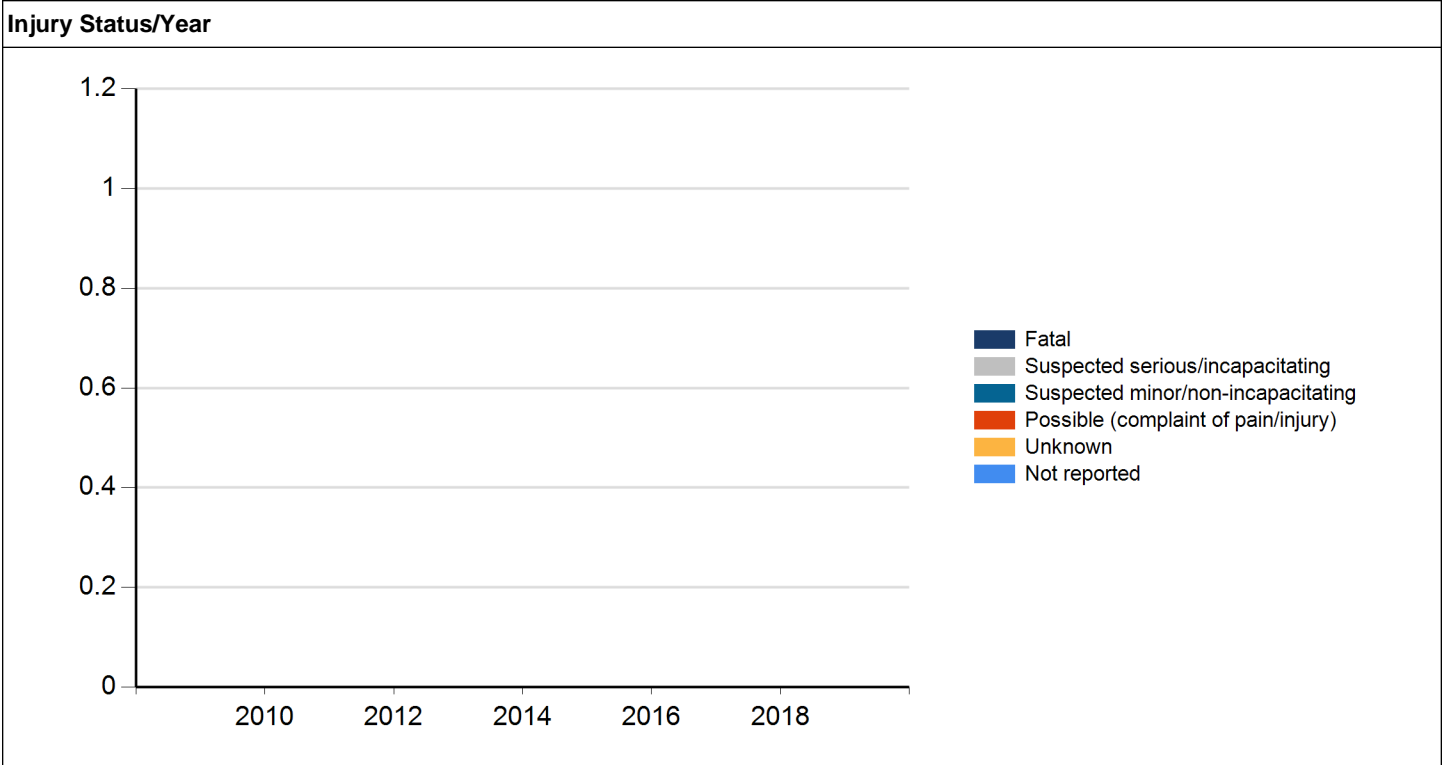
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	1	1
2015	0	0	0	0	1	1
2016	0	0	0	0	1	1
2017	0	0	0	0	1	1
2018	0	0	0	0	1	1
2019	0	0	0	0	0	0
Total	0	0	0	0	5	5





Iowa Crash Analysis Tool
Quick Report
2014-2018

Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



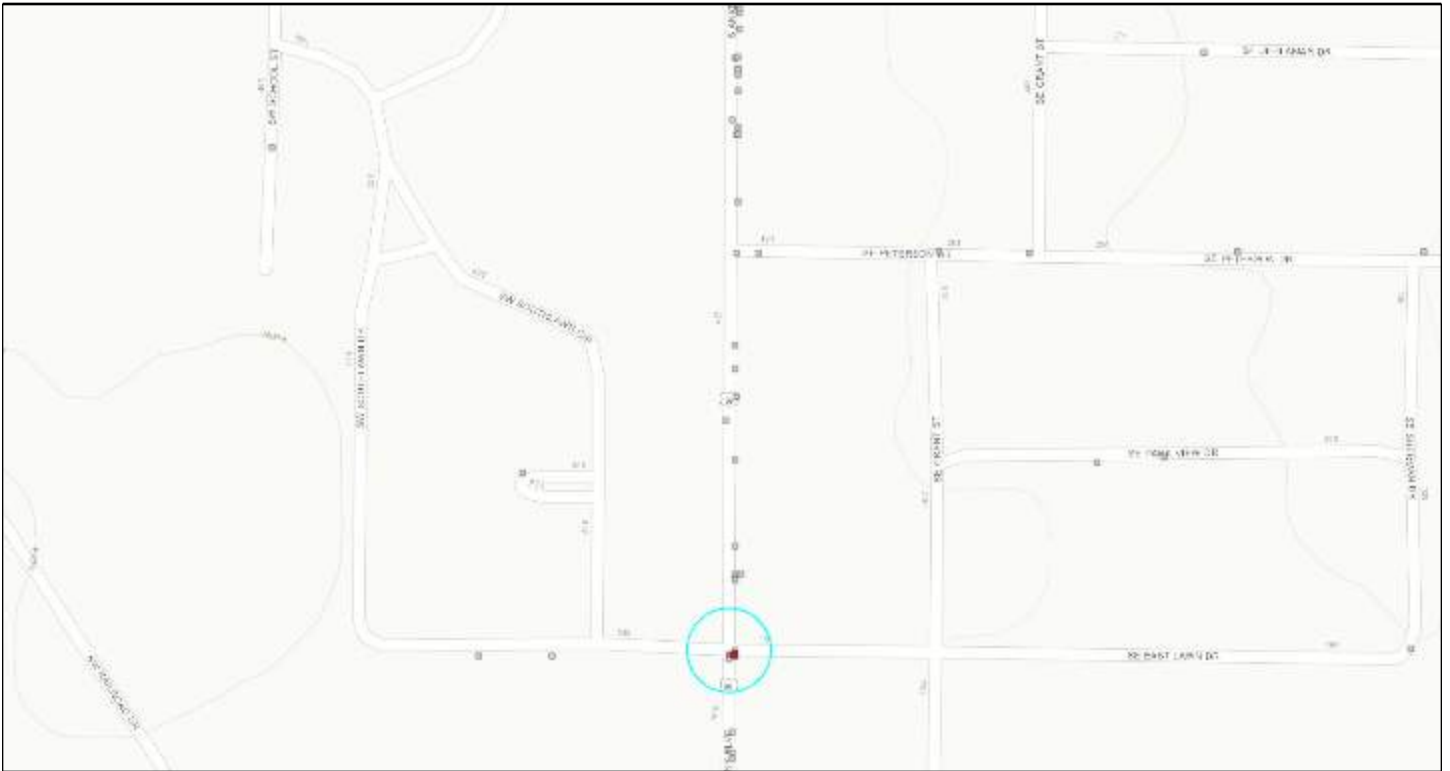
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	10
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	0
Property Damage Only	10

Injury Status Summary	0
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	0
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	59,000.00
Average (per crash dollars):	5,900.00
Total Vehicles:	20.00
Average (per crash):	2.00
Total Occupants:	25.00
Average (per crash):	2.50

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.00





Iowa Crash Analysis Tool
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Major Cause			10
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	3	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	1
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	1	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	2
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Tuesday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Wednesday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Thursday	0	0	0	0	1	0	0	0	1	0	0	0	0	2
Friday	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Saturday	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	0	0	0	2	1	1	2	4	0	0	0	0	10

Manner of Crash Collision	10
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	6
Angle, oncoming left turn	3
Broadside (front to side)	0
Sideswipe, same direction	1
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	10
Dry	7
Wet	3
Ice/frost	0
Snow	0
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	20
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...)	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	20



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	1	0	0	1
= 18	0	0	0	0	0
= 19	1	0	0	0	1
= 20	0	1	0	0	1
>= 21 and <= 24	1	1	0	0	2
>= 25 and <= 29	2	0	0	0	2
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	2	0	0	0	2
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	1	0	0	0	1
>= 50 and <= 54	2	0	0	0	2
>= 55 and <= 59	2	1	0	0	3
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	1	2	0	0	3
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	13	7	0	0	20

Alcohol Test Given	20
None	20
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Given	20
None	20
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

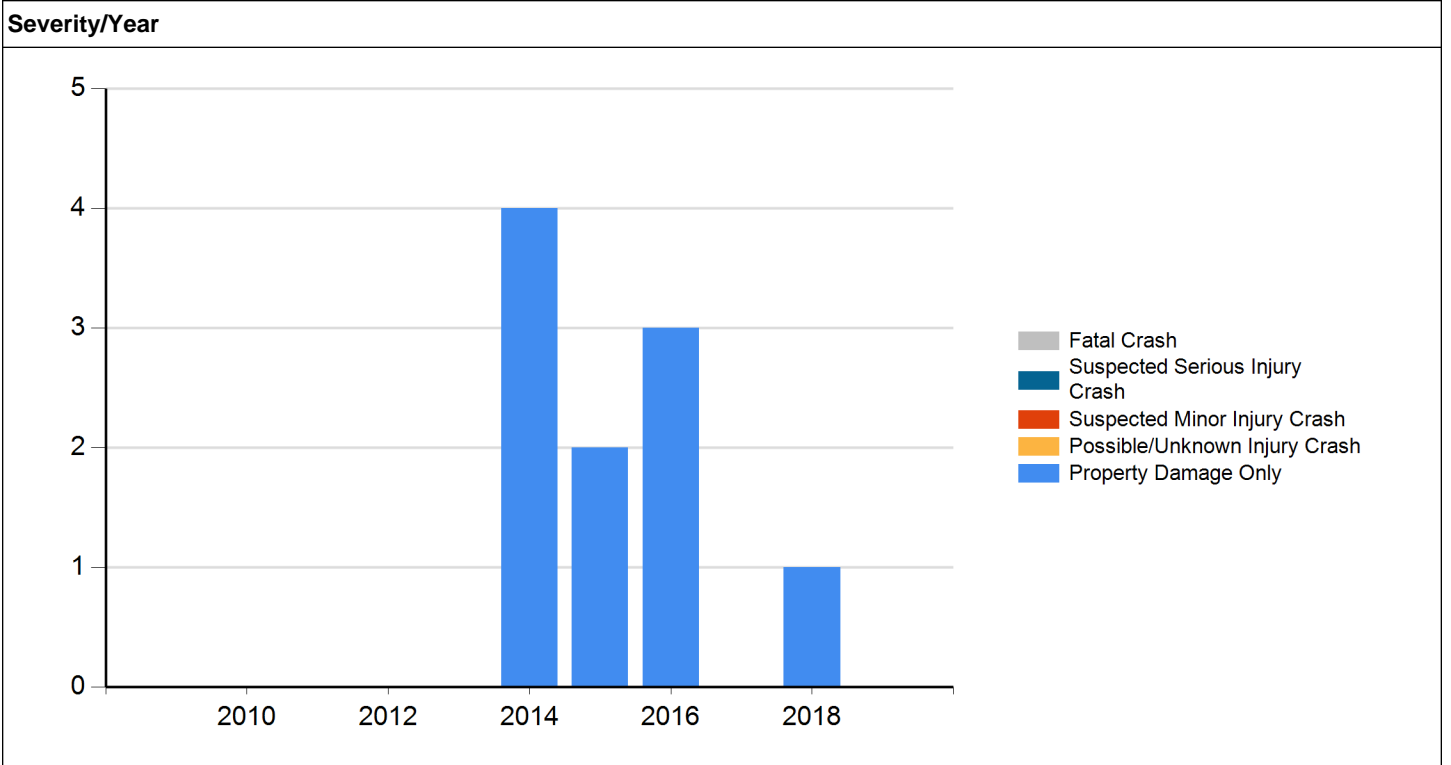
Drug Test Result	20
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	20
Other	0

Drug/Alcohol Related	10
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	10



Iowa Crash Analysis Tool
Quick Report
2014-2018

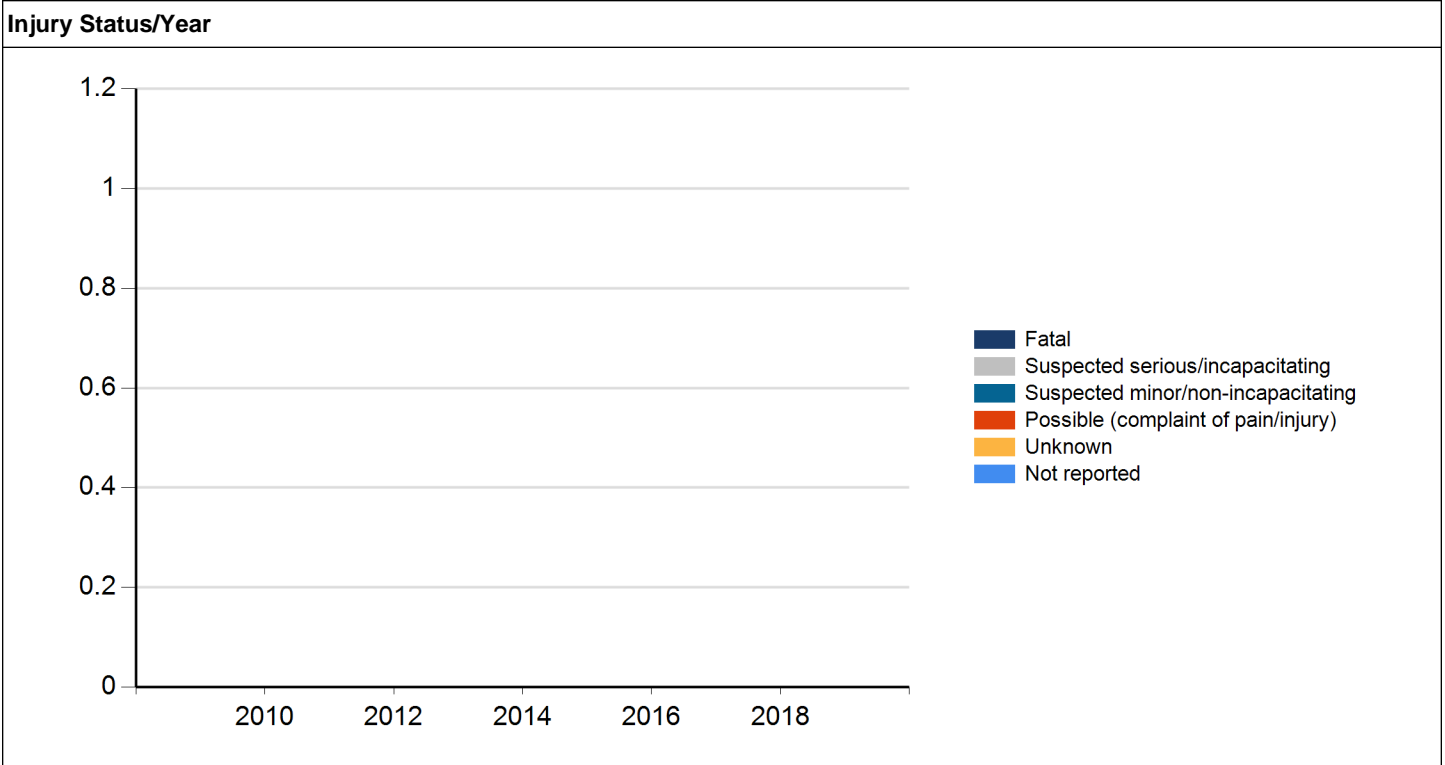
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	4	4	4
2015	0	0	0	0	2	2	2
2016	0	0	0	0	3	3	3
2017	0	0	0	0	0	0	0
2018	0	0	0	0	1	1	1
2019	0	0	0	0	0	0	0
Total	0	0	0	0	10	10	10





Iowa Crash Analysis Tool
Quick Report
2014-2018

Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	20
Fatal Crash	0
Suspected Serious Injury Crash	3
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	3
Property Damage Only	13

Injury Status Summary	12
Fatal	0
Suspected serious/incapacitating	3
Suspected minor/non-incapacitating	3
Possible (complaint of pain/injury)	5
Unknown	1
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	100,783.00
Average (per crash dollars):	5,039.15
Total Vehicles:	41.00
Average (per crash):	2.05
Total Occupants:	53.00
Average (per crash):	2.65

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.55
Major Injuries/Crash:	0.15
Minor Injuries/Crash:	0.15
Possible/Unknown Injuries/Crash:	0.25





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			20
Animal	0	Ran traffic signal	1
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	4	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	1	Followed too close	7
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	1	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	4
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	2	1	0	0	0	3
Tuesday	0	0	0	0	0	1	0	1	1	0	0	0	0	3
Wednesday	0	0	0	0	0	2	0	0	0	1	0	0	0	3
Thursday	0	0	0	0	0	2	2	0	1	1	0	0	0	6
Friday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Saturday	0	0	0	0	2	0	0	0	0	0	1	0	0	3
Total	0	0	0	0	2	5	2	2	4	4	1	0	0	20

Manner of Crash Collision	20
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	15
Angle, oncoming left turn	4
Broadside (front to side)	1
Sideswipe, same direction	0
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	20
Dry	12
Wet	7
Ice/frost	0
Snow	1
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	41
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...)	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	41



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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	2	1	0	0	3
= 17	1	0	0	0	1
= 18	1	0	0	0	1
= 19	1	1	0	0	2
= 20	0	1	0	0	1
>= 21 and <= 24	2	3	0	0	5
>= 25 and <= 29	2	1	0	0	3
>= 30 and <= 34	3	2	0	0	5
>= 35 and <= 39	4	3	0	0	7
>= 40 and <= 44	3	0	0	0	3
>= 45 and <= 49	1	1	0	0	2
>= 50 and <= 54	1	3	0	0	4
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	1	0	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	1	0	0	0	1
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	23	17	1	0	41

Alcohol Test Given	41
None	40
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Given	41
None	40
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

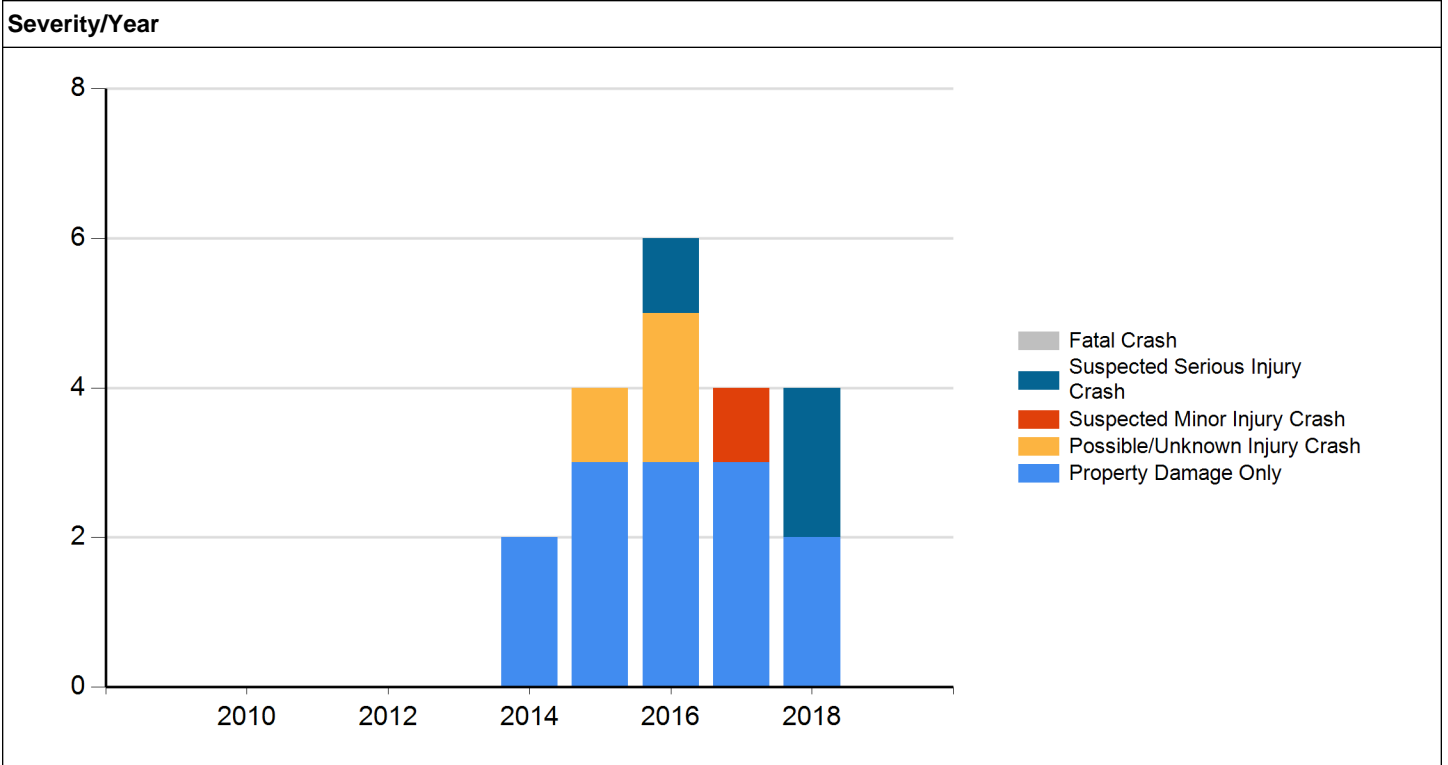
Drug Test Result	41
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	41
Other	0

Drug/Alcohol Related	20
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	20



Iowa Crash Analysis Tool
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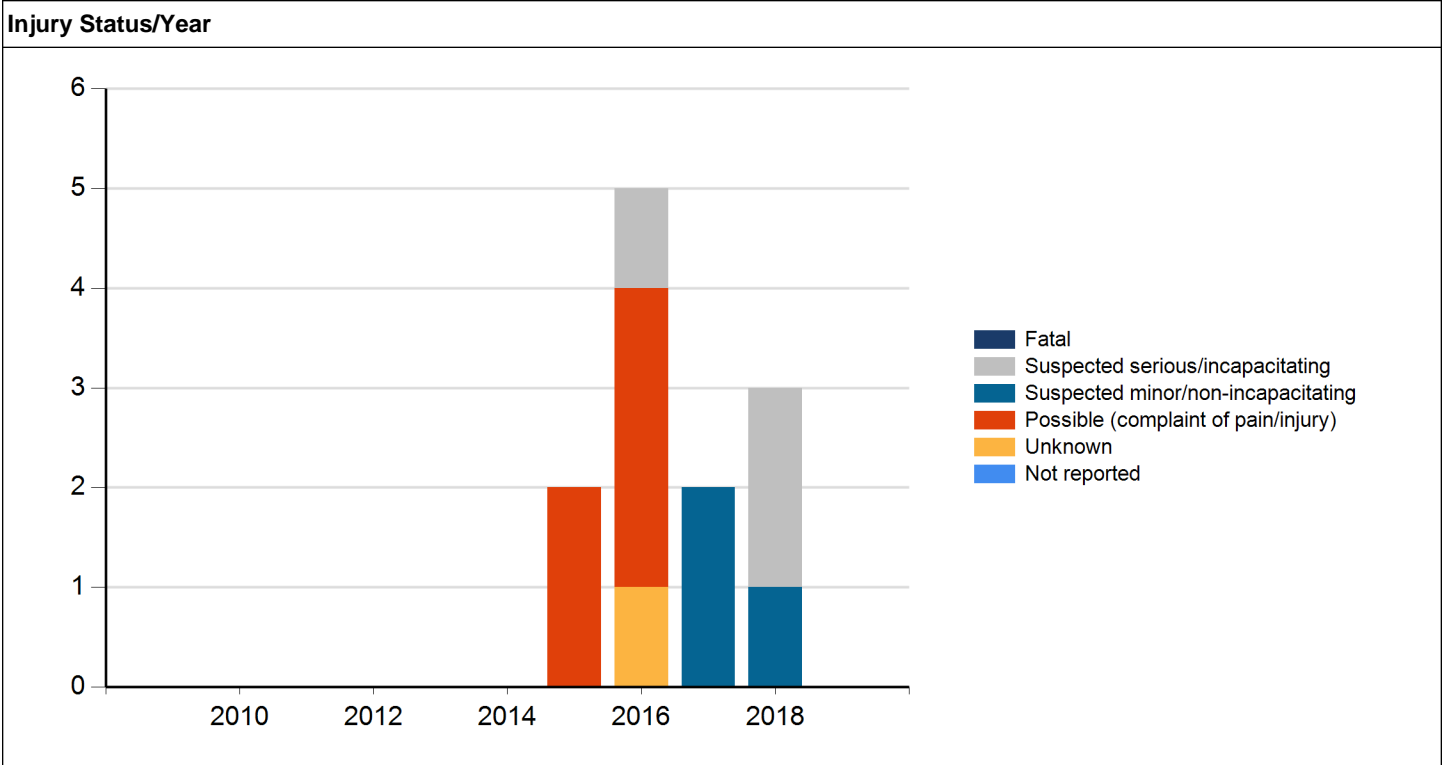
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	
2010	0	0	0	0	0	0	
2011	0	0	0	0	0	0	
2012	0	0	0	0	0	0	
2013	0	0	0	0	0	0	
2014	0	0	0	0	2	2	
2015	0	0	0	1	3	4	
2016	0	1	0	2	3	6	
2017	0	0	1	0	3	4	
2018	0	2	0	0	2	4	
2019	0	0	0	0	0	0	
Total	0	3	1	3	13	20	





Iowa Crash Analysis Tool
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	2	0	0	2
2016	0	1	0	3	1	0	5
2017	0	0	2	0	0	0	2
2018	0	2	1	0	0	0	3
2019	0	0	0	0	0	0	0
Total	0	3	3	5	1	0	12





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



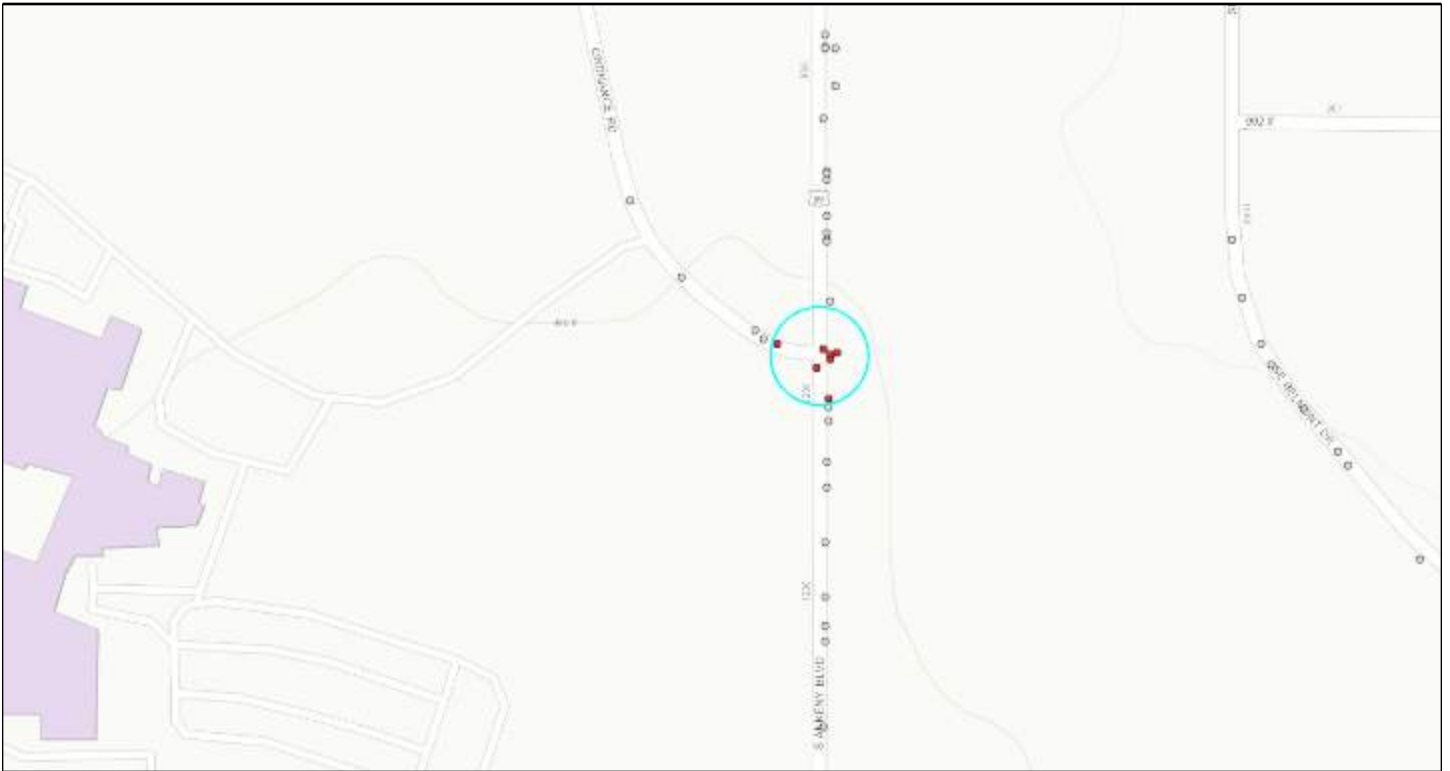
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	15
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	2
Property Damage Only	12

Injury Status Summary	11
Fatal	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	9
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	72,200.00
Average (per crash dollars):	4,813.33
Total Vehicles:	31.00
Average (per crash):	2.07
Total Occupants:	45.00
Average (per crash):	3.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.73
Major Injuries/Crash:	0.07
Minor Injuries/Crash:	0.07
Possible/Unknown Injuries/Crash:	0.60





Iowa Crash Analysis Tool
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Major Cause			15
Animal	0	Ran traffic signal	2
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	2
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	5
Unknown	1	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
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Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	2	1	0	0	0	0	0	3
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	1	2	0	1	1	0	0	0	0	0	5
Wednesday	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Friday	0	0	0	0	0	2	0	0	1	0	0	0	0	3
Saturday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	2	2	3	4	3	1	0	0	0	0	15

Manner of Crash Collision	15
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	7
Angle, oncoming left turn	2
Broadside (front to side)	3
Sideswipe, same direction	1
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	15
Dry	13
Wet	1
Ice/frost	0
Snow	1
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	31
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	1
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	30



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	2	1	0	0	3
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	1	1	0	0	2
>= 21 and <= 24	2	0	0	0	2
>= 25 and <= 29	3	2	0	0	5
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	2	1	0	0	3
>= 40 and <= 44	4	0	0	0	4
>= 45 and <= 49	1	0	0	0	1
>= 50 and <= 54	1	0	0	0	1
>= 55 and <= 59	1	1	1	0	3
>= 60 and <= 64	1	1	0	0	2
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	2	0	0	0	2
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	20	10	1	0	31

Alcohol Test Given	31
None	31
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Given	31
None	31
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

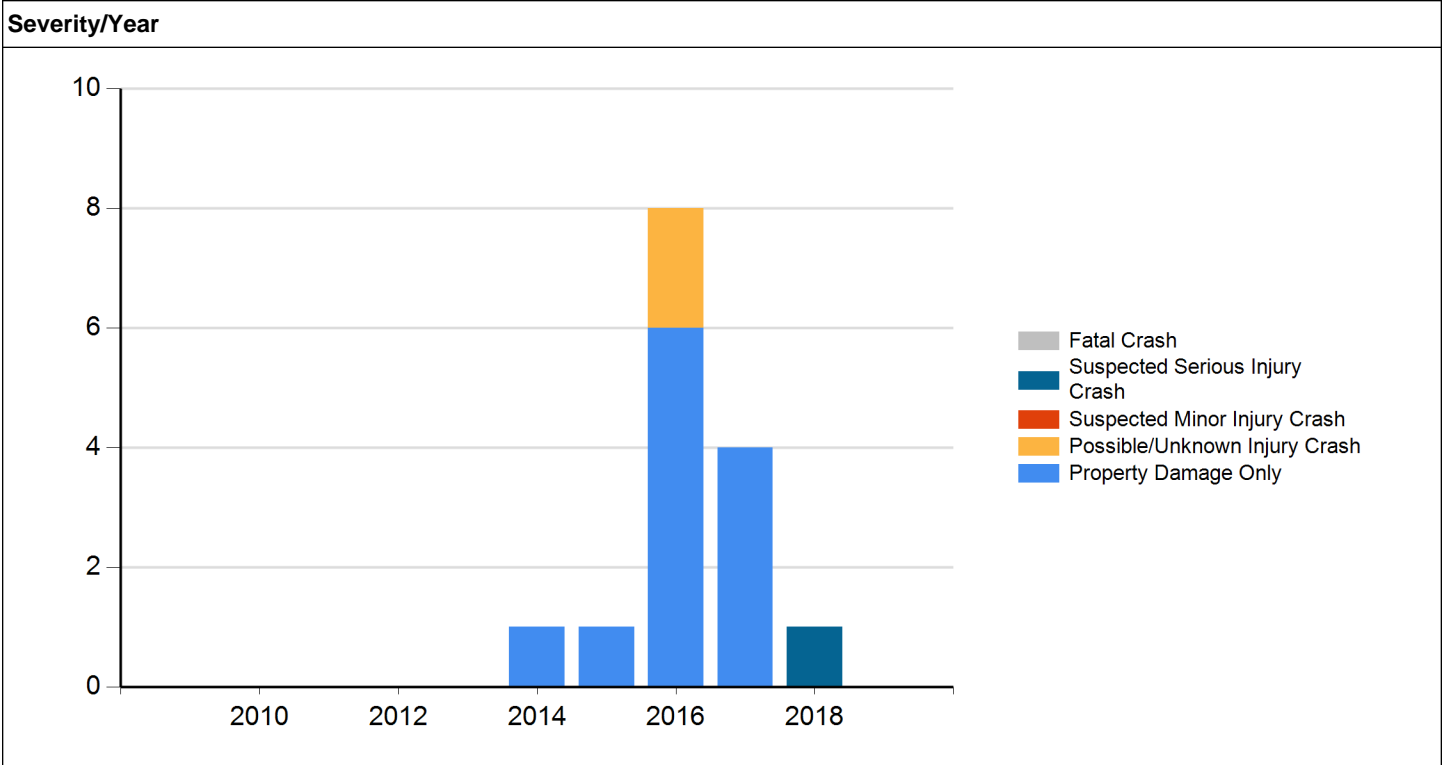
Drug Test Result	31
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	31
Other	0

Drug/Alcohol Related	15
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	15

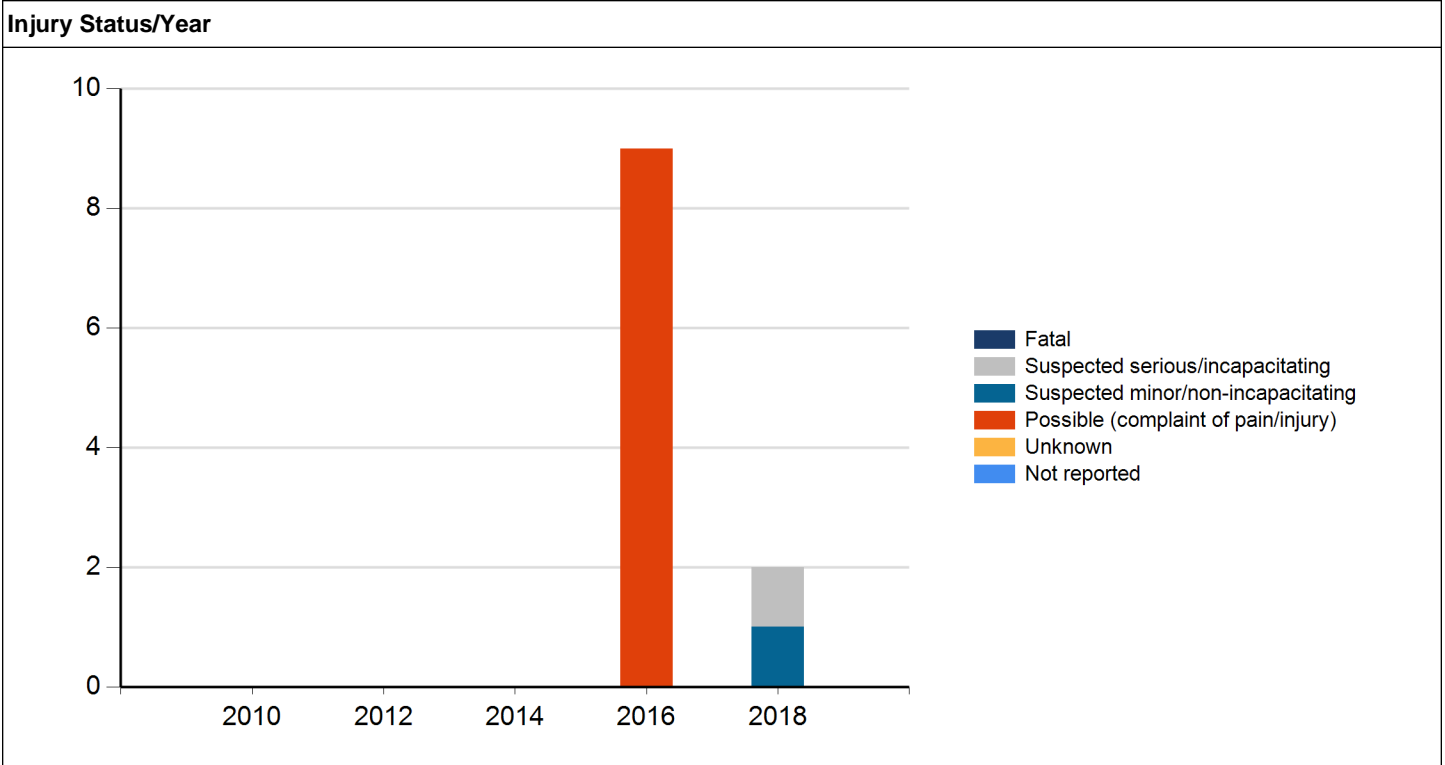


Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	1	1	1
2015	0	0	0	0	1	1	1
2016	0	0	0	2	6	8	8
2017	0	0	0	0	4	4	4
2018	0	1	0	0	0	1	1
2019	0	0	0	0	0	0	0
Total	0	1	0	2	12	15	



Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	9	0	0	9
2017	0	0	0	0	0	0	0
2018	0	1	1	0	0	0	2
2019	0	0	0	0	0	0	0
Total	0	1	1	9	0	0	11





Iowa Crash Analysis Tool
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2014-2018

Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



Iowa Crash Analysis Tool
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2014-2018

Crash Severity	16
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	1
Property Damage Only	14

Injury Status Summary	2
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	1
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	65,350.00
Average (per crash dollars):	4,084.38
Total Vehicles:	34.00
Average (per crash):	2.13
Total Occupants:	44.00
Average (per crash):	2.75

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.13
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.06
Possible/Unknown Injuries/Crash:	0.06





Iowa Crash Analysis Tool
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Major Cause			16
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	1
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	1
Operating vehicle in an reckless, erratic, ca...	1	Followed too close	6
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	2
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	2	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	1	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Monday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tuesday	0	0	0	1	0	1	0	1	1	0	0	0	0	4
Wednesday	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Friday	0	0	0	0	0	0	1	0	2	0	0	0	0	3
Saturday	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	0	0	0	1	2	3	1	4	5	0	0	0	0	16

Manner of Crash Collision	16
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	12
Angle, oncoming left turn	1
Broadside (front to side)	1
Sideswipe, same direction	2
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	16
Dry	13
Wet	2
Ice/frost	0
Snow	1
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	34		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	34



Iowa Crash Analysis Tool
Quick Report
2014-2018

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	1	0	0	0	1
= 16	1	0	0	0	1
= 17	2	1	0	0	3
= 18	1	0	0	0	1
= 19	0	1	0	0	1
= 20	0	1	0	0	1
>= 21 and <= 24	1	1	0	0	2
>= 25 and <= 29	0	4	0	0	4
>= 30 and <= 34	0	5	0	0	5
>= 35 and <= 39	1	1	0	0	2
>= 40 and <= 44	2	1	0	0	3
>= 45 and <= 49	1	1	0	0	2
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	1	2	0	0	3
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	1	1	0	0	2
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	12	21	0	0	33

Alcohol Test Given	34
None	32
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	1
Not reported	1

Drug Test Given	34
None	33
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

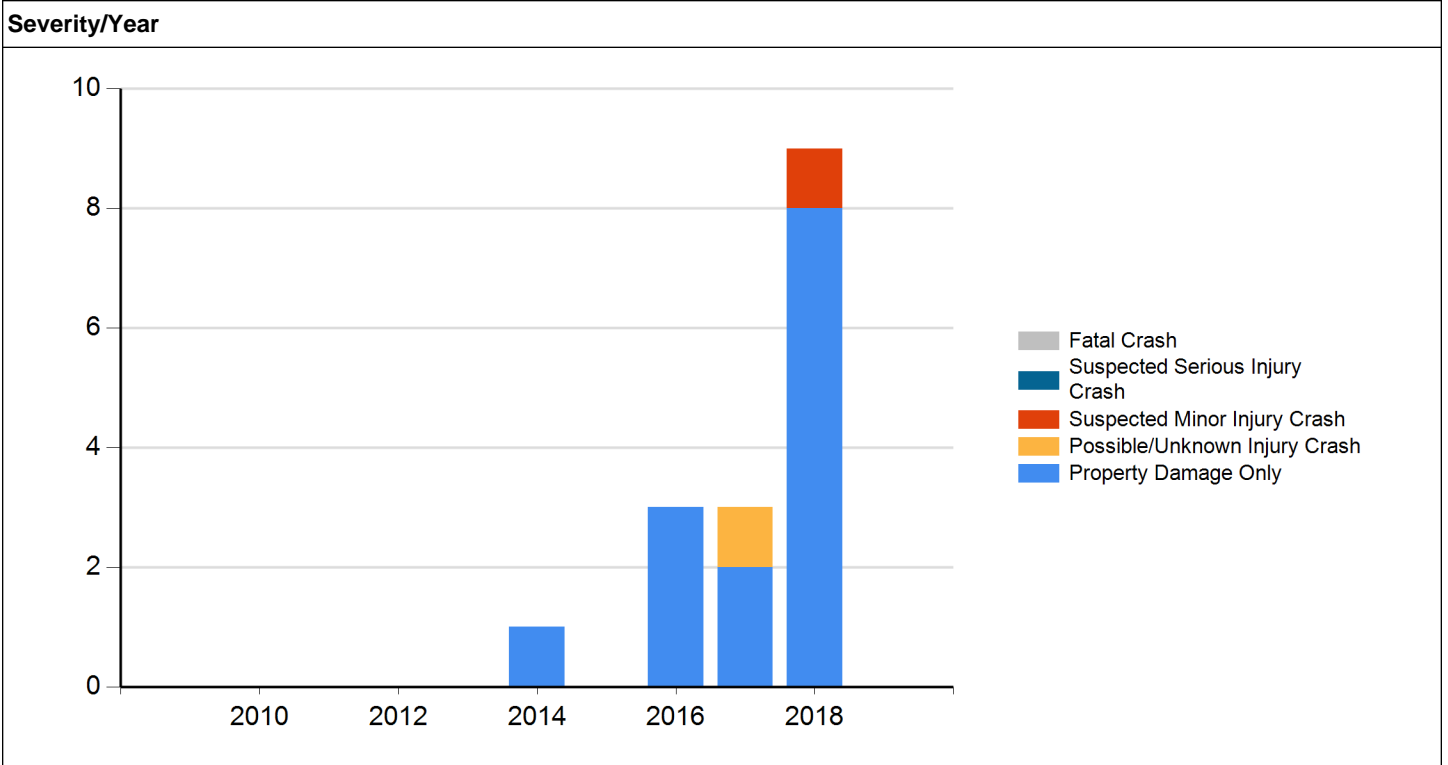
Drug Test Result	34
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	34
Other	0

Drug/Alcohol Related	16
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	1
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	15



Iowa Crash Analysis Tool
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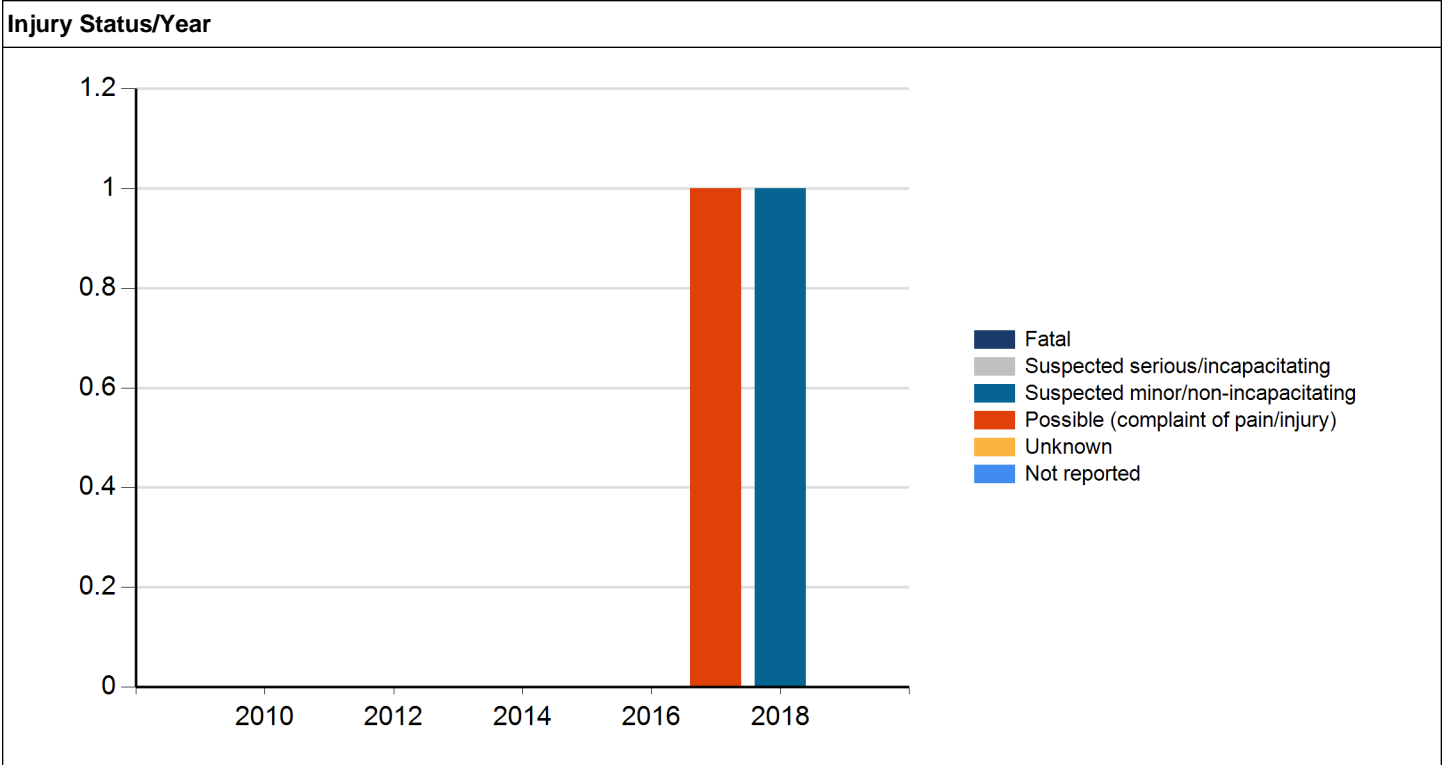
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	1	1
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	3	3
2017	0	0	0	1	2	3	3
2018	0	0	1	0	8	9	9
2019	0	0	0	0	0	0	0
Total	0	0	1	1	14	16	





Iowa Crash Analysis Tool
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	0	1	0	0	1
2018	0	0	1	0	0	0	1
2019	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	2





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



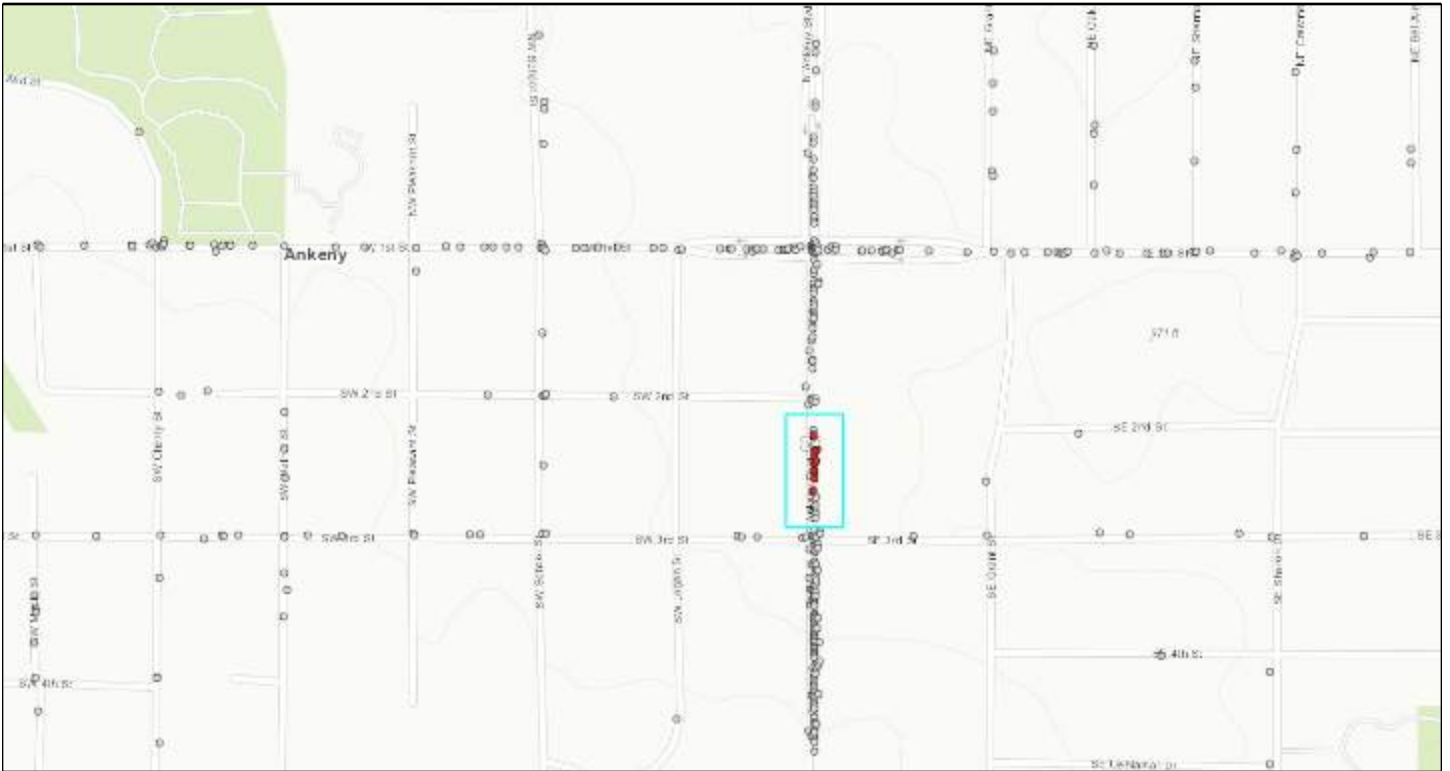
Iowa Crash Analysis Tool
Quick Report
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Crash Severity	14
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	1
Property Damage Only	12

Injury Status Summary	2
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	1
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	81,900.00
Average (per crash dollars):	5,850.00
Total Vehicles:	32.00
Average (per crash):	2.29
Total Occupants:	49.00
Average (per crash):	3.50

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.14
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.07
Possible/Unknown Injuries/Crash:	0.07





Iowa Crash Analysis Tool
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Major Cause			14
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	1	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	2
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	3
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	2
Driver Distraction: Manual operation of an e...	1	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	2
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	3
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
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Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Wednesday	0	0	0	0	1	0	0	0	2	0	0	0	0	3
Thursday	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Friday	0	0	0	0	0	0	1	0	2	0	1	0	0	4
Saturday	0	0	0	0	1	1	1	0	0	0	0	0	0	3
Total	0	0	0	0	2	1	3	1	5	1	1	0	0	14

Manner of Crash Collision	14
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	8
Angle, oncoming left turn	0
Broadside (front to side)	0
Sideswipe, same direction	5
Sideswipe, opposite direction	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	14
Dry	10
Wet	4
Ice/frost	0
Snow	0
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	32
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	32



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	1	2	0	0	3
= 18	1	0	0	0	1
= 19	0	0	0	0	0
= 20	1	1	0	0	2
>= 21 and <= 24	1	5	0	0	6
>= 25 and <= 29	1	2	0	0	3
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	2	3	0	0	5
>= 40 and <= 44	0	2	0	0	2
>= 45 and <= 49	2	0	0	0	2
>= 50 and <= 54	2	0	0	0	2
>= 55 and <= 59	0	2	0	0	2
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	0	1	0	0	1
>= 70 and <= 74	1	0	0	0	1
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	12	19	1	0	32

Alcohol Test Given	32
None	31
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Given	32
None	31
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

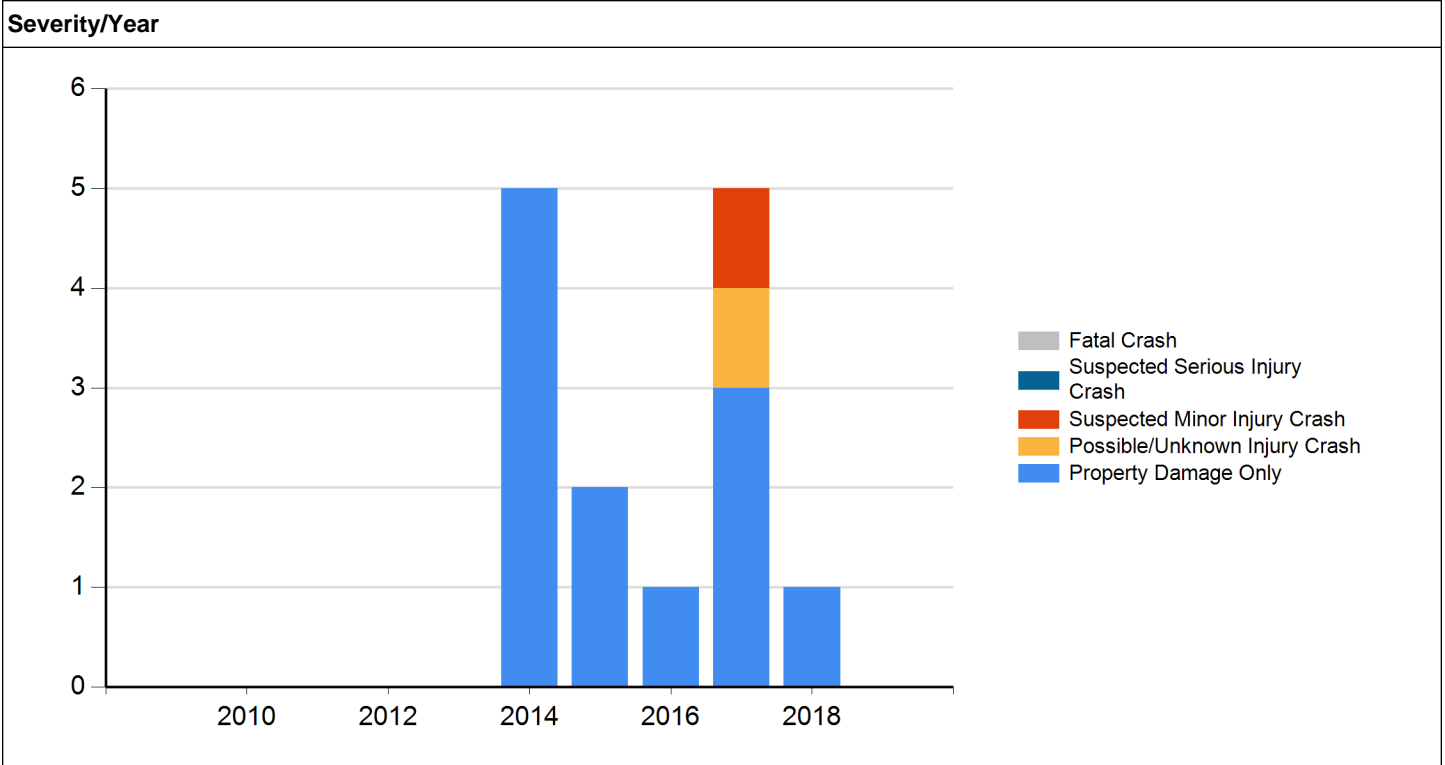
Drug Test Result	32
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	32
Other	0

Drug/Alcohol Related	14
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	14



Iowa Crash Analysis Tool
Quick Report
2014-2018

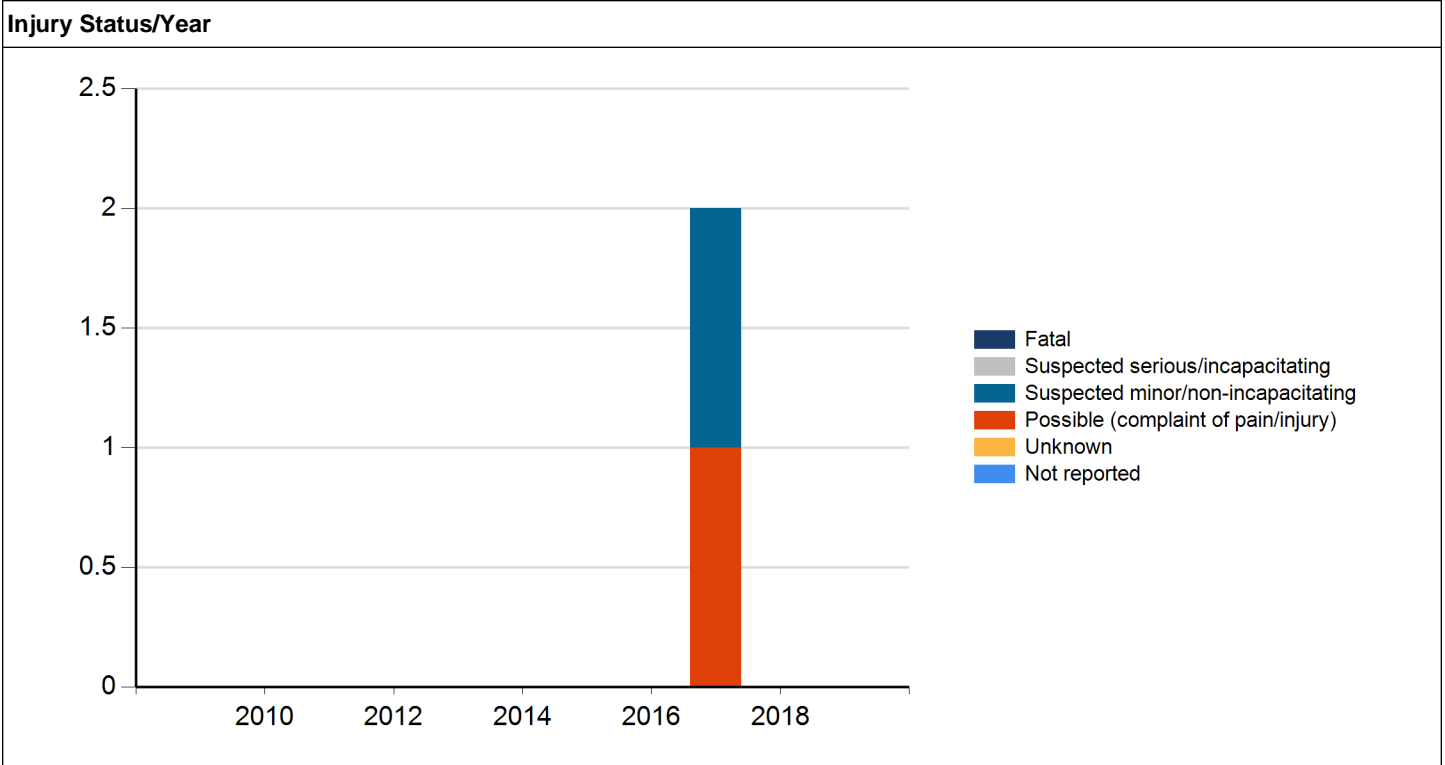
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	5	5
2015	0	0	0	0	2	2
2016	0	0	0	0	1	1
2017	0	0	1	1	3	5
2018	0	0	0	0	1	1
2019	0	0	0	0	0	0
Total	0	0	1	1	12	14





Iowa Crash Analysis Tool
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	1	1	0	0	2
2018	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	2





Iowa Crash Analysis Tool
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Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



Iowa Crash Analysis Tool
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Crash Severity	64
Fatal Crash	1
Suspected Serious Injury Crash	2
Suspected Minor Injury Crash	4
Possible/Unknown Injury Crash	14
Property Damage Only	43

Injury Status Summary	30
Fatal	2
Suspected serious/incapacitating	2
Suspected minor/non-incapacitating	9
Possible (complaint of pain/injury)	17
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	450,342.00
Average (per crash dollars):	7,036.59
Total Vehicles:	137.00
Average (per crash):	2.14
Total Occupants:	191.00
Average (per crash):	2.98

Average Severity	
Fatalities/Fatal Crash:	2.00
Fatalities/Crash:	0.03
Injuries/Crash:	0.44
Major Injuries/Crash:	0.03
Minor Injuries/Crash:	0.14
Possible/Unknown Injuries/Crash:	0.27





Iowa Crash Analysis Tool
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Major Cause			63
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	7	FTYROW: From driveway	7
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	1
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	5
Exceeded authorized speed	0	Improper or erratic lane changing	3
Operating vehicle in an reckless, erratic, ca...	2	Followed too close	11
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	2
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	2	Driver Distraction: Other interior distracti...	4
Driver Distraction: Exterior distraction	1	Ran off road - right	1
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	1	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	1	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	14
Unknown	1	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	1	0	2	0	0	0	0	3
Monday	0	0	0	0	0	1	2	4	2	2	1	0	0	12
Tuesday	0	0	0	0	2	0	4	2	2	1	1	0	0	12
Wednesday	0	0	0	0	1	1	2	2	2	2	0	0	0	10
Thursday	0	0	0	0	0	1	2	1	3	1	0	0	0	8
Friday	0	0	0	0	0	3	3	1	1	0	0	0	0	8
Saturday	0	0	0	0	0	4	2	1	1	2	1	0	0	11
Total	0	0	0	0	3	10	16	11	13	8	3	0	0	64

Manner of Crash Collision	64
Non-collision (single vehicle)	1
Head-on (front to front)	3
Rear-end (front to rear)	38
Angle, oncoming left turn	7
Broadside (front to side)	8
Sideswipe, same direction	5
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	2
Unknown	0

Surface Conditions	64
Dry	43
Wet	17
Ice/frost	2
Snow	2
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	137		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	1	Traffic sign support	1
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	135



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	1	0	0	1
= 16	4	5	0	0	9
= 17	4	5	0	0	9
= 18	4	5	0	0	9
= 19	6	6	0	0	12
= 20	3	2	0	0	5
>= 21 and <= 24	7	5	0	0	12
>= 25 and <= 29	7	9	0	0	16
>= 30 and <= 34	7	1	0	0	8
>= 35 and <= 39	9	5	0	0	14
>= 40 and <= 44	6	1	0	0	7
>= 45 and <= 49	3	2	0	0	5
>= 50 and <= 54	5	2	1	0	8
>= 55 and <= 59	3	4	0	0	7
>= 60 and <= 64	3	3	0	0	6
>= 65 and <= 69	2	0	0	0	2
>= 70 and <= 74	0	3	0	0	3
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	1	0	0	0	1
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	74	60	1	0	135

Alcohol Test Given	137
None	134
Blood	0
Urine	1
Breath	0
Vitreous	0
Refused	0
Not reported	2

Drug Test Given	137
None	134
Blood	1
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	2

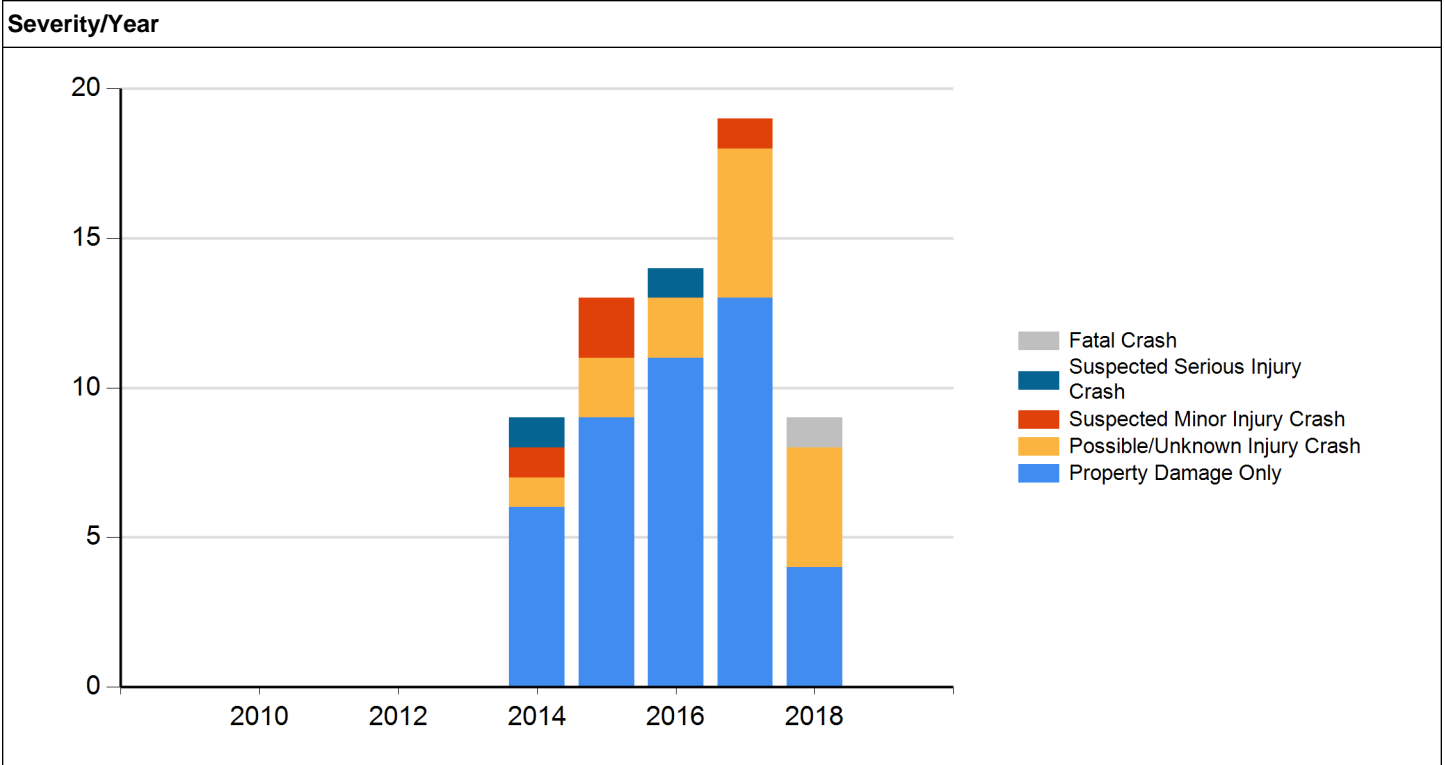
Drug Test Result	137
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	137
Other	0

Drug/Alcohol Related	64
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	1
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	63



Iowa Crash Analysis Tool
Quick Report
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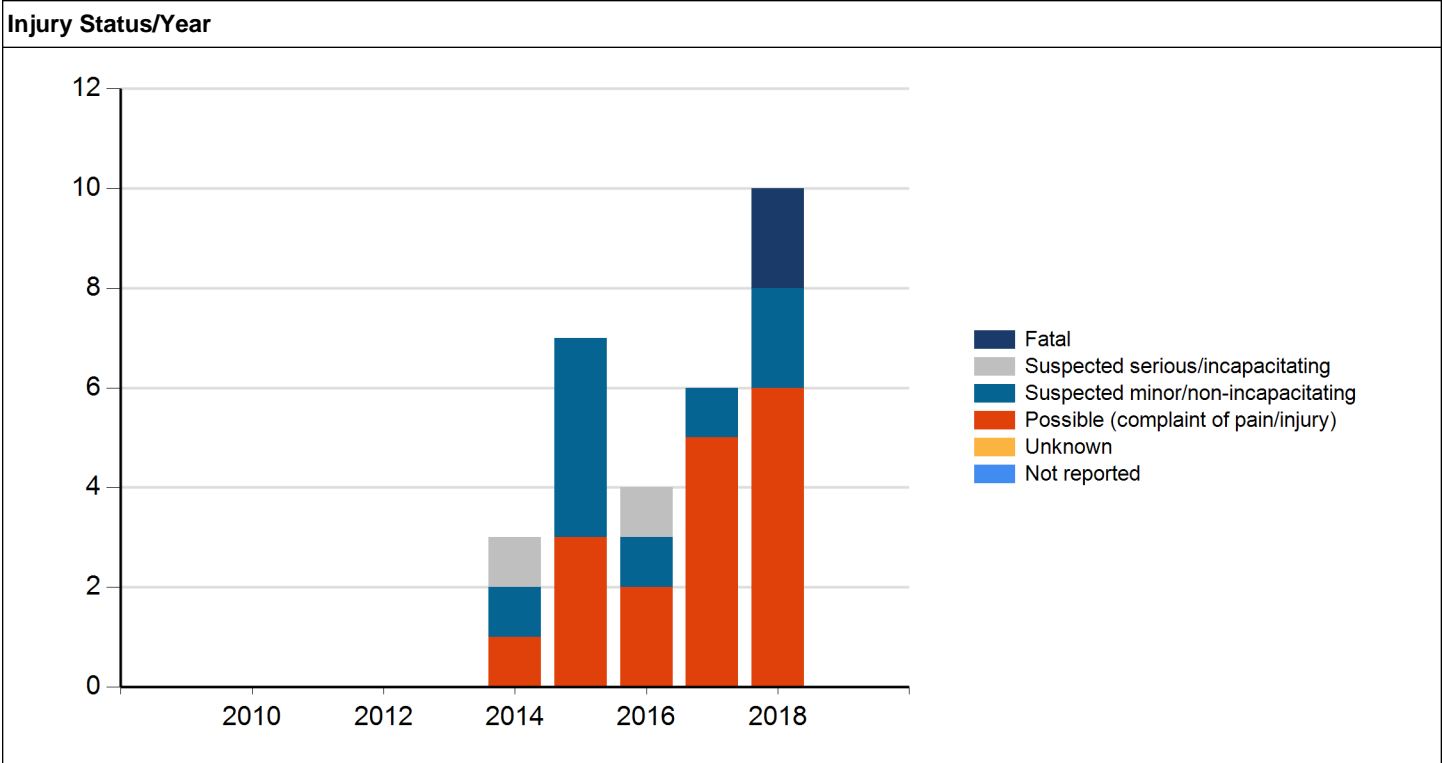
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	1	1	1	6	9	9
2015	0	0	2	2	9	13	13
2016	0	1	0	2	11	14	14
2017	0	0	1	5	13	19	19
2018	1	0	0	4	4	9	9
2019	0	0	0	0	0	0	0
Total	1	2	4	14	43	64	64





Iowa Crash Analysis Tool
Quick Report
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	1	1	1	0	0	3
2015	0	0	4	3	0	0	7
2016	0	1	1	2	0	0	4
2017	0	0	1	5	0	0	6
2018	2	0	2	6	0	0	10
2019	0	0	0	0	0	0	0
Total	2	2	9	17	0	0	30





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



Iowa Crash Analysis Tool
Quick Report
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Crash Severity	6
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	5

Injury Status Summary	2
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	1
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	39,950.00
Average (per crash dollars):	6,658.33
Total Vehicles:	17.00
Average (per crash):	2.83
Total Occupants:	23.00
Average (per crash):	3.83

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.33
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.17
Possible/Unknown Injuries/Crash:	0.17





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			6
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	3
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	2
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Tuesday	0	0	0	0	1	0	0	1	1	0	0	0	0	3
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Saturday	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	2	1	1	1	1	0	0	0	0	6

Manner of Crash Collision	6
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	4
Angle, oncoming left turn	0
Broadside (front to side)	0
Sideswipe, same direction	1
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	6
Dry	5
Wet	1
Ice/frost	0
Snow	0
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	17
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	17



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	2	0	0	2
= 18	0	1	0	0	1
= 19	2	1	0	0	3
= 20	0	0	0	0	0
>= 21 and <= 24	2	0	0	0	2
>= 25 and <= 29	1	0	0	0	1
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	0	1	0	0	1
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	1	0	0	0	1
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	0	1	0	0	1
>= 70 and <= 74	0	1	0	0	1
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	8	9	0	0	17

Alcohol Test Given	17
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Given	17
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

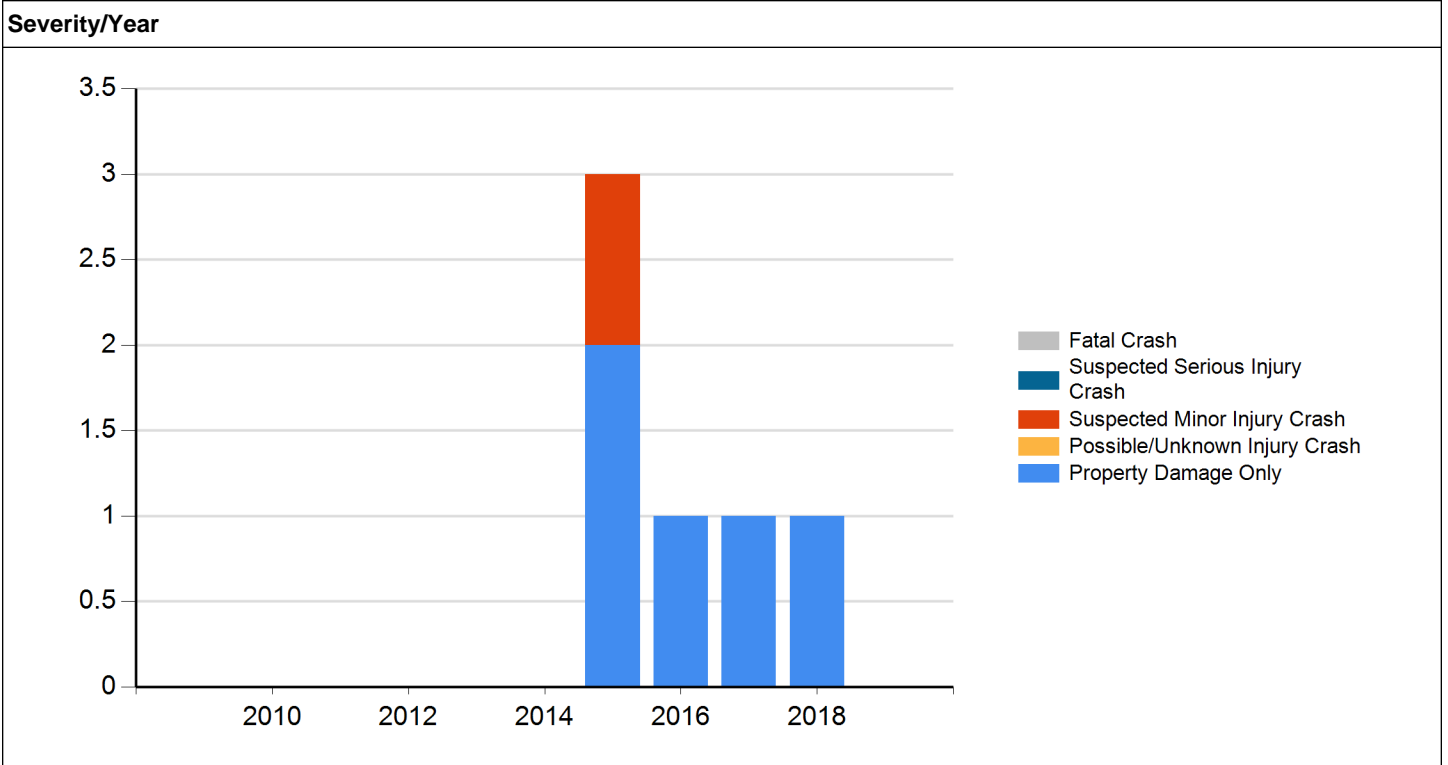
Drug Test Result	17
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	17
Other	0

Drug/Alcohol Related	6
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	6



Iowa Crash Analysis Tool
Quick Report
2014-2018

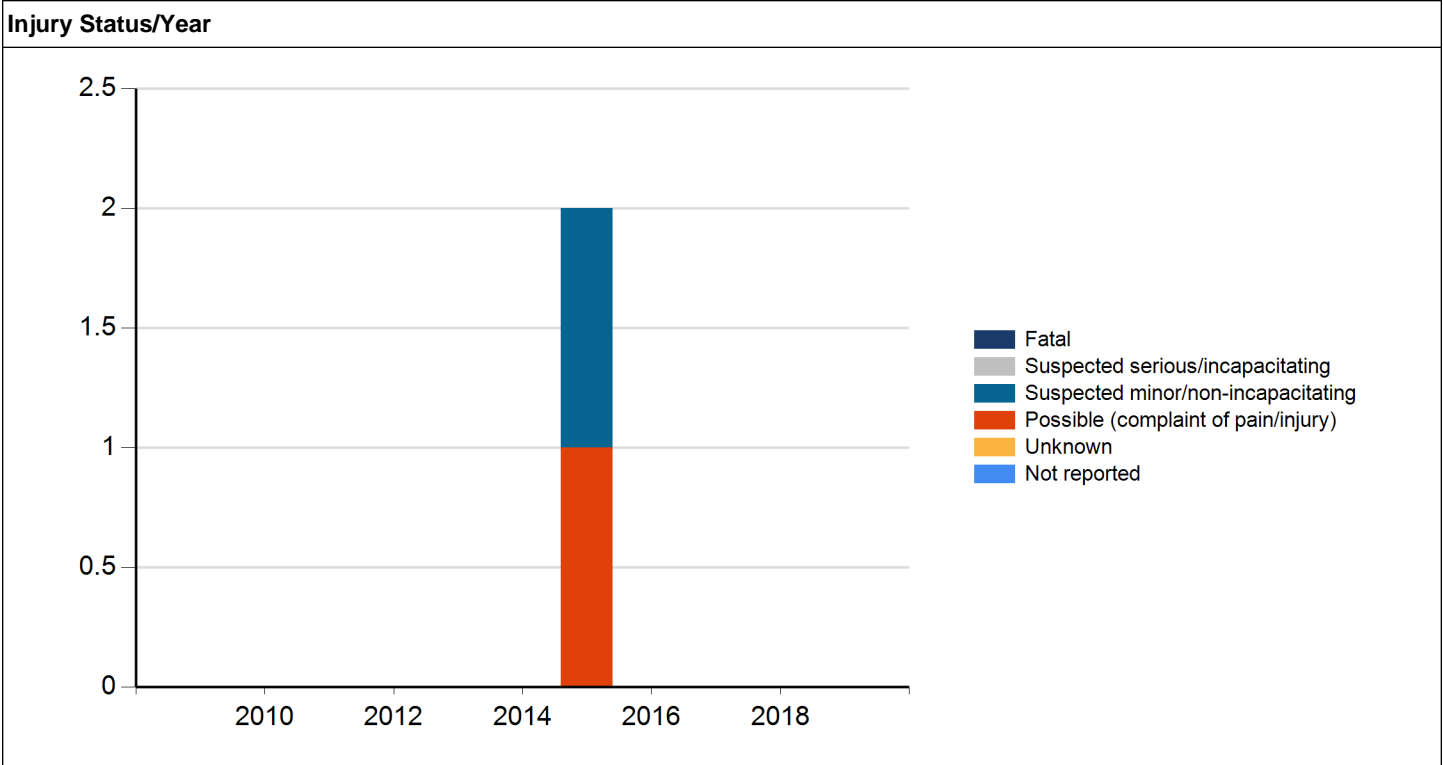
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	1	0	2	3
2016	0	0	0	0	1	1
2017	0	0	0	0	1	1
2018	0	0	0	0	1	1
2019	0	0	0	0	0	0
Total	0	0	1	0	5	6





Iowa Crash Analysis Tool
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	1	1	0	0	2
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	2





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



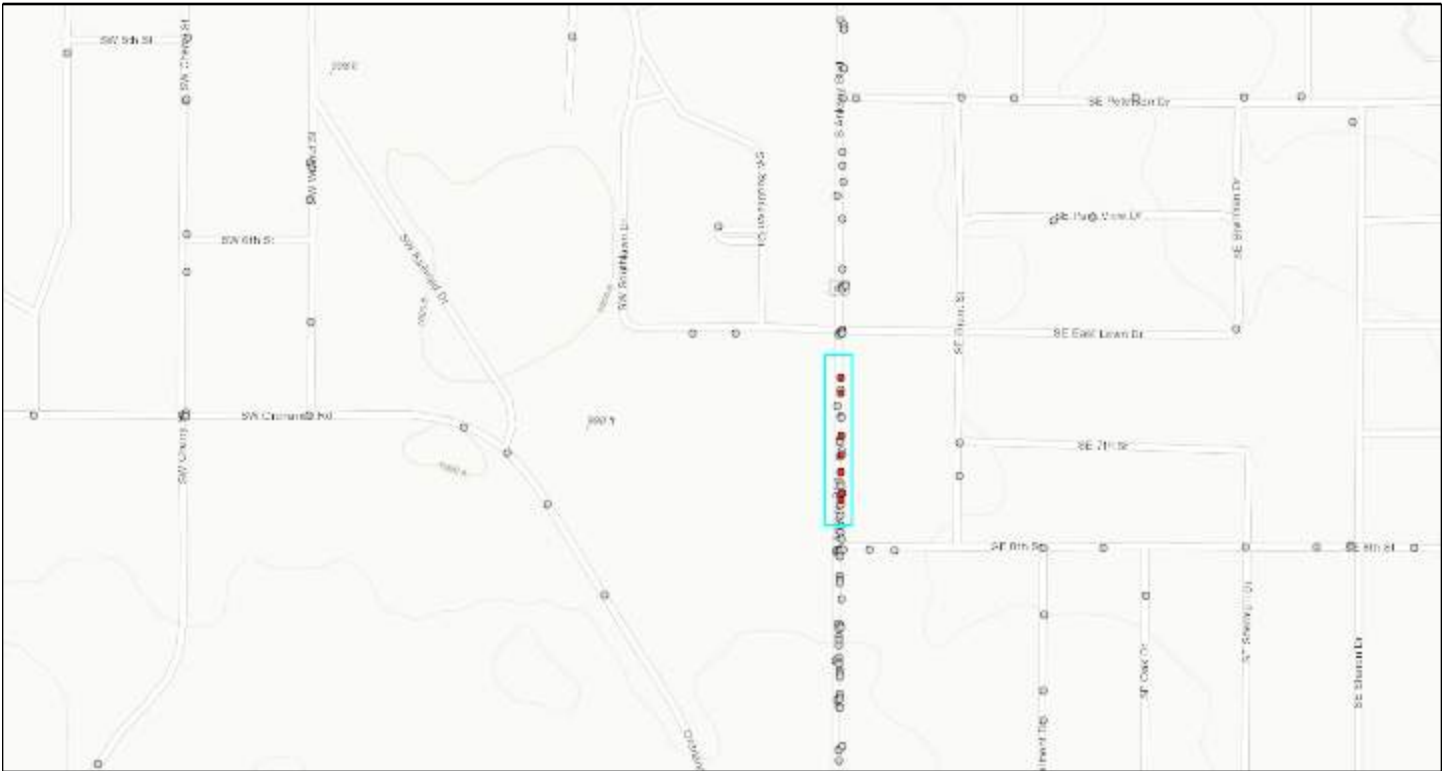
Iowa Crash Analysis Tool
Quick Report
2014-2018

Crash Severity	8
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	2
Property Damage Only	6

Injury Status Summary	2
Fatal	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	2
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	29,050.00
Average (per crash dollars):	3,631.25
Total Vehicles:	16.00
Average (per crash):	2.00
Total Occupants:	17.00
Average (per crash):	2.13

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.25
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.25





Iowa Crash Analysis Tool
Quick Report
2014-2018

Major Cause			8
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	1	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	2
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	3
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Wednesday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	3	0	1	0	0	0	0	0	4
Saturday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	1	0	3	1	2	1	0	0	0	0	8

Manner of Crash Collision	8
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	4
Angle, oncoming left turn	0
Broadside (front to side)	1
Sideswipe, same direction	3
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	8
Dry	8
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	16
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	16



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	1	0	0	2
= 17	1	0	0	0	1
= 18	0	0	0	0	0
= 19	1	1	0	0	2
= 20	2	0	0	0	2
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	1	0	0	1
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	1	1	0	0	2
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	1	1	0	0	2
>= 55 and <= 59	2	0	0	0	2
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	10	6	0	0	16

Alcohol Test Given	16
None	16
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Given	16
None	16
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

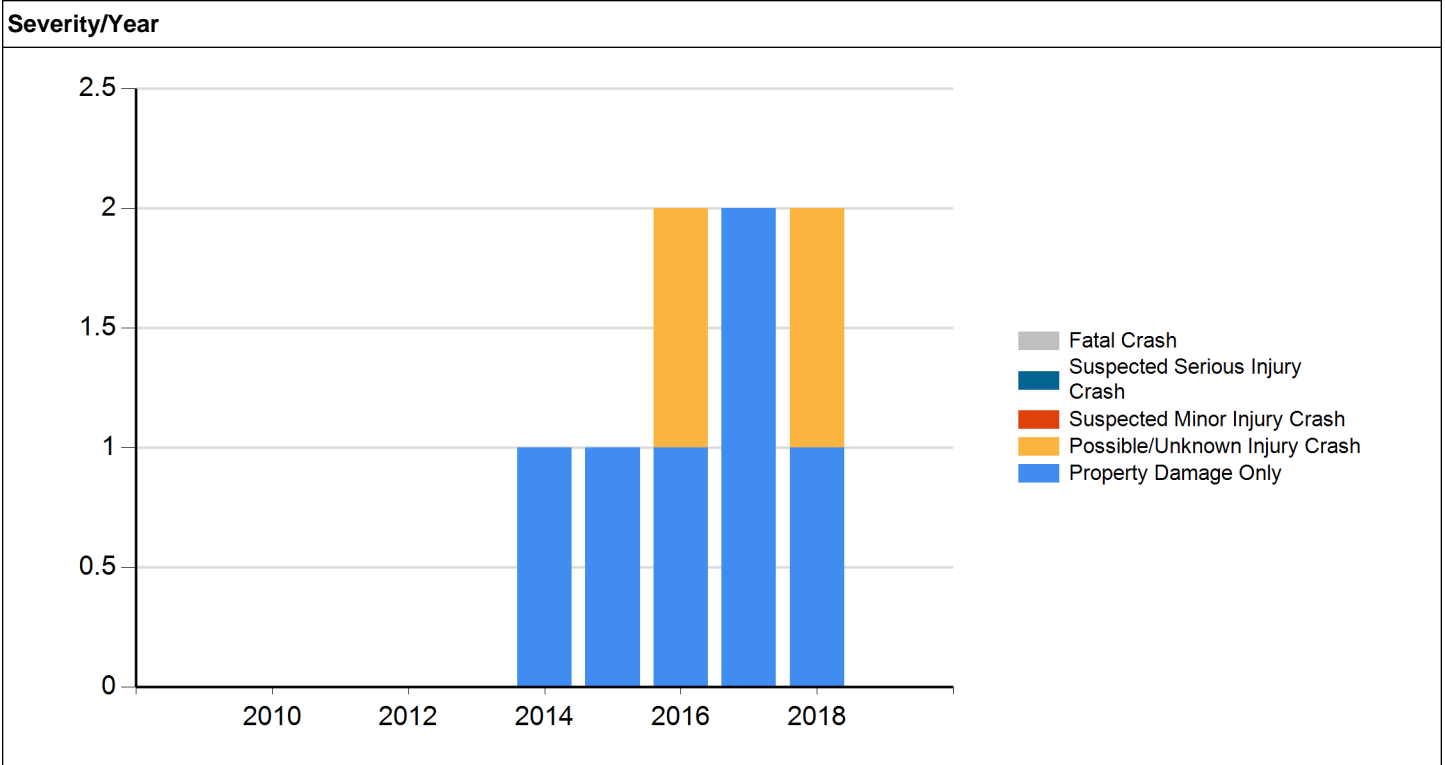
Drug Test Result	16
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	16
Other	0

Drug/Alcohol Related	8
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	8



Iowa Crash Analysis Tool
Quick Report
2014-2018

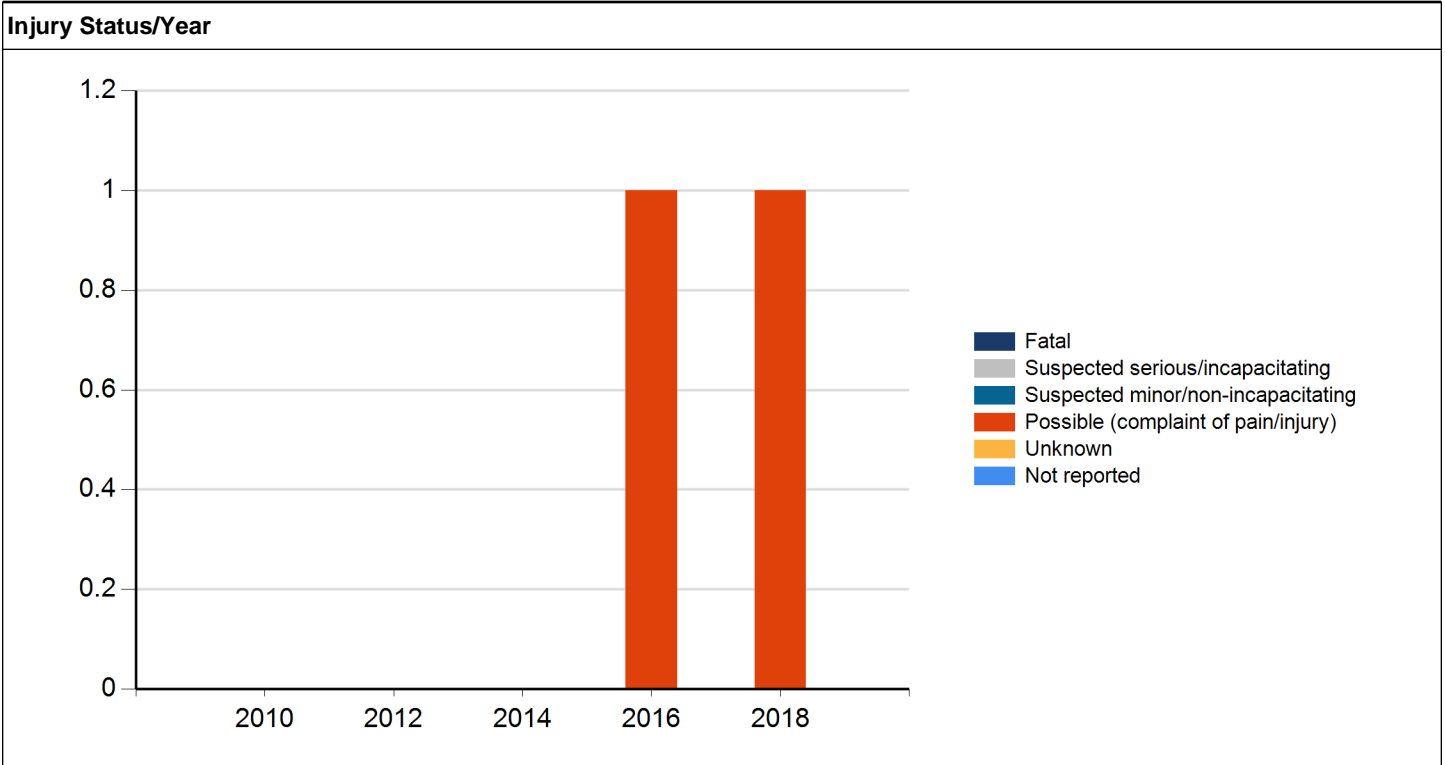
Crash Severity - Annual						
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	1	1
2015	0	0	0	0	1	1
2016	0	0	0	1	1	2
2017	0	0	0	0	2	2
2018	0	0	0	1	1	2
2019	0	0	0	0	0	0
Total	0	0	0	2	6	8





Iowa Crash Analysis Tool
Quick Report
2014-2018

Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	1	0	0	1
2017	0	0	0	0	0	0	0
2018	0	0	0	1	0	0	1
2019	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	2





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information



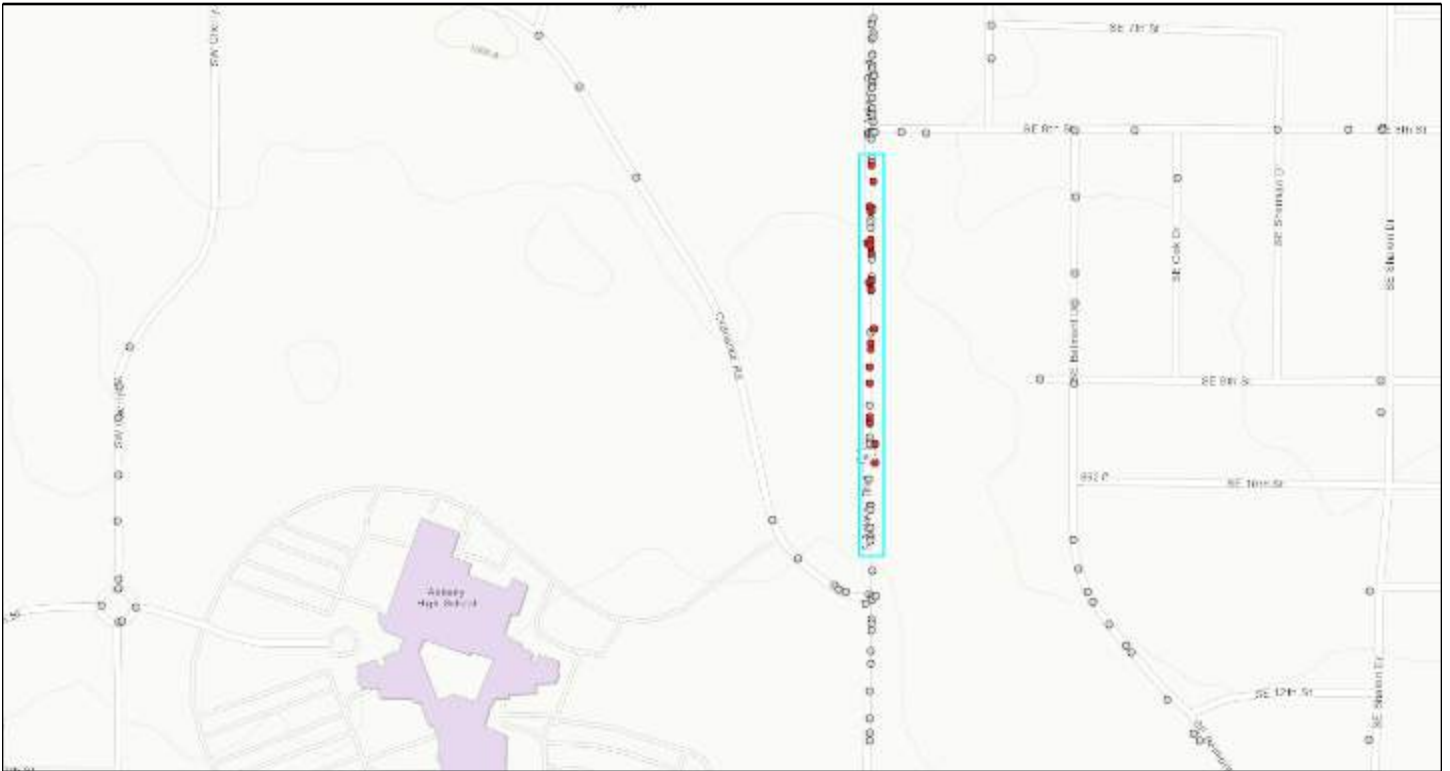
Iowa Crash Analysis Tool
Quick Report
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Crash Severity	24
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	3
Possible/Unknown Injury Crash	3
Property Damage Only	17

Injury Status Summary	8
Fatal	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	3
Possible (complaint of pain/injury)	4
Unknown	0
Not reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	162,650.00
Average (per crash dollars):	6,777.08
Total Vehicles:	61.00
Average (per crash):	2.54
Total Occupants:	81.00
Average (per crash):	3.38

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.33
Major Injuries/Crash:	0.04
Minor Injuries/Crash:	0.13
Possible/Unknown Injuries/Crash:	0.17





Iowa Crash Analysis Tool
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Major Cause			24
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	1
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	2
Operating vehicle in an reckless, erratic, ca...	0	Followed too close	10
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	1	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	1	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	5
Unknown	1	Not reported	0
Other: No improper action	0		



**Iowa Crash Analysis Tool
Quick Report
2014-2018**

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	1	1	0	0	0	0	0	2
Wednesday	0	0	0	0	0	0	0	2	1	1	0	1	0	5
Thursday	0	0	0	0	0	3	0	1	0	0	0	0	0	4
Friday	0	0	0	0	0	0	1	2	1	0	1	0	0	5
Saturday	0	0	0	1	1	3	1	0	1	0	0	0	0	7
Total	0	0	0	1	1	6	3	6	4	1	1	1	0	24

Manner of Crash Collision	24
Non-collision (single vehicle)	0
Head-on (front to front)	1
Rear-end (front to rear)	18
Angle, oncoming left turn	1
Broadside (front to side)	1
Sideswipe, same direction	3
Sideswipe, opposite direction	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	24
Dry	17
Wet	5
Ice/frost	0
Snow	2
Slush	0
Mud, dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	61
Bridge overhead structure	0
Bridge/bridge rail parapet	0
Ditch	0
Ground	0
Guardrail - face	0
Concrete traffic barrier (median or right sid...	0
Cable barrier	0
Utility pole/light support	0
Traffic signal support	0
Fire hydrant	0
Tree	0
Snow bank	0
Wall	0
Other fixed object	0
Bridge pier or support	0
Curb/island/raised median	0
Embankment	0
Culvert/pipe opening	0
Guardrail - end	0
Other traffic barrier	0
Impact attenuator/crash cushion	0
Traffic sign support	0
Other post/pole/support	0
Mailbox	0
Landscape/shrubbery	0
Fence	0
Building	0
None (no fixed object struck)	61



Iowa Crash Analysis Tool
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Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	1	5	0	0	6
= 18	3	0	0	0	3
= 19	1	1	0	0	2
= 20	1	0	0	0	1
>= 21 and <= 24	1	3	0	0	4
>= 25 and <= 29	4	3	1	0	8
>= 30 and <= 34	2	4	0	0	6
>= 35 and <= 39	1	1	1	0	3
>= 40 and <= 44	3	2	0	0	5
>= 45 and <= 49	2	0	0	0	2
>= 50 and <= 54	2	1	0	0	3
>= 55 and <= 59	5	0	0	0	5
>= 60 and <= 64	3	2	0	0	5
>= 65 and <= 69	2	0	0	0	2
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	5	0	5
Total	31	23	7	0	61

Alcohol Test Given	61
None	55
Blood	0
Urine	0
Breath	1
Vitreous	0
Refused	0
Not reported	5

Drug Test Given	61
None	55
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	6

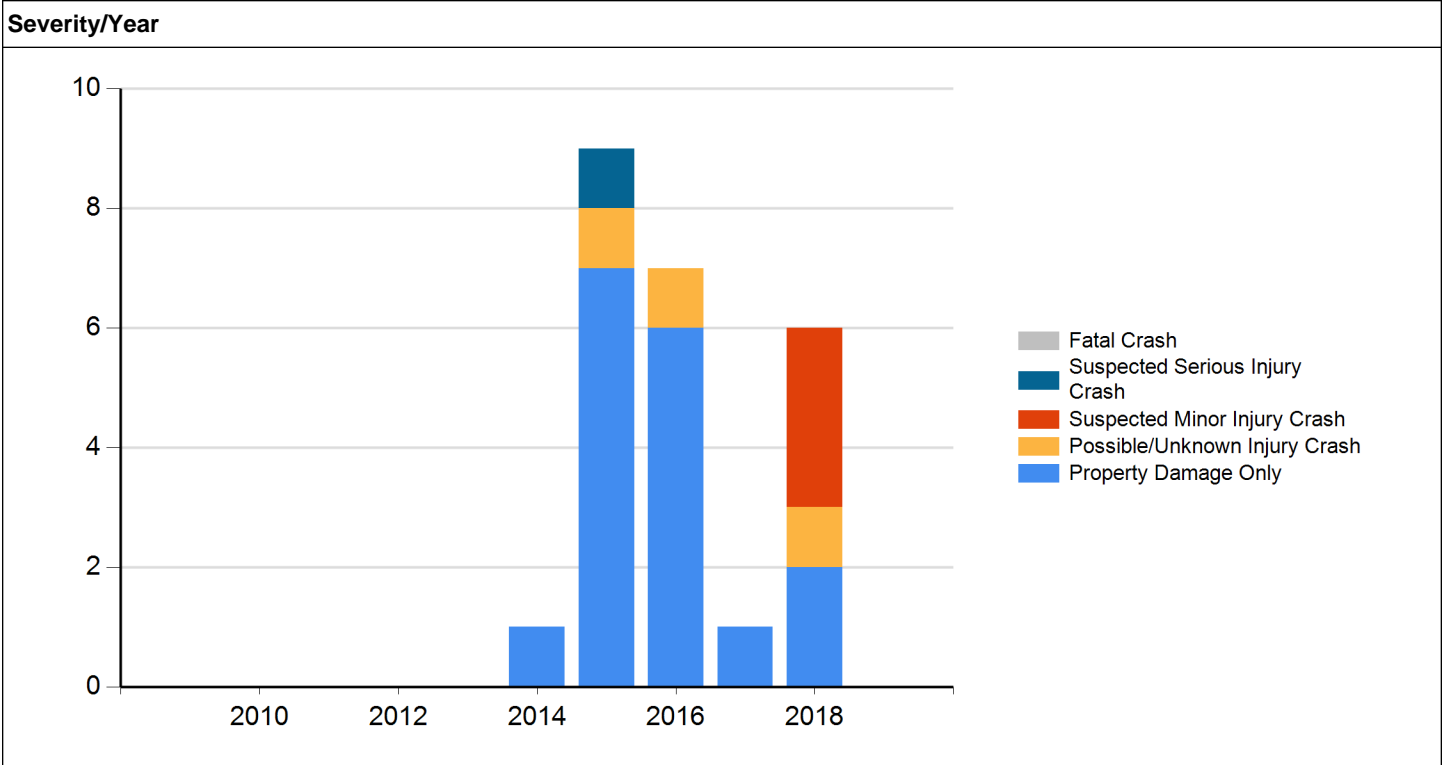
Drug Test Result	61
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	61
Other	0

Drug/Alcohol Related	24
Drug	0
Alcohol (< Statutory)	1
Alcohol (Statutory)	0
Drug/Alcohol (< Statutory)	0
Drug/Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	23



Iowa Crash Analysis Tool
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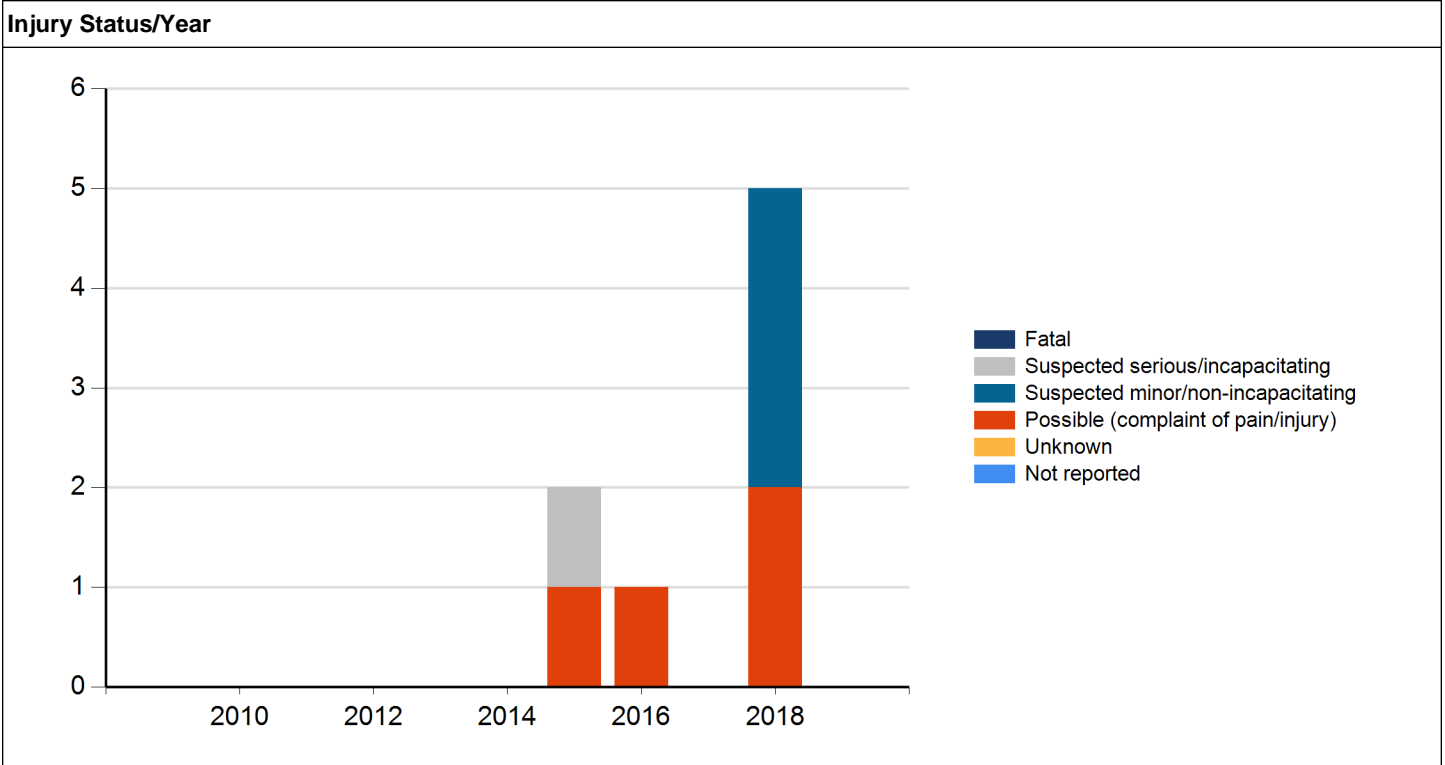
Crash Severity - Annual							
Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total	
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	1	1	1
2015	0	1	0	1	7	9	9
2016	0	0	0	1	6	7	7
2017	0	0	0	0	1	1	1
2018	0	0	3	1	2	6	6
2019	0	0	0	0	0	0	0
Total	0	1	3	3	17	24	





Iowa Crash Analysis Tool
Quick Report
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Injury Status - Annual							
Crash Year	Fatal	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Unknown	Not reported	Total
2009	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	1	0	1	0	0	2
2016	0	0	0	1	0	0	1
2017	0	0	0	0	0	0	0
2018	0	0	3	2	0	0	5
2019	0	0	0	0	0	0	0
Total	0	1	3	4	0	0	8





Meeting the following criteria

Jurisdiction: Statewide
Year: 2014, 2015, 2016, 2017, 2018
Map Selection: Yes
Filter: None

Analyst Information

Appendix C – SimTraffic Reports

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.5	16.6	6.1	8.3	12.2	4.0	7.9	0.9	0.4	5.0	0.9	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.2

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.0	4.7	0.6	0.5	5.7	2.1	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.4	18.0	7.5	11.8	17.5	5.0	8.1	1.1	0.8	5.0	2.0	1.3

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.8

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.8	3.8	0.1	0.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	51.5	52.5	9.4	45.5	48.2	6.3	14.2	2.9	2.8	8.8	5.3	3.9

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	5.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	42.1	50.0	48.8	27.0	6.3	2.2	1.3	7.8	3.3	2.1	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.2	0.3	1.2	0.1	1.2	0.0	0.0	0.0	2.6	0.3	0.3
Total Del/Veh (s)	34.0	43.0	31.8	36.3	34.8	5.1	17.0	25.7	19.5	21.7	22.0	15.9

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	28.1

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	3.9	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	46.5	48.2	7.0	52.5	51.6	26.1	8.2	3.6	2.4	9.2	6.7	5.0

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	10.5

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	35.3

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.2	12.7	0.2	44
SE 8th St	19	1.7	28.3	0.3	33
SE East Lawn Dr	1	1.0	12.7	0.1	33
SE Peterson Dr	5	0.6	13.8	0.1	34
SE 3rd St	27	3.7	23.0	0.2	29
SE 2nd St	6	1.1	9.0	0.1	31
E 1st St	26	25.5	32.9	0.1	8
Total		36.7	132.5	1.0	27

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.6	10.8	0.1	26
SW 3rd St	27	6.7	14.5	0.1	19
SE Peterson Dr	5	2.3	21.6	0.2	31
SW Southlawn Dr	1	0.9	14.1	0.1	33
SW 8th St	19	3.3	15.2	0.1	27
Ordnance Rd	18	5.7	31.8	0.3	30
Total		21.4	107.9	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (ft)	58	40	75	16	31
Average Queue (ft)	22	12	10	1	2
95th Queue (ft)	49	38	46	12	16
Link Distance (ft)	796	543	550	550	621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB	SB
Directions Served	LR	T	LT	T
Maximum Queue (ft)	66	4	52	5
Average Queue (ft)	26	0	7	0
95th Queue (ft)	54	4	32	5
Link Distance (ft)	510	621	926	926
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	74	41	47	12	42	6
Average Queue (ft)	18	13	3	0	3	0
95th Queue (ft)	58	38	23	8	21	4
Link Distance (ft)	328	431	348	348	326	326
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: S Ankeny Blvd & Ordinance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	78	113	48	31	117	33	56	38	158	173
Average Queue (ft)	17	33	10	6	52	3	8	5	41	47
95th Queue (ft)	50	81	36	26	96	17	34	24	114	121
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	2	0				0	5	
Queuing Penalty (veh)	0	0	0	0				1	0	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	44	208	94	83	119	143
Average Queue (ft)	4	89	24	16	46	51
95th Queue (ft)	24	168	64	54	99	110
Link Distance (ft)	150	535	1301	1301	550	550
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	TR	L	T
Maximum Queue (ft)	237	352	326	141	156	157	79	119	205	233	225	253
Average Queue (ft)	69	201	185	81	82	87	36	53	108	135	101	115
95th Queue (ft)	151	296	280	133	134	141	65	99	181	208	180	203
Link Distance (ft)		715	715		2546	2546			326	326		1219
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			175	
Storage Blk Time (%)	0	20					0		0		2	2
Queuing Penalty (veh)	0	19					0		0		4	5

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB
Directions Served	TR
Maximum Queue (ft)	256
Average Queue (ft)	115
95th Queue (ft)	208
Link Distance (ft)	1219
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (ft)	147	70	166	120	98	200	197
Average Queue (ft)	62	32	78	36	34	85	98
95th Queue (ft)	123	58	141	84	80	169	180
Link Distance (ft)	350		448	926	926	348	348
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		160					
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Zone Summary

Zone wide Queuing Penalty: 30

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.7	7.9	1.1	0.9	1.2

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.8	0.6	2.2	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	13.0	11.4	1.1	2.0	1.8

18: S Ankeny Blvd & Ordinance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	1.6	0.0	0.0	0.3
Total Del/Veh (s)	15.2	31.7	4.1	5.3	5.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	42.1	41.1	2.2	3.5	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.9	28.2	23.0	21.4	28.1

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.1	0.2	0.0	0.0	0.2
Total Del/Veh (s)	28.6	47.3	3.9	6.6	10.5

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	35.3

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	23.8	22.7	5.7	18.0	30.7	9.5	7.8	2.5	1.7	10.2	0.9	0.8

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	21.4	9.3	1.5	1.3	13.6	2.6	2.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	19.1	19.7	4.7	23.7	26.6	12.6	6.2	2.3	1.6	11.8	2.1	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.5

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.5	0.6	3.8	0.2	0.2	4.2	0.7	0.1	0.3	0.0	0.0	0.0
Total Del/Veh (s)	51.2	49.3	8.3	42.5	49.7	12.1	17.7	4.9	3.0	15.7	5.3	3.8

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	7.7

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	42.3	44.6	50.8	22.6	10.3	5.6	4.6	16.3	3.5	1.7	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.2	0.3	1.0	0.2	1.0	0.0	0.0	0.0	2.5	0.3	0.3
Total Del/Veh (s)	50.5	44.0	30.8	39.2	45.1	12.8	19.0	32.0	28.9	32.8	23.4	17.0

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	32.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	4.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.9	47.9	6.5	52.1	50.4	27.5	11.1	7.3	5.8	11.8	4.7	3.0

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	9.7

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	46.7

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	4.7	16.0	0.2	35
SE 8th St	19	5.7	32.5	0.3	29
SE East Lawn Dr	1	2.6	14.5	0.1	29
SE Peterson Dr	5	1.5	14.8	0.1	32
SE 3rd St	27	7.3	26.7	0.2	25
SE 2nd St	6	2.3	10.3	0.1	27
E 1st St	26	31.9	39.3	0.1	7
Total		56.0	154.1	1.0	23

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.7	10.9	0.1	25
SW 3rd St	27	4.7	12.6	0.1	22
SE Peterson Dr	5	2.8	22.1	0.2	31
SW Southlawn Dr	1	0.9	14.2	0.1	33
SW 8th St	19	3.5	15.3	0.1	27
Ordnance Rd	18	5.3	31.9	0.3	30
Total		19.9	107.0	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	48	43	148	103	87	15
Average Queue (ft)	15	13	29	6	7	1
95th Queue (ft)	42	38	91	51	42	12
Link Distance (ft)	796	543	550	550	621	621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	70	4	13	130	86
Average Queue (ft)	28	0	1	36	4
95th Queue (ft)	58	4	6	99	37
Link Distance (ft)	510	621	621	926	926
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	41	46	89	75	91	46
Average Queue (ft)	12	13	6	6	6	2
95th Queue (ft)	37	39	44	41	41	25
Link Distance (ft)	328	431	348	348	326	326
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	70	90	55	54	212	78	86	47	129	129
Average Queue (ft)	16	31	14	19	102	24	28	6	32	39
95th Queue (ft)	48	72	43	46	176	64	71	29	85	93
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	2	1	1			0	5	
Queuing Penalty (veh)	0	0	1	0	3			1	0	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	35	153	169	179	123	126
Average Queue (ft)	4	64	75	76	54	43
95th Queue (ft)	23	120	151	154	106	101
Link Distance (ft)	150	535	1301	1301	550	550
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	TR	L	T
Maximum Queue (ft)	247	289	296	176	240	250	163	239	328	337	233	236
Average Queue (ft)	128	167	152	78	144	151	74	77	236	261	116	131
95th Queue (ft)	217	253	240	139	216	222	131	159	321	342	203	213
Link Distance (ft)		715	715		2546	2546			326	326		1219
Upstream Blk Time (%)								0	0	1		
Queuing Penalty (veh)								0	2	6		
Storage Bay Dist (ft)	165			220			220	235			175	
Storage Blk Time (%)	7	10		0	1	1	0		7		3	2
Queuing Penalty (veh)	15	20		0	1	3	0		11		9	4

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB
Directions Served	TR
Maximum Queue (ft)	244
Average Queue (ft)	135
95th Queue (ft)	226
Link Distance (ft)	1219
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (ft)	118	71	173	227	239	150	165
Average Queue (ft)	47	33	78	103	111	51	59
95th Queue (ft)	97	59	145	193	208	110	123
Link Distance (ft)	350		448	926	926	348	348
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		160					
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Zone Summary

Zone wide Queuing Penalty: 77

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	13.1	19.5	2.7	1.0	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	11.9	1.5	3.1	2.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.1	20.2	2.3	2.2	2.5

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	2.7	0.2	0.0	0.5
Total Del/Veh (s)	13.7	24.4	7.5	5.3	7.7

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	42.3	31.6	5.6	4.5	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	0.9	0.6
Total Del/Veh (s)	44.0	34.2	29.6	25.2	32.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.3	0.2	0.0	0.0	0.2
Total Del/Veh (s)	26.0	41.9	7.6	4.8	9.7

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	46.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	19.1	19.1	8.0	14.4	19.3	6.0	6.5	1.0	0.9	5.1	1.0	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	15.1	5.1	0.7	0.6	4.9	2.0	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.8	21.5	7.0	15.4	23.7	5.8	9.5	1.5	1.1	6.9	2.2	1.8

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.5

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	3.7	0.1	0.2	4.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	55.9	51.3	10.5	54.7	55.0	6.8	15.9	3.4	3.1	8.2	7.4	6.4

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.6

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	51.5	47.8	53.8	28.3	10.7	3.0	2.4	9.3	3.5	2.3	7.6

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.8	0.2	0.3	1.2	0.2	1.1	0.0	0.0	0.0	2.6	0.3	0.3
Total Del/Veh (s)	34.0	45.7	34.9	37.8	34.9	5.6	23.8	24.1	17.8	26.0	24.8	18.6

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	29.9

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.5	3.8	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	43.7	45.9	7.5	48.5	48.1	31.1	11.9	5.1	3.5	8.6	5.8	4.1

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	10.7

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	42.0

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.7	13.6	0.2	41
SE 8th St	19	3.0	29.6	0.3	32
SE East Lawn Dr	1	1.1	12.9	0.1	32
SE Peterson Dr	5	0.7	14.0	0.1	33
SE 3rd St	27	5.1	24.4	0.2	28
SE 2nd St	6	1.6	9.6	0.1	29
E 1st St	26	23.8	31.2	0.1	9
Total		39.0	135.3	1.0	27

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	3.0	11.1	0.1	25
SW 3rd St	27	5.8	13.7	0.1	20
SE Peterson Dr	5	2.1	21.3	0.2	32
SW Southlawn Dr	1	1.0	14.1	0.1	33
SW 8th St	19	3.4	15.3	0.1	27
Ordnance Rd	18	7.7	33.9	0.3	28
Total		23.0	109.5	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LT	LT	TR
Maximum Queue (ft)	62	57	73	55	2
Average Queue (ft)	28	21	12	7	0
95th Queue (ft)	55	49	46	33	2
Link Distance (ft)	796	543	550	621	621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	60	11	65
Average Queue (ft)	30	0	9
95th Queue (ft)	54	7	39
Link Distance (ft)	510	621	926
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	84	59	81	6	67	21
Average Queue (ft)	31	22	10	0	7	1
95th Queue (ft)	76	50	46	4	34	14
Link Distance (ft)	328	431	348	348	326	326
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: S Ankeny Blvd & Ordinance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	97	112	72	35	136	62	72	23	195	212
Average Queue (ft)	24	41	18	9	55	8	13	5	71	85
95th Queue (ft)	65	91	54	32	103	36	48	20	156	170
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	5	0	0			0	12	
Queuing Penalty (veh)	0	0	0	0	0			1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	50	228	99	85	122	128
Average Queue (ft)	12	111	30	28	45	51
95th Queue (ft)	39	192	74	70	96	101
Link Distance (ft)	150	535	1301	1301	550	550
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	TR	L	T
Maximum Queue (ft)	264	377	344	189	175	175	92	156	200	218	243	258
Average Queue (ft)	86	247	232	84	99	105	39	64	89	113	127	140
95th Queue (ft)	198	339	319	155	151	161	73	123	163	187	210	228
Link Distance (ft)		715	715		2546	2546			326	326		1219
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			175	
Storage Blk Time (%)	0	26		0	0	0			0		3	4
Queuing Penalty (veh)	1	29		0	0	0			0		10	11

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB
Directions Served	TR
Maximum Queue (ft)	256
Average Queue (ft)	140
95th Queue (ft)	232
Link Distance (ft)	1219
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (ft)	171	83	195	128	131	183	195
Average Queue (ft)	81	36	95	50	45	59	75
95th Queue (ft)	140	69	162	106	107	129	143
Link Distance (ft)	350		448	926	926	348	348
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		160					
Storage Blk Time (%)	1						
Queuing Penalty (veh)	1						

Zone Summary

Zone wide Queuing Penalty: 55

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.6	13.5	1.2	1.1	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.7	0.7	2.0	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.0	15.0	1.7	2.3	2.5

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.6	0.0	0.0	0.4
Total Del/Veh (s)	17.0	38.3	4.9	7.4	7.6

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	51.5	40.5	3.1	3.7	7.6

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	42.2	28.7	22.9	24.7	29.9

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.9	0.2	0.0	0.0	0.2
Total Del/Veh (s)	28.7	45.0	5.5	5.8	10.7

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	42.0

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	39.6	27.0	10.9	29.5	32.3	12.2	6.4	2.0	1.3	8.8	1.0	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	36.5	13.8	1.3	0.9	10.5	2.3	2.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	38.6	39.6	14.9	48.3	48.5	32.6	9.6	5.0	4.5	17.5	2.5	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	5.0

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.7	3.7	0.1	0.2	4.1	1.1	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	49.3	53.0	9.7	42.7	48.5	12.9	20.7	6.5	4.8	20.2	12.6	9.7

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	11.3

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	39.9	45.7	46.3	25.1	10.2	4.6	4.1	21.9	5.3	2.5	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.3	0.3	1.1	0.2	1.1	0.0	0.0	0.0	2.5	0.3	0.3
Total Del/Veh (s)	53.6	44.7	32.7	74.9	58.6	16.3	27.2	43.7	42.7	46.4	26.7	21.4

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	41.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	3.9	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	51.0	52.9	7.1	49.0	52.3	31.8	14.2	7.2	5.1	17.5	6.1	3.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	10.8

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	61.0

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	6.5	17.1	0.2	33
SE 8th St	19	4.5	31.4	0.3	30
SE East Lawn Dr	1	2.0	13.9	0.1	30
SE Peterson Dr	5	1.3	14.6	0.1	32
SE 3rd St	27	7.1	26.5	0.2	25
SE 2nd St	6	5.2	13.2	0.1	21
E 1st St	26	43.6	51.0	0.1	5
Total		70.2	167.8	1.0	22

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	3.2	11.5	0.1	24
SW 3rd St	27	6.0	13.9	0.1	20
SE Peterson Dr	5	2.5	21.9	0.2	31
SW Southlawn Dr	1	1.0	14.3	0.1	33
SW 8th St	19	5.3	17.2	0.1	24
Ordnance Rd	18	13.2	39.7	0.3	24
Total		31.2	118.4	0.8	26

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	61	62	104	32	71	2
Average Queue (ft)	24	23	30	1	10	0
95th Queue (ft)	57	54	83	19	47	2
Link Distance (ft)	796	543	550	550	621	621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	103	4	10	118	65
Average Queue (ft)	38	0	1	34	3
95th Queue (ft)	77	4	6	83	32
Link Distance (ft)	510	621	621	926	926
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	71	80	183	197	114	87
Average Queue (ft)	25	26	43	50	14	4
95th Queue (ft)	57	63	143	159	65	41
Link Distance (ft)	328	431	348	348	326	326
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: S Ankeny Blvd & Ordinance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	80	134	71	59	244	199	148	50	201	212
Average Queue (ft)	26	44	26	22	113	68	66	6	93	101
95th Queue (ft)	66	97	59	52	198	147	133	30	173	181
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	6	2	2	0		0	21	
Queuing Penalty (veh)	0	0	2	1	11	0		1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	40	173	131	130	183	159
Average Queue (ft)	8	82	53	54	77	67
95th Queue (ft)	31	148	108	113	148	134
Link Distance (ft)	150	535	1301	1301	550	550
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	TR	L	T
Maximum Queue (ft)	257	340	310	268	301	319	228	313	352	350	268	393
Average Queue (ft)	151	195	181	126	194	200	97	126	286	302	177	175
95th Queue (ft)	253	310	280	241	308	323	203	274	373	376	268	318
Link Distance (ft)		715	715		2546	2546			326	326		1219
Upstream Blk Time (%)								0	5	8		
Queuing Penalty (veh)								0	28	51		
Storage Bay Dist (ft)	165			220			220	235			175	
Storage Blk Time (%)	12	15		3	6	8	0	0	19		14	4
Queuing Penalty (veh)	28	32		7	9	25	0	0	37		40	12

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB
Directions Served	TR
Maximum Queue (ft)	354
Average Queue (ft)	170
95th Queue (ft)	279
Link Distance (ft)	1219
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (ft)	154	75	198	224	210	147	145
Average Queue (ft)	62	35	94	97	89	72	79
95th Queue (ft)	124	64	168	184	175	123	129
Link Distance (ft)	350		448	926	926	348	348
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		160					
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Zone Summary

Zone wide Queuing Penalty: 288

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	23.0	24.5	2.1	1.1	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	19.0	1.3	2.8	2.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	31.8	43.0	5.0	2.7	5.0

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	2.4	0.3	0.0	0.6
Total Del/Veh (s)	15.5	28.2	9.4	12.5	11.3

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	44.3	33.9	4.6	6.6	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	45.7	47.9	41.1	31.8	41.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.2	0.2	0.0	0.0	0.2
Total Del/Veh (s)	29.2	44.0	7.7	6.2	10.8

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	61.0

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.1	12.8	5.6	10.8	14.3	5.1	5.4	0.8	0.4	4.3	0.9	0.8

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.2

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	12.1	4.3	0.5	0.5	4.8	1.8	1.5

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Total Del/Veh (s)	17.3	14.9	5.9	12.9	13.8	4.3	7.3	1.1	0.7	4.8	1.8	1.5

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.8

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.5	3.8	0.1	0.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.9	62.1	9.1	56.3	63.8	5.4	14.5	3.2	4.1	7.1	5.7	4.9

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	6.2

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.3	49.6	53.0	27.7	8.0	2.0	1.5	5.9	1.8	1.0	6.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.2	0.3	1.2	0.1	1.1	0.0	0.0	0.1	2.6	0.3	0.3
Total Del/Veh (s)	35.8	44.7	31.0	37.6	33.4	5.5	17.7	18.1	3.6	22.1	21.2	14.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	26.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.5	4.0	4.0	0.2	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	46.8	50.7	6.2	45.5	48.6	21.1	9.1	4.2	1.5	5.7	6.5	4.9

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	10.2

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	34.2

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.6	13.1	0.2	42
SE 8th St	19	2.0	28.6	0.3	33
SE East Lawn Dr	1	0.9	12.7	0.1	33
SE Peterson Dr	5	0.5	13.8	0.1	34
SE 3rd St	27	4.2	23.4	0.2	29
SE 2nd St	6	1.2	9.3	0.1	30
E 1st St	26	18.0	25.4	0.1	11
Total		30.4	126.3	1.0	29

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.4	10.6	0.1	26
SW 3rd St	27	6.5	14.3	0.1	19
SE Peterson Dr	5	1.9	21.3	0.2	32
SW Southlawn Dr	1	0.9	14.0	0.1	33
SW 8th St	19	1.8	13.7	0.1	30
Ordnance Rd	18	6.0	32.2	0.3	29
Total		19.5	106.0	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (ft)	52	39	69	4	43
Average Queue (ft)	21	12	8	0	3
95th Queue (ft)	48	37	40	4	19
Link Distance (ft)	796	543	550	550	621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	LT
Maximum Queue (ft)	47	2	48
Average Queue (ft)	20	0	6
95th Queue (ft)	41	2	28
Link Distance (ft)	496		920
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T
Maximum Queue (ft)	78	40	32	2	7	23	2
Average Queue (ft)	18	14	3	0	0	1	0
95th Queue (ft)	59	39	17	2	6	12	2
Link Distance (ft)	328	430		341	341		325
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100			50	
Storage Blk Time (%)						0	
Queuing Penalty (veh)						0	

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	70	96	50	33	123	68	85	23	152	161
Average Queue (ft)	17	31	10	5	49	9	14	3	48	57
95th Queue (ft)	48	72	37	23	94	42	56	17	113	126
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	2	0	0			0	8	
Queuing Penalty (veh)	0	0	0	0	0			0	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	35	189	31	63	65	11	38	87	88
Average Queue (ft)	4	84	3	14	16	0	11	16	26
95th Queue (ft)	22	161	19	46	49	6	36	58	68
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)								0	
Queuing Penalty (veh)								0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	247	339	326	178	145	154	70	112	170	162	76	230
Average Queue (ft)	84	219	203	89	80	87	28	48	64	69	26	103
95th Queue (ft)	190	304	291	154	130	140	56	93	128	130	61	180
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	21		0						0		1
Queuing Penalty (veh)	0	20		0						0		3

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	222	223
Average Queue (ft)	112	109
95th Queue (ft)	190	194
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	4	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	106	97	81	75	127	44	97	121	19	32	139	146
Average Queue (ft)	43	40	32	24	49	15	27	35	1	7	57	75
95th Queue (ft)	90	83	62	58	99	39	72	89	9	27	114	129
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1		0	2		0	0				0
Queuing Penalty (veh)	1	1		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 33

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.9	11.0	0.9	0.9	1.2

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.2	0.5	1.9	1.5

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	11.7	10.1	1.2	1.8	1.8

18: S Ankeny Blvd & Ordnance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	1.7	0.0	0.0	0.3
Total Del/Veh (s)	14.9	37.9	4.5	5.6	6.2

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	49.3	40.8	2.0	2.0	6.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	41.1	27.6	15.3	21.0	26.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	1.3	0.0	0.0	0.4
Total Del/Veh (s)	29.0	42.3	4.5	6.4	10.2

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	34.2

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.2	22.5	7.7	18.5	24.6	9.0	4.7	1.6	1.0	8.0	0.8	0.5

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.1	9.4	1.1	0.8	9.9	2.1	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	20.9	24.1	4.8	23.7	27.3	8.3	4.6	1.3	0.6	13.9	2.0	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.9

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	3.7	0.1	0.2	4.2	0.6	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	52.1	39.4	8.5	49.6	43.6	10.7	19.2	5.2	2.5	11.9	6.8	4.8

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	8.5

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.3	49.1	49.8	23.8	6.0	3.2	2.4	14.3	3.0	3.0	5.4

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.2	0.3	1.1	0.2	1.0	0.0	0.0	0.0	2.5	0.3	0.3
Total Del/Veh (s)	40.0	42.4	26.8	42.0	47.0	14.7	22.7	28.4	5.2	28.4	24.1	17.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	30.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.4	3.9	3.9	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	44.3	50.4	5.5	43.9	56.2	24.8	11.1	3.3	1.8	12.1	5.3	3.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	7.9

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	43.1

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	5.2	16.5	0.2	34
SE 8th St	19	3.1	29.9	0.3	32
SE East Lawn Dr	1	1.6	13.5	0.1	31
SE Peterson Dr	5	1.1	14.3	0.1	32
SE 3rd St	27	3.2	22.5	0.2	30
SE 2nd St	6	1.4	9.5	0.1	29
E 1st St	26	28.3	35.8	0.1	8
Total		43.8	142.0	1.0	25

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.5	10.8	0.1	25
SW 3rd St	27	5.2	13.0	0.1	21
SE Peterson Dr	5	2.2	21.7	0.2	31
SW Southlawn Dr	1	0.8	14.1	0.1	33
SW 8th St	19	3.0	14.9	0.1	28
Ordnance Rd	18	7.1	33.6	0.3	28
Total		20.9	108.1	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (ft)	50	44	73	8	54
Average Queue (ft)	18	14	18	0	5
95th Queue (ft)	45	40	57	6	26
Link Distance (ft)	796	543	550	550	621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB	SB
Directions Served	LR	R	LT	T
Maximum Queue (ft)	66	9	104	35
Average Queue (ft)	22	0	28	2
95th Queue (ft)	47	5	76	24
Link Distance (ft)	496		920	920
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	48	41	30	11	20	32
Average Queue (ft)	15	13	3	0	1	3
95th Queue (ft)	41	38	17	7	10	18
Link Distance (ft)	328	430		341	341	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			50
Storage Blk Time (%)						0
Queuing Penalty (veh)						0

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	72	105	56	47	222	130	123	24	131	130
Average Queue (ft)	18	34	15	17	88	28	30	5	44	51
95th Queue (ft)	51	78	46	44	168	81	85	20	100	106
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)		0	3	1	1	0		0	10	
Queuing Penalty (veh)		0	1	0	5	0		1	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	40	151	27	119	135	26	75	111	131
Average Queue (ft)	5	61	2	32	34	2	29	33	47
95th Queue (ft)	25	122	14	87	93	14	62	84	104
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				0	0			0	
Queuing Penalty (veh)				0	0			0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	236	267	249	168	251	255	180	187	295	319	228	223
Average Queue (ft)	108	170	160	75	156	162	74	74	161	172	48	117
95th Queue (ft)	192	239	229	142	226	235	142	136	257	271	143	191
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)									0	0		
Queuing Penalty (veh)									0	1		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	3	8		0	1	1	0		1	15		2
Queuing Penalty (veh)	6	15		0	1	3	0		2	20		5

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	239	242
Average Queue (ft)	128	130
95th Queue (ft)	208	216
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	6	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	89	75	70	73	132	88	92	105	26	45	105	122
Average Queue (ft)	35	27	31	21	59	33	28	36	2	15	51	63
95th Queue (ft)	76	64	59	57	117	69	71	81	13	41	94	108
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	0	0		0	3		0	0				0
Queuing Penalty (veh)	0	0		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 71

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.1	17.2	1.7	0.9	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.3	1.0	2.5	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	16.1	19.2	1.3	2.0	1.9

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	2.6	0.2	0.0	0.5
Total Del/Veh (s)	14.3	25.1	8.0	6.8	8.5

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	49.3	33.3	3.2	3.9	5.4

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.5	36.4	24.6	24.5	30.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.1	0.0	0.0	0.3
Total Del/Veh (s)	26.2	42.0	3.9	5.3	7.9

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	43.1

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	19.7	15.7	7.3	19.6	18.0	6.3	6.9	1.2	0.8	4.8	1.0	0.8

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.7

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.7	5.0	0.6	0.6	4.8	1.9	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.0	20.6	8.7	14.8	15.3	6.6	6.8	1.2	0.7	6.7	2.1	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.2

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.6	3.8	0.1	0.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	57.0	56.9	9.5	50.4	48.2	6.0	18.3	3.5	3.4	8.5	6.0	4.6

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	44.6	48.6	56.6	30.2	9.2	3.3	1.5	7.1	2.3	1.2	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.8	0.2	0.3	1.0	0.2	1.1	0.0	0.0	0.1	2.5	0.3	0.3
Total Del/Veh (s)	31.6	42.6	30.7	35.6	32.2	6.1	23.3	25.6	4.9	26.3	25.9	20.0

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	28.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.5	3.9	3.9	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	47.3	49.4	6.7	43.7	48.2	22.6	12.0	4.3	1.5	7.8	6.3	4.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	10.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.4

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.8	13.8	0.2	40
SE 8th St	19	3.4	29.9	0.3	32
SE East Lawn Dr	1	1.3	13.0	0.1	32
SE Peterson Dr	5	0.6	13.9	0.1	34
SE 3rd St	27	4.3	23.4	0.2	29
SE 2nd St	6	1.2	9.3	0.1	30
E 1st St	26	25.2	32.6	0.1	8
Total		39.8	135.8	1.0	27

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.8	11.0	0.1	25
SW 3rd St	27	6.3	14.0	0.1	20
SE Peterson Dr	5	2.1	21.5	0.2	31
SW Southlawn Dr	1	1.0	14.1	0.1	33
SW 8th St	19	2.3	14.1	0.1	29
Ordnance Rd	18	5.9	32.1	0.3	29
Total		20.3	106.8	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	62	58	85	11	55	7
Average Queue (ft)	28	21	15	1	7	0
95th Queue (ft)	55	49	54	11	33	5
Link Distance (ft)	796	543	550	550	621	621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	60	59
Average Queue (ft)	23	9
95th Queue (ft)	47	38
Link Distance (ft)	496	920
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	112	55	32	2	10	33	4	10
Average Queue (ft)	33	20	5	0	0	5	0	0
95th Queue (ft)	83	48	24	2	6	23	3	6
Link Distance (ft)	328	430		341	341		325	325
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			100			50		
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	78	109	62	31	137	64	78	37	153	169
Average Queue (ft)	22	36	19	9	59	7	13	7	59	63
95th Queue (ft)	58	80	51	32	108	33	49	27	121	131
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	5	0	0			0	10	
Queuing Penalty (veh)	0	0	0	0	0			1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	43	222	33	94	101	27	49	90	102
Average Queue (ft)	9	104	6	30	33	2	16	25	37
95th Queue (ft)	33	187	27	75	80	13	43	66	83
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)					0				
Queuing Penalty (veh)					0				

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	264	363	344	166	155	160	87	143	206	200	122	257
Average Queue (ft)	85	242	223	79	85	96	29	63	86	95	37	135
95th Queue (ft)	208	334	312	141	142	153	61	115	161	161	85	228
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	25		0				0	0	2	0	4
Queuing Penalty (veh)	0	27		0				0	0	2	0	12

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	289	272
Average Queue (ft)	141	143
95th Queue (ft)	235	236
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	4	
Queuing Penalty (veh)	11	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	103	114	73	73	150	59	106	142	20	41	129	149
Average Queue (ft)	48	51	35	30	62	22	27	41	1	12	60	77
95th Queue (ft)	95	98	62	66	121	49	73	99	10	37	111	129
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	2		0	3		0	0				0
Queuing Penalty (veh)	1	2		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 61

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	11.7	14.3	1.4	1.0	1.7

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.7	0.6	2.0	1.7

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	15.6	12.1	1.2	2.1	2.2

18: S Ankeny Blvd & Ordnance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.6	0.0	0.0	0.4
Total Del/Veh (s)	16.4	33.6	5.4	6.0	7.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	44.6	42.0	3.4	2.5	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.0	27.0	21.1	25.5	28.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.9	1.3	0.0	0.0	0.4
Total Del/Veh (s)	29.7	41.2	4.8	6.2	10.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.4

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.0	25.9	9.2	26.3	38.8	13.4	7.0	2.0	1.4	10.1	1.0	0.4

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.4

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	31.7	13.8	1.1	1.0	11.1	2.3	2.3

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.7	38.2	10.1	34.3	31.7	19.0	6.7	2.4	1.6	14.0	2.1	1.8

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	3.0

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	1.0	3.7	0.2	0.2	4.1	1.1	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	51.9	55.4	9.1	47.7	54.2	12.8	24.4	6.9	4.3	20.9	10.7	8.1

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	11.4

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	50.2	47.9	51.3	25.2	9.0	5.3	3.1	13.7	2.9	2.5	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.3	0.3	1.0	0.2	1.0	0.0	0.0	0.0	2.4	0.3	0.3
Total Del/Veh (s)	46.1	45.8	33.4	45.5	51.9	16.9	30.8	35.7	8.8	37.4	27.1	19.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	35.5

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.5	3.9	4.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	44.8	50.4	6.1	49.0	52.5	27.5	14.1	5.3	2.2	12.9	5.9	3.7

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	9.4

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	54.0

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	6.9	17.5	0.2	32
SE 8th St	19	5.2	32.1	0.3	29
SE East Lawn Dr	1	2.1	14.0	0.1	30
SE Peterson Dr	5	1.2	14.4	0.1	32
SE 3rd St	27	5.2	24.4	0.2	28
SE 2nd St	6	2.5	10.7	0.1	26
E 1st St	26	35.5	42.9	0.1	6
Total		58.5	156.0	1.0	23

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.7	11.0	0.1	25
SW 3rd St	27	5.8	13.5	0.1	20
SE Peterson Dr	5	2.5	21.9	0.2	31
SW Southlawn Dr	1	1.0	14.3	0.1	33
SW 8th St	19	2.9	14.8	0.1	28
Ordnance Rd	18	11.1	37.5	0.3	25
Total		26.0	113.1	0.8	27

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	64	65	115	78	72	27
Average Queue (ft)	25	24	30	4	11	1
95th Queue (ft)	54	55	85	37	46	22
Link Distance (ft)	796	543	550	550	621	621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB	SB
Directions Served	LR	R	LT	T
Maximum Queue (ft)	88	13	102	28
Average Queue (ft)	31	1	33	1
95th Queue (ft)	66	7	81	19
Link Distance (ft)	496		920	920
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T
Maximum Queue (ft)	67	63	36	103	116	34	6
Average Queue (ft)	22	23	5	7	11	7	0
95th Queue (ft)	52	55	24	51	64	28	5
Link Distance (ft)	328	430		341	341		325
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100			50	
Storage Blk Time (%)				0		0	0
Queuing Penalty (veh)				0		1	0

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	72	114	82	55	255	228	206	32	154	179
Average Queue (ft)	24	41	26	23	132	69	72	6	69	78
95th Queue (ft)	59	89	61	51	225	155	150	23	132	147
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)		0	6	2	3	0		0	21	
Queuing Penalty (veh)		0	2	1	22	0		1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	39	175	33	171	177	35	86	116	120
Average Queue (ft)	9	75	6	69	73	6	35	32	45
95th Queue (ft)	31	141	26	140	143	26	71	86	106
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				1	0			0	
Queuing Penalty (veh)				0	0			0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	259	333	296	192	284	296	233	301	338	342	250	263
Average Queue (ft)	140	187	178	85	169	179	88	114	230	243	119	167
95th Queue (ft)	234	283	270	160	253	268	178	216	326	341	285	254
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)								0	1	1		
Queuing Penalty (veh)								0	4	8		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	7	16		0	3	5	0	0	7	28		8
Queuing Penalty (veh)	17	34		0	5	14	0	0	13	44		24

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	322	276
Average Queue (ft)	170	164
95th Queue (ft)	264	240
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	4	
Queuing Penalty (veh)	14	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	109	84	74	88	164	118	163	176	24	55	123	127
Average Queue (ft)	41	25	35	24	62	40	64	77	4	16	65	78
95th Queue (ft)	87	64	62	64	125	84	139	145	16	45	106	119
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	2	0		0	5	0	0	0				0
Queuing Penalty (veh)	2	0		0	2	1	0	0				0

Zone Summary

Zone wide Queuing Penalty: 211

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	19.7	26.2	2.2	1.1	2.4

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	18.9	1.1	2.8	2.3

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	24.4	28.5	2.4	2.3	3.0

18: S Ankeny Blvd & Ordnance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	2.5	0.4	0.0	0.6
Total Del/Veh (s)	15.5	29.6	10.5	10.6	11.4

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	50.2	35.0	5.3	3.8	6.7

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	0.9	0.6
Total Del/Veh (s)	44.2	40.1	31.5	29.0	35.5

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	1.1	0.0	0.0	0.3
Total Del/Veh (s)	26.6	42.5	5.9	5.9	9.4

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	54.0

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.9	15.9	6.3	13.3	18.2	4.6	5.8	0.7	0.7	4.5	0.7	0.6

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.1

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.4	4.5	0.5	0.5	4.2	1.7	1.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	12.9	17.9	6.2	12.4	13.2	4.4	8.3	1.1	1.1	4.6	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.7

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.6	3.8	0.1	0.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	50.5	50.2	8.3	55.5	58.9	6.1	14.1	3.1	2.6	5.6	5.2	3.7

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	5.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	47.6	49.5	50.0	27.8	8.8	1.8	1.2	6.0	1.8	0.8	5.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.2	0.3	1.2	0.1	1.0	0.0	0.0	0.1	2.6	0.3	0.3
Total Del/Veh (s)	34.0	43.3	29.6	36.1	33.6	5.4	17.6	18.5	3.4	22.0	20.8	13.4

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	26.0

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.5	3.9	3.8	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	43.6	52.1	6.1	47.5	51.0	19.4	10.1	4.1	1.3	7.1	6.2	4.1

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	10.2

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	33.4

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.4	12.9	0.2	43
SE 8th St	19	1.8	28.2	0.3	33
SE East Lawn Dr	1	0.7	12.4	0.1	33
SE Peterson Dr	5	0.5	13.7	0.1	34
SE 3rd St	27	4.0	23.1	0.2	29
SE 2nd St	6	1.1	9.2	0.1	30
E 1st St	26	18.3	25.7	0.1	11
Total		29.8	125.3	1.0	29

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.3	10.5	0.1	26
SW 3rd St	27	6.2	14.0	0.1	20
SE Peterson Dr	5	1.8	21.2	0.2	32
SW Southlawn Dr	1	0.7	13.9	0.1	34
SW 8th St	19	1.7	13.5	0.1	31
Ordnance Rd	18	5.4	31.7	0.3	30
Total		18.2	104.8	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	52	37	35	27
Average Queue (ft)	22	12	7	2
95th Queue (ft)	48	37	29	14
Link Distance (ft)	790	537		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	51	31
Average Queue (ft)	21	5
95th Queue (ft)	42	22
Link Distance (ft)	490	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	L	T	TR
Maximum Queue (ft)	76	33	27	2	24	2	6
Average Queue (ft)	17	12	3	0	2	0	0
95th Queue (ft)	56	36	16	3	13	2	4
Link Distance (ft)	328	430		341		325	325
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100		50		
Storage Blk Time (%)					0		
Queuing Penalty (veh)					0		

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	66	88	50	31	127	52	63	22	133	156
Average Queue (ft)	16	25	12	5	45	6	8	3	42	50
95th Queue (ft)	46	63	38	23	90	31	38	14	100	112
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)		0	2	0	0			0	7	
Queuing Penalty (veh)		0	0	0	0			0	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	38	216	30	61	59	10	44	77	90	
Average Queue (ft)	5	83	3	14	16	0	12	16	25	
95th Queue (ft)	24	162	19	45	48	6	37	54	70	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	218	330	326	158	142	156	86	120	154	162	74	219
Average Queue (ft)	67	212	199	74	79	85	27	47	63	72	26	107
95th Queue (ft)	159	290	280	136	128	137	62	89	126	133	60	186
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	19								0		2
Queuing Penalty (veh)	0	18								0		4

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	213	209
Average Queue (ft)	111	109
95th Queue (ft)	187	188
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	3	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	101	96	71	61	136	54	87	100	13	38	125	141
Average Queue (ft)	42	39	32	25	55	18	27	34	1	8	52	74
95th Queue (ft)	88	82	61	54	111	46	69	82	8	30	106	126
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1			3		0					0
Queuing Penalty (veh)	1	1			1		0					0

Zone Summary

Zone wide Queuing Penalty: 30

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	9.1	11.5	0.8	0.7	1.1

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.6	0.5	1.7	1.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	11.1	9.5	1.1	1.8	1.7

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	1.5	0.0	0.0	0.3
Total Del/Veh (s)	14.6	41.3	4.3	5.1	5.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	47.6	40.6	1.9	1.9	5.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.7	27.4	15.5	20.5	26.0

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.1	1.2	0.0	0.0	0.4
Total Del/Veh (s)	28.5	43.9	4.4	6.1	10.2

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	33.4

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.6	25.6	6.2	21.8	23.3	9.9	4.4	1.2	0.9	6.7	0.7	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.3

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.6	9.4	1.0	0.9	8.0	1.5	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.5	21.6	5.6	26.3	21.5	9.3	6.1	1.4	0.5	12.3	1.9	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.9

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	3.8	0.3	0.2	4.1	0.7	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	47.1	56.3	7.9	46.7	54.5	10.7	17.7	4.9	3.2	12.9	6.3	4.4

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	8.0

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	39.3	46.2	47.1	21.5	5.3	3.3	2.4	14.3	2.8	1.1	5.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.2	0.3	1.1	0.2	1.0	0.0	0.0	0.0	2.5	0.3	0.3
Total Del/Veh (s)	41.0	42.0	28.2	41.8	46.8	15.7	21.9	28.3	5.4	30.7	23.6	16.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	30.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.4	3.9	4.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	47.0	52.2	5.5	45.7	52.4	24.5	10.8	3.1	1.6	12.7	5.1	3.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	7.6

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	42.2

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	4.9	16.3	0.2	34
SE 8th St	19	3.1	29.9	0.3	32
SE East Lawn Dr	1	1.2	13.1	0.1	32
SE Peterson Dr	5	1.0	14.3	0.1	33
SE 3rd St	27	3.0	22.3	0.2	30
SE 2nd St	6	1.4	9.5	0.1	29
E 1st St	26	28.2	35.7	0.1	8
Total		42.9	141.1	1.0	26

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.4	10.7	0.1	26
SW 3rd St	27	5.1	12.9	0.1	21
SE Peterson Dr	5	1.6	20.9	0.2	32
SW Southlawn Dr	1	0.7	13.9	0.1	33
SW 8th St	19	2.8	14.6	0.1	28
Ordnance Rd	18	6.6	33.0	0.3	29
Total		19.2	106.1	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	TR
Maximum Queue (ft)	48	44	45	32	2
Average Queue (ft)	16	13	13	3	0
95th Queue (ft)	44	39	39	17	2
Link Distance (ft)	790	537			621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100	100	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	61	4	55
Average Queue (ft)	22	0	17
95th Queue (ft)	47	4	47
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	44	40	28	27	40	33
Average Queue (ft)	12	14	3	1	2	4
95th Queue (ft)	38	39	18	22	24	21
Link Distance (ft)	328	430		341	341	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			50
Storage Blk Time (%)				0		0
Queuing Penalty (veh)				0		0

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	64	97	63	44	204	97	90	29	122	125
Average Queue (ft)	17	31	15	19	86	25	26	6	40	46
95th Queue (ft)	48	70	45	46	159	67	67	22	92	100
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	3	1	1	0		0	9	
Queuing Penalty (veh)	0	0	1	0	3	0		1	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	33	165	24	114	122	30	76	101	121
Average Queue (ft)	5	58	2	36	37	3	31	30	46
95th Queue (ft)	23	120	13	85	91	18	64	79	100
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				0	0			0	
Queuing Penalty (veh)				0	0			0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	240	292	258	164	237	247	204	166	287	311	214	244
Average Queue (ft)	115	180	167	73	156	162	81	73	161	175	50	124
95th Queue (ft)	198	262	239	140	220	225	159	129	254	272	153	209
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)									0	0		
Queuing Penalty (veh)									1	2		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	3	9		0	1	1	0	0	1	15		4
Queuing Penalty (veh)	7	17		0	1	3	0	0	2	20		9

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	256	249
Average Queue (ft)	124	126
95th Queue (ft)	209	208
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	4	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	81	87	59	59	132	82	91	114	17	56	108	114
Average Queue (ft)	30	28	31	19	61	33	23	35	1	13	48	61
95th Queue (ft)	71	70	56	50	116	66	65	82	9	40	90	106
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	0	1			3			0				0
Queuing Penalty (veh)	0	1			1			0				0

Zone Summary

Zone wide Queuing Penalty: 74

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.3	17.6	1.3	0.7	1.3

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.8	1.0	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.4	18.4	1.4	2.0	1.9

18: S Ankeny Blvd & Ordnance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	2.7	0.2	0.0	0.5
Total Del/Veh (s)	13.3	25.8	7.4	6.3	8.0

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	39.3	31.4	3.3	3.7	5.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.8	36.2	24.5	24.7	30.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.2	1.1	0.0	0.0	0.3
Total Del/Veh (s)	26.8	39.9	3.7	5.2	7.6

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	42.2

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.0	21.1	8.8	14.8	20.1	5.1	6.3	0.9	0.8	4.2	0.9	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.0	5.5	0.6	0.6	4.8	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.7	20.2	8.6	17.7	19.1	6.7	9.4	1.3	0.9	6.1	2.1	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.5	3.8	0.2	0.1	4.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	53.4	53.4	10.5	49.0	54.5	6.8	16.9	3.4	2.5	8.1	6.3	4.7

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	42.2	48.8	53.4	28.8	9.7	3.3	1.8	6.9	2.3	1.6	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.2	0.3	1.2	0.2	1.0	0.0	0.0	0.1	2.5	0.3	0.4
Total Del/Veh (s)	32.5	42.8	31.9	35.5	31.8	5.7	22.7	24.8	4.7	26.1	26.0	19.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	28.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.5	3.8	4.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	46.5	46.4	6.9	46.0	51.2	26.9	12.8	4.7	1.6	9.3	6.6	4.9

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.1

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.6

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.8	13.7	0.2	41
SE 8th St	19	3.4	30.0	0.3	32
SE East Lawn Dr	1	1.0	12.8	0.1	32
SE Peterson Dr	5	0.6	13.8	0.1	34
SE 3rd St	27	4.6	23.7	0.2	28
SE 2nd St	6	1.3	9.4	0.1	29
E 1st St	26	24.3	31.7	0.1	9
Total		39.0	135.0	1.0	27

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.8	11.0	0.1	25
SW 3rd St	27	6.6	14.4	0.1	19
SE Peterson Dr	5	1.9	21.3	0.2	32
SW Southlawn Dr	1	0.9	14.1	0.1	33
SW 8th St	19	2.2	14.0	0.1	29
Ordnance Rd	18	6.1	32.3	0.3	29
Total		20.5	107.0	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	TR	L	T	TR
Maximum Queue (ft)	77	55	33	5	33	4	7
Average Queue (ft)	29	23	10	0	4	0	0
95th Queue (ft)	60	50	33	4	21	3	4
Link Distance (ft)	790	537		550		621	621
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100		100		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	60	42
Average Queue (ft)	22	7
95th Queue (ft)	46	30
Link Distance (ft)	490	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	104	55	33	4	13	32	2	9
Average Queue (ft)	34	21	5	0	0	4	0	0
95th Queue (ft)	85	50	23	4	5	21	2	5
Link Distance (ft)	328	430		341	341		325	325
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			100			50		
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	88	117	63	38	125	61	74	33	149	163
Average Queue (ft)	21	38	18	9	54	8	12	5	56	68
95th Queue (ft)	60	85	50	32	101	35	47	21	118	133
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	4	0				0	11	
Queuing Penalty (veh)	0	0	0	0				1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	48	229	34	85	90	26	44	79	96	
Average Queue (ft)	10	104	6	29	34	2	15	23	35	
95th Queue (ft)	36	187	27	71	79	15	42	63	80	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	261	359	331	181	160	165	84	140	190	194	92	258
Average Queue (ft)	78	239	229	78	87	92	28	63	85	95	36	132
95th Queue (ft)	185	327	311	142	142	147	62	116	153	157	73	213
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	24		0		0			0	1	0	3
Queuing Penalty (veh)	0	27		0		0			0	2	0	9

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	258	258
Average Queue (ft)	142	143
95th Queue (ft)	229	231
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	4	
Queuing Penalty (veh)	12	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	98	110	78	71	141	62	118	115	23	38	151	165
Average Queue (ft)	49	49	35	29	67	20	34	42	2	10	63	81
95th Queue (ft)	92	94	66	63	122	50	88	92	12	33	124	142
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1		0	3		0	0				0
Queuing Penalty (veh)	2	1		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 57

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	13.7	13.7	1.1	0.9	1.6

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	9.9	0.6	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.9	14.3	1.3	2.1	2.3

18: S Ankeny Blvd & Ordinance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.7	0.0	0.0	0.4
Total Del/Veh (s)	16.8	35.9	5.0	6.2	7.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	42.2	41.4	3.4	2.4	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.4	26.5	20.2	25.5	28.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.9	1.3	0.0	0.0	0.4
Total Del/Veh (s)	28.8	45.9	5.2	6.5	11.1

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.6

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	32.6	33.9	8.6	37.7	28.4	10.6	7.1	1.6	1.1	8.9	0.8	0.6

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.1

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	32.0	12.1	1.1	1.0	10.2	1.6	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	26.8	37.1	8.5	37.0	46.6	21.5	6.3	2.7	2.0	13.3	2.1	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	3.3

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.9	3.7	0.1	0.2	4.1	1.1	0.2	0.3	0.0	0.0	0.0
Total Del/Veh (s)	49.2	53.8	9.1	51.7	48.8	12.6	24.1	6.7	4.0	18.3	10.6	7.7

18: S Ankeny Blvd & Ordinance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	11.4

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	44.6	48.2	52.7	24.8	7.9	5.5	3.4	12.9	3.3	2.2	6.9

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.2	0.3	1.1	0.2	1.0	0.0	0.0	0.0	2.4	0.4	0.4
Total Del/Veh (s)	45.9	47.0	36.9	49.8	50.8	17.8	29.8	38.0	8.8	39.2	26.9	19.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	36.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.4	4.0	3.9	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	47.9	52.4	6.2	46.5	53.1	27.4	12.2	5.2	2.3	12.8	5.7	4.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	9.3

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	55.3

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	6.8	17.4	0.2	32
SE 8th St	19	5.4	32.3	0.3	29
SE East Lawn Dr	1	1.6	13.5	0.1	31
SE Peterson Dr	5	1.1	14.3	0.1	33
SE 3rd St	27	5.1	24.2	0.2	28
SE 2nd St	6	2.8	11.0	0.1	25
E 1st St	26	37.8	45.2	0.1	6
Total		60.5	157.9	1.0	23

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.7	11.0	0.1	25
SW 3rd St	27	5.6	13.4	0.1	21
SE Peterson Dr	5	1.8	21.3	0.2	32
SW Southlawn Dr	1	0.8	14.1	0.1	33
SW 8th St	19	3.3	15.2	0.1	27
Ordnance Rd	18	11.1	37.5	0.3	25
Total		25.2	112.4	0.8	27

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	61	64	56	2	35	4
Average Queue (ft)	25	23	22	0	4	0
95th Queue (ft)	55	54	51	2	22	3
Link Distance (ft)	790	537		550		621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	70	9	62
Average Queue (ft)	27	0	23
95th Queue (ft)	56	5	52
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T
Maximum Queue (ft)	69	64	47	106	121	35	3
Average Queue (ft)	23	26	5	11	17	7	0
95th Queue (ft)	54	59	30	67	83	28	3
Link Distance (ft)	328	430		341	341		325
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100			50	
Storage Blk Time (%)				1		0	
Queuing Penalty (veh)				0		0	

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	86	106	84	55	248	237	186	55	156	177
Average Queue (ft)	28	41	26	22	130	71	67	8	68	80
95th Queue (ft)	67	82	66	50	219	158	143	32	136	147
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	7	2	3	0		0	20	
Queuing Penalty (veh)	0	0	2	1	19	0		2	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	39	206	31	195	192	37	72	123	138
Average Queue (ft)	9	80	5	73	74	9	32	36	49
95th Queue (ft)	32	157	24	148	148	31	60	96	114
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				1	1			0	
Queuing Penalty (veh)				0	0			0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	264	352	320	206	268	289	216	295	341	345	250	269
Average Queue (ft)	145	193	185	89	162	170	89	111	243	256	126	173
95th Queue (ft)	251	302	285	164	245	257	172	220	346	358	298	261
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)								0	1	2		
Queuing Penalty (veh)								0	7	13		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	6	16		0	3	4	0	0	9	32		10
Queuing Penalty (veh)	15	36		0	4	12	1	0	17	49		30

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	343	269
Average Queue (ft)	174	167
95th Queue (ft)	280	245
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	4	
Queuing Penalty (veh)	13	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	92	92	67	74	154	82	170	178	25	52	117	140
Average Queue (ft)	39	29	32	25	61	36	60	72	3	17	65	80
95th Queue (ft)	80	72	60	58	119	69	136	147	16	45	102	125
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	0		0	4		0	0				0
Queuing Penalty (veh)	1	1		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 227

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	22.7	25.2	1.8	0.9	2.1

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	16.6	1.1	2.1	1.9

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	23.5	33.8	2.7	2.2	3.3

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.2	2.3	0.4	0.0	0.6
Total Del/Veh (s)	15.8	31.0	10.4	10.6	11.4

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	44.6	34.8	5.5	4.0	6.9

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	45.2	40.1	33.1	29.6	36.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.2	1.1	0.0	0.0	0.3
Total Del/Veh (s)	28.7	41.8	5.6	5.8	9.3

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	55.3

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	15.1	16.0	6.2	10.9	15.1	3.4	4.6	0.7	0.6	4.9	0.7	0.5

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.0

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.3	4.6	0.5	0.4	4.6	1.6	1.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.8	4.0	1.1	0.7	1.8	1.7	1.6

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.8	3.8	0.1	0.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	50.7	58.6	8.6	41.6	50.5	5.1	14.4	3.1	2.9	6.8	4.8	3.5

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	5.6

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	47.3	50.7	39.5	29.4	6.5	2.1	1.2	6.1	1.9	1.4	6.2

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.2	0.3	1.2	0.1	1.1	0.0	0.0	0.1	2.7	0.3	0.3
Total Del/Veh (s)	36.0	44.3	30.1	36.1	34.7	5.4	18.4	17.9	3.7	21.5	21.0	14.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	26.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.5	3.9	4.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	46.3	48.9	6.1	46.2	51.2	24.2	11.3	4.3	1.4	7.2	6.4	4.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	10.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	33.6

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.5	13.0	0.2	43
SE 8th St	19	2.1	28.7	0.3	33
SE East Lawn Dr	1	0.7	12.4	0.1	33
SE Peterson Dr	5	0.5	13.7	0.1	34
SE 3rd St	27	4.3	23.5	0.2	29
SE 2nd St	6	1.1	9.2	0.1	30
E 1st St	26	17.7	25.1	0.1	11
Total		29.8	125.6	1.0	29

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.3	10.5	0.1	26
SW 3rd St	27	6.4	14.2	0.1	20
SE Peterson Dr	5	1.7	21.1	0.2	32
SW Southlawn Dr	1	0.7	13.8	0.1	34
SW 8th St	19	1.8	13.7	0.1	30
Ordnance Rd	18	5.1	31.3	0.3	30
Total		18.1	104.6	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	TR
Maximum Queue (ft)	51	38	37	27	4
Average Queue (ft)	20	10	8	3	0
95th Queue (ft)	46	35	31	17	3
Link Distance (ft)	790	537			621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100	100	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	54	2	37
Average Queue (ft)	21	0	7
95th Queue (ft)	44	2	28
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	77	33
Average Queue (ft)	17	10
95th Queue (ft)	59	34
Link Distance (ft)	328	430
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	68	114	43	31	126	54	79	23	125	131
Average Queue (ft)	16	29	9	6	47	6	9	3	40	42
95th Queue (ft)	46	72	31	25	92	32	43	15	94	100
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	1	0	0			0	7	
Queuing Penalty (veh)	0	0	0	0	0			0	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	39	196	24	82	77	9	51	92	96
Average Queue (ft)	5	86	3	16	19	0	14	17	24
95th Queue (ft)	23	164	18	54	56	7	41	58	68
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				0				0	
Queuing Penalty (veh)				0				0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	259	345	308	166	143	149	79	129	148	154	74	217
Average Queue (ft)	74	223	200	67	83	86	27	55	58	67	27	103
95th Queue (ft)	186	317	289	137	134	138	58	103	118	125	62	177
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	20		0						0		1
Queuing Penalty (veh)	0	19		0						0		4

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	225	239
Average Queue (ft)	114	106
95th Queue (ft)	197	196
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	5	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	101	96	76	70	132	62	107	116	21	50	133	144
Average Queue (ft)	42	41	34	27	57	18	28	36	1	13	54	73
95th Queue (ft)	87	85	62	59	111	47	74	87	10	40	107	126
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1		0	2			0				0
Queuing Penalty (veh)	1	1		0	1			0				0

Zone Summary

Zone wide Queuing Penalty: 32

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.6	10.2	0.8	0.8	1.0

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.3	0.5	1.7	1.4

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.8	4.0	1.1	1.8	1.6

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	1.8	0.0	0.0	0.3
Total Del/Veh (s)	14.4	29.9	4.3	4.8	5.6

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	47.3	41.5	2.1	2.1	6.2

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	40.8	27.9	15.3	20.6	26.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	1.3	0.0	0.0	0.4
Total Del/Veh (s)	28.5	45.3	4.7	6.3	10.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	33.6

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	19.5	23.1	5.3	23.1	29.1	6.6	4.8	1.1	1.1	8.4	0.7	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.4

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	31.3	10.0	1.0	0.9	8.4	1.6	1.8

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3	10.2	1.4	0.7	2.0	2.0	1.7

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.8	3.8	0.2	0.2	4.1	0.7	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	49.7	53.0	8.0	52.4	56.7	11.1	19.0	4.8	3.3	14.9	6.8	4.9

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	8.3

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	51.0	50.8	50.0	23.2	7.3	2.9	2.2	14.2	2.7	1.5	5.0

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.2	0.3	1.1	0.2	1.0	0.0	0.0	0.0	2.5	0.3	0.4
Total Del/Veh (s)	41.8	41.9	27.4	46.5	47.3	14.9	23.3	29.8	6.8	30.6	25.1	16.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	31.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.4	3.9	3.9	0.3	0.3	0.1	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	49.2	48.4	5.9	49.9	53.0	25.2	11.7	3.4	2.0	12.7	5.8	3.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	8.2

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	43.4

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	4.8	16.1	0.2	35
SE 8th St	19	2.8	29.6	0.3	32
SE East Lawn Dr	1	1.2	13.0	0.1	32
SE Peterson Dr	5	1.0	14.2	0.1	33
SE 3rd St	27	3.3	22.5	0.2	30
SE 2nd St	6	1.4	9.6	0.1	29
E 1st St	26	29.7	37.1	0.1	7
Total		44.2	142.1	1.0	25

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.5	10.8	0.1	25
SW 3rd St	27	5.7	13.5	0.1	20
SE Peterson Dr	5	1.7	21.0	0.2	32
SW Southlawn Dr	1	0.7	13.9	0.1	33
SW 8th St	19	2.7	14.5	0.1	29
Ordnance Rd	18	7.0	33.4	0.3	28
Total		20.4	107.1	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	39	44	44	2	33
Average Queue (ft)	16	13	15	0	3
95th Queue (ft)	43	39	41	2	18
Link Distance (ft)	790	537		550	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		100
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	69	8	62
Average Queue (ft)	24	0	23
95th Queue (ft)	50	5	53
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	T	TR	T
Maximum Queue (ft)	33	37	19	21	5
Average Queue (ft)	12	13	1	1	0
95th Queue (ft)	37	38	15	16	5
Link Distance (ft)	328	430	341	341	325
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)			0		0
Queuing Penalty (veh)			0		0

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	62	86	57	51	201	118	93	31	119	133
Average Queue (ft)	17	30	17	17	89	26	24	5	43	51
95th Queue (ft)	45	68	48	45	163	77	67	22	96	107
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)		0	4	1	1	0		0	10	
Queuing Penalty (veh)		0	1	0	4	0		1	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	41	152	30	116	117	24	86	104	125	
Average Queue (ft)	5	58	2	30	30	2	33	28	41	
95th Queue (ft)	25	117	15	83	84	14	67	77	96	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)				0	0			0		
Queuing Penalty (veh)				0	0			0		

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	236	270	263	182	244	245	163	202	290	315	250	243
Average Queue (ft)	114	166	158	76	154	163	68	84	166	178	60	123
95th Queue (ft)	202	246	244	150	221	230	132	152	260	278	169	208
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)									0	0		
Queuing Penalty (veh)									0	1		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	4	9		0	1	1		0	1	19		3
Queuing Penalty (veh)	8	17		1	1	3		1	3	25		9

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	270	240
Average Queue (ft)	134	133
95th Queue (ft)	222	213
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	6	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	87	86	67	74	138	101	104	117	23	59	119	133
Average Queue (ft)	36	27	31	24	61	37	29	36	2	21	52	61
95th Queue (ft)	78	69	56	59	117	77	76	87	13	51	100	115
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	0		0	2		0	0				0
Queuing Penalty (veh)	0	0		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 82

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.6	20.0	1.3	0.7	1.4

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.5	1.0	2.1	1.8

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.3	10.2	1.4	2.0	1.7

18: S Ankeny Blvd & Ordinance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.4	2.6	0.2	0.0	0.5
Total Del/Veh (s)	13.3	27.7	7.7	6.8	8.3

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	51.0	33.4	2.9	3.7	5.0

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	39.9	37.4	26.0	25.5	31.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.2	1.2	0.0	0.0	0.3
Total Del/Veh (s)	26.6	41.5	4.1	5.9	8.2

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	43.4

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	18.1	19.5	8.5	16.0	18.9	5.6	4.9	0.9	0.7	4.2	0.9	0.5

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.5

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	18.9	5.5	0.6	0.6	5.1	1.7	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.5	4.5	1.2	0.8	2.1	2.0	1.9

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	3.7	0.1	0.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	52.5	57.7	10.5	53.0	53.2	5.9	18.1	3.5	3.0	7.4	6.0	4.9

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.2

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	41.7	47.6	46.8	28.0	9.5	3.3	1.8	6.6	2.2	1.0	6.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.2	0.3	1.1	0.2	1.1	0.0	0.0	0.1	2.5	0.3	0.3
Total Del/Veh (s)	33.8	44.2	33.8	36.2	32.8	5.7	24.0	24.8	4.6	27.4	27.3	20.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	29.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.5	3.9	3.9	0.3	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	44.8	49.6	6.3	46.8	49.9	26.1	12.5	5.1	1.6	8.0	6.8	5.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.1

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.9

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	3.9	13.9	0.2	40
SE 8th St	19	3.4	29.8	0.3	32
SE East Lawn Dr	1	1.0	12.7	0.1	33
SE Peterson Dr	5	0.6	13.8	0.1	34
SE 3rd St	27	5.1	24.3	0.2	28
SE 2nd St	6	1.3	9.4	0.1	29
E 1st St	26	24.3	31.7	0.1	9
Total		39.4	135.5	1.0	27

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.8	11.0	0.1	25
SW 3rd St	27	6.9	14.5	0.1	19
SE Peterson Dr	5	1.9	21.3	0.2	32
SW Southlawn Dr	1	0.9	14.0	0.1	33
SW 8th St	19	2.1	13.9	0.1	30
Ordnance Rd	18	5.9	32.1	0.3	29
Total		20.4	106.9	0.8	29

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	L	TR
Maximum Queue (ft)	66	55	41	3	34	4
Average Queue (ft)	28	22	10	0	5	0
95th Queue (ft)	57	49	35	3	23	3
Link Distance (ft)	790	537		550		621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	81	2	42
Average Queue (ft)	25	0	10
95th Queue (ft)	56	2	34
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB
Directions Served	LTR	LTR	TR
Maximum Queue (ft)	85	44	6
Average Queue (ft)	30	20	0
95th Queue (ft)	77	45	5
Link Distance (ft)	328	430	341
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	76	110	63	33	119	61	79	25	142	160
Average Queue (ft)	22	39	19	8	57	9	14	5	51	60
95th Queue (ft)	55	87	50	30	105	40	54	20	113	126
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	4	0				0	10	
Queuing Penalty (veh)	0	0	0	0				1	1	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	44	215	31	90	96	27	44	84	94	
Average Queue (ft)	9	102	7	29	33	2	14	22	32	
95th Queue (ft)	32	184	27	71	79	15	41	62	76	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)								0		
Queuing Penalty (veh)								0		

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	264	361	355	167	164	162	77	153	192	208	128	257
Average Queue (ft)	88	244	231	78	82	86	28	72	84	95	35	136
95th Queue (ft)	204	341	323	142	143	149	60	126	153	164	84	232
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	25		0	0				0	2		5
Queuing Penalty (veh)	0	27		0	0				0	2		16

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	308	305
Average Queue (ft)	148	150
95th Queue (ft)	253	252
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	5	
Queuing Penalty (veh)	16	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	111	128	73	73	144	68	124	134	20	58	139	161
Average Queue (ft)	48	50	34	29	65	24	36	44	2	20	63	83
95th Queue (ft)	98	99	62	63	119	53	88	102	11	50	121	141
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	2		0	3		0	0				0
Queuing Penalty (veh)	1	2		0	1		0	0				0

Zone Summary

Zone wide Queuing Penalty: 69

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.8	13.0	1.1	0.9	1.5

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	10.1	0.6	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.5	4.5	1.2	2.1	1.9

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.5	0.0	0.0	0.4
Total Del/Veh (s)	16.7	38.7	5.3	6.0	7.2

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	46.4	39.7	3.4	2.4	6.8

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	40.9	27.2	20.8	26.8	29.4

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.9	1.3	0.0	0.0	0.4
Total Del/Veh (s)	29.1	44.6	5.6	6.7	11.1

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	40.9

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.0	26.4	10.2	36.3	36.1	13.9	6.8	1.6	1.2	9.1	0.8	0.8

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.1

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	43.2	16.1	1.1	1.0	11.5	1.7	2.2

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.6	15.2	2.7	1.5	2.2	2.2	2.7

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	3.7	0.3	0.3	4.0	1.0	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	51.1	46.7	9.3	51.5	46.8	12.0	23.1	6.6	4.0	15.7	9.8	8.4

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	10.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.5	52.2	50.7	28.1	9.2	5.8	3.3	14.0	3.3	1.5	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.3	0.3	1.1	0.2	1.0	0.0	0.0	0.1	2.5	0.4	0.4
Total Del/Veh (s)	50.0	46.2	35.3	54.2	51.0	18.3	31.7	35.7	9.3	36.3	28.6	21.6

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	36.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.5	3.9	3.9	0.3	0.3	0.1	0.0	0.1	0.1	0.0	0.0
Total Del/Veh (s)	48.5	53.0	7.0	46.2	53.8	29.4	14.3	5.7	2.6	16.2	6.2	4.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	10.0

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	55.1

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	6.7	17.3	0.2	33
SE 8th St	19	5.6	32.6	0.3	29
SE East Lawn Dr	1	1.6	13.5	0.1	31
SE Peterson Dr	5	1.1	14.3	0.1	33
SE 3rd St	27	5.6	24.7	0.2	27
SE 2nd St	6	2.8	10.9	0.1	25
E 1st St	26	35.6	43.0	0.1	6
Total		58.9	156.2	1.0	23

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.8	11.1	0.1	25
SW 3rd St	27	6.0	13.8	0.1	20
SE Peterson Dr	5	1.8	21.2	0.2	32
SW Southlawn Dr	1	0.8	14.1	0.1	33
SW 8th St	19	3.3	15.1	0.1	27
Ordnance Rd	18	10.2	36.6	0.3	26
Total		25.0	111.8	0.8	27

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	TR
Maximum Queue (ft)	69	64	56	36	12
Average Queue (ft)	26	25	21	7	1
95th Queue (ft)	56	56	51	27	7
Link Distance (ft)	790	537			621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100	100	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB	SB
Directions Served	LR	R	L	T
Maximum Queue (ft)	96	9	70	12
Average Queue (ft)	31	0	28	0
95th Queue (ft)	68	5	58	11
Link Distance (ft)	490			920
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150	100	
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	T	TR	T
Maximum Queue (ft)	42	57	106	130	6
Average Queue (ft)	20	22	9	13	0
95th Queue (ft)	45	51	63	75	5
Link Distance (ft)	328	430	341	341	325
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)			1		
Queuing Penalty (veh)			0		

Intersection: 18: S Ankeny Blvd & Ordinance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	75	108	77	54	246	194	164	29	153	172
Average Queue (ft)	24	40	25	20	121	69	68	5	65	78
95th Queue (ft)	58	88	61	49	200	145	139	20	131	145
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	0	7	2	2	0		0	18	
Queuing Penalty (veh)	0	0	2	1	10	0		1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	42	177	33	182	191	40	86	117	135	
Average Queue (ft)	10	81	5	76	78	6	34	37	52	
95th Queue (ft)	34	144	24	148	150	27	69	94	115	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)				1	1			0		
Queuing Penalty (veh)				0	0			0		

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	264	352	313	214	272	278	236	307	337	338	250	258
Average Queue (ft)	147	195	184	94	165	172	94	126	228	243	122	166
95th Queue (ft)	255	303	277	181	248	255	181	240	332	348	292	255
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)								0	1	2		
Queuing Penalty (veh)								0	6	11		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	11	15		1	3	3	0	1	7	27	0	8
Queuing Penalty (veh)	27	34		3	4	10	1	3	15	42	0	24

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	304	286
Average Queue (ft)	170	168
95th Queue (ft)	256	248
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	6	
Queuing Penalty (veh)	17	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	100	82	70	69	163	113	188	186	28	78	134	146
Average Queue (ft)	40	27	34	24	63	44	67	78	5	30	70	82
95th Queue (ft)	84	66	63	58	128	90	142	152	19	63	114	130
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1		0	5	0	0	1				0
Queuing Penalty (veh)	1	1		0	2	0	1	0				0

Zone Summary

Zone wide Queuing Penalty: 216

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	19.4	27.6	1.8	0.9	2.1

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	22.4	1.1	2.4	2.2

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.6	15.2	2.6	2.2	2.7

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	2.3	0.3	0.0	0.6
Total Del/Veh (s)	15.4	29.2	9.9	9.8	10.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	49.5	38.7	5.7	4.2	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	45.7	41.1	31.8	29.8	36.3

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.1	0.0	0.0	0.3
Total Del/Veh (s)	28.4	43.7	6.4	6.6	10.0

Total Zone Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	55.1

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	17.7	21.4	8.1	17.0	16.5	5.4	5.9	1.0	0.7	4.6	0.9	0.7

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.5

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.1	5.0	0.6	0.5	5.9	1.8	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.7	4.9	1.3	1.0	2.2	1.7	2.0

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.9	0.8	3.7	0.1	0.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	52.3	47.5	11.8	52.3	52.9	6.4	21.9	3.7	3.0	8.1	6.9	5.2

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	8.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	48.9	47.7	46.8	27.6	11.6	4.0	2.1	6.5	2.4	2.0	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.2	0.3	1.2	0.2	1.1	0.0	0.0	0.1	2.4	0.4	0.3
Total Del/Veh (s)	34.0	44.7	34.7	37.0	32.6	6.7	28.5	26.1	4.8	28.6	29.4	22.0

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	30.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.6	3.9	4.0	0.3	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Total Del/Veh (s)	44.7	50.9	7.6	42.8	49.1	26.5	15.1	5.8	1.6	7.7	7.1	4.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	45.0

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	4.0	14.2	0.2	39
SE 8th St	19	4.1	30.6	0.3	31
SE East Lawn Dr	1	1.1	12.7	0.1	32
SE Peterson Dr	5	0.6	13.8	0.1	34
SE 3rd St	27	5.7	24.9	0.2	27
SE 2nd St	6	1.4	9.5	0.1	29
E 1st St	26	25.8	33.2	0.1	8
Total		42.7	139.0	1.0	26

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	2.9	11.1	0.1	25
SW 3rd St	27	7.2	14.9	0.1	19
SE Peterson Dr	5	1.9	21.4	0.2	32
SW Southlawn Dr	1	0.9	14.0	0.1	33
SW 8th St	19	2.3	14.1	0.1	29
Ordnance Rd	18	6.3	32.4	0.3	29
Total		21.5	107.9	0.8	28

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	TR
Maximum Queue (ft)	61	46	44	33	4
Average Queue (ft)	27	20	12	4	0
95th Queue (ft)	56	46	38	20	3
Link Distance (ft)	790	537			621
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100	100	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	64	4	40
Average Queue (ft)	25	0	9
95th Queue (ft)	50	3	32
Link Distance (ft)	490		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	96	42
Average Queue (ft)	31	18
95th Queue (ft)	76	43
Link Distance (ft)	328	430
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	98	141	64	33	148	85	78	36	193	205
Average Queue (ft)	23	46	18	8	65	12	17	5	63	71
95th Queue (ft)	65	101	51	30	120	49	58	25	142	155
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	5	0	0			0	12	
Queuing Penalty (veh)	0	0	0	0	0			1	2	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	T	R	L	T	TR	
Maximum Queue (ft)	43	233	35	97	110	31	50	100	121	
Average Queue (ft)	9	106	7	38	41	2	16	27	37	
95th Queue (ft)	32	187	28	87	89	16	44	72	86	
Link Distance (ft)	150	521		1301	1301			550	550	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			150			150	150			
Storage Blk Time (%)					0			0		
Queuing Penalty (veh)					0			0		

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	256	405	376	171	165	175	90	176	201	206	115	263
Average Queue (ft)	102	264	253	78	95	104	32	85	92	101	39	142
95th Queue (ft)	236	366	348	145	152	165	70	149	167	172	81	232
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	0	29						0	0	2		5
Queuing Penalty (veh)	1	34						0	0	2		17

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	322	281
Average Queue (ft)	166	161
95th Queue (ft)	265	252
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	7	
Queuing Penalty (veh)	23	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	126	126	87	77	145	75	136	152	21	60	141	164
Average Queue (ft)	52	53	38	35	72	23	41	52	2	21	70	88
95th Queue (ft)	105	101	69	69	128	54	101	115	11	49	122	143
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	2	1		0	4		0	0				0
Queuing Penalty (veh)	3	2		0	2		0	0				0

Zone Summary

Zone wide Queuing Penalty: 88

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	13.6	12.9	1.2	0.9	1.5

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.8	0.6	1.9	1.6

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.7	4.9	1.3	2.2	2.0

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	1.5	0.0	0.0	0.4
Total Del/Veh (s)	17.7	36.7	6.2	6.7	8.1

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	48.9	39.9	4.0	2.6	7.1

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.6	0.0	1.0	0.6
Total Del/Veh (s)	41.5	27.4	22.5	28.5	30.6

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.9	1.4	0.0	0.0	0.4
Total Del/Veh (s)	29.8	43.5	6.3	6.9	11.6

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	45.0

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	31.9	36.7	12.9	34.6	43.4	15.9	6.8	1.7	1.5	9.6	0.9	0.5

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	60.1	27.5	1.1	1.0	11.5	1.8	2.5

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by movement

Movement	EBR	WBR	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.2	56.1	5.7	5.3	2.3	1.9	5.0

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.8	3.7	0.2	0.2	4.1	1.3	0.3	0.5	0.0	0.0	0.0
Total Del/Veh (s)	46.9	50.5	10.9	47.1	44.7	13.8	26.9	8.0	5.3	16.8	12.8	9.9

18: S Ankeny Blvd & Ordnance Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	12.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	38.5	49.2	42.3	26.8	10.0	6.2	4.2	16.1	3.1	2.0	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.3	0.3	1.1	0.2	1.0	0.0	0.0	0.1	2.4	0.4	0.4
Total Del/Veh (s)	51.8	45.3	36.0	73.5	59.1	19.8	37.8	44.4	12.9	49.4	32.7	25.5

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	42.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.5	3.9	4.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	49.4	53.4	7.4	45.3	51.5	29.5	15.9	6.2	2.9	16.4	6.1	4.1

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	10.3

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	65.1

Arterial Level of Service: NB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ordnance Rd	18	7.9	18.3	0.2	31
SE 8th St	19	6.0	32.9	0.3	29
SE East Lawn Dr	1	1.7	13.6	0.1	30
SE Peterson Dr	5	1.1	14.4	0.1	32
SE 3rd St	27	6.1	25.2	0.2	27
SE 2nd St	6	5.9	14.0	0.1	20
E 1st St	26	44.2	51.6	0.1	5
Total		73.0	170.1	1.0	21

Arterial Level of Service: SB S Ankeny Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SW 2nd St	6	3.0	11.3	0.1	24
SW 3rd St	27	5.9	13.7	0.1	20
SE Peterson Dr	5	1.9	21.3	0.2	32
SW Southlawn Dr	1	0.9	14.2	0.1	33
SW 8th St	19	3.1	14.9	0.1	28
Ordnance Rd	18	13.1	39.5	0.3	24
Total		28.0	115.0	0.8	27

Intersection: 1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	80	72	57	4	35	8
Average Queue (ft)	27	25	22	0	6	0
95th Queue (ft)	63	60	50	4	27	4
Link Distance (ft)	790	537		550		621
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: S Ankeny Blvd & SE Peterson Dr

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	R	L	T	T
Maximum Queue (ft)	117	2	13	72	23	9
Average Queue (ft)	37	0	0	27	1	0
95th Queue (ft)	96	2	6	59	17	9
Link Distance (ft)	490	621			920	920
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150	100		
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Intersection: 6: S Ankeny Blvd & SW 2nd St/SE 2nd St

Movement	EB	WB	NB	NB
Directions Served	LTR	LTR	T	TR
Maximum Queue (ft)	46	91	236	248
Average Queue (ft)	19	28	50	61
95th Queue (ft)	45	93	193	212
Link Distance (ft)	328	430	341	341
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			1	2
Storage Bay Dist (ft)				
Storage Blk Time (%)			4	
Queuing Penalty (veh)			0	

Intersection: 18: S Ankeny Blvd & Ordnance Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	101	145	70	57	269	303	256	27	208	209
Average Queue (ft)	28	53	25	23	148	100	94	9	91	94
95th Queue (ft)	71	114	59	53	251	226	186	26	171	177
Link Distance (ft)	441		254			742	742		1301	1301
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		110		40	190			36		
Storage Blk Time (%)	0	1	5	3	6	0		0	26	
Queuing Penalty (veh)	0	1	2	1	40	1		1	4	

Intersection: 19: S Ankeny Blvd & SW 8th St/SE 8th St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	R	L	T	TR
Maximum Queue (ft)	45	178	33	195	205	59	94	120	130
Average Queue (ft)	8	81	6	82	82	9	38	36	52
95th Queue (ft)	30	149	25	154	156	42	76	93	111
Link Distance (ft)	150	521		1301	1301			550	550
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150			150	150		
Storage Blk Time (%)				1	1		0	0	
Queuing Penalty (veh)				0	0		0	0	

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	260	358	327	280	357	374	290	324	351	351	250	274
Average Queue (ft)	156	203	194	122	198	207	112	165	267	280	152	200
95th Queue (ft)	264	312	300	243	317	326	231	300	370	379	321	292
Link Distance (ft)		715	715		2533	2533			325	325		
Upstream Blk Time (%)								0	5	8		
Queuing Penalty (veh)								0	33	54		
Storage Bay Dist (ft)	165			220			220	235			150	175
Storage Blk Time (%)	11	18		4	8	10	0	1	17	42	0	18
Queuing Penalty (veh)	29	43		13	13	34	1	4	40	71	0	59

Intersection: 26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	413	364
Average Queue (ft)	228	214
95th Queue (ft)	400	353
Link Distance (ft)	1219	1219
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	9	
Queuing Penalty (veh)	30	

Intersection: 27: S Ankeny Blvd & SW 3rd St/SE 3rd St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	95	92	81	82	160	113	181	196	30	74	128	141
Average Queue (ft)	36	32	39	28	64	48	74	88	5	29	72	83
95th Queue (ft)	81	76	67	66	127	92	151	167	19	62	117	129
Link Distance (ft)		344			429		920	920			341	341
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		160	100		150			150	150		
Storage Blk Time (%)	1	1		0	5	0	0	1				0
Queuing Penalty (veh)	1	1		0	2	0	1	0				0

Zone Summary

Zone wide Queuing Penalty: 481

1: S Ankeny Blvd & SW Southlawn Dr/SE East Lawn Dr Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	26.8	31.1	1.9	1.0	2.3

5: S Ankeny Blvd & SE Peterson Dr Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	34.4	1.1	2.4	2.5

6: S Ankeny Blvd & SW 2nd St/SE 2nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.2	56.1	5.7	2.3	5.0

18: S Ankeny Blvd & Ordance Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.3	2.5	0.5	0.0	0.7
Total Del/Veh (s)	16.3	27.1	11.8	12.7	12.8

19: S Ankeny Blvd & SW 8th St/SE 8th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	43.3	36.0	6.2	4.2	7.3

26: S Ankeny Blvd/N Ankeny Blvd & W 1st St/E 1st St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.0	0.6	0.0	1.0	0.6
Total Del/Veh (s)	45.7	48.9	39.5	36.7	42.2

27: S Ankeny Blvd & SW 3rd St/SE 3rd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.2	1.3	0.0	0.0	0.3
Total Del/Veh (s)	27.5	42.2	7.1	6.5	10.3

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	65.1

Appendix D – Traffic Signal Warrant Analysis



Traffic Signal Warrant Analysis

Warrants 1 - 3 (Volume Warrants)

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SW/SE 3rd St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	22084 vehicles	Total Approach Volume	2154.35 vehicles
Total Ped/Bike Volume	45 crossings	Total Ped/Bike Volume	13 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

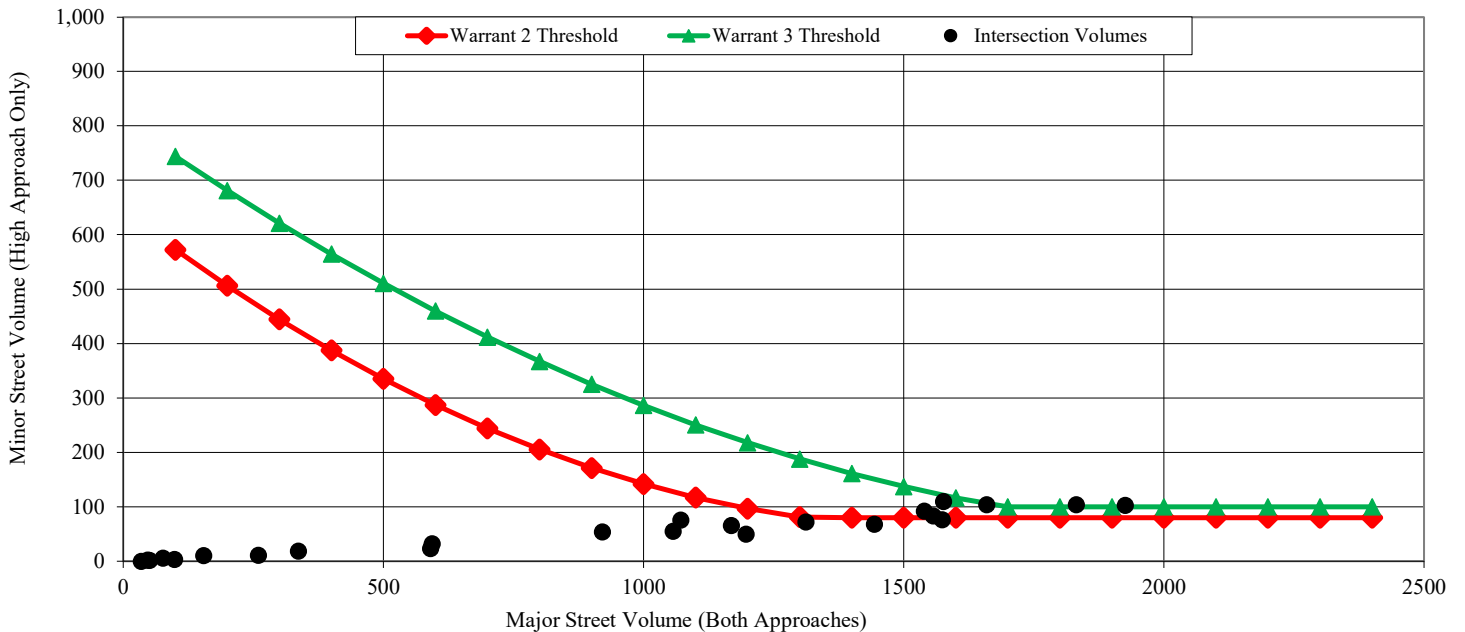
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Satisfied	Not Satisfied
Required values reached for	0 hours	8 hours	0 (Cond. A) & 11 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	150	75	120 (Cond. A) & 60 (Cond. B)

* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Satisfied
Required values reached for	6 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Satisfied
Required values reached for	1570 total, 67.8 minor, 0 delay	2 hours
Criteria - Total Approach Volume (veh in one hour)	800	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	100	
Criteria - Minor Street High Side Delay (veh-hrs)	4	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)





Traffic Signal Warrant Analysis

Warrants 4 to 6 (Pedestrian, School, Coordinated Systems)

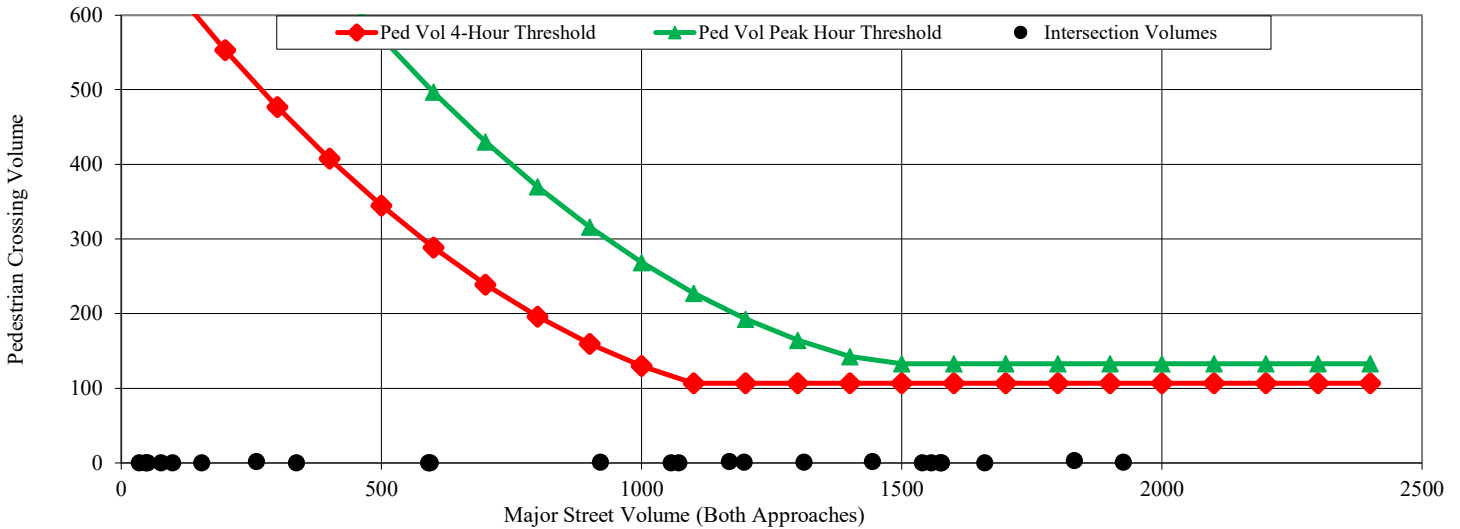
Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SW/SE 3rd St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	22084 vehicles	Total Approach Volume	2154.35 vehicles
Total Ped/Bike Volume	45 crossings	Total Ped/Bike Volume	13 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Pedestrian Warrant thresholds.

Warrant 4, Pedestrian Volume		
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	0 hours	0 hours
Criteria - Min. Distance to Nearest Controlled Crossing	300 feet, unless progressive movement not impacted	
Criteria - Major Street Volume and Crossing Volume	See Figure Below	

Figure 4C-5 & Figure 4C-7 (Warrant 4 Four Hour & Peak Hour)



Warrant 5, School Crossing	
Condition Satisfied?	Not Satisfied
Criteria - School Crossing Data	<ul style="list-style-type: none"> - 20 or more schoolchildren crossing during the highest hour. - Consideration given to other remedial measures. - 300 feet or more to nearest controlled crossing, or proposed signal will not restrict progression. - Engineering study showing inadequate gaps in traffic.

Warrant 6, Coordinated Signal System	
Condition Satisfied?	Not Satisfied
Criteria - Coordinated Signal System	<ul style="list-style-type: none"> - If one-way, the adjacent traffic control signals are too far apart to provide the necessary degree of vehicular platooning. - If two-way, the adjacent traffic control signals do not provide the necessary degree of platooning, but will collectively provide a progressive operation with the proposed traffic control signal. - Resultant spacing of traffic control signal is 1,000 feet or greater.



Traffic Signal Warrant Analysis

Warrants 7-9 (Crash, Network, Rail Crossing)

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SW/SE 3rd St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	22084 vehicles	Total Approach Volume	2154.35 vehicles
Total Ped/Bike Volume	45 crossings	Total Ped/Bike Volume	13 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

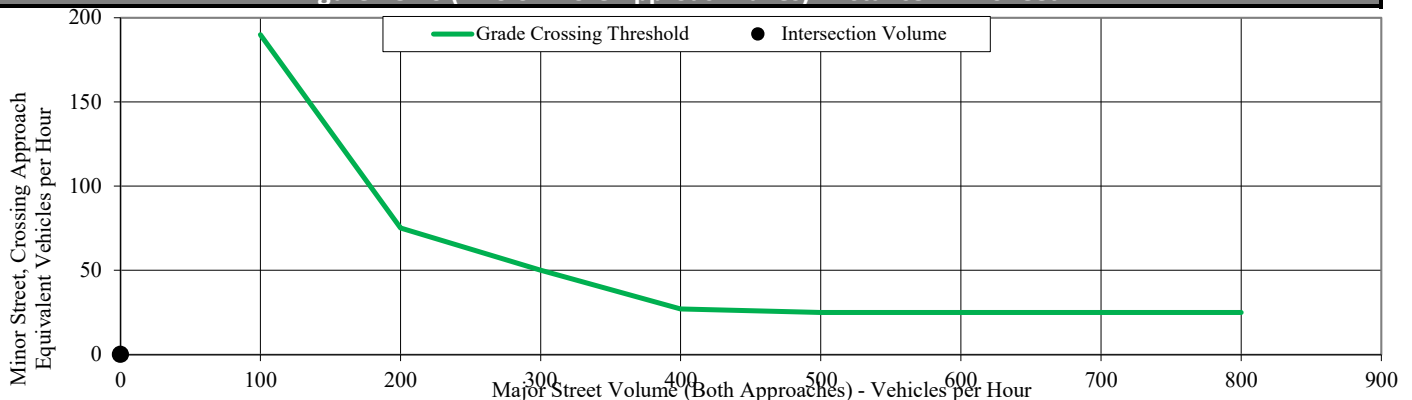
Reduction applied to Crash and Roadway Network Warrant thresholds due to high speed on US 69/S Ankeny Blvd.

Warrant 7, Crash Experience	
Condition Satisfied?	Not Satisfied
Required values reached for	Alternatives not tried, 4 or less correctable crashes, 11 hours (Veh. Vol.), 0 hours (Ped 4-Hour), and 0 hours (Ped Peak Hour)
Criteria - Alternatives	Adequate trial has failed to reduce the crash frequency
Criteria - Reported Crashes (within 12-month period)	5 or more crashes susceptible to correction by a traffic control signal
Criteria - Major Street (veh/hr)	From Warrant 1: 480 (Cond. A), 720 (Cond. B)
Criteria - Minor Street (veh/hr)	From Warrant 1: 120 (Cond. A), 60 (Cond. B)
(Alternative Volume Requirement) Criteria - Pedestrian Volume	80 percent of the Pedestrian Volume Warrant requirements

Warrant 8, Roadway Network	
Condition Satisfied?	Not Satisfied
Required values reached for	Not an intersection of 2 major routes and satisfies volume/warrant requirements
Criteria - Common Intersection of Two Major Routes	- Part of the street or highway system, or - Includes rural or suburban highways outside, entering, or traversing a city, or - Appears as or major route on an official plan.
Criteria - Existing or Immediately Projected Entering Volume	1,000 or more vehicles per typical peak hour
Criteria - Warrants	Satisfies Warrants 1, 2, or 3 with 5-year projected volumes
(Alternative Requirement) Criteria - Non-normal Business Day	1,000 or more vehicles per hour for any 5 hours

Warrant 9, Intersection Near a Grade Crossing	
Condition Satisfied?	Not Examined
Required values reached for	
Criteria - Alternatives	
Criteria - Max. Distance to Nearest Controlled Crossing	
Criteria - Major Street Volume and Crossing Volume	

Figure 4C-10 (Two or More Approach Lanes): Distance D = 70 feet



Traffic Signal Warrant Analysis

Multi-Way Stop Warrants

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SW/SE 3rd St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	22084 vehicles	Total Approach Volume	2154.35 vehicles
Total Ped/Bike Volume	45 crossings	Total Ped/Bike Volume	13 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Multi-Way Stop Warrant thresholds.

Condition A - Traffic Signal Warrant	
Condition Satisfied?	Not Satisfied
Criteria*	Traffic Signal Warranted & Justified

* Multi-way stop control may be used as an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

Condition B - Crash Experience	
Condition Satisfied?	Not satisfied
Required values reached for	less than 4 correctable crashes
Criteria - Crash Experience	5 or more correctable crashes in 12-month period

Condition C - Intersection Volume & Delay	
Condition Satisfied?	Not Satisfied
Required values reached for	1 hour & 0 sec. average delay/veh
Criteria - Major Street (veh/hr)	300 for any 8 hours of an average day
Criteria - Minor Street (total vol-veh, ped, & bikes/hr)	200 for the same 8 hours of an average day
Criteria - Delay (average sec/veh)	30 during the highest hour

Condition D - Combination Volume, Crash Experience, & Delay	
Condition Satisfied?	Not Satisfied
Required values reached for	4 hours, less than 4 crashes, & 0 sec. average delay/veh
Criteria - Major Street (veh/hr)	240 for any 8 hours of an average day
Criteria - Minor Street (total vol-veh, ped, & bikes/hr)	160 for the same 8 hours of an average day
Criteria - Crash Experience	4 or more correctable crashes in 12-month period
Criteria - Delay (average sec/veh)	24 during the highest hour



Traffic Signal Warrant Analysis

Warrants 1 - 3 (Volume Warrants)

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SE 8th St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	21481 vehicles	Total Approach Volume	816.75 vehicles
Total Ped/Bike Volume	20 crossings	Total Ped/Bike Volume	9 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

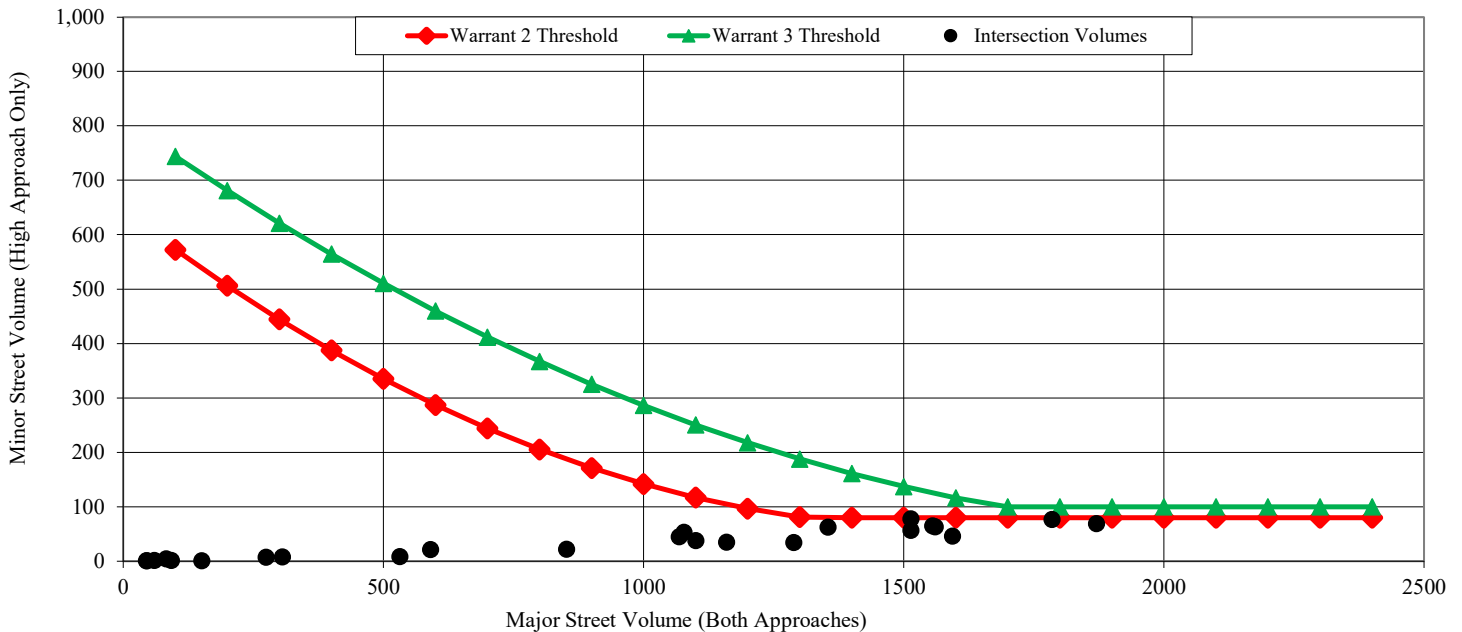
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Not Satisfied	Not Satisfied
Required values reached for	0 hours	2 hours	0 (Cond. A) & 6 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	150	75	120 (Cond. A) & 60 (Cond. B)

* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	1355 total, 0 minor, 0 delay	0 hours
Criteria - Total Approach Volume (veh in one hour)	650	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	100	
Criteria - Minor Street High Side Delay (veh-hrs)	4	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)





Traffic Signal Warrant Analysis

Warrants 4 to 6 (Pedestrian, School, Coordinated Systems)

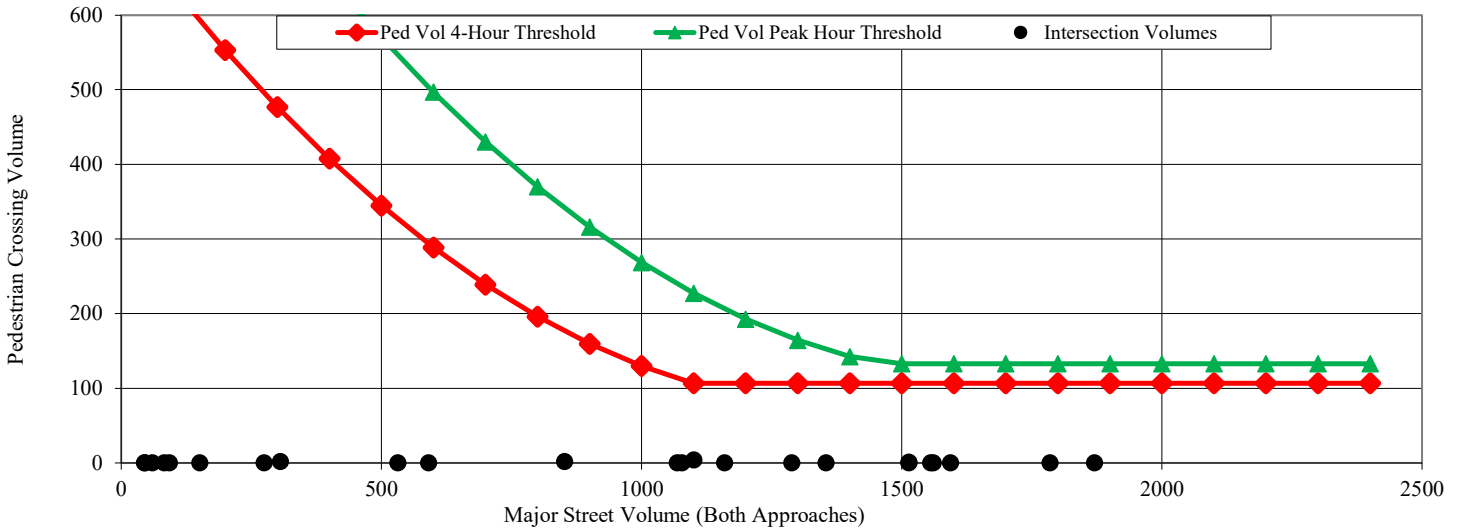
Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SE 8th St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	21481 vehicles	Total Approach Volume	816.75 vehicles
Total Ped/Bike Volume	20 crossings	Total Ped/Bike Volume	9 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Pedestrian Warrant thresholds.

Warrant 4, Pedestrian Volume		
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	0 hours	0 hours
Criteria - Min. Distance to Nearest Controlled Crossing	300 feet, unless progressive movement not impacted	
Criteria - Major Street Volume and Crossing Volume	See Figure Below	

Figure 4C-5 & Figure 4C-7 (Warrant 4 Four Hour & Peak Hour)



Warrant 5, School Crossing	
Condition Satisfied?	Not Satisfied
Criteria - School Crossing Data	<ul style="list-style-type: none"> - 20 or more schoolchildren crossing during the highest hour. - Consideration given to other remedial measures. - 300 feet or more to nearest controlled crossing, or proposed signal will not restrict progression. - Engineering study showing inadequate gaps in traffic.

Warrant 6, Coordinated Signal System	
Condition Satisfied?	Not Satisfied
Criteria - Coordinated Signal System	<ul style="list-style-type: none"> - If one-way, the adjacent traffic control signals are too far apart to provide the necessary degree of vehicular platooning. - If two-way, the adjacent traffic control signals do not provide the necessary degree of platooning, but will collectively provide a progressive operation with the proposed traffic control signal. - Resultant spacing of traffic control signal is 1,000 feet or greater.



Traffic Signal Warrant Analysis

Warrants 7-9 (Crash, Network, Rail Crossing)

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SE 8th St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	21481 vehicles	Total Approach Volume	816.75 vehicles
Total Ped/Bike Volume	20 crossings	Total Ped/Bike Volume	9 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

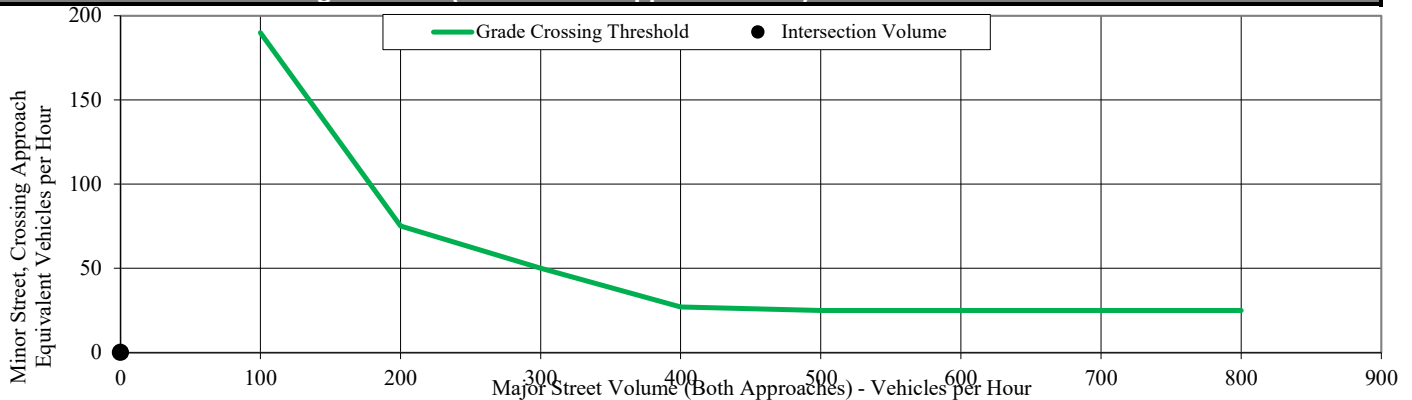
Reduction applied to Crash and Roadway Network Warrant thresholds due to high speed on US 69/S Ankeny Blvd.

Warrant 7, Crash Experience	
Condition Satisfied?	Not Satisfied
Required values reached for	Alternatives not tried, 4 or less correctable crashes, 6 hours (Veh. Vol.), 0 hours (Ped 4-Hour), and 0 hours (Ped Peak Hour)
Criteria - Alternatives	Adequate trial has failed to reduce the crash frequency
Criteria - Reported Crashes (within 12-month period)	5 or more crashes susceptible to correction by a traffic control signal
Criteria - Major Street (veh/hr)	From Warrant 1: 480 (Cond. A), 720 (Cond. B)
Criteria - Minor Street (veh/hr)	From Warrant 1: 120 (Cond. A), 60 (Cond. B)
(Alternative Volume Requirement) Criteria - Pedestrian Volume	80 percent of the Pedestrian Volume Warrant requirements

Warrant 8, Roadway Network	
Condition Satisfied?	Not Satisfied
Required values reached for	Not an intersection of 2 major routes and satisfies volume/warrant requirements
Criteria - Common Intersection of Two Major Routes	- Part of the street or highway system, or - Includes rural or suburban highways outside, entering, or traversing a city, or - Appears as or major route on an official plan.
Criteria - Existing or Immediately Projected Entering Volume	1,000 or more vehicles per typical peak hour
Criteria - Warrants	Satisfies Warrants 1, 2, or 3 with 5-year projected volumes
(Alternative Requirement) Criteria - Non-normal Business Day	1,000 or more vehicles per hour for any 5 hours

Warrant 9, Intersection Near a Grade Crossing	
Condition Satisfied?	Not Examined
Required values reached for	
Criteria - Alternatives	
Criteria - Max. Distance to Nearest Controlled Crossing	
Criteria - Major Street Volume and Crossing Volume	

Figure 4C-10 (Two or More Approach Lanes): Distance D = 70 feet



Traffic Signal Warrant Analysis

Multi-Way Stop Warrants

Project Name	US 69 (S Ankeny Blvd) Corridor Study
Project/File #	181921.01
Scenario	Existing 2019 Volumes

Intersection Information			
Major Street (N/S Road)	US 69/S Ankeny Blvd	Minor Street (E/W Road)	SE 8th St
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	21481 vehicles	Total Approach Volume	816.75 vehicles
Total Ped/Bike Volume	20 crossings	Total Ped/Bike Volume	9 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Multi-Way Stop Warrant thresholds.

Condition A - Traffic Signal Warrant	
Condition Satisfied?	Not Satisfied
Criteria*	Traffic Signal Warranted & Justified

* Multi-way stop control may be used as an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

Condition B - Crash Experience	
Condition Satisfied?	Not satisfied
Required values reached for	less than 4 correctable crashes
Criteria - Crash Experience	5 or more correctable crashes in 12-month period

Condition C - Intersection Volume & Delay	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours & 0 sec. average delay/veh
Criteria - Major Street (veh/hr)	300 for any 8 hours of an average day
Criteria - Minor Street (total vol-veh, ped, & bikes/hr)	200 for the same 8 hours of an average day
Criteria - Delay (average sec/veh)	30 during the highest hour

Condition D - Combination Volume, Crash Experience, & Delay	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours, less than 4 crashes, & 0 sec. average delay/veh
Criteria - Major Street (veh/hr)	240 for any 8 hours of an average day
Criteria - Minor Street (total vol-veh, ped, & bikes/hr)	160 for the same 8 hours of an average day
Criteria - Crash Experience	4 or more correctable crashes in 12-month period
Criteria - Delay (average sec/veh)	24 during the highest hour

Appendix E – CMF Details



CMF / CRF Details

CMF ID: 271

Provide a left-turn lane on both major-road approaches

Description:

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [*Safety Effectiveness of Intersection Left- and Right-Turn Lanes, Harwood et al., 2002*](#)

Star Quality Rating:



Crash Modification Factor (CMF)

Value: 0.58

Adjusted Standard Error: 0.04

Unadjusted Standard Error: 0.03

Crash Reduction Factor (CRF)

Value: 42 (This value indicates a **decrease** in crashes)

Adjusted Standard Error: 4

Unadjusted Standard Error:

3

Applicability

Crash Type:

All

Crash Severity:

All

Roadway Types:

Not Specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Urban

Traffic Volume:

Time of Day:

If countermeasure is intersection-based

Intersection Type:

Roadway/roadway (not interchange related)

Intersection Geometry:

4-leg

Traffic Control:

Signalized

Major Road Traffic Volume:

4600 to 40300 Average Daily Traffic (ADT)

Minor Road Traffic Volume:

100 to 13700 Average Daily Traffic (ADT)

Development Details

Date Range of Data Used:

Municipality:

State:



CMF / CRF Details

CMF ID: 269

Provide a left-turn lane on both major-road approaches

Description:

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [*Safety Effectiveness of Intersection Left- and Right-Turn Lanes, Harwood et al., 2002*](#)

Star Quality Rating:



Crash Modification Factor (CMF)

Value: 0.53

Adjusted Standard Error: 0.04

Unadjusted Standard Error: 0.04

Crash Reduction Factor (CRF)

Value: 47 (This value indicates a **decrease** in crashes)

Adjusted Standard Error: 4

Unadjusted Standard Error:	4
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Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	4-leg
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	1500 to 40600 Average Daily Traffic (ADT)
Minor Road Traffic Volume:	200 to 8000 Average Daily Traffic (ADT)

Development Details

Date Range of Data Used:	
Municipality:	
State:	

Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	Yes. HSM lists this CMF in bold font to indicate that it has the highest reliability since it has an adjusted standard error of 0.1 or less.
Date Added to Clearinghouse:	Dec-01-2009
Comments:	Countermeasure name changed to match HSM

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CMF / CRF Details

CMF ID: 10374

Road diet (Convert 4-lane undivided road to 4-lanes plus turning lane)

Description: Converting 4-lane road to 4-lane plus one two-way turning lane.

Prior Condition: Urban 4-lane undivided roadway

Category: Roadway

Study: [Investigating Safety Impact of Center Line Rumble Strips, Lane Conversion, Roundabout and J-Turn Features on Louisiana Highways, Sun and Rahman, 2019](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value: 0.758

Adjusted Standard Error:

Unadjusted Standard Error: 0.033

Crash Reduction Factor (CRF)

Value: 24.2 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	3.3
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Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	4
Road Division Type:	Undivided
Speed Limit:	
Area Type:	Urban
Traffic Volume:	6800 to 22141 <i>Annual Average Daily Traffic (AADT)</i>
Time of Day:	Not specified

If countermeasure is intersection-based

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	2004 to 2016
Municipality:	
State:	LA

Country:	USA
Type of Methodology Used:	Other before/after
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-01-2020
Comments:	

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CMF / CRF Details

CMF ID: 5044

Provide a raised median

Description:

Prior Condition: Two-way left-turn lane

Category: Access management

Study: [*Before-and-after safety study of roadways Where new medians have been added, Alluri et al., 2012*](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value: 0.697

Adjusted Standard Error:

Unadjusted Standard Error: 0.022

Crash Reduction Factor (CRF)

Value: 30.3 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	2.2
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Applicability	
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Crash Type:	All
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Number of Lanes:	2,4,6
Road Division Type:	Divided by TWLTL
Speed Limit:	
Area Type:	Urban and suburban
Traffic Volume:	10500 to 57000 <i>Annual Average Daily Traffic (AADT)</i>
Time of Day:	All

<i>If countermeasure is intersection-based</i>	
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Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
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Date Range of Data Used:	2003 to 2010
Municipality:	
State:	FL

Country:	USA
Type of Methodology Used:	Simple before/after
Sample Size Used:	Crashes
Before Sample Size Used:	2518 Crashes
After Sample Size Used:	1804 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Aug-01-2013
Comments:	

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Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	Yes. HSM lists this CMF in bold font to indicate that it has the highest reliability since it has an adjusted standard error of 0.1 or less.
Date Added to Clearinghouse:	Dec-01-2009
Comments:	Countermeasure name changed to match HSM

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Appendix F – Planning Level Construction Cost Estimate

**US 69 / S. ANKENY BOULEVARD CORRIDOR
FOUR-LANE ROADWAY CROSS SECTION WITH SPOT IMPROVMENTS**

Conceptual Level Opinion of Probable Construction Costs, August 2020



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION	LS	5.0 % of Items 3-21	-	\$ 52,000
2	TRAFFIC CONTROL	LS	4.0 % of Items 3-21	-	\$ 41,600
3	CLASS 10 EARTHWORK / GRADING	CY	1,350	\$20.00	\$ 27,000
4	MODIFIED SUBBASE, 6"	SY	4,070	\$12.00	\$ 48,840
5	PCC PAVEMENT, 10"	SY	3,040	\$75.00	\$ 228,000
6	CONCRETE MEDIAN	SY	0	\$105.00	\$ -
7	DRIVEWAY, PCC, 7"	SY	310	\$60.00	\$ 18,600
8	DRIVEWAY, REMOVAL	SY	1,030	\$20.00	\$ 20,600
9	SIDEWALK, PCC, 4"	SY	540	\$80.00	\$ 43,200
10	SIDEWALK, PCC, 6"	SY	470	\$100.00	\$ 47,000
11	SIDEWALK REMOVAL	SY	900	\$20.00	\$ 18,000
12	CURB & GUTTER REMOVAL	LF	3,205	\$10.00	\$ 32,050
13	INTAKE, SINGLE OPEN-THROAT CURB, SW-508	EA	10	\$7,500.00	\$ 75,000
14	INTAKE ADJSUTMENT, MAJOR	EA	10	\$2,500.00	\$ 25,000
15	STORM SEWER, TRENCHED, RCP 2000D, 18"	LF	120	\$100.00	\$ 12,000
16	PAVEMENT MARKINGS, DURABLE	STA	120	\$100.00	\$ 12,000
17	PAINTED SYMBOLS	EA	9	\$200.00	\$ 1,800
18	GROOVES FOR PAVEMENT MARKINGS	STA	120	\$245.00	\$ 29,400
19	GROOVES FOR SYMBOLS	EA	9	\$125.00	\$ 1,125
20	TRAFFIC SIGNAL MODIFICATIONS	LS	1	\$375,000.00	\$ 375,000
21	TEMPORARY SIGNAL DURING CONSTRUCTION	LS	1	\$25,000.00	\$ 25,000
			Subtotal Roadway and Structure Costs (Items 1-21)		\$ 1,133,000
22	CONTINGENCY	LS	25.0 % of Subtotals	-	\$ 283,000
2020 SUBTOTAL CONSTRUCTION COSTS					\$ 1,416,000
3 YEAR(S) INFLATION (ASSUME 4.5% ANNUAL RATE)					\$ 200,000
2023 SUBTOTAL CONSTRUCTION COSTS					\$ 1,616,000

**US 69 / S. ANKENY BOULEVARD CORRIDOR
FIVE-LANE UNDIVIDED ROADWAY CROSS SECTION**

Conceptual Level Opinion of Probable Construction Costs, August 2020



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION	LS	5.0 % of Items 3-21	-	\$ 105,900
2	TRAFFIC CONTROL	LS	4.0 % of Items 3-21	-	\$ 84,700
3	CLASS 10 EARTHWORK / GRADING	CY	4,030	\$20.00	\$ 80,600
4	MODIFIED SUBBASE, 6"	SY	11,810	\$12.00	\$ 141,720
5	PCC PAVEMENT, 10"	SY	9,060	\$75.00	\$ 679,500
6	CONCRETE MEDIAN	SY	410	\$105.00	\$ 43,050
7	DRIVEWAY, PCC, 7"	SY	790	\$60.00	\$ 47,400
8	DRIVEWAY, REMOVAL	SY	2,240	\$20.00	\$ 44,800
9	SIDEWALK, PCC, 4"	SY	2,140	\$80.00	\$ 171,200
10	SIDEWALK, PCC, 6"	SY	830	\$100.00	\$ 83,000
11	SIDEWALK REMOVAL	SY	2,020	\$20.00	\$ 40,400
12	CURB & GUTTER REMOVAL	LF	8,300	\$10.00	\$ 83,000
13	INTAKE, SINGLE OPEN-THROAT CURB, SW-508	EA	22	\$7,500.00	\$ 165,000
14	INTAKE ADJSUTMENT, MAJOR	EA	22	\$2,500.00	\$ 55,000
15	STORM SEWER, TRENCHED, RCP 2000D, 18"	LF	275	\$100.00	\$ 27,500
16	PAVEMENT MARKINGS, DURABLE	STA	150.0	\$100.00	\$ 15,000
17	PAINTED SYMBOLS	EA	12	\$200.00	\$ 2,400
18	GROOVES FOR PAVEMENT MARKINGS	STA	150.0	\$245.00	\$ 36,750
19	GROOVES FOR SYMBOLS	EA	12	\$125.00	\$ 1,500
20	TRAFFIC SIGNAL MODIFICATIONS	LS	1	\$375,000.00	\$ 375,000
21	TEMPORARY SIGNAL DURING CONSTRUCTION	LS	1	\$25,000.00	\$ 25,000
			Subtotal Roadway and Structure Costs (Items 1-21)		\$ 2,308,000
22	CONTINGENCY	LS	25.0 % of Subtotals	-	\$ 577,000
2020 SUBTOTAL CONSTRUCTION COSTS					\$ 2,885,000
3 YEAR(S) INFLATION (ASSUME 4.5% ANNUAL RATE)					\$ 407,000
2023 SUBTOTAL CONSTRUCTION COSTS					\$ 3,292,000

**US 69 / S. ANKENY BOULEVARD CORRIDOR
FIVE-LANE DIVIDED ROADWAY CROSS SECTION**

Conceptual Level Opinion of Probable Construction Costs, August 2020



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION	LS	5.0 % of Items 3-21	-	\$ 129,700
2	TRAFFIC CONTROL	LS	4.0 % of Items 3-21	-	\$ 103,800
3	CLASS 10 EARTHWORK / GRADING	CY	4,030	\$20.00	\$ 80,600
4	MODIFIED SUBBASE, 6"	SY	11,810	\$12.00	\$ 141,720
5	PCC PAVEMENT, 10"	SY	9,060	\$75.00	\$ 679,500
6	CONCRETE MEDIAN	SY	5,270	\$105.00	\$ 553,350
7	DRIVEWAY, PCC, 7"	SY	790	\$60.00	\$ 47,400
8	DRIVEWAY, REMOVAL	SY	2,240	\$20.00	\$ 44,800
9	SIDEWALK, PCC, 4"	SY	2,140	\$80.00	\$ 171,200
10	SIDEWALK, PCC, 6"	SY	830	\$100.00	\$ 83,000
11	SIDEWALK REMOVAL	SY	2,020	\$20.00	\$ 40,400
12	CURB & GUTTER REMOVAL	LF	8,300	\$10.00	\$ 83,000
13	INTAKE, SINGLE OPEN-THROAT CURB, SW-508	EA	22	\$7,500.00	\$ 165,000
14	INTAKE ADJSUTMENT, MAJOR	EA	22	\$2,500.00	\$ 55,000
15	STORM SEWER, TRENCHED, RCP 2000D, 18"	LF	275	\$100.00	\$ 27,500
16	PAVEMENT MARKINGS, DURABLE	STA	50.0	\$100.00	\$ 5,000
17	PAINTED SYMBOLS	EA	13	\$200.00	\$ 2,600
18	GROOVES FOR PAVEMENT MARKINGS	STA	50.0	\$245.00	\$ 12,250
19	GROOVES FOR SYMBOLS	EA	13	\$125.00	\$ 1,625
20	TRAFFIC SIGNAL MODIFICATIONS	LS	1	\$375,000.00	\$ 375,000
21	TEMPORARY SIGNAL DURING CONSTRUCTION	LS	1	\$25,000.00	\$ 25,000
			Subtotal Roadway and Structure Costs (Items 1-21)		\$ 2,827,000
22	CONTINGENCY	LS	25.0 % of Subtotals	-	\$ 707,000
2020 SUBTOTAL CONSTRUCTION COSTS					\$ 3,534,000
3 YEAR(S) INFLATION (ASSUME 4.5% ANNUAL RATE)					\$ 499,000
2023 SUBTOTAL CONSTRUCTION COSTS					\$ 4,033,000