June 25, 2021

Ms. Michelle Bennett, Project Manager
IN-N-OUT BURGER
13502 Hamburger Lane
Baldwin Park, CA 91706

RE: In-N-Out at 1830 Cleveland Avenue Project Focused Traffic Analysis
Project No. 19379

Dear Ms. Bennett:

Ganddini Group, Inc. is pleased to provide this Focused Traffic Analysis for the proposed In-N-Out at 1830 Cleveland Avenue Project in the City of Madera, California.

The purpose of this study is to evaluate the proposed modification of the existing "pork chop" raised median at the Commons East Access road to allow westbound left turns from Cleveland Avenue. This study includes evaluation of left turn queuing for various driveways and intersections along the two-way left-turn median lane along Cleveland Avenue between the Commons Center Access and the State Route 99 (SR-99) Southbound Ramps based on the Opening Year (2023) with Project conditions. Additionally, this study includes analysis of the appropriate trip generation rates for the In-N-Out project and an evaluation of the storage length capacity for the drive-through lane.

PROJECT DESCRIPTION

Figure 1 shows the project location map. The project site is currently occupied by an existing 6,671 square foot restaurant. The proposed project will demolish the existing 6.671 square foot restaurant building and construct a new 3,879 square foot In-N-Out fast food burger restaurant with a drive-through window. As part of the project, the existing "pork chop" raised median at the Commons East Access road will be modified to allow westbound left turns from Cleveland Avenue to improve the external circulation to the proposed In-N-Out site. Appendix A shows the site plan.

TRIP GENERATION RATE CALCULATIONS

To determine new project site trip generation of the proposed In-N-Out restaurant, average trip generation rates were estimated based on other historic traffic survey data previously collected at various locations in Northern and Southern California. These restaurant locations were chosen as survey site because they are comparable to the proposed project site in terms of the building size, site configuration and typical operations. The survey sites includes the following six (6) existing In-N-Out restaurant locations:

- Redwood City, CA – 949 Veterans Boulevard, Redwood City, CA 94063
- Rocklin, CA – 5490 Crossings Drive, Rocklin, CA 95677
- Vacaville, CA – 170 Nut Tree Parkway, Vacaville, CA 95687
- Fairfield, CA – 1364 Holiday Lane, Fairfield, CA 94534

- Long Beach, CA – 6391 East Pacific Coast Highway, Long Beach, CA 90815
- Los Angeles, CA – 9149 South Sepulveda Boulevard, CA 90045

The trip generation surveys were collected over a 24-hour period on a typical weekday and Saturday. The peak hour trip generation data used in this analysis has been taken from the highest hour within the weekday PM peak period (4:00 PM to 6:00 PM) and Saturday mid-day peak period (12:00 PM to 2:00 PM). AM peak period data are not presented because the proposed In-N-Out restaurant will not serve breakfast and will not be operational during the AM peak period. Detailed traffic count worksheets and trip generation calculations are contained in Appendix B. For the 2 survey sites (#5 and #6) in Southern California, 24-hour counts were not available.

Table 1 summarizes the In-N-Out trip generation survey data. As shown in Table 1, the surveyed In-N-Out trip rates are higher than typical trip rates for "fast-food restaurant with drive through window" that are published in the Institute of Transportation Engineer (ITE) *Trip Generation Manual*. Therefore, it is more conservative to utilize the surveyed In-N-Out trip rates to estimate the proposed project traffic, except for the Saturday daily trip rates which the surveyed Saturday daily trip rate is slightly lower than the ITE Saturday daily trip rates.

As documented in the ITE *Trip Generation Manual*, a pass-by trip reduction adjustment is applicable to commercial land uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, during the weekday evening peak hour, a motorist already traveling along Cleveland Avenue between work and home or other destinations may stop and shop at the commercial uses before continuing to the primary destination. A pass-by discount under this example would reduce or eliminate both the inbound trip and the outbound trip from the surrounding roadway circulation system since the vehicle was already traveling on the roadway. Without the pass-by trip discount, two trips would be generated: an inbound trip to the project site, and an outbound trip from the project site.

Table 2 shows the new project trip generation based on the surveyed In-N-Out trip rates and the existing restaurant building based on the ITE trip rates for High-Turnover (Sit-Down) Restaurant (ITE Land Use Code 932). As shown in Table 2, the project is forecast to result in 616 net new daily trips on a typical weekday, including 52 net new trips during the PM peak hour, and 792 net new daily trips on a typical Saturday, including 103 net new trips during the Saturday mid-day peak hour.

For the purpose of the driveway and intersection queuing analysis along Cleveland Avenue, the pass-by trip reduction is not considered in the trip generation for the future Opening Year 2023 traffic forecast. Therefore, the intersection and queuing analysis based on the project net gross trip difference without pass-by trips as shown in Table 2.

DRIVE-THROUGH LANE QUEUEING ASSESSMENT

The drive-through lane queue assessment will determine a recommended storage based on the average peak queue lengths observed in the following new and historic survey conducted comparable In-N-Out sites. Field observations of drive-through lane queues were conducted at the following eight (8) existing In-N-Out restaurant locations:

- Redwood City, CA – 949 Veterans Boulevard, Redwood City, CA 94063
- Rocklin, CA – 5490 Crossings Drive, Rocklin, CA 95677
- Vacaville, CA – 170 Nut Tree Parkway, Vacaville, CA 95687

- Fairfield, CA – 1364 Holiday Lane, Fairfield, CA 94534
- Long Beach, CA – 6391 East Pacific Coast Highway, Long Beach, CA 90815
- Los Angeles, CA – 9149 South Sepulveda Boulevard, CA 90045
- Corona, CA – 2305 Compton Avenue, Corona, CA 92881
- Highland, CA – 28009 Greenspot Road, Highland, CA 92346

Two additional In-N-Out survey sites in Corona and Highland are included because additional historic drive-through survey data were available. The drive-through vehicular queues were observed and documented in 15-minute intervals from 5:00 PM to 7:00 PM on a typical weekday and from 12:00 PM to 2:00 PM on a typical Saturday. Appendix B includes the drive-through lane queueing survey data. Table 3 summarizes the surveyed drive-through lane queue length collected at the eight In-N-Out locations. As shown in Table 3, the average peak vehicular queue length is 15 vehicles on a typical weekday and 17 vehicles on a typical Saturday.

Based on the surveyed average peak queue length, a storage capacity of 17 vehicles for the drive-through lane is required for the proposed In-N-Out project. The site plan is showing a storage capacity of 25 vehicle for the drive-through lane. As shown on Figure 2, there should be adequate capacity in the drive through lane during the weekday and Saturday peak hours. It is recommended that the proposed project utilize a floating menu/ordering staff during the peak periods to help minimize the drive-through queue.

EXISTING 2021 BACKGROUND TRAFFIC VOLUMES

Existing peak hour intersection volumes are based upon weekday PM and Saturday mid-day (MD) peak period intersection turning movement counts obtained in May 2021 during typical weekday and Saturday conditions at the following driveways and intersections (see Figure 1):

	Study Intersections	Jurisdiction
1.	The Commons Center Access (NS) at Cleveland Avenue (EW)	Madera
2.	The Commons East Access (NS) at Cleveland Avenue (EW)	Madera
3.	SR-99 Southbound Ramps (NS) at Cleveland Avenue (EW)	Caltrans
4.	SR-99 Northbound Ramps (NS) at Cleveland Avenue (EW)	Caltrans
5.	The Commons East Access (NS) at Fairgrounds Road (EW)	Madera
6.	Midlands Tractors West Driveway (NS) at Cleveland Avenue (EW)	Madera
7.	Midlands Tractors Center Driveway (NS) at Cleveland Avenue (EW)	Madera
8.	Midlands Tractors East Driveway (NS) at Cleveland Avenue (EW)	Madera
9.	Chevrons West Driveway (NS) at Cleveland Avenue (EW)	Madera
10.	Chevrons East Driveway (NS) at Cleveland Avenue (EW)	Madera

The weekday PM peak period was counted between 4:00 PM and 7:00 AM and the Saturday MD peak period was counted between 11:00 AM and 2:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C.

For the purpose of the traffic simulation analysis along Cleveland Avenue, the driveway volumes for Midland Tractors West Driveway (Intersection #6) and Midland Tractors Center Driveway (Intersection #7) are combined into a single analysis node (#7) within the Synchro analysis software. Similarly, Chevrons West

Driveway (Intersection #9) and Chevrons Tractors East Driveway (Intersection #10) are combined into a single analysis node (#9) within the Synchro analysis software for the queuing analysis purpose. With the proposed modification of the existing "pork chop" raised median at the Commons East Access road to allow westbound left turns from Cleveland Avenue, 25% of the existing westbound left-turn traffic on Cleveland Avenue at the Commons Center Access (Intersection #1) has been redistributed to the Commons East Access (Intersection #2) with the proposed westbound left-turn configuration. During the time of counts, the SR-99 Northbound Off-Ramp was closed during the weekdays and the SR-99 Northbound On-Ramp was closed during both weekday and Saturdays. Additional turning movements were added to account for the SR-99 Northbound Ramps being operational. Further adjustments are also made to various through movements so that the flow conservation is balanced along Cleveland Avenue. Appendix D shows the 2021 background traffic flow adjustment spreadsheets.

Due to abnormal travel patterns associated with the COVID-19 pandemic, the peak hour intersection volumes collected in May 2021 have been adjusted to estimate pre-pandemic conditions. Appendix E contains adjustment factor calculations for converting new May 2021 counts to "pre-lockdown" February 2020 conditions. SR-99 highway volumes near the study area from the California Department of Transportation Performance Measurement System (PeMS) database for February 2020 were compared to post-lockdown May 2021. As shown in Appendix E, the adjustment factors to convert May 2021 counts to pre-lockdown February 2020 base volumes are 1.193 for the weekday PM peak hour and 1.113 for the Saturday mid-day peak hour. To provide a conservative analysis, the highest of three values for each peak hour for the combined travel directions was selected as the appropriate adjustment factor for this analysis.

OPENING YEAR (2023) WITH PROJECT TRAFFIC

A 2% annual growth rate has been applied to existing 2021 traffic counts to represent Opening Year (2023) without Project conditions. The total growth factor is 1.04 for 2 years from 2021 to 2023.

The project outbound and inbound trip distribution patterns are shown in Figure 3 and Figure 4, respectively. Based on the identified project trip distributions, Figure 5 and Figure 6 show Opening Year (2023) with Project weekday PM and Saturday mid-day peak hour intersection turning movement volumes.

INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection Level of Service (LOS) analysis methodologies from the latest edition (6th Edition) of the Transportation Research Board Highway Capacity Manual (HCM) are used to evaluate the operation of the driveways and intersections. The HCM methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle, Level of Service, and queuing. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

For study intersections with poor Level of Service (E or F), further review of queue lengths based on the HCM 95th-percentile back-of-queue methodology is conducted to evaluate whether the addition of Project-generated trips substantially contributes to unacceptable queueing on an Avenue or Boulevard or substantially extends queueing at a nearby signalized intersection. The 95th-percentile queue length effectively represents the maximum queue length expected (to a 95 percent confidence level) and is an industry accepted standard for determining turning lane storage and intersection spacing requirements.

Intersection Level of Service analysis was performed using the Vistro software with HCM-default saturation flow rates and measured peak hour factors from the intersection volume counts. Detailed Level of Service worksheets for each of the analysis scenarios are provided in Appendix F.

The intersection delay Levels of Service for Opening Year (2023) With Project conditions are shown in Table 4. As shown in Table 4, the study intersections are projected to operating at Levels of Service D or better during the peak hours for Opening Year (2023) With Project conditions, except for the following intersections:

- The Commons East Access (NS) at Cleveland Avenue (EW) – #2 (PM and MD Peak Hours)
- Midland Tractors East Driveway (NS) at Cleveland Avenue (EW) – #8 (PM Peak Hour)
- Chevrons Driveway (NS) at Cleveland Avenue (EW) – #9 (PM and MD Peak Hours)

As shown in Table 4, the operational deficiencies at the 3 study intersections are limited to the three southbound left-turn movements from the three driveways (Intersections #2, #8 and #9) while all other turning movements and the through traffic movements along Cleveland Avenue are operating at acceptable levels of service. These three southbound left-turn movements are already operating at deficient Level of Service during Existing and "Without Project" conditions and are not caused by the project; therefore, no project-related improvements are recommended. It should be noted that the driveway queuing analysis in Table 5 shows that the peak southbound queue lengths anticipated by these three driveways (Intersection #2, #8 and #9) can accommodated within the available storage of their driveway throats and on-site parking aisles, as highlighted in yellow.

INTERSECTION AND DRIVEWAY QUEUING ANALYSIS

The intersection and driveway queuing analysis were conducted for Cleveland Avenue between the Commons Center Access (Intersection #1) and SR-99 Northbound Ramps (Intersection #4). The queuing analysis was performed using the Synchro/SimTraffic analysis and simulation software for Opening Year (2023) with Project conditions. The queueing analysis assessed the average and 95th-percentile queue lengths at the following seven (7) intersections along Oak Valley Parkway:

- The Commons Center Access (NS) at Cleveland Avenue (EW) – #1
- Midland Tractors Center Driveway (NS) at Cleveland Avenue (EW) – #7
- Midland Tractors East Driveway (NS) at Cleveland Avenue (EW) – #8
- The Commons East Access (NS) at Cleveland Avenue (EW) – #2
- Chevrons Driveway (NS) at Cleveland Avenue (EW) – #9
- SR-99 Southbound Ramps (NS) at Cleveland Avenue (EW) – #3
- SR-99 Northbound Ramps (NS) at Cleveland Avenue (EW) – #4

Table 5 summarizes the queuing analysis results for Opening Year (2023) with Project conditions. The SimTraffic intersection queuing analysis worksheets are included in Appendix G. Table 5 also shows the available storage length and traffic volumes for the various traffic movements.

Based on the queuing analysis results in Table 5, no queuing deficiencies are forecast to occur along the two-way left-turn median lane on Cleveland Avenue for Opening Year (2023) With Project conditions. Adequate storage lengths are forecast to be provided for the driveways and adjacent streets along Cleveland Avenue. Based on a qualitative review of the SimTraffic simulation, there appears to be smooth traffic flow along Cleveland Avenue. The queues for the project driveways will disperse within a reasonable amount of time based on the eastbound and westbound through traffic gaps on Cleveland Avenue provided by the signalized intersection of the SR-99 Southbound Ramps (Intersection #3).

East of the Commons East Access on Cleveland Avenue (Highlighted in Green)

Based on the queuing analysis (Table 5), the 160-foot westbound left turn storage within the two-way left turn lane median at the intersection of the Commons East Access at Cleveland Avenue (Intersection #2) is adequate to accommodate the 95th percentile queue:

- 80 AM Peak Hour Trips with a 95th percentile queue length of 102 feet
- 128 PM Peak Hour Trips with a 95th percentile queue length of 77 feet

Based on the queuing analysis (Table 5), the 110-foot eastbound left turn storage within the two-way left turn lane median at the intersection of Chevron Drive at Cleveland Avenue (Intersection #9) is adequate to accommodate the 95th percentile queue:

- 27 AM Peak Hour Trips with a 95th percentile queue length of 37 feet
- 32 PM Peak Hour Trips with a 95th percentile queue length of 57 feet

These two opposing left turn movements (highlighted in green) will not adversely impact each other within the two-way left turn median land on Cleveland Avenue between the Commons East Access (Intersection #2) and the Chevron Driveway (Intersection #9) because their storage capacity are adequate to accommodate the 95th percentile queue lengths.

West of the Commons East Access on Cleveland Avenue (Highlighted in Blue)

Based on the queuing analysis (Table 5), the 300-foot westbound left turn storage within the two-way left turn lane median at the intersection of the Commons Center Access at Cleveland Avenue (Intersection #1) is adequate to accommodate the 95th percentile queue:

- 147 AM Peak Hour Trips with a 95th percentile queue length of 153 feet
- 157 PM Peak Hour Trips with a 95th percentile queue length of 73 feet

Based on the queuing analysis (Table 5), the 45-foot eastbound left turn storage within the two-way left turn lane median at the intersection of the Commons East Access at Cleveland Avenue (Intersection #2) is adequate to accommodate the 95th percentile queue:

- 21 AM Peak Hour Trips with a 95th percentile queue length of 42 feet
- 17 PM Peak Hour Trips with a 95th percentile queue length of 32 feet

Based on the queuing analysis (Table 5), the 100-foot eastbound left turn storage within the two-way left turn lane median at the intersection of Midland Tractors East Driveway at Cleveland Avenue (Intersection #8) is adequate to accommodate the 95th percentile queue:

- 2 AM Peak Hour Trips with a 95th percentile queue length of 0 feet
- 2 PM Peak Hour Trips with a 95th percentile queue length of 0 feet

These three opposing left turn movements (highlighted in blue) will not adversely impact each other within the two-way left turn median land on Cleveland Avenue between the Commons Center Access (Intersection #1) and the Commons Center Access (Intersection #2) because their storage capacity are adequate to accommodate the 95th percentile queue lengths.

Table 5 shows that the peak southbound queue lengths anticipated by the 3 driveways (Intersection #2, #8 and #9), which are projected to experiences deficient Level of Service for the south left-turn movements, can accommodated within the available storage of their driveway throats and on-site parking aisles, as highlighted in yellow.

Figure 7 shows the peak queue length for the left turn movements on the two-way left-turn median lane on Cleveland Avenue. Based on the queuing analysis, the 160-foot westbound left turn storage within the two-way left-turn median lane at the intersection of the Commons East Access at Cleveland Avenue (Intersection #2) is adequate to accommodate the 95th percentile queue. Other left turn movements on Cleveland Avenue also have adequate storage capacity.

CONCLUSION

Based on the surveyed average peak queue length, the available storage capacity of 25 vehicles for the drive-through lane is forecast to provide adequate storage capacity during the weekday and Saturday peak hours. It is recommended that the proposed project utilize a floating menu/ordering staff during the peak periods to help minimize the drive-through queue.

Based on the intersection level of service analysis, the operational deficiencies at the three study intersections are limited to the three southbound left-turn movements from the three private driveways (Intersections #2, #8 and #9) while all other turning movements and the through traffic movements along Cleveland Avenue

are operating at acceptable levels of service. These three southbound left-turn movements are already operating at deficient Level of Service during Existing and "Without Project" conditions and are not caused by the project; therefore, no additional improvements are recommended. The driveway queuing analysis shows that the peak southbound queue lengths anticipated by these three driveways (Intersection #2, #8 and #9) can accommodated within the available storage of their driveway throats and on-site parking aisles.

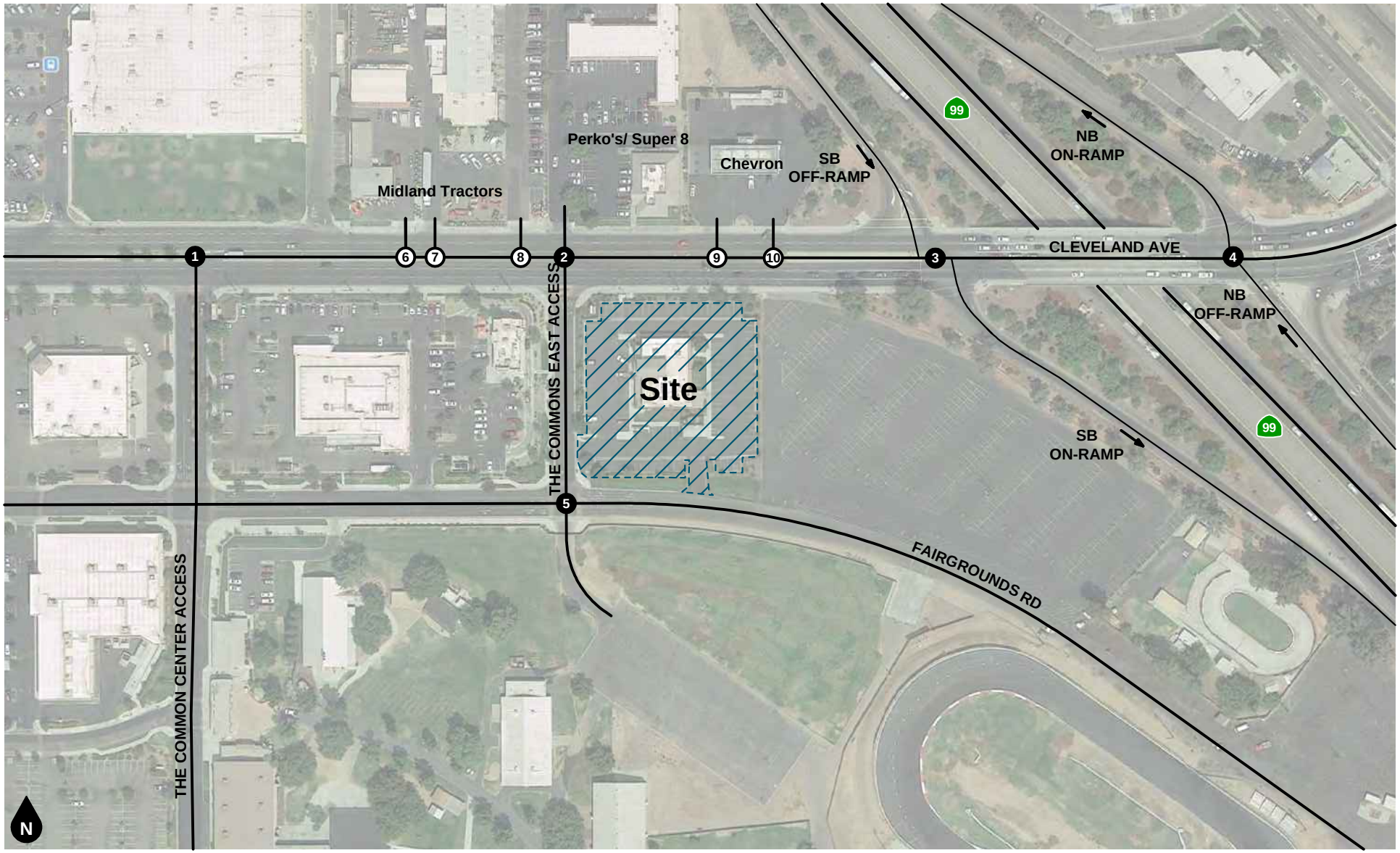
Based on the queuing analysis, the 160-foot westbound left turn storage within the two-way left turn lane median at the intersection of the Commons East Access at Cleveland Avenue (Intersection #2) is adequate to accommodate the 95th percentile queue. Other left turn movements on Cleveland Avenue also have adequate storage capacity.

It has been a pleasure to assist you with this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100.

Sincerely,

GANDDINI GROUP, INC.

Tom Huang, TE
Senior Traffic Engineer



Legend

(#) Study Intersection

(#) Driveway

Figure 1
Project Location Map

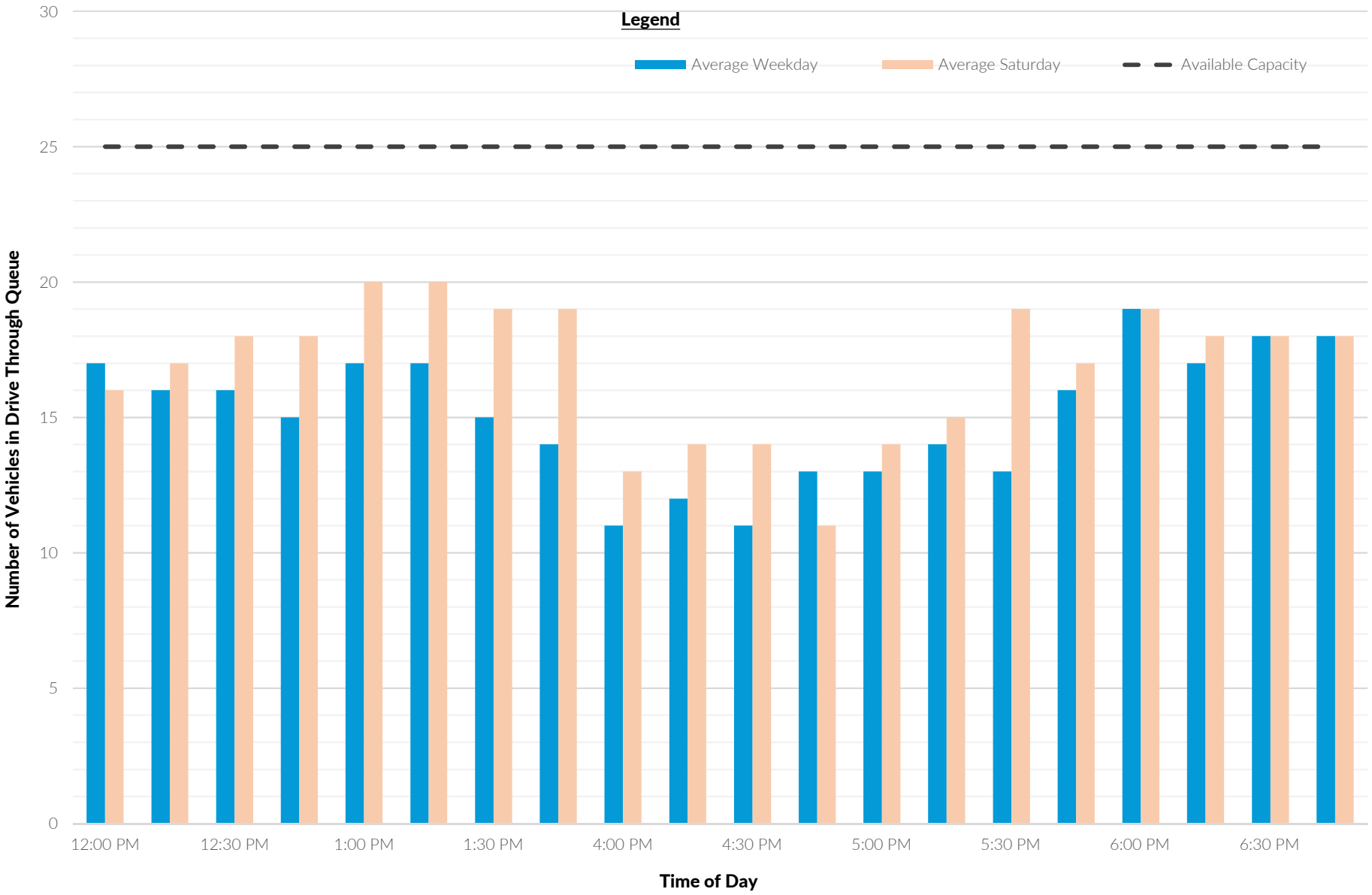
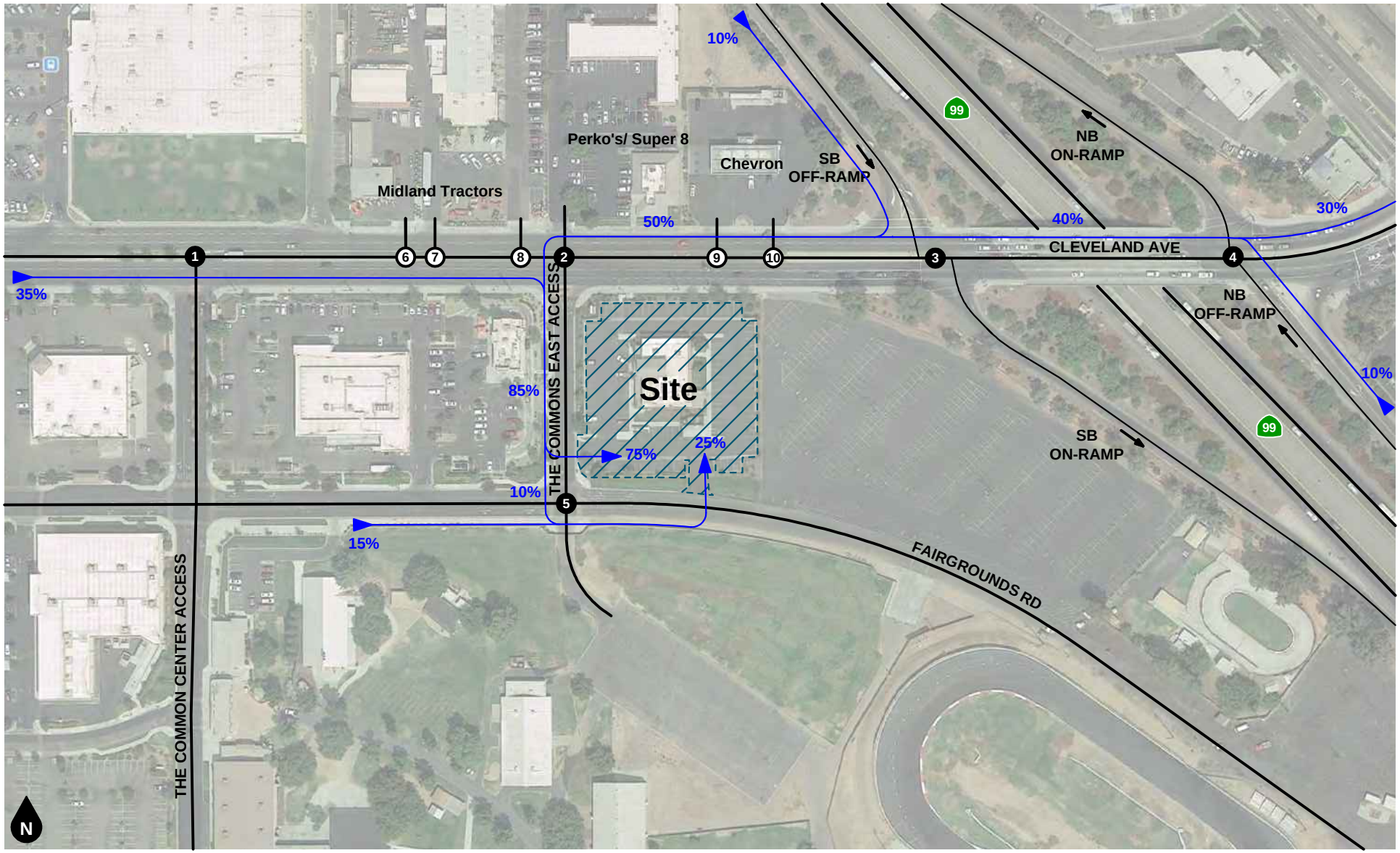


Figure 2
Average Drive-Through Queue



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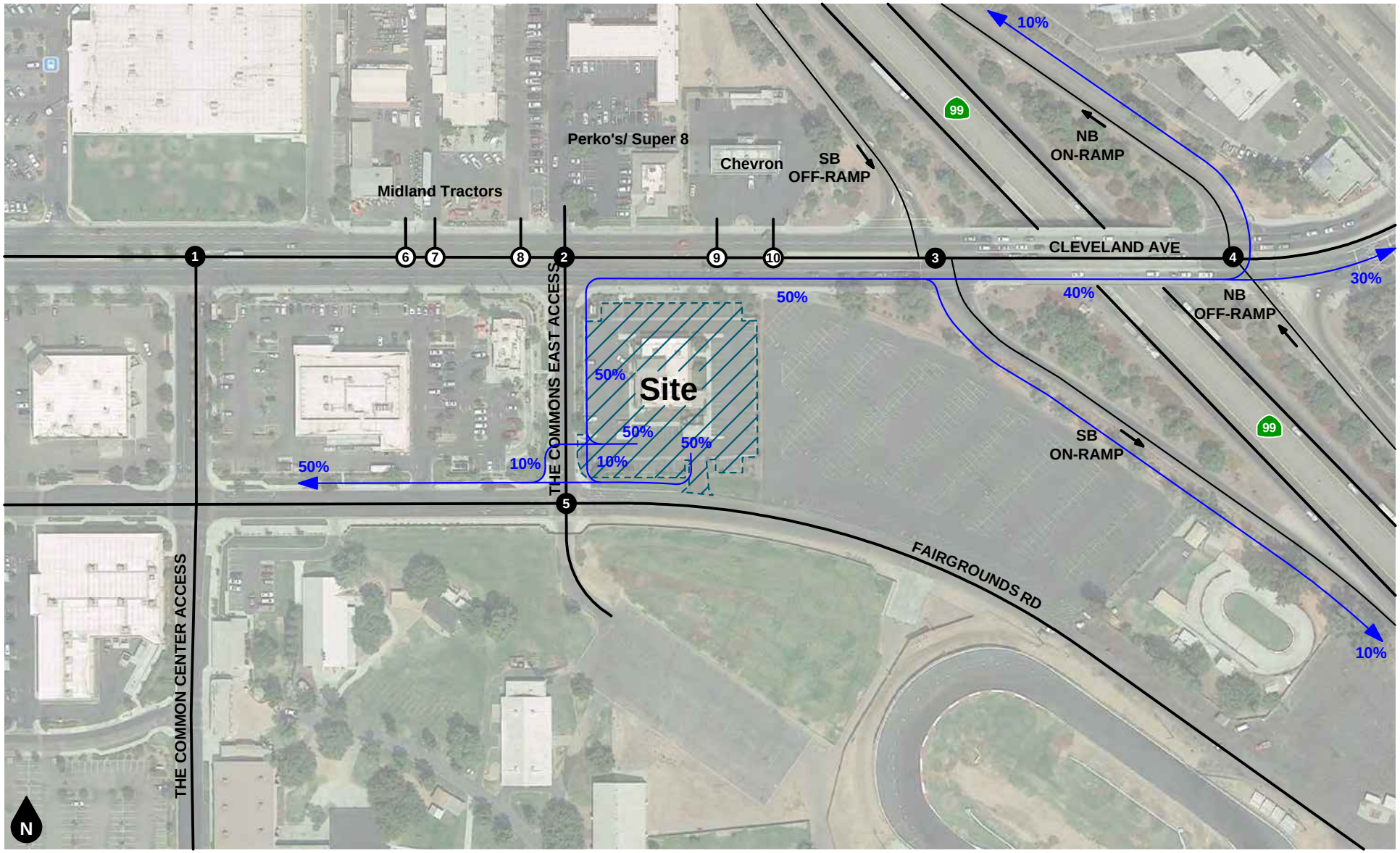
10% Percent To Project

Figure 3
Project Inbound Trip Distribution



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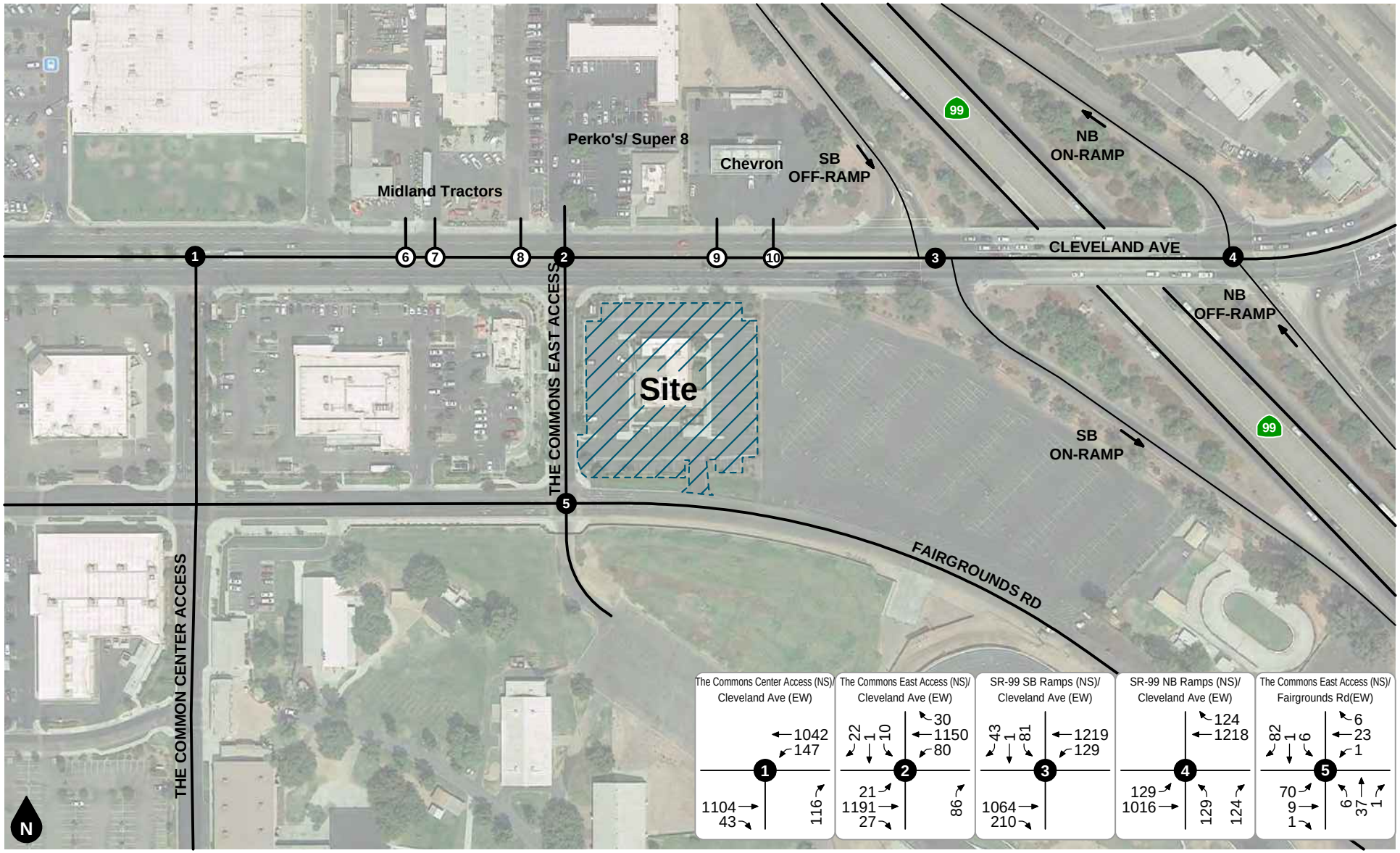
10% Percent From Project

Figure 4
Project Outbound Trip Distribution



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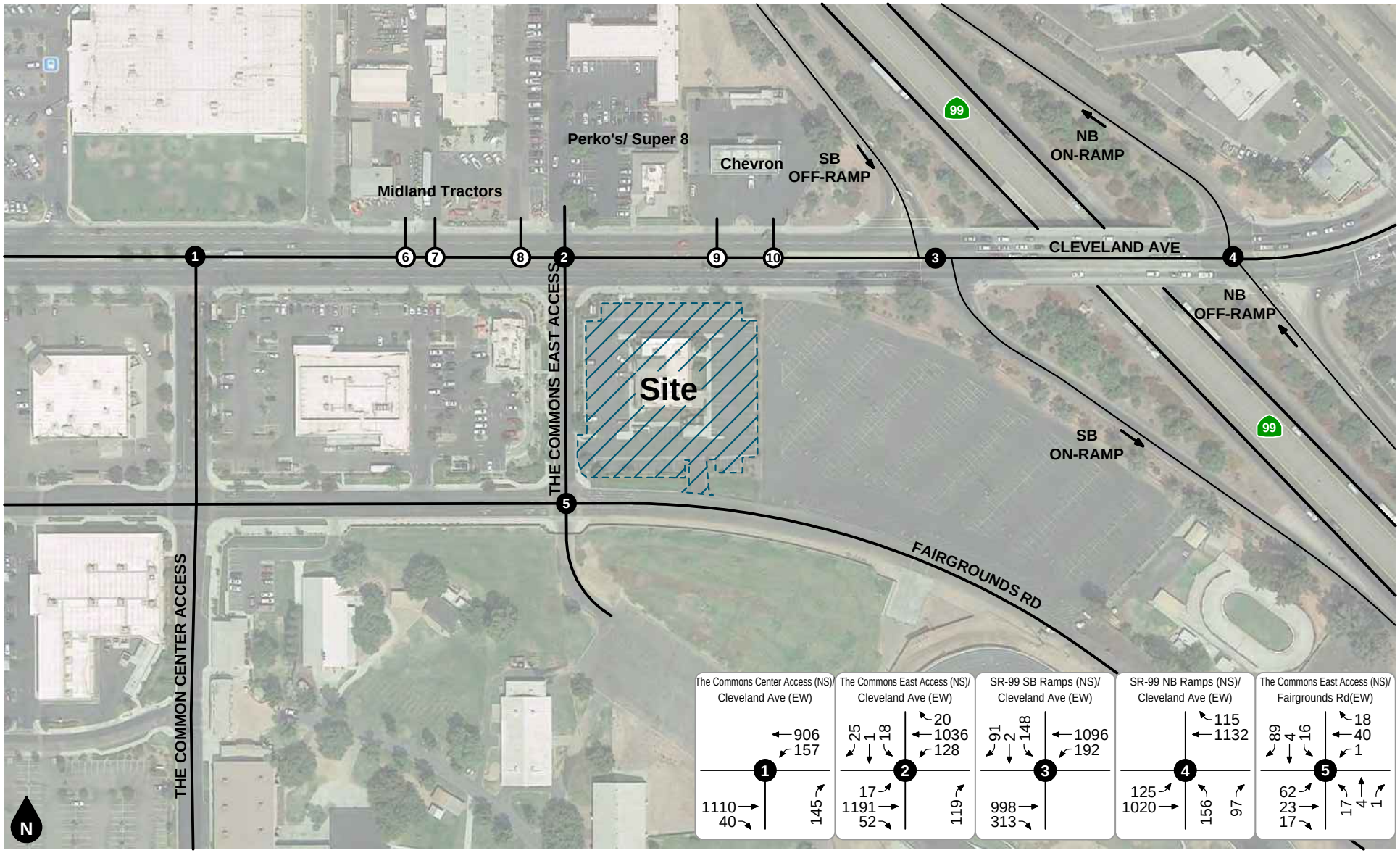
Study Intersection

(#) Driveway

Figure 5
Opening Year (2023) With Project
Weekday PM Peak Hour Turning Movements



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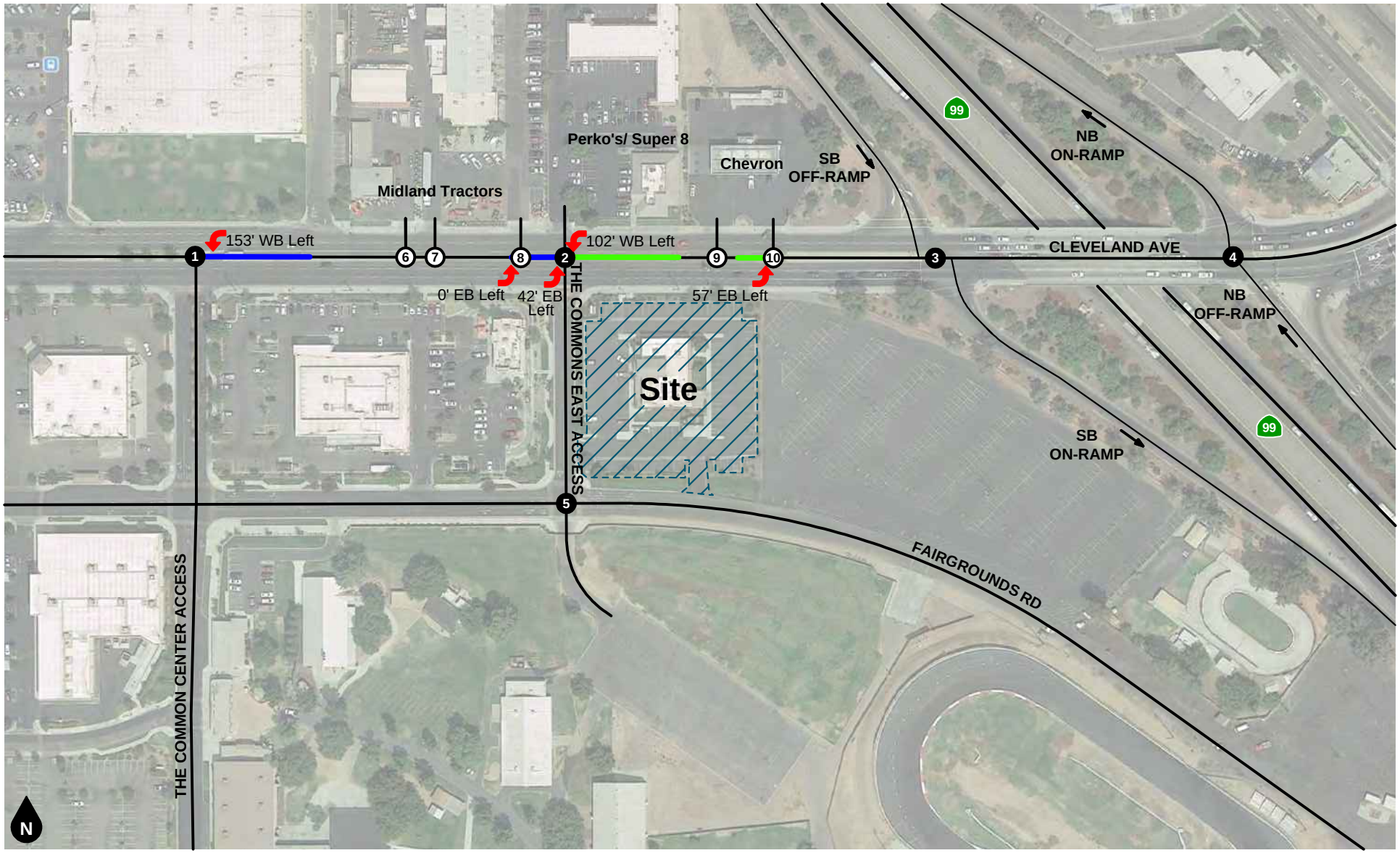
(#) Study Intersection

(#) Driveway

Figure 6
Opening Year (2023) With Project
Saturday Mid-day Peak Hour Turning Movements



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153' WB Left Peak Left-Turn Queue Length

Figure 7
Peak Left-Turn Queue Lengths on Cleveland Avenue

Table 1
In-N-Out Site Survey and Average Trip Generation Rate Calculations

Surveyed Trips										
Survey Site Location			Weekday PM Peak			Weekday Daily	Saturday Mid-Day			Saturday Daily
No.	City	Size[1]	In	Out	Total		In	Out	Total	
1	Redwood City, CA[2]	3.750 TSF	66	75	141	2,225	152	149	301	2,929
2	Rocklin, CA[2]	3.750 TSF	84	75	159	1,720	88	96	184	1,761
3	Vacaville, CA[2]	3.750 TSF	87	65	152	1,879	94	103	197	2,244
4	Fairfield, CA[2]	3.750 TSF	75	57	132	1,662	105	103	208	2,081
5	Long Beach, CA[2]	3.600 TSF	69	73	142	n/a	121	114	235	n/a
6	Los Angeles, CA[2]	3.800 TSF	127	111	238	n/a	224	200	424	n/a
Average Surveyed Trips		3.733 TSF	85	76	161	1,872	131	128	259	2,254

Surveyed Site Trip Rates										
Survey Site Location			Weekday PM Peak			Weekday Daily	Saturday Mid-Day			Saturday Daily
No.	City	Size[1]	In	Out	Total		In	Out	Total	
1	Redwood City, CA[2]	3.750 TSF	17.60	20.00	37.60	593.33	40.53	39.73	80.26	781.07
2	Rocklin, CA[2]	3.750 TSF	22.40	20.00	42.40	458.67	23.47	25.60	49.07	469.60
3	Vacaville, CA[2]	3.750 TSF	23.20	17.33	40.53	501.07	25.07	27.47	52.54	598.40
4	Fairfield, CA[2]	3.750 TSF	20.00	15.20	35.20	443.20	28.00	27.47	55.47	554.93
5	Long Beach, CA[2]	3.600 TSF	19.17	20.28	39.45	n/a	33.61	31.67	65.28	n/a
6	Los Angeles, CA[2]	3.800 TSF	33.42	29.21	62.63	n/a	58.95	52.63	111.58	n/a
Average Surveyed Trip Rates		3.733 TSF	22.63	20.34	42.97	499.07	34.94	34.10	69.04	601.00
Typical Fast-Food Restaurant with Drive-Thru Window (ITE 934)[3]		TSF	16.99	15.68	32.67	470.95	26.47	28.68	55.15	616.12
Difference			+5.64	+4.66	+10.30	+28.12	+8.47	+5.42	+13.89	-15.12
Percent Difference			33%	30%	32%	6%	32%	19%	25%	-2%

Notes:

(1) TSF = Thousand Square Feet

(2) Historic survey conducted at various In-N-Out locations in California.

(3) ITE = Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; XXX = Land Use Code

Table 2
Project Trip Generation

Trip Generation Rates											
		Rate		Weekday PM Peak			Weekday	Saturday Mid-Day			Saturday
No.	Land Use	Code[1]	Units[2]	In %	Out %	Total	Daily	In%	Out%	Total	Daily
1	High-Turnover (Sit-Down) Restaurant	ITE 932	TSF	62%	38%	9.77	112.18	51%	49%	11.19	122.40
2	In-N-Out Burger w/ Drive-Thru	Survey[3]	TSF	53%	47%	42.97	499.07	51%	49%	69.04	601.00

Trips Generated										
			Weekday PM Peak Hour			Weekday	Saturday Mid-Day			Saturday
No.	Land Use	Quantity[2]	In	Out	Total	Daily	In	Out	Total	Daily
1	Previous Entitled Use									
	High-Turnover (Sit-Down) Restaurant	6.671 TSF	40	25	65	748	38	37	75	817
	Pass-By Trips[4]	40% [5]	-16	-10	-26	-299	-15	-15	-30	-327
	Subtotal Net Trips		24	15	39	449	23	22	45	490
Total Previous Entitled Use Gross Trips		6.671 TSF	40	25	65	748	38	37	75	817
Total Previous Entitled Use Pass-By Trip Reduction			-16	-10	-26	-299	-15	-15	-30	-327
Total Previous Entitled Use Net Trips with Pass-By Trips			**24**	**15**	**39**	**449**	**23**	**22**	**45**	**490**
2	Proposed Use									
	In-N-Out Burger w/ Drive-Thru	3.879 TSF	88	79	167	1,936	136	132	268	2,331
	Pass-By Trips[4]	45% [5]	-40	-36	-76	-871	-61	-59	-120	-1,049
	Subtotal Net Trips		48	43	91	1,065	75	73	148	1,282
Total Proposed Use Gross Trips		3.879 TSF	88	79	167	1,936	136	132	268	2,331
Total Proposed Use Pass-By Trip Reduction			-40	-36	-76	-871	-61	-59	-120	-1,049
Total Proposed Use Net Trips with Pass-By Trip Reduction			**48**	**43**	**91**	**1,065**	**75**	**73**	**148**	**1,282**
Project Net Gross Trip Difference without Pass-By Trips			+48	+54	+102	+1,188	+98	+95	+193	+1,514
Overall Project Net Trip Difference			**+24**	**+28**	**+52**	**+616**	**+52**	**+51**	**+103**	**+792**

Notes:

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017 (see Table 1).

(2) TSF = Thousand Square Feet

(3) Historic survey conducted at various In-N-Out locations in California. (See Table 1)

(4) Pass-By Trips: ITE, Trip Generation Handbook, 3rd Edition, 2017.
Table E.30, Land Use Code 932 - High-Turnover (Sit-Down) Restaurant, Average Pass-By Trip Percentage = 43%.
Table E.32, Land Use Code 934 - Fast-Food Restaurant with Drive-Through Window, Average Pass-By Trip Percentage = 50%.

(5) A more conservative (lower) pass-by trip reduction percentage is utilized in the trip generation calculations.

Table 3
Survey Site Drive-Through Queue Summary

	1 - Redwood City		2 - Rocklin		3 - Vacaville		4 - Fairfield		5 - Long Beach		6 - Los Angeles		7 - Corona		8 - Highland		Average	
Time Period	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
12:00 PM - 12:15 PM		18		10		20		13	15	16	20	20	15	13	18	16	17	16
12:15 PM - 12:30 PM		21		13		19		18	15	14	18	16	14	16	18	20	16	17
12:30 PM - 12:45 PM		20		12		15		17	13	16	21	20	13	20	17	20	16	18
12:45 PM - 1:00 PM		18		11		23		18	8	10	19	20	14	22	18	21	15	18
1:00 PM - 1:15 PM		21		12		22		23	12	15	22	23	16	22	18	18	17	20
1:15 PM - 1:30 PM		20		14		28		17	13	16	21	22	18	23	14	20	17	20
1:30 PM - 1:45 PM		19		13		27		15	8	10	20	20	17	24	13	20	15	19
1:45 PM - 2:00 PM		21		12		29		18	7	9	20	20	14	23	13	22	14	19
4:00 PM - 4:15 PM	14		5		11		5		6	8	17	10	15	18	15	14	11	13
4:15 PM - 4:30 PM	16		8		14		8		5	10	15	14	11	16	16	15	12	14
4:30 PM - 4:45 PM	16		7		16		9		3	8	12	18	9	16	14	14	11	14
4:45 PM - 5:00 PM	15		6		17		16		6	5	10	8	15	16	17	15	13	11
5:00 PM - 5:15 PM	14		8		13		17		5	9	9	8	18	23	19	15	13	14
5:15 PM - 5:30 PM	14		9		11		16		7	10	14	9	21	24	19	18	14	15
5:30 PM - 5:45 PM	15		11		13		8		7	10	17	20	16	24	18	22	13	19
5:45 PM - 6:00 PM	15		12		18		17		5	9	19	19	18	23	21	17	16	17
6:00 PM - 6:15 PM									12	13	20	20	23	18	21	23	19	19
6:15 PM - 6:30 PM									7	9	19	19	24	23	19	19	17	18
6:30 PM - 6:45 PM									10	10	20	20	24	23	18	19	18	18
6:45 PM - 7:00 PM									12	14	18	18	23	20	17	19	18	18
Maximum	16	21	12	14	18	29	17	23	15	16	22	23	24	24	21	23	19	20
85th Percentile	16.0	21.0	10.9	13.0	17.0	28.0	17.0	18.0	13.0	15.2	20.2	20.0	23.0	23.2	19.0	21.2	17.2	19.0
Average	14.9	19.8	8.3	12.1	14.1	22.9	12.0	17.4	8.8	11.1	17.6	17.2	16.9	20.4	17.2	18.4	15.1	16.9

Table 4
Opening Year (2023) With Project Intersection Levels of Service Analysis

Study Intersection	Traffic Control[1]	Peak Hour	Intersection Approaches								Intersection Average		Deficient Movement
			Northbound		Southbound		Eastbound		Westbound				
			Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]	
1. The Commons Center Access	CSS	PM	18.7	C	-	-	0.0	A	3.3	A	2.5	A	No
at Cleveland Ave		MD	20.5	C	-	-	0.0	A	4.2	A	3.2	A	No
2. The Commons East Access	CSS	PM	18.2	C	90.3	F	0.2	A	1.4	A	2.5	A	SB Left
at Cleveland Ave		MD	20.6	C	249.6	F	0.1	A	3.1	A	6.6	A	SB Left
3. The SR-99 SB Ramps	TS	PM	-	-	26.5	C	20.2	C	8.5	A	14.7	B	No
at Cleveland Ave		MD	-	-	26.0	C	24.7	C	11.1	B	18.7	B	No
4. The SR-99 NB Ramps	TS	PM	41.8	D	-	-	8.2	A	3.9	A	9.2	A	No
at Cleveland Ave		MD	41.2	D	-	-	8.8	A	3.5	A	9.4	A	No
5. The Commons East Access	CSS	PM	1.0	A	0.5	A	10.1	B	9.9	A	4.9	A	No
at Fairgrounds Rd		MD	5.8	A	1.1	A	10.2	B	10.1	B	6.5	A	No
7. Midlands Tractors Center Dwy	CSS	PM	-	-	20.1	C	0.0	A	0.0	A	0.1	A	No
at Cleveland Ave		MD	-	-	17.2	C	0.0	A	0.0	A	0.1	A	No
8. Midlands Tractors East Dwy	CSS	PM	-	-	56.6	F	0.0	A	0.0	A	0.5	A	SB Left
at Cleveland Ave		MD	-	-	34.1	D	0.0	A	0.0	A	0.1	A	No
9. Chervrons Dwy	CSS	PM	-	-	82.1	F	0.3	A	0.0	A	2.4	A	SB Left
at Cleveland Ave		MD	-	-	99.7	F	0.3	A	0.0	A	2.7	A	SB Left

Notes:
(1) TS = Traffic Signal; CSS = Cross Street Stop

(2) Delay is shown in seconds/vehicle.

(3) LOS = Level of Service

Table 5 (1 of 2)

Cleveland Avenue Intersection and Driveway Queuing Analysis

Study Intersection	Turning Movement	Available Storage Length		Opening Year (2023) With Project						Adequate Storage?
				Weekday PM Peak Hour			Saturday Mid-Day Peak Hour			
				Traffic Volumes	Average Queue	95th Percentile Queue	Traffic Volumes	Average Queue	95th Percentile Queue	
1. The Commons Center Access at Cleveland Avenue	NB Right	200' on Street[2]	200'	116	29'	52'	145	46'	71'	Yes
	EB Right	380' on Street[2]	380'	43	0'	0'	40	0'	0'	Yes
	WB Left	300' Pocket + Two-Way Left Turn Lane	300'	147	73'	153'	157	50'	73'	Yes
2. The Commons East Access at Cleveland Avenue	NB Right	220' on Street[2]	220'	86	40'	62'	119	53'	73'	Yes
	SB All-Way	40'+40' Throats + Parking Aisles[1]	80'	33	19'	57'	44	32'	73'	Yes
	EB Left	35'+10' Two-Way Left Turn Lane	45'	21	17'	42'	17	9'	32'	Yes
	EB Right	420' on Street[2]	420'	27	0'	0'	52	2'	11'	Yes
	WB Left	160' Two-Way Left Turn Lnae	160'	80	56'	102'	128	42'	77'	Yes
3. SR-99 SB Ramps at Cleveland Avenue	SB Left-Thru	150' Lane + 800' Ramp	950'	82	51'	114'	150	80'	111'	Yes
	SB Right	150' Lane + 90' Transition + Ramp	240'	43	44'	74'	91	34'	63'	Yes
	EB Thru	450' on Street[2]	450'	1,064	138'	159'	998	121'	154'	Yes
	EB Right	450' Lane	450'	210	20'	54'	313	93'	154'	Yes
	WB Left	130' Pocket + 60' Transition	190'	129	64'	118'	192	101'	151'	Yes
	WB Thru	330' on Street[2]	330'	1,219	38'	78'	1,096	22'	71'	Yes
4. SR-99 NB Ramps at at Cleveland Avenue	NB Left	150'+350' Lanes + 90' Transition + 580' Ramp	1170'	129	105'	243'	156	97'	163'	Yes
	NB Right	300' Lane + 100' Transition	400'	124	0'	0'	97	0'	0'	Yes
	EB Left	100' Pocket + 60' Transition	160'	129	91'	129'	125	92'	157'	Yes
	EB Thru	330' on Street[2]	330'	1,016	9'	31'	1,020	51'	151'	Yes
	WB Thru	210' on Street[2]	210'	1,218	68'	133'	1,132	67'	133'	Yes
	WB Right	60' Lane + 40' Transition	100'	124	21'	53'	115	17'	42'	Yes
7. Midland Tractors Center Driveway at Cleveland Avenue	SB Left-Right	50' Throat + Parking Aisle[1]	50'	18	22'	44'	9	4'	22'	Yes
	EB Thru	280' on Street[2]	280'	1,220	17'	84'	1,255	0'	0'	Yes
	WB Right	100' on Street[2]	100'	1	0'	0'	1	0'	0'	Yes

Table 5 (2 of 2)

Cleveland Avenue Intersection and Driveway Queuing Analysis

Study Intersection	Turning Movement	Available Storage Length		Opening Year (2023) With Project						Adequate Storage?
				Weekday PM Peak Hour			Saturday Mid-Day Peak Hour			
				Traffic Volumes	Average Queue	95th Percentile Queue	Traffic Volumes	Average Queue	95th Percentile Queue	
8. Midland Tractors	SB Left-Right	50' Throat + 100' Parking Aisle[1]	150'	23	32'	58'	5	12'	44'	Yes
East Driveway	EB Left	100' Two-Way Left Turn Lane	100'	2	0'	0'	2	0'	0'	Yes
at Cleveland Avenue	EB Thru	400' on Street[2]	400'	1,225	24'	61'	1,256	4'	23'	Yes
	WB Right	50'+170' on Street[2]	220'	2	15'	54'	4	30'	73'	Yes
9. Chevron Driveway	SB Left-Right	20' Throat + 180' Parking Aisle[1]	200'	71	127'	190'	66	67'	131'	Yes
at Cleveland Avenue	EB Left	110' Two-Way Left Turn Lane	110'	27	13'	37'	32	23'	57'	Yes
	EB Thru	200' on Street[2]	200'	1,260	81'	143'	1,295	47'	101'	Yes
	WB Right	100' on Street[2]	100'	49	8'	40'	38	4'	22'	Yes

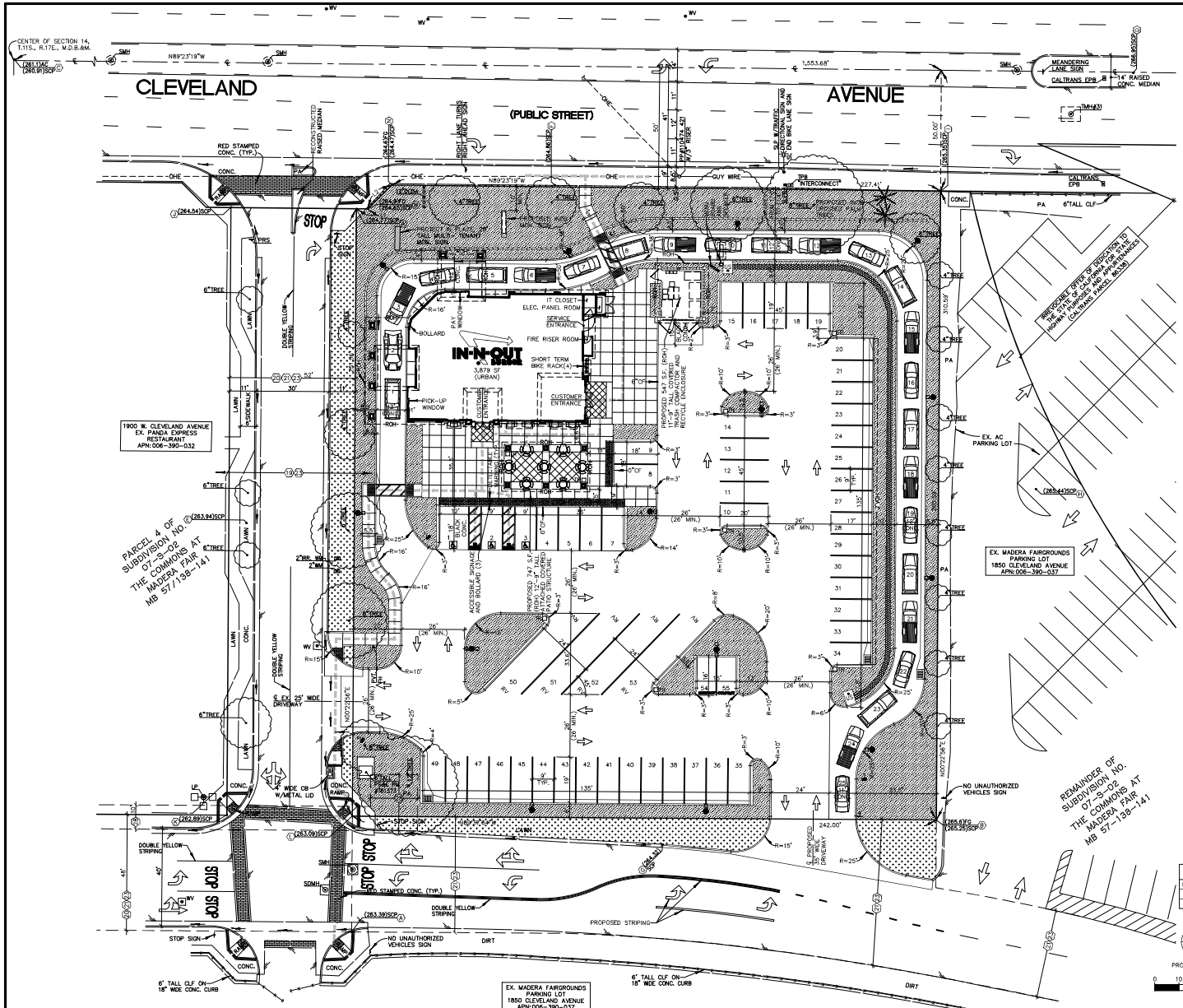
Notes:

(1) For exit movement at the driveway, the available storage length includes the length of the driveway throat and parking access aisle.

(2) There are no turn lanes. Available storage length is the distance to the upstream intersection or major driveway opening.

APPENDIX A

SITE PLAN



LEGEND

- NEW 24"x36" CONCRETE DRAIN BOX INLET WITH A FLOGARD PLUS FOSSIL FILTER INSERT FOR THE PRE-TREATMENT OF STORMWATER RUNOFF.
- PROPOSED INSTALLED AND MAINTAINED 17'-6" TALL FIXTURE HEIGHT LIGHT POLE ON TOP OF A 30" TALL 24" DIAMETER CONCRETE BASE FOR A TOTAL HEIGHT OF 20' TALL.
- PROPOSED INOB INSTALLED AND MAINTAINED LANDSCAPED PLANTER AND IRRIGATION SYSTEM ONSITE, INCLUDING AREA UNDER BUILDING ROOF OVERHANG (ROH) AND VEHICLE OVERHANG (VOH) CONSISTING OF APPROXIMATELY 15,018 SQUARE FEET (23.8%).
- BLACK TRUNCATED DOMES DETECTABLE WARNING STRIP.
- VEHICLE DETECTOR LOOP.
- PROPERTY LINE.
- OUTDOOR SEATING PATIO TABLE WITH UMBRELLA (4 SEATS).
- OUTDOOR SEATING PATIO TABLE WITH NO UMBRELLA (4 SEATS).
- OUTDOOR SEATING PATIO TABLE WITH NO UMBRELLA (2 SEATS).
- NEW 3' TALL 18"x24" LIT "DRIVE THRU" DIRECTIONAL SIGN.
- NEW 3' TALL 18"x24" LIT "THANK YOU, DO NOT ENTER" DIRECTIONAL SIGN.
- NEW PEDESTRIAN CROSSWALK SIGN.
- NEW ACCESSIBILITY ENTRY SIGN.
- NEW 3' TALL 18"x24" LIT "NOT A DRIVE THRU ENTRANCE" DIRECTIONAL SIGN.
- PROPOSED TAN COLOR SPLIT-FACE CMU WALL AND 2" CAP.
- 2 EXPOSED HEIGHT OF PROPOSED CMU RETAINING WALL IN FEET.
- CF CURB FACE.
- LOC LIMITS OF PROPOSED CONSTRUCTION.
- LL PROPOSED LEASE PREMISES LINE.
- VOH VEHICLE OVERHANG WITH NO OBSTRUCTIONS INCLUDING LIGHT POLES, TREES AND SIGNAGE.
- ADA ACCESSIBLE PATH OF TRAVEL. ACCESSIBLE PATH OF TRAVEL IS NOT LESS THAN 4 FEET WIDE, AND DOES NOT EXCEED A RUNNING SLOPE OF 1:20 (5%) OR A CROSS SLOPE IN EXCESS OF 1:50 (2%). REFER TO SHEET C33 FOR SPECIFIC SLOPES AND GRADES.
- TR PORTABLE TRASH RECEPTACLE ON A MINIMUM 24"x24"x4" CONCRETE PAD.
- NEW CONCRETE SIDEWALK.
- A REFER TO THE BOUNDARY MONUMENT AND SURVEY CONTROL POINT DESCRIPTIONS SHOWN ON SHEET C36.
- 29 SIMPLIFIED PLOTTABLE EASEMENT DESCRIPTION SHOWN ON SHEET C36.
- DTWS DRIVE-THRU CATWALK CONCRETE PAD WITH UMBRELLA STAND PER DETAIL "11" SHOWN ON SHEET C___.
- PROPOSED 18" TO 27" TALL 22" WIDE STUCCO COVERED SEAT/SCREEN WALL WITH A PRECAST CONCRETE CAP.
- PROPOSED INOB INSTALLED AND MAINTAINED OFFSITE STREET LANDSCAPE PLANTER AND IRRIGATION SYSTEM CONSISTING OF APPROXIMATELY 4,044 SQUARE FEET.
- 24" WIDE MATTED ASSOCIATE WALKWAY PER ___ CONSISTING OF APPROXIMATELY 479 SQUARE FEET.

GENERAL NOTES

1. AREA OF THIS SUBJECT PROPERTY IS 63,086 SQUARE FEET OR 1.448 ACRES.
2. EXISTING CITY ZONE: C2 – HEAVY COMMERCIAL.
3. GENERAL PLAN LAND USE DESIGNATION: C – COMMERCIAL.
4. EXISTING LAND USE: EXISTING 29' TALL SINGLE STORY 6,940 SQUARE FOOT "SUGAR PINE SMOKEHOUSE" RESTAURANT BUILDING WITH 110 SURFACE PAVED STRIPED PARKING SPACES.
5. 1 SPACE FOR EACH 3 SEATS OF INDOOR PLUS OUTDOOR SEATING (41) OR 10 SPACES PER 1,000 S.F. OF BUILDING AREA PER CC&Rs (39) WHICHEVER IS GREATER = 41 REQUIRED PARKING SPACES.
6. PROPOSED BUILDING AREA = 3,879 S.F.
   INDOOR SEATING = 84 SEATS.
   OUTDOOR SEATING = 38 SEATS (12 TABLES).
   OUTDOOR SEATING AREA = 747 S.F. STRUCTURE PLUS 64 S.F. EACH FOR 0-4 SEAT TABLES (0 S.F.) PLUS 20 S.F. FOR 5-2 SEAT TABLES (100 S.F.) = 847 S.F.
7. REQUIRED LANDSCAPE AREA WITHIN PROPERTY (5%) = 3,155 S.F.
8. LANDSCAPE AREA PROVIDED WITHIN PROPERTY = 15,013 S.F. (23.8%).
9. 9'x19' STANDARD SPACE OR 9'x17' PLUS A 2' VOH.
10. PARKING SPACE DETAILED SUMMARY TABLE

DESCRIPTION	EXISTING	REQUIRED	PROPOSED
1. STANDARD SPACE (9'x19')	105	39	20
2. STANDARD SPACE (9'x20')	0	0	5
3. STANDARD SPACE (9'x18' PLUS A 2' VOH)	0	0	6
4. STANDARD SPACE (9'x17' PLUS A 2' VOH)	0	0	15
5. ACCESSIBLE VAN (17'x18' PLUS A 2' VOH)	2	1	1
6. ACCESSIBLE SPACE (15'x18' PLUS A 2' VOH)	3	1	2
7. RECREATIONAL VEHICLE SPACE (12'x35')	0	0	4
8. COMPACT SPACE (8'x16')	0	0	2
9. TOTAL	110	41	55
10. DRIVE THRU VEHICLE QUEUE (20' LONG VEHICLE)	0	0	25
11. SHORT-TERM BICYCLE PARKING WITHIN DESIGNATED BIKE RACK.	0	2	4
12. LONG-TERM BICYCLE PARKING WITHIN A LOCKABLE PERMANENTLY ANCHORED LOCKER ON A CONCRETE SLAB-AMERICAN BICYCLE SECURITY COMPANY BMC-SHELL MODEL 302, FINISH: MEDIUM GRAY.	0	0	0

11. ALL NEW SIGNS SHALL BE APPROVED BY A SEPARATE CITY PERMIT.
12. ASSESSOR PARCEL NUMBER: 006-390-033.
13. RECIPROCAL ACCESS IS PROVIDED WITH THE ADJOINING LAND WITHIN THE COMMONS AT MADERA FAIR.
14. THE PROPOSED IN-N-OUT BURGER BUILDING WILL BE EQUIPPED WITH FIRE SPRINKLERS.

SHEET INDEX OF CITY ENTITLEMENT DRAWINGS

DEVELOPER:
IN-N-OUT BURGER
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706
CONTACT: MICHELLE BENNETT
PHONE: 626 813-5375

Underground Service Alert
Call: Toll Free 811
TWO WORKING DAYS BEFORE YOU DIG

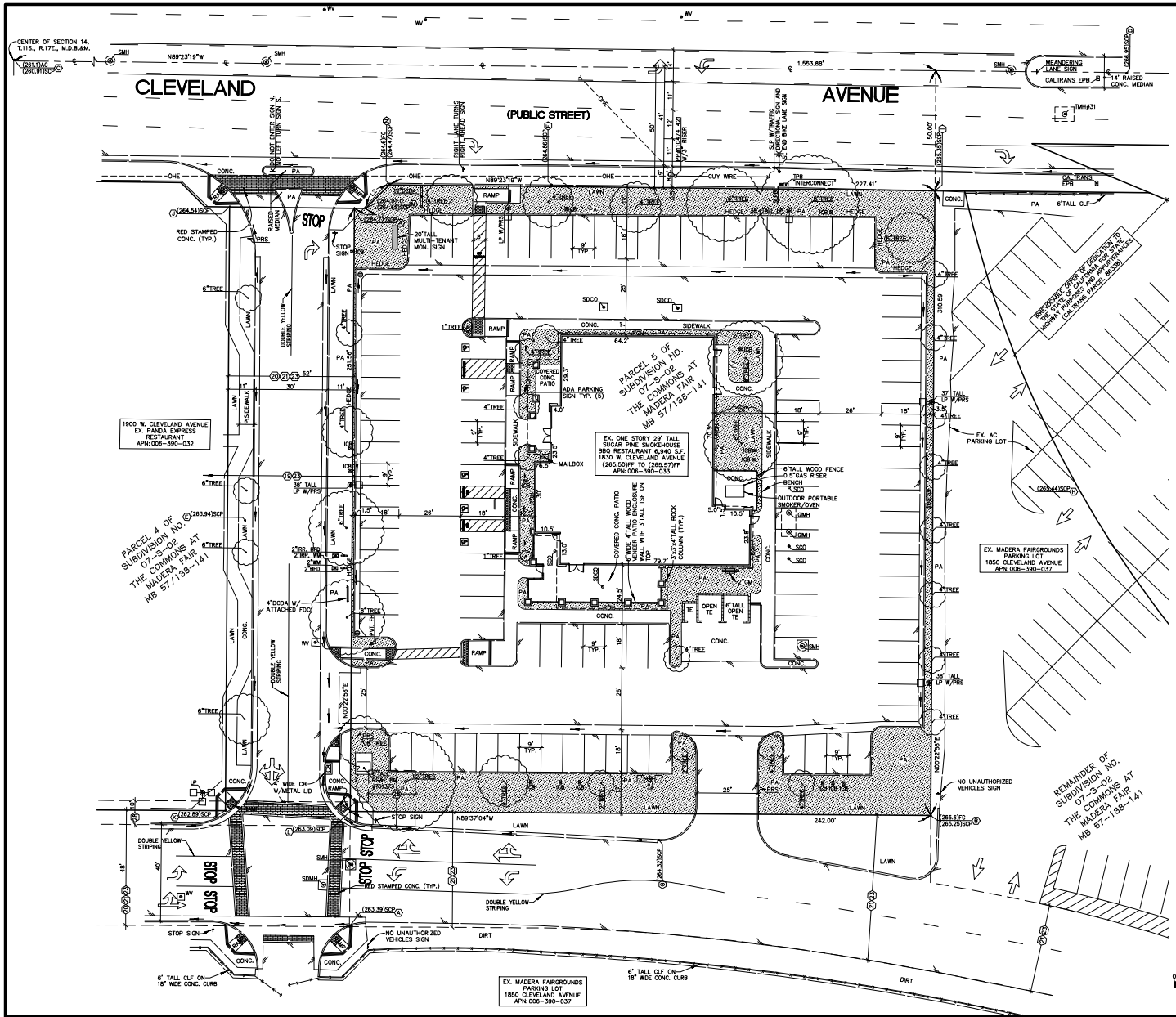
REVISIONS
1 ___
2 ___
3 ___
4 ___
5 ___

GHA PROJECT NO. ------
GHA Architecture/Development
14901 Quorum Drive
Suite 300
Dallas Texas 75254
Ph: (972) 239-8884
Fax: (972) 239-5054

CIVIL ENGINEER:
MSL ENGINEERING, INC.
CIVIL ENGINEERS AND LAND SURVEYORS SPECIALIZING IN SITE DEVELOPMENT
301 NORTH SAN DIMAS AVENUE, SAN DIMAS, CA. 91773
(909) 305-2305 FAX (909) 305-2307
MARK S. LAMOUREUX R.C.E. 38382 — DATE 06-08-2021
REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

PROPERTY ADDRESS
THE COMMONS AT MADERA FAIR
1830 WEST CLEVELAND AVENUE
MADERA, CA 93637

CITY ENTITLEMENT NEW SITE PLAN
C30



LINE TABLE		
NO.	BEARING	DISTANCE
L1	N89°23'19"W	4.60'
L2	N45°29'49"E	14.11'

ENCROACHMENT NOTES

THERE ARE NO FOUND VISIBLE ENCROACHMENT OF IMPROVEMENTS FOR THIS SURVEYED PROPERTY IN PART DUE TO RECIPROCAL EASEMENTS (20), (21), AND (23) FOR VEHICLE AND PEDESTRIAN ACCESS, DRIVES, SIDEWALKS, UTILITIES, STORM DRAIN, AND SURFACE DRAINAGE.

PARTIAL LEGEND

EXISTING LANDSCAPED PLANTER AND VACANT SOIL AREA ONSITE CONSISTING OF 11,631 S.F. OR 18.4% OF THE GROSS SITE AREA.

(20) REFER TO EASEMENT DESCRIPTIONS SHOWN ON SHEET C36.

(A) REFER TO BOUNDARY MONUMENTS AND SURVEY CONTROL POINTS SHOWN ON SHEET C36.

DEVELOPER:
IN-N-OUT BURGER
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706
CONTACT: MICHELLE BENNETT
PHONE: 626 813-5375

Underground Service Alert
Call: Toll Free
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REVISIONS

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MSL ENGINEERING, INC.
CIVIL ENGINEERS AND LAND SURVEYORS SPECIALIZING IN SITE DEVELOPMENT
301 NORTH SAN DIMAS AVENUE, SAN DIMAS, CA. 91773
(909) 305-2305 FAX (909) 305-2307
Mark S. Lamoureux
MARK S. LAMOUREUX R.C.E. 38382
06-08-2021 DATE

REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

IN-N-OUT BURGER
THE COMMONS AT MADERA FAIR
1830 WEST CLEVELAND AVENUE
MADERA, CA 93637

CITY ENTITLEMENT
EXISTING SITE PLAN

C31

APPENDIX B

IN-N-OUT SITE SURVEY DATA

Table 6 – In-N-Out Burger Site Traffic Survey and Trip Rate Calculation

Survey Site Location		Size (TSF)*	Measured Weekday Trips				Measured Saturday Trips			
			Weekday Daily	PM Peak Hour			Saturday Daily	Mid-Day (MD) Peak Hour		
No.	City			Total	In	Out		Total	In	Out
1	Long Beach[1]	3.600	n/a	142	69	73	n/a	235	121	114
2	Millbrae[1]	3.750	5,137	235	128	107	5,281	421	215	206
3	Redwood City[1]	3.750	2,225	141	66	75	2,929	301	152	149
4	Rocklin[1]	3.750	1,720	159	84	75	1,761	184	88	96
5	Vacaville[1]	3.750	1,879	152	87	65	2,244	197	94	103
6	Fairfield[1]	3.750	1,662	132	75	57	2,081	208	105	103
Average		***3.725***	***2,525***	***160***	***85***	***75***	***2,859***	***258***	***129***	***129***
Calculated In-N-Out Trip Rates[2] (Trips/TSF)			*673.33*	*42.95*	*22.82*	*20.13*	*762.40*	*69.26*	*34.63*	*34.63*
7	Vallejo (Proposed)	**3.867**	**2,604**	**166**	**88**	**78**	**2,948**	**268**	**134**	**134**
Typical Trip Rates for Fast-Food Restaurant With Drive-Thru (ITE 934)[3]			496.12	32.65	16.98	15.67	722.03	59.00	30.09	28.91

Note: (See Appendix D for survey data sheets)

* TSF = Thousand Square Feet

[1] The site locations are not fully isolated; therefore, trip counts at the site access points likely included some trips associated with adjacent land uses, resulting in slightly overstated trip generation counts and a conservative analysis.

[2] Average trip rates per thousand square feet calculated based on the average trips of the 6 survey locations.

[3] Institute of Transportation Engineers (ITE), Trip Generation Manual, 9th Edition, 2014.

4.2 Pass-By Trip Reduction Adjustment

As documented in the ITE *Trip Generation Manual* (9th Edition, 2012), a pass-by trip reduction adjustment is applicable to fast-food restaurant land uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, during the weekday PM peak hour, a motorist already traveling along Redwood Parkway between work and home or other destinations may stop and eat at the proposed restaurant before continuing to his intended destination. A pass-by discount under this example would reduce or eliminate both the inbound trip and the outbound trip from the surrounding roadway circulation system since the vehicle was already traveling on the roadway. Without the pass-by trip discount, two trips would be generated: an inbound trip to the project site, and an outbound trip from the project site.

Table 16 – Drive-Through Lane Vehicular Queue Observations

Day	Time	Observed* Drive-Through Queue						Average Queue
		Long Beach	Millbrae	Redwood City	Rocklin	Vacaville	Fairfield	
Weekday	4:00 - 4:15 PM	6	13	14	5	11	5	9
	4:15 - 4:30 PM	5	14	16	8	14	8	11
	4:30 - 4:45 PM	3	15	16	7	16	9	11
	4:45 - 5:00 PM	6	14	15	6	17	16	12
	5:00 - 5:15 PM	5	13	14	8	13	17	12
	5:15 - 5:30 PM	7	15	14	9	11	16	12
	5:30 - 5:45 PM	7	16	15	11	13	8	12
	5:45 - 6:00 PM	5	15	15	12	18	17	14
	Peak Queue	**7**	**16**	**16**	**12**	**18**	**17**	**14**
Saturday	12:00 - 12:15 PM	16	14	18	10	20	13	15
	12:15 - 12:30 PM	14	15	21	13	19	18	17
	12:30 - 12:45 PM	16	14	20	12	15	17	16
	12:45 - 1:00 PM	10	14	18	11	23	18	16
	1:00 - 1:15 PM	15	14	21	12	22	23	18 [1]
	1:15 - 1:30 PM	16	13	20	14	28	17	18 [1]
	1:30 - 1:45 PM	10	14	19	13	27	15	16
	1:45 - 2:00 PM	9	15	21	12	29	18	17
	Peak Queue	**16**	**15**	**21**	**14**	**29**	**23**	**20** [1]

Note: (*See Appendix N for survey data sheets)

[1] The average maximum observed drive-through queue is longer than the proposed drive-through lane adjacent to the proposed building, which has a minimum storage of 17 vehicles. Additional vehicles may queue on-site along the parking aisle (see Exhibit 22).

During the peak periods when the drive-through lane queue exceeds the storage length, In-N-Out will provide personnel to take food orders at the end of the drive-through queue to facilitate circulation and minimize the drive-through queue. The standard operational procedure for In-N-Out is to deploy associates with handheld wireless order tablets as soon as the queue exceeds 8 vehicles at the menu board, which will help facilitate efficient movements through the queue and direct traffic as needed. The staging for the overflow drive-through queue could be addressed by the store associates implementing traffic control measures to align the traffic to line up along the parking aisle to avoid spilling onto the street. Exhibit 22 shows the recommended traffic control measures including signage and pavement marking.

Another option is that the store associates could direct the overflow queuing vehicles to park at vacant parking spaces when the drive-through queue length reach the capacity of 17 vehicles. The drive-through queue length would be monitored by store associates so that the queue length will not exceed 17 vehicles and that the parking lot circulation aisles will remain clear.

To determine forecast trip generation of the proposed In-N-Out restaurant, trip generation sample surveys were conducted in May 2012 at the following three existing In-N-Out restaurants located in the Cities of Redondo Beach, Long Beach, and Los Angeles:

- Existing In-N-Out located at 6391 East Pacific Coast Highway, Long Beach, CA;
- Existing In-N-Out located at 9149 South Sepulveda Boulevard, Los Angeles, CA; and
- Existing In-N-Out located at 3801 Inglewood Avenue, Redondo Beach, CA.

The In-N-Out trip generation sample surveys were collected during the same time periods evaluated in this analysis (weekday 11:30 a.m. to 1:30 p.m., weekday 4:00 p.m. to 6:00 p.m., Saturday 11:30 a.m. to 1:30 p.m. and Saturday 4:00 p.m. to 6:00 p.m.). The trip generation data used in this analysis were taken from the highest hour within each peak period counted. Detailed traffic count data sheets are contained in Appendix A.

Table 8 summarizes the weekday peak hour trip generation for the surveyed In-N-Out locations.

Table 8
In-N-Out Weekday Trip Generation Survey Count Summary

Survey Location	Size (tsf)	Weekday AM Peak Hour Trips			Weekday Mid-Day Peak Hour Trips			Weekday PM Peak Hour Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
Redondo Beach In-N-Out	2.8	0	0	0	136	135	271	94	89	183
Long Beach In-N-Out	3.6	0	0	0	138	135	273	69	73	142
Los Angeles In-N-Out	3.8	0	0	0	196	159	355	127	111	238
Average In-N-Out Weekday Trip Generation		**0**	**0**	**0**	**157**	**143**	**300**	**97**	**91**	**188**

Source: Observed data.

Note: tsf = thousand square feet.

As shown in Table 8, the surveyed In-N-Out restaurants currently generate approximately an average of 300 weekday mid-day peak hour trips and an average of 188 weekday p.m. peak hour trips. It should be noted the surveyed locations included outdoor seating patios similar to the proposed project.

Table 9 summarizes the Saturday peak hour trip generation for the surveyed In-N-Out locations.

Table 9
In-N-Out Saturday Trip Generation Survey Count Summary

Survey Location	Size (tsf)	Saturday AM Peak Hour Trips			Saturday Mid-Day Peak Hour Trips			Saturday PM Peak Hour Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
Redondo Beach In-N-Out	2.8	0	0	0	164	146	310	141	149	290
Long Beach In-N-Out	3.6	0	0	0	121	114	235	90	89	179
Los Angeles In-N-Out	3.8	0	0	0	224	200	424	119	113	232
Average In-N-Out Saturday Trip Generation		**0**	**0**	**0**	**170**	**153**	**323**	**117**	**117**	**234**

Source: Observed data.

Note: tsf = thousand square feet.

As shown in Table 9, the surveyed In-N-Out restaurants currently generate approximately an average of 323 Saturday mid-day peak hour trips and an average of 234 Saturday p.m. peak hour trips. It should be noted the surveyed locations included outdoor seating patios similar to the proposed project.

Pass-by Trip Reduction

As documented in ITE's *Trip Generation Handbook (Institute of Transportation Engineers, 2nd Edition, 2004),* a pass-by trip reduction is applicable to fast food restaurant with drive-through and high turnover sit-down restaurant land uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, during the mid-day or p.m. peak hour, a motorist already traveling along Sepulveda Boulevard (SR-1) between work and home or other destinations may stop at the proposed project site. A pass-by discount under this example would reduce/eliminate both the inbound trip and the outbound trip from the surrounding roadway circulation system since the vehicle was already traveling on the roadway. Without the pass-by trip discount, two trips would be generated: an inbound trip to the project site, and an outbound trip from the project site.

Table 10 summarizes the pass-by trip reductions applicable to the proposed project land uses identified by Caltrans and utilized in this analysis which are conservatively lower than the pass-by trip reductions identified by ITE. For example, while ITE identifies a fast food restaurant with drive through pass-by trip reduction of 49 percent in the weekday mid-day peak and 50 percent in the weekday p.m. peak, Caltrans has identified a pass-by discount of 10 percent in the weekday mid-day peak and 25 percent in the weekday p.m. peak. Also, while ITE identifies a high turn over sit-down restaurant with pass-by trip reduction of 43 percent in the weekday mid-day peak and 43 percent in the weekday p.m. peak, Caltrans has identified a pass-by discount of 10 percent in the weekday mid-day peak and 25 percent in the weekday p.m. peak.

As shown in Table 61, with the addition of a second left-turn lane at the westbound Mariposa Avenue approach at Sepulveda Boulevard (SR-1), the left-turn movement queue is forecast to not queue back beyond the Ralphs Shopping Center for either forecast opening year without project conditions or forecast opening year with project conditions.

As also shown in Table 61, the westbound right-turn and through queue is forecast to slightly increase assuming the addition of a second westbound left-turn lane; this is a result of changing the traffic signal phasing from a permitted left-turn phase with a single left-turn lane (current traffic signal phasing) to a protected left-turn phase to accommodate dual side-by-side westbound left turn lanes.

IN-N-OUT BURGER DRIVE-THROUGH QUEUE ANALYSIS

An analysis has been prepared to evaluate the adequacy of the vehicular queue storage area provided for the proposed In-N-Out Burger drive-through as shown on the project site.

To forecast the vehicular queue at the proposed In-N-Out Burger, RBF has conducted sample survey field observations of vehicular queues at the following three existing In-N-Out Burger restaurants:

- Existing In-N-Out located at 6391 East Pacific Coast Highway, Long Beach, CA;
- Existing In-N-Out located at 9149 South Sepulveda Boulevard, Los Angeles, CA; and
- Existing In-N-Out located at 3801 Inglewood Avenue, Redondo Beach, CA.

The vehicular queues were observed and documented in 15-minute intervals from 10:00 a.m. to 12:00 midnight on a typical weekday and a typical Saturday in May 2012.

Table 62 summarizes the collected drive-through vehicular queue data collected at the three sample survey field In-N-Out restaurants.

Table 62
Existing In-N-Out Restaurants
Summary of Drive-Through Vehicular Queue Observations

No.	Time	Weekday Observed Queue (Vehicles)				Saturday Observed Queue (Vehicles)			
		Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average	Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average
1	10:00 AM	0	0	4	*1*	0	0	0	*0*
2	10:15 AM	5	2	8	*5*	4	3	7	*3*
3	10:30 AM	8	5	6	*6*	7	4	8	*4*
4	10:45 AM	7	6	6	*6*	9	6	5	*5*
5	11:00 AM	3	6	11	*6*	7	8	8	*6*
6	11:15 AM	6	12	21	*12*	8	11	10	*7*
7	11:30 AM	7	16	23	*13*	9	12	15	*9*
8	11:45 AM	14	19	21	*17*	16	18	16	*12*
9	12:00 PM	15	20	23	*18*	16	20	16	*13*
10	12:15 PM	15	18	26	***19***	14	16	20	*13*
11	12:30 PM	13	21	11	*15*	16	20	31	*16*
12	12:45 PM	8	19	11	*12*	10	20	33	*16*

No.	Time	Weekday Observed Queue (Vehicles)				Saturday Observed Queue (Vehicles)			
		Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average	Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average
13	1:00 PM	12	**22**	17	*17*	15	23	35	***18***
14	1:15 PM	13	21	16	*15*	16	22	**36**	***18***
15	1:30 PM	8	20	11	*11*	10	20	31	*15*
16	1:45 PM	7	20	9	*11*	9	20	28	*14*
17	2:00 PM	8	21	10	*13*	12	21	26	*15*
18	2:15 PM	7	21	8	*12*	13	**26**	23	*16*
19	2:30 PM	8	**22**	15	*15*	9	22	21	*13*
20	2:45 PM	6	21	13	*13*	8	21	18	*11*
21	3:00 PM	6	18	10	*11*	9	18	12	*9*
22	3:15 PM	5	17	12	*11*	9	17	14	*10*
23	3:30 PM	4	16	14	*11*	6	17	8	*9*
24	3:45 PM	5	18	13	*12*	9	9	19	*9*
25	4:00 PM	6	17	16	*12*	8	10	22	*10*
26	4:15 PM	5	15	19	*12*	10	14	26	*11*
27	4:30 PM	3	12	17	*10*	8	18	24	*12*
28	4:45 PM	6	10	18	*11*	5	8	18	*9*
29	5:00 PM	5	9	22	*11*	9	8	14	*9*
30	5:15 PM	7	14	24	*13*	10	9	13	*10*
31	5:30 PM	7	17	23	*14*	10	20	20	*12*
32	5:45 PM	5	19	16	*12*	9	19	19	*12*
33	6:00 PM	12	20	18	*15*	13	20	25	*13*
34	6:15 PM	7	19	23	*14*	9	19	18	*12*
35	6:30 PM	10	20	25	*16*	10	20	22	*13*
36	6:45 PM	12	18	26	*17*	14	18	19	*12*
37	7:00 PM	10	17	23	*16*	12	19	23	*12*
38	7:15 PM	11	18	27	*17*	13	20	22	*12*
39	7:30 PM	7	19	19	*16*	9	21	24	*12*
40	7:45 PM	6	20	21	*16*	9	22	25	*14*
41	8:00 PM	8	21	23	*17*	10	21	22	*12*
42	8:15 PM	6	19	22	*15*	9	22	23	*13*
43	8:30 PM	9	19	18	*13*	11	18	19	*12*
44	8:45 PM	10	20	**28**	*18*	12	17	18	*11*
45	9:00 PM	12	18	27	***19***	13	16	12	*11*
46	9:15 PM	**16**	19	16	*17*	**17**	19	13	*11*
47	9:30 PM	14	20	17	*17*	15	18	9	*10*
48	9:45 PM	15	19	16	*17*	10	20	14	*9*
49	10:00 PM	14	21	15	*17*	12	19	20	*11*
50	10:15 PM	13	17	18	*16*	14	18	23	*12*

No.	Time	Weekday Observed Queue (Vehicles)				Saturday Observed Queue (Vehicles)			
		Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average	Long Beach In-N-Out	Los Angeles In-N-Out	Redondo Beach In-N-Out	Average
51	10:30 PM	12	16	19	*16*	13	19	26	*13*
52	10:45 PM	12	14	16	*14*	11	18	22	*12*
53	11:00 PM	11	16	15	*14*	9	21	21	*13*
54	11:15 PM	13	17	13	*14*	10	17	23	*12*
55	11:30 PM	9	15	12	*12*	8	16	19	*10*
56	11:45 PM	8	13	11	*11*	6	14	12	*7*
Queue		**16**	**22**	**28**	***19***	**17**	**26**	**36**	***18***

Note: Maximum queue value shown in **bold**; average queue value shone in ***bold italics.***

As shown in Table 62, the maximum vehicular queue at each of the three observed locations is as follows:

- Long Beach In-N-Out: 16 vehicles on a typical weekday occurring at 9:15 p.m., and 17 vehicles on a typical Saturday occurring at 9:15 p.m.
- Los Angeles In-N-Out: 22 vehicles on a typical weekday occurring at 1:00 p.m. and 2:30 p.m., 26 vehicles on a typical Saturday occurring at 2:15 p.m.
- Redondo Beach In-N-Out: 28 vehicles on a typical weekday occurring at 8:45 p.m., 36 vehicles on a typical Saturday occurring at 1:15 p.m.

As also shown in Table 62, the average maximum vehicular queue at the three observed locations is 19 vehicles on a typical weekday and 18 vehicles on a typical Saturday.

It is important to note the Redondo Beach In-N-Out restaurant sample survey location is located at the Inglewood Avenue/I-405 interchange with high visibility and easy access with one of the busiest freeways in the nation, and therefore would be expected to generate higher traffic volumes and correspondingly higher vehicular queues than the proposed In-N-Out restaurant. Drive-through queue lengths at the Los Angeles In-N-Out restaurant sample survey location at Sepulveda Boulevard (SR-1) north of Los Angeles International Airport (LAX) would most likely represent similar drive-through queue lengths expected to occur at the proposed In-N-Out restaurant.

It should be noted the drive-through queue and its potential to affect the Queen Esther Square Shopping Center is more critical during the weekday mid-day lunch period since a number of businesses in the retail center would be closed during the evening. Additionally, the substantial daytime employee population generated by the large employment base in El Segundo is significantly diminished during weekday evening hours and Saturday/weekend hours.

Based on the proposed project site plan (*Gerdes, Henrichson & Associates, 12/11/2012),* the proposed project provides vehicular queue storage capacity for approximately 23 vehicles. Therefore, adequate vehicular queue storage is forecast to be provided for the proposed In-N-Out drive-through based on sample survey of other In-N-Out drive-through queues.

Wednesday, May 16th, 2012 CITY: Los Angeles PROJECT: In-N-Out Burger

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	39		35		20
00:15						12:15	48		36		18
00:30						12:30	52		37		21
00:45						12:45	57	196	41	149	19
01:00						13:00	39		45		22
01:15						13:15	36		46		21
01:30						13:30	35		41		20
01:45						13:45	X	110	X	132	20
02:00						14:00					21
02:15						14:15					21
02:30						14:30					22
02:45						14:45					21
03:00						15:00					18
03:15						15:15					17
03:30						15:30					16
03:45						15:45					18
04:00						16:00	31		24		17
04:15						16:15	18		18		15
04:30						16:30	27		28		12
04:45						16:45	33	109	22	92	10
05:00						17:00	34		30		9
05:15						17:15	25		33		14
05:30						17:30	36		23		17
05:45						17:45	32	127	25	111	19
06:00						18:00	30		36		20
06:15						18:15					19
06:30						18:30					20
06:45						18:45					18
07:00						19:00					17
07:15						19:15					18
07:30						19:30					19
07:45						19:45					20
08:00						20:00					21
08:15						20:15					19
08:30						20:30					19
08:45						20:45					20
09:00						21:00					18
09:15						21:15					19
09:30						21:30					20
09:45						21:45					19
10:00					0	22:00					21
10:15					2	22:15					17
10:30					5	22:30					16
10:45					6	22:45					14
11:00					6	23:00					16
11:15					12	23:15					17
11:30	28		32		16	23:30					15
11:45	31	59	29	61	120 19	23:45					13
Total Vol.		59		61				542		484	

Daily Totals		
IN		**OUT**
601		**545**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

05/19/12 CITY: Los Angeles PROJECT: In-N-Out Burger

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	49		38		20
00:15						12:15	49		41		16
00:30						12:30	51		43		20
00:45						12:45	66	215	57	179	20
01:00						13:00	53		49		23
01:15						13:15	54		51		22
01:30						13:30	49		54		20
01:45						13:45	X	156	X	154	20
02:00						14:00					21
02:15						14:15					26
02:30						14:30					22
02:45						14:45					21
03:00						15:00					18
03:15						15:15					17
03:30						15:30					17
03:45						15:45					9
04:00						16:00	28		24		10
04:15						16:15	37		20		14
04:30						16:30	38		25		18
04:45						16:45	25	128	34	103	8
05:00						17:00	15		26		8
05:15						17:15	28		30		9
05:30						17:30	43		24		20
05:45						17:45	33	119	33	113	19
06:00						18:00	35		38		20
06:15						18:15	X		X		19
06:30						18:30	X		X		20
06:45						18:45	X	35	X	38	18
07:00						19:00					19
07:15						19:15					20
07:30						19:30					21
07:45						19:45					22
08:00						20:00					21
08:15						20:15					22
08:30						20:30					18
08:45						20:45					17
09:00						21:00					16
09:15						21:15					19
09:30						21:30					18
09:45						21:45					20
10:00						22:00					19
10:15					3	22:15					18
10:30					4	22:30					19
10:45					6	22:45					18
11:00					8	23:00					21
11:15					11	23:15					17
11:30	31		46		12	23:30					16
11:45	42	73	35	81	18	23:45					14
Total Vol.		73		81				653		587	

Daily Totals	
IN	**OUT**
726	**668**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

Wednesday, May 16,2012 CITY: Long Beach PROJECT: In N Out Burger

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	31		25		15
00:15						12:15	30		15		15
00:30						12:30	52		50		13
00:45						12:45	25	138	29	119	8
01:00						13:00	29		29		12
01:15						13:15	32		27		13
01:30						13:30	18		23		8
01:45						13:45	X	79	X	79	7
02:00						14:00					8
02:15						14:15					7
02:30						14:30					8
02:45						14:45					6
03:00						15:00					6
03:15						15:15					5
03:30						15:30					4
03:45						15:45					5
04:00						16:00	16		19		6
04:15						16:15	12		17		5
04:30						16:30	14		14		3
04:45						16:45	16	58	10	60	6
05:00						17:00	19		14		5
05:15						17:15	20		19		7
05:30						17:30	19		19		7
05:45						17:45	11	69	21	73	5
06:00						18:00	17		20		12
06:15						18:15	X		X		7
06:30						18:30	X		X		10
06:45						18:45	X	17	X	20	12
07:00						19:00					10
07:15						19:15					11
07:30						19:30					7
07:45						19:45					6
08:00						20:00					8
08:15						20:15					6
08:30						20:30					9
08:45						20:45					10
09:00						21:00					12
09:15						21:15					16
09:30						21:30					14
09:45						21:45					15
10:00						22:00					14
10:15					5	22:15					13
10:30					8	22:30					12
10:45					7	22:45					12
11:00					3	23:00					11
11:15					6	23:15					13
11:30	19		25		7	23:30					9
11:45	21	40	27	52	14	23:45					8
Total Vol.		40		52				361		351	

Daily Total	
IN	**401**
OUT	**361**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

Saturday, May 19,2012 CITY: Long Beach PROJECT: In N Out Burger

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	17		17		16
00:15						12:15	34		20		14
00:30						12:30	22		30		16
00:45						12:45	32	105	37	104	10
01:00						13:00	33		27		15
01:15						13:15	29		23		16
01:30						13:30	29		33		10
01:45						13:45	X	91	X	83	9
02:00						14:00					12
02:15						14:15					13
02:30						14:30					9
02:45						14:45					8
03:00						15:00					9
03:15						15:15					9
03:30						15:30					6
03:45						15:45					9
04:00						16:00	21		25		8
04:15						16:15	22		16		10
04:30						16:30	21		25		8
04:45						16:45	24	88	24	90	5
05:00						17:00	19		19		9
05:15						17:15	19		21		10
05:30						17:30	28		25		10
05:45						17:45	18	84	19	84	9
06:00						18:00	23		18		13
06:15						18:15					9
06:30						18:30					10
06:45						18:45	X	23	X	18	14
07:00						19:00					12
07:15						19:15					13
07:30						19:30					9
07:45						19:45					9
08:00						20:00					10
08:15						20:15					9
08:30						20:30					11
08:45						20:45					12
09:00						21:00					13
09:15						21:15					17
09:30						21:30					15
09:45						21:45					10
10:00						22:00					12
10:15					4	22:15					14
10:30					7	22:30					13
10:45					9	22:45					11
11:00					7	23:00					9
11:15					8	23:15					10
11:30	25		16		9	23:30					8
11:45	27	52	18	34	16	23:45					6
Total Vol.		52		34				391		379	

Daily Total	
IN	**443**
OUT	**391**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

Wednesday, May16th 2012 CITY: Redondo Beach PROJECT: IN N OUT

Prepared by

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	32		24		23
00:15						12:15	42		42		26
00:30						12:30	36		29		11
00:45						12:45	27	137	38	133	11
01:00						13:00	31		26		17
01:15						13:15	28		23		16
01:30						13:30	32		31		11
01:45						13:45	X	91	X	80	9
02:00						14:00					10
02:15						14:15					8
02:30						14:30					15
02:45						14:45					13
03:00						15:00					10
03:15						15:15					12
03:30						15:30					14
03:45						15:45					13
04:00						16:00	17		16		16
04:15						16:15	18		19		19
04:30						16:30	29		24		17
04:45						16:45	18	82	23	82	18
05:00						17:00	28		23		22
05:15						17:15	19		19		24
05:30						17:30	24		21		23
05:45						17:45	28	99	21	84	16
06:00						18:00	13		26		18
06:15						18:15	X		X		23
06:30						18:30	X		X		25
06:45						18:45	X	13	X	26	26
07:00						19:00					23
07:15						19:15					27
07:30						19:30					19
07:45						19:45					21
08:00						20:00					23
08:15						20:15					22
08:30						20:30					18
08:45						20:45					28
09:00						21:00					27
09:15						21:15					16
09:30						21:30					17
09:45						21:45					16
10:00					4	22:00					15
10:15					8	22:15					18
10:30					6	22:30					19
10:45					6	22:45					16
11:00					11	23:00					15
11:15					21	23:15					13
11:30	24		34		23	23:30					12
11:45	25	49	37	71	21	23:45					11
Total Vol.		49		71				422		405	

Daily Total	
IN	**471**
OUT	**476**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

Saturday, May 19th,2012 CITY: Redondo Beach PROJECT: IN N OUT

AM Period	IN		OUT		MAXIMUM QUEUE	PM Period	IN		OUT		MAXIMUM QUEUE
00:00						12:00	26		28		16
00:15						12:15	36		34		20
00:30						12:30	29		25		31
00:45						12:45	49	140	40	127	33
01:00						13:00	48		42		35
01:15						13:15	38		39		36
01:30						13:30	40		58		31
01:45						13:45	X	126	X	139	28
02:00						14:00					26
02:15						14:15					23
02:30						14:30					21
02:45						14:45					18
03:00						15:00					12
03:15						15:15					14
03:30						15:30					8
03:45						15:45					19
04:00						16:00	46		40		22
04:15						16:15	45		38		26
04:30						16:30	31		31		24
04:45						16:45	19	141	40	149	18
05:00						17:00	33		25		14
05:15						17:15	24		27		13
05:30						17:30	28		27		20
05:45						17:45	23	108	34	113	19
06:00						18:00	35		26		25
06:15						18:15	X		X		18
06:30						18:30	X		X		22
06:45						18:45	X	35	X	26	19
07:00						19:00					23
07:15						19:15					22
07:30						19:30					24
07:45						19:45					25
08:00						20:00					22
08:15						20:15					23
08:30						20:30					19
08:45						20:45					18
09:00						21:00					12
09:15						21:15					13
09:30						21:30					9
09:45						21:45					14
10:00					0	22:00					20
10:15					7	22:15					23
10:30					8	22:30					26
10:45					5	22:45					22
11:00					8	23:00					21
11:15					10	23:15					23
11:30	24		34		15	23:30					19
11:45	25	49	37	71	16	23:45					12
Total Vol.		49		71				550		554	

Daily Total	
IN	**599**
OUT	**625**

PACIFIC TRAFFIC & TRANSIT DATA SERVICES

Table 1
Drive-Through Lane Queue Observation

Time	Saturday 12/2/2017		Sunday 12/3/2017		Monday 12/4/2017		Tuesday 12/5/2017		Wednesday 12/6/2017		Thursday 12/7/2017		Friday 12/8/2017		Hourly Peak Queue	Hourly Average Queue	Hourly 85th Percentile Queue
	Corona	Highland	Corona	Highland	Corona	Highland	Corona	Highland	Corona	Highland	Corona	Highland	Corona	Highland			
10:30-10:45	7	4	5	6	6	6	5	5	6	4	5	4	6	6	7	5.4	6.0
10:45-11:00	14	5	11	7	14	8	7	7	12	6	7	7	8	11	14	8.9	12.1
11:00-11:15	7	6	9	9	17	11	11	9	12	9	9	10	10	14	17	10.2	12.1
11:15-11:30	9	14	13	11	14	17	15	10	12	13	11	14	17	15	17	13.2	15.1
11:30-11:45	9	12	17	16	14	15	15	14	15	15	16	14	16	16	17	14.6	16.0
11:45-12:00	11	13	19	18	17	14	10	14	14	14	16	14	15	17	19	14.7	17.1
12:00-12:15	13	16	17	18	12	18	13	17	18	14	15	18	23	19	23	16.5	18.1
12:15-12:30	16	20	18	20	17	17	13	17	18	15	14	18	24	21	24	17.7	20.1
12:30-12:45	20	20	23	20	20	16	13	19	16	15	13	17	23	21	23	18.3	21.1
12:45-1:00	22	21	24	19	15	13	17	18	13	11	14	18	17	20	24	17.3	21.1
1:00-1:15	22	18	24	19	14	14	11	17	13	7	16	18	14	19	24	16.1	19.2
1:15-1:30	23	20	23	19	11	11	14	13	16	10	18	14	15	14	23	15.8	20.2
1:30-1:45	24	20	22	18	11	14	11	13	15	10	17	13	16	16	24	15.7	20.1
1:45-2:00	23	22	17	17	10	14	10	18	13	3	14	13	15	18	23	14.8	18.2
2:00-2:15	22	17	18	15	15	13	11	15	16	14	10	16	15	17	22	15.3	17.1
2:15-2:30	23	17	17	17	17	18	16	16	16	15	13	19	13	18	23	16.8	18.1
2:30-2:45	24	14	23	18	18	14	15	13	12	14	13	16	13	15	24	15.9	18.3
2:45-3:00	20	17	14	15	12	15	14	12	10	13	13	18	15	15	20	14.5	17.1
3:00-3:15	20	16	18	16	18	18	23	14	17	12	14	16	16	18	23	16.9	18.1
3:15-3:30	17	18	14	19	15	18	19	12	18	13	14	14	18	18	19	16.2	18.1
3:30-3:45	17	14	16	19	18	17	17	10	11	17	16	19	17	19	19	16.2	19.0
3:45-4:00	15	12	17	16	16	18	12	11	15	16	14	18	15	17	18	15.1	17.1
4:00-4:15	18	14	20	14	12	15	9	14	12	14	15	15	17	13	20	14.4	17.1
4:15-4:30	16	15	18	14	16	13	10	16	9	12	11	16	11	19	19	14.0	16.1
4:30-4:45	16	14	17	16	17	15	14	14	10	15	9	14	11	17	17	14.2	17.0
4:45-5:00	16	15	17	18	14	18	12	15	16	14	15	17	13	16	18	15.4	17.1
5:00-5:15	23	15	15	19	16	15	13	14	23	13	18	19	13	15	23	16.5	19.2
5:15-5:30	24	18	17	20	23	13	12	13	18	17	21	19	16	19	24	17.9	21.1
5:30-5:45	24	22	23	19	16	16	13	19	16	16	16	18	23	19	24	18.6	23.0
5:45-6:00	23	17	23	18	15	20	13	19	17	18	18	21	15	20	23	18.4	21.1
6:00-6:15	18	23	24	21	12	20	12	18	18	20	23	21	19	23	24	19.4	23.0
6:15-6:30	23	19	24	21	15	19	17	17	23	13	24	19	17	22	24	19.5	**23.1** *
6:30-6:45	23	19	**25**	20	23	19	23	17	23	16	24	18	18	17	**25** *	**20.4** *	**23.1** *
6:45-7:00	20	19	**25**	19	24	18	17	15	17	14	23	17	15	18	**25** *	18.6	**23.1** *
7:00-7:15	23	21	24	17	23	16	18	14	14	13	13	16	17	19	24	17.7	23.0
7:15-7:30	15	19	24	18	16	15	15	15	16	15	17	21	18	20	24	17.4	20.1
7:30-7:45	14	17	23	18	12	12	14	16	13	12	16	19	23	21	23	16.4	21.1
7:45-8:00	16	15	23	19	14	15	12	17	13	17	20	19	24	19	24	17.4	20.2
8:00-8:15	15	18	15	20	14	18	12	13	14	18	17	14	23	18	23	16.4	18.1
8:15-8:30	16	19	15	17	15	13	13	16	12	16	14	14	17	17	19	15.3	17.0
8:30-8:45	17	21	16	15	14	13	14	13	10	17	15	12	16	17	21	15.0	17.0
8:45-9:00	14	19	14	14	14	12	10	13	14	19	15	14	13	15	19	14.3	15.2
9:00-9:15	17	20	12	16	14	11	12	14	11	18	13	15	15	18	20	14.7	18.0
9:15-9:30	12	20	10	16	15	14	9	15	11	16	15	19	15	17	20	14.6	17.1
9:30-9:45	16	18	13	17	11	15	8	12	8	14	10	18	16	16	18	13.7	17.1
9:45-10:00	12	17	15	16	9	12	8	11	11	12	13	16	11	16	17	12.8	16.0
10:00-10:15	13	20	12	13	14	10	7	10	12	13	13	15	12	14	20	12.7	14.1
10:15-10:30	12	19	9	12	9	9	6	10	11	15	13	14	15	14	19	12.0	15.0
10:30-10:45	14	18	13	12	11	8	6	8	7	14	11	11	15	14	18	11.6	14.1
10:45-11:00	19	18	11	13	9	7	7	7	8	10	9	11	14	14	19	11.2	14.2
11:00-11:15	20	15	8	15	8	8	6	7	6	11	8	10	13	11	20	10.4	15.0
11:15-11:30	16	17	12	16	6	7	5	8	5	9	7	9	11	12	17	10.0	16.0
11:30-11:45	14	19	10	12	7	6	4	6	4	7	5	8	11	10	19	8.8	12.1
11:45-12:00	12	16	8	9	5	5	4	5	5	8	6	9	11	9	16	8.0	11.1
12:00-12:15	11	16	5	8	5	5	3	6	4	6	4	7	11	8	16	7.1	11.0
12:15-12:30	11	15	7	7	4	4	3	4	3	5	3	5	11	7	15	6.4	11.0
12:30-12:45	13	9	6	5	3	3	3	3	2	3	3	4	11	3	13	5.1	9.1
12:45-1:00	13	8	4	4	2	2	2	2	2	2	2	2	11	5	13	4.4	8.2
Site Peak Queue	24	23	**25**	21	24	20	23	19	23	20	24	21	24	23			
Site Average Queue	**16.8**	16.6	16.1	15.5	13.4	13.1	11.3	12.6	12.5	12.6	13.3	14.6	15.2	15.8			
Site 85th Percentile Queue	**23.0**	20.0	**23.0**	19.0	17.0	18.0	15.5	17.0	17.0	16.5	17.5	19.0	18.0	19.0			

Table 2
Estimated Project Drive-Through Lane Queue Demand

Time	Peak Queue	Average Queue	85th Percentile Queue	Queue Exceeds 15-Vehicle Capacity
10:30-10:45	7	5.4	6.0	-
10:45-11:00	14	8.9	12.1	-
11:00-11:15	17	10.2	12.1	-
11:15-11:30	17	13.2	15.1	-
11:30-11:45	17	14.6	16.0	1
11:45-12:00	19	14.7	17.1	2
12:00-12:15	23	16.5	18.1	3
12:15-12:30	24	17.7	20.1	5
12:30-12:45	23	18.3	21.1	6
12:45-1:00	24	17.3	21.1	6
1:00-1:15	24	16.1	19.2	4
1:15-1:30	23	15.8	20.2	5
1:30-1:45	24	15.7	20.1	5
1:45-2:00	23	14.8	18.2	3
2:00-2:15	22	15.3	17.1	2
2:15-2:30	23	16.8	18.1	3
2:30-2:45	24	15.9	18.3	3
2:45-3:00	20	14.5	17.1	2
3:00-3:15	23	16.9	18.1	3
3:15-3:30	19	16.2	18.1	3
3:30-3:45	19	16.2	19.0	4
3:45-4:00	18	15.1	17.1	2
4:00-4:15	20	14.4	17.1	2
4:15-4:30	19	14.0	16.1	1
4:30-4:45	17	14.2	17.0	2
4:45-5:00	18	15.4	17.1	2
5:00-5:15	23	16.5	19.2	4
5:15-5:30	24	17.9	21.1	6
5:30-5:45	24	18.6	23.0	8
5:45-6:00	23	18.4	21.1	6
6:00-6:15	24	19.4	23.0	8
6:15-6:30	24	19.5	**23.1** *	8
6:30-6:45	**25** *	**20.4** *	**23.1** *	8
6:45-7:00	**25** *	18.6	**23.1** *	8
7:00-7:15	24	17.7	23.0	8
7:15-7:30	24	17.4	20.1	5
7:30-7:45	23	16.4	21.1	6
7:45-8:00	24	17.4	20.2	5
8:00-8:15	23	16.4	18.1	3
8:15-8:30	19	15.3	17.0	2
8:30-8:45	21	15.0	17.0	2
8:45-9:00	19	14.3	15.2	-
9:00-9:15	20	14.7	18.0	3
9:15-9:30	20	14.6	17.1	2
9:30-9:45	18	13.7	17.1	2
9:45-10:00	17	12.8	16.0	1
10:00-10:15	20	12.7	14.1	-
10:15-10:30	19	12.0	15.0	-
10:30-10:45	18	11.6	14.1	-
10:45-11:00	19	11.2	14.2	-
11:00-11:15	20	10.4	15.0	-
11:15-11:30	17	10.0	16.0	1
11:30-11:45	19	8.8	12.1	-
11:45-12:00	16	8.0	11.1	-
12:00-12:15	16	7.1	11.0	-
12:15-12:30	15	6.4	11.0	-
12:30-12:45	13	5.1	9.1	-
12:45-1:00	13	4.4	8.2	-

APPENDIX C

EXISTING TRAFFIC COUNT DATA

INTERSECTION TURNING MOVEMENT COUNTS

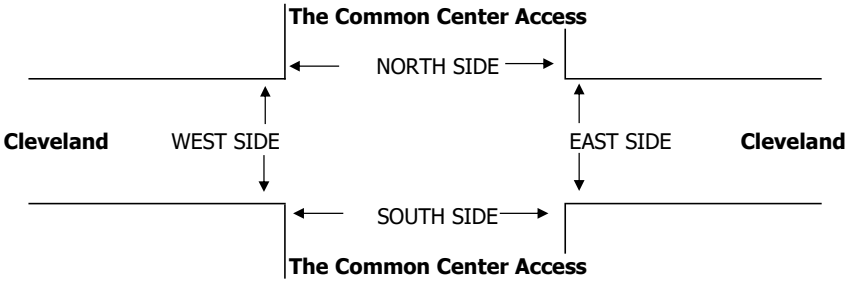
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	The Common Center Access	LOCATION #:	1
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND The Common Center Access			SOUTHBOUND The Common Center Access			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR 1	SL X	ST X	SR X	EL X	ET 3	ER 0	WL 1	WT 3	WR X	TOTAL
MD	11:00 AM	0	0	37	0	0	0	0	189	8	57	194	0	485
	11:15 AM	0	0	22	0	0	0	0	167	4	50	197	0	440
	11:30 AM	0	0	25	0	0	0	0	181	10	35	174	0	425
	11:45 AM	0	0	25	0	0	0	0	204	9	35	188	0	461
	12:00 PM	0	0	30	0	0	0	0	174	5	50	181	0	440
	12:15 PM	0	0	21	0	0	0	0	189	10	53	206	0	479
	12:30 PM	0	0	29	0	0	0	0	216	7	44	171	0	467
	12:45 PM	0	0	40	0	0	0	0	175	10	43	187	0	455
	1:00 PM	0	0	35	0	0	0	0	197	7	41	217	0	497
	1:15 PM	0	0	39	0	0	0	0	209	6	36	186	0	476
	1:30 PM	0	0	30	0	0	0	0	187	9	43	196	0	465
	1:45 PM	0	0	36	0	0	0	0	181	9	38	179	0	443
	VOLUMES	0	0	369	0	0	0	0	2,269	94	525	2,276	0	5,533
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	96%	4%	19%	81%	0%	
	APP/DEPART	369	/	0	0	/	572	2,363	/	2,685	2,801	/	2,276	0
	BEGIN PEAK HR		12:15 PM											
	VOLUMES	0	0	125	0	0	0	0	777	34	181	781	0	1,898
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	96%	4%	19%	81%	0%	
	PEAK HR FACTOR		0.781			0.000			0.909			0.929		0.955
	APP/DEPART	125	/	0	0	/	203	811	/	914	962	/	781	0



INTERSECTION TURNING MOVEMENT COUNTS

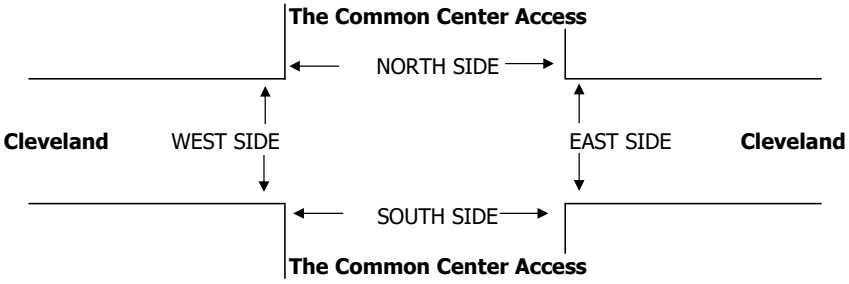
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Thu, May 13, 21	NORTH & SOUTH:	The Common Center Access	LOCATION #:	1
	EAST & WEST:	Cleveland	CONTROL:	STOP N

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND The Common Center Access			SOUTHBOUND The Common Center Access			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR 1	SL X	ST X	SR X	EL X	ET 3	ER 0	WL 1	WT 3	WR X	TOTAL
PM	4:00 PM	0	0	27	0	0	0	0	168	5	46	160	0	406
	4:15 PM	0	0	34	0	0	0	0	162	2	30	153	0	381
	4:30 PM	0	0	20	0	0	0	0	208	7	43	184	0	462
	4:45 PM	0	0	26	0	0	0	0	169	8	39	188	0	430
	5:00 PM	0	0	26	0	0	0	0	183	8	30	181	0	428
	5:15 PM	0	0	22	0	0	0	0	184	11	45	183	0	445
	5:30 PM	0	0	23	0	0	0	0	167	3	32	171	0	396
	5:45 PM	0	0	27	0	0	0	0	178	8	35	151	0	399
	6:00 PM	0	0	25	0	0	0	0	177	2	42	170	0	416
	6:15 PM	0	0	24	0	0	0	0	168	5	28	176	0	401
	6:30 PM	0	0	24	0	0	0	0	157	6	48	132	0	367
	6:45 PM	0	0	27	0	0	0	0	148	9	26	128	0	338
	VOLUMES	0	0	305	0	0	0	0	2,069	74	444	1,977	0	4,869
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	97%	3%	18%	82%	0%	
	APP/DEPART	305	/	0	0	/	463	2,143	/	2,429	2,421	/	1,977	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	94	0	0	0	0	744	34	157	736	0	1,765
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	96%	4%	18%	82%	0%	
	PEAK HR FACTOR		0.904			0.000			0.905			0.979		0.955
	APP/DEPART	94	/	0	0	/	168	778	/	861	893	/	736	0



INTERSECTION TURNING MOVEMENT COUNTS

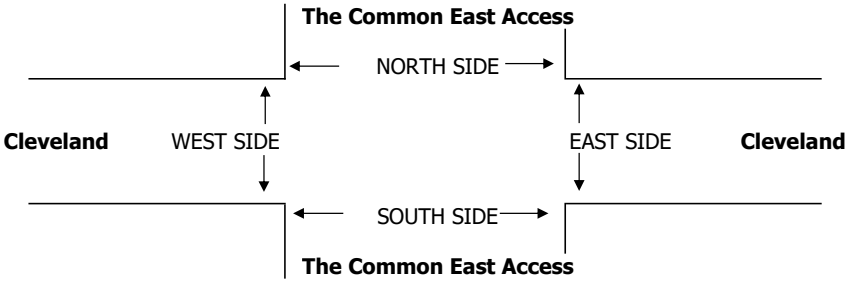
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	The Common East Access	LOCATION #:	2
	EAST & WEST:	Cleveland	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND The Common East Access			SOUTHBOUND The Common East Access			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR 1	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 2	WR 0	TOTAL
MD	11:00 AM	0	0	11	8	2	14	11	207	10	2	227	8	500
	11:15 AM	0	0	14	8	0	3	2	189	3	1	246	1	467
	11:30 AM	0	0	16	2	0	9	6	211	3	3	200	5	455
	11:45 AM	0	0	11	5	0	10	4	216	6	5	220	4	481
	12:00 PM	0	0	19	3	0	5	7	205	0	3	240	5	487
	12:15 PM	0	0	14	7	0	5	3	211	3	3	252	6	504
	12:30 PM	0	0	21	5	1	2	8	232	2	10	212	4	497
	12:45 PM	0	0	14	2	0	5	2	212	7	7	208	2	459
	1:00 PM	0	0	18	3	0	4	1	229	3	1	263	6	528
	1:15 PM	0	0	7	5	0	11	4	243	3	7	224	5	509
	1:30 PM	0	0	19	4	0	3	3	215	6	3	232	5	490
	1:45 PM	0	0	14	6	1	5	5	214	0	3	212	4	464
	VOLUMES	0	0	178	58	4	76	56	2,584	46	48	2,736	55	5,841
	APPROACH %	0%	0%	100%	42%	3%	55%	2%	96%	2%	2%	96%	2%	
	APP/DEPART	178	/	109	138	/	91	2,686	/	2,827	2,839	/	2,814	0
	BEGIN PEAK HR		12:30 PM											
	VOLUMES	0	0	60	15	1	22	15	916	15	25	907	17	1,993
	APPROACH %	0%	0%	100%	39%	3%	58%	2%	97%	2%	3%	96%	2%	
	PEAK HR FACTOR		0.714			0.594			0.946			0.879		0.944
	APP/DEPART	60	/	30	38	/	36	946	/	996	949	/	931	0



INTERSECTION TURNING MOVEMENT COUNTS

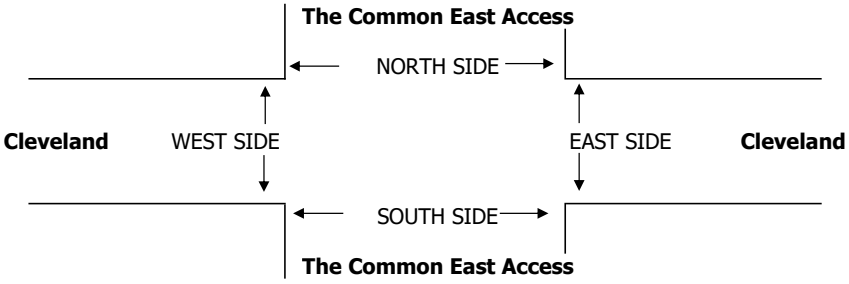
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Thu, May 13, 21	NORTH & SOUTH:	The Common East Access	LOCATION #:	2
	EAST & WEST:	Cleveland	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND The Common East Access			SOUTHBOUND The Common East Access			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR 1	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 2	WR 0	TOTAL
PM	4:00 PM	0	0	14	2	0	1	0	198	2	2	208	0	427
	4:15 PM	0	0	19	2	0	4	2	195	6	3	181	3	415
	4:30 PM	0	0	15	4	0	5	4	226	2	3	216	6	481
	4:45 PM	0	0	13	1	0	5	5	199	3	3	225	7	461
	5:00 PM	0	0	11	2	0	3	2	217	0	0	199	5	439
	5:15 PM	0	0	10	1	0	5	7	207	3	2	218	6	459
	5:30 PM	0	0	18	5	0	4	5	179	7	2	203	5	428
	5:45 PM	0	0	37	0	0	7	7	193	3	1	175	4	427
	6:00 PM	0	0	11	0	0	4	5	213	2	0	208	2	445
	6:15 PM	0	0	9	3	0	2	6	183	1	3	206	2	415
	6:30 PM	0	0	9	4	0	2	6	180	2	3	172	1	379
	6:45 PM	0	0	14	0	0	3	0	172	3	5	150	3	350
	VOLUMES	0	0	180	24	0	45	49	2,362	34	27	2,361	44	5,126
	APPROACH %	0%	0%	100%	35%	0%	65%	2%	97%	1%	1%	97%	2%	
	APP/DEPART	180	/	92	69	/	56	2,445	/	2,571	2,432	/	2,407	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	49	8	0	18	18	849	8	8	858	24	1,840
	APPROACH %	0%	0%	100%	31%	0%	69%	2%	97%	1%	1%	96%	3%	
	PEAK HR FACTOR		0.817			0.722			0.943			0.947		0.956
	APP/DEPART	49	/	42	26	/	13	875	/	909	890	/	876	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

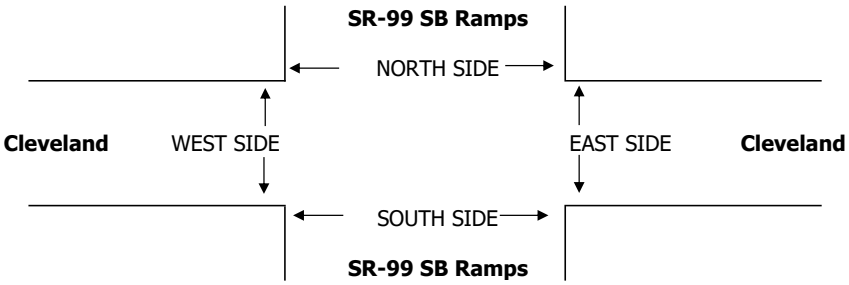
DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	SR-99 SB Ramps	LOCATION #:	3
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

ST Illegal

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-99 SB Ramps			SOUTHBOUND SR-99 SB Ramps			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL X	ET 2	ER 1	WL 1	WT 2	WR X	TOTAL
MD	11:00 AM	0	0	0	19	1	24	0	145	65	34	214	0	502
	11:15 AM	0	0	0	44	0	22	0	163	62	33	225	0	549
	11:30 AM	0	0	0	26	2	17	0	158	58	51	195	0	507
	11:45 AM	0	0	0	45	0	15	0	183	62	36	215	0	556
	12:00 PM	0	0	0	41	0	22	0	152	64	34	216	0	529
	12:15 PM	0	0	0	41	0	23	0	164	62	38	239	0	567
	12:30 PM	0	0	0	33	0	23	0	180	70	39	194	0	539
	12:45 PM	0	0	0	35	2	16	0	166	73	49	217	0	558
	1:00 PM	0	0	0	23	0	17	0	184	69	41	248	0	582
	1:15 PM	0	0	0	37	0	19	0	196	60	42	200	0	554
	1:30 PM	0	0	0	33	0	18	0	168	70	34	235	0	558
	1:45 PM	0	0	0	36	1	16	0	177	68	48	209	0	555
	VOLUMES	0	0	0	413	6	232	0	2,036	783	479	2,607	0	6,556
	APPROACH %	0%	0%	0%	63%	1%	36%	0%	72%	28%	16%	84%	0%	
	APP/DEPART	0	/	0	651	/	1,268	2,819	/	2,449	3,086	/	2,839	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	128	2	70	0	714	272	166	900	0	2,252
	APPROACH %	0%	0%	0%	64%	1%	35%	0%	72%	28%	16%	84%	0%	
	PEAK HR FACTOR		0.000			0.893			0.963			0.922		0.967
	APP/DEPART	0	/	0	200	/	440	986	/	842	1,066	/	970	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

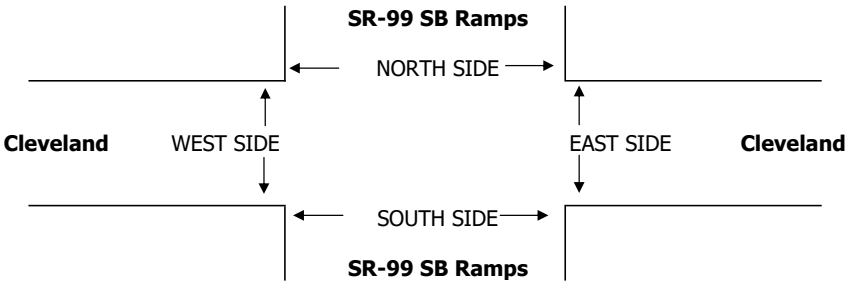
DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896
	NORTH & SOUTH:	SR-99 SB Ramps	LOCATION #:	3
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

ST Illegal

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-99 SB Ramps			SOUTHBOUND SR-99 SB Ramps			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL X	ET 2	ER 1	WL 1	WT 2	WR X	TOTAL
PM	4:00 PM	0	0	0	13	1	12	0	179	37	18	202	0	462
	4:15 PM	0	0	0	11	0	10	0	160	38	23	177	0	419
	4:30 PM	0	0	0	12	0	7	0	211	49	18	222	0	519
	4:45 PM	0	0	0	11	0	8	0	173	37	31	221	0	481
	5:00 PM	0	0	0	12	1	9	0	192	41	32	188	0	475
	5:15 PM	0	0	0	30	0	7	0	165	45	23	218	0	488
	5:30 PM	0	0	0	11	2	11	0	163	48	28	195	0	458
	5:45 PM	0	0	0	43	0	13	0	165	62	19	181	0	483
	6:00 PM	0	0	0	13	0	11	0	164	57	36	198	0	479
	6:15 PM	0	0	0	15	0	11	0	141	49	30	203	0	449
	6:30 PM	0	0	0	26	1	11	0	153	52	39	160	0	442
	6:45 PM	0	0	0	13	0	7	0	149	37	30	164	0	400
	VOLUMES	0	0	0	210	5	117	0	2,015	552	327	2,329	0	5,555
	APPROACH %	0%	0%	0%	63%	2%	35%	0%	78%	22%	12%	88%	0%	
	APP/DEPART	0	/	0	332	/	884	2,567	/	2,225	2,656	/	2,446	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	65	1	31	0	741	172	104	849	0	1,963
	APPROACH %	0%	0%	0%	67%	1%	32%	0%	81%	19%	11%	89%	0%	
	PEAK HR FACTOR		0.000			0.655			0.878			0.945		0.946
	APP/DEPART	0	/	0	97	/	277	913	/	806	953	/	880	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

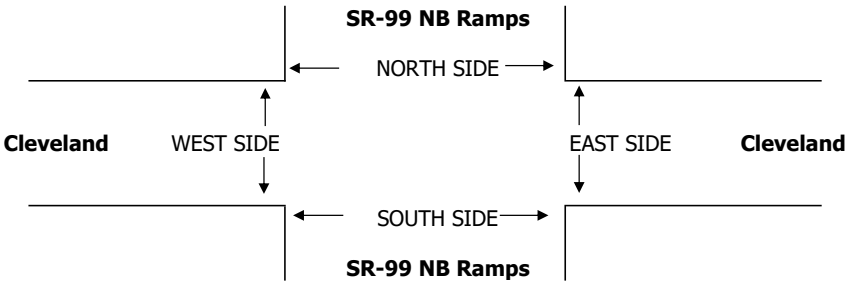
DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	SR-99 NB Ramps	LOCATION #:	4
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

N Leg closed

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-99 NB Ramps			SOUTHBOUND SR-99 NB Ramps			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL 2	NT X	NR 1	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
MD	11:00 AM	23	0	18	0	0	0	0	164	0	0	225	0	430
	11:15 AM	31	0	19	0	0	0	0	205	0	0	227	0	482
	11:30 AM	25	0	21	0	0	0	0	184	0	0	221	0	451
	11:45 AM	31	0	17	0	0	0	0	228	0	0	220	0	496
	12:00 PM	28	0	22	0	0	0	0	195	0	0	222	0	467
	12:15 PM	33	0	16	0	0	0	0	205	0	0	244	0	498
	12:30 PM	22	0	22	0	0	0	0	213	0	0	215	0	472
	12:45 PM	25	0	24	0	0	0	0	201	0	0	241	0	491
	1:00 PM	32	0	21	0	0	0	0	207	0	0	257	0	517
	1:15 PM	34	0	20	0	0	0	0	233	0	0	208	0	495
	1:30 PM	35	0	19	0	0	0	0	201	0	0	234	0	489
	1:45 PM	32	0	23	0	0	0	0	211	0	0	225	0	491
	VOLUMES	351	0	242	0	0	0	0	2,447	0	0	2,739	0	5,779
	APPROACH %	59%	0%	41%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	593	/	0	0	/	0	2,447	/	2,689	2,739	/	3,090	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	126	0	84	0	0	0	0	842	0	0	940	0	1,992
	APPROACH %	60%	0%	40%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.972			0.000			0.903			0.914		0.963
	APP/DEPART	210	/	0	0	/	0	842	/	926	940	/	1,066	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

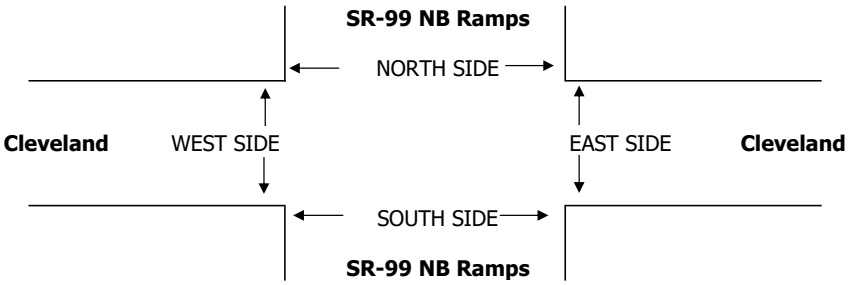
DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896	
	NORTH & SOUTH:	SR-99 NB Ramps	LOCATION #:	4	
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL	

NOTES:

N Leg & S Leg closed

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-99 NB Ramps			SOUTHBOUND SR-99 NB Ramps			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL 2	NT X	NR 1	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
PM	4:00 PM	0	0	0	0	0	0	0	192	0	0	220	0	412
	4:15 PM	0	0	0	0	0	0	0	171	0	0	200	0	371
	4:30 PM	0	0	0	0	0	0	0	223	0	0	240	0	463
	4:45 PM	0	0	0	0	0	0	0	184	0	0	252	0	436
	5:00 PM	0	0	0	0	0	0	0	201	0	0	220	0	421
	5:15 PM	0	0	0	0	0	0	0	195	0	0	241	0	436
	5:30 PM	0	0	0	0	0	0	0	174	0	0	223	0	397
	5:45 PM	0	0	0	0	0	0	0	199	0	0	200	0	399
	6:00 PM	0	0	0	0	0	0	0	177	0	0	234	0	411
	6:15 PM	0	0	0	0	0	0	0	165	0	0	233	0	398
	6:30 PM	0	0	0	0	0	0	0	179	0	0	201	0	380
	6:45 PM	0	0	0	0	0	0	0	162	0	0	194	0	356
	VOLUMES	0	0	0	0	0	0	0	2,222	0	0	2,658	0	4,880
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	2,222	/	2,222	2,658	/	2,658	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	803	0	0	953	0	1,756
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.900			0.945		0.948
	APP/DEPART	0	/	0	0	/	0	803	/	803	953	/	953	0



INTERSECTION TURNING MOVEMENT COUNTS

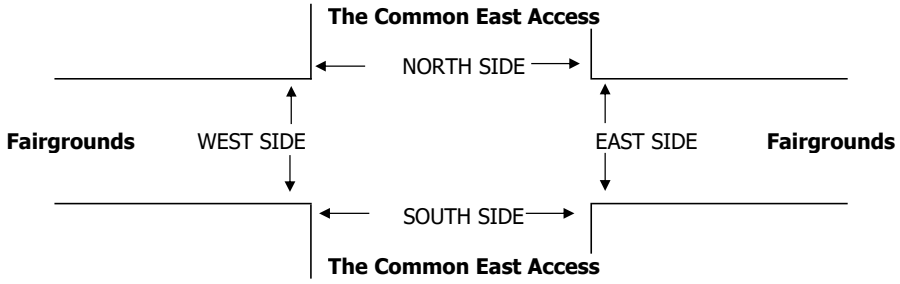
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	The Common East Access	LOCATION #:	5
	EAST & WEST:	Fairgrounds	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND The Common East Access			SOUTHBOUND The Common East Access			EASTBOUND Fairgrounds			WESTBOUND Fairgrounds			
LANES:	NL 0	NT 1	NR 0	SL 0.3	ST 0.3	SR 0.3	EL 1	ET 0.5	ER 0.5	WL 1	WT 0.5	WR 0.5	TOTAL
MD 11:00 AM	4	1	0	0	0	13	13	3	2	0	2	3	41
11:15 AM	2	1	0	1	1	5	9	2	2	0	0	0	23
11:30 AM	2	0	0	0	0	2	18	1	3	1	0	1	28
11:45 AM	3	2	0	2	1	7	8	2	1	0	2	0	28
12:00 PM	4	2	0	0	0	3	16	4	4	0	2	5	40
12:15 PM	1	1	0	0	0	12	12	1	1	0	0	0	28
12:30 PM	7	1	0	0	3	5	16	0	6	0	0	1	39
12:45 PM	2	0	0	5	1	4	10	2	3	0	1	1	29
1:00 PM	5	5	0	0	0	4	16	0	2	0	0	0	32
1:15 PM	1	0	0	0	1	7	5	0	5	0	1	1	21
1:30 PM	4	1	0	1	1	8	19	2	2	0	1	0	39
1:45 PM	3	0	0	0	1	8	20	1	4	1	1	1	40
VOLUMES	38	14	0	9	9	78	162	18	35	2	10	13	388
APPROACH %	73%	27%	0%	9%	9%	81%	75%	8%	16%	8%	40%	52%	
APP/DEPART	52	/	191	96	/	46	215	/	21	25	/	130	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	14	4	0	5	4	24	54	7	14	0	3	7	136
APPROACH %	78%	22%	0%	15%	12%	73%	72%	9%	19%	0%	30%	70%	
PEAK HR FACTOR		0.563			0.688			0.781			0.357		0.850
APP/DEPART	18	/	68	33	/	18	75	/	8	10	/	42	0



INTERSECTION TURNING MOVEMENT COUNTS

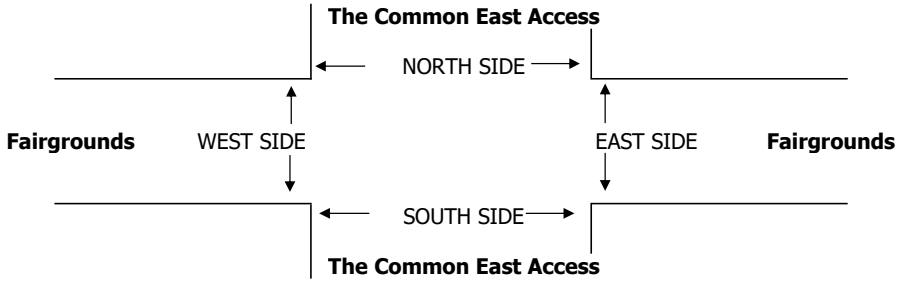
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896	
	NORTH & SOUTH:	The Common East Access	LOCATION #:	5	
	EAST & WEST:	Fairgrounds	CONTROL:	STOP ALL	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND The Common East Access			SOUTHBOUND The Common East Access			EASTBOUND Fairgrounds			WESTBOUND Fairgrounds			
	LANES:	NL 0	NT 1	NR 0	SL 0.3	ST 0.3	SR 0.3	EL 1	ET 0.5	ER 0.5	WL 1	WT 0.5	WR 0.5	TOTAL
PM	4:00 PM	0	0	0	1	0	3	14	0	1	0	3	0	22
	4:15 PM	1	1	0	1	0	8	15	0	1	0	0	2	29
	4:30 PM	1	1	0	3	1	2	18	2	0	0	1	1	30
	4:45 PM	0	0	0	0	0	4	17	0	1	0	0	0	22
	5:00 PM	0	0	0	0	0	1	12	3	0	0	1	1	18
	5:15 PM	1	0	0	0	0	5	17	0	0	0	0	0	23
	5:30 PM	3	20	0	0	0	9	10	0	1	0	0	0	43
	5:45 PM	1	10	0	0	0	6	15	0	0	0	0	1	33
	6:00 PM	0	0	0	0	0	2	14	2	0	0	1	0	19
	6:15 PM	0	0	0	0	0	4	10	0	0	0	0	0	14
	6:30 PM	0	0	0	0	0	4	9	0	0	0	0	0	13
	6:45 PM	0	0	0	0	0	6	8	1	0	0	1	0	16
	VOLUMES	7	32	0	5	1	54	159	8	4	0	7	5	282
	APPROACH %	18%	82%	0%	8%	2%	90%	93%	5%	2%	0%	58%	42%	
	APP/DEPART	39	/	195	60	/	5	171	/	9	12	/	73	0
	BEGIN PEAK HR		5:15 PM											
	VOLUMES	5	30	0	0	0	22	56	2	1	0	1	1	118
	APPROACH %	14%	86%	0%	0%	0%	100%	95%	3%	2%	0%	50%	50%	
	PEAK HR FACTOR		0.380			0.611			0.868			0.500		0.686
	APP/DEPART	35	/	85	22	/	1	59	/	2	2	/	30	0



INTERSECTION TURNING MOVEMENT COUNTS

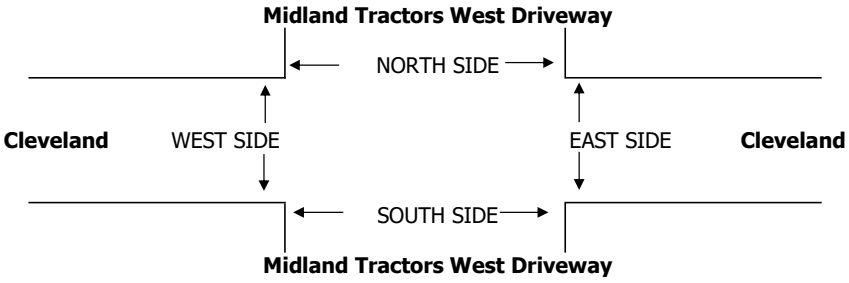
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	Midland Tractors West Driveway	LOCATION #:	6
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors West Driveway			SOUTHBOUND Midland Tractors West Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 0	EL X	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	2	0	0	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	2	/	0	0	/	0	0	/	2	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	0	0	0	0	2	0	0	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	2	/	0	0	/	0	0	/	2	0



INTERSECTION TURNING MOVEMENT COUNTS

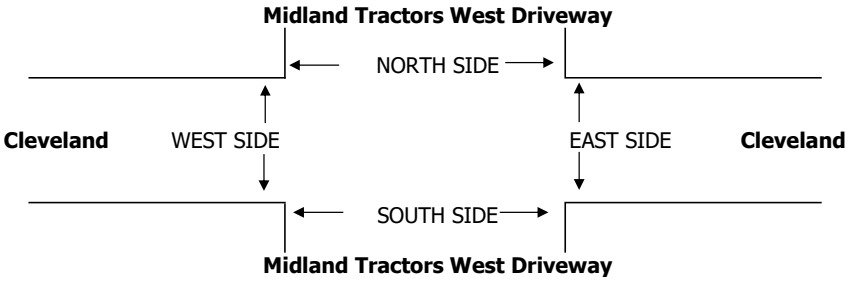
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896
	NORTH & SOUTH:	Midland Tractors West Driveway	LOCATION #:	6
	EAST & WEST:	Cleveland	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors West Driveway			SOUTHBOUND Midland Tractors West Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 0	EL X	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
PM	4:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	4
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	6	0	0	0	0	0	0	6
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	6	/	0	0	/	0	0	/	6	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	0	0	4	0	0	0	0	0	0	4
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	4	/	0	0	/	0	0	/	4	0



INTERSECTION TURNING MOVEMENT COUNTS

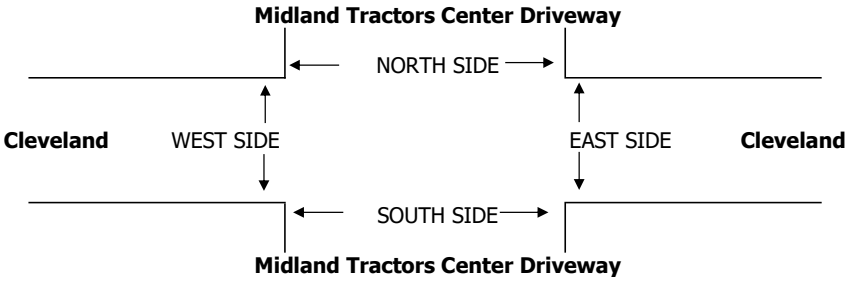
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	Midland Tractors Center Driveway	LOCATION #:	7
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors Center Driveway			SOUTHBOUND Midland Tractors Center Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL X	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	1	0	0	0	0	0	1	2
	11:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
	11:30 AM	0	0	0	1	0	1	0	0	0	0	0	0	2
	11:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	2
	12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	12:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	12:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	4	0	8	0	0	0	0	0	1	14
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	1	12	/	0	1	/	4	1	/	9	0
	BEGIN PEAK HR		11:00 AM											
	VOLUMES	0	0	0	3	0	3	0	0	0	0	0	1	8
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.750			0.250			0.250		1.000
	APP/DEPART	0	/	1	6	/	0	1	/	3	1	/	4	0



INTERSECTION TURNING MOVEMENT COUNTS

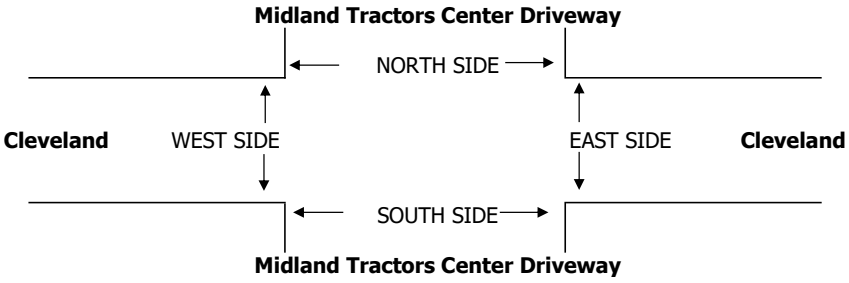
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896
	NORTH & SOUTH:	Midland Tractors Center Driveway	LOCATION #:	7
	EAST & WEST:	Cleveland	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors Center Driveway			SOUTHBOUND Midland Tractors Center Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL X	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
PM	4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
	4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
	4:30 PM	0	0	0	3	0	0	0	0	0	0	0	0	3
	4:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
	5:00 PM	0	0	0	1	0	2	0	0	0	0	0	0	3
	5:15 PM	0	0	0	2	0	1	0	0	0	0	0	0	3
	5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	6:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	12	0	7	0	0	0	0	0	0	21
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	19	/	0	2	/	12	0	/	9	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	6	0	5	0	0	0	0	0	0	12
	APPROACH %	0%	0%	0%	55%	0%	45%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.917			0.250			0.000		0.750
	APP/DEPART	0	/	0	11	/	0	1	/	6	0	/	6	0



INTERSECTION TURNING MOVEMENT COUNTS

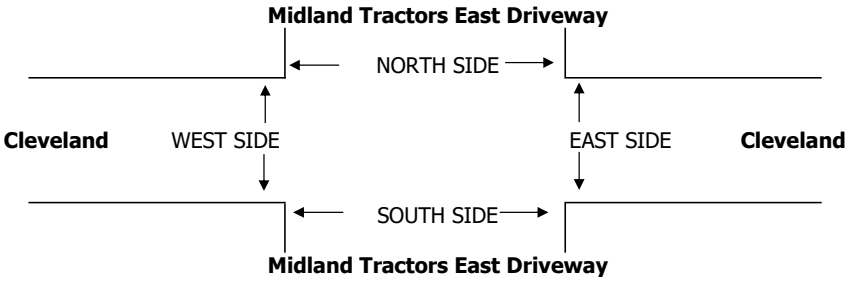
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	Midland Tractors East Driveway	LOCATION #:	8
	EAST & WEST:	Cleveland	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors East Driveway			SOUTHBOUND Midland Tractors East Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
	11:30 AM	0	0	0	1	0	0	0	0	0	0	0	1	2
	11:45 AM	0	0	0	0	0	0	1	0	0	0	0	2	3
	12:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	4
	12:15 PM	0	0	0	1	0	0	0	0	0	0	0	1	2
	12:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	2
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
	1:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	2	0	0	0	0	1	3
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	4	0	2	6	0	0	0	0	8	20
	APPROACH %	0%	0%	0%	67%	0%	33%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	14	6	/	0	6	/	4	8	/	2	0
	BEGIN PEAK HR		11:45 AM											
	VOLUMES	0	0	0	3	0	2	2	0	0	0	0	4	11
	APPROACH %	0%	0%	0%	60%	0%	40%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.313			0.500			0.500		0.688
	APP/DEPART	0	/	6	5	/	0	2	/	3	4	/	2	0



INTERSECTION TURNING MOVEMENT COUNTS

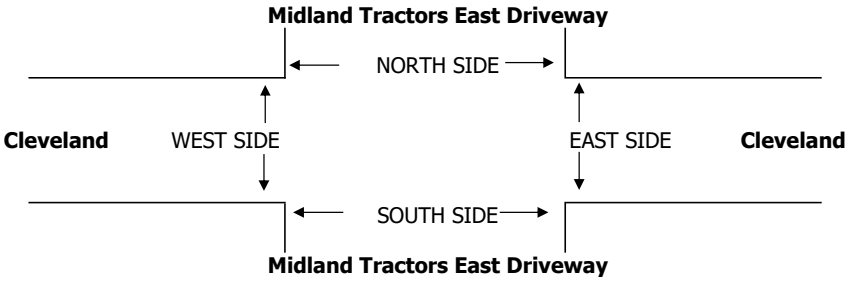
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896	
	NORTH & SOUTH:	Midland Tractors East Driveway	LOCATION #:	8	
	EAST & WEST:	Cleveland	CONTROL:	STOP S	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Midland Tractors East Driveway			SOUTHBOUND Midland Tractors East Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 3	WR 0	TOTAL
PM	4:00 PM	0	0	0	3	0	2	1	0	0	0	0	1	7
	4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	2
	4:30 PM	0	0	0	3	0	1	1	0	0	0	0	0	5
	4:45 PM	0	0	0	0	0	1	1	0	0	0	0	1	3
	5:00 PM	0	0	0	9	0	3	0	0	0	0	0	0	12
	5:15 PM	0	0	0	0	0	2	0	0	0	0	0	1	3
	5:30 PM	0	0	0	1	0	2	0	0	0	0	0	0	3
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	16	0	11	4	0	0	0	0	7	38
	APPROACH %	0%	0%	0%	59%	0%	41%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	11	27	/	0	4	/	16	7	/	11	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	12	0	7	2	0	0	0	0	2	23
	APPROACH %	0%	0%	0%	63%	0%	37%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.396			0.500			0.500		0.479
	APP/DEPART	0	/	4	19	/	0	2	/	12	2	/	7	0



INTERSECTION TURNING MOVEMENT COUNTS

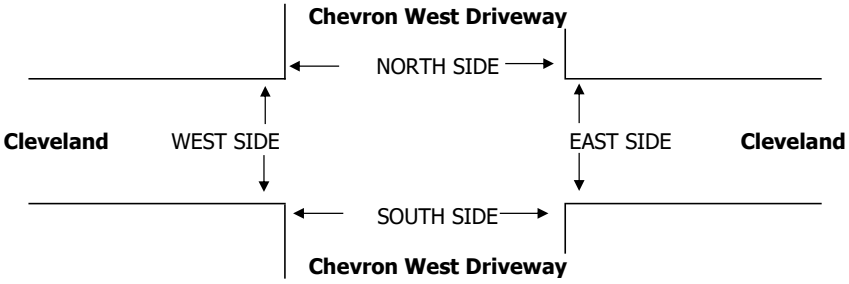
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	Chevron West Driveway	LOCATION #:	9
	EAST & WEST:	Cleveland	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Chevron West Driveway			SOUTHBOUND Chevron West Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 2	WR 0	TOTAL
MD	11:00 AM	0	0	0	5	0	9	3	0	0	0	0	0	17
	11:15 AM	0	0	0	4	0	3	1	0	0	0	0	0	8
	11:30 AM	0	0	0	5	0	3	2	0	0	0	0	0	10
	11:45 AM	0	0	0	9	0	9	3	0	0	0	0	0	21
	12:00 PM	0	0	0	6	0	6	2	0	0	0	0	0	14
	12:15 PM	0	0	0	3	0	11	6	0	0	0	0	0	20
	12:30 PM	0	0	0	5	0	6	4	0	0	0	0	0	15
	12:45 PM	0	0	0	4	0	8	0	0	0	0	0	0	12
	1:00 PM	0	0	0	2	0	9	3	0	0	0	0	1	15
	1:15 PM	0	0	0	3	0	6	2	0	0	0	0	0	11
	1:30 PM	0	0	0	5	0	2	1	0	0	0	0	0	8
	1:45 PM	0	0	0	10	0	8	2	0	0	0	0	1	21
	VOLUMES	0	0	0	61	0	80	29	0	0	0	0	2	172
	APPROACH %	0%	0%	0%	43%	0%	57%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	31	141	/	0	29	/	61	2	/	80	0
	BEGIN PEAK HR		11:45 AM											
	VOLUMES	0	0	0	23	0	32	15	0	0	0	0	0	70
	APPROACH %	0%	0%	0%	42%	0%	58%	100%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.764			0.625			0.000		0.833
	APP/DEPART	0	/	15	55	/	0	15	/	23	0	/	32	0



INTERSECTION TURNING MOVEMENT COUNTS

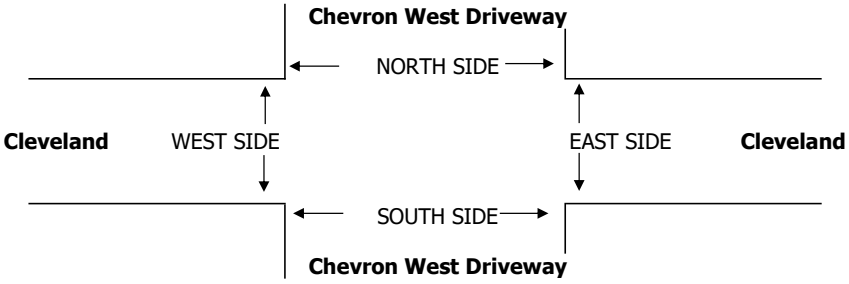
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Thu, May 13, 21	NORTH & SOUTH:	Chevron West Driveway	LOCATION #:	9
	EAST & WEST:	Cleveland	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Chevron West Driveway			SOUTHBOUND Chevron West Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 2	WR 0	TOTAL
PM	4:00 PM	0	0	0	3	0	5	1	0	0	0	0	0	9
	4:15 PM	0	0	0	5	0	6	2	0	0	0	0	0	13
	4:30 PM	0	0	0	4	0	7	6	0	0	0	0	0	17
	4:45 PM	0	0	0	4	0	12	3	0	0	0	0	0	19
	5:00 PM	0	0	0	6	0	7	2	0	0	0	0	0	15
	5:15 PM	0	0	0	2	0	12	2	0	0	0	0	0	16
	5:30 PM	0	0	0	2	0	9	1	0	0	0	0	0	12
	5:45 PM	0	0	0	5	0	9	1	0	0	0	0	2	17
	6:00 PM	0	0	0	4	0	9	3	0	0	0	0	0	16
	6:15 PM	0	0	0	7	0	10	4	0	0	0	0	1	22
	6:30 PM	0	0	0	6	0	5	0	0	0	0	0	0	11
	6:45 PM	0	0	0	3	0	3	2	0	0	0	0	0	8
	VOLUMES	0	0	0	51	0	94	27	0	0	0	0	3	175
	APPROACH %	0%	0%	0%	35%	0%	65%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	30	145	/	0	27	/	51	3	/	94	0
	BEGIN PEAK HR		5:30 PM											
	VOLUMES	0	0	0	18	0	37	9	0	0	0	0	3	67
	APPROACH %	0%	0%	0%	33%	0%	67%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.809			0.375			0.375		0.761
	APP/DEPART	0	/	12	55	/	0	9	/	18	3	/	37	0



INTERSECTION TURNING MOVEMENT COUNTS

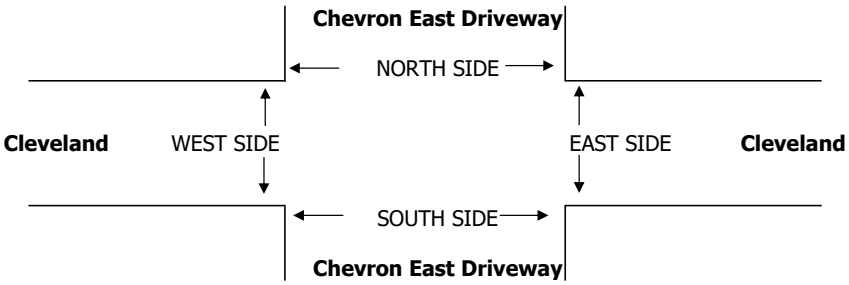
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Madera	PROJECT #:	SC2896
Sat, May 15, 21	NORTH & SOUTH:	Chevron East Driveway	LOCATION #:	10
	EAST & WEST:	Cleveland	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Chevron East Driveway			SOUTHBOUND Chevron East Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 2	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	4	0	0	0	0	4	8
	11:15 AM	0	0	0	1	0	0	1	0	0	0	0	5	7
	11:30 AM	0	0	0	1	0	1	5	0	0	0	0	7	14
	11:45 AM	0	0	0	0	0	0	3	0	0	0	0	12	15
	12:00 PM	0	0	0	0	0	0	4	0	0	0	0	7	11
	12:15 PM	0	0	0	0	0	0	1	0	0	0	0	7	8
	12:30 PM	0	0	0	0	0	1	4	0	0	0	0	6	11
	12:45 PM	0	0	0	0	0	1	2	0	0	0	0	10	13
	1:00 PM	0	0	0	0	0	0	1	0	0	0	0	6	7
	1:15 PM	0	0	0	0	0	1	4	0	0	0	0	4	9
	1:30 PM	0	0	0	0	0	0	1	0	0	0	0	10	11
	1:45 PM	0	0	0	0	0	0	4	0	0	0	0	10	14
	VOLUMES	0	0	0	2	0	4	34	0	0	0	0	88	128
	APPROACH %	0%	0%	0%	33%	0%	67%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	122	6	/	0	34	/	2	88	/	4	0
	BEGIN PEAK HR		11:30 AM											
	VOLUMES	0	0	0	1	0	1	13	0	0	0	0	33	48
	APPROACH %	0%	0%	0%	50%	0%	50%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.250			0.650			0.688		0.800
	APP/DEPART	0	/	46	2	/	0	13	/	1	33	/	1	0



INTERSECTION TURNING MOVEMENT COUNTS

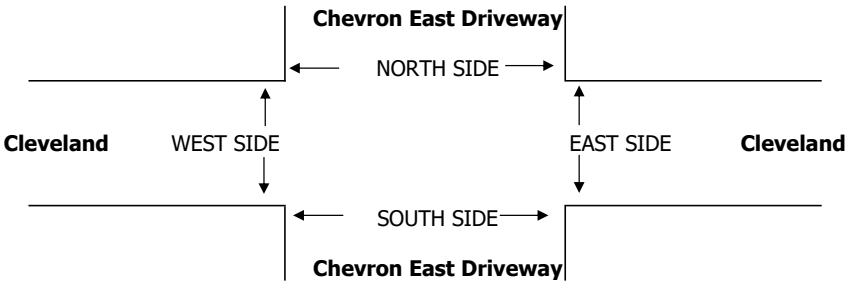
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 13, 21	LOCATION:	Madera	PROJECT #:	SC2896
	NORTH & SOUTH:	Chevron East Driveway	LOCATION #:	10
	EAST & WEST:	Cleveland	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Chevron East Driveway			SOUTHBOUND Chevron East Driveway			EASTBOUND Cleveland			WESTBOUND Cleveland			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 3	ER X	WL X	WT 2	WR 0	TOTAL
PM	4:00 PM	0	0	0	0	0	0	1	0	0	0	0	9	10
	4:15 PM	0	0	0	1	0	0	1	0	0	0	0	9	11
	4:30 PM	0	0	0	3	0	1	1	0	0	0	0	7	12
	4:45 PM	0	0	0	0	0	0	1	0	0	0	0	8	9
	5:00 PM	0	0	0	0	0	1	5	0	0	0	0	8	14
	5:15 PM	0	0	0	0	0	1	4	0	0	0	0	6	11
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	8	8
	5:45 PM	0	0	0	0	0	0	4	0	0	0	0	14	18
	6:00 PM	0	0	0	0	0	0	2	0	0	0	0	5	7
	6:15 PM	0	0	0	0	0	1	3	0	0	0	0	12	16
	6:30 PM	0	0	0	0	0	1	3	0	0	0	0	3	7
	6:45 PM	0	0	0	0	0	0	1	0	0	0	0	10	11
	VOLUMES	0	0	0	4	0	5	26	0	0	0	0	99	134
	APPROACH %	0%	0%	0%	44%	0%	56%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	125	9	/	0	26	/	4	99	/	5	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	0	0	2	13	0	0	0	0	36	51
	APPROACH %	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.500			0.650			0.643		0.708
	APP/DEPART	0	/	49	2	/	0	13	/	0	36	/	2	0

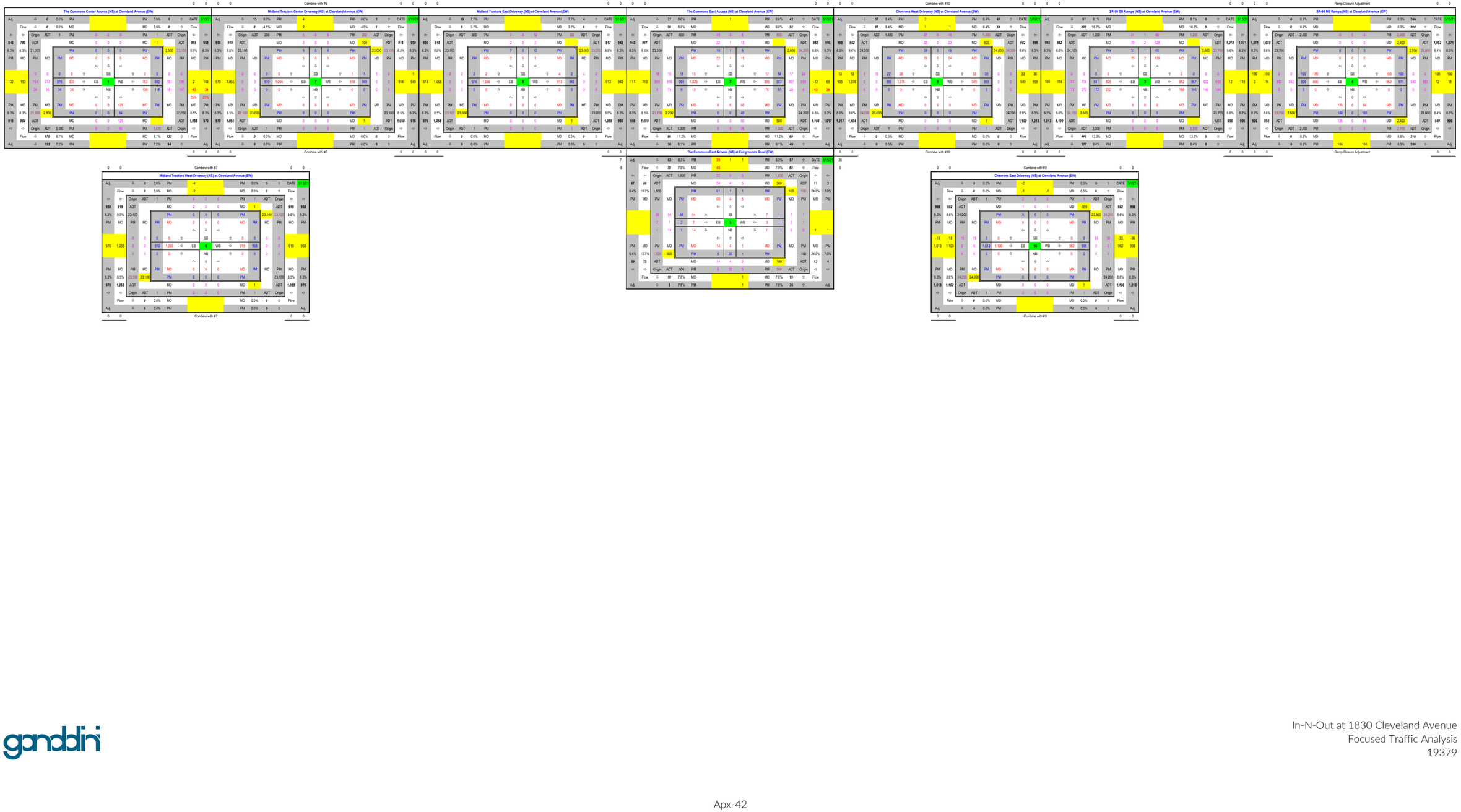


APPENDIX D

TRAFFIC FLOW ADJUSTMENT SPREADSHEETS

Redistributed 2021 Background Intersection Traffic Volumes
With Proposed Westbound Left-Turn Configuration at the Commons East Access on Cleveland Avenue

***25% Westbound Left-Turn Traffic Redistributed from the Commons Center Access (Intersection #1) to the Commons East Access (Intersection #2)**



APPENDIX E

EXISTING VOLUME ADJUSTMENT FACTOR CALCULATIONS

Appendix E-1
Caltrans PEMS SR-99 Mainline Count Comparisons

Freeway Segment	Travel Direction	Peak Hour	2/4/2020 Tue	2/5/2020 Wed	2/6/2020 Thu	February 2020 Average		
Mainline VDS 601303 - N/O MADERA A	SR-99 N	PM	2936 5:50:00 PM	3003 5:35:00 PM	2983 5:30:00 PM	2974	6,149	5,718
Mainline VDS 602303 - N/O MADERA A	SR-99 S		3200 5:10:00 PM	3112 5:05:00 PM	3212 5:15:00 PM	3175		
Mainline VDS 601304 - 2nd ST SR 99 NE	SR-99 N	PM	2408 5:10:00 PM	2523 5:00:00 PM	2454 4:55:00 PM	2462	5,286	
Mainline VDS 602304 - 2nd ST SR 99 SE	SR-99 S		2854 4:55:00 PM	2762 4:55:00 PM	2855 5:15:00 PM	2824		

Freeway Segment	Travel Direction	Peak Hour	5/4/2021 Tue	5/5/2021 Wed	5/6/2021 Thu	May 2021 Average		
Mainline VDS 601303 - N/O MADERA A	SR-99 N	PM	2558 5:45:00 PM	2707 5:20:00 PM	2805 5:20:00 PM	2690	5,156	4,764
Mainline VDS 602303 - N/O MADERA A	SR-99 S		2510 4:55:00 PM	2486 5:05:00 PM	2401 5:25:00 PM	2466		
Mainline VDS 601304 - 2nd ST SR 99 NE	SR-99 N	PM	2086 5:10:00 PM	2181 5:15:00 PM	2193 5:30:00 PM	2153	4,371	
Mainline VDS 602304 - 2nd ST SR 99 SE	SR-99 S		2297 4:55:00 PM	2229 4:55:00 PM	2127 5:20:00 PM	2218		

Roadway Segment		Peak Hour	May 2021 to Feb 2020 Seasonal Factor		
SR-99 Highway	Mainline VDS 601303 - N/O MADERA AV	PM	1.106	1.193	1.201
	Mainline VDS 602303 - N/O MADERA AV		1.288		
	Mainline VDS 601304 - 2nd ST SR 99 NB		1.144	1.209	
	Mainline VDS 602304 - 2nd ST SR 99 SB		1.273		

Appendix E-2
Caltrans PEMS SR-99 Mainline Count Comparisons

Freeway Segment	Travel Direction	Peak Hour	1/18/2020 Sat	1/25/2020 Sat	2/1/2020 Sat	February 2020 Average		
Mainline VDS 601303 - N/O MADERA A	SR-99 N	PM	2570 5:10:00 PM	2506 4:55:00 PM	2572 5:20:00 PM	2549	5,319	4,976
Mainline VDS 602303 - N/O MADERA A	SR-99 S		2621 4:55:00 PM	2808 5:00:00 PM	2881 5:05:00 PM	2770		
Mainline VDS 601304 - 2nd ST SR 99 NB	SR-99 N	PM	2222 5:00:00 PM	2217 4:55:00 PM	2321 5:20:00 PM	2253	4,633	
Mainline VDS 602304 - 2nd ST SR 99 SB	SR-99 S		2316 4:55:00 PM	2461 4:55:00 PM	2363 5:00:00 PM	2380		

Freeway Segment	Travel Direction	Peak Hour	4/17/2021 Sat	4/24/2021 Sat	5/1/2021 Sat	May 2021 Average		
Mainline VDS 601303 - N/O MADERA A	SR-99 N	PM	2412 5:10:00 PM	2361 5:15:00 PM	2494 5:15:00 PM	2422	4,778	4,494
Mainline VDS 602303 - N/O MADERA A	SR-99 S		2304 4:55:00 PM	2499 4:55:00 PM	2266 5:30:00 PM	2356		
Mainline VDS 601304 - 2nd ST SR 99 NB	SR-99 N	PM	2081 5:00:00 PM	1997 5:30:00 PM	2165 5:05:00 PM	2081	4,210	
Mainline VDS 602304 - 2nd ST SR 99 SB	SR-99 S		2093 4:55:00 PM	2258 5:00:00 PM	2035 5:30:00 PM	2129		

Roadway Segment		Peak Hour	May 2021 to Feb 2020 Seasonal Factor		
SR-99 Highway	Mainline VDS 601303 - N/O MADERA AV	MD	1.052	1.113	1.107
	Mainline VDS 602303 - N/O MADERA AV		1.176		
	Mainline VDS 601304 - 2nd ST SR 99 NB		1.083	1.100	
	Mainline VDS 602304 - 2nd ST SR 99 SB		1.118		

APPENDIX F

INTERSECTION LEVEL OF SERVICE ANALYSIS WORKSHEETS

Intersection Level Of Service Report

Intersection 1: The Commons Center Access (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	94	876	34	118	840
Base Volume Adjustment Factor	1.0000	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	116	1104	43	147	1042
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	30	289	11	38	273
Total Analysis Volume [veh/h]	0	121	1156	45	154	1091
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.32	0.01	0.00	0.49	0.01
d_M, Delay for Movement [s/veh]	0.00	18.83	0.00	0.00	27.19	0.00
Movement LOS		C	A	A	D	A
95th-Percentile Queue Length [veh/ln]	0.00	1.34	0.00	0.00	2.58	0.00
95th-Percentile Queue Length [ft/ln]	0.00	33.61	0.00	0.00	64.43	0.00
d_A, Approach Delay [s/veh]	18.83		0.00		3.36	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.52					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 2: The Commons East Access (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	279.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	49	8	1	18	18	960	8	47	927	24
Base Volume Adjustment Factor	1.0000	1.0000	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	26	0	0	0	0	0	17	24	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	86	10	1	22	21	1191	27	80	1150	30
Peak Hour Factor	1.0000	1.0000	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	3	0	6	5	311	7	21	301	8
Total Analysis Volume [veh/h]	0	0	90	10	1	23	22	1246	28	84	1203	31
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.21	0.46	0.06	0.05	0.04	0.01	0.00	0.16	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	15.90	233.81	279.46	75.49	11.69	0.00	0.00	12.87	0.00	0.00
Movement LOS			C	F	F	F	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.80	2.33	2.33	2.33	0.12	0.00	0.00	0.55	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	20.07	58.26	58.26	58.26	3.06	0.00	0.00	13.66	0.00	0.00
d_A, Approach Delay [s/veh]	15.90			128.05			0.20			0.82		
Approach LOS	C			F			A			A		
d_I, Intersection Delay [s/veh]	2.60											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: SR-99 SB Ramps (NS) at Cleveland Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	65	1	31	0	841	172	104	967	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.1930	1.1930	1.1930	1.0000	1.1930	1.1930	1.1930	1.1930	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	5	0	21	5	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	1	43	0	1064	210	129	1219	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9460	0.9460	0.9460	1.0000	0.9460	0.9460	0.9460	0.9460	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	21	0	11	0	281	55	34	322	0
Total Analysis Volume [veh/h]	0	0	0	86	1	45	0	1125	222	136	1289	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	21	0	0	0	98	0	31	129	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	5	0	0	0	5	0	0	5	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall								No		No	No	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	L	C
C, Cycle Length [s]		150	150	150	150	150
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		17	94	94	27	125
g / C, Green / Cycle		0.11	0.63	0.63	0.18	0.83
(v / s)_i Volume / Saturation Flow Rate		0.05	0.32	0.14	0.08	0.36
s, saturation flow rate [veh/h]		1781	3560	1589	1781	3560
c, Capacity [veh/h]		202	2231	996	321	2967
d1, Uniform Delay [s]		61.96	15.28	12.15	54.60	3.27
k, delay calibration		0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.46	0.82	0.52	4.07	0.47
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.43	0.50	0.22	0.42	0.43
d, Delay for Lane Group [s/veh]		68.41	16.10	12.67	58.67	3.73
Lane Group LOS		E	B	B	E	A
Critical Lane Group		Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]		3.44	10.67	3.41	4.97	4.29
50th-Percentile Queue Length [ft/ln]		86.00	266.84	85.32	124.22	107.34
95th-Percentile Queue Length [veh/ln]		6.19	16.03	6.14	8.62	7.69
95th-Percentile Queue Length [ft/ln]		154.80	400.78	153.58	215.62	192.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	68.41	0.00	0.00	0.00	16.10	12.67	58.67	3.73	0.00
Movement LOS				E				B	B	E	A	
d_A, Approach Delay [s/veh]	0.00			68.41			15.53			8.97		
Approach LOS	A			E			B			A		
d_I, Intersection Delay [s/veh]	13.85											
Intersection LOS	B											
Intersection V/C	0.472											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	64.40	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	1.781	0.000	0.000
Crosswalk LOS	F	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	227	1253	1667
d_b, Bicycle Delay [s]	75.00	58.96	10.45	2.08
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.671	2.735
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: SR-99 NB Ramps (NS) at Cleveland Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	47.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	100	0	100	0	0	0	100	806	0	0	971	100
Base Volume Adjustment Factor	1.1930	1.0000	1.1930	1.0000	1.0000	1.0000	1.1930	1.1930	1.0000	1.0000	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.00	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	0	5	16	0	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	0	124	0	0	0	129	1016	0	0	1218	124
Peak Hour Factor	0.9480	1.0000	0.9480	1.0000	1.0000	1.0000	0.9480	0.9480	1.0000	1.0000	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	0	33	0	0	0	34	268	0	0	321	33
Total Analysis Volume [veh/h]	136	0	131	0	0	0	136	1072	0	0	1285	131
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	0	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	30	0	0	0	0	0	30	30	0	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	0	0	0	0	0	11	139	0	0	128	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	7	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	5	0	0	0	0	0	0	5	0	0	5	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No						No	No			No	
Maximum Recall	No						No	No			No	
Pedestrian Recall	No						No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	C	R
C, Cycle Length [s]	150	150		150	150	150	150
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7		7	135	124	124
g / C, Green / Cycle	0.05	0.05		0.05	0.90	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08		0.08	0.30	0.36	0.08
s, saturation flow rate [veh/h]	3459	1589		1781	3560	3560	1589
c, Capacity [veh/h]	161	74		83	3204	2943	1314
d1, Uniform Delay [s]	70.95	71.50		71.50	1.07	3.53	2.46
k, delay calibration	0.50	0.50		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	38.64	393.72		334.11	0.28	0.47	0.15
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	1.77		1.64	0.33	0.44	0.10
d, Delay for Lane Group [s/veh]	109.59	465.22		405.61	1.36	4.00	2.61
Lane Group LOS	F	F		F	A	A	A
Critical Lane Group	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.47	10.98		10.92	1.11	4.55	0.67
50th-Percentile Queue Length [ft/ln]	86.84	274.46		273.12	27.73	113.86	16.87
95th-Percentile Queue Length [veh/ln]	6.25	18.53		18.28	2.00	8.05	1.21
95th-Percentile Queue Length [ft/ln]	156.31	463.19		456.95	49.91	201.36	30.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	109.59	0.00	465.22	0.00	0.00	0.00	405.61	1.36	0.00	0.00	4.00	2.61
Movement LOS	F		F				F	A			A	A
d_A, Approach Delay [s/veh]	284.07			0.00			46.87			3.87		
Approach LOS	F			A			D			A		
d_I, Intersection Delay [s/veh]	47.71											
Intersection LOS	D											
Intersection V/C	0.557											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.051	1.708	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	1800	1653
d_b, Bicycle Delay [s]	75.00	75.00	0.75	2.25
l_b,int, Bicycle LOS Score for Intersection	4.132	4.132	2.556	2.728
Bicycle LOS	D	D	B	B

Sequence

Ring 1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 5: The Commons East Access (NS) at Fairgrounds Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	30	1	1	1	61	56	2	1	1	1	1
Base Volume Adjustment Factor	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	6	0	7	0	0	22	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	37	1	6	1	82	70	9	1	1	23	6
Peak Hour Factor	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860	0.6860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	13	0	2	0	30	26	3	0	0	8	2
Total Analysis Volume [veh/h]	9	54	1	9	1	120	102	13	1	1	34	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.14	0.02	0.00	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	7.34	0.00	0.00	10.59	10.02	8.68	9.57	10.63	8.87
Movement LOS	A	A	A	A	A	A	B	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.47	0.06	0.06	0.00	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.31	0.31	0.31	0.29	0.29	0.29	11.81	1.44	1.44	0.10	4.70	4.70
d_A, Approach Delay [s/veh]	1.05			0.51			10.51			10.24		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.09											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 7: Midland Tractors Center Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	61.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	6	9	0	970	949	1
Base Volume Adjustment Factor	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	11	0	1220	1177	1
Peak Hour Factor	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	4	0	407	392	0
Total Analysis Volume [veh/h]	9	15	0	1627	1569	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.05	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	61.33	23.24	22.50	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.62	0.62	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.60	15.60	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.52		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Midland Tractors East Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,165.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.346

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	12	7	2	974	943	2
Base Volume Adjustment Factor	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	8	2	1225	1170	2
Peak Hour Factor	0.4790	0.4790	0.4790	0.4790	0.4790	0.4790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	4	1	639	611	1
Total Analysis Volume [veh/h]	31	17	4	2557	2443	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.35	0.12	0.05	0.03	0.02	0.00
d_M, Delay for Movement [s/veh]	1165.69	917.74	56.60	0.00	0.00	0.00
Movement LOS	F	F	F	A	A	A
95th-Percentile Queue Length [veh/ln]	6.38	6.38	0.17	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	159.57	159.57	4.22	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	1077.87		0.09		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	10.28					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 9: Chevron West Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	567.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.402

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	39	22	995	959	39
Base Volume Adjustment Factor	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	26	24	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	49	27	1260	1214	49
Peak Hour Factor	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	16	9	414	399	16
Total Analysis Volume [veh/h]	29	64	35	1656	1595	64
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.40	0.20	0.09	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	567.40	404.86	15.30	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	8.49	8.49	0.30	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	212.32	212.32	7.46	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	455.54		0.32		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	12.46					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 1: The Commons Center Access (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	125	930	34	136	783
Base Volume Adjustment Factor	1.0000	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	145	1110	40	157	906
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	38	291	10	41	237
Total Analysis Volume [veh/h]	0	152	1162	42	164	949
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.40	0.01	0.00	0.53	0.01
d_M, Delay for Movement [s/veh]	0.00	20.69	0.00	0.00	28.70	0.00
Movement LOS		C	A	A	D	A
95th-Percentile Queue Length [veh/ln]	0.00	1.88	0.00	0.00	2.88	0.00
95th-Percentile Queue Length [ft/ln]	0.00	47.02	0.00	0.00	72.08	0.00
d_A, Approach Delay [s/veh]	20.69		0.00		4.23	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.18					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 2: The Commons East Access (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	485.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	60	15	1	22	15	1029	15	70	895	17
Base Volume Adjustment Factor	1.0000	1.0000	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	49	0	0	0	0	0	34	50	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	119	18	1	25	17	1191	52	128	1036	20
Peak Hour Factor	1.0000	1.0000	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	31	5	0	7	4	311	14	33	271	5
Total Analysis Volume [veh/h]	0	0	124	19	1	26	18	1246	54	134	1084	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.30	1.01	0.07	0.05	0.03	0.01	0.00	0.25	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	17.47	442.68	485.87	257.95	10.91	0.00	0.00	14.11	0.00	0.00
Movement LOS			C	F	F	F	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.25	4.51	4.51	4.51	0.09	0.00	0.00	1.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	31.23	112.72	112.72	112.72	2.21	0.00	0.00	24.96	0.00	0.00
d_A, Approach Delay [s/veh]	17.47			339.21			0.15			1.53		
Approach LOS	C			F			A			A		
d_I, Intersection Delay [s/veh]	7.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: SR-99 SB Ramps (NS) at Cleveland Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	128	2	70	0	828	272	166	912	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.1130	1.1130	1.1130	1.0000	1.1130	1.1130	1.1130	1.1130	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	10	0	39	10	0	40	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	148	2	91	0	998	313	192	1096	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670	1.0000	0.9670	0.9670	0.9670	0.9670	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	38	1	24	0	258	81	50	283	0
Total Analysis Volume [veh/h]	0	0	0	153	2	94	0	1032	324	199	1133	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	21	0	0	0	98	0	31	129	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	5	0	0	0	5	0	0	5	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall								No		No	No	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	L	C
C, Cycle Length [s]		150	150	150	150	150
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		17	94	94	27	125
g / C, Green / Cycle		0.11	0.63	0.63	0.18	0.83
(v / s)_i Volume / Saturation Flow Rate		0.09	0.29	0.20	0.11	0.32
s, saturation flow rate [veh/h]		1781	3560	1589	1781	3560
c, Capacity [veh/h]		202	2231	996	321	2967
d1, Uniform Delay [s]		64.50	14.72	13.13	56.77	3.06
k, delay calibration		0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		23.06	0.69	0.87	8.74	0.37
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.76	0.46	0.33	0.62	0.38
d, Delay for Lane Group [s/veh]		87.56	15.41	14.00	65.52	3.43
Lane Group LOS		F	B	B	E	A
Critical Lane Group		Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]		6.99	9.42	5.40	7.79	3.53
50th-Percentile Queue Length [ft/ln]		174.84	235.54	134.93	194.67	88.20
95th-Percentile Queue Length [veh/ln]		11.33	14.46	9.21	12.36	6.35
95th-Percentile Queue Length [ft/ln]		283.27	361.39	230.17	309.08	158.76

Movement, Approach, & Intersection Results

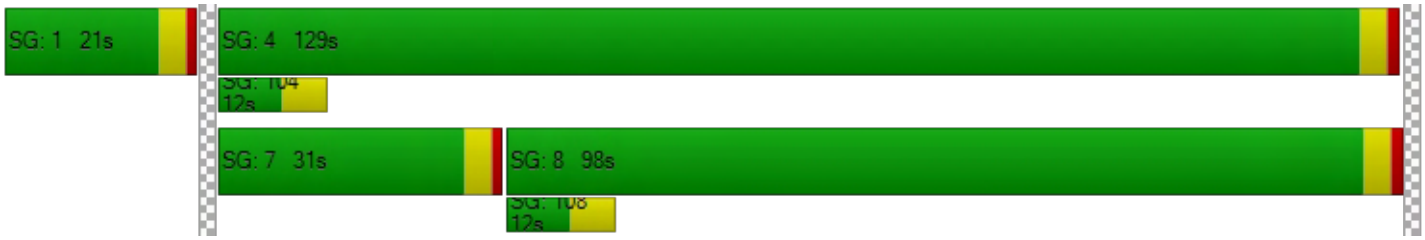
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	87.56	0.00	0.00	0.00	15.41	14.00	65.52	3.43	0.00
Movement LOS				F				B	B	E	A	
d_A, Approach Delay [s/veh]	0.00			87.56			15.07			12.71		
Approach LOS	A			F			B			B		
d_I, Intersection Delay [s/veh]	17.87											
Intersection LOS	B											
Intersection V/C	0.522											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.958	1.814	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	227	1253	1667
d_b, Bicycle Delay [s]	75.00	58.96	10.45	2.08
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.678	2.659
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: SR-99 NB Ramps (NS) at Cleveland Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	39.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.500

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	126	0	84	0	0	0	100	856	0	0	952	100
Base Volume Adjustment Factor	1.1130	1.0000	1.1130	1.0000	1.0000	1.0000	1.1130	1.1130	1.0000	1.0000	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.00	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	0	10	29	0	0	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	0	97	0	0	0	125	1020	0	0	1132	115
Peak Hour Factor	0.9630	1.0000	0.9630	1.0000	1.0000	1.0000	0.9630	0.9630	1.0000	1.0000	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	0	25	0	0	0	32	265	0	0	294	30
Total Analysis Volume [veh/h]	162	0	101	0	0	0	130	1059	0	0	1175	119
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	0	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	30	0	0	0	0	0	30	30	0	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	0	0	0	0	0	11	139	0	0	128	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	7	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	5	0	0	0	0	0	0	5	0	0	5	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No						No	No			No	
Maximum Recall	No						No	No			No	
Pedestrian Recall	No						No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	C	R
C, Cycle Length [s]	150	150		150	150	150	150
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7		7	135	124	124
g / C, Green / Cycle	0.05	0.05		0.05	0.90	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.05	0.06		0.07	0.30	0.33	0.07
s, saturation flow rate [veh/h]	3459	1589		1781	3560	3560	1589
c, Capacity [veh/h]	161	74		83	3204	2943	1314
d1, Uniform Delay [s]	71.50	71.50		71.50	1.07	3.36	2.44
k, delay calibration	0.50	0.50		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	71.81	227.96		304.03	0.28	0.41	0.14
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	1.36		1.56	0.33	0.40	0.09
d, Delay for Lane Group [s/veh]	143.31	299.46		375.53	1.34	3.77	2.57
Lane Group LOS	F	F		F	A	A	A
Critical Lane Group	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.73	7.56		10.23	1.09	3.97	0.61
50th-Percentile Queue Length [ft/ln]	118.21	189.08		255.76	27.25	99.25	15.19
95th-Percentile Queue Length [veh/ln]	8.30	13.03		17.18	1.96	7.15	1.09
95th-Percentile Queue Length [ft/ln]	207.57	325.76		429.41	49.04	178.64	27.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	143.31	0.00	299.46	0.00	0.00	0.00	375.53	1.34	0.00	0.00	3.77	2.57
Movement LOS	F		F				F	A			A	A
d_A, Approach Delay [s/veh]	203.28			0.00			42.26			3.66		
Approach LOS	F			A			D			A		
d_I, Intersection Delay [s/veh]	39.49											
Intersection LOS	D											
Intersection V/C	0.500											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.050	1.690	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	1800	1653
d_b, Bicycle Delay [s]	75.00	75.00	0.75	2.25
l_b,int, Bicycle LOS Score for Intersection	4.132	4.132	2.541	2.627
Bicycle LOS	D	D	B	B

Sequence

Ring 1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 5: The Commons East Access (NS) at Fairgrounds Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	4	1	5	4	69	54	7	14	1	3	7
Base Volume Adjustment Factor	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	10	0	9	0	15	0	0	37	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	4	1	16	4	89	62	23	17	1	40	18
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	0	5	1	26	18	7	5	0	12	5
Total Analysis Volume [veh/h]	20	5	1	19	5	105	73	27	20	1	47	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.10	0.04	0.02	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	7.26	0.00	0.00	10.59	10.19	8.83	9.83	10.72	8.79
Movement LOS	A	A	A	A	A	A	B	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.03	0.03	0.03	0.34	0.18	0.18	0.00	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.87	0.87	0.87	0.75	0.75	0.75	8.46	4.51	4.51	0.10	7.24	7.24
d_A, Approach Delay [s/veh]	5.74			1.07			10.21			10.12		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	6.42											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 7: Midland Tractors Center Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	5	0	1055	914	1
Base Volume Adjustment Factor	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	34	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	6	0	1255	1058	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	0	314	265	0
Total Analysis Volume [veh/h]	3	6	0	1255	1058	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	27.92	13.96	14.82	0.00	0.00	0.00
Movement LOS	D	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.54	2.54	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.61		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 8: Midland Tractors East Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	62.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	2	2	1056	913	4
Base Volume Adjustment Factor	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	34	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	1256	1057	4
Peak Hour Factor	0.6880	0.6880	0.6880	0.6880	0.6880	0.6880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	456	384	1
Total Analysis Volume [veh/h]	4	3	3	1826	1536	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	62.80	20.04	22.19	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.04	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.65	5.65	1.07	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	44.47		0.04		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 9: Chevron West Dwy (NS) at Cleveland Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	330.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.058

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	24	33	28	1076	949	33
Base Volume Adjustment Factor	1.1130	1.1130	1.1130	1.1130	1.1130	1.1130
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	49	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	38	32	1295	1148	38
Peak Hour Factor	0.8330	0.8330	0.8330	0.8330	0.8330	0.8330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	11	10	389	345	11
Total Analysis Volume [veh/h]	34	46	38	1555	1378	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.06	0.12	0.08	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	330.31	227.94	13.26	0.00	0.00	0.00
Movement LOS	F	F	B	A	A	A
95th-Percentile Queue Length [veh/ln]	6.29	6.29	0.26	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	157.35	157.35	6.51	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	271.45		0.32		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	7.17					
Intersection LOS	F					

APPENDIX G

INTERSECTION QUEUING ANALYSIS WORKSHEETS

Intersection: 1: The Commons Center Access & Cleveland Ave

Movement	WB	NB
Directions Served	L	R
Maximum Queue (ft)	153	50
Average Queue (ft)	73	29
95th Queue (ft)	153	52
Link Distance (ft)		252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	290	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: The Commons East Access /The Commons East Access & Cleveland Ave

Movement	EB	WB	NB	SB
Directions Served	T	L	R	LTR
Maximum Queue (ft)	32	96	68	50
Average Queue (ft)	17	56	40	19
95th Queue (ft)	42	102	62	57
Link Distance (ft)	4		166	161
Upstream Blk Time (%)	6			
Queuing Penalty (veh)	23			
Storage Bay Dist (ft)		200		
Storage Blk Time (%)	6			
Queuing Penalty (veh)	1			

Intersection: 3: SR-99 SB On-Ramp/SR-99 SB Off-Ramp & Cleveland Ave

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	139	147	56	126	70	68	114	76
Average Queue (ft)	120	138	20	64	17	38	51	44
95th Queue (ft)	159	154	54	118	57	78	114	74
Link Distance (ft)	125	125	125		402	402	972	
Upstream Blk Time (%)	10	12						
Queuing Penalty (veh)	45	50						
Storage Bay Dist (ft)				150				150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 4: SR-99 NB Off-Ramp/SR-99 NB On-Ramp & Cleveland Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	L
Maximum Queue (ft)	123	32	31	134	153	55	120	133
Average Queue (ft)	91	9	4	56	68	21	31	74
95th Queue (ft)	129	31	22	124	133	53	97	146
Link Distance (ft)		402	402	216	216			783
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	120					75	150	
Storage Blk Time (%)	5				7			0
Queuing Penalty (veh)	23				9			0

Intersection: 5: Flea Market/The Commons East Access & Fairgrounds Rd

Movement	EB	EB	WB
Directions Served	L	TR	TR
Maximum Queue (ft)	89	31	30
Average Queue (ft)	39	4	8
95th Queue (ft)	73	22	30
Link Distance (ft)		466	197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 7: Cleveland Ave & Midland Tractors Center Dwy

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	117	31
Average Queue (ft)	17	22
95th Queue (ft)	84	44
Link Distance (ft)	300	170
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Cleveland Ave & Midland Tractors East Dwy

Movement	EB	WB	SB
Directions Served	T	TR	LR
Maximum Queue (ft)	54	53	53
Average Queue (ft)	24	15	32
95th Queue (ft)	61	54	58
Link Distance (ft)	52	4	166
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	11		
Storage Bay Dist (ft)			
Storage Blk Time (%)	3		
Queuing Penalty (veh)	0		

Intersection: 9: Cleveland Ave & Chevron Dwy

Movement	EB	EB	EB	WB	SB
Directions Served	L	T	T	T	LR
Maximum Queue (ft)	31	114	139	55	168
Average Queue (ft)	13	54	81	8	127
95th Queue (ft)	37	111	143	40	190
Link Distance (ft)		248	248	125	153
Upstream Blk Time (%)					31
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0	5			
Queuing Penalty (veh)	0	1			

Intersection: 1: The Commons Center Access & Cleveland Ave

Movement	WB	NB
Directions Served	L	R
Maximum Queue (ft)	74	72
Average Queue (ft)	50	46
95th Queue (ft)	73	71
Link Distance (ft)		252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	290	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: The Commons East Access /The Commons East Access & Cleveland Ave

Movement	EB	EB	WB	NB	SB
Directions Served	T	TR	L	R	LTR
Maximum Queue (ft)	31	15	72	74	69
Average Queue (ft)	9	2	42	53	32
95th Queue (ft)	32	11	77	73	73
Link Distance (ft)	4	4		166	161
Upstream Blk Time (%)	1	0			
Queuing Penalty (veh)	5	0			
Storage Bay Dist (ft)			200		
Storage Blk Time (%)	1				
Queuing Penalty (veh)	0				

Intersection: 3: SR-99 SB On-Ramp/SR-99 SB Off-Ramp & Cleveland Ave

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	149	148	142	143	67	70	117	55
Average Queue (ft)	121	113	93	101	20	22	80	34
95th Queue (ft)	154	149	154	151	61	71	111	63
Link Distance (ft)	125	125	125		402	402	972	
Upstream Blk Time (%)	10	13	5					
Queuing Penalty (veh)	42	58	24					
Storage Bay Dist (ft)				150				150
Storage Blk Time (%)				1				
Queuing Penalty (veh)				3				

Intersection: 4: SR-99 NB Off-Ramp/SR-99 NB On-Ramp & Cleveland Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	L
Maximum Queue (ft)	145	55	191	115	159	31	51	108
Average Queue (ft)	92	20	51	67	55	17	29	68
95th Queue (ft)	157	60	151	113	133	42	53	110
Link Distance (ft)		402	402	216	216			783
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	120					75	150	
Storage Blk Time (%)	8				4			
Queuing Penalty (veh)	41				4			

Intersection: 5: Flea Market/The Commons East Access & Fairgrounds Rd

Movement	EB	EB	WB
Directions Served	L	TR	TR
Maximum Queue (ft)	31	54	53
Average Queue (ft)	26	25	34
95th Queue (ft)	44	54	47
Link Distance (ft)		466	197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Cleveland Ave & Midland Tractors Center Dwy

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	4
95th Queue (ft)	22
Link Distance (ft)	170
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Cleveland Ave & Midland Tractors East Dwy

Movement	EB	WB	SB
Directions Served	T	TR	LR
Maximum Queue (ft)	31	53	52
Average Queue (ft)	4	30	12
95th Queue (ft)	23	73	44
Link Distance (ft)	52	4	166
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 9: Cleveland Ave & Chevron Dwy

Movement	EB	EB	EB	EB	SB
Directions Served	L	T	T	T	LR
Maximum Queue (ft)	49	96	93	31	158
Average Queue (ft)	23	47	29	4	67
95th Queue (ft)	57	101	90	22	131
Link Distance (ft)		248	248	248	153
Upstream Blk Time (%)					3
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0	4			
Queuing Penalty (veh)	0	1			