

# SEATON SMALL BUSINESS CENTER

## TRAFFIC IMPACT ANALYSIS

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## Table of Contents

<b>1</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>2</b>	<b>INTRODUCTION.....</b>	<b>2</b>
2.1	Project Description.....	2
2.2	Study Area and Analysis Scenarios .....	5
2.3	Methodology.....	6
2.4	Significance Criteria .....	7
<b>3</b>	<b>BASELINE CONDITIONS .....</b>	<b>8</b>
3.1	Existing Transportation System .....	8
3.2	Existing Traffic Volumes and Levels of Service .....	8
<b>4</b>	<b>PROPOSED PROJECT .....</b>	<b>13</b>
4.1	Project Description and Project Access .....	13
4.2	Project Trip Generation.....	13
4.3	Project Trip Distribution and Assignment.....	13
<b>5</b>	<b>PROJECT IMPACTS .....</b>	<b>23</b>
5.1	Project Completion Traffic Volumes and LOS.....	23
5.3	Cumulative Traffic Volumes and LOS .....	29
<b>6</b>	<b>Conclusion .....</b>	<b>40</b>

## Figures

FIGURE 1:	PROJECT LOCATION .....	3
FIGURE 2:	PROJECT SITE PLAN .....	4
FIGURE 3:	PROJECT STUDY AREA .....	6
FIGURE 4:	STUDY AREA INTERSECTIONS EXISTING LANE CONFIGURATION .....	9
FIGURE 5A:	EXISTING AM PEAK HOUR TRAFFIC VOLUMES .....	10
FIGURE 5B:	EXISTING PM PEAK HOUR TRAFFIC VOLUMES.....	11
FIGURE 6A:	PROJECT AUTO TRIP DISTRIBUTION (UNDEVELOPED).....	15
FIGURE 6B:	PROJECT TRUCK TRIP DISTRIBUTION (UNDEVELOPED) .....	16
FIGURE 7A:	PROJECT AUTO TRIP DISTRIBUTION (DEVELOPED) .....	17
FIGURE 7B:	PROJECT TRUCK TRIP DISTRIBUTION (DEVELOPED) .....	18
FIGURE 8A:	PROJECT TOTAL AM TRIP ASSIGNMENT PCE (UNDEVELOPED) .....	19
FIGURE 8B:	PROJECT TOTAL PM TRIP ASSIGNMENT PCE (UNDEVELOPED).....	20
FIGURE 9A:	PROJECT TOTAL AM TRIP ASSIGNMENT PCE (DEVELOPED).....	21
FIGURE 9B:	PROJECT TOTAL PM TRIP ASSIGNMENT PCE (DEVELOPED).....	22
FIGURE 10A:	PROJECT COMPLETION AM PEAK HOUR TRAFFIC VOLUMES (UNDEVELOPED) .....	24
FIGURE 10B:	PROJECT COMPLETION PM PEAK HOUR TRAFFIC VOLUMES (UNDEVELOPED) .....	25
FIGURE 11A:	PROJECT COMPLETION AM PEAK HOUR TRAFFIC VOLUMES (DEVELOPED) .....	26
FIGURE 11B:	PROJECT COMPLETION PM PEAK HOUR TRAFFIC VOLUMES (DEVELOPED).....	27
FIGURE 12:	LOCATION OF CUMULATIVE PROJECTS .....	30
FIGURE 13A:	CUMULATIVE PROJECTS AM TRIP ASSIGNMENT .....	33
FIGURE 13B:	CUMULATIVE PROJECTS PM TRIP ASSIGNMENT .....	34
FIGURE 14A:	CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES (UNDEVELOPED) .....	35
FIGURE 14B:	CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES (UNDEVELOPED) .....	36
FIGURE 15A:	CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES (DEVELOPED).....	37

FIGURE 1 5b: CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES (DEVELOPED)..... 38

## Tables

TABLE 1. RELATIONSHIP BETWEEN CONTROL DELAY AND LOS AT A SIGNALIZED INTERSECTION.....7

TABLE 2. RELATIONSHIP BETWEEN DELAY AND LOS AN UNSIGNALIZED INTERSECTION .....7

TABLE 3. EXISTING AM AND PM PEAK HOUR LEVELS OF SERVICE ..... 12

TABLE 4. PROJECT TRIP GENERATION ..... 14

TABLE 5. PROJECT COMPLETION AM AND PM PEAK HOUR LEVELS OF SERVICE (UNDEVELOPED) ..... 28

TABLE 6. PROJECT COMPLETION AM AND PM PEAK HOUR LEVELS OF SERVICE (DEVELOPED) ..... 28

TABLE 7. CUMULATIVE PROJECTS TRIP GENERATION ..... 31

TABLE 8. CUMULATIVE PEAK HOUR LEVELS OF SERVICE (UNDEVELOPED)..... 39

TABLE 9. CUMULATIVE PEAK HOUR LEVELS OF SERVICE (DEVELOPED) ..... 39

## Appendices

APPENDIX A – TRAFFIC STUDY SCOPING AGREEMENT

APPENDIX B – TRAFFIC COUNTS

APPENDIX C – LEVEL OF SERVICE CALCULATIONS

APPENDIX D – SEATON AVENUE STRIPING PLAN

APPENDIX E – QUALIFICATIONS OF TIA PREPARERS

## 1 EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) evaluates the potential traffic impacts of the Seaton Small Business Center project. The project is located on a 9.80-acre site located west of Seaton Avenue in between Markham Street and Perry Street. Based on the Institute of Transportation Engineers Trip Generation Manual 10<sup>th</sup> Ed (Supplement) trip generation rate for General Light Industrial (Land Use Code 110), the project would generate 623 daily trips including 88 AM peak hour and 79 PM peak hour trips.

Three study area intersections listed in Section 2.2 – Study Area and Analysis Scenarios were evaluated during the AM and PM peak hours, which are defined as the hours with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Condition
- Project Completion (corresponding to the project opening year 2023)
- Cumulative

### **Existing Condition Intersection Analysis Results**

All of the intersections would operate with satisfactory LOS of C or better in the Existing Condition scenario. No improvements are required.

### **Project Completion Intersection Analysis Results (Undeveloped and Developed)**

All of the intersections would operate with satisfactory LOS of C or better in the Project Completion scenario. No improvements are required.

### **Cumulative Intersection Analysis Results (Undeveloped and Developed)**

All of the intersections would operate with satisfactory LOS of C or better in the Cumulative scenario. No improvements are required.

The project site would be accessible via two driveways along Seaton Avenue. The north driveway is an auto only full access driveway, and the south driveway is an auto and truck full access driveway.

## 2 INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related impacts of the proposed Seaton Small Business Center Project (project; proposed project). The scope of work for this TIA was reviewed and approved by the County of Riverside and is provided in Appendix A. The TIA was prepared according to the approved scope of work using methodologies and significance criteria consistent with the requirements of the County of Riverside Transportation Analysis Guidelines, General Plan, and applicable provisions of the California Environmental Quality Act (CEQA).

### 2.1 Project Description

The proposed project is located on a 9.80-acre site on the west side of Seaton Avenue between Markham Street and Perry Street, in the Mead Valley area of unincorporated Riverside County, California. The location of the project is shown in Figure 1 - Project Location, and the project site plan is shown in Figure 2 – Project Site Plan. The project proposes to construct two new 49,470 square-foot (sf) industrial buildings, totaling 98,940 sf, that would operate 7 days a week 24 hours a day. The site is currently vacant.

The project site would be accessible via two driveways along Seaton Avenue. The north driveway is an auto only full access driveway, and the south driveway is an auto and truck full access driveway.

Truck and trailer parking and loading would be located on the west side of each building, with a trailer storage lot along the west boundary of the project site. Passenger car parking would be available along the eastern side of each building.

Figure 1: Project Location

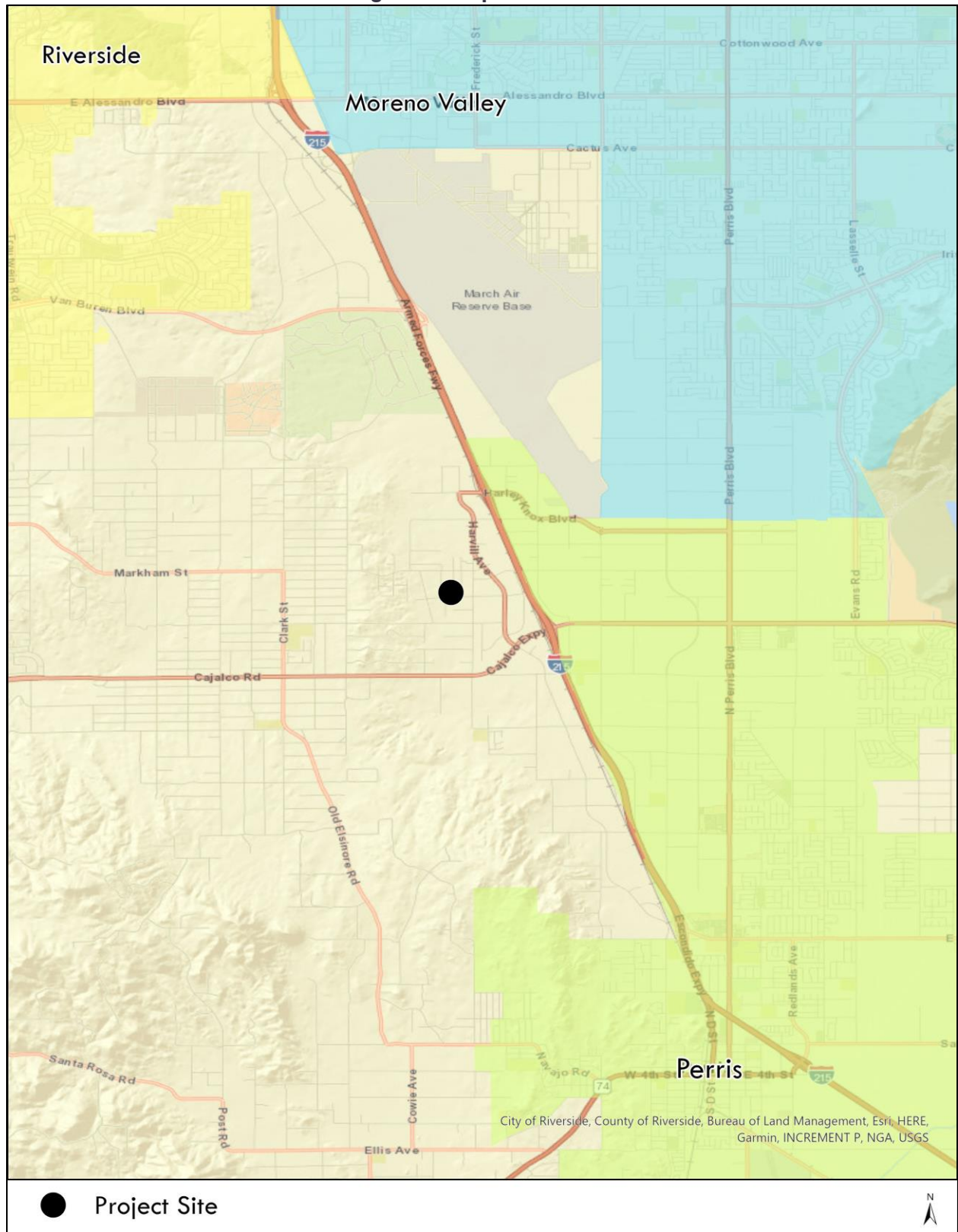
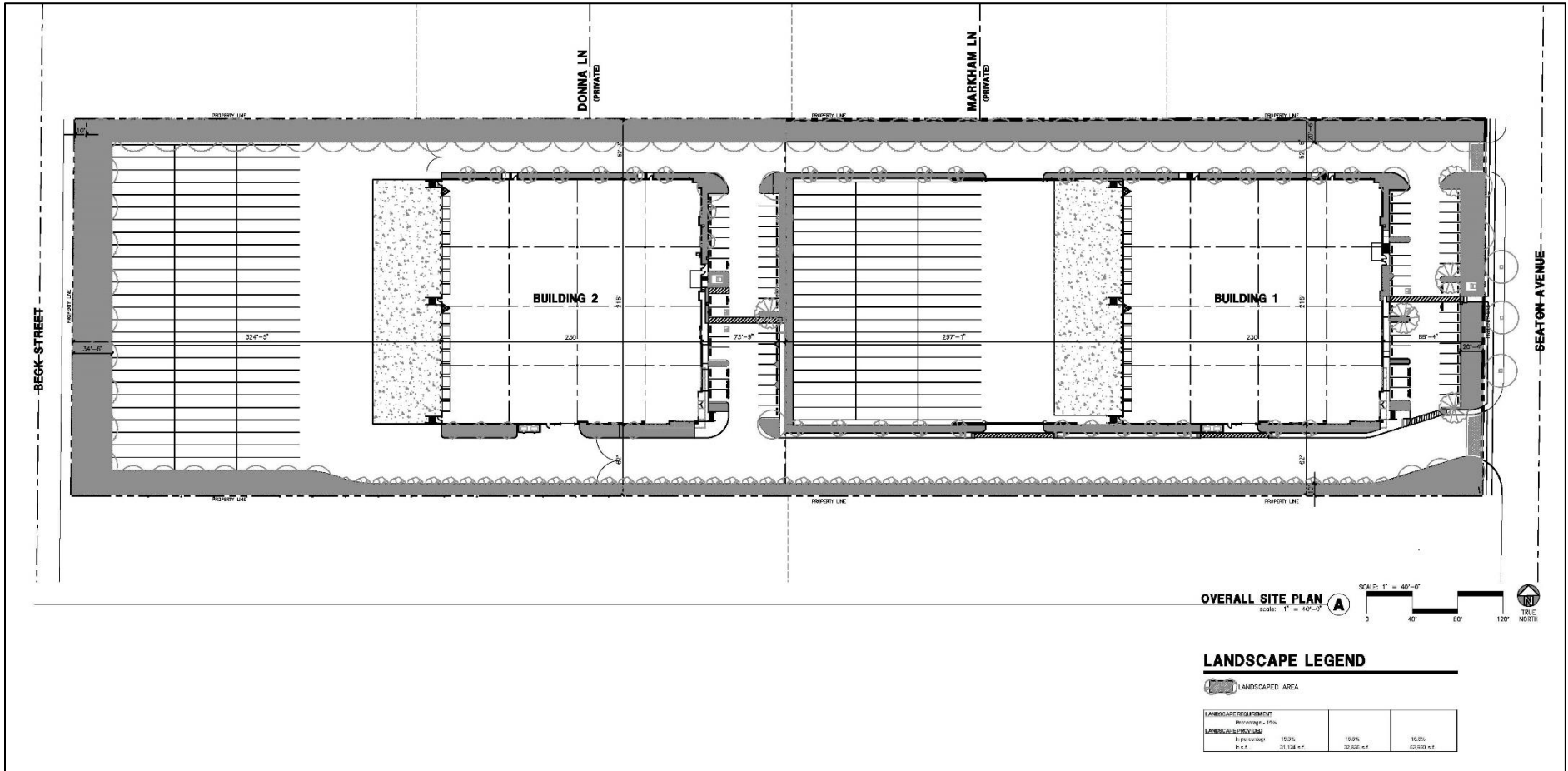


Figure 2: Project Site Plan



## 2.2 Study Area and Analysis Scenarios

The Riverside County Transportation Analysis Guidelines provides thresholds for determining when a TIA is needed and guidance on selecting study area intersections. According to Appendix A of the TIA Preparation Guide, a development may be exempted from preparation of a TIA when the trip generation is less than 100 vehicle trips during the peak hours. The project would generate fewer than 100 vehicle trips, however County staff requested preparation of a TIA due to concerns about traffic generated by industrial projects in the Mead Valley area. The Transportation Analysis Guidelines specifies that “the minimum area to be studied shall include any intersection of Collector or higher classification streets at which the proposed project will add 50 or more peak hour trips”. As demonstrated later in this report, none of the study area intersections would meet this criterion. Therefore, the study area was selected to include those intersections immediately adjacent to the project where the project would have the most effect on traffic volumes. The following intersections were included in the analysis:

1. Harvill Avenue/Markham Street
2. Seaton Avenue/Markham Street
3. Harvill Avenue/Commerce Center Drive
4. Seaton Avenue/Commerce Center Drive
5. Seaton Avenue/Driveway 1
6. Seaton Avenue/Driveway 2
7. Seaton Avenue/Perry Street
8. Harvill Avenue/Perry Street

The location of the study area intersections is shown on Figure 3 – Project Study Area. Study area intersections were evaluated during the AM and PM peak hours, which are defined as the hour with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Condition
- Project Completion (Existing plus ambient growth plus project corresponding to the project opening year 2023)
- Cumulative (Project Completion plus addition of cumulative development projects)

Forecast traffic volumes for the Project Completion were developed by applying a growth rate of two percent per year to the 2021 traffic counts and adding traffic from the proposed project. Cumulative conditions were determined by adding traffic from nearby cumulative development projects (approved and not yet built and those under review) to the Project Completion traffic volumes. The two percent per year growth rate is consistent with the TIAs prepared for the Knox Business Park and Diamond Warehouse, both approved by County of Riverside Engineering staff during the scoping process.



Figure 3: Project Study Area



### 2.3 Methodology

Intersection operations are evaluated using Level of Service (LOS), which is a measure of the delay experienced by drivers on a roadway facility. LOS A indicates free-flow traffic conditions and is generally the best operating conditions. LOS F is an extremely congested condition and is the worst operating condition from the driver's perspective. In this report, LOS at signalized and unsignalized intersections is calculated using the Highway Capacity Manual (HCM), 6<sup>th</sup> Edition methodology. The HCM methodology is required by the Riverside County Transportation Department *Transportation Analysis Preparation Guide*. Additionally, all signalized intersection analysis input parameters were used, as outlined in Exhibit C of the TIA Preparation Guide.

LOS at signalized intersections is defined in terms of the weighted average control delay for the intersection as a whole. Control delay is a measure of the increase in travel time that is experienced due to traffic signal control and is expressed in terms of average control delay per vehicle (in seconds). Control delay is determined based on the intersection geometry and volume, signal cycle

length, phasing and coordination along the arterial corridor. Table 1 shows the relationship between control delay and LOS at a signalized intersection.

**Table 1. Relationship between Control Delay and LOS at a Signalized Intersection**

LOS	Delay (Seconds per Vehicle)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

Unsignalized intersections are categorized as either all-way stop control (AWSC) or two-way stop control (TWSC). LOS at AWSC intersections is determined by the weighted average control delay of the overall intersection. The HCM TWSC intersection methodology calculates LOS based on the delay experienced by drivers on the minor (stop-controlled) approaches to the intersection. For TWSC intersections, LOS is determined for each minor-street movement, as well as the major-street left-turns. The relationship between delay and LOS at Unsignalized intersections is shown in Table 2.

**Table 2. Relationship between Delay and LOS an Unsignalized Intersection**

LOS	Delay (seconds)
A	0-10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	>50

## 2.4 Significance Criteria

The Riverside General Plan Chapter 4, Circulation Element, prescribes a LOS standard of LOS C for all intersections in the County, except for intersections within designated Area Plans. Mead Valley Area Plan is one of those Area Plans designated for a LOS standard of LOS D. The study area is within the Mead Valley Area therefore a LOS standard of LOS D has been used in the analysis. An impact would occur if the project causes an intersection to deteriorate from acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F). At an intersection already operating at LOS E or F in the baseline condition, a project impact would occur if the project adds any delay to an intersection already operating at an unacceptable LOS.

### 3 BASELINE CONDITIONS

This section discusses the existing baseline (without project) conditions. Baseline conditions are those conditions that exist within the study area in the existing condition.

#### 3.1 Existing Transportation System

Access to the project site is provided from Seaton Avenue. There are currently no sidewalks built along Seaton Avenue. The project site is not served by transit. Figure 4 – Study Area Existing Lane Configuration shows the existing intersection geometrics within the study area. Below is the breakdown of the major streets within the study area:

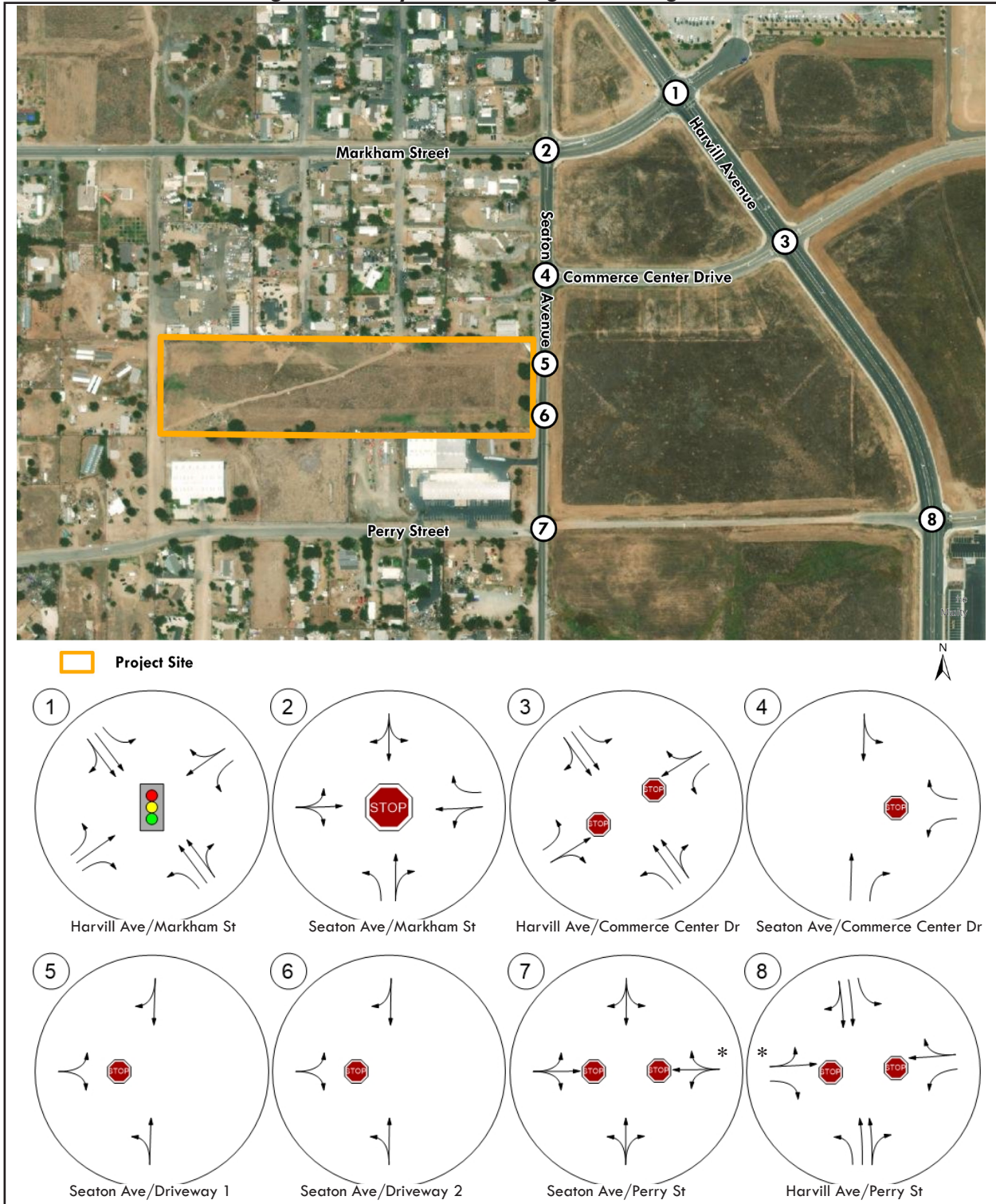
- Harvill Avenue is a Major (118' right of way (ROW)) street that is 4-Lanes divided with a posted speed limit of 50 miles per hour (mph).
- Markham Street is a Secondary Highway (100' ROW) street that is 2-Lanes undivided with a posted speed limit of 45 mph.
- Seaton Avenue is a Secondary Highway (100' ROW) street that are 2-Lanes undivided, with no posted speed limit within the study area (30 mph assumed).

#### 3.2 Existing Traffic Volumes and Levels of Service

Traffic counts at the existing study area intersections, were collected on Wednesday, June 16, 2021, and Thursday, July 8, 2021. Intersection turn movement count sheets are provided in Appendix B. Existing AM and Existing PM peak hour traffic volumes are shown on Figure 5 – Existing Peak Hour Traffic Volumes.

The existing Levels of Service at the study area intersections were determined using the HCM methodology, described previously in section 2.3. Table 3 shows the existing AM and PM peak hour levels of service at study intersections. All LOS calculations are provided in Appendix C. As shown in Table 3, all study intersections operate at satisfactory LOS C or better during the AM and PM peak hours in the existing (2021) condition.

Figure 4: Study Area Existing Lane Configuration



\*Leads to Unpaved Road

Figure 5a: Existing AM Peak Hour Traffic Volumes

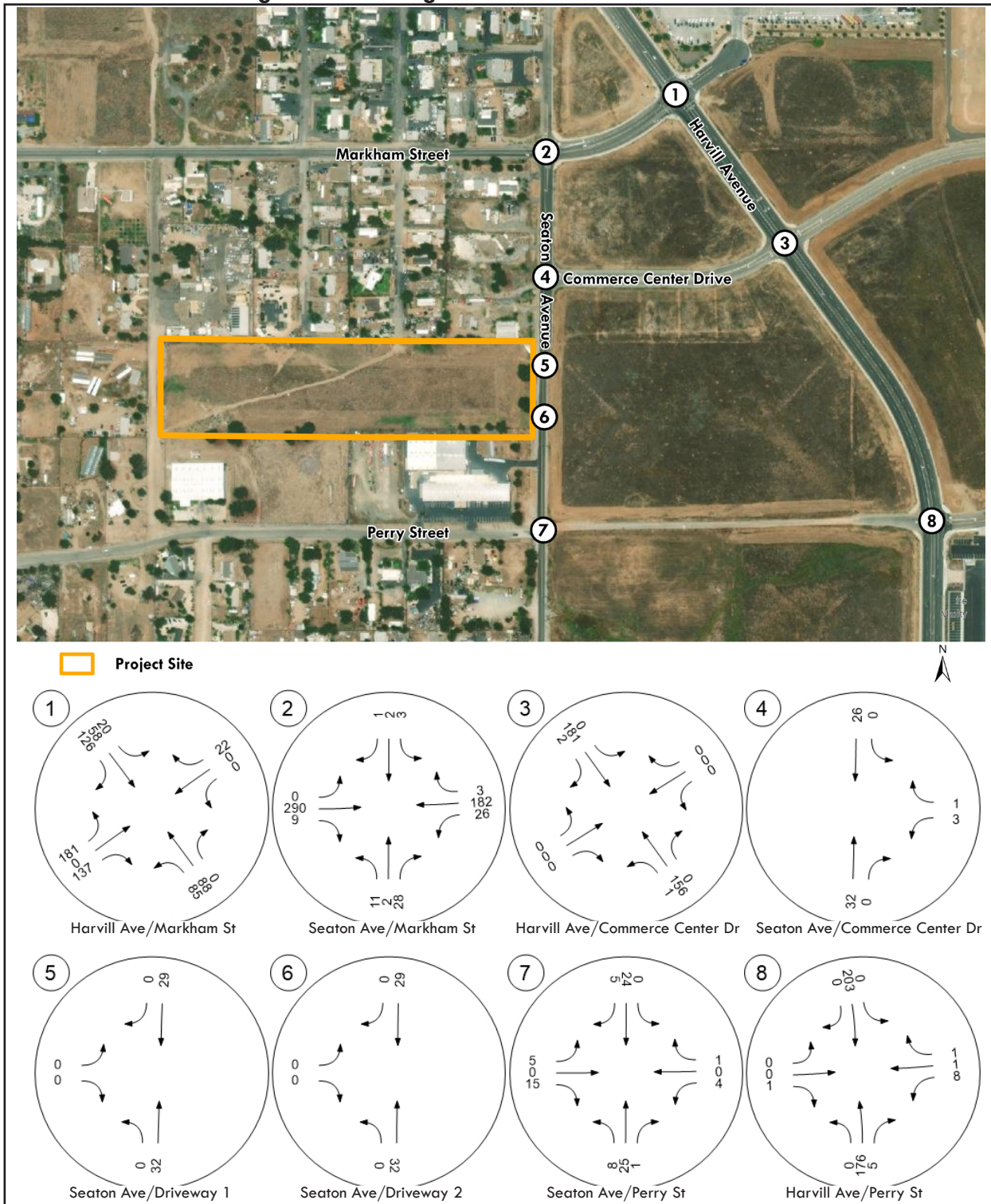
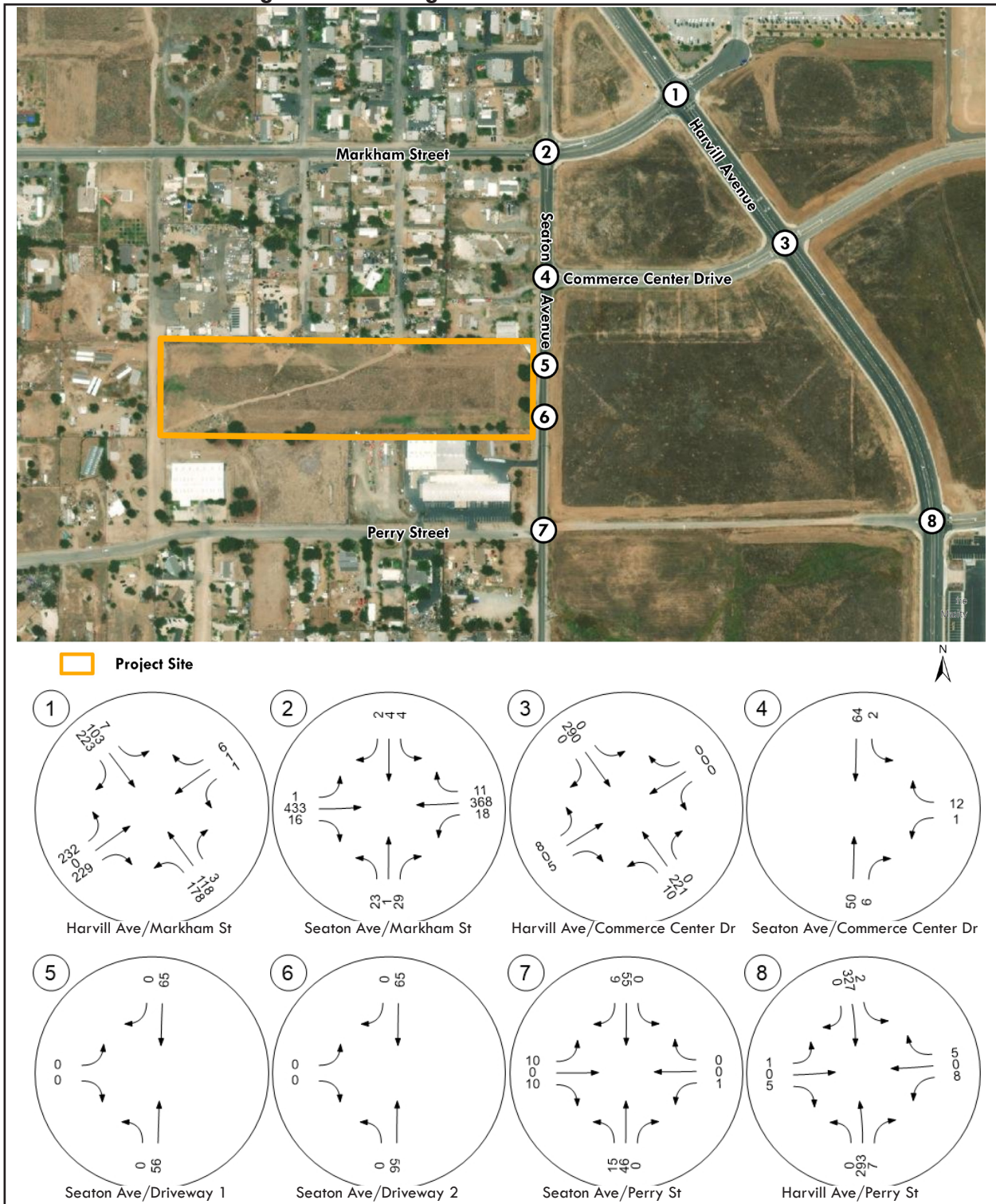


Figure 5b: Existing PM Peak Hour Traffic Volumes



**Table 3. Existing AM and PM Peak Hour Levels of Service**

Intersection	Signal Control	AM Peak		PM Peak	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1. Harvill Ave/Markham St	Signal	27.0	C	30.3	C
2. Seaton Ave/Markham St	AWSC	11.2	B	18.2	C
3. Harvill Ave/Commerce Center Dr	TWSC	7.7	A	12.7	B
4. Seaton Ave/Commerce Cener Dr	TWSC	8.9	A	9.4	A
5. Seaton Ave/Driveway 1	TWSC	-	-	-	-
6. Seaton Ave/Driveway 2	TWSC	-	-	-	-
7. Seaton Ave/Perry St	TWSC	9.2	A	9.9	A
8. Harvill Ave/Perry St	TWSC	12.1	B	14.2	B

AWSC = All-Way Stop Controlled

TWSC = Two-Way Stop Controlled

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service

## 4 PROPOSED PROJECT

### 4.1 Project Description and Project Access

As described in Section 2.1 – Project Description, the project proposes to construct two new 49,470 sf industrial buildings, totaling 98,940 sf that would operate 7 days a week 24 hours a day. The site is currently vacant.

### 4.2 Project Trip Generation

Vehicle trips were generated for the project using trip rates from the Institute of Transportation Engineers Trip Generation Manual 10<sup>th</sup> Ed (Supplement) trip generation rate for General Light Industrial (Land Use Code 110). The trip generation is broken out by vehicle type and passenger car equivalent (PCE) factors are applied to the truck trips to determine the PCE trip generation. Passenger car equivalent factors account for the additional roadway capacity utilized by trucks due to their larger size, slower acceleration and reduced maneuverability when compared to passenger cars. The project trip generation is shown in Table 4. The project would generate 623 daily PCE trips including 88 AM peak hour and 79 PM peak hour PCE trips.

### 4.3 Project Trip Distribution and Assignment

Project trips were distributed to the study area intersections based on the location of the project and logical routes of travel to and from the site. In the existing condition Perry Street is undeveloped east of Seaton Avenue, however an approved development, by LDC Properties, on the southeast corner of Seaton Avenue/Perry Street are conditioned to improve the segment of Perry Street between Seaton Avenue and Harvill Avenue. Once this is built, it will become the primary route for trucks to leave the site and continue to Harvill Avenue. However, since it is currently unknown if the proposed project would be developed before or after the roadway improvement, two scenarios were analyzed. The scenario where Perry Street remains undeveloped by the project opening year will be called Undeveloped and the scenario where Perry Street is developed before the project opening year will be called Developed.

With the development of Perry Street, Seaton Avenue would require restriping to add a left turn pocket turning onto Perry Street and a left turn pocket turning into the south driveway. A striping plan was done to show the updated striping along Seaton Avenue, with 150 feet of storage for the southbound left turn onto Perry Street and 150 feet of storage for the northbound left turn into the south driveway into the project site. The striping plan can be found in Appendix D.

Project trips were assigned to the study area intersections by multiplying the project trip generation by the trip distribution percent at each location. The project trip distribution automobiles and trucks are shown in Figure 6 – Project Trip Distribution (Undeveloped), and Figure 7 – Project Trip Distribution (Developed). The project total trip assignment for the AM and PM peak hour are shown in Figure 8 – Total Project Trip Assignment PCE (Undeveloped) and Figure 9 – Total Project Trip Assignment PCE (Developed).



**Table 4. Project Trip Generation**

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b><u>Trip Rates</u></b>								
General Light Industrial <sup>1</sup>	TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63
<b><u>Project Trip Generation</u></b>								
Project	98.940 TSF	491	61	8	69	8	54	62
<b><u>Vehicle Mix<sup>2</sup></u></b>								
	<b><u>Percent</u></b>							
Passenger Vehicles	78.60%	386	48	7	54	6	43	49
2-Axle Trucks	8.00%	39	5	1	6	1	4	5
3-Axle Trucks	3.90%	19	2	0	3	0	2	2
4+-Axle Trucks	9.50%	47	6	1	7	1	5	6
	100%	491	61	8	69	8	54	62
<b><u>PCE Trip Generation<sup>3</sup></u></b>								
	<b><u>PCE Factor</u></b>							
Passenger Vehicles	1.0	386	48	7	54	6	43	49
2-Axle Trucks	1.5	59	7	1	8	1	7	7
3-Axle Trucks	2.0	38	5	1	5	1	4	5
4+-Axle Trucks	3.0	140	17	2	20	2	15	18
<b>Total PCE Trip Generation</b>		<b>623</b>	<b>77</b>	<b>11</b>	<b>88</b>	<b>10</b>	<b>69</b>	<b>79</b>

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 110 - General Light Industrial.<sup>2</sup> Vehicle Mix from the City of Fontana, *Truck Trip Generation Study*, August 2003. Classification: Light Industrial.<sup>3</sup> Passenger Car Equivalent (PCE) factors from the County of Riverside Transportation Analysis Guidelines, 2020

Figure 6a: Project Auto Trip Distribution (Undeveloped)

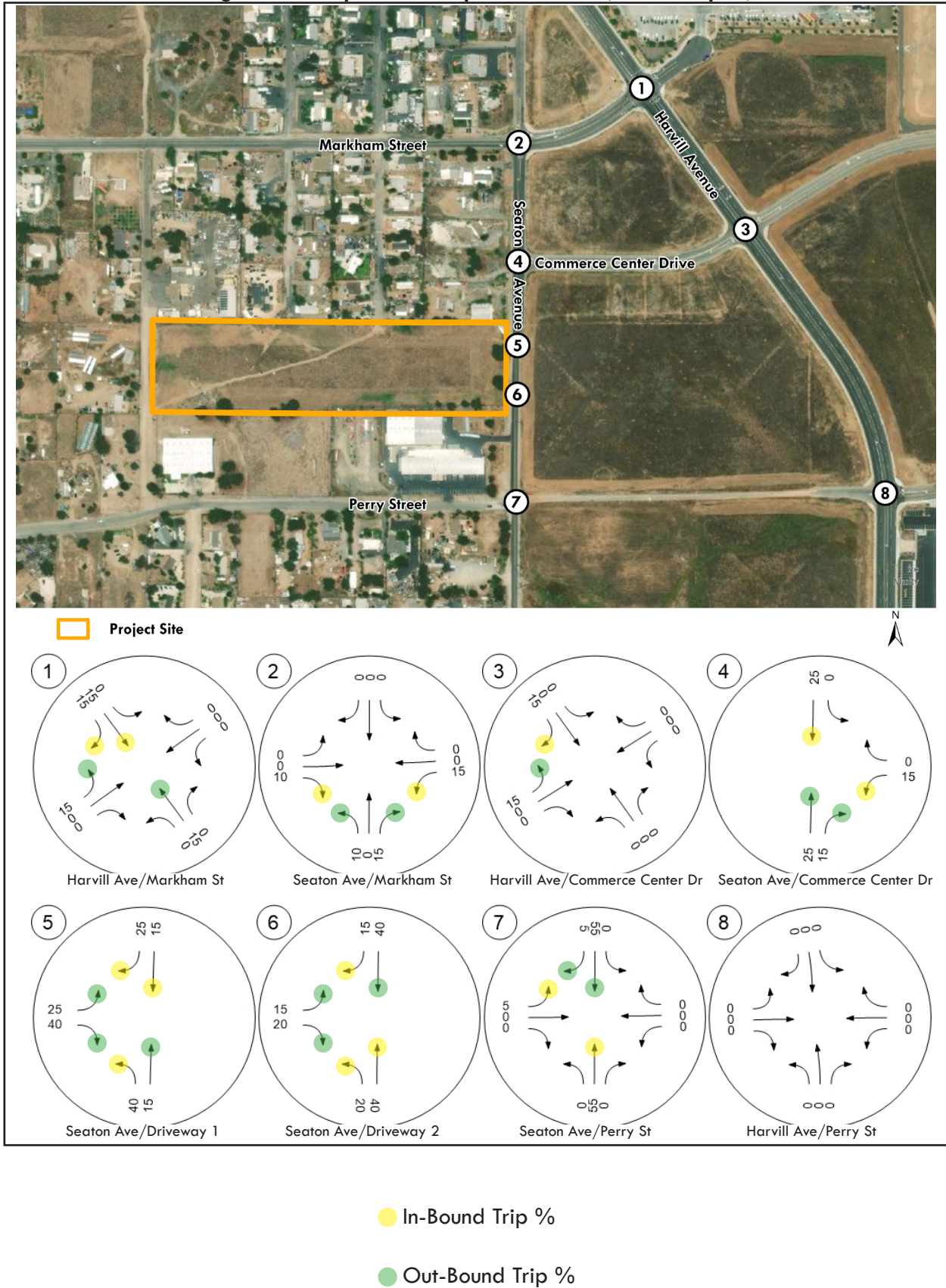


Figure 6b: Project Truck Trip Distribution (Undeveloped)

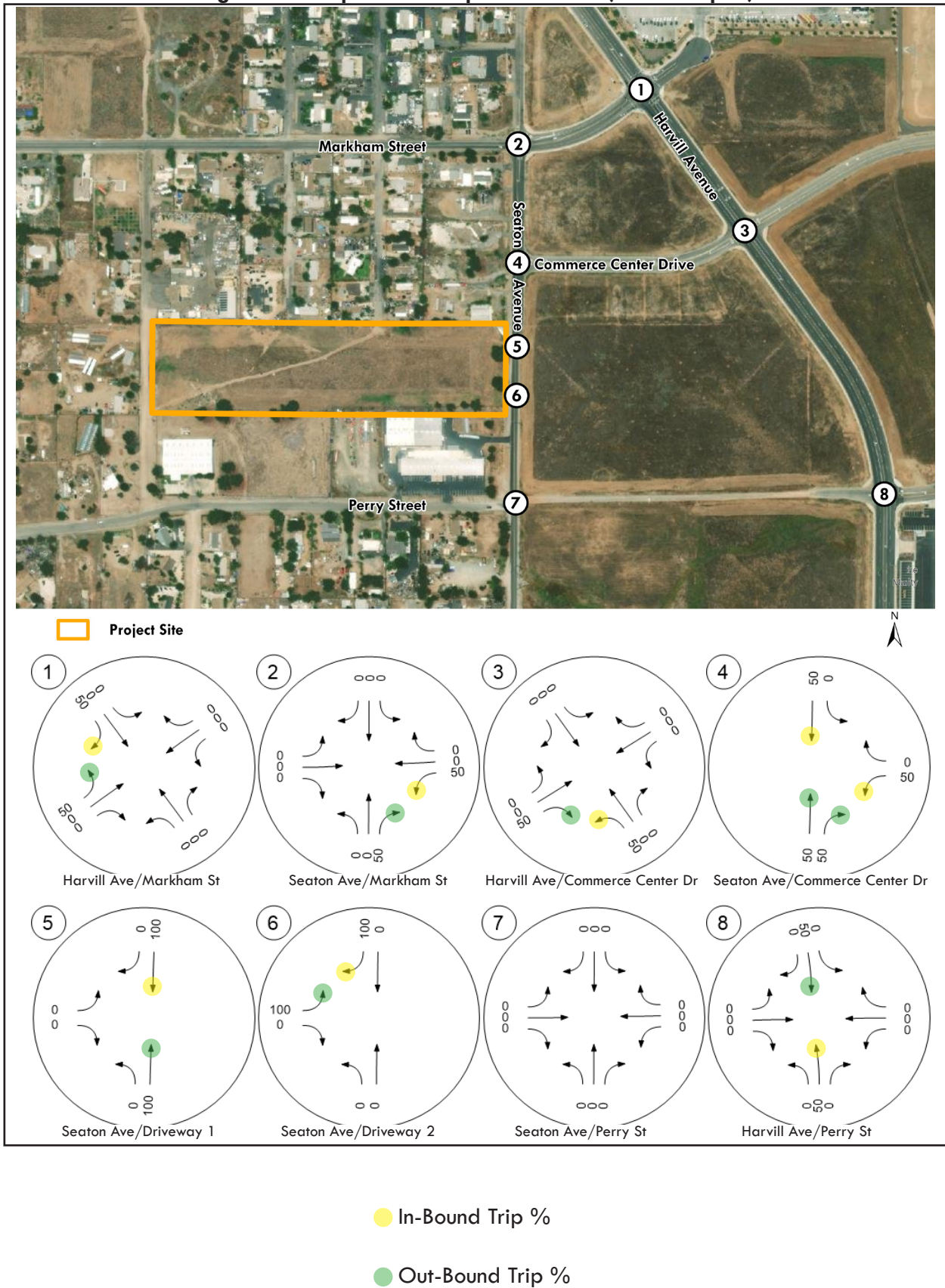


Figure 7a: Project Auto Trip Distribution (Developed)

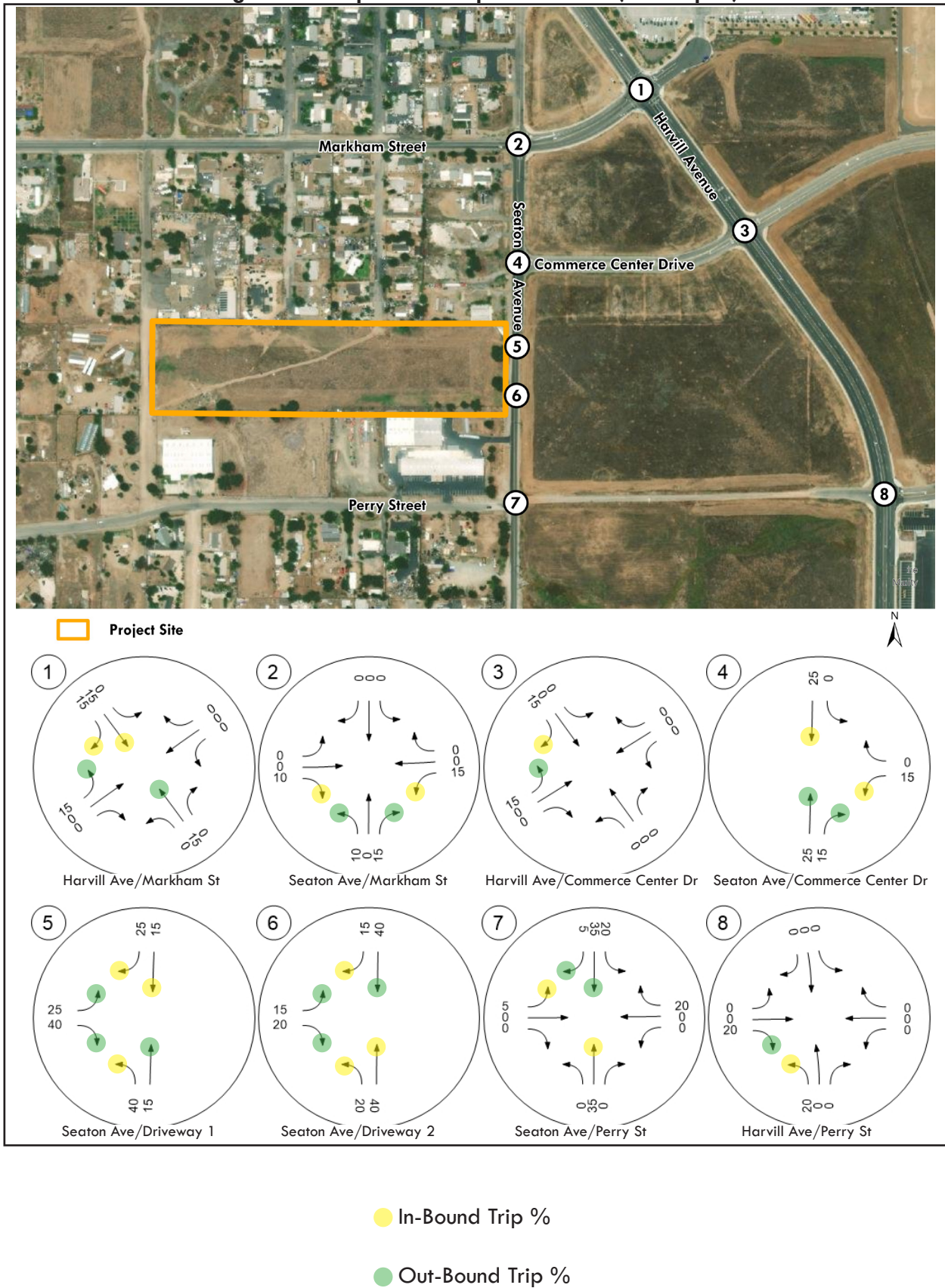
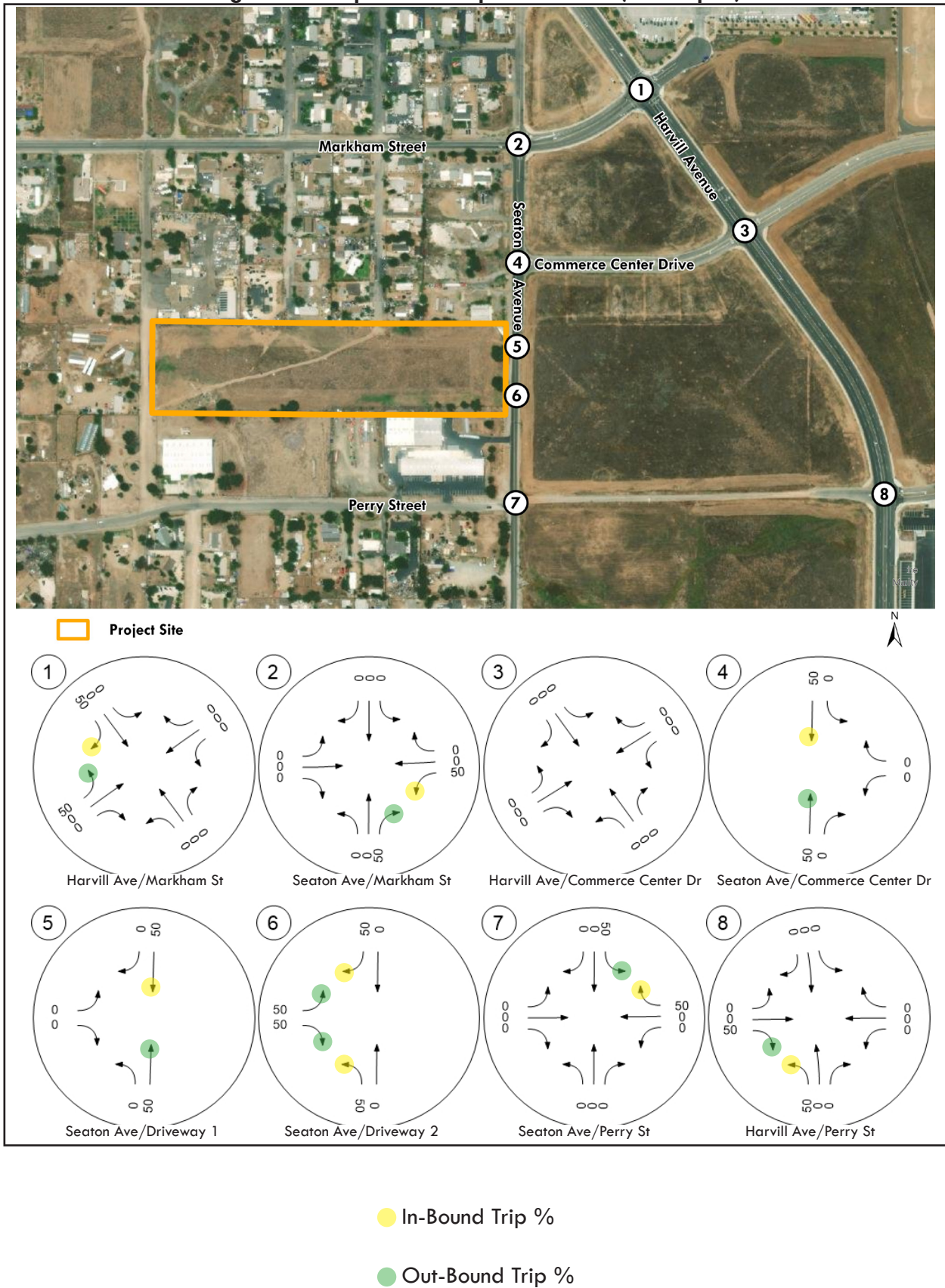
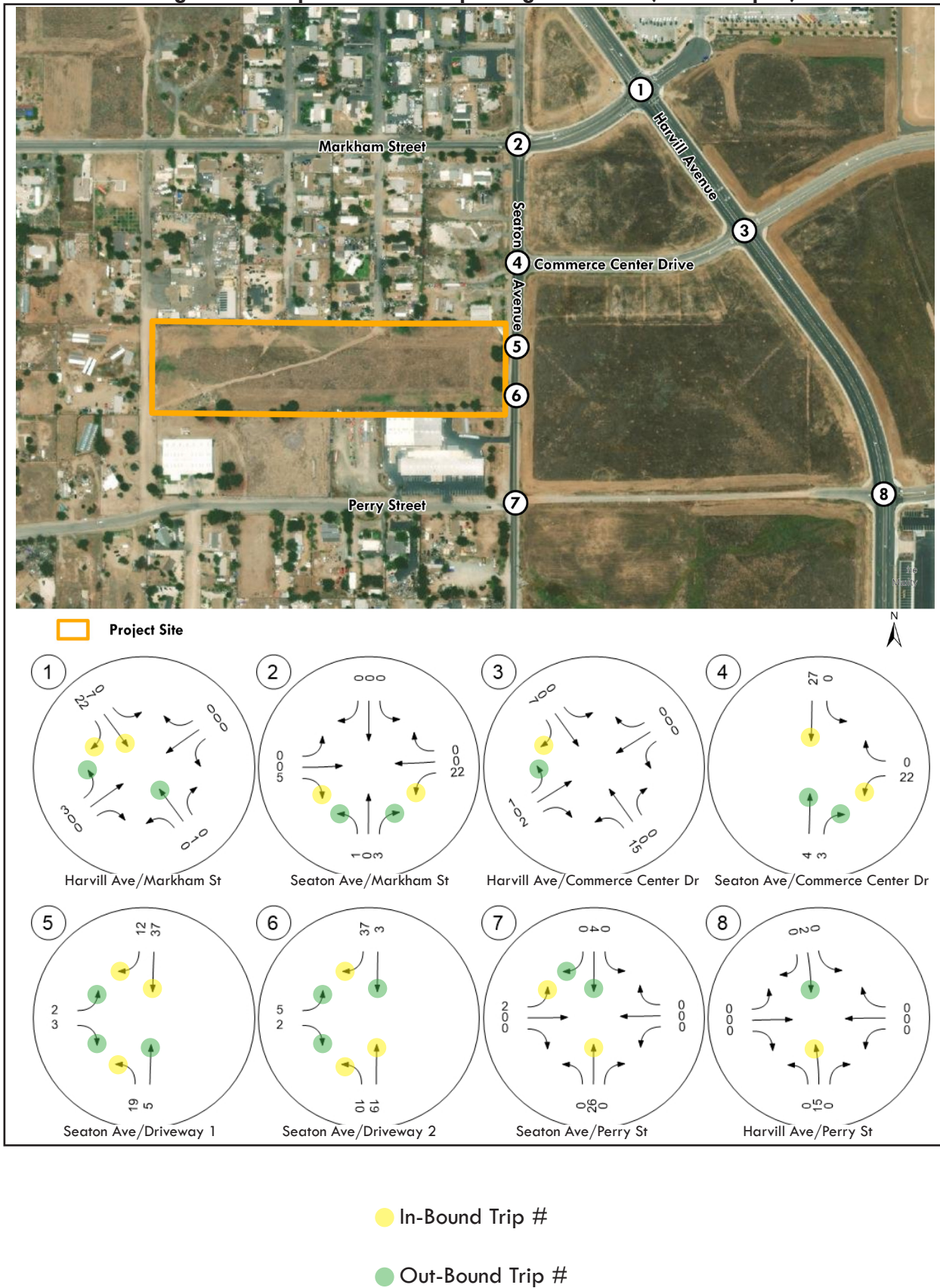


Figure 7b: Project Truck Trip Distribution (Developed)



**Figure 8a: Project Total AM Trip Assignment PCE (Undeveloped)**



**Figure 8b: Project Total PM Trip Assignment PCE (Undeveloped)**

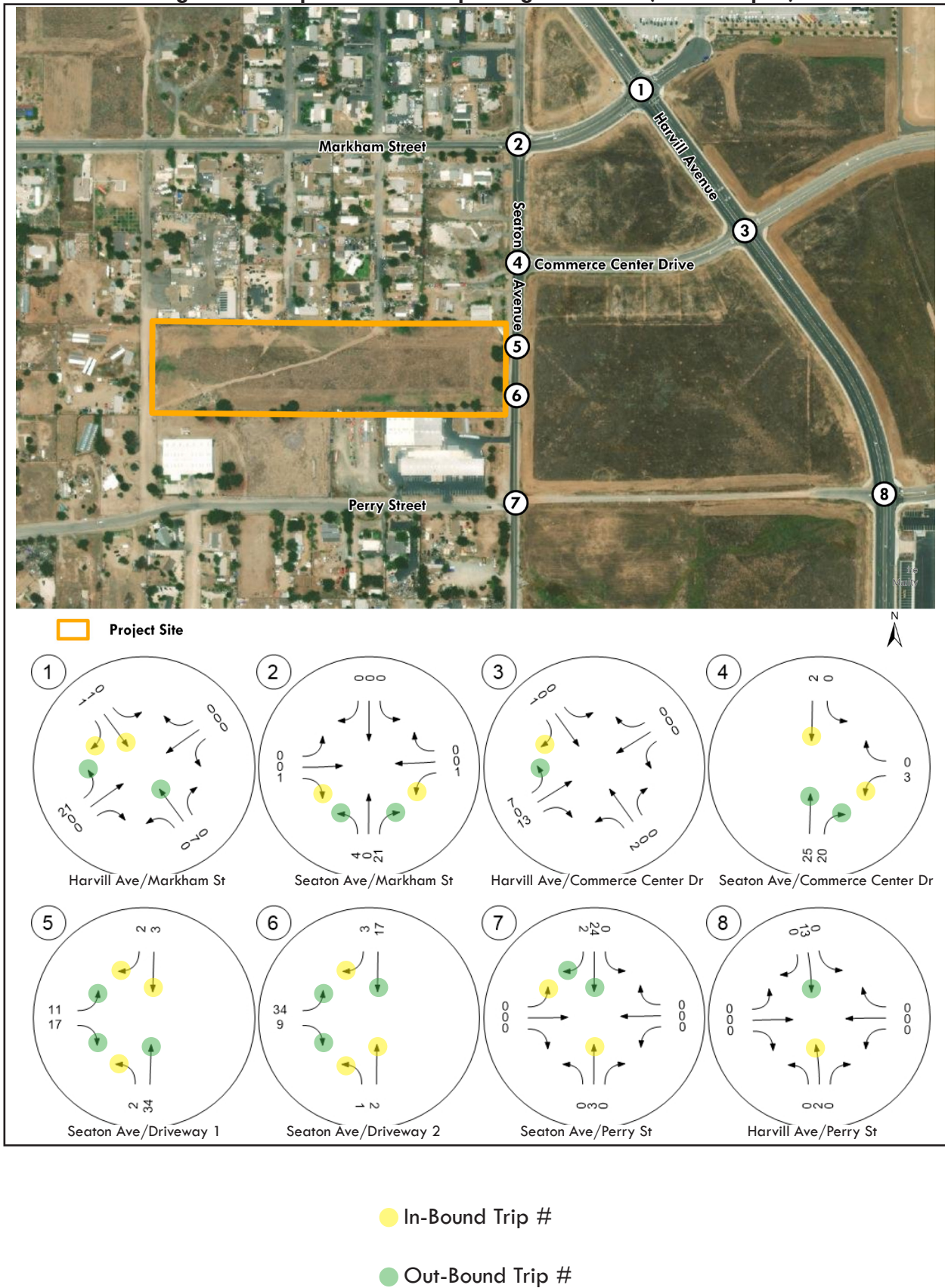
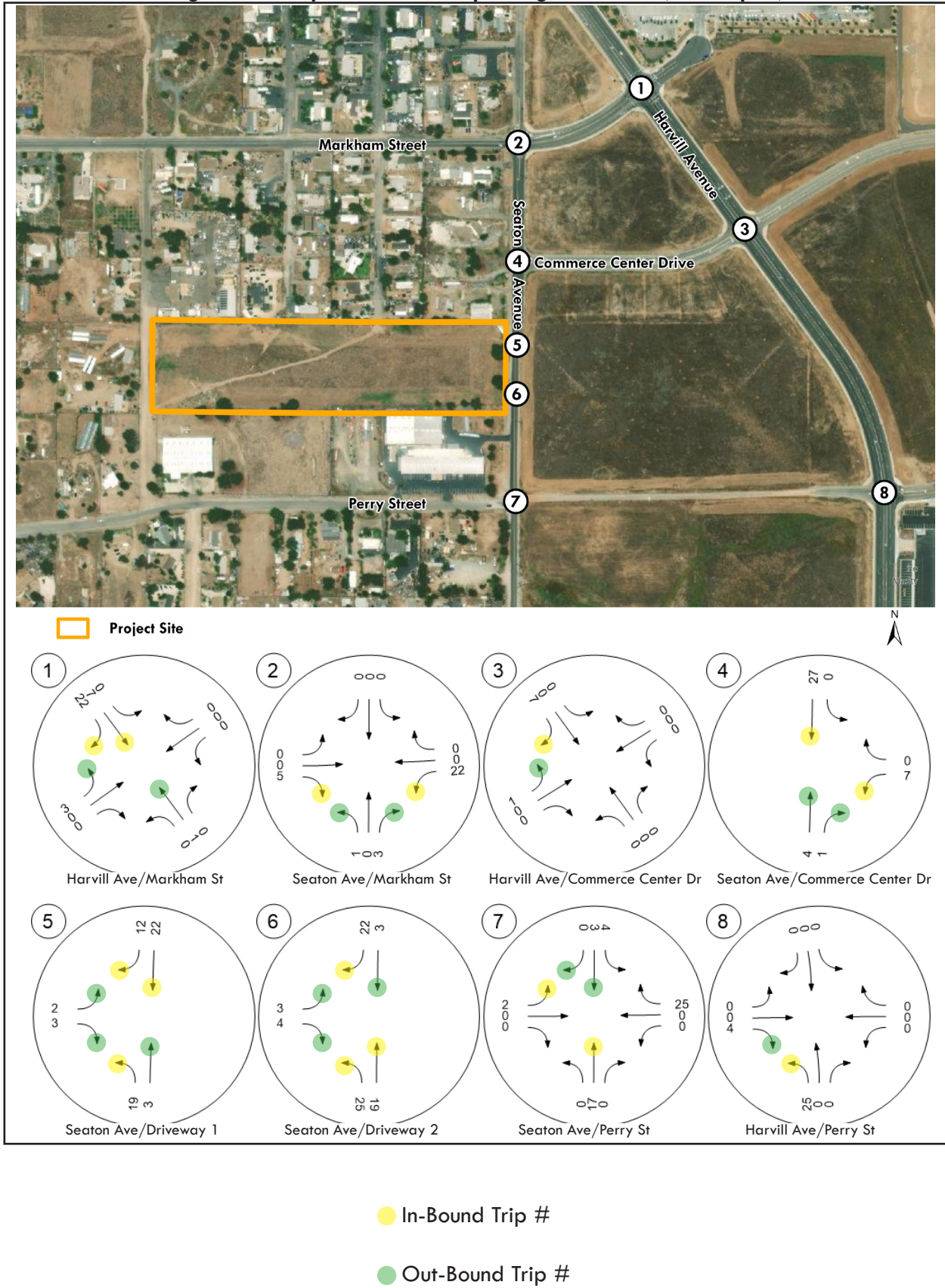
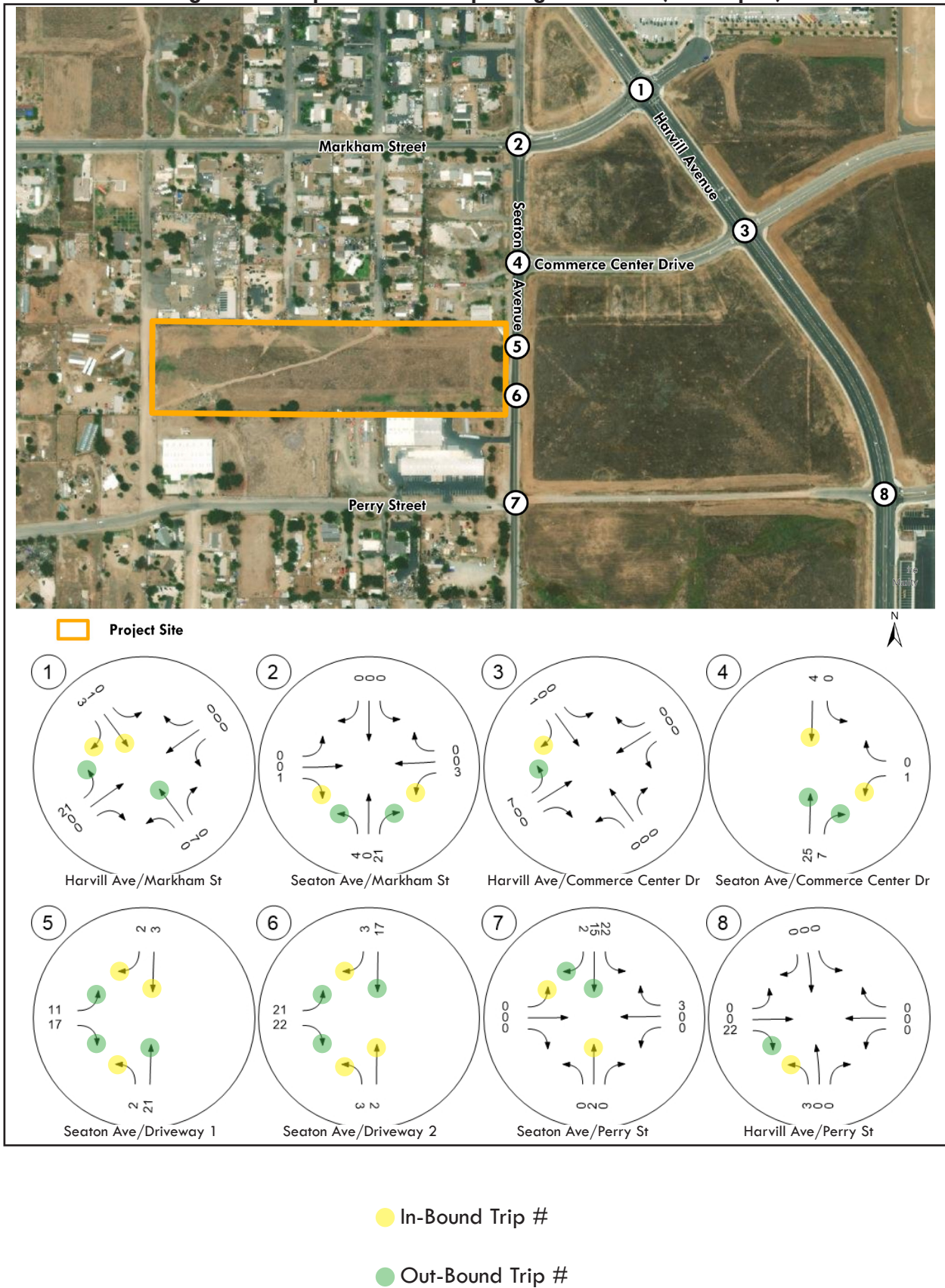


Figure 9a: Project Total AM Trip Assignment PCE (Developed)





**Figure 9b: Project Total PM Trip Assignment PCE (Developed)**



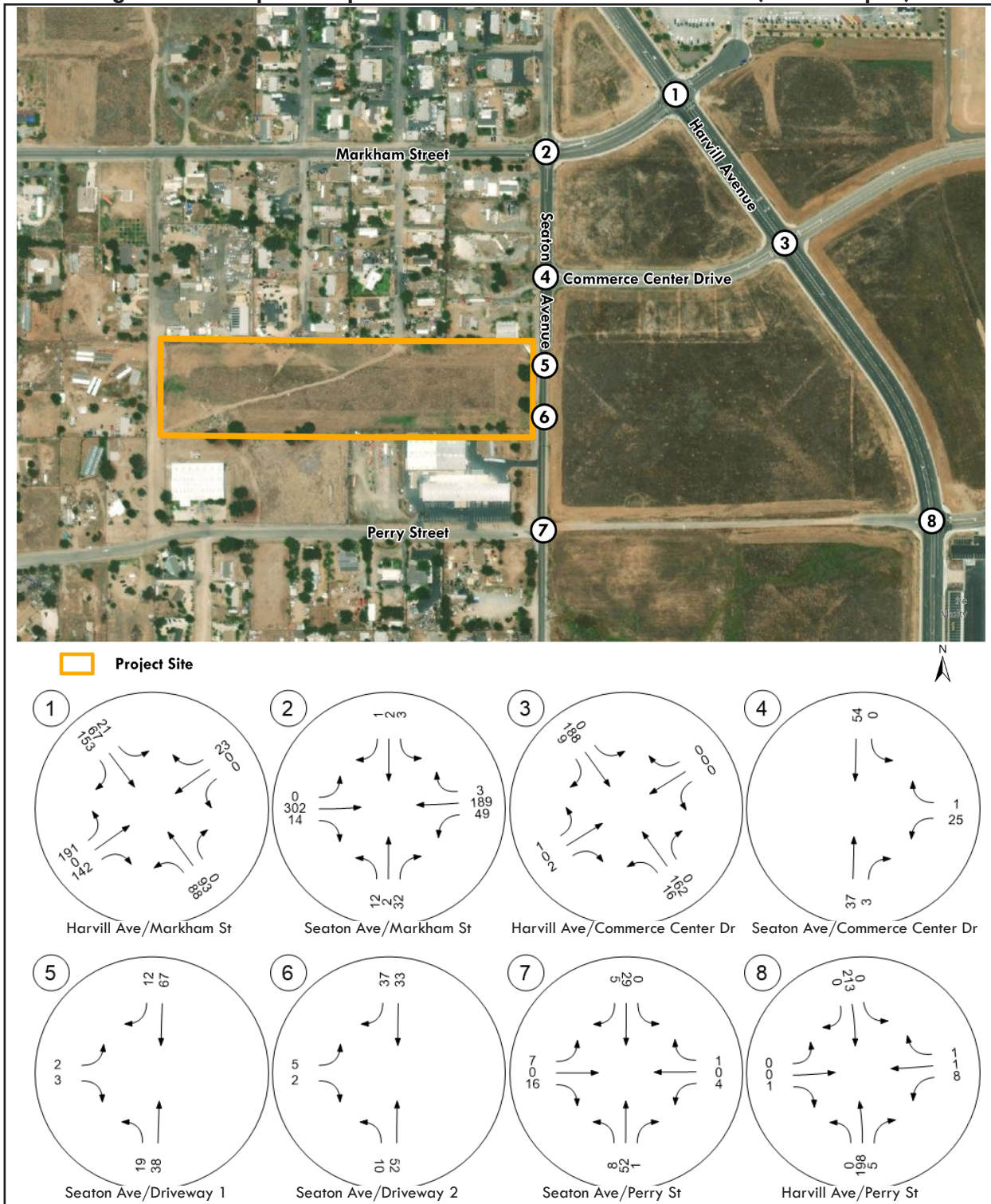
## 5 PROJECT IMPACTS

### 5.1 Project Completion Traffic Volumes and LOS

Project Completion (2023) traffic volumes were developed by applying a growth rate of two percent per year to the existing (2021) traffic volumes. As stated in section 4, Perry Street could be constructed by the Project Completion year, therefore two scenarios are analyzed, Project Completion Undeveloped and Project Completion Developed. The Project Completion traffic volumes are illustrated in Figure 10 – Project Completion Peak Hour Traffic Volumes (Undeveloped) and Figure 11 – Project Completion Peak Hour Traffic Volumes (Developed).

The Project Completion levels of service (LOS) at the existing study area intersections were determined using the HCM methodology, described previously in Section 2.3 - Methodology. Table 5 shows the Project Completion Undeveloped AM and PM peak hour levels of service at study intersections and Table 6 shows the Project Completion Developed AM and PM peak hour levels of service at study intersections. As shown in Table 5 and Table 6, all of the intersections are forecast to operate at satisfactory LOS C or better in the Project Completion scenario.

**Figure 10a: Project Completion AM Peak Hour Traffic Volumes (Undeveloped)**



**Figure 10b: Project Completion PM Peak Hour Traffic Volumes (Undeveloped)**

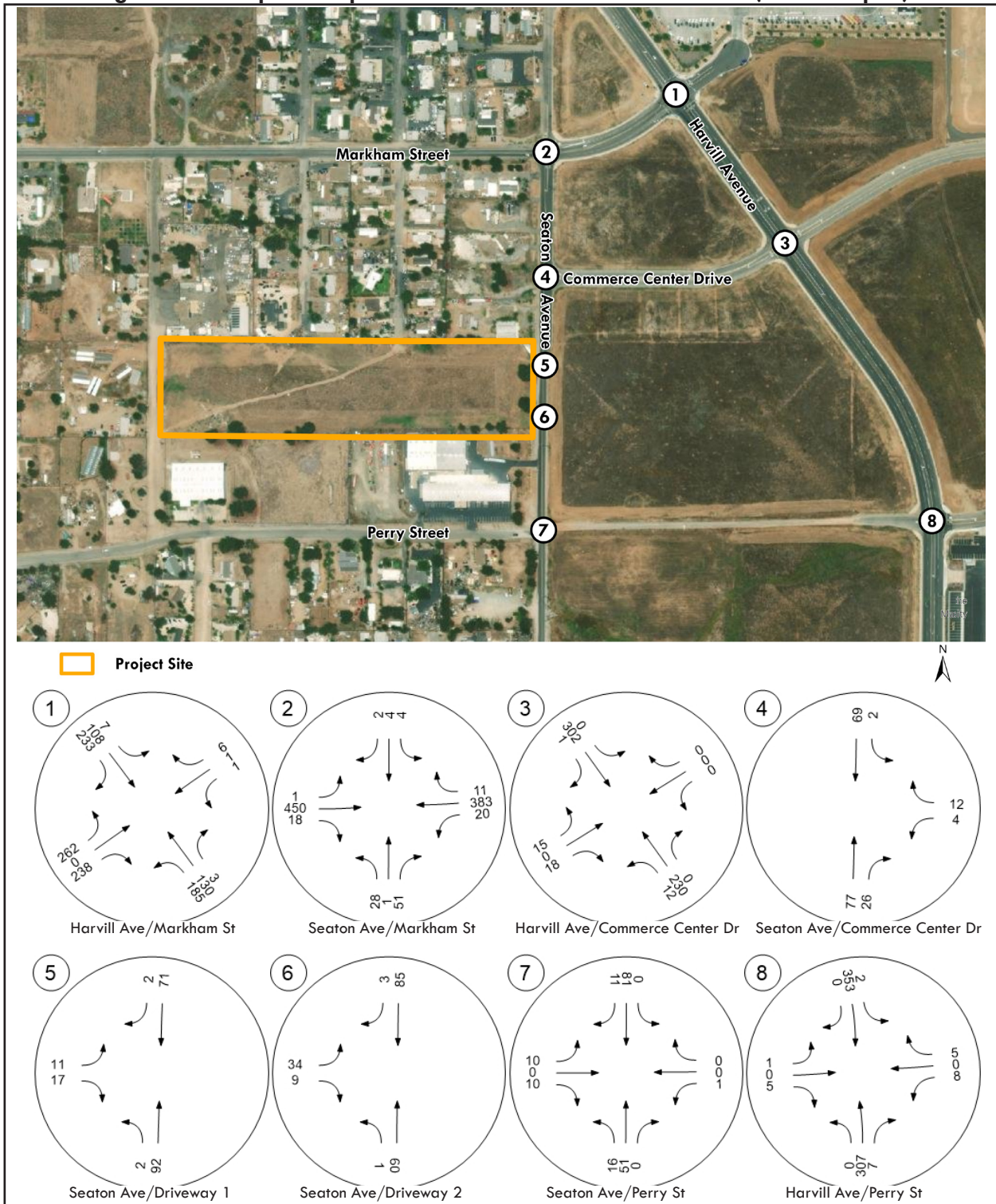
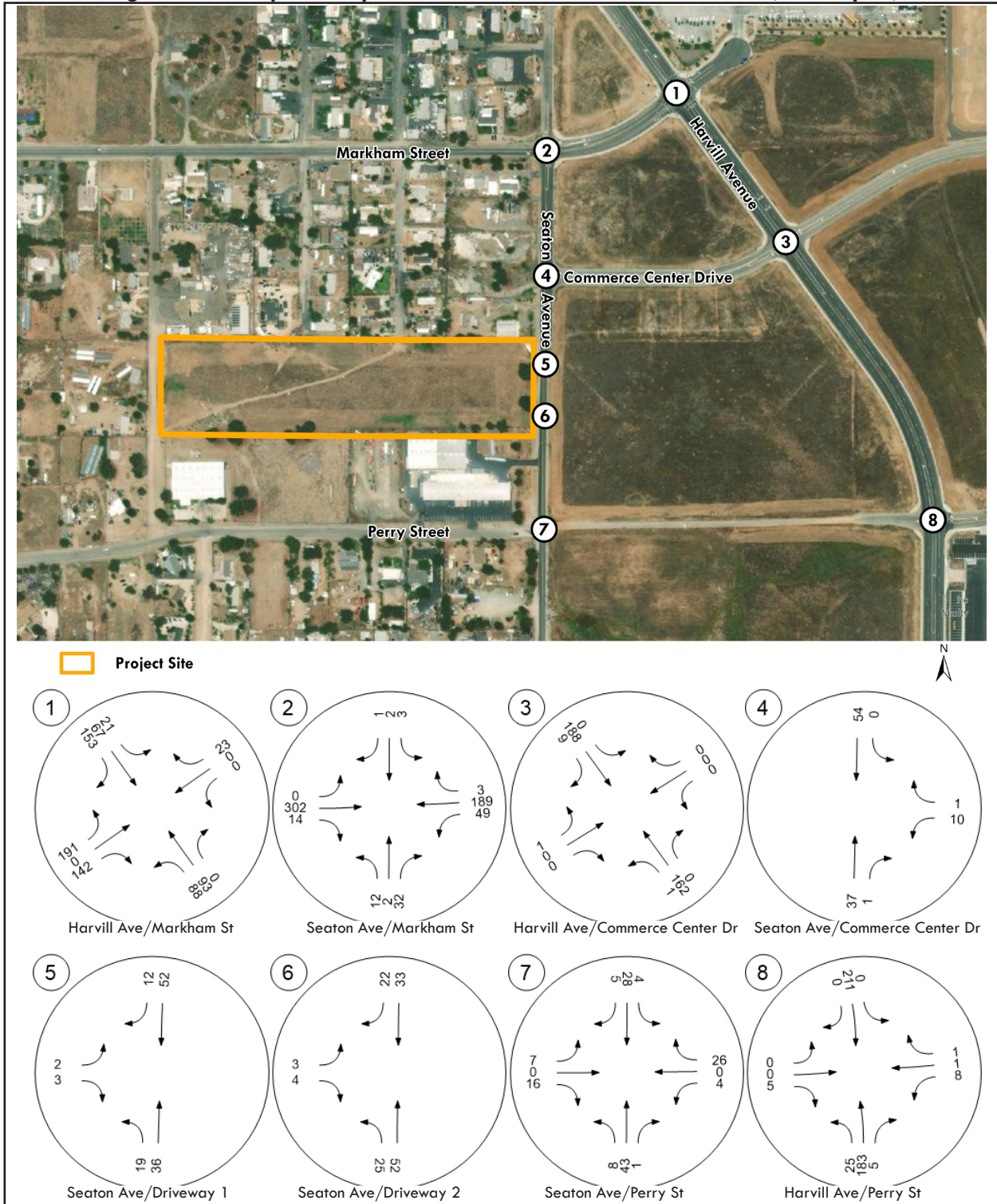
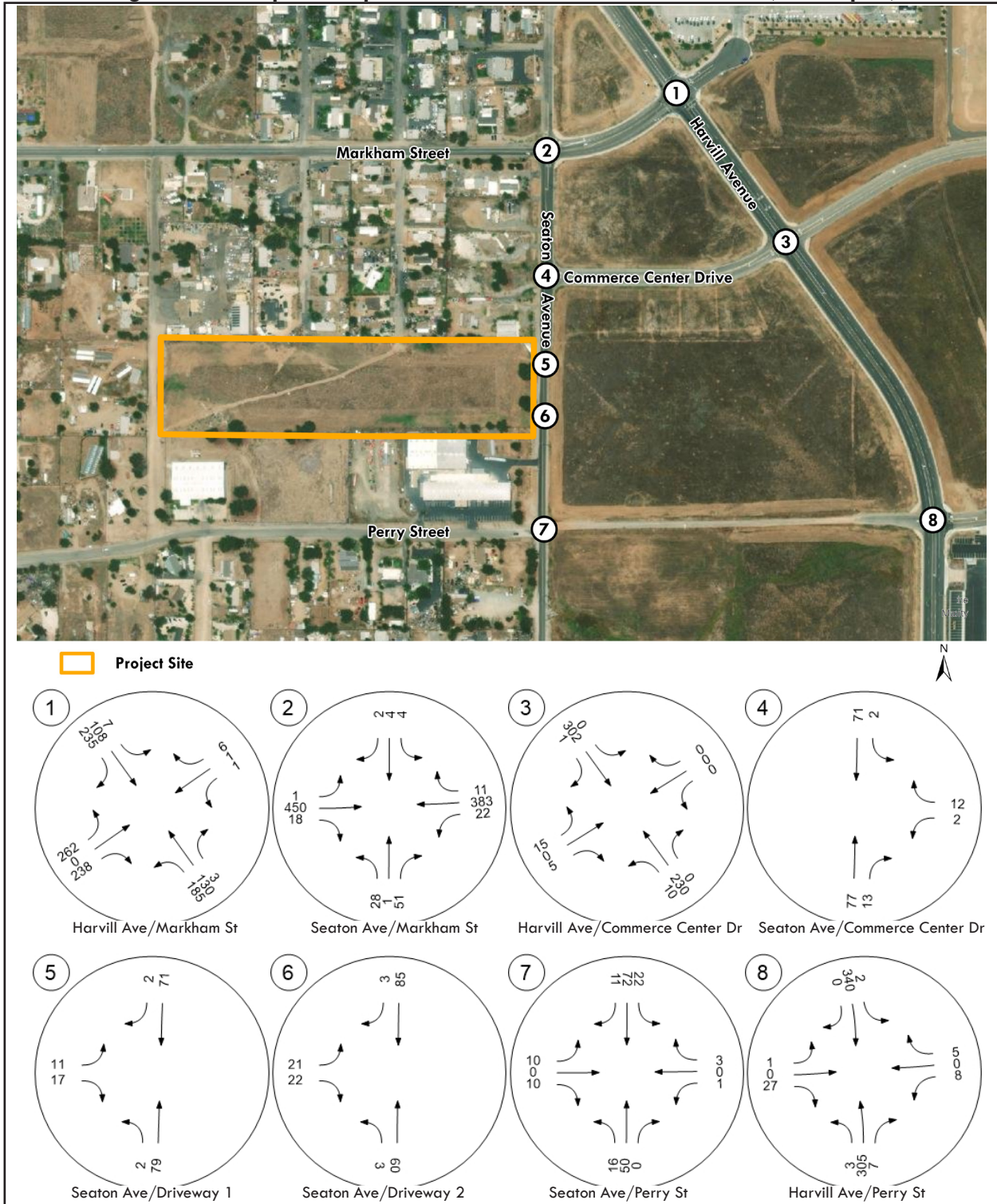


Figure 11a: Project Completion AM Peak Hour Traffic Volumes (Developed)



**Figure 11b: Project Completion PM Peak Hour Traffic Volumes (Developed)**



**Table 5. Project Completion AM and PM Peak Hour Levels of Service (Undeveloped)**

Intersection	Signal Control	AM Peak		PM Peak	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1. Harvill Ave/Markham St	Signal	28.2	C	30.9	C
2. Seaton Ave/Markham St	AWSC	11.8	B	21.1	C
3. Harvill Ave/Commerce Center Dr	TWSC	11.6	B	13.2	B
4. Seaton Ave/Commerce Cener Dr	TWSC	9.5	A	9.7	A
5. Seaton Ave/Driveway 1	TWSC	9.4	A	9.5	A
6. Seaton Ave/Driveway 2	TWSC	9.2	A	9.5	A
7. Seaton Ave/Perry St	TWSC	9.5	A	10.2	B
8. Harvill Ave/Perry St	TWSC	12.4	B	14.8	B

AWSC = All-Way Stop Controlled

TWSC = Two-Way Stop Controlled

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service**Table 6. Project Completion AM and PM Peak Hour Levels of Service (Developed)**

Intersection	Signal Control	AM Peak		PM Peak	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1. Harvill Ave/Markham St	Signal	28.2	C	30.9	C
2. Seaton Ave/Markham St	AWSC	11.8	B	21.3	C
3. Harvill Ave/Commerce Center Dr	TWSC	11.1	B	13.1	B
4. Seaton Ave/Commerce Cener Dr	TWSC	9.3	A	9.7	A
5. Seaton Ave/Driveway 1	TWSC	9.4	A	9.5	A
6. Seaton Ave/Driveway 2	TWSC	9.4	A	9.5	A
7. Seaton Ave/Perry St	TWSC	9.8	A	10.8	B
8. Harvill Ave/Perry St	TWSC	12.9	B	15.0	C

AWSC = All-Way Stop Controlled

TWSC = Two-Way Stop Controlled

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service

### 5.3 Cumulative Traffic Volumes and LOS

Cumulative traffic volumes were determined by adding surrounding projects that are either in process or approved but not yet operational to the Project Completion traffic volumes. A total of 20 projects in the vicinity of the proposed project were included in the Cumulative scenario. The location of the cumulative projects are shown in Figure 12 – Location of Cumulative Projects. The project trip generation for each cumulative project was taken from the projects approved TIA, or, where the TIA was not available, calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation*, 10<sup>th</sup> Edition. Table 7 shows the trip generation for each cumulative project.

The traffic volumes generated by the cumulative projects were distributed to the study area intersections using the manual distribution method. The distribution used for each cumulative project was determined based on the location of the project in relation to the study area, as well as logical paths of travel to and from each cumulative project site. The cumulative project traffic volumes are illustrated in Figure 13 – Cumulative Projects Trip Assignment.

Figure 14 – Cumulative Peak Hour Traffic Volumes (Undeveloped) and Figure 15 – Cumulative Peak Hour Traffic Volumes (Developed) shows the Cumulative AM and PM peak hour traffic volumes at the study intersections for each scenario.

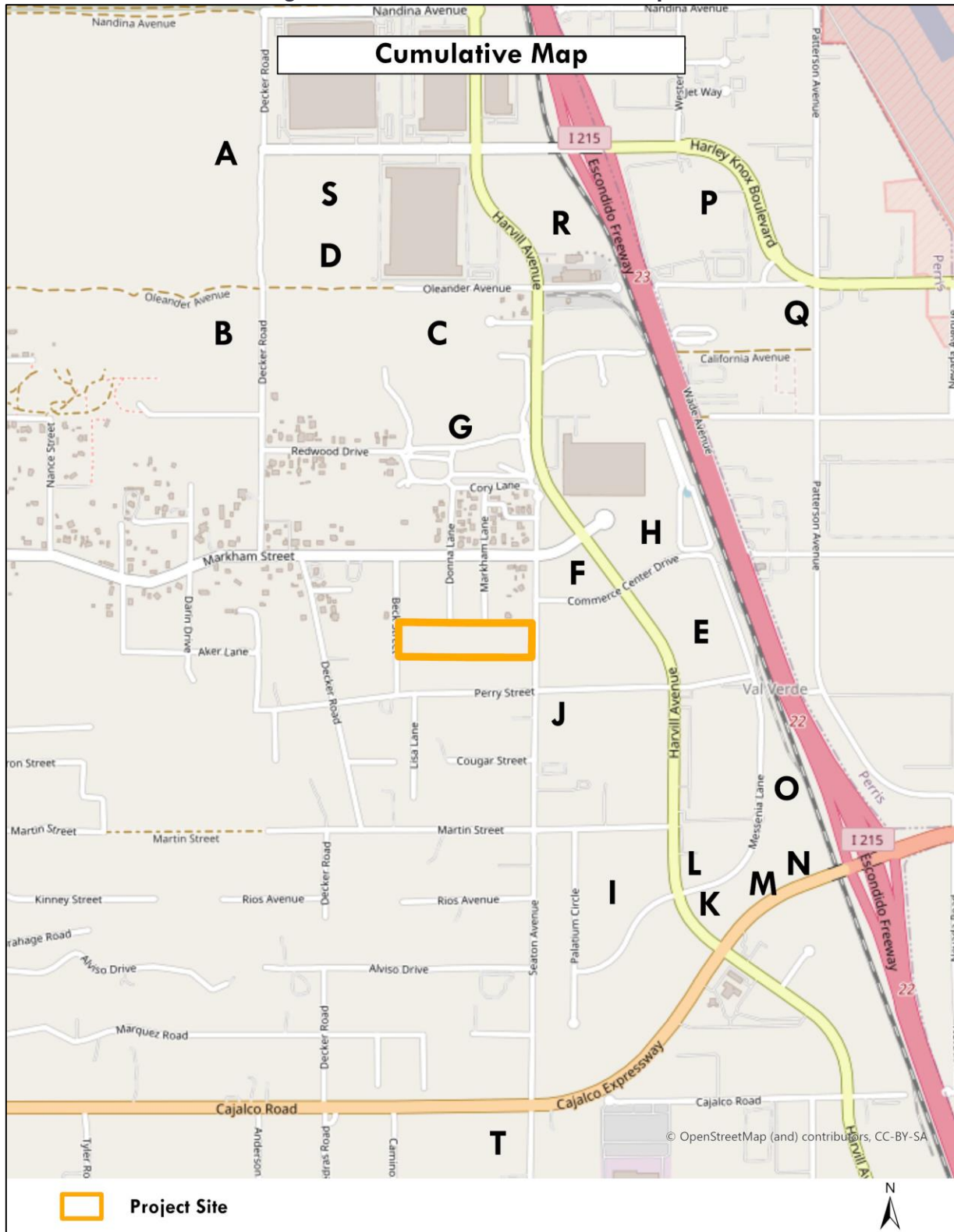
An intersection operations analysis was conducted for the study area to evaluate the Cumulative AM and PM peak hour conditions. Intersection operations were calculated using the LOS methodology described previously. Table 8 provides a comparison between the Cumulative Conditions (Undeveloped) and Table 9 provides a comparison between the Cumulative Conditions (Developed).

As shown in Table 8 and Table 9, all of intersections would operate with satisfactory LOS of C or better in the Cumulative Conditions.

The estimated queue lengths for the northbound left for Intersection 6 (Seaton Avenue/Driveway 2) and southbound left for Intersection 7 (Seaton Avenue/Perry Street) is less than one vehicle, therefore the capacity of 150 feet would be more than sufficient to accommodate both ingress and egress Truck and automobile trips.



Figure 12: Location of Cumulative Projects



**Table 7. Cumulative Projects Trip Generation**

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Rates</u>								
High-Cube Warehouse/Distribution Center <sup>1</sup>	TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
Warehouse <sup>2</sup>	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
Manufacturing <sup>3</sup>	TSF	3.93	0.48	0.14	0.62	0.21	0.46	0.67
Fulfillment Center <sup>4</sup>	TSF	2.13	0.10	0.02	0.12	0.06	0.10	0.17
High-Cube Cold Storage Warehouse <sup>5</sup>	TSF	2.12	0.08	0.03	0.11	0.03	0.09	0.12
<b><u>A: Oleander Business Park</u></b>								
Total High Cube PCE	568.589 TSF	1936	141	46	187	61	143	204
<b><u>B: Knox Logistics Center</u></b>								
Total High Cube PCE	1259.410 TSF	2936	119	53	172	62	138	200
<b><u>C: Majestic Freeway Business Center Building 20</u></b>								
Total Warehouse SF	425.830 TSF	942	71	21	92	28	75	103
<b><u>D: Majestic Freeway Business Center Buildings 21 and 22</u></b>								
Total Warehouse SF	241.059 TSF	533	40	12	52	16	42	58
<b><u>E: Majestic Freeway Business Center Building 11</u></b>								
Total High Cube SF	391.045 TSF	717	32	9	41	14	37	51
<b><u>F: Majestic Freeway Business Center Building 15</u></b>								
Total Warehouse SF	90.279 TSF	200	15	4	20	6	16	22
<b><u>G: Majestic Freeway Business Center Building 19</u></b>								
Total Warehouse SF	364.560 TSF	806	61	18	79	24	64	88
<b><u>H: Majestic Freeway Business Center Building 12</u></b>								
Total Warehouse SF	154.751 TSF	342	26	8	33	10	27	37
<b><u>I: Majestic Logistics Center</u></b>								
Total High Cube PCE	1244.670 TSF	2240	104	30	134	52	134	186
<b><u>J: Seaton Commerce Center</u></b>								
Total High Cube SF	210.800 TSF	235	10	3	13	5	12	17
<b><u>K: Majestic Freeway Business Center Building 5</u></b>								
Total Warehouse SF	40.000 TSF	56	4	1	5	2	4	6

**Table 7 (cont.) Cumulative Projects Trip Generation**

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b><u>L: Majestic Freeway Business Center Building 6</u></b>								
Total Warehouse SF	72.000 TSF	101	8	2	10	3	8	11
<b><u>M: Majestic Freeway Business Center Building 7</u></b>								
Total Warehouse SF	80.000 TSF	112	8	3	11	3	9	12
<b><u>N: Majestic Freeway Business Center Building 8</u></b>								
Total Warehouse SF	110.000 TSF	154	12	3	15	5	12	17
<b><u>O: Majestic Freeway Business Center Building 9</u></b>								
Total Warehouse SF	45.000 TSF	63	5	1	6	2	5	7
<b><u>P: Gateway</u></b>								
Total High Cube SF	400.000 TSF	446	20	6	25	9	23	32
<b><u>Q: Canyon Steel</u></b>								
Total Manufacturing SF	28.124 TSF	68	8	2	11	4	8	12
<b><u>R: Diamond Warehouse</u></b>								
High Cube Warehouse SF	418.000 TSF	686	21	0	21	10	31	41
<b><u>S: Muranaka</u></b>								
Fulfillment Center SF	239.717 TSF	660	30	7	37	18	29	47
<b><u>T: Seaton and Cajalco</u></b>								
Warehouse and Cold Storage SF	365.050 TSF	746	28	15	43	15	29	44
<b>Total Cumulative Trip Generation</b>		<b>13977</b>	<b>763</b>	<b>245</b>	<b>1008</b>	<b>347</b>	<b>847</b>	<b>1194</b>

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017* . Land Use Code 152 - High-Cube Warehouse/Distribution Center.<sup>2</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017* . Land Use Code 150 - Warehouse.<sup>3</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017* . Land Use Code 130 - Manufacturing.<sup>4</sup> Trip rates from TUMF High-Cube Warehouse Trip Generation Study, WSP, January 29, 2019. In/Out splits from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017* . Land Use Code 155 - High-Cube Fulfillment Center Warehouse.<sup>5</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017* . Land Use Code 157 - High-Cube Cold Storage Warehouse.

Figure 13a: Cumulative Projects AM Trip Assignment

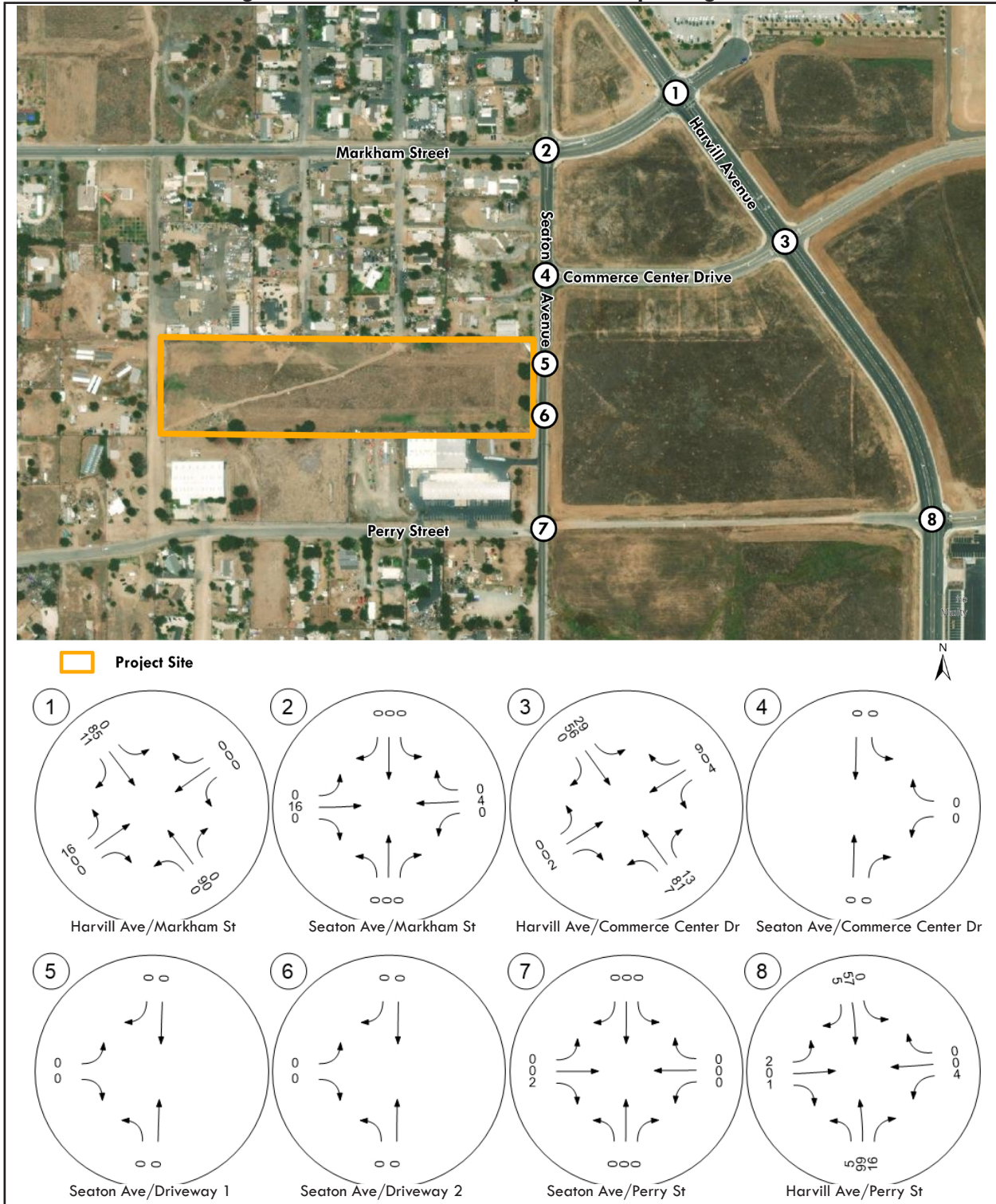


Figure 13b: Cumulative Projects PM Trip Assignment

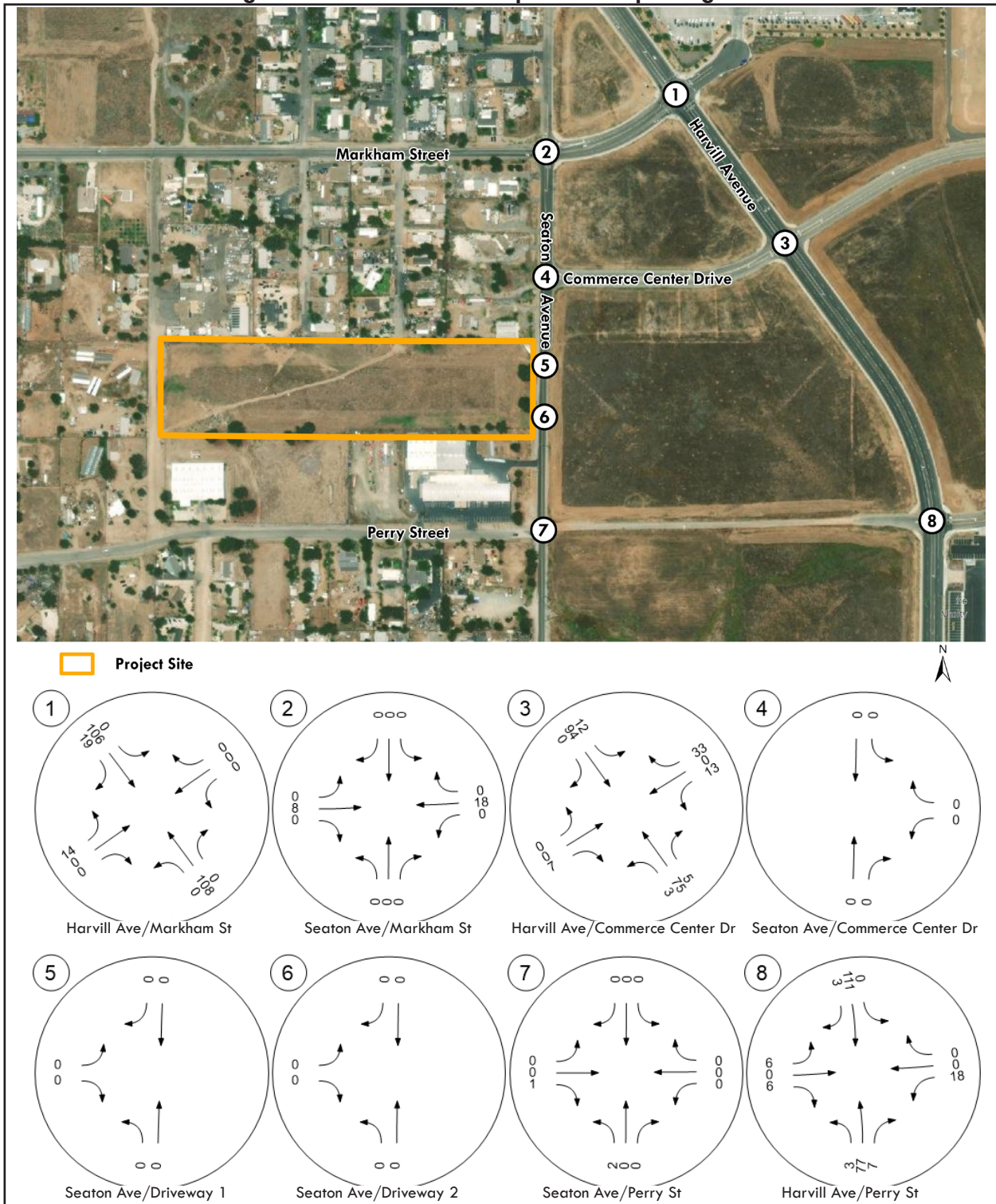


Figure 14a: Cumulative AM Peak Hour Traffic Volumes (Undeveloped)

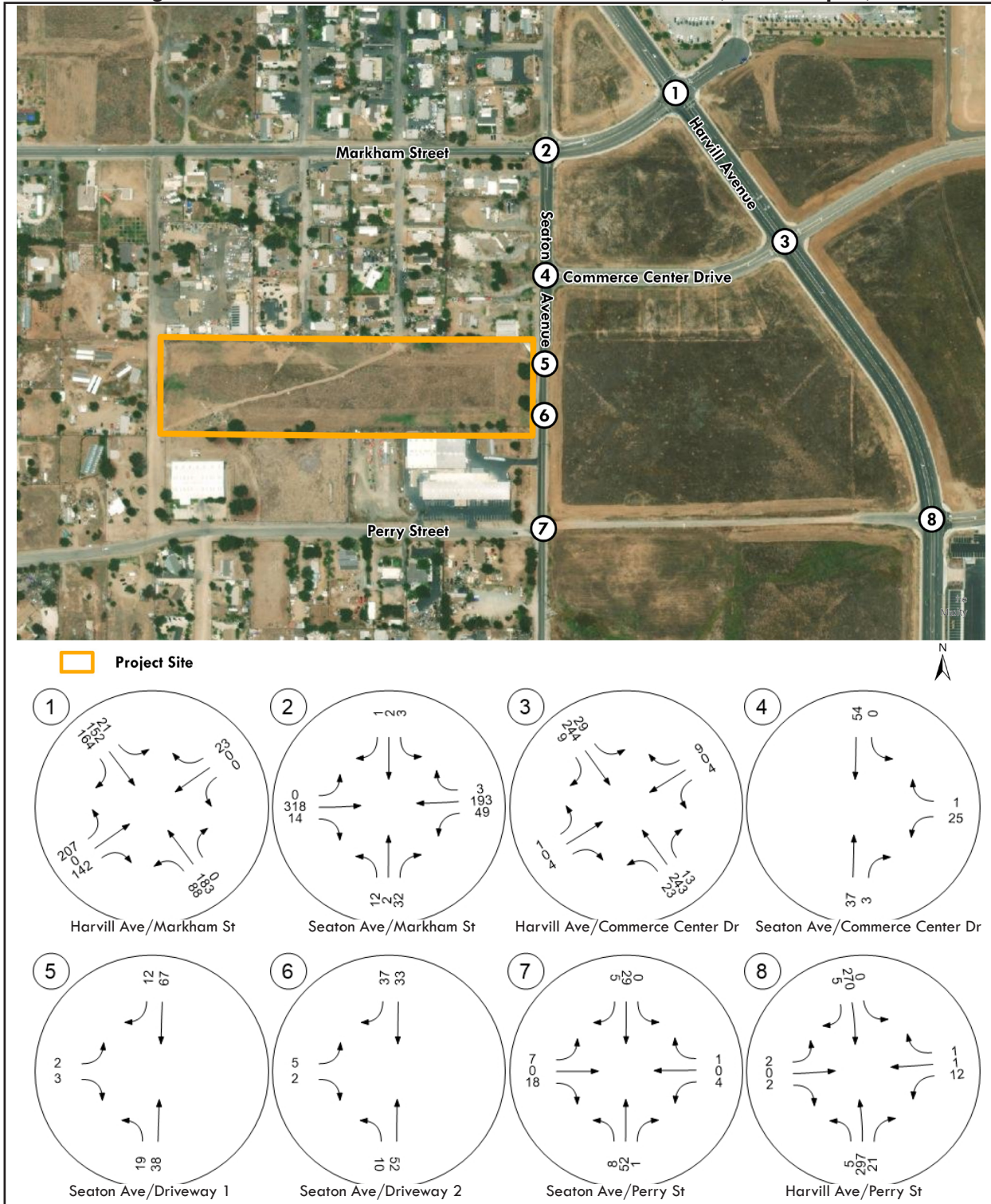


Figure 14b: Cumulative PM Peak Hour Traffic Volumes (Undeveloped)

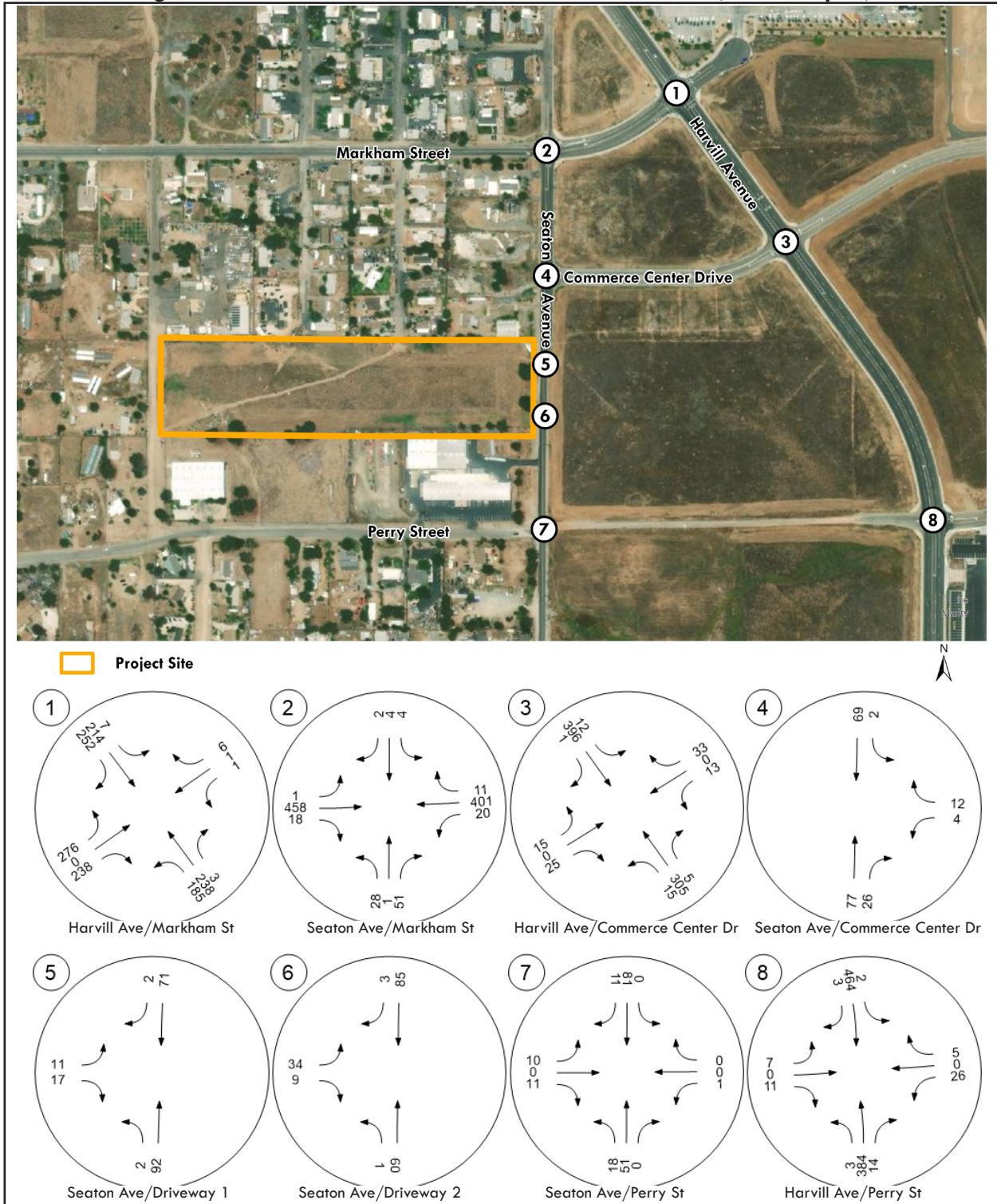


Figure 15a: Cumulative AM Peak Hour Traffic Volumes (Developed)

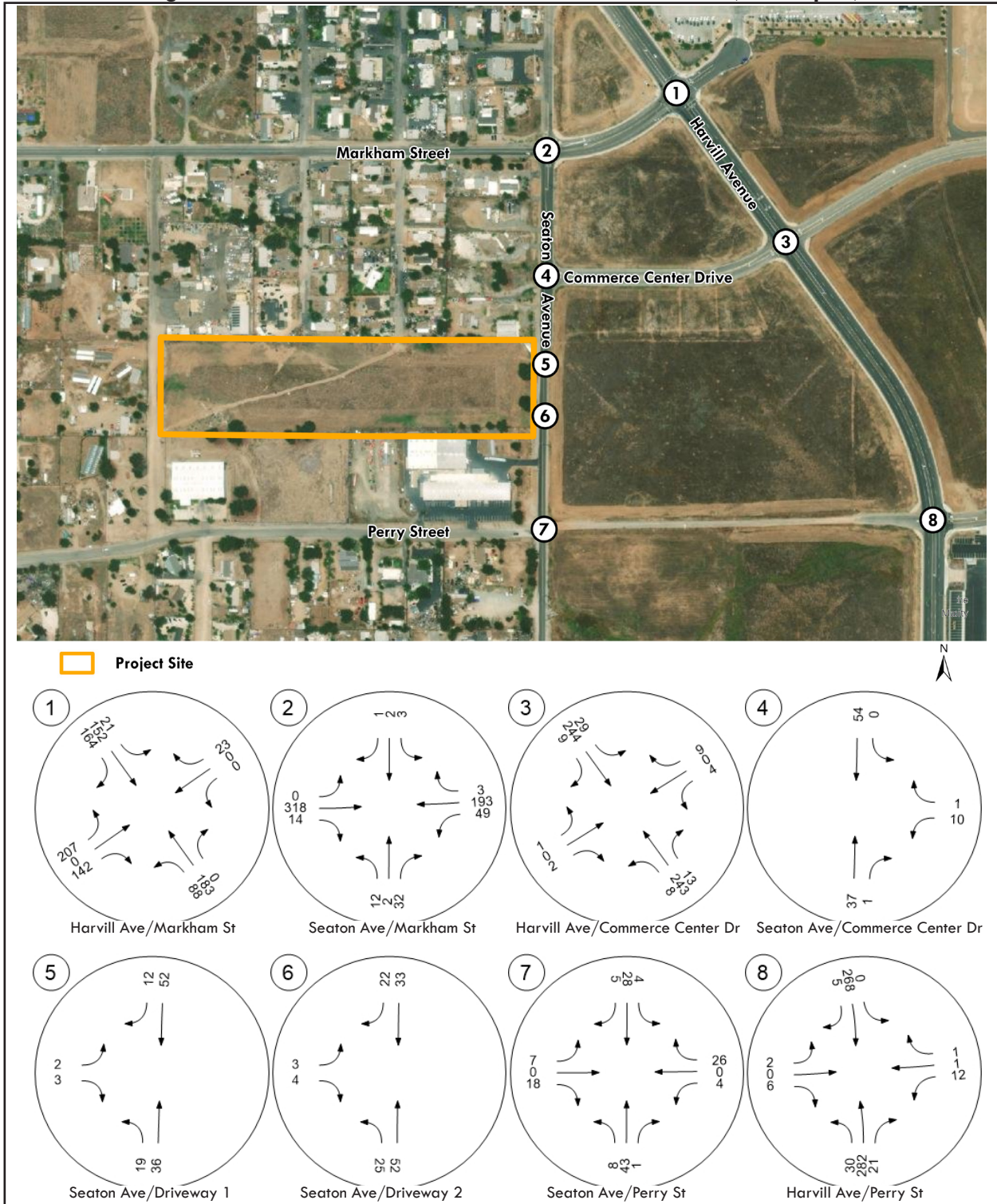
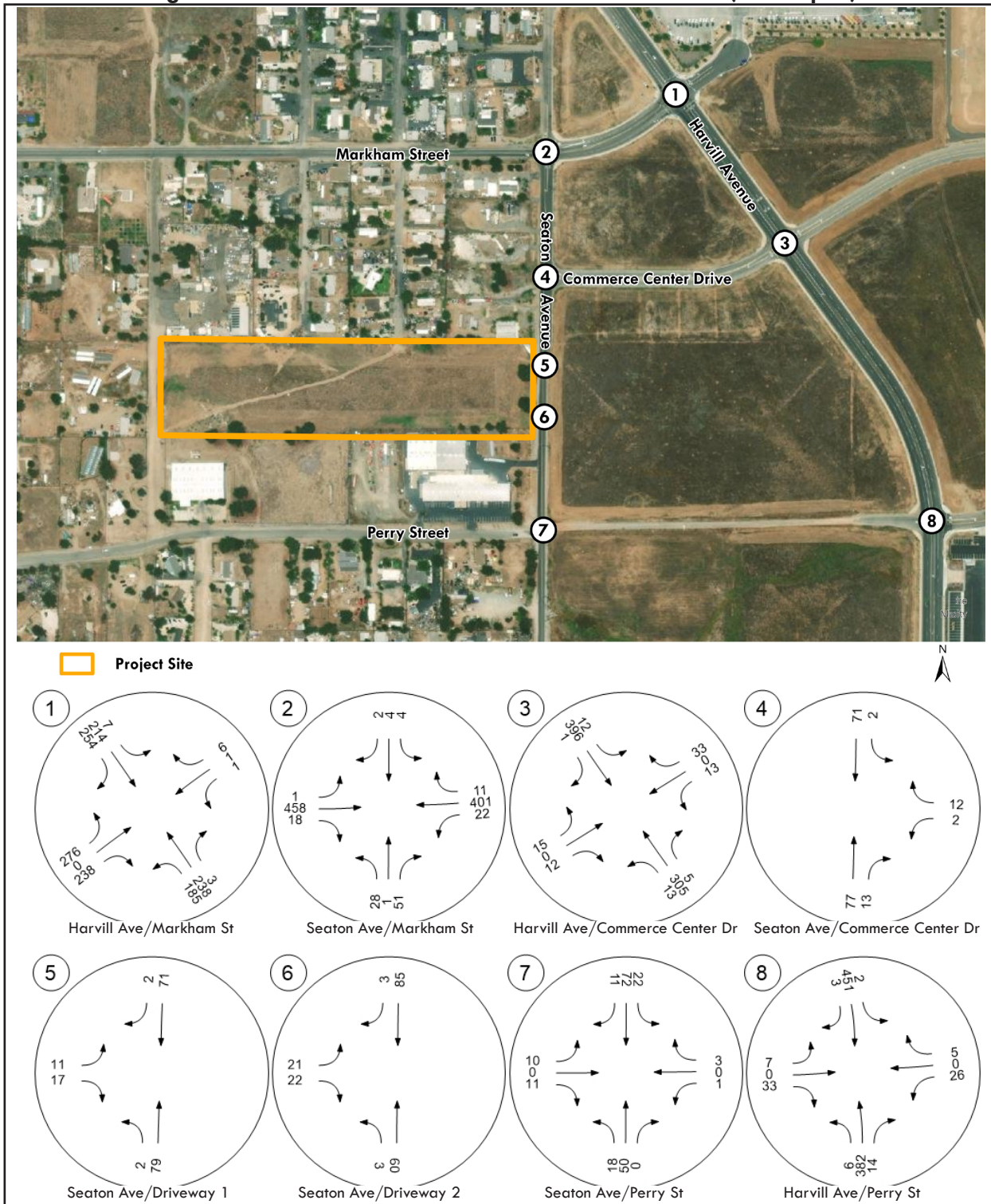




Figure 15b: Cumulative PM Peak Hour Traffic Volumes (Developed)



**Table 8. Cumulative Peak Hour Levels of Service (Undeveloped)**

Intersection	Signal Control	AM Peak		PM Peak	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1. Harvill Ave/Markham St	Signal	29.5	C	31.2	C
2. Seaton Ave/Markham St	AWSC	12.2	B	22.7	C
3. Harvill Ave/Commerce Center Dr	TWSC	14.8	B	16.8	C
4. Seaton Ave/Commerce Cener Dr	TWSC	9.5	A	9.7	A
5. Seaton Ave/Driveway 1	TWSC	9.4	A	9.5	A
6. Seaton Ave/Driveway 2	TWSC	9.2	A	9.5	A
7. Seaton Ave/Perry St	TWSC	9.6	A	10.3	B
8. Harvill Ave/Perry St	TWSC	14.8	B	19.5	C

AWSC = All-Way Stop Controlled

TWSC = Two-Way Stop Controlled

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service**Table 9. Cumulative Peak Hour Levels of Service (Developed)**

Intersection	Signal Control	AM Peak		PM Peak	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1. Harvill Ave/Markham St	Signal	29.5	C	31.2	C
2. Seaton Ave/Markham St	AWSC	12.2	B	22.8	C
3. Harvill Ave/Commerce Center Dr	TWSC	14.1	B	16.7	C
4. Seaton Ave/Commerce Cener Dr	TWSC	9.3	A	9.7	A
5. Seaton Ave/Driveway 1	TWSC	9.3	A	9.5	A
6. Seaton Ave/Driveway 2	TWSC	9.4	A	9.5	A
7. Seaton Ave/Perry St	TWSC	9.8	A	10.9	B
8. Harvill Ave/Perry St	TWSC	15.4	C	20.1	C

AWSC = All-Way Stop Controlled

TWSC = Two-Way Stop Controlled

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service

## 6 Conclusion

The analysis of the Seaton Small Business Center Project's traffic impacts at the study area intersections show all intersections would remain at LOS C or better in all scenarios. Therefore, no off-site mitigation would be required to achieve an acceptable LOS. Below is a breakdown of the results of the plus project scenarios

### **Existing Condition Intersection Analysis Results (Undeveloped and Developed)**

All of the intersections would operate with satisfactory LOS of C or better in the Existing Condition scenario. No improvements are required.

### **Project Completion Intersection Analysis Results (Undeveloped and Developed)**

All of the intersections would operate with satisfactory LOS of C or better in the Project Completion scenario. No improvements are required.

### **Cumulative Intersection Analysis Results (Undeveloped and Developed)**

All of the intersections would operate with satisfactory LOS of C or better in the Cumulative scenario. No improvements are required.

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*APPENDIX A – TRAFFIC STUDY SCOPING AGREEMENT*

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## Exhibit B

### SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated February 2020.

Case No. PPT210022  
 Related Cases - \_\_\_\_\_  
 SP No. \_\_\_\_\_  
 EIR No. \_\_\_\_\_  
 GPA No. \_\_\_\_\_  
 CZ No. \_\_\_\_\_

Project Name: Seaton and Perry  
 Project Address: APN 314-091-005  
 Project Description: Construction of two 49,470sf industrial buildings (98,940 total sf)

	<u>Consultant</u>	<u>Developer</u>
Name:	<u>EPD Solutions</u>	<u>Dedeaux Properties</u>
Address:	<u>2 Park Plaza, Suite 1120</u>	<u>100 Wilshire Blvd, Suite 250</u>
	<u>Irvine, CA 92614</u>	<u>Santa Monica, CA 90401</u>
Telephone:	<u>(949) 794-1186</u>	<u>(323) 981-8226</u>
Fax:	_____	_____

**A. Trip Generation Source:** ITE 10<sup>th</sup> Edition

Current GP Land Use	<u>Light Industrial (LI)</u>	Proposed Land Use	<u>Light Industrial (LI)</u>
Current Zoning	<u>M-SC and I-P</u>	Proposed Zoning	<u>M-SC and I-P</u>

	Current Trip Generation In PCE <i>(From Attached Counts)</i>			Proposed Trip Generation In PCE		
	In	Out	Total	In	Out	Total
AM Trips	<u>0</u>	<u>0</u>	<u>0</u>	<u>78</u>	<u>11</u>	<u>88</u>
PM Trips	<u>0</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>69</u>	<u>79</u>

Internal Trip Allowance       Yes       No      ( \_\_\_\_\_ % Trip Discount)  
 Pass-By Trip Allowance       Yes       No      ( \_\_\_\_\_ % Trip Discount)

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

**B. Trip Geographic Distribution:**      N 30(50%)      S 40(50%)      E 0(0) %      W 30(0) %  
 Car(Truck) (attach exhibit for detailed assignment)

**C. Background Traffic**

Project Build-out Year: 2023      Annual Ambient Growth Rate: 2 %

Phase Year(s) \_\_\_\_\_  
 Other area projects to be analyzed: \_\_\_\_\_

Model/Forecast methodology \_\_\_\_\_

Exhibit B – Scoping Agreement – Page 2

**D. Study intersections:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- |  |                                       |
|--|---------------------------------------|
| 1. <u>Harvill Avenue/Markham Street</u>        | 6. <u>Seaton Avenue/Driveway 2</u>    |
| 2. <u>Seaton Avenue/Markham Street</u>         | 7. <u>Harvill Avenue/Perry Street</u> |
| 3. <u>Harvill Avenue/Commerce Center Drive</u> | 8. <u>Seaton Avenue/Perry Street</u>  |
| 4. <u>Seaton Avenue/Commerce Center Drive</u>  | 9. _____                              |
| 5. <u>Seaton Avenue/Driveway 1</u>             | 10. _____                             |

**E. Study Roadway Segments:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

**E. Other Jurisdictional Impacts**

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries?  Yes  No

If so, name of City Jurisdiction: City of Perris

**F. Site Plan** (please attach reduced copy)

**G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)** (To be filled out by Transportation Department)

(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Two Scenarios will be analyzed for the project, one where Perry Street is undeveloped, and one where Perry Street is developed. A focus on the Project Driveways and onsite circulation will also be included in the study.

**H. Existing Conditions**

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts. Date of counts \_\_\_\_\_

**\*NOTE\* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

**Recommended by:**

McGrew Macias \_\_\_\_\_ 7/6/2021

Consultant's Representative

Date

Scoping Agreement Submitted on 7/6/2021

Revised on \_\_\_\_\_

**Approved Scoping Agreement:**

[Signature] \_\_\_\_\_ 07/07/2021  
Riverside County Transportation Department Date

**Table 1. Seaton Ave and Perry Street Trip Generation**

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b><u>Trip Rates</u></b>								
General Light Industrial <sup>1</sup>	TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63
<b><u>Project Trip Generation</u></b>								
Project	98.940 TSF	491	61	8	69	8	54	62
<b><u>Vehicle Mix</u><sup>2</sup></b>								
	<b><u>Percent</u></b>							
Passenger Vehicles	78.60%	386	48	7	54	6	43	49
2-Axle Trucks	8.00%	39	5	1	6	1	4	5
3-Axle Trucks	3.90%	19	2	0	3	0	2	2
4+-Axle Trucks	9.50%	47	6	1	7	1	5	6
	100%	491	61	8	69	8	54	62
<b><u>PCE Trip Generation</u><sup>3</sup></b>								
	<b><u>PCE Factor</u></b>							
Passenger Vehicles	1.0	386	48	7	54	6	43	49
2-Axle Trucks	1.5	59	7	1	8	1	7	7
3-Axle Trucks	2.0	38	5	1	5	1	4	5
4+-Axle Trucks	3.0	140	17	2	20	2	15	18
<b>Total PCE Trip Generation</b>		<b>623</b>	<b>77</b>	<b>11</b>	<b>88</b>	<b>10</b>	<b>69</b>	<b>79</b>

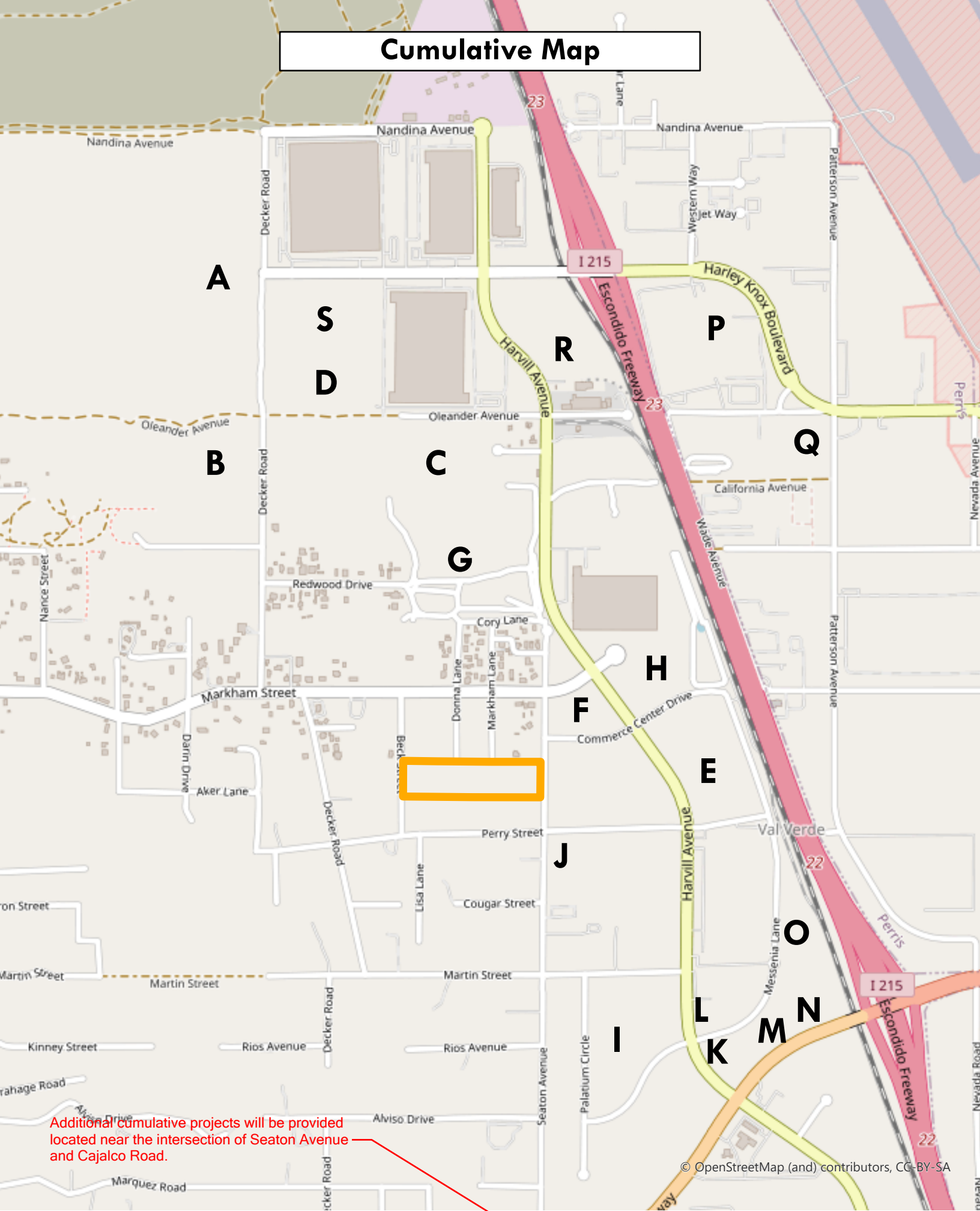
TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 110 - General Light Industrial.<sup>2</sup> Vehicle Mix from the City of Fontana, *Truck Trip Generation Study*, August 2003. Classification: Light Industrial.<sup>3</sup> Passenger Car Equivalent (PCE) factors from San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016

Revise to refer Appendix C of the County Transportation Analysis Guidelines for PCE factors.

# Cumulative Map



Additional cumulative projects will be provided located near the intersection of Seaton Avenue and Cajalco Road.

 Project Site





**Cumulative PCE Trip Generation**

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
<u>Trip Rates</u>									
High-Cube Warehouse/Distribution Center <sup>1</sup>	TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10	
Warehouse <sup>2</sup>	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19	
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Fulfillment Center <sup>4</sup>		2.13	0.10	0.02	0.12	0.06	0.10	0.17	
<b><u>A: Oleander Buisness Park</u></b>									
Total PCE	568.589	TSF	1936	141	46	187	61	143	204
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Total PCE	1259.410	TSF	2936	119	53	172	62	138	200
<b><u>C: Majestic Freeway Business Center Building 20</u></b>									
Total Warehouse SF	425.830	TSF	942	71	21	92	28	75	103
<b><u>D: Majestic Freeway Business Center Buildings 21 and 22</u></b>									
Total Warehouse SF	241.059	TSF	533	40	12	52	16	42	58
<b><u>E: Majestic Freeway Business Center Building 11</u></b>									
Total High Cube SF	391.045	TSF	717	32	9	41	14	37	51
<b><u>F: Majestic Freeway Business Center Building 15</u></b>									
Total Warehouse SF	90.279	TSF	200	15	4	20	6	16	22
<b><u>G: Majestic Freeway Business Center Building 19</u></b>									
Total Warehouse SF	364.560	TSF	806	61	18	79	24	64	88
<b><u>H: Majestic Freeway Business Center Building 12</u></b>									
Total Warehouse SF	154.751	TSF	342	26	8	33	10	27	37
<b><u>I: Majestic Logistics Center</u></b>									
Total PCE	1244.670	TSF	2240	104	30	134	52	134	186
<b><u>J: Seaton Commerce Center</u></b>									
Total SF	210.800	TSF	235	10	3	13	5	12	17
<b><u>K: Majestic Freeway Business Center Building 5</u></b>									
Total SF	40.000	TSF	56	4	1	5	2	4	6

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
<b><u>L: Majestic Freeway Business Center Building 6</u></b>									
Total SF	72.000	TSF	101	8	2	10	3	8	11
<b><u>M: Majestic Freeway Business Center Building 7</u></b>									
Total SF	80.000	TSF	112	8	3	11	3	9	12
<b><u>N: Majestic Freeway Business Center Building 8</u></b>									
Total SF	110.000	TSF	154	12	3	15	5	12	17
<b><u>O: Majestic Freeway Business Center Building 9</u></b>									
Total SF	45.000	TSF	63	5	1	6	2	5	7
<b><u>P: Gateway</u></b>									
Total High Cube SF	400.000	TSF	446	20	6	25	9	23	32
<b><u>Q: Canyon Steel</u></b>									
Total Manufacturing SF	28.124	TSF	68	8	2	11	4	8	12
<b><u>R: Diamond Warehouse</u></b>									
High Cube Warehouse SF	418.000	TSF	686	21	0	21	10	31	41
<b><u>S: Muranaka</u></b>									
Fulfillment Center SF	239.717	TSF	660	30	7	37	18	29	47
<b>Total Cumulative Trip Generation</b>			<b>13231</b>	<b>735</b>	<b>230</b>	<b>965</b>	<b>332</b>	<b>818</b>	<b>1150</b>

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

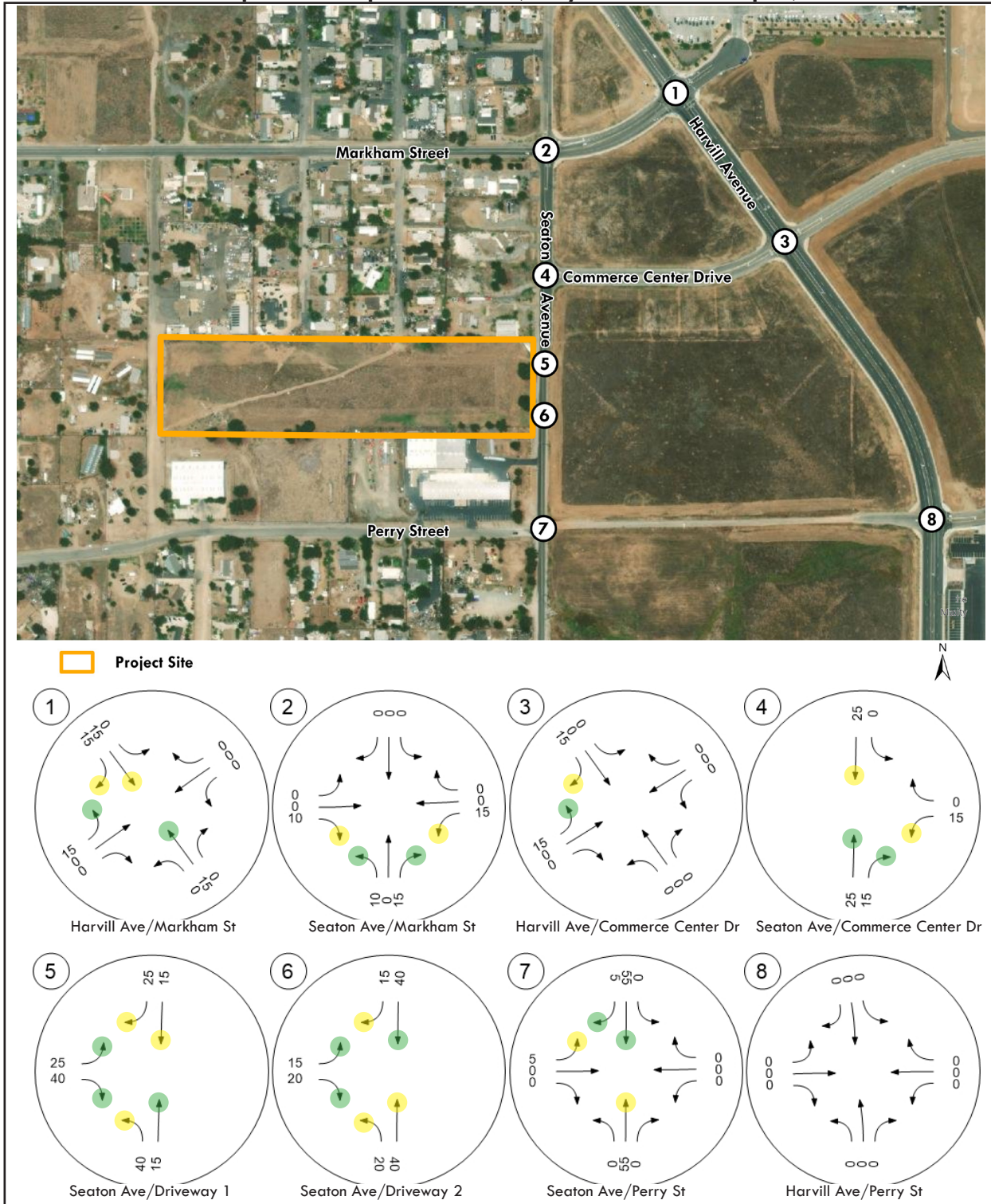
<sup>1</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 152 - High-Cube Warehouse/Distribution Center.

<sup>2</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 150 - Warehouse.

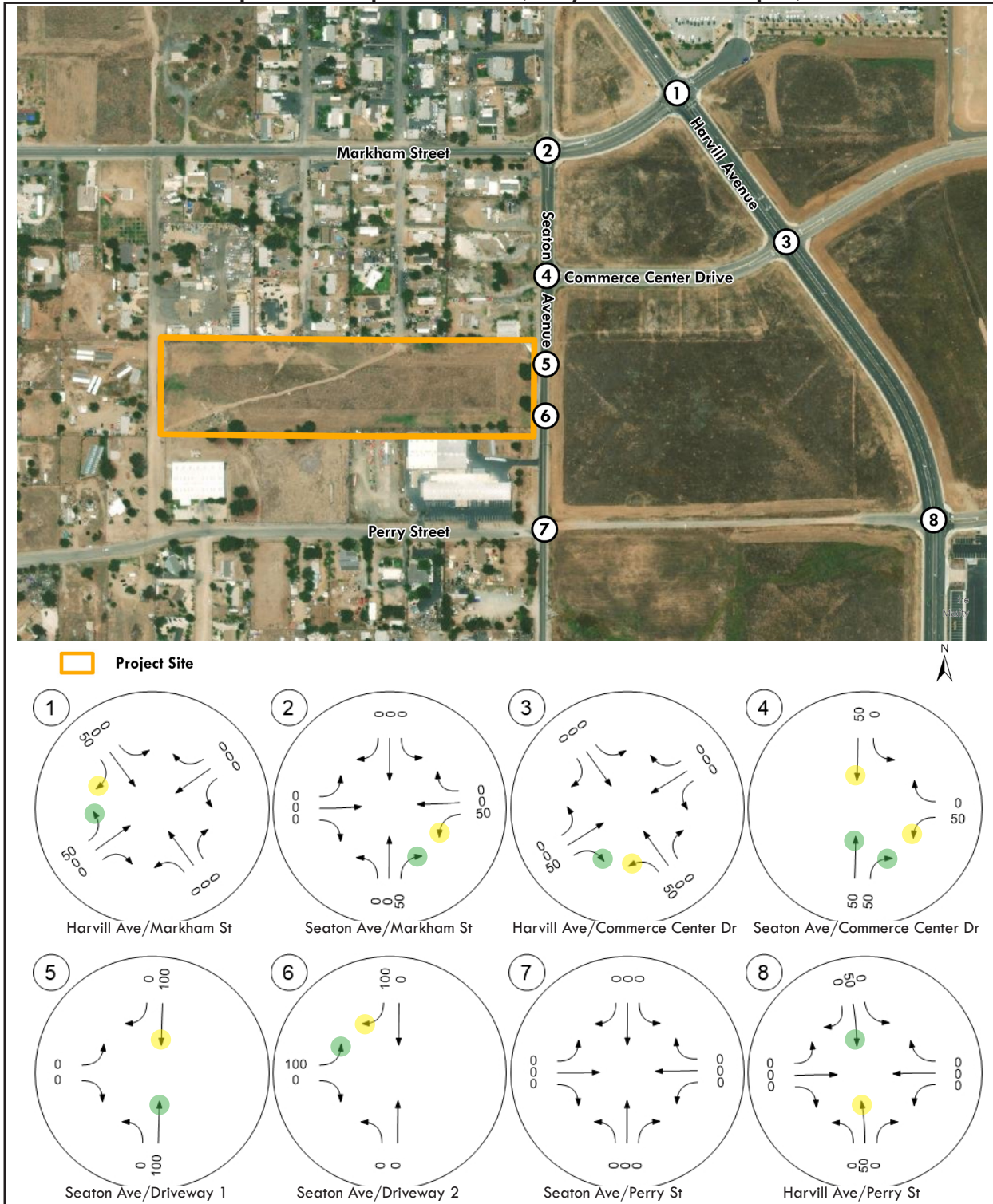
<sup>3</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 130 - Manufacturing.

<sup>4</sup> Trip rates from TUMF High-Cube Warehouse Trip Generation Study, WSP, January 29, 2019. In/Out splits from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 155 - High-Cube Fulfillment Center Warehouse.

**Project Auto Trip Distribution (Perry Street Undeveloped)**



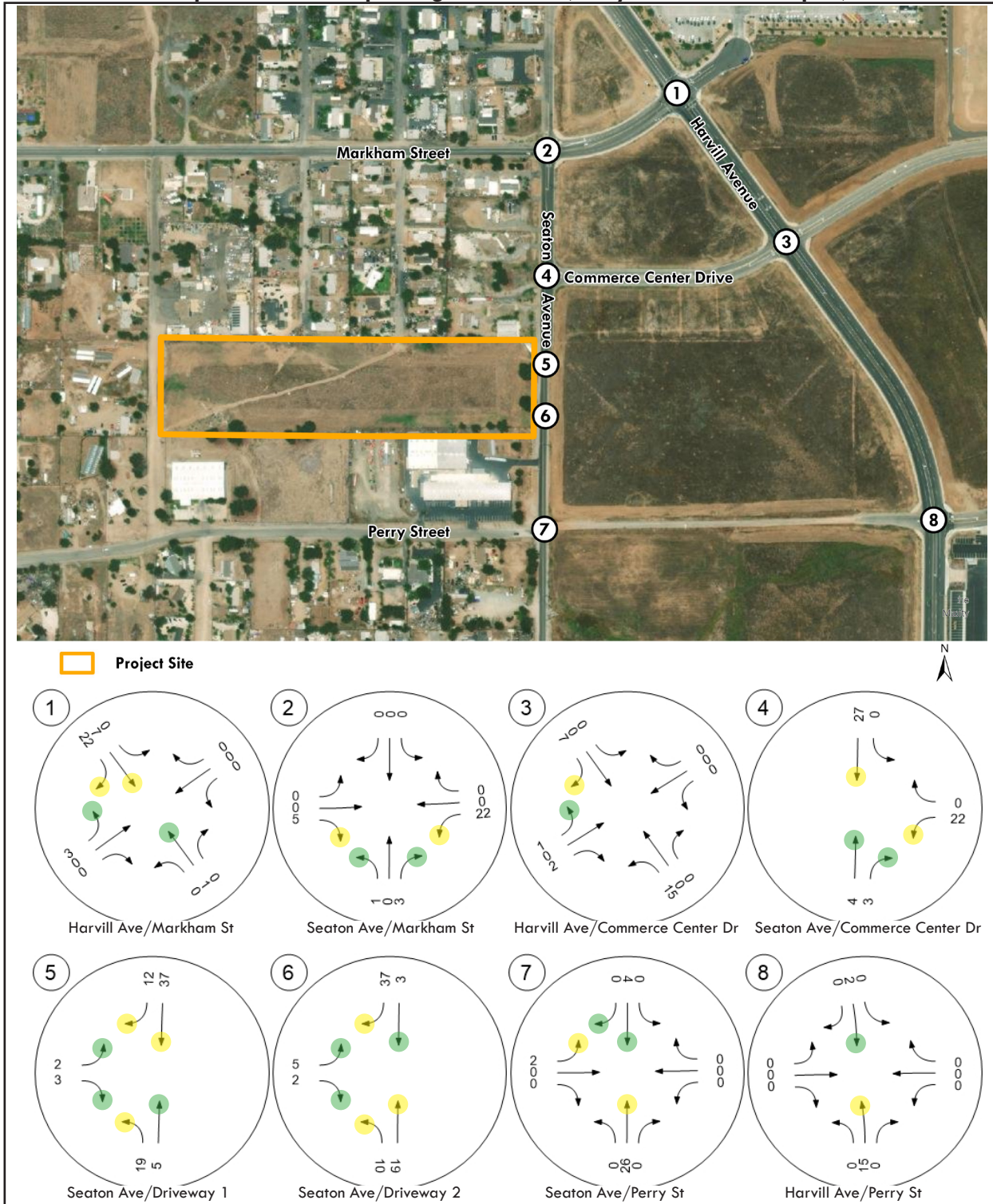
**Project Truck Trip Distribution (Perry Street Undeveloped)**



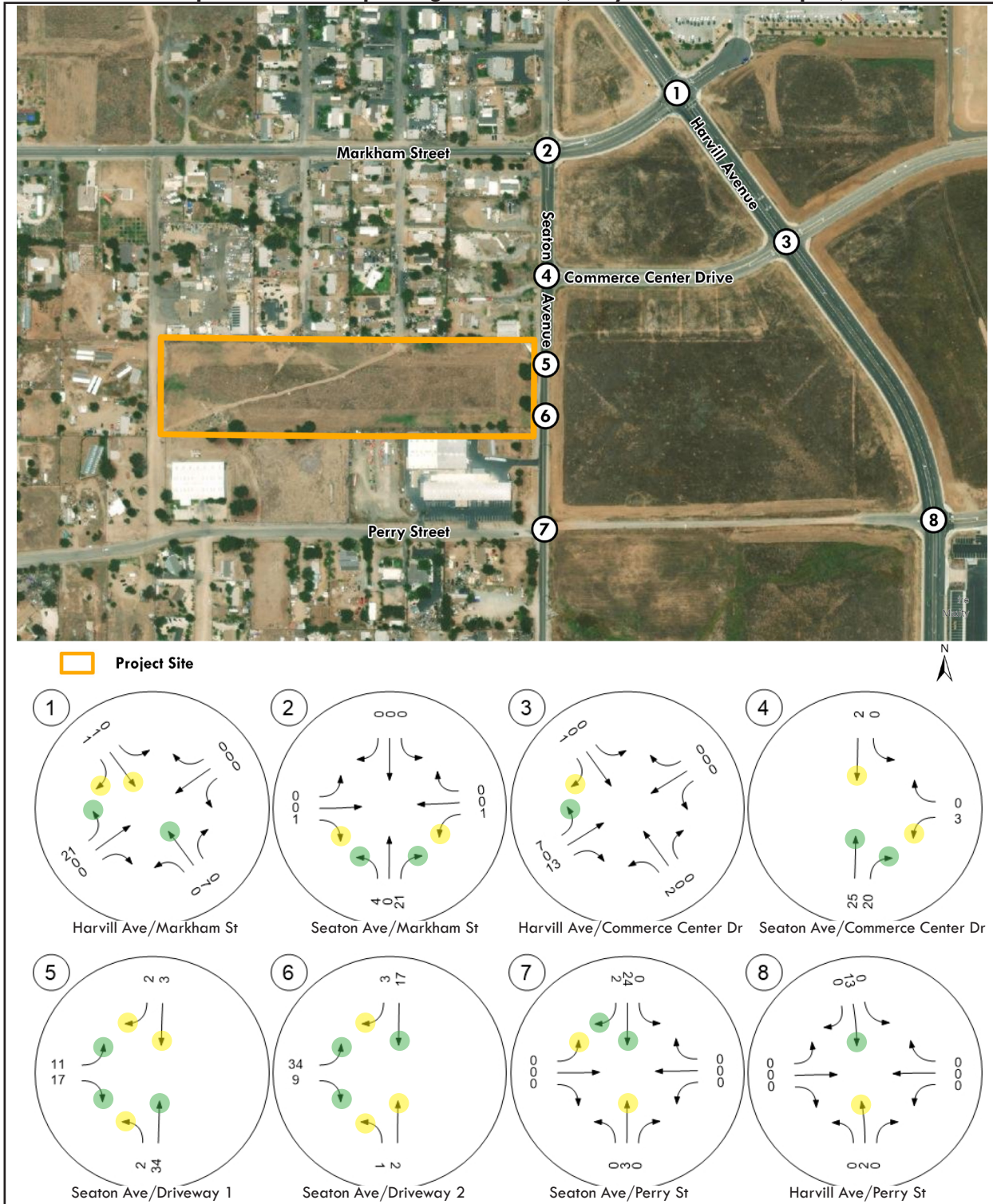
● In-Bound Trip %

● Out-Bound Trip %

**Project Total AM Trip Assignment PCE (Perry Street Undeveloped)**



**Project Total PM Trip Assignment PCE (Perry Street Undeveloped)**

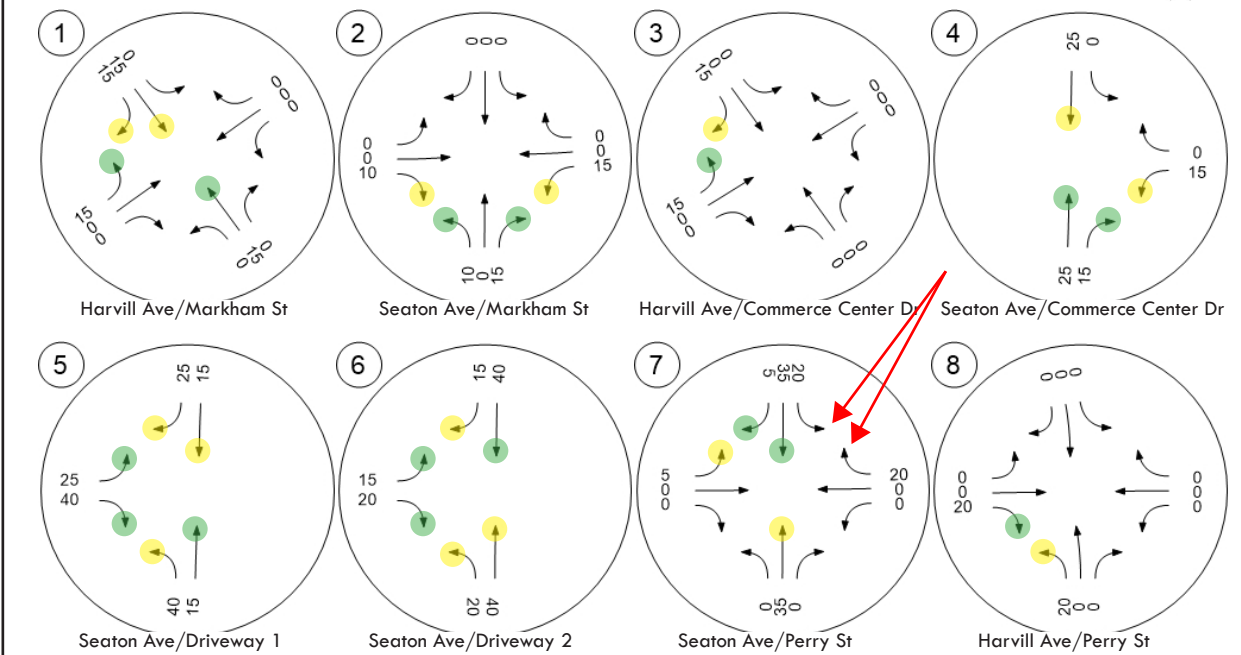


**Project Auto Trip Distribution (Perry Street Developed)**

Provide conceptual striping on Seaton Avenue that accommodates for left-turn pockets at the approach the Driveway 2 and Perry Street.



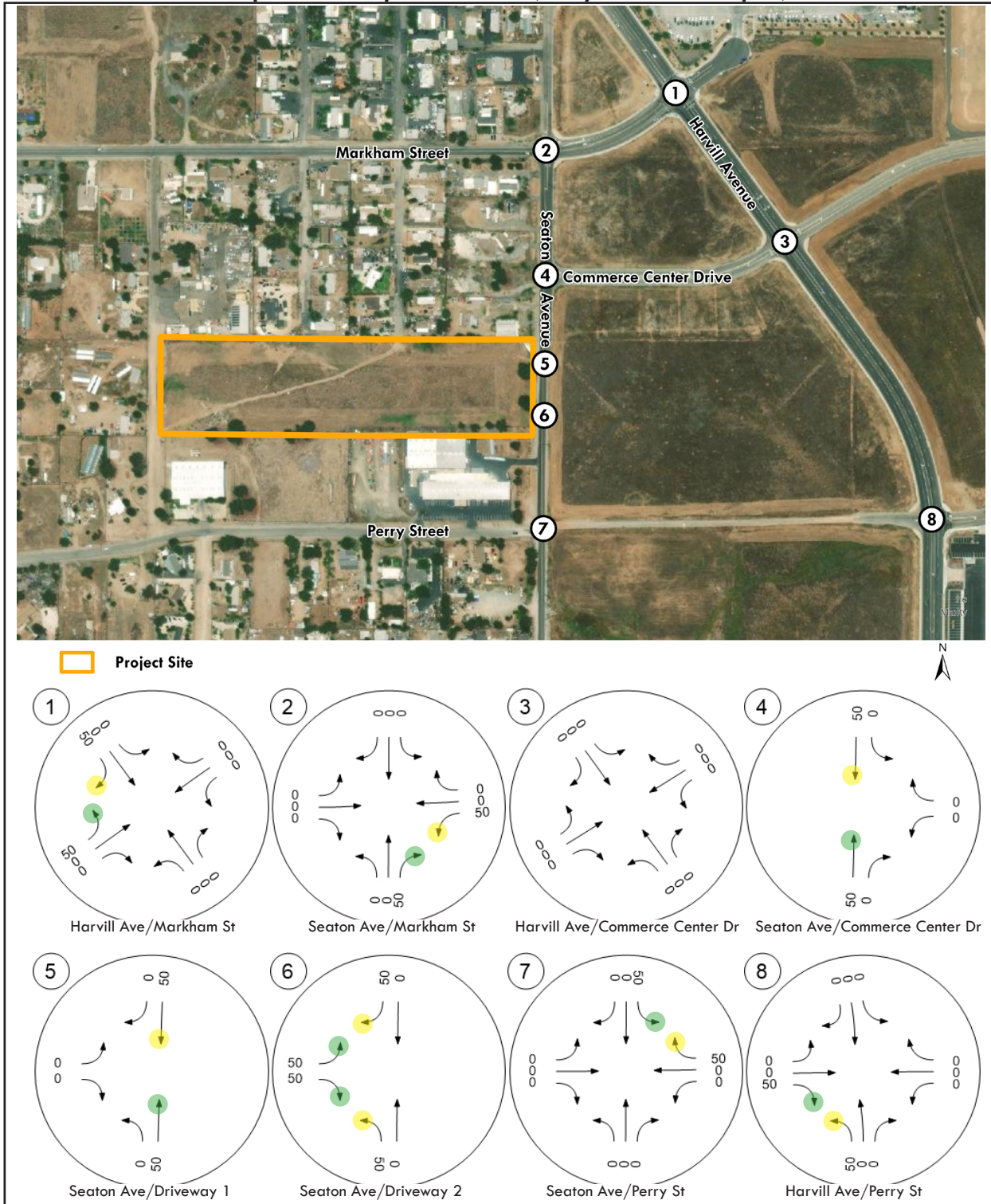
Project Site



In-Bound Trip %

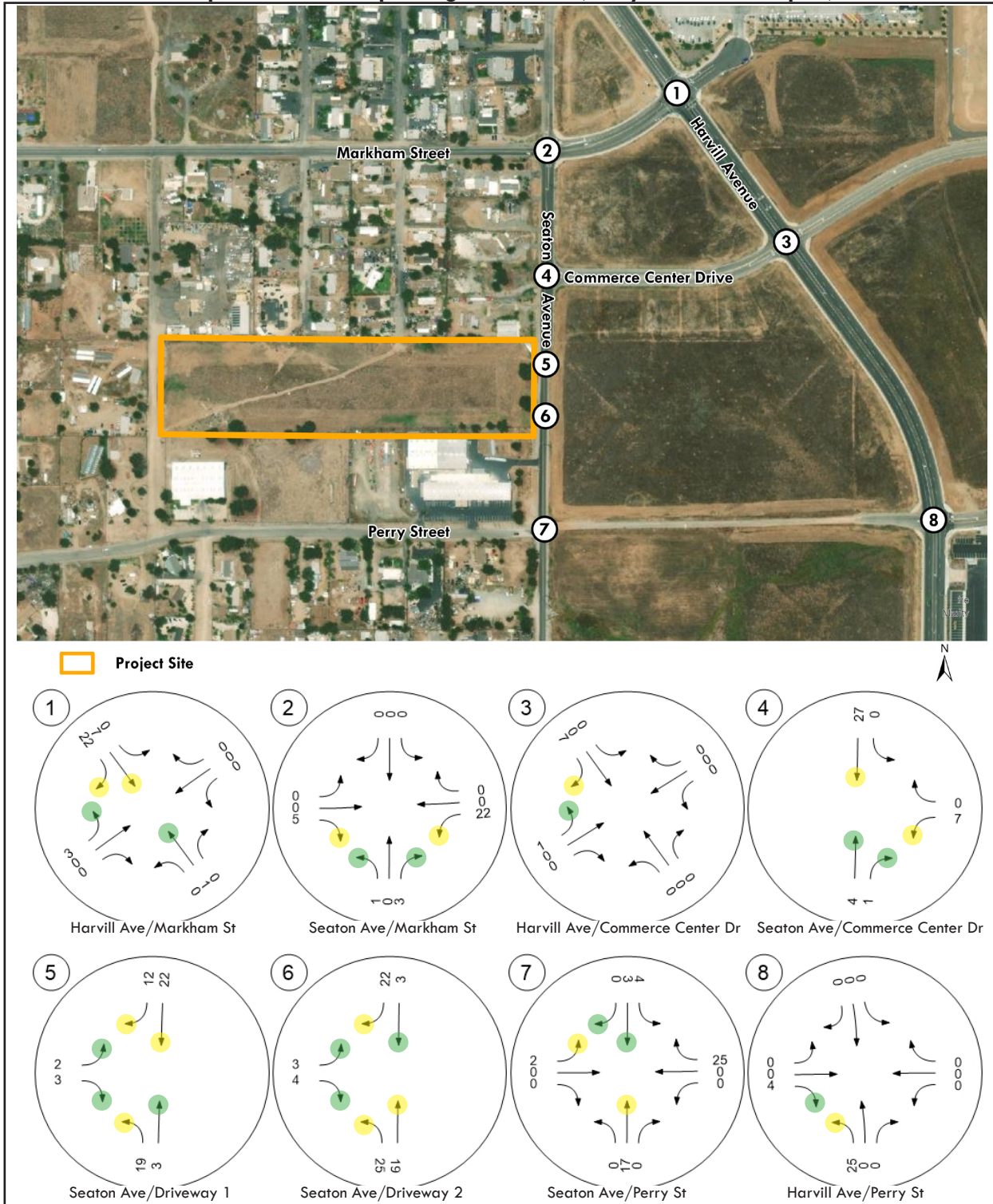
Out-Bound Trip %

**Project Truck Trip Distribution (Perry Street Developed)**





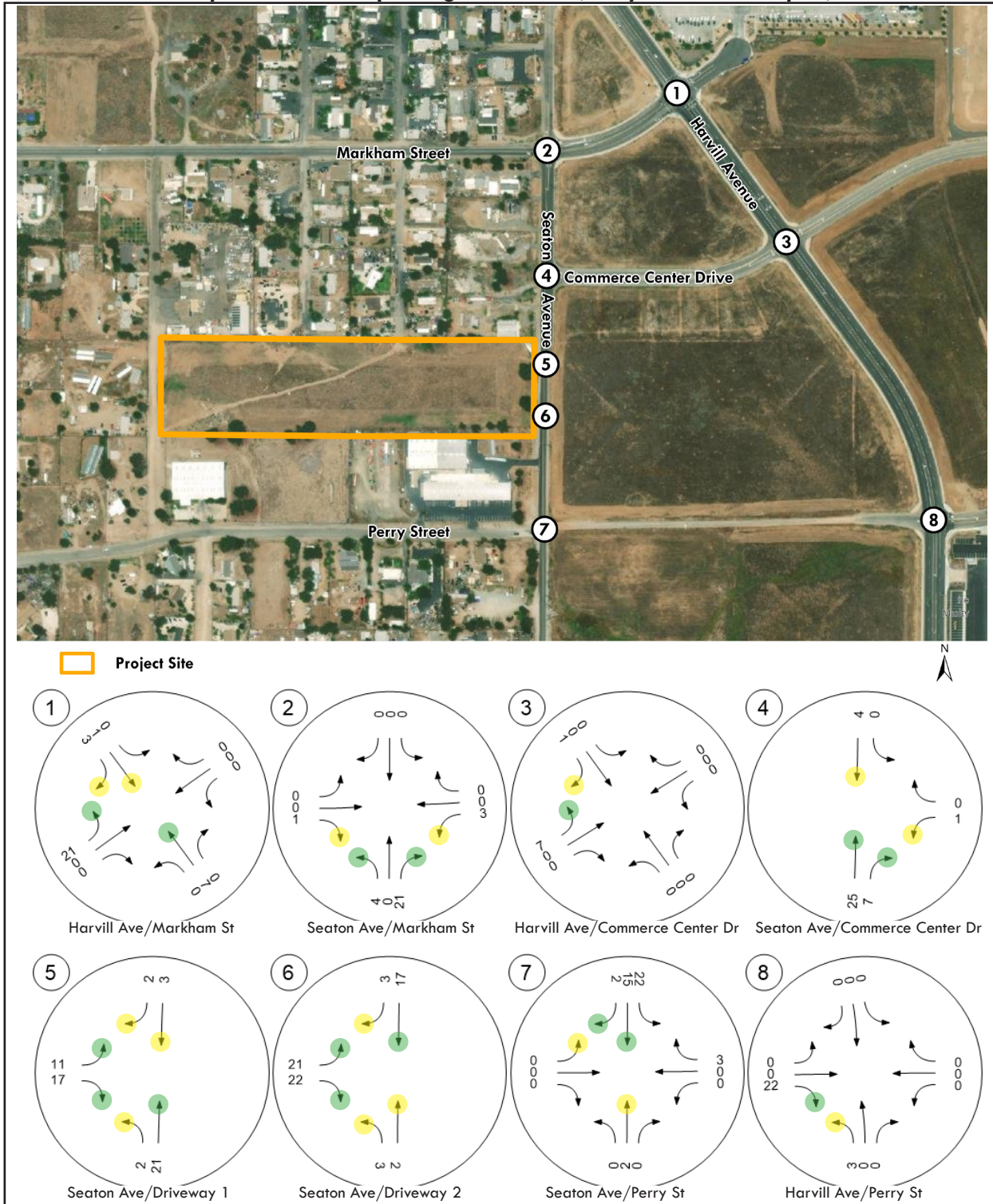
**Project Total AM Trip Assignment PCE (Perry Street Developed)**



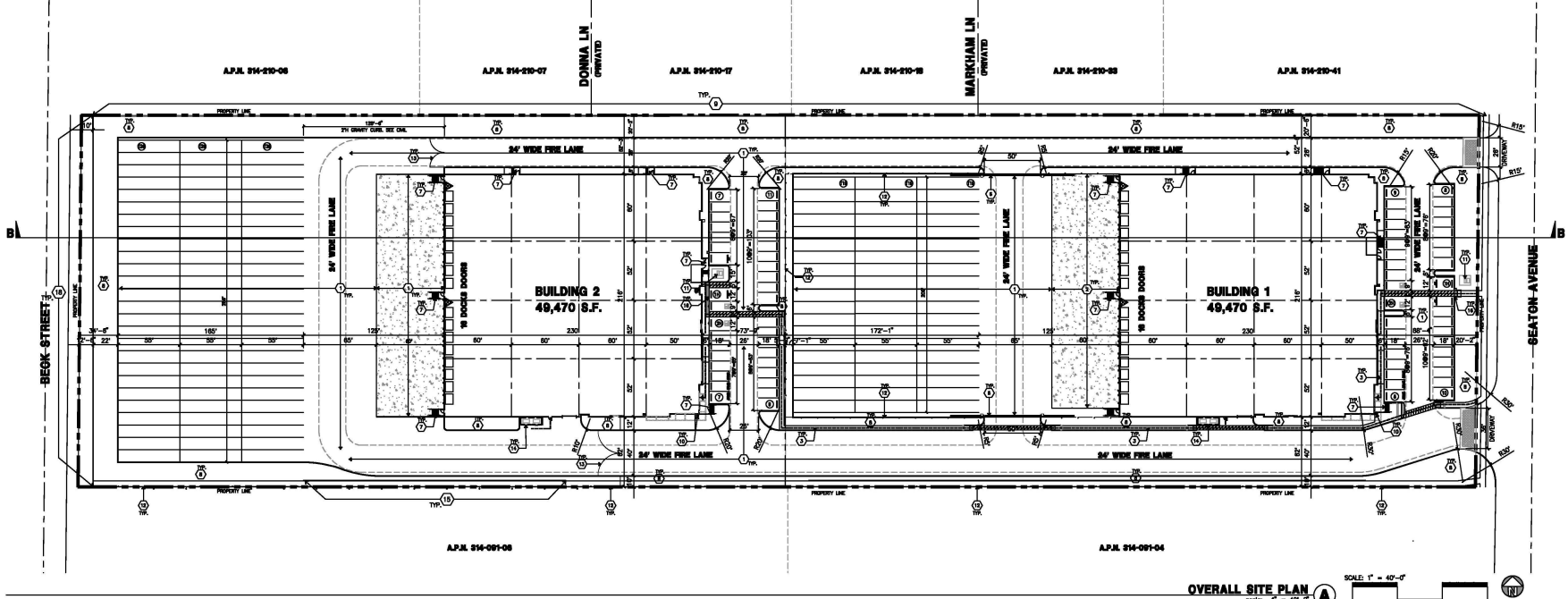
● In-Bound Trip #

● Out-Bound Trip #

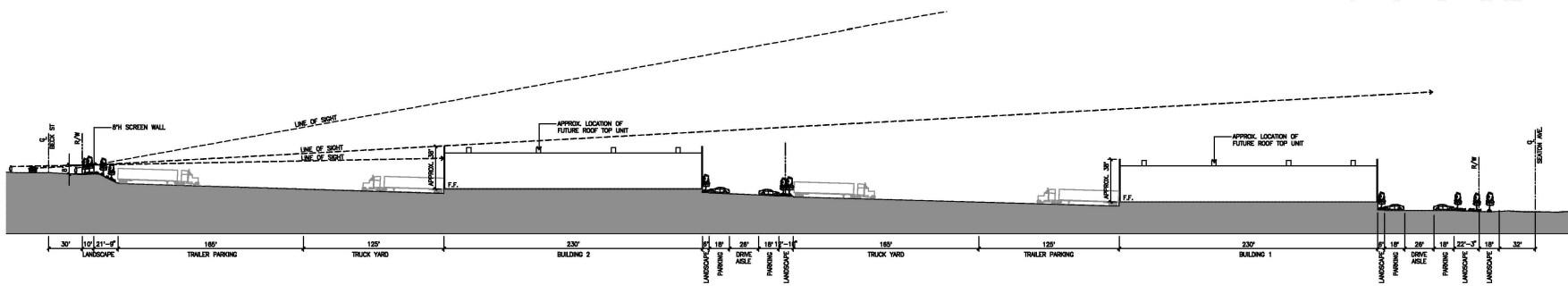
**Project Total PM Trip Assignment PCE (Perry Street Developed)**



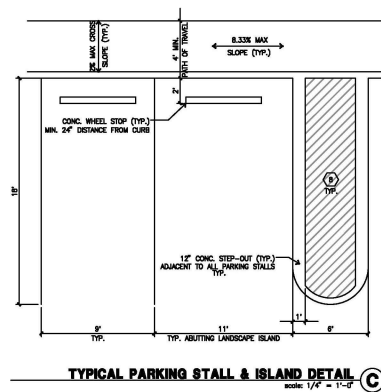
- In-Bound Trip #
- Out-Bound Trip #



**OVERALL SITE PLAN**  
SCALE: 1" = 40'-0"  
TRUE NORTH



**SECTION B-B**  
SCALE: 1" = 40'-0"  
TRUE NORTH



**TYPICAL PARKING STALL & ISLAND DETAIL**  
SCALE: 1/4" = 1'-0"

**PROPERTY OWNER**  
DEDEAUX PROPERTIES  
100 WILSHIRE BLVD. SUITE 250  
SANTA MONICA, CA 90401  
CONTACT: BENJAMIN M. WOODING  
PHONE: 310-881-8228

**APPLICANT**  
SPD SOLUTIONS, INC.  
2 PARK PLAZA SUITE 1100  
IRVINE, CA 92614  
CONTACT: BRADDOCK WOLFE  
PHONE: 949-794-1191

**ARCHITECT**  
HPA INC.  
1801 BARDEN AVE. STE 100  
IRVINE, CA 92613  
CONTACT: BRUCE CHU  
PHONE: 949-852-2122

**ENGINEER**  
GOODMAN & ASSOCIATES  
2078 SHY VIEW DRIVE  
CULVER CA 92528  
CONTACT: DAVID GOODMAN  
PHONE: 949-468-3181

**LANDSCAPE**  
HUNTER LANDSCAPE INC.  
711 1/2 E. WALK STREET  
SANTA ANA, CA 92705  
CONTACT: TOM HAYES  
PHONE: 714-468-2600

**ADDRESS OF THE PROPERTY**  
SEATON AVENUE AND PERRY STREET

**ASSESSOR'S PARCEL NUMBER**  
314-081-06

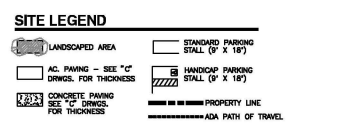
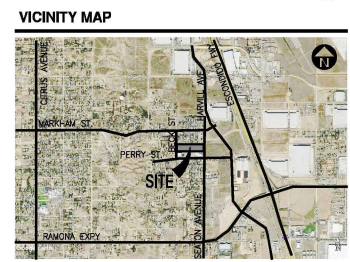
**ZONING**  
IP (INDUSTRIAL PARK)

**LEGAL DESCRIPTION**  
THE NORTH 1/2 OF THE SOUTH 1/2 OF THE NE 1/4 OF THE SE 1/4 OF SECTION 2, TOWNSHIP 4 SOUTH, RANGE 4 WEST IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

**UTILITIES**  
WATER: EASTERN MUNICIPAL WATER DISTRICT  
SEWER: RIVERSIDE COUNTY FIRE DEPARTMENT  
GAS: SO CAL GAS COMPANY  
ELECTRIC: SDI CALIFORNIA Edison  
FIRE PROTECTION: EASTERN MUNICIPAL WATER DISTRICT  
RIVERSIDE COUNTY FIRE DEPARTMENT

**PROJECT DATA**

SETBACKS	BL05.1	BL06.2	Total
BLDG. AREA	200,320 s.f.	237,283 s.f.	437,603 s.f.
Office - 1st floor	4,699 sq. ft.	4,789 sq. ft.	9,488 sq. ft.
SALES/RENTAL AREA	2,500 s.f.	2,500 s.f.	5,000 s.f.
Warehouse	49,470 s.f.	49,470 s.f.	98,940 s.f.
TOTAL	249,890	249,890	499,780 s.f.
<b>SOVEREIGN</b>			
Office	10,000 s.f.	10,000 s.f.	20,000 s.f.
Other	10,000 s.f.	10,000 s.f.	20,000 s.f.
TOTAL	20,000 s.f.	20,000 s.f.	40,000 s.f.
<b>ADDITIONAL PROVISIONS</b>			
Warehouse (P x 18')	31 s.u.s.	31 s.u.s.	62 s.u.s.
Accessory Storage (P x 18')	1 s.u.s.	1 s.u.s.	2 s.u.s.
Accessory Van (P x 18')	1 s.u.s.	1 s.u.s.	2 s.u.s.
RV Storage (P x 18')	1 s.u.s.	1 s.u.s.	2 s.u.s.
RV Van (P x 18')	1 s.u.s.	1 s.u.s.	2 s.u.s.
Open Air Storage (P x 18')	2 s.u.s.	2 s.u.s.	4 s.u.s.
Total	38 s.u.s.	38 s.u.s.	76 s.u.s.
<b>TRAILER PARKING PROVIDED</b>	57 s.u.s.	79 s.u.s.	136 s.u.s.
<b>LANDSCAPE REQUIREMENT</b>			
Landscaping - 2%	16.8%	16.8%	33.6%
Landscaping Provided	23,623 s.f.	37,225 s.f.	60,848 s.f.
<b>SETBACKS</b>			
Building	Per City Ordinance		
Front Street - 20'	20'		
Side Street - 0'	0'		
<b>ZONING ORDINANCE FOR COUNTY</b>			
Zoning Designation - Industrial Park (IP)			
Maximum Building Height Allowed - 35 feet			
Maximum Floor Area Ratio - 0.25:1.00			



- SITE PLAN KEYNOTES**
- HEAVY BROOM FINISH CONC. PAVEMENT.
  - ASPHALT CONCRETE (AC) PAVING.
  - CONCRETE WALKWAY
  - DRIVEWAY APPROXS TO BE CONSTRUCTED PER "L" DRAWINGS.
  - 5'-0" x 2'-0" x 6'-0" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAIN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH.
  - SOFFIT TO BE 1/4" x 1/2" MIN. OR DRIVE WAY W/ 1/2" MAX. AS REQ. BY CITY INSPECTOR.
  - IF H PROVIDE METAL, MANUAL OPERATED GATES W/ KNOCK-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DIVISION.
  - EXTERIOR CONC. STAIR.
  - LANDSCAPE. SEE "L" DWGS.
  - 10M CONCRETE TILT-UP SCREEN WALL
  - BIKE RACK.
  - APPROXIMATE LOCATION OF TRANSFORMER.
  - 8" MILDSTEEL IRON FENCE.
  - DOUBLE SWING GATE.
  - APPROXIMATE ENCLOSURE PER CITY STANDARD.
  - RETURN WALL.
  - FUTURE EV CHARGING STATION LOCATION
  - PROPOSED LOCATION OF LIGHT POLE
  - 8" H CONCRETE TILT-UP SCREEN WALL

**HPA architecture**  
hpa, inc.  
1881 barden avenue, - ste. #100  
irvine, ca 92612  
tel: 949-859-1770  
fax: 949-859-0851  
email: hpa@hparchs.com

Owner:  
**DEDEAUX PROPERTIES**  
100 Wilshire Blvd Suite 250  
Santa Monica, CA 90401  
tel: (323) 981-8228

Project:  
**SEATON AVE. & PERRY STREET**

COUNTY OF RIVERSIDE, CA

Consultants:  
CIVIL: Goodman & Associates  
STRUCTURAL: -  
MECHANICAL: -  
PLUMBING: -  
ELECTRICAL: Hunter Landscape  
LANDSCAPE: -  
FIRE PROTECTION: -  
SOILS ENGINEER: -

Title: OVERALL SITE PLAN

Project Number: 20423  
Drawn by: JW  
Date: 6/14/2021  
Revision: -

Sheet:  
**DAB-A1.1**

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*APPENDIX B – TRAFFIC COUNTS*

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### INTERSECTION TURNING MOVEMENT COUNTS

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

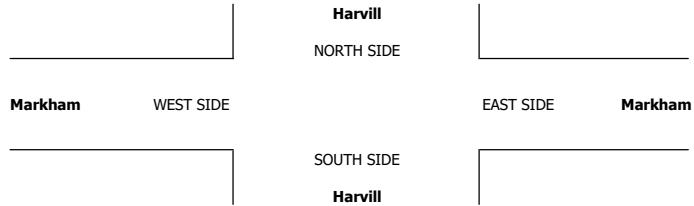
DATE: 7/8/21 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Mead Valley Harvill Markham	PROJECT #: LOCATION #: CONTROL:	SC2958 1 SIGNAL
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PCE Adjusted	<b>NOTES:</b>								AM PM	▲ N	◀ W E ▶
	Class	1	2	3	4	5	6	7	8		
	Factor	1	1.5	2	3	2	2	2	2		

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			U-TURNS					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	1	2	0	1	2	0	1	1	1	1	1	0						

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>AM</b>													
7:00 AM	26	13	0	3	20	24	41	0	24	0	0	2	152
7:15 AM	23	21	0	6	14	38	42	0	43	0	0	6	192
7:30 AM	24	18	0	8	8	23	52	0	32	0	0	9	174
7:45 AM	17	30	0	3	17	31	39	0	36	0	0	0	172
8:00 AM	21	20	0	3	19	35	48	0	26	0	0	7	178
8:15 AM	22	23	0	8	19	31	36	1	24	0	3	1	165
8:30 AM	25	17	0	0	13	20	33	2	28	1	0	6	143
8:45 AM	15	17	1	3	17	31	40	0	23	2	0	0	147
VOLUMES	171	157	1	34	126	230	329	3	235	3	3	31	1,322
APPROACH %	52%	48%	0%	9%	32%	59%	58%	1%	41%	8%	8%	84%	
APP/DEPART	328	/	517	390	/	364	567	/	38	37	/	404	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	85	88	0	20	58	126	181	0	137	0	0	22	715
APPROACH %	49%	51%	0%	10%	28%	62%	57%	0%	43%	0%	0%	100%	
PEAK HR FACTOR	0.935			0.885			0.939			0.611			0.931
APP/DEPART	172	/	290	204	/	195	318	/	20	22	/	211	0
<b>PM</b>													
4:00 PM	49	25	1	0	14	50	40	0	55	0	0	1	234
4:15 PM	42	25	1	6	26	52	46	1	39	1	0	1	239
4:30 PM	31	36	0	0	33	48	74	0	49	0	0	2	271
4:45 PM	60	44	3	0	18	60	52	0	63	0	0	3	302
5:00 PM	53	23	0	3	25	52	53	0	47	1	1	1	257
5:15 PM	35	15	0	4	28	65	54	0	71	0	0	0	271
5:30 PM	44	10	0	1	21	37	44	2	72	0	2	5	237
5:45 PM	33	8	1	2	16	42	52	1	59	1	0	3	216
VOLUMES	345	186	6	16	179	403	412	4	453	3	3	16	2,025
APPROACH %	64%	35%	1%	3%	30%	67%	47%	0%	52%	14%	14%	73%	
APP/DEPART	536	/	614	598	/	635	869	/	26	22	/	751	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	178	118	3	7	103	223	232	0	229	1	1	6	1,099
APPROACH %	60%	39%	1%	2%	31%	67%	50%	0%	50%	13%	13%	75%	
PEAK HR FACTOR	0.700			0.861			0.928			0.667			0.911
APP/DEPART	298	/	356	333	/	332	461	/	10	8	/	402	0

				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
0	0	0	0	0



# INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 7/8/21 THURSDAY

LOCATION: NORTH & SOUTH: EAST & WEST:

Mead Valley Seaton Markham

PROJECT #: SC2958 LOCATION #: 2 CONTROL: STOP ALL

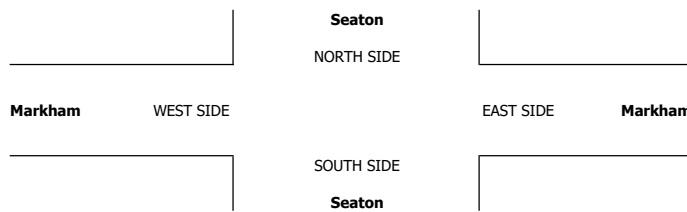
PCE Adjusted	NOTES:											AM PM	▲ N	▶ E	
	Class	1	2	3	4	5	6								
	Factor	1	1.5	2	3	2	2						OTHER	▼ S	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	1	1	0	0	1	0	0	1	1	

U-TURNS				
NB	SB	EB	WB	TTL

	AM														
	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES	APPROACH %	APP/DEPART	BEGIN PEAK HR	VOLUMES		APPROACH %
	3	0	9	0	0	0	0	0	55	3	6	46	0	122	
	1	0	3	1	2	0	0	0	81	4	8	50	2	150	
	4	0	8	0	0	0	0	0	78	3	2	42	0	135	
	3	2	14	2	0	0	0	0	62	3	9	43	1	136	
	3	0	4	0	0	1	0	0	70	0	7	48	0	132	
	0	0	9	2	0	0	0	0	50	3	9	46	0	119	
	3	0	8	0	0	0	1	1	56	0	3	36	1	108	
	0	2	8	0	0	0	0	0	54	3	7	41	0	114	
	17	4	62	5	2	1	1	504	18	50	350	4	1,014		
	20%	4%	75%	64%	21%	14%	0%	96%	3%	12%	87%	1%			
	82	/	8	7	/	69	523	/	570	403	/	367	0		
	11	2	28	3	2	1	0	290	9	26	182	3	553		
	27%	4%	70%	50%	30%	20%	0%	97%	3%	12%	87%	1%			
		0.564			0.500			0.888			0.888		0.924		
	40	/	4	5	/	36	299	/	320	210	/	193	0		
PM	4:00 PM	9	0	11	1	2	0	0	84	4	11	81	6	208	
	4:15 PM	3	4	7	5	1	0	1	78	7	6	90	1	202	
	4:30 PM	9	0	13	3	0	0	2	102	5	7	70	0	208	
	4:45 PM	7	0	6	1	1	1	1	110	4	3	102	7	243	
	5:00 PM	6	0	7	2	3	1	0	93	5	4	92	3	214	
	5:15 PM	5	1	13	1	0	0	0	111	6	8	91	1	236	
	5:30 PM	5	0	4	0	0	0	0	119	2	3	84	0	216	
	5:45 PM	9	0	7	0	0	0	0	96	6	6	68	1	193	
		53	5	66	12	7	2	4	792	38	48	677	19	1,718	
		43%	4%	54%	58%	33%	10%	0%	95%	5%	6%	91%	2%		
		123	/	27	20	/	92	833	/	869	743	/	731	0	
	23	1	29	4	4	2	1	433	16	18	368	11	909		
	43%	2%	55%	37%	42%	21%	0%	96%	4%	5%	93%	3%			
		0.716			0.432			0.933			0.889		0.937		
	53	/	13	10	/	38	450	/	465	397	/	393	0		

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



### INTERSECTION TURNING MOVEMENT COUNTS

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

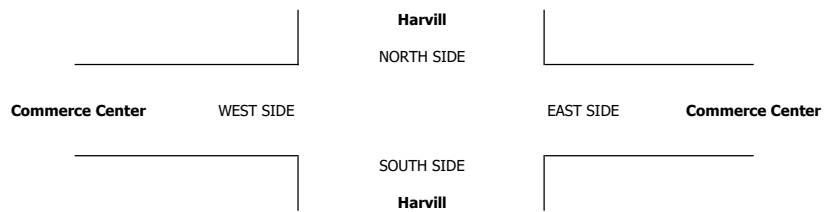
DATE: 6/16/21 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Mead Valley Harvill Commerce Center	PROJECT #: LOCATION #: CONTROL:	SC2958 1 STOP ALL
-------------------------------	---	---	---------------------------------------	-------------------------

PCE Adjusted	<b>NOTES:</b>								AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
	Class	1	2	3	4	5	6	7		
	Factor	1	1.5	2	3	2	2	2		

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0		NB	SB	EB	WB	TTL

AM	7:00 AM	1	31	0	0	35	1	0	0	0	0	0	0	68	
		7:15 AM	0	28	0	0	45	2	0	0	0	0	0	0	75
	7:30 AM	0	35	0	0	57	0	0	0	0	0	0	0	92	
	7:45 AM	0	44	0	0	51	0	0	0	0	0	0	0	95	
	8:00 AM	1	49	0	0	29	0	0	0	0	0	0	0	79	
	8:15 AM	1	30	0	0	24	0	0	0	3	0	0	0	58	
	8:30 AM	0	27	0	0	39	0	0	0	0	0	0	0	66	
	8:45 AM	0	31	0	0	45	0	0	0	0	0	0	0	75	
	VOLUMES	3	274	0	0	323	3	0	0	3	0	0	0	606	
	APPROACH %	1%	99%	0%	0%	99%	1%	0%	0%	100%	0%	0%	0%		
	APP/DEPART	277	/	274	326	/	326	3	/	0	0	/	6	0	
	BEGIN PEAK HR	7:15 AM													
	VOLUMES	1	156	0	0	181	2	0	0	0	0	0	0	340	
	APPROACH %	1%	99%	0%	0%	99%	1%	0%	0%	0%	0%	0%	0%		
	PEAK HR FACTOR	0.783													
	APP/DEPART	157	/	156	183	/	181	0	/	0	0	/	3	0	
PM	4:00 PM	0	58	0	0	78	1	0	0	0	0	0	0	137	
	4:15 PM	4	35	0	0	57	0	0	0	0	0	0	0	96	
	4:30 PM	0	55	0	0	83	0	4	0	0	0	0	0	142	
	4:45 PM	8	52	0	0	77	0	3	0	1	0	0	0	140	
	5:00 PM	1	58	0	0	76	0	1	0	0	0	0	0	136	
	5:15 PM	1	56	0	0	55	0	0	0	4	0	0	0	115	
	5:30 PM	2	41	0	0	81	0	0	1	0	0	0	0	125	
	5:45 PM	1	42	0	0	58	0	0	0	0	0	0	0	100	
		VOLUMES	17	396	0	0	564	1	8	1	5	0	0	0	990
		APPROACH %	4%	96%	0%	0%	100%	0%	58%	8%	35%	0%	0%	0%	
	APP/DEPART	413	/	403	565	/	568	13	/	1	0	/	18	0	
	BEGIN PEAK HR	4:30 PM													
	VOLUMES	10	221	0	0	290	0	8	0	5	0	0	0	533	
	APPROACH %	4%	96%	0%	0%	100%	0%	63%	0%	38%	0%	0%	0%		
	PEAK HR FACTOR	0.960													
	APP/DEPART	231	/	228	290	/	295	12	/	0	0	/	10	0	

0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0



### INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 6/16/21 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Mead Valley Seaton Commerce Center	PROJECT #: LOCATION #: CONTROL:	SC2958 2 STOP W
-------------------------------	---	--	---------------------------------------	-----------------------

PCE Adjusted	<b>NOTES:</b>								AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
	Class	1	2	3	4	5	6	7		
	Factor	1	1.5	2	3	2	2	2		

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			U-TURNS				
	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB

AM	7:00 AM	0	8	0	0	9	0	0	0	0	0	1	0	0	17
		7:15 AM	0	12	0	0	5	0	0	0	0	0	2	0	1
	7:30 AM	0	7	0	0	8	0	0	0	0	0	0	0	0	15
	7:45 AM	0	6	0	0	5	0	0	0	0	0	0	0	0	11
	8:00 AM	0	1	0	0	6	0	0	0	0	0	0	0	1	8
	8:15 AM	0	5	3	0	8	0	0	0	0	0	0	0	0	16
	8:30 AM	0	8	0	0	2	0	0	0	0	1	0	0	0	11
	8:45 AM	0	5	1	0	8	0	0	0	0	0	0	0	0	14
	VOLUMES	0	51	4	0	49	0	0	0	0	4	0	2	110	
	APPROACH %	0%	93%	7%	0%	100%	0%	0%	0%	67%	0%	33%			
	APP/DEPART	55	/	53	49	/	53	0	/	4	6	/	0	0	
	BEGIN PEAK HR	7:00 AM													
	VOLUMES	0	32	0	0	26	0	0	0	0	3	0	1	62	
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	75%	0%	25%			
	PEAK HR FACTOR	0.667		0.765		0.000		0.333		0.795					
	APP/DEPART	32	/	33	26	/	29	0	/	0	4	/	0	0	
PM	4:00 PM	0	21	0	0	24	0	0	0	0	0	0	1	46	
	4:15 PM	0	6	0	0	13	0	0	0	1	0	4	24		
	4:30 PM	0	12	5	0	20	0	0	0	0	0	0	37		
	4:45 PM	0	11	1	2	8	0	0	0	0	0	7	28		
	5:00 PM	0	10	1	0	10	0	0	0	0	0	2	23		
	5:15 PM	0	10	3	1	14	0	0	0	0	0	1	28		
	5:30 PM	0	7	1	0	17	0	0	0	0	0	2	27		
	5:45 PM	0	7	0	0	14	0	0	0	0	0	0	21		
		VOLUMES	0	84	11	3	117	0	0	0	1	0	17	232	
		APPROACH %	0%	89%	11%	2%	98%	0%	0%	0%	6%	0%	94%		
		APP/DEPART	94	/	101	120	/	118	0	/	13	18	/	0	0
		BEGIN PEAK HR	4:00 PM												
	VOLUMES	0	50	6	2	64	0	0	0	1	0	12	134		
	APPROACH %	0%	89%	11%	2%	98%	0%	0%	0%	8%	0%	92%			
	PEAK HR FACTOR	0.667		0.691		0.000		0.464		0.736					
	APP/DEPART	56	/	62	65	/	65	0	/	8	13	/	0	0	

0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0





### INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:  
6/16/21  
WEDNESDAY

LOCATION:  
NORTH & SOUTH:  
EAST & WEST:

Mead Valley  
Seaton  
Perry

PROJECT #: SC2958  
LOCATION #: 3  
CONTROL: STOP E/W

PCE Adjusted	NOTES:								AM PM	MD	OTHER	OTHER	▲ N ▼	← W →	E ▶	
	Class	1	2	3	4	5	6	7								
	Factor	1	1.5	2	3	2	2									

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	Seaton			Seaton			Perry			Perry				NB	SB	EB	WB	TTL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR						
	0	1	0	0	1	0	0	1	0	0	0	1	0					

AM	7:00 AM	Seaton			Seaton			Perry			Perry			TOTAL	NB	SB	EB	WB	TTL	
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR							
	7:00 AM	6	6	0	0	6	3	1	0	5	2	0	0	28						
	7:15 AM	0	9	0	0	7	0	3	0	5	1	0	1	25						
	7:30 AM	1	5	1	0	7	1	1	0	3	1	0	0	20						
	7:45 AM	1	6	0	0	4	1	0	0	3	0	0	0	14						
	8:00 AM	3	3	0	0	6	2	0	0	5	0	1	0	20						
	8:15 AM	4	7	0	0	5	1	0	0	5	0	0	0	22						
	8:30 AM	0	7	0	0	2	0	0	0	2	0	0	0	10						
	8:45 AM	0	7	0	0	7	1	0	0	1	0	0	0	16						
	VOLUMES	15	48	1	0	44	9	5	0	28	4	1	1	154	0	0	0	0	0	
	APPROACH %	23%	75%	2%	0%	83%	17%	14%	0%	86%	64%	18%	18%							
	APP/DEPART	64	/	54	53	/	75	32	/	1	6	/	25	0						
	BEGIN PEAK HR	7:00 AM																		
	VOLUMES	8	25	1	0	24	5	5	0	15	4	0	1	87						
	APPROACH %	24%	74%	3%	0%	82%	18%	23%	0%	77%	78%	0%	22%							
	PEAK HR FACTOR	0.708			0.792			0.650			0.563			0.772						
	APP/DEPART	34	/	31	29	/	42	20	/	1	5	/	13	0						
	4:00 PM	4	14	0	0	17	5	4	0	1	0	0	0	45						
	4:15 PM	4	7	0	0	11	2	1	0	2	0	0	0	27						
	4:30 PM	3	10	0	0	20	2	5	0	7	0	0	0	46						
	4:45 PM	5	15	0	0	8	0	0	0	0	1	0	0	28						
	5:00 PM	2	6	0	0	8	2	2	0	4	0	1	1	25						
	5:15 PM	1	7	0	0	11	3	4	0	3	0	0	0	28						
	5:30 PM	2	11	0	0	9	3	1	0	3	0	0	0	29						
	5:45 PM	1	10	0	0	10	1	4	0	3	0	0	0	29						
	VOLUMES	21	79	0	0	92	18	21	0	23	1	1	1	255	0	0	0	0	0	
	APPROACH %	21%	79%	0%	0%	84%	16%	48%	0%	52%	33%	33%	33%							
	APP/DEPART	100	/	101	109	/	115	44	/	0	3	/	39	0						
	BEGIN PEAK HR	4:00 PM																		
	VOLUMES	15	46	0	0	55	9	10	0	10	1	0	0	145						
	APPROACH %	24%	76%	0%	0%	87%	13%	50%	0%	50%	100%	0%	0%							
	PEAK HR FACTOR	0.769			0.722			0.417			0.250			0.794						
	APP/DEPART	60	/	56	64	/	66	20	/	0	1	/	23	0						



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 7/8/21 THURSDAY

LOCATION: NORTH & SOUTH: EAST & WEST:

Mead Valley Harvill Perry

PROJECT #: SC2958 LOCATION #: 3 CONTROL: STOP E/W

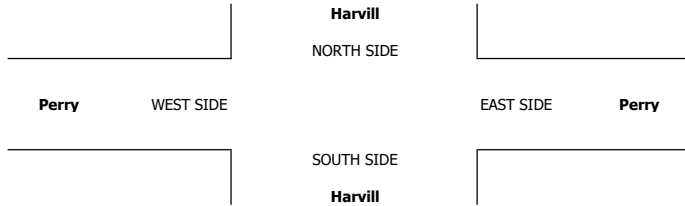
NOTES table with Class and Factor columns and directional flow indicators (N, S, E, W).

Main header table for Northbound, Southbound, Eastbound, and Westbound directions, listing lanes and total counts.

U-TURNS table with columns for NB, SB, EB, WB, and TTL.

Main data table showing traffic volumes, approach percentages, and peak factors for AM and PM periods.

U-TURNS data table showing counts for NB, SB, EB, WB, and TTL.



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*APPENDIX C – LEVEL OF SERVICE CALCULATIONS*

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## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 1 Existing AM

Report File: C:\...\Existing AM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	EB Left	0.267	27.0	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.470	11.2	B
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	NB Left	0.001	7.7	A
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.010	8.9	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	NB Thru	0.000	0.0	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	NB Thru	0.000	0.0	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.008	9.2	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Thru	0.004	12.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Peak Hour Factor	0.9350	0.9350	0.9350	0.8850	0.8850	0.8850	0.9390	0.9390	0.9390	0.6110	0.6110	0.6110
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]	23	24	0	6	16	36	48	0	36	0	0	9
Total Analysis Volume [veh/h]	91	94	0	23	66	142	193	0	146	0	0	36
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	20	0	12	23	0	12	29	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	2	36	36	8	13	13	0	5
g / C, Green / Cycle	0.07	0.56	0.56	0.03	0.52	0.52	0.11	0.19	0.19	0.00	0.07
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.02	0.01	0.03	0.09	0.11	0.00	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1615	1810	1900	1615	1810	1615
c, Capacity [veh/h]	121	1055	1055	50	981	834	208	356	303	3	119
d1, Uniform Delay [s]	32.20	7.12	7.12	33.63	8.52	9.01	30.79	0.00	25.50	0.00	30.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	8.99	0.08	0.08	6.39	0.13	0.44	15.93	0.00	1.19	0.00	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.04	0.04	0.46	0.07	0.17	0.93	0.00	0.48	0.00	0.30
d, Delay for Lane Group [s/veh]	41.19	7.20	7.20	40.02	8.65	9.45	46.72	0.00	26.69	0.00	32.21
Lane Group LOS	D	A	A	D	A	A	D	A	C	A	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	0.26	0.26	0.44	0.42	0.97	3.88	0.00	2.07	0.00	0.58
50th-Percentile Queue Length [ft/ln]	42.06	6.40	6.40	11.06	10.46	24.33	96.93	0.00	51.76	0.00	14.50
95th-Percentile Queue Length [veh/ln]	3.03	0.46	0.46	0.80	0.75	1.75	6.98	0.00	3.73	0.00	1.04
95th-Percentile Queue Length [ft/ln]	75.71	11.52	11.52	19.90	18.83	43.80	174.47	0.00	93.17	0.00	26.10

**Movement, Approach, & Intersection Results**

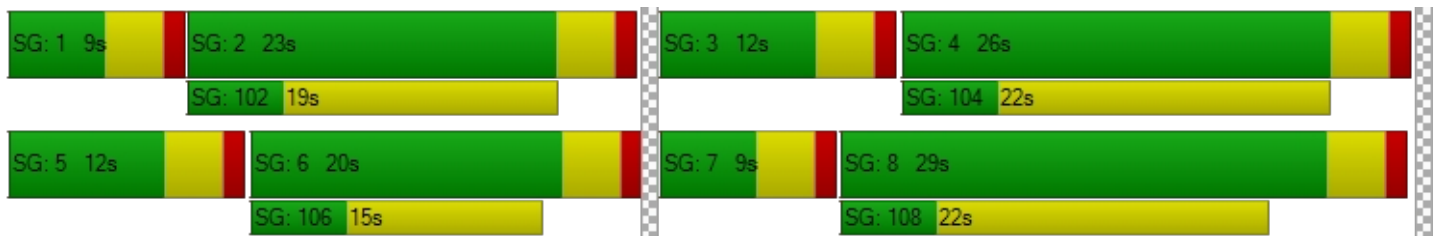
d_M, Delay for Movement [s/veh]	41.19	7.20	7.20	40.02	8.65	9.45	46.72	0.00	26.69	0.00	32.21	32.21
Movement LOS	D	A	A	D	A	A	D	A	C	A	C	C
d_A, Approach Delay [s/veh]	23.92			12.27			38.09			32.21		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	26.97											
Intersection LOS	C											
Intersection V/C	0.267											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.64	26.64	26.64	26.64
I_p,int, Pedestrian LOS Score for Intersection	2.418	2.469	2.329	1.958
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	456	542	713	627
d_b, Bicycle Delay [s]	20.89	18.64	14.52	16.52
I_b,int, Bicycle LOS Score for Intersection	1.712	1.750	2.119	1.619
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	11	2	28	3	2	1	0	290	9	26	182	3
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	11	2	28	3	2	1	0	290	9	26	182	3
Peak Hour Factor	0.5640	0.5640	0.5640	0.5000	0.5000	0.5000	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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	12	2	1	1	0	82	3	7	51	1
Total Analysis Volume [veh/h]	20	4	50	6	4	2	0	327	10	29	205	3
Pedestrian Volume [ped/h]	0			0			0			0		

Version 2021 (SP 0-6)

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	558	679	591	718	705	830
Degree of Utilization, x	0.04	0.08	0.02	0.47	0.33	0.00

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.11	0.26	0.06	2.52	1.45	0.01
95th-Percentile Queue Length [ft]	2.79	6.46	1.55	63.10	36.35	0.27
Approach Delay [s/veh]	8.71		9.22	12.39	10.28	
Approach LOS	A		A	B	B	
Intersection Delay [s/veh]	11.16					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	1	156	0	0	181	2	0	0	0	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	1	156	0	0	181	2	0	0	0	0	0	0
Peak Hour Factor	0.7830	0.7830	0.7830	0.8030	0.8030	0.8030	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	50	0	0	56	1	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	199	0	0	225	2	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	7.60	0.00	0.00	10.93	11.89	8.90	10.80	11.90	8.82
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.04			0.00			10.57			10.51		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	A											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		↑R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	32	0	0	26	3	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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]	32	0	0	26	3	1
Peak Hour Factor	0.6670	0.6670	0.7650	0.7650	0.3330	0.3330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	0	8	2	1
Total Analysis Volume [veh/h]	48	0	0	34	9	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.29	0.00	8.93	8.52
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.74	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.13					
Intersection LOS	A					



**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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	32	29	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	8	0	0	0
Total Analysis Volume [veh/h]	0	34	31	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.26	0.00	0.00	0.00	8.81	8.43
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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	32	29	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	8	0	0	0
Total Analysis Volume [veh/h]	0	34	31	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.26	0.00	0.00	0.00	8.81	8.43
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	8	25	1	0	24	5	5	0	15	4	0	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	8	25	1	0	24	5	5	0	15	4	0	1
Peak Hour Factor	0.7080	0.7080	0.7080	0.7920	0.7920	0.7920	0.6500	0.6500	0.6500	0.5630	0.5630	0.5630
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]	3	9	0	0	8	2	2	0	6	2	0	0
Total Analysis Volume [veh/h]	11	35	1	0	30	6	8	0	23	7	0	2
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	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.28	0.00	0.00	7.27	0.00	0.00	9.16	9.63	8.56	9.23	9.57	8.49
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.10	0.10	0.10	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.52	0.00	0.00	0.00	2.39	2.39	2.39	0.76	0.76	0.76
d_A, Approach Delay [s/veh]	1.70			0.00			8.71			9.07		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.51											
Intersection LOS	A											

**Intersection Level Of Service Report  
Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	176	5	0	203	0	0	0	1	8	1	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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	176	5	0	203	0	0	0	1	8	1	1
Peak Hour Factor	0.8960	0.8960	0.8960	0.8320	0.8320	0.8320	0.2500	0.2500	0.2500	0.4170	0.4170	0.4170
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	49	1	0	61	0	0	0	1	5	1	1
Total Analysis Volume [veh/h]	0	196	6	0	244	0	0	0	4	19	2	2
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.60	0.00	0.00	11.11	12.06	8.96	11.08	12.06	8.86
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	2.40	0.45	0.45
d_A, Approach Delay [s/veh]	0.00			0.00			8.96			10.97		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.61											
Intersection LOS	B											



## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 1 Existing AM

Report File: C:\...\Existing AM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	85	88	0	20	58	126	181	0	137	0	0	22	717

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	11	2	28	3	2	1	0	290	9	26	182	3	557

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	1	156	0	0	181	2	0	0	0	0	0	0	340

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	32	0	0	26	3	1	62

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	0	32	29	0	0	0	61

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	0	32	29	0	0	0	61

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	8	25	1	0	24	5	5	0	15	4	0	1	88

Version 2021 (SP 0-6)

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	0	176	5	0	203	0	0	0	1	8	1	1	395

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 2 Existing PM

Report File: C:\...\Existing PM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	WB Left	0.454	30.3	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.721	18.2	C
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.023	12.7	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.002	9.4	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.031	9.9	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.003	14.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	190.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Peak Hour Factor	0.7000	0.7000	0.7000	0.8610	0.8610	0.8610	0.9280	0.9280	0.9280	0.6670	0.6670	0.6670
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]	64	42	1	2	30	65	63	0	62	0	0	2
Total Analysis Volume [veh/h]	254	169	4	8	120	259	250	0	247	1	1	9
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	31	0	9	23	0	19	35	0	10	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	52	52	1	40	40	14	16	16	0	2
g / C, Green / Cycle	0.15	0.62	0.62	0.01	0.47	0.47	0.16	0.18	0.18	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.14	0.05	0.05	0.00	0.06	0.16	0.14	0.00	0.15	0.00	0.01
s, saturation flow rate [veh/h]	1810	1900	1885	1810	1900	1615	1810	1900	1615	1810	1640
c, Capacity [veh/h]	277	1170	1160	20	900	765	289	348	296	4	42
d1, Uniform Delay [s]	35.50	6.58	6.58	41.81	12.59	14.05	34.85	0.00	33.50	42.40	40.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	11.74	0.12	0.12	12.94	0.31	1.20	7.63	0.00	6.11	34.27	2.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.92	0.07	0.07	0.41	0.13	0.34	0.86	0.00	0.83	0.27	0.24
d, Delay for Lane Group [s/veh]	47.24	6.71	6.71	54.75	12.90	15.25	42.49	0.00	39.62	76.67	43.53
Lane Group LOS	D	A	A	D	B	B	D	A	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.70	0.52	0.52	0.23	1.18	2.92	5.34	0.00	5.09	0.06	0.23
50th-Percentile Queue Length [ft/ln]	142.38	12.96	12.89	5.70	29.55	72.92	133.48	0.00	127.31	1.39	5.73
95th-Percentile Queue Length [veh/ln]	9.61	0.93	0.93	0.41	2.13	5.25	9.13	0.00	8.79	0.10	0.41
95th-Percentile Queue Length [ft/ln]	240.23	23.32	23.21	10.26	53.20	131.26	228.22	0.00	219.83	2.51	10.32



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.24	6.71	6.71	54.75	12.90	15.25	42.49	0.00	39.62	76.67	43.53	43.53
Movement LOS	D	A	A	D	B	B	D	A	D	E	D	D
d_A, Approach Delay [s/veh]	30.82			15.34			41.06			46.54		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.27											
Intersection LOS	C											
Intersection V/C	0.454											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.00	34.00	34.00	34.00
I_p,int, Pedestrian LOS Score for Intersection	2.557	2.563	2.499	1.950
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	635	447	729	517
d_b, Bicycle Delay [s]	19.81	25.65	17.17	23.37
I_b,int, Bicycle LOS Score for Intersection	1.912	1.879	2.380	1.578
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	23	1	29	4	4	2	1	433	16	18	368	11
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	23	1	29	4	4	2	1	433	16	18	368	11
Peak Hour Factor	0.7160	0.7160	0.7160	0.4320	0.4320	0.4320	0.9330	0.9330	0.9330	0.8890	0.8890	0.8890
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]	8	0	10	2	2	1	0	116	4	5	103	3
Total Analysis Volume [veh/h]	32	1	41	9	9	5	1	464	17	20	414	12
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	486	581	512	669	674	781
Degree of Utilization, x	0.07	0.07	0.04	0.72	0.64	0.02

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.21	0.23	0.14	6.14	4.68	0.05
95th-Percentile Queue Length [ft]	5.26	5.83	3.52	153.41	117.08	1.17
Approach Delay [s/veh]	9.92		10.36	21.03	16.89	
Approach LOS	A		B	C	C	
Intersection Delay [s/veh]	18.18					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	10	221	0	0	290	0	8	0	5	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	10	221	0	0	290	0	8	0	5	0	0	0
Peak Hour Factor	0.9600	0.9600	0.9600	0.8730	0.8730	0.8730	0.7500	0.7500	0.7500	0.9500	0.9500	0.9500
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]	3	58	0	0	83	0	3	0	2	0	0	0
Total Analysis Volume [veh/h]	10	230	0	0	332	0	11	0	7	0	0	0
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	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.93	0.00	0.00	7.67	0.00	0.00	12.66	13.53	9.24	11.95	13.49	8.90
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.00	0.00	0.07	0.02	0.02	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.61	0.00	0.00	0.00	0.00	0.00	1.75	0.62	0.62	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.33			0.00			11.33			11.45		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.48											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		←R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	50	6	2	64	1	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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]	50	6	2	64	1	12
Peak Hour Factor	0.6670	0.6670	0.6910	0.6910	0.4640	0.4640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	2	1	23	1	6
Total Analysis Volume [veh/h]	75	9	3	93	2	26
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.41	8.73
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.01	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.15	0.15	0.18	2.02
d_A, Approach Delay [s/veh]	0.00		0.23		8.78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.29					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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	56	65	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	17	0	0	0
Total Analysis Volume [veh/h]	0	59	68	0	0	0
Pedestrian Volume [ped/h]	0		0		0	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.13	8.60
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	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	56	65	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	17	0	0	0
Total Analysis Volume [veh/h]	0	59	68	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.13	8.60
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	15	46	0	0	55	9	10	0	10	1	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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]	15	46	0	0	55	9	10	0	10	1	0	0
Peak Hour Factor	0.7690	0.7690	0.7690	0.7220	0.7220	0.7220	0.4170	0.4170	0.4170	0.2500	0.2500	0.2500
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	15	0	0	19	3	6	0	6	1	0	0
Total Analysis Volume [veh/h]	20	60	0	0	76	12	24	0	24	4	0	0
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	0.00	0.00	0.00	0.03	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	7.31	0.00	0.00	9.88	10.34	8.90	9.87	10.16	8.59
Movement LOS	A	A	A	A	A	A	A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.00	0.00	0.00	0.18	0.18	0.18	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.00	1.00	1.00	0.00	0.00	0.00	4.39	4.39	4.39	0.41	0.41	0.41
d_A, Approach Delay [s/veh]	1.85			0.00			9.39			9.87		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.90											
Intersection LOS	A											

**Intersection Level Of Service Report  
Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	293	7	2	327	0	1	0	5	8	0	5
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth 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
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	0	0	0	0	0	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	293	7	2	327	0	1	0	5	8	0	5
Peak Hour Factor	0.8200	0.8200	0.8200	0.8100	0.8100	0.8100	0.7500	0.7500	0.7500	0.7220	0.7220	0.7220
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	89	2	1	101	0	0	0	2	3	0	2
Total Analysis Volume [veh/h]	0	357	9	2	404	0	1	0	7	11	0	7
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	8.09	0.00	0.00	8.00	0.00	0.00	14.16	15.89	9.48	14.11	15.84	9.35
Movement LOS	A	A	A	A	A	A	B	C	A	B	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.08	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.12	0.00	0.00	0.19	0.19	0.65	2.08	0.63	0.63
d_A, Approach Delay [s/veh]	0.00			0.04			10.06			12.26		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.40											
Intersection LOS	B											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 2 Existing PM

Report File: C:\...\Existing PM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	178	118	3	7	103	223	232	0	229	1	1	6	1101

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	23	1	29	4	4	2	1	433	16	18	368	11	910

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	10	221	0	0	290	0	8	0	5	0	0	0	534

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	50	6	2	64	1	12	135

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	0	56	65	0	0	0	121

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	0	56	65	0	0	0	121

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	15	46	0	0	55	9	10	0	10	1	0	0	146



Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	0	293	7	2	327	0	1	0	5	8	0	5	648

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 5 OY AM

Report File: C:\...\IPC AM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	EB Left	0.295	28.2	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.503	11.8	B
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.002	11.6	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.086	9.5	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.002	9.4	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.006	9.2	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.009	9.5	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Thru	0.004	12.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	7	22	3	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	93	0	21	67	153	191	0	142	0	0	23
Peak Hour Factor	0.9350	0.9350	0.9350	0.8850	0.8850	0.8850	0.9390	0.9390	0.9390	0.6110	0.6110	0.6110
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]	24	25	0	6	19	43	51	0	38	0	0	9
Total Analysis Volume [veh/h]	94	99	0	24	76	173	203	0	151	0	0	38
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	22	0	10	23	0	12	29	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	2	36	36	8	13	13	0	5
g / C, Green / Cycle	0.07	0.55	0.55	0.03	0.51	0.51	0.11	0.19	0.19	0.00	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.03	0.03	0.01	0.04	0.11	0.11	0.00	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1615	1810	1900	1615	1810	1615
c, Capacity [veh/h]	125	1049	1049	52	972	826	208	361	307	3	124
d1, Uniform Delay [s]	32.12	7.24	7.24	33.59	8.73	9.39	30.98	0.00	25.42	0.00	30.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	8.82	0.09	0.09	6.32	0.16	0.58	23.50	0.00	1.22	0.00	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.05	0.05	0.46	0.08	0.21	0.97	0.00	0.49	0.00	0.31
d, Delay for Lane Group [s/veh]	40.94	7.33	7.33	39.91	8.89	9.96	54.48	0.00	26.64	0.00	32.05
Lane Group LOS	D	A	A	D	A	A	D	A	C	A	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	0.27	0.27	0.46	0.49	1.23	4.64	0.00	2.25	0.00	0.61
50th-Percentile Queue Length [ft/ln]	43.24	6.85	6.85	11.48	12.31	30.85	116.08	0.00	56.33	0.00	15.24
95th-Percentile Queue Length [veh/ln]	3.11	0.49	0.49	0.83	0.89	2.22	8.18	0.00	4.06	0.00	1.10
95th-Percentile Queue Length [ft/ln]	77.84	12.32	12.32	20.67	22.16	55.53	204.43	0.00	101.40	0.00	27.43

**Movement, Approach, & Intersection Results**

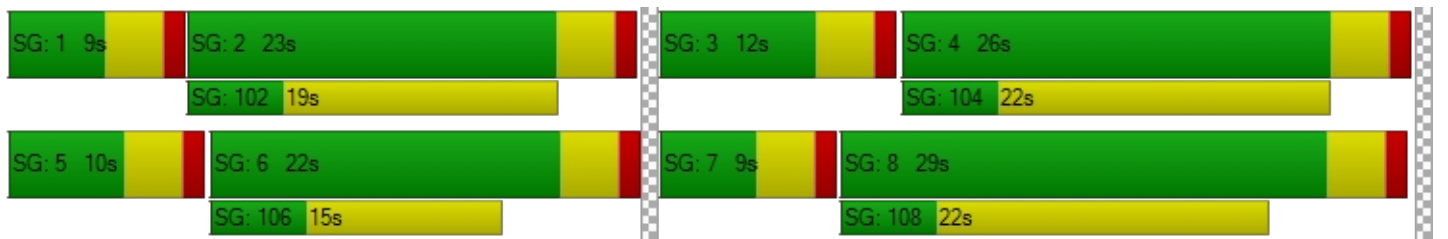
d_M, Delay for Movement [s/veh]	40.94	7.33	7.33	39.91	8.89	9.96	54.48	0.00	26.64	0.00	32.05	32.05
Movement LOS	D	A	A	D	A	A	D	A	C	A	C	C
d_A, Approach Delay [s/veh]	23.70			12.30			42.61			32.05		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	28.24											
Intersection LOS	C											
Intersection V/C	0.295											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.64	26.64	26.64	26.64
I_p,int, Pedestrian LOS Score for Intersection	2.425	2.488	2.271	1.959
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	513	542	713	627
d_b, Bicycle Delay [s]	19.37	18.64	14.52	16.52
I_b,int, Bicycle LOS Score for Intersection	1.719	1.785	2.144	1.622
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	11	2	28	3	2	1	0	290	9	26	182	3
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	3	0	0	0	0	0	5	22	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]	12	2	32	3	2	1	0	302	14	49	189	3
Peak Hour Factor	0.5640	0.5640	0.5640	0.5000	0.5000	0.5000	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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	14	2	1	1	0	85	4	14	53	1
Total Analysis Volume [veh/h]	21	4	57	6	4	2	0	340	16	55	213	3
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	545	662	574	708	692	819
Degree of Utilization, x	0.04	0.09	0.02	0.50	0.39	0.00

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.30	0.06	2.85	1.83	0.01
95th-Percentile Queue Length [ft]	3.00	7.59	1.60	71.30	45.80	0.28
Approach Delay [s/veh]	8.92		9.40	13.12	11.10	
Approach LOS	A		A	B	B	
Intersection Delay [s/veh]	11.82					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	1	156	0	0	181	2	0	0	0	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	7	1	0	2	0	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]	16	162	0	0	188	9	1	0	2	0	0	0
Peak Hour Factor	0.7830	0.7830	0.7830	0.8030	0.8030	0.8030	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	52	0	0	59	3	0	0	1	0	0	0
Total Analysis Volume [veh/h]	20	207	0	0	234	11	1	0	2	0	0	0
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	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	7.62	0.00	0.00	11.58	12.56	8.96	11.38	12.61	8.84
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.14	0.00	0.00	0.00	0.00	0.00	0.14	0.16	0.16	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.68			0.00			9.83			10.94		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.39											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		←R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	32	0	0	26	3	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	3	0	27	22	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]	37	3	0	54	25	1
Peak Hour Factor	0.6670	0.6670	0.7650	0.7650	0.3330	0.3330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	1	0	18	19	1
Total Analysis Volume [veh/h]	55	4	0	71	75	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.31	0.00	9.51	8.55
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.28	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.02	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		9.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.55					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	5	37	12	2	3
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]	19	38	67	12	2	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	10	18	3	1	1
Total Analysis Volume [veh/h]	20	40	71	13	2	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.37	8.66
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.00	1.00	0.00	0.00	0.41	0.41
d_A, Approach Delay [s/veh]	2.46		0.00		8.95	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.29					
Intersection LOS	A					



**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	19	3	37	5	2
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]	10	52	33	37	5	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	9	10	1	1
Total Analysis Volume [veh/h]	11	55	35	39	5	2
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.21	8.57
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.54	0.54	0.00	0.00	0.59	0.59
d_A, Approach Delay [s/veh]	1.23		0.00		9.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.98					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	8	25	1	0	24	5	5	0	15	4	0	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	0	4	0	2	0	0	0	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]	8	52	1	0	29	5	7	0	16	4	0	1
Peak Hour Factor	0.7080	0.7080	0.7080	0.7920	0.7920	0.7920	0.6500	0.6500	0.6500	0.5630	0.5630	0.5630
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]	3	18	0	0	9	2	3	0	6	2	0	0
Total Analysis Volume [veh/h]	11	73	1	0	37	6	11	0	25	7	0	2
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	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	7.34	0.00	0.00	9.47	9.93	8.62	9.54	9.84	8.67
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.12	0.12	0.12	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.53	0.00	0.00	0.00	2.90	2.90	2.90	0.82	0.82	0.82
d_A, Approach Delay [s/veh]	0.94			0.00			8.88			9.35		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.80											
Intersection LOS	A											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	176	5	0	203	0	0	0	1	8	1	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	0	0	2	0	0	0	0	0	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	198	5	0	213	0	0	0	1	8	1	1
Peak Hour Factor	0.8960	0.8960	0.8960	0.8320	0.8320	0.8320	0.2500	0.2500	0.2500	0.4170	0.4170	0.4170
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	55	1	0	64	0	0	0	1	5	1	1
Total Analysis Volume [veh/h]	0	221	6	0	256	0	0	0	4	19	2	2
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	7.66	0.00	0.00	11.36	12.40	9.00	11.41	12.41	8.93
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	2.53	0.47	0.47
d_A, Approach Delay [s/veh]	0.00			0.00			9.00			11.28		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.58											
Intersection LOS	B											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 5 OY AM

Report File: C:\...\IPC AM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	88	93	0	21	67	153	191	0	142	0	0	23	778

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	12	2	32	3	2	1	0	302	14	49	189	3	609

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	16	162	0	0	188	9	1	0	2	0	0	0	378

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	37	3	0	54	25	1	120

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	19	38	67	12	2	3	141

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	10	52	33	37	5	2	139

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	8	52	1	0	29	5	7	0	16	4	0	1	123

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	0	198	5	0	213	0	0	0	1	8	1	1	427



## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 6 OY PM

Report File: C:\...\IPC PM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	WB Left	0.476	30.9	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.778	21.1	C
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.043	13.2	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.012	9.7	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.015	9.5	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.043	9.5	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.033	10.2	B
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.003	14.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	1	1	21	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	130	3	7	108	233	262	0	238	1	1	6
Peak Hour Factor	0.7000	0.7000	0.7000	0.8610	0.8610	0.8610	0.9280	0.9280	0.9280	0.6670	0.6670	0.6670
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]	66	46	1	2	31	68	71	0	64	0	0	2
Total Analysis Volume [veh/h]	264	186	4	8	125	271	282	0	256	1	1	9
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	31	0	9	23	0	19	35	0	10	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	51	51	1	39	39	15	17	17	0	2
g / C, Green / Cycle	0.15	0.60	0.60	0.01	0.46	0.46	0.18	0.20	0.20	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.15	0.05	0.05	0.00	0.07	0.17	0.16	0.00	0.16	0.00	0.01
s, saturation flow rate [veh/h]	1810	1900	1886	1810	1900	1615	1810	1900	1615	1810	1640
c, Capacity [veh/h]	278	1136	1127	21	866	736	319	380	323	5	43
d1, Uniform Delay [s]	35.75	7.26	7.26	41.80	13.50	15.15	34.22	0.00	32.39	42.39	40.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	15.88	0.15	0.15	11.01	0.35	1.42	7.98	0.00	4.37	18.52	2.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.95	0.08	0.08	0.38	0.14	0.37	0.88	0.00	0.79	0.20	0.23
d, Delay for Lane Group [s/veh]	51.63	7.40	7.41	52.81	13.85	16.57	42.20	0.00	36.76	60.90	43.30
Lane Group LOS	D	A	A	D	B	B	D	A	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.24	0.62	0.61	0.22	1.29	3.23	6.25	0.00	5.27	0.05	0.23
50th-Percentile Queue Length [ft/ln]	155.98	15.38	15.31	5.54	32.35	80.84	156.26	0.00	131.78	1.14	5.70
95th-Percentile Queue Length [veh/ln]	10.34	1.11	1.10	0.40	2.33	5.82	10.35	0.00	9.04	0.08	0.41
95th-Percentile Queue Length [ft/ln]	258.39	27.68	27.55	9.97	58.23	145.52	258.76	0.00	225.91	2.06	10.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.63	7.40	7.41	52.81	13.85	16.57	42.20	0.00	36.76	60.90	43.30	43.30
Movement LOS	D	A	A	D	B	B	D	A	D	E	D	D
d_A, Approach Delay [s/veh]	33.12			16.45			39.61			44.90		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.91											
Intersection LOS	C											
Intersection V/C	0.476											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.03	34.03	34.03	34.03
I_p,int, Pedestrian LOS Score for Intersection	2.570	2.585	2.392	1.950
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	635	447	729	517
d_b, Bicycle Delay [s]	19.83	25.67	17.20	23.39
I_b,int, Bicycle LOS Score for Intersection	1.934	1.893	2.447	1.578
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	23	1	29	4	4	2	1	433	16	18	368	11
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	21	0	0	0	0	0	1	1	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]	28	1	51	4	4	2	1	450	18	20	383	11
Peak Hour Factor	0.7160	0.7160	0.7160	0.4320	0.4320	0.4320	0.9330	0.9330	0.9330	0.8890	0.8890	0.8890
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]	10	0	18	2	2	1	0	121	5	6	108	3
Total Analysis Volume [veh/h]	39	1	71	9	9	5	1	482	19	22	431	12
Pedestrian Volume [ped/h]	0			0			0			0		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	475	566	491	646	650	749
Degree of Utilization, x	0.08	0.13	0.05	0.78	0.70	0.02

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.27	0.43	0.15	7.43	5.62	0.05
95th-Percentile Queue Length [ft]	6.67	10.85	3.68	185.70	140.61	1.22
Approach Delay [s/veh]	10.32		10.69	25.32	19.67	
Approach LOS	B		B	D	C	
Intersection Delay [s/veh]	21.12					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	10	221	0	0	290	0	8	0	5	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	0	0	1	7	0	13	0	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]	12	230	0	0	302	1	15	0	18	0	0	0
Peak Hour Factor	0.9600	0.9600	0.9600	0.8730	0.8730	0.8730	0.7500	0.7500	0.7500	0.9500	0.9500	0.9500
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]	3	60	0	0	86	0	5	0	6	0	0	0
Total Analysis Volume [veh/h]	13	240	0	0	346	1	20	0	24	0	0	0
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	0.00	0.00	0.00	0.04	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.97	0.00	0.00	7.69	0.00	0.00	13.18	13.99	9.38	12.38	13.87	8.93
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.81	0.00	0.00	0.00	0.00	0.00	3.40	2.19	2.19	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.41			0.00			11.11			11.73		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.92											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		↑R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	50	6	2	64	1	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	20	0	2	3	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]	77	26	2	69	4	12
Peak Hour Factor	0.6670	0.6670	0.6910	0.6910	0.4640	0.4640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	10	1	25	2	6
Total Analysis Volume [veh/h]	115	39	3	100	9	26
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.73	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.04	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.16	0.16	0.89	2.13
d_A, Approach Delay [s/veh]	0.00		0.22		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.17					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	34	3	2	11	17
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]	2	92	71	2	11	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	24	19	1	3	4
Total Analysis Volume [veh/h]	2	97	75	2	12	18
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.54	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.00	0.00	2.55	2.55
d_A, Approach Delay [s/veh]	0.15		0.00		9.08	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	17	3	34	9
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]	1	60	85	3	34	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	16	22	1	9	2
Total Analysis Volume [veh/h]	1	63	89	3	36	9
Pedestrian Volume [ped/h]	0		0		0	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.51	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	0.00	4.12	4.12
d_A, Approach Delay [s/veh]	0.12		0.00		9.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.14					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	15	46	0	0	55	9	10	0	10	1	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	24	2	0	0	0	0	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]	16	51	0	0	81	11	10	0	10	1	0	0
Peak Hour Factor	0.7690	0.7690	0.7690	0.7220	0.7220	0.7220	0.4170	0.4170	0.4170	0.2500	0.2500	0.2500
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	17	0	0	28	4	6	0	6	1	0	0
Total Analysis Volume [veh/h]	21	66	0	0	112	15	24	0	24	4	0	0
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	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	7.32	0.00	0.00	10.25	10.68	9.11	10.23	10.49	8.62
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.00	0.00	0.00	0.19	0.19	0.19	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.09	1.09	1.09	0.00	0.00	0.00	4.67	4.67	4.67	0.44	0.44	0.44
d_A, Approach Delay [s/veh]	1.81			0.00			9.68			10.23		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.49											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	293	7	2	327	0	1	0	5	8	0	5
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	13	0	0	0	0	0	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	307	7	2	353	0	1	0	5	8	0	5
Peak Hour Factor	0.8200	0.8200	0.8200	0.8100	0.8100	0.8100	0.7500	0.7500	0.7500	0.7220	0.7220	0.7220
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	94	2	1	109	0	0	0	2	3	0	2
Total Analysis Volume [veh/h]	0	374	9	2	436	0	1	0	7	11	0	7
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	8.04	0.00	0.00	14.80	16.63	9.58	14.63	16.57	9.41
Movement LOS	A	A	A	A	A	A	B	C	A	B	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.03	0.09	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.13	0.00	0.00	0.20	0.20	0.67	2.20	0.64	0.64
d_A, Approach Delay [s/veh]	0.00			0.04			10.23			12.60		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.38											
Intersection LOS	B											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 6 OY PM

Report File: C:\...\IPC PM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	185	130	3	7	108	233	262	0	238	1	1	6	1174

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	28	1	51	4	4	2	1	450	18	20	383	11	973

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	12	230	0	0	302	1	15	0	18	0	0	0	578

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	77	26	2	69	4	12	190

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	2	92	71	2	11	17	195

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	1	60	85	3	34	9	192

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	16	51	0	0	81	11	10	0	10	1	0	0	180

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	0	307	7	2	353	0	1	0	5	8	0	5	688

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22



## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 5 OY AM

Report File: C:\...\IPC AM built.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	EB Left	0.295	28.2	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.503	11.8	B
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.002	11.1	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.034	9.3	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.002	9.3	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.004	9.4	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.014	9.8	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Thru	0.004	12.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	190.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	7	22	3	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	93	0	21	67	153	191	0	142	0	0	23
Peak Hour Factor	0.9350	0.9350	0.9350	0.8850	0.8850	0.8850	0.9390	0.9390	0.9390	0.6110	0.6110	0.6110
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]	24	25	0	6	19	43	51	0	38	0	0	9
Total Analysis Volume [veh/h]	94	99	0	24	76	173	203	0	151	0	0	38
Presence of On-Street Parking	No		No	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 in	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]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	22	0	10	23	0	12	29	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	2	36	36	8	13	13	0	5
g / C, Green / Cycle	0.07	0.55	0.55	0.03	0.51	0.51	0.11	0.19	0.19	0.00	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.03	0.03	0.01	0.04	0.11	0.11	0.00	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1615	1810	1900	1615	1810	1615
c, Capacity [veh/h]	125	1049	1049	52	972	826	208	361	307	3	124
d1, Uniform Delay [s]	32.12	7.24	7.24	33.59	8.73	9.39	30.98	0.00	25.42	0.00	30.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	8.82	0.09	0.09	6.32	0.16	0.58	23.50	0.00	1.22	0.00	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.05	0.05	0.46	0.08	0.21	0.97	0.00	0.49	0.00	0.31
d, Delay for Lane Group [s/veh]	40.94	7.33	7.33	39.91	8.89	9.96	54.48	0.00	26.64	0.00	32.05
Lane Group LOS	D	A	A	D	A	A	D	A	C	A	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	0.27	0.27	0.46	0.49	1.23	4.49	0.00	2.14	0.00	0.61
50th-Percentile Queue Length [ft/ln]	43.24	6.85	6.85	11.48	12.31	30.85	112.19	0.00	53.50	0.00	15.24
95th-Percentile Queue Length [veh/ln]	3.11	0.49	0.49	0.83	0.89	2.22	7.96	0.00	3.85	0.00	1.10
95th-Percentile Queue Length [ft/ln]	77.84	12.32	12.32	20.67	22.16	55.53	199.04	0.00	96.29	0.00	27.43

**Movement, Approach, & Intersection Results**

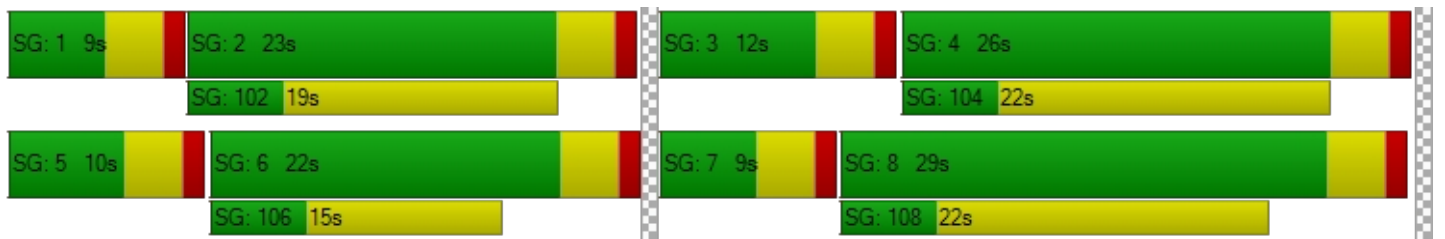
d_M, Delay for Movement [s/veh]	40.94	7.33	7.33	39.91	8.89	9.96	54.48	0.00	26.64	0.00	32.05	32.05
Movement LOS	D	A	A	D	A	A	D	A	C	A	C	C
d_A, Approach Delay [s/veh]	23.70			12.30			42.61			32.05		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	28.24											
Intersection LOS	C											
Intersection V/C	0.295											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.64	26.64	26.64	26.64
I_p,int, Pedestrian LOS Score for Intersection	2.425	2.488	2.347	1.959
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	513	542	713	627
d_b, Bicycle Delay [s]	19.37	18.64	14.52	16.52
I_b,int, Bicycle LOS Score for Intersection	1.719	1.785	2.144	1.622
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	←↑→			↑			↑			←↑→		
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	11	2	28	3	2	1	0	290	9	26	182	3
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	3	0	0	0	0	0	5	22	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]	12	2	32	3	2	1	0	302	14	49	189	3
Peak Hour Factor	0.5640	0.5640	0.5640	0.5000	0.5000	0.5000	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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	14	2	1	1	0	85	4	14	53	1
Total Analysis Volume [veh/h]	21	4	57	6	4	2	0	340	16	55	213	3
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	545	662	574	708	692	819
Degree of Utilization, x	0.04	0.09	0.02	0.50	0.39	0.00

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.30	0.06	2.85	1.83	0.01
95th-Percentile Queue Length [ft]	3.00	7.59	1.60	71.30	45.80	0.28
Approach Delay [s/veh]	8.92		9.40	13.12	11.10	
Approach LOS	A		A	B	B	
Intersection Delay [s/veh]	11.82					
Intersection LOS	B					



**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	1	156	0	0	181	2	0	0	0	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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	7	1	0	0	0	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]	1	162	0	0	188	9	1	0	0	0	0	0
Peak Hour Factor	0.7830	0.7830	0.7830	0.8030	0.8030	0.8030	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	52	0	0	59	3	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	207	0	0	234	11	1	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.62	0.00	0.00	11.12	12.09	8.95	10.92	12.14	8.84
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.06	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.04			0.00			11.12			10.63		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		←R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	32	0	0	26	3	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	1	0	27	7	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]	37	1	0	54	10	1
Peak Hour Factor	0.6670	0.6670	0.7650	0.7650	0.3330	0.3330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	0	18	8	1
Total Analysis Volume [veh/h]	55	1	0	71	30	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.31	0.00	9.27	8.55
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.11	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.66	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		9.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.90					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	3	22	12	2	3
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]	19	36	52	12	2	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	9	14	3	1	1
Total Analysis Volume [veh/h]	20	38	55	13	2	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.27	8.59
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.98	0.98	0.00	0.00	0.40	0.40
d_A, Approach Delay [s/veh]	2.54		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.46					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	19	3	22	3	4
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]	25	52	33	22	3	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	14	9	6	1	1
Total Analysis Volume [veh/h]	26	55	35	23	3	4
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.38	8.53
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.27	1.27	0.00	0.00	0.57	0.57
d_A, Approach Delay [s/veh]	2.36		0.00		8.89	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.73					
Intersection LOS	A					



**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	8	25	1	0	24	5	5	0	15	4	0	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	4	3	0	2	0	0	0	0	25
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]	8	43	1	4	28	5	7	0	16	4	0	26
Peak Hour Factor	0.7080	0.7080	0.7080	0.7920	0.7920	0.7920	0.6500	0.6500	0.6500	0.5630	0.5630	0.5630
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]	3	15	0	1	9	2	3	0	6	2	0	12
Total Analysis Volume [veh/h]	11	61	1	5	35	6	11	0	25	7	0	46
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	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.32	0.00	0.00	9.81	9.92	8.61	9.69	10.00	8.78
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.01	0.01	0.01	0.12	0.12	0.12	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.53	0.24	0.24	0.24	2.98	2.98	2.98	4.30	4.30	4.30
d_A, Approach Delay [s/veh]	1.10			0.80			8.98			8.90		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.38											
Intersection LOS	A											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	176	5	0	203	0	0	0	1	8	1	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	0	0	0	0	0	4	0	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]	25	183	5	0	211	0	0	0	5	8	1	1
Peak Hour Factor	0.8960	0.8960	0.8960	0.8320	0.8320	0.8320	0.2500	0.2500	0.2500	0.4170	0.4170	0.4170
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]	7	51	1	0	63	0	0	0	5	5	1	1
Total Analysis Volume [veh/h]	28	204	6	0	254	0	0	0	20	19	2	2
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	7.78	0.00	0.00	7.62	0.00	0.00	11.96	12.94	9.06	12.08	12.94	8.89
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.11	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	2.80	0.49	0.49
d_A, Approach Delay [s/veh]	0.92			0.00			9.06			11.88		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	1.26											
Intersection LOS	B											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 5 OY AM

Report File: C:\...\IPC AM built.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	88	93	0	21	67	153	191	0	142	0	0	23	778

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	12	2	32	3	2	1	0	302	14	49	189	3	609

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	1	162	0	0	188	9	1	0	0	0	0	0	361

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	37	1	0	54	10	1	103

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	19	36	52	12	2	3	124

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	25	52	33	22	3	4	139

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	8	43	1	4	28	5	7	0	16	4	0	26	142

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	25	183	5	0	211	0	0	0	5	8	1	1	439

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 6 OY PM

Report File: C:\...\IPC PM built.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	WB Left	0.477	30.9	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.779	21.3	C
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.043	13.1	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.005	9.7	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.014	9.5	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.026	9.5	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.037	10.8	B
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.030	15.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.



**Intersection Level Of Service Report**  
**Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	190.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	1	3	21	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	130	3	7	108	235	262	0	238	1	1	6
Peak Hour Factor	0.7000	0.7000	0.7000	0.8610	0.8610	0.8610	0.9280	0.9280	0.9280	0.6670	0.6670	0.6670
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]	66	46	1	2	31	68	71	0	64	0	0	2
Total Analysis Volume [veh/h]	264	186	4	8	125	273	282	0	256	1	1	9
Presence of On-Street Parking	No		No	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 in	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]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	31	0	9	23	0	19	35	0	10	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	51	51	1	39	39	15	17	17	0	2
g / C, Green / Cycle	0.15	0.60	0.60	0.01	0.46	0.46	0.18	0.20	0.20	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.15	0.05	0.05	0.00	0.07	0.17	0.16	0.00	0.16	0.00	0.01
s, saturation flow rate [veh/h]	1810	1900	1886	1810	1900	1615	1810	1900	1615	1810	1640
c, Capacity [veh/h]	278	1136	1127	21	866	736	319	380	323	5	43
d1, Uniform Delay [s]	35.75	7.26	7.26	41.80	13.50	15.18	34.22	0.00	32.39	42.39	40.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	15.88	0.15	0.15	11.01	0.35	1.43	7.98	0.00	4.38	18.52	2.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.95	0.08	0.08	0.38	0.14	0.37	0.88	0.00	0.79	0.20	0.23
d, Delay for Lane Group [s/veh]	51.63	7.40	7.41	52.81	13.85	16.61	42.20	0.00	36.76	60.90	43.30
Lane Group LOS	D	A	A	D	B	B	D	A	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.24	0.62	0.61	0.22	1.29	3.26	6.02	0.00	5.06	0.05	0.23
50th-Percentile Queue Length [ft/ln]	155.98	15.38	15.31	5.54	32.35	81.58	150.57	0.00	126.60	1.14	5.70
95th-Percentile Queue Length [veh/ln]	10.34	1.11	1.10	0.40	2.33	5.87	10.05	0.00	8.75	0.08	0.41
95th-Percentile Queue Length [ft/ln]	258.39	27.68	27.55	9.97	58.23	146.85	251.19	0.00	218.86	2.06	10.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.63	7.40	7.41	52.81	13.85	16.61	42.20	0.00	36.76	60.90	43.30	43.30
Movement LOS	D	A	A	D	B	B	D	A	D	E	D	D
d_A, Approach Delay [s/veh]	33.12			16.47			39.61			44.90		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.89											
Intersection LOS	C											
Intersection V/C	0.477											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.03	34.03	34.03	34.03
I_p,int, Pedestrian LOS Score for Intersection	2.570	2.586	2.523	1.950
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	635	447	729	517
d_b, Bicycle Delay [s]	19.83	25.67	17.20	23.39
I_b,int, Bicycle LOS Score for Intersection	1.934	1.895	2.447	1.578
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	23	1	29	4	4	2	1	433	16	18	368	11
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	21	0	0	0	0	0	1	3	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]	28	1	51	4	4	2	1	450	18	22	383	11
Peak Hour Factor	0.7160	0.7160	0.7160	0.4320	0.4320	0.4320	0.9330	0.9330	0.9330	0.8890	0.8890	0.8890
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]	10	0	18	2	2	1	0	121	5	6	108	3
Total Analysis Volume [veh/h]	39	1	71	9	9	5	1	482	19	25	431	12
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	475	566	490	645	649	749
Degree of Utilization, x	0.08	0.13	0.05	0.78	0.70	0.02

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.27	0.43	0.15	7.45	5.73	0.05
95th-Percentile Queue Length [ft]	6.68	10.87	3.68	186.15	143.14	1.22
Approach Delay [s/veh]	10.33		10.71	25.39	19.94	
Approach LOS	B		B	D	C	
Intersection Delay [s/veh]	21.26					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	10	221	0	0	290	0	8	0	5	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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	1	7	0	0	0	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]	10	230	0	0	302	1	15	0	5	0	0	0
Peak Hour Factor	0.9600	0.9600	0.9600	0.8730	0.8730	0.8730	0.7500	0.7500	0.7500	0.9500	0.9500	0.9500
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]	3	60	0	0	86	0	5	0	2	0	0	0
Total Analysis Volume [veh/h]	10	240	0	0	346	1	20	0	7	0	0	0
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	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.97	0.00	0.00	7.69	0.00	0.00	13.08	13.81	9.29	12.14	13.78	8.93
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.00	0.00	0.13	0.03	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.62	0.00	0.00	0.00	0.00	0.00	3.36	0.63	0.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.32			0.00			12.10			11.62		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.65											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		↑R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	50	6	2	64	1	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	7	0	4	1	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]	77	13	2	71	2	12
Peak Hour Factor	0.6670	0.6670	0.6910	0.6910	0.4640	0.4640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	5	1	26	1	6
Total Analysis Volume [veh/h]	115	19	3	103	4	26
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	7.47	0.00	9.72	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.02	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.15	0.15	0.39	2.13
d_A, Approach Delay [s/veh]	0.00		0.21		9.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.09					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	21	3	2	11	17
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]	2	79	71	2	11	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	21	19	1	3	4
Total Analysis Volume [veh/h]	2	83	75	2	12	18
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.46	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.00	0.00	2.53	2.53
d_A, Approach Delay [s/veh]	0.17		0.00		9.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	2	17	3	21	22
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	60	85	3	21	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	16	22	1	6	6
Total Analysis Volume [veh/h]	3	63	89	3	22	23
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.03	0.02
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.52	8.91
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.15	0.15	0.00	0.00	3.94	3.94
d_A, Approach Delay [s/veh]	0.34		0.00		9.21	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	15	46	0	0	55	9	10	0	10	1	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	22	15	2	0	0	0	0	0	3
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]	16	50	0	22	72	11	10	0	10	1	0	3
Peak Hour Factor	0.7690	0.7690	0.7690	0.7220	0.7220	0.7220	0.4170	0.4170	0.4170	0.2500	0.2500	0.2500
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	16	0	8	25	4	6	0	6	1	0	3
Total Analysis Volume [veh/h]	21	65	0	30	100	15	24	0	24	4	0	12
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	0.02	0.00	0.00	0.04	0.00	0.03	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.37	0.00	0.00	10.85	11.17	9.09	10.74	11.00	8.66
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.06	0.06	0.06	0.20	0.20	0.20	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	1.07	1.07	1.07	1.48	1.48	1.48	4.96	4.96	4.96	1.39	1.39	1.39
d_A, Approach Delay [s/veh]	1.82			1.52			9.97			9.18		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.40											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	293	7	2	327	0	1	0	5	8	0	5
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	0	0	0	22	0	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]	3	305	7	2	340	0	1	0	27	8	0	5
Peak Hour Factor	0.8200	0.8200	0.8200	0.8100	0.8100	0.8100	0.7500	0.7500	0.7500	0.7220	0.7220	0.7220
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]	1	93	2	1	105	0	0	0	9	3	0	2
Total Analysis Volume [veh/h]	4	372	9	2	420	0	1	0	36	11	0	7
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	8.03	0.00	0.00	14.68	16.52	9.70	15.00	16.46	9.40
Movement LOS	A	A	A	A	A	A	B	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.14	0.09	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.26	0.00	0.00	0.13	0.00	0.00	0.20	0.20	3.52	2.29	0.64	0.64
d_A, Approach Delay [s/veh]	0.08			0.04			9.83			12.82		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.75											
Intersection LOS	C											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 6 OY PM

Report File: C:\...\IPC PM built.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	185	130	3	7	108	235	262	0	238	1	1	6	1176

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	28	1	51	4	4	2	1	450	18	22	383	11	975

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	10	230	0	0	302	1	15	0	5	0	0	0	563

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	77	13	2	71	2	12	177

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	2	79	71	2	11	17	182

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	3	60	85	3	21	22	194

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	16	50	0	22	72	11	10	0	10	1	0	3	195

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	3	305	7	2	340	0	1	0	27	8	0	5	698

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 7 OY AM + P

Report File: C:\...\Cumulative AM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	EB Left	0.312	29.5	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.530	12.2	B
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.011	14.8	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.086	9.5	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.002	9.4	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.006	9.2	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.009	9.6	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Thru	0.005	14.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.312

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	91	0	0	92	33	19	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	183	0	21	152	164	207	0	142	0	0	23
Peak Hour Factor	0.9350	0.9350	0.9350	0.8850	0.8850	0.8850	0.9390	0.9390	0.9390	0.6110	0.6110	0.6110
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]	24	49	0	6	43	46	55	0	38	0	0	9
Total Analysis Volume [veh/h]	94	196	0	24	172	185	220	0	151	0	0	38
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	22	0	10	23	0	12	29	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	2	36	36	8	13	13	0	5
g / C, Green / Cycle	0.07	0.55	0.55	0.03	0.51	0.51	0.11	0.19	0.19	0.00	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.05	0.01	0.09	0.11	0.12	0.00	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1615	1810	1900	1615	1810	1615
c, Capacity [veh/h]	125	1049	1049	52	972	826	208	361	307	3	124
d1, Uniform Delay [s]	32.12	7.44	7.44	33.59	9.22	9.47	31.09	0.00	25.42	0.00	30.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	8.82	0.18	0.18	6.32	0.40	0.63	45.07	0.00	1.22	0.00	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.09	0.09	0.46	0.18	0.22	1.06	0.00	0.49	0.00	0.31
d, Delay for Lane Group [s/veh]	40.94	7.61	7.61	39.91	9.61	10.09	76.16	0.00	26.64	0.00	32.05
Lane Group LOS	D	A	A	D	A	B	F	A	C	A	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	0.56	0.56	0.46	1.18	1.33	5.99	0.00	2.25	0.00	0.61
50th-Percentile Queue Length [ft/ln]	43.24	13.95	13.95	11.48	29.57	33.30	149.68	0.00	56.33	0.00	15.24
95th-Percentile Queue Length [veh/ln]	3.11	1.00	1.00	0.83	2.13	2.40	10.21	0.00	4.06	0.00	1.10
95th-Percentile Queue Length [ft/ln]	77.84	25.10	25.10	20.67	53.22	59.94	255.28	0.00	101.40	0.00	27.43

**Movement, Approach, & Intersection Results**

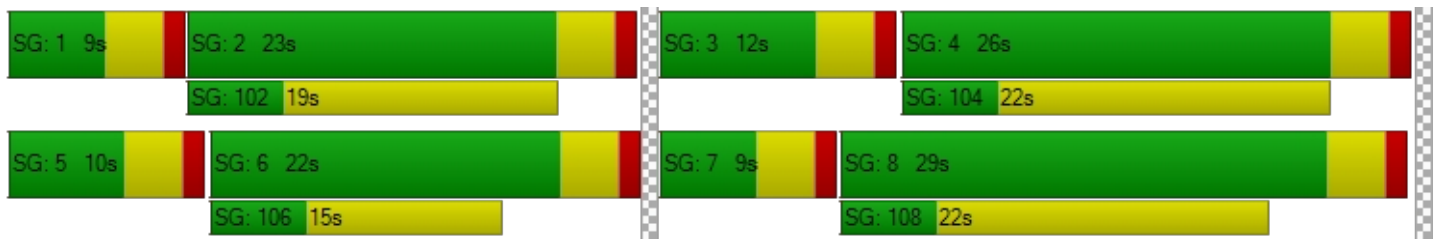
d_M, Delay for Movement [s/veh]	40.94	7.61	7.61	39.91	9.61	10.09	76.16	0.00	26.64	0.00	32.05	32.05
Movement LOS	D	A	A	D	A	B	F	A	C	A	C	C
d_A, Approach Delay [s/veh]	18.42			11.75			56.00			32.05		
Approach LOS	B			B			E			C		
d_I, Intersection Delay [s/veh]	29.46											
Intersection LOS	C											
Intersection V/C	0.312											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.64	26.64	26.64	26.64
I_p,int, Pedestrian LOS Score for Intersection	2.488	2.560	2.278	1.959
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	513	542	713	627
d_b, Bicycle Delay [s]	19.37	18.64	14.52	16.52
I_b,int, Bicycle LOS Score for Intersection	1.799	1.874	2.172	1.622
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	11	2	28	3	2	1	0	290	9	26	182	3
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	3	0	0	0	0	16	5	22	4	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]	12	2	32	3	2	1	0	318	14	49	193	3
Peak Hour Factor	0.5640	0.5640	0.5640	0.5000	0.5000	0.5000	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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	14	2	1	1	0	90	4	14	54	1
Total Analysis Volume [veh/h]	21	4	57	6	4	2	0	358	16	55	217	3
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	540	655	569	706	690	816
Degree of Utilization, x	0.04	0.09	0.02	0.53	0.39	0.00

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.31	0.06	3.14	1.89	0.01
95th-Percentile Queue Length [ft]	3.03	7.67	1.62	78.49	47.13	0.28
Approach Delay [s/veh]	8.98		9.47	13.69	11.23	
Approach LOS	A		A	B	B	
Intersection Delay [s/veh]	12.19					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	1	156	0	0	181	2	0	0	0	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	81	13	29	56	7	1	0	4	4	0	9
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]	23	243	13	29	244	9	1	0	4	4	0	9
Peak Hour Factor	0.7830	0.7830	0.7830	0.8030	0.8030	0.8030	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	7	78	4	9	76	3	0	0	1	1	0	2
Total Analysis Volume [veh/h]	29	310	17	36	304	11	1	0	4	4	0	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	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.93	0.00	0.00	7.98	0.00	0.00	14.67	16.35	9.17	14.79	16.33	9.24
Movement LOS	A	A	A	A	A	A	B	C	A	B	C	A
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.09	0.00	0.00	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	1.77	0.00	0.00	2.23	0.00	0.00	0.20	0.35	0.35	0.82	0.79	0.79
d_A, Approach Delay [s/veh]	0.65			0.82			10.27			10.95		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.98											
Intersection LOS	B											



**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		←R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	32	0	0	26	3	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	3	0	27	22	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]	37	3	0	54	25	1
Peak Hour Factor	0.6670	0.6670	0.7650	0.7650	0.3330	0.3330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	1	0	18	19	1
Total Analysis Volume [veh/h]	55	4	0	71	75	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.31	0.00	9.51	8.55
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.28	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.02	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		9.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.55					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	5	37	12	2	3
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]	19	38	67	12	2	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	10	18	3	1	1
Total Analysis Volume [veh/h]	20	40	71	13	2	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.37	8.66
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.00	1.00	0.00	0.00	0.41	0.41
d_A, Approach Delay [s/veh]	2.46		0.00		8.95	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.29					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	19	3	37	5	2
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]	10	52	33	37	5	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	9	10	1	1
Total Analysis Volume [veh/h]	11	55	35	39	5	2
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.21	8.57
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.54	0.54	0.00	0.00	0.59	0.59
d_A, Approach Delay [s/veh]	1.23		0.00		9.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.98					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	8	25	1	0	24	5	5	0	15	4	0	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	0	4	0	2	0	2	0	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]	8	52	1	0	29	5	7	0	18	4	0	1
Peak Hour Factor	0.7080	0.7080	0.7080	0.7920	0.7920	0.7920	0.6500	0.6500	0.6500	0.5630	0.5630	0.5630
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]	3	18	0	0	9	2	3	0	7	2	0	0
Total Analysis Volume [veh/h]	11	73	1	0	37	6	11	0	28	7	0	2
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	0.00	0.00	0.00	0.01	0.00	0.03	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	7.34	0.00	0.00	9.48	9.94	8.63	9.57	9.84	8.67
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.13	0.13	0.13	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.53	0.00	0.00	0.00	3.14	3.14	3.14	0.82	0.82	0.82
d_A, Approach Delay [s/veh]	0.94			0.00			8.87			9.37		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.90											
Intersection LOS	A											



**Intersection Level Of Service Report  
Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	176	5	0	203	0	0	0	1	8	1	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	114	16	0	59	5	2	0	1	4	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]	5	297	21	0	270	5	2	0	2	12	1	1
Peak Hour Factor	0.8960	0.8960	0.8960	0.8320	0.8320	0.8320	0.2500	0.2500	0.2500	0.4170	0.4170	0.4170
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]	1	83	6	0	81	2	2	0	2	7	1	1
Total Analysis Volume [veh/h]	6	331	23	0	325	6	8	0	8	29	2	2
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.07	0.01	0.00
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	7.96	0.00	0.00	13.17	14.95	9.24	13.76	14.75	9.33
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.03	0.21	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.36	0.00	0.00	0.00	0.00	0.00	1.36	1.36	0.71	5.27	0.59	0.59
d_A, Approach Delay [s/veh]	0.13			0.00			11.21			13.55		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.91											
Intersection LOS	B											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 7 OY AM + P

Report File: C:\...\Cumulative AM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	88	183	0	21	152	164	207	0	142	0	0	23	980

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	12	2	32	3	2	1	0	318	14	49	193	3	629

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	23	243	13	29	244	9	1	0	4	4	0	9	579

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	37	3	0	54	25	1	120

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	19	38	67	12	2	3	141

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	10	52	33	37	5	2	139

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	8	52	1	0	29	5	7	0	18	4	0	1	125

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	5	297	21	0	270	5	2	0	2	12	1	1	616

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 8 OY PM + P

Report File: C:\...\Cumulative PM.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	NB Left	0.498	31.2	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.797	22.7	C
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.062	16.8	C
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.012	9.7	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.015	9.5	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.043	9.5	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.033	10.3	B
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.127	19.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	0	0	107	20	35	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	238	3	7	214	252	276	0	238	1	1	6
Peak Hour Factor	0.7000	0.7000	0.7000	0.8610	0.8610	0.8610	0.9280	0.9280	0.9280	0.6670	0.6670	0.6670
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]	66	85	1	2	62	73	74	0	64	0	0	2
Total Analysis Volume [veh/h]	264	340	4	8	249	293	297	0	256	1	1	9
Presence of On-Street Parking	No		No	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 in	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	1 - Coordination Group
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	31	0	9	24	0	19	35	0	10	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	1	40	40	15	17	17	0	2
g / C, Green / Cycle	0.14	0.60	0.60	0.01	0.47	0.47	0.18	0.20	0.20	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.09	0.00	0.13	0.18	0.16	0.00	0.16	0.00	0.01
s, saturation flow rate [veh/h]	1810	1900	1892	1810	1900	1615	1810	1900	1615	1810	1640
c, Capacity [veh/h]	256	1135	1131	21	888	755	320	381	324	5	43
d1, Uniform Delay [s]	36.56	7.59	7.59	41.80	13.91	14.76	34.54	0.00	32.37	42.39	40.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	34.06	0.28	0.28	11.01	0.79	1.50	11.62	0.00	4.35	18.52	2.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.03	0.15	0.15	0.38	0.28	0.39	0.93	0.00	0.79	0.20	0.23
d, Delay for Lane Group [s/veh]	70.62	7.88	7.88	52.81	14.70	16.27	46.16	0.00	36.71	60.90	43.30
Lane Group LOS	F	A	A	D	B	B	D	A	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.35	1.17	1.16	0.22	2.71	3.46	6.92	0.00	5.27	0.05	0.23
50th-Percentile Queue Length [ft/ln]	183.85	29.18	29.09	5.54	67.72	86.41	173.08	0.00	131.63	1.14	5.70
95th-Percentile Queue Length [veh/ln]	11.95	2.10	2.09	0.40	4.88	6.22	11.24	0.00	9.03	0.08	0.41
95th-Percentile Queue Length [ft/ln]	298.81	52.53	52.37	9.97	121.90	155.54	280.96	0.00	225.72	2.06	10.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	70.62	7.88	7.88	52.81	14.70	16.27	46.16	0.00	36.71	60.90	43.30	43.30
Movement LOS	F	A	A	D	B	B	D	A	D	E	D	D
d_A, Approach Delay [s/veh]	35.12			16.09			41.79			44.90		
Approach LOS	D			B			D			D		
d_I, Intersection Delay [s/veh]	31.24											
Intersection LOS	C											
Intersection V/C	0.498											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.03	34.03	34.03	34.03
I_p,int, Pedestrian LOS Score for Intersection	2.661	2.687	2.401	1.950
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	635	470	729	517
d_b, Bicycle Delay [s]	19.83	24.90	17.20	23.39
I_b,int, Bicycle LOS Score for Intersection	2.061	2.013	2.472	1.578
Bicycle LOS	B	B	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	22.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.797

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	23	1	29	4	4	2	1	433	16	18	368	11
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	21	0	0	0	0	8	1	1	18	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]	28	1	51	4	4	2	1	458	18	20	401	11
Peak Hour Factor	0.7160	0.7160	0.7160	0.4320	0.4320	0.4320	0.9330	0.9330	0.9330	0.8890	0.8890	0.8890
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]	10	0	18	2	2	1	0	123	5	6	113	3
Total Analysis Volume [veh/h]	39	1	71	9	9	5	1	491	19	22	451	12
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	471	559	485	641	647	746
Degree of Utilization, x	0.08	0.13	0.05	0.80	0.73	0.02

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.27	0.44	0.15	7.92	6.31	0.05
95th-Percentile Queue Length [ft]	6.75	11.00	3.73	198.09	157.75	1.23
Approach Delay [s/veh]	10.42		10.80	26.98	21.47	
Approach LOS	B		B	D	C	
Intersection Delay [s/veh]	22.66					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	10	221	0	0	290	0	8	0	5	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	75	5	12	94	1	7	0	20	13	0	33
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]	15	305	5	12	396	1	15	0	25	13	0	33
Peak Hour Factor	0.9600	0.9600	0.9600	0.8730	0.8730	0.8730	0.7500	0.7500	0.7500	0.9500	0.9500	0.9500
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]	4	79	1	3	113	0	5	0	8	3	0	9
Total Analysis Volume [veh/h]	16	318	5	14	454	1	20	0	33	14	0	35
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	0.06	0.00	0.04	0.04	0.00	0.04
d_M, Delay for Movement [s/veh]	8.27	0.00	0.00	7.92	0.00	0.00	16.83	17.32	9.81	15.38	17.26	9.36
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.03	0.00	0.00	0.20	0.13	0.13	0.12	0.13	0.13
95th-Percentile Queue Length [ft/ln]	1.09	0.00	0.00	0.85	0.00	0.00	4.91	3.30	3.30	3.02	3.17	3.17
d_A, Approach Delay [s/veh]	0.39			0.24			12.46			11.08		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.59											
Intersection LOS	C											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		←R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	50	6	2	64	1	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	20	0	2	3	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]	77	26	2	69	4	12
Peak Hour Factor	0.6670	0.6670	0.6910	0.6910	0.4640	0.4640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	10	1	25	2	6
Total Analysis Volume [veh/h]	115	39	3	100	9	26
Pedestrian Volume [ped/h]	0		0		0	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.73	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.04	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.16	0.16	0.89	2.13
d_A, Approach Delay [s/veh]	0.00		0.22		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.17					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	34	3	2	11	17
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]	2	92	71	2	11	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	24	19	1	3	4
Total Analysis Volume [veh/h]	2	97	75	2	12	18
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.54	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.00	0.00	2.55	2.55
d_A, Approach Delay [s/veh]	0.15		0.00		9.08	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	17	3	34	9
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]	1	60	85	3	34	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	16	22	1	9	2
Total Analysis Volume [veh/h]	1	63	89	3	36	9
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.51	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	0.00	4.12	4.12
d_A, Approach Delay [s/veh]	0.12		0.00		9.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.14					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	15	46	0	0	55	9	10	0	10	1	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	0	24	2	0	0	1	0	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]	18	51	0	0	81	11	10	0	11	1	0	0
Peak Hour Factor	0.7690	0.7690	0.7690	0.7220	0.7220	0.7220	0.4170	0.4170	0.4170	0.2500	0.2500	0.2500
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]	6	17	0	0	28	4	6	0	7	1	0	0
Total Analysis Volume [veh/h]	23	66	0	0	112	15	24	0	26	4	0	0
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	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.49	0.00	0.00	7.32	0.00	0.00	10.30	10.73	9.13	10.29	10.53	8.62
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.00	0.00	0.00	0.19	0.19	0.19	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.19	1.19	1.19	0.00	0.00	0.00	4.87	4.87	4.87	0.44	0.44	0.44
d_A, Approach Delay [s/veh]	1.93			0.00			9.69			10.29		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.58											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.127

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	293	7	2	327	0	1	0	5	8	0	5
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	79	7	0	124	3	6	0	6	18	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]	3	384	14	2	464	3	7	0	11	26	0	5
Peak Hour Factor	0.8200	0.8200	0.8200	0.8100	0.8100	0.8100	0.7500	0.7500	0.7500	0.7220	0.7220	0.7220
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]	1	117	4	1	143	1	2	0	4	9	0	2
Total Analysis Volume [veh/h]	4	468	17	2	573	4	9	0	15	36	0	7
Pedestrian Volume [ped/h]	0			0			0			0		



**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.00	0.00	0.01	0.00	0.03	0.00	0.02	0.13	0.00	0.01
d_M, Delay for Movement [s/veh]	8.59	0.00	0.00	8.31	0.00	0.00	18.99	21.76	10.15	19.51	21.19	9.75
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.43	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.30	0.00	0.00	0.14	0.00	0.00	2.62	2.62	1.61	10.74	0.69	0.69
d_A, Approach Delay [s/veh]	0.07			0.03			13.47			17.92		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.01											
Intersection LOS	C											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry Vistro Analysis.vistro

Scenario 8 OY PM + P

Report File: C:\...\Cumulative PM.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	185	238	3	7	214	252	276	0	238	1	1	6	1421

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	28	1	51	4	4	2	1	458	18	20	401	11	999

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	15	305	5	12	396	1	15	0	25	13	0	33	820

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	77	26	2	69	4	12	190

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	2	92	71	2	11	17	195

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	1	60	85	3	34	9	192

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	18	51	0	0	81	11	10	0	11	1	0	0	183

Version 2021 (SP 0-6)

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	3	384	14	2	464	3	7	0	11	26	0	5	919

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 7 OY AM + P

Report File: C:\...\Cumulative AM built.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	EB Left	0.312	29.5	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.530	12.2	B
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.010	14.1	B
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.034	9.3	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.002	9.3	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.004	9.4	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.014	9.8	A
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Thru	0.006	15.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.312

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	190.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	85	88	0	20	58	126	181	0	137	0	0	22
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	91	0	0	92	33	19	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	183	0	21	152	164	207	0	142	0	0	23
Peak Hour Factor	0.9350	0.9350	0.9350	0.8850	0.8850	0.8850	0.9390	0.9390	0.9390	0.6110	0.6110	0.6110
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]	24	49	0	6	43	46	55	0	38	0	0	9
Total Analysis Volume [veh/h]	94	196	0	24	172	185	220	0	151	0	0	38
Presence of On-Street Parking	No		No	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 in	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]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	22	0	10	23	0	12	29	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	2	36	36	8	13	13	0	5
g / C, Green / Cycle	0.07	0.55	0.55	0.03	0.51	0.51	0.11	0.19	0.19	0.00	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.05	0.01	0.09	0.11	0.12	0.00	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1615	1810	1900	1615	1810	1615
c, Capacity [veh/h]	125	1049	1049	52	972	826	208	361	307	3	124
d1, Uniform Delay [s]	32.12	7.44	7.44	33.59	9.22	9.47	31.09	0.00	25.42	0.00	30.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	8.82	0.18	0.18	6.32	0.40	0.63	45.07	0.00	1.22	0.00	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.09	0.09	0.46	0.18	0.22	1.06	0.00	0.49	0.00	0.31
d, Delay for Lane Group [s/veh]	40.94	7.61	7.61	39.91	9.61	10.09	76.16	0.00	26.64	0.00	32.05
Lane Group LOS	D	A	A	D	A	B	F	A	C	A	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	0.56	0.56	0.46	1.18	1.33	5.83	0.00	2.14	0.00	0.61
50th-Percentile Queue Length [ft/ln]	43.24	13.95	13.95	11.48	29.57	33.30	145.68	0.00	53.50	0.00	15.24
95th-Percentile Queue Length [veh/ln]	3.11	1.00	1.00	0.83	2.13	2.40	9.99	0.00	3.85	0.00	1.10
95th-Percentile Queue Length [ft/ln]	77.84	25.10	25.10	20.67	53.22	59.94	249.78	0.00	96.29	0.00	27.43

**Movement, Approach, & Intersection Results**

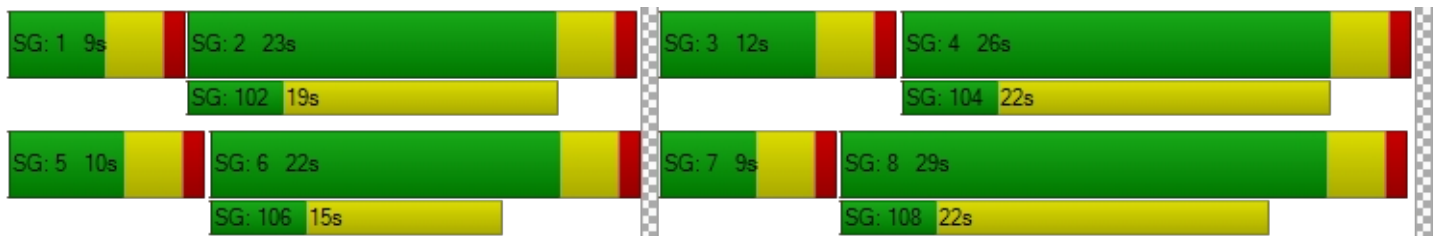
d_M, Delay for Movement [s/veh]	40.94	7.61	7.61	39.91	9.61	10.09	76.16	0.00	26.64	0.00	32.05	32.05
Movement LOS	D	A	A	D	A	B	F	A	C	A	C	C
d_A, Approach Delay [s/veh]	18.42			11.75			56.00			32.05		
Approach LOS	B			B			E			C		
d_I, Intersection Delay [s/veh]	29.46											
Intersection LOS	C											
Intersection V/C	0.312											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.64	26.64	26.64	26.64
I_p,int, Pedestrian LOS Score for Intersection	2.488	2.560	2.358	1.959
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	513	542	713	627
d_b, Bicycle Delay [s]	19.37	18.64	14.52	16.52
I_b,int, Bicycle LOS Score for Intersection	1.799	1.874	2.172	1.622
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	←↑→			↑			↑			←↑→		
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	11	2	28	3	2	1	0	290	9	26	182	3
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	3	0	0	0	0	16	5	22	4	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]	12	2	32	3	2	1	0	318	14	49	193	3
Peak Hour Factor	0.5640	0.5640	0.5640	0.5000	0.5000	0.5000	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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	14	2	1	1	0	90	4	14	54	1
Total Analysis Volume [veh/h]	21	4	57	6	4	2	0	358	16	55	217	3
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	540	655	569	706	690	816
Degree of Utilization, x	0.04	0.09	0.02	0.53	0.39	0.00

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.31	0.06	3.14	1.89	0.01
95th-Percentile Queue Length [ft]	3.03	7.67	1.62	78.49	47.13	0.28
Approach Delay [s/veh]	8.98		9.47	13.69	11.23	
Approach LOS	A		A	B	B	
Intersection Delay [s/veh]	12.19					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	1	156	0	0	181	2	0	0	0	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	81	13	29	56	7	1	0	2	4	0	9
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]	8	243	13	29	244	9	1	0	2	4	0	9
Peak Hour Factor	0.7830	0.7830	0.7830	0.8030	0.8030	0.8030	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	3	78	4	9	76	3	0	0	1	1	0	2
Total Analysis Volume [veh/h]	10	310	17	36	304	11	1	0	2	4	0	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	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.89	0.00	0.00	7.98	0.00	0.00	13.98	15.62	9.17	14.06	15.61	9.24
Movement LOS	A	A	A	A	A	A	B	C	A	B	C	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.09	0.00	0.00	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.60	0.00	0.00	2.23	0.00	0.00	0.19	0.17	0.17	0.75	0.79	0.79
d_A, Approach Delay [s/veh]	0.23			0.82			10.77			10.72		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.76											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑↱		↑		↰↱	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	32	0	0	26	3	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	1	0	27	7	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]	37	1	0	54	10	1
Peak Hour Factor	0.6670	0.6670	0.7650	0.7650	0.3330	0.3330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	0	18	8	1
Total Analysis Volume [veh/h]	55	1	0	71	30	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.31	0.00	9.27	8.55
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.11	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.66	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		9.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.90					
Intersection LOS	A					



**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	3	22	12	2	3
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]	19	36	52	12	2	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	9	14	3	1	1
Total Analysis Volume [veh/h]	20	38	55	13	2	3
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.27	8.59
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.98	0.98	0.00	0.00	0.40	0.40
d_A, Approach Delay [s/veh]	2.54		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.46					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	32	29	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	19	3	22	3	4
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]	25	52	33	22	3	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	14	9	6	1	1
Total Analysis Volume [veh/h]	26	55	35	23	3	4
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.38	8.53
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.27	1.27	0.00	0.00	0.57	0.57
d_A, Approach Delay [s/veh]	2.36		0.00		8.89	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.73					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	8	25	1	0	24	5	5	0	15	4	0	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	4	3	0	2	0	2	0	0	25
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]	8	43	1	4	28	5	7	0	18	4	0	26
Peak Hour Factor	0.7080	0.7080	0.7080	0.7920	0.7920	0.7920	0.6500	0.6500	0.6500	0.5630	0.5630	0.5630
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]	3	15	0	1	9	2	3	0	7	2	0	12
Total Analysis Volume [veh/h]	11	61	1	5	35	6	11	0	28	7	0	46
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	0.00	0.00	0.00	0.01	0.00	0.03	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.32	0.00	0.00	9.82	9.93	8.63	9.72	10.00	8.78
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.01	0.01	0.01	0.13	0.13	0.13	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.53	0.24	0.24	0.24	3.22	3.22	3.22	4.30	4.30	4.30
d_A, Approach Delay [s/veh]	1.10			0.80			8.96			8.90		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.45											
Intersection LOS	A											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	176	5	0	203	0	0	0	1	8	1	1
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	99	16	0	57	5	2	0	5	4	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]	30	282	21	0	268	5	2	0	6	12	1	1
Peak Hour Factor	0.8960	0.8960	0.8960	0.8320	0.8320	0.8320	0.2500	0.2500	0.2500	0.4170	0.4170	0.4170
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]	8	79	6	0	81	2	2	0	6	7	1	1
Total Analysis Volume [veh/h]	33	315	23	0	322	6	8	0	24	29	2	2
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.03	0.07	0.01	0.00
d_M, Delay for Movement [s/veh]	7.98	0.00	0.00	7.92	0.00	0.00	13.93	15.68	9.32	14.71	15.45	9.29
Movement LOS	A	A	A	A	A	A	B	C	A	B	C	A
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.09	0.23	0.02	0.02
95th-Percentile Queue Length [ft/ln]	2.04	0.00	0.00	0.00	0.00	0.00	1.49	1.49	2.16	5.84	0.61	0.61
d_A, Approach Delay [s/veh]	0.71			0.00			10.47			14.42		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.41											
Intersection LOS	C											



## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 7 OY AM + P

Report File: C:\...\Cumulative AM built.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	88	183	0	21	152	164	207	0	142	0	0	23	980

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	12	2	32	3	2	1	0	318	14	49	193	3	629

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	8	243	13	29	244	9	1	0	2	4	0	9	562

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	37	1	0	54	10	1	103

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	19	36	52	12	2	3	124

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	25	52	33	22	3	4	139

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	8	43	1	4	28	5	7	0	18	4	0	26	144

Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	30	282	21	0	268	5	2	0	6	12	1	1	628

## Table of Contents

Intersection Analysis Summary .....	2
Intersection Level Of Service Report .....	3
Intersection 1: Harvill Ave/Markham St .....	3
Intersection 2: Seaton Ave/Markham St .....	8
Intersection 3: Harvill Ave/Commerce Center Dr .....	10
Intersection 4: Seaton Ave/Commerce Center Dr .....	12
Intersection 5: Seaton Ave/Driveway 1 .....	14
Intersection 6: Seaton Ave/Driveway 2 .....	16
Intersection 7: Seaton Ave/Perry St .....	18
Intersection 8: Harvill Ave/Perry St .....	20
Turning Movement Volume: Summary .....	22

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 8 OY PM + P

Report File: C:\...\Cumulative PM built.pdf

10/6/2021

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harvill Ave/Markham St	Signalized	HCM 6th Edition	NB Left	0.499	31.2	C
2	Seaton Ave/Markham St	All-way stop	HCM 6th Edition	EB Thru	0.798	22.8	C
3	Harvill Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	EB Left	0.061	16.7	C
4	Seaton Ave/Commerce Center Dr	Two-way stop	HCM 6th Edition	WB Left	0.005	9.7	A
5	Seaton Ave/Driveway 1	Two-way stop	HCM 6th Edition	EB Left	0.014	9.5	A
6	Seaton Ave/Driveway 2	Two-way stop	HCM 6th Edition	EB Left	0.026	9.5	A
7	Seaton Ave/Perry St	Two-way stop	HCM 6th Edition	EB Left	0.037	10.9	B
8	Harvill Ave/Perry St	Two-way stop	HCM 6th Edition	WB Left	0.132	20.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report  
Intersection 1: Harvill Ave/Markham St**

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	190.00	100.00	100.00	200.00	100.00	100.00	140.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	178	118	3	7	103	223	232	0	229	1	1	6
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	0	0	107	22	35	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	238	3	7	214	254	276	0	238	1	1	6
Peak Hour Factor	0.7000	0.7000	0.7000	0.8610	0.8610	0.8610	0.9280	0.9280	0.9280	0.6670	0.6670	0.6670
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]	66	85	1	2	62	74	74	0	64	0	0	2
Total Analysis Volume [veh/h]	264	340	4	8	249	295	297	0	256	1	1	9
Presence of On-Street Parking	No		No	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 in		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]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	31	0	9	24	0	19	35	0	10	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	14	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	1	40	40	15	17	17	0	2
g / C, Green / Cycle	0.14	0.60	0.60	0.01	0.47	0.47	0.18	0.20	0.20	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.09	0.00	0.13	0.18	0.16	0.00	0.16	0.00	0.01
s, saturation flow rate [veh/h]	1810	1900	1892	1810	1900	1615	1810	1900	1615	1810	1640
c, Capacity [veh/h]	256	1135	1131	21	888	755	320	381	324	5	43
d1, Uniform Delay [s]	36.56	7.59	7.59	41.80	13.91	14.79	34.54	0.00	32.37	42.39	40.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, 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
d2, Incremental Delay [s]	34.06	0.28	0.28	11.01	0.79	1.52	11.62	0.00	4.35	18.52	2.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.03	0.15	0.15	0.38	0.28	0.39	0.93	0.00	0.79	0.20	0.23
d, Delay for Lane Group [s/veh]	70.62	7.88	7.88	52.81	14.70	16.31	46.16	0.00	36.71	60.90	43.30
Lane Group LOS	F	A	A	D	B	B	D	A	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.35	1.17	1.16	0.22	2.71	3.49	6.68	0.00	5.06	0.05	0.23
50th-Percentile Queue Length [ft/ln]	183.85	29.18	29.09	5.54	67.72	87.15	167.04	0.00	126.46	1.14	5.70
95th-Percentile Queue Length [veh/ln]	11.95	2.10	2.09	0.40	4.88	6.28	10.92	0.00	8.75	0.08	0.41
95th-Percentile Queue Length [ft/ln]	298.81	52.53	52.37	9.97	121.90	156.88	273.01	0.00	218.67	2.06	10.26



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	70.62	7.88	7.88	52.81	14.70	16.31	46.16	0.00	36.71	60.90	43.30	43.30
Movement LOS	F	A	A	D	B	B	D	A	D	E	D	D
d_A, Approach Delay [s/veh]	35.12			16.11			41.79			44.90		
Approach LOS	D			B			D			D		
d_I, Intersection Delay [s/veh]	31.23											
Intersection LOS	C											
Intersection V/C	0.499											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.03	34.03	34.03	34.03
I_p,int, Pedestrian LOS Score for Intersection	2.661	2.688	2.537	1.950
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	635	470	729	517
d_b, Bicycle Delay [s]	19.83	24.90	17.20	23.39
I_b,int, Bicycle LOS Score for Intersection	2.061	2.015	2.472	1.578
Bicycle LOS	B	B	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 2: Seaton Ave/Markham St**

Control Type:	All-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	23	1	29	4	4	2	1	433	16	18	368	11
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	21	0	0	0	0	8	1	3	18	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]	28	1	51	4	4	2	1	458	18	22	401	11
Peak Hour Factor	0.7160	0.7160	0.7160	0.4320	0.4320	0.4320	0.9330	0.9330	0.9330	0.8890	0.8890	0.8890
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]	10	0	18	2	2	1	0	123	5	6	113	3
Total Analysis Volume [veh/h]	39	1	71	9	9	5	1	491	19	25	451	12
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	470	559	484	640	647	745
Degree of Utilization, x	0.08	0.13	0.05	0.80	0.74	0.02

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.27	0.44	0.15	7.94	6.42	0.05
95th-Percentile Queue Length [ft]	6.75	11.02	3.73	198.58	160.61	1.23
Approach Delay [s/veh]	10.43		10.81	27.07	21.79	
Approach LOS	B		B	D	C	
Intersection Delay [s/veh]	22.83					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 3: Harvill Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
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 Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	240.00	100.00	100.00	190.00	100.00	100.00	165.00	100.00	100.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	10	221	0	0	290	0	8	0	5	0	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	75	5	12	94	1	7	0	7	13	0	33
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]	13	305	5	12	396	1	15	0	12	13	0	33
Peak Hour Factor	0.9600	0.9600	0.9600	0.8730	0.8730	0.8730	0.7500	0.7500	0.7500	0.9500	0.9500	0.9500
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]	3	79	1	3	113	0	5	0	4	3	0	9
Total Analysis Volume [veh/h]	14	318	5	14	454	1	20	0	16	14	0	35
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	0.06	0.00	0.02	0.04	0.00	0.04
d_M, Delay for Movement [s/veh]	8.27	0.00	0.00	7.92	0.00	0.00	16.73	17.13	9.70	15.06	17.18	9.36
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.03	0.00	0.00	0.19	0.06	0.06	0.12	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.95	0.00	0.00	0.85	0.00	0.00	4.86	1.57	1.57	2.93	3.17	3.17
d_A, Approach Delay [s/veh]	0.34			0.24			13.61			10.99		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.41											
Intersection LOS	C											

**Intersection Level Of Service Report**  
**Intersection 4: Seaton Ave/Commerce Center Dr**

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↑R		↑		↑R	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	155.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	50	6	2	64	1	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	7	0	4	1	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]	77	13	2	71	2	12
Peak Hour Factor	0.6670	0.6670	0.6910	0.6910	0.4640	0.4640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	5	1	26	1	6
Total Analysis Volume [veh/h]	115	19	3	103	4	26
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	7.47	0.00	9.72	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.02	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.15	0.15	0.39	2.13
d_A, Approach Delay [s/veh]	0.00		0.21		9.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.09					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 5: Seaton Ave/Driveway 1**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	21	3	2	11	17
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]	2	79	71	2	11	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	21	19	1	3	4
Total Analysis Volume [veh/h]	2	83	75	2	12	18
Pedestrian Volume [ped/h]	0		0		0	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.46	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.00	0.00	2.53	2.53
d_A, Approach Delay [s/veh]	0.17		0.00		9.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 6: Seaton Ave/Driveway 2**

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

**Intersection Setup**

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

**Volumes**

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	56	65	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	2	17	3	21	22
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	60	85	3	21	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	16	22	1	6	6
Total Analysis Volume [veh/h]	3	63	89	3	22	23
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.03	0.02
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.52	8.91
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.15	0.15	0.00	0.00	3.94	3.94
d_A, Approach Delay [s/veh]	0.34		0.00		9.21	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

**Intersection Level Of Service Report  
Intersection 7: Seaton Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry 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
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	15	46	0	0	55	9	10	0	10	1	0	0
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	2	0	22	15	2	0	0	1	0	0	3
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]	18	50	0	22	72	11	10	0	11	1	0	3
Peak Hour Factor	0.7690	0.7690	0.7690	0.7220	0.7220	0.7220	0.4170	0.4170	0.4170	0.2500	0.2500	0.2500
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]	6	16	0	8	25	4	6	0	7	1	0	3
Total Analysis Volume [veh/h]	23	65	0	30	100	15	24	0	26	4	0	12
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	0.02	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.03	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.37	0.00	0.00	10.90	11.22	9.10	10.80	11.04	8.66
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.06	0.06	0.06	0.21	0.21	0.21	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	1.18	1.18	1.18	1.48	1.48	1.48	5.16	5.16	5.16	1.40	1.40	1.40
d_A, Approach Delay [s/veh]	1.95			1.52			9.96			9.20		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.47											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 8: Harvill Ave/Perry St**

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
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 Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	140.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	293	7	2	327	0	1	0	5	8	0	5
Base Volume 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
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	77	7	0	111	3	6	0	28	18	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]	6	382	14	2	451	3	7	0	33	26	0	5
Peak Hour Factor	0.8200	0.8200	0.8200	0.8100	0.8100	0.8100	0.7500	0.7500	0.7500	0.7220	0.7220	0.7220
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	116	4	1	139	1	2	0	11	9	0	2
Total Analysis Volume [veh/h]	7	466	17	2	557	4	9	0	44	36	0	7
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.06	0.13	0.00	0.01
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	8.31	0.00	0.00	18.76	21.53	10.30	20.14	20.98	9.75
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.01	0.00	0.00	0.10	0.10	0.19	0.45	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.52	0.00	0.00	0.14	0.00	0.00	2.57	2.57	4.85	11.19	0.69	0.69
d_A, Approach Delay [s/veh]	0.12			0.03			11.74			18.45		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.30											
Intersection LOS	C											

## Seaton &amp; Perry Industrial

Vistro File: C:\...\Seaton Perry\_built\_Vistro Analysis.vistro

Scenario 8 OY PM + P

Report File: C:\...\Cumulative PM built.pdf

10/6/2021

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Harvill Ave/Markham St	185	238	3	7	214	254	276	0	238	1	1	6	1423

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Seaton Ave/Markham St	28	1	51	4	4	2	1	458	18	22	401	11	1001

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Harvill Ave/Commerce Center Dr	13	305	5	12	396	1	15	0	12	13	0	33	805

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Seaton Ave/Commerce Center Dr	77	13	2	71	2	12	177

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Seaton Ave/Driveway 1	2	79	71	2	11	17	182

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
6	Seaton Ave/Driveway 2	3	60	85	3	21	22	194

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Seaton Ave/Perry St	18	50	0	22	72	11	10	0	11	1	0	3	198



Version 2021 (SP 0-6)

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ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Harvill Ave/Perry St	6	382	14	2	451	3	7	0	33	26	0	5	929

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*APPENDIX D – SEATON AVENUE STRIPING PLAN*

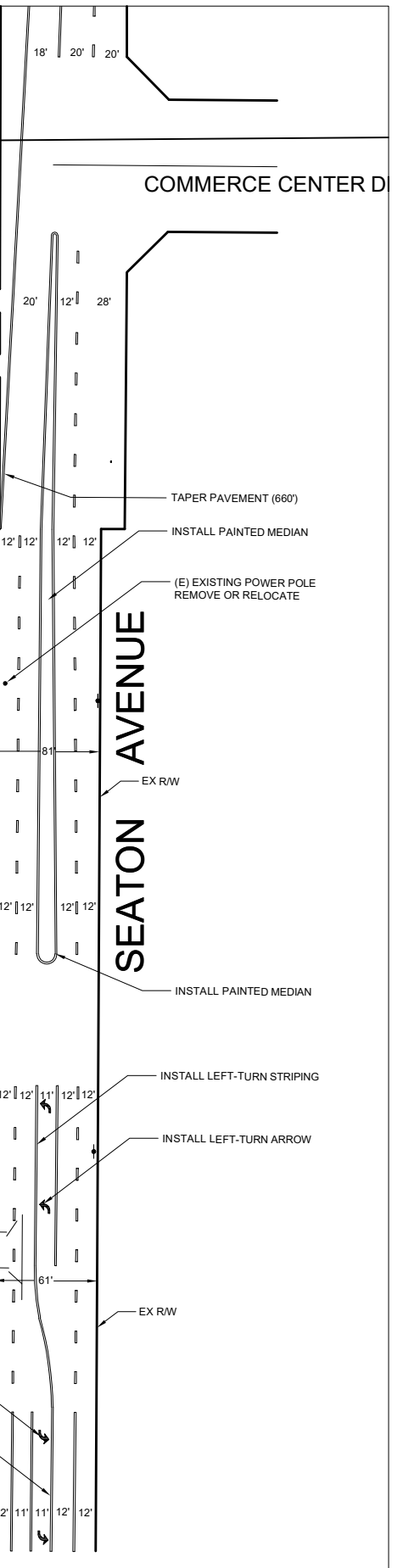
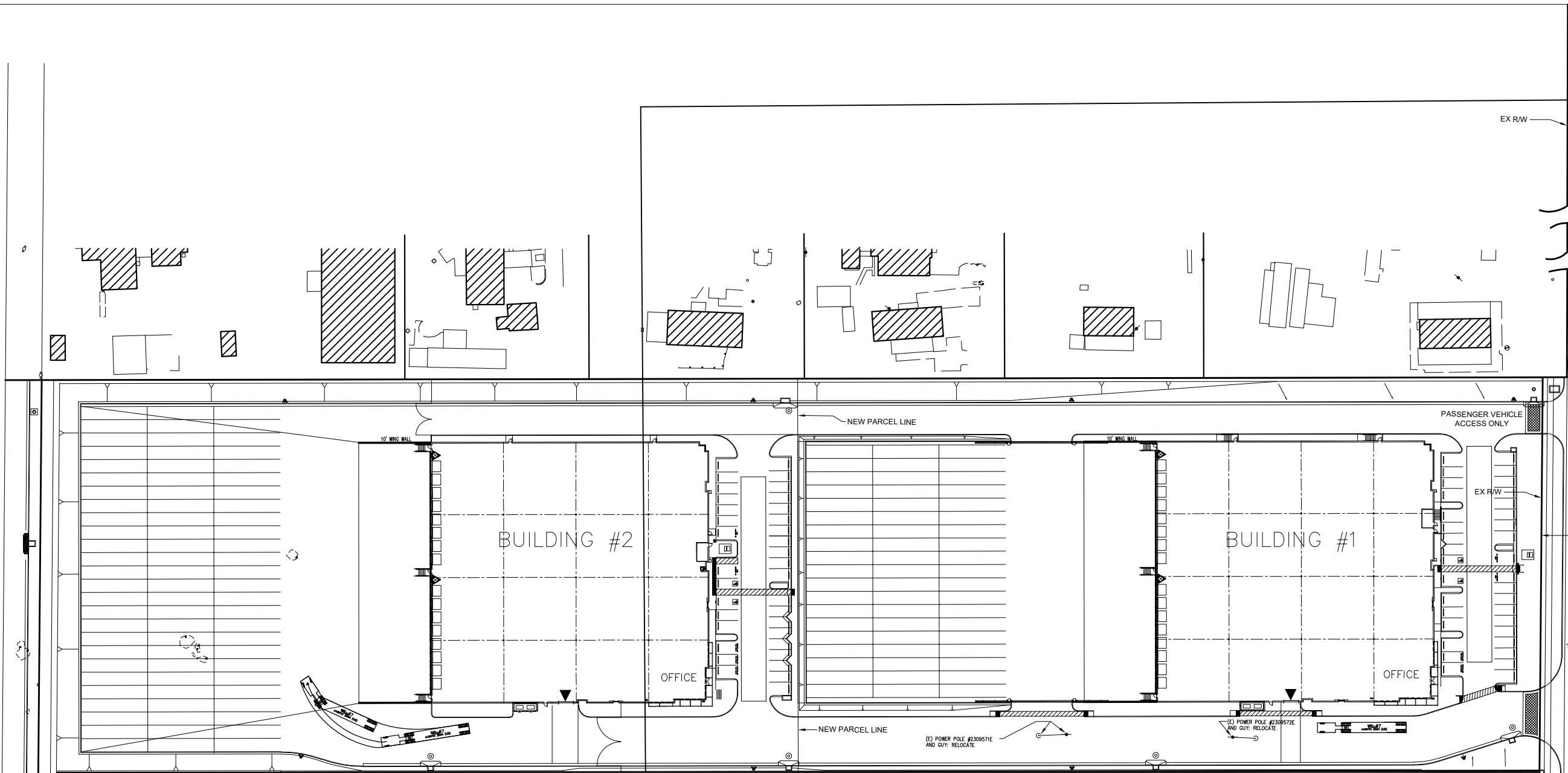
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BECK STREET

COMMERCE CENTER D

SEATON AVENUE

PERRY STREET



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## APPENDIX E – QUALIFICATIONS OF TIA PREPARERS

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### **Meghan Macias, TE**

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### **Education**

Master of Urban and Regional Planning  
University of California, Irvine – 1998

Bachelor of Arts, Geography  
California State University, Fullerton – 1996

### **Professional Registrations**

California Professional Traffic Engineer, TR 2697

### **Professional Affiliations**

Institute of Transportation Engineers (ITE)  
Orange County Traffic Engineering Council (OCTEC)  
Association of Environmental Professionals (AEP)

### **Alex Garber**

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### **Education**

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### **Professional Affiliations**

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### **Abby Pal**

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### **Education**

Master of Urban Design  
Carnegie Mellon University, Pittsburgh, PA - 2016  
Bachelor of Architecture  
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### **Professional Affiliations**

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