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REDLANDS MADERA AT CITRUS TRAIL TRAFFIC IMPACT ANALYSIS

City of Redlands

June 23, 2023

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

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City of Redlands

June 23, 2023

prepared by

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Project No. 19620

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EXECUTIVE SUMMARY

This section summarizes the proposed project, operational findings, and identifies recommendations (if any) as specified in this study.

Project Description

The 9.0-acre project site (APN 0168-291-02) is located at the northwest corner of Wabash Avenue and Colton Avenue in the City of Redlands, California. The project site is currently vacant.

The proposed project involves construction of a 103-dwelling unit single-family residential development. Vehicle access for the proposed project site is proposed via three internal residential streets, of which one will connect to Colton Avenue and two will connect to Wabash Avenue.

Project Trip Generation

The proposed project is forecast to generate a total of approximately 918 daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

Level of Service Analysis

The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for the Existing and Existing Plus Project, except for the following intersection that is forecast to continue operating at Level of Service D during the peak hours:

1. Judson Street (NS) at Colton Avenue (EW)

The addition of project trips does not degrade the Level of Service below the current Level of Service grade. Therefore, the proposed project is forecast to result in no substantial transportation effects at the study intersections for Existing Plus Project conditions.

Summary of Improvements

Project design features necessary to provide project access are outlined in the Site Access & On-Site Circulation (Section 7).

No off-site improvements are warranted since the project is forecast to result in no substantial transportation effects at the study intersections for Existing Plus Project conditions. However, all development projects are required, as a condition of approval, to pay the Development Impact Fee in effect at the time of the building permit issuance.

Vehicle Miles Traveled Analysis

Based on review of the proposed development and location, the project satisfies the County-established VMT screening criteria. Therefore, preparation of a transportation impact study with vehicle miles traveled (VMT) analysis is not warranted and the proposed project may be presumed to result in a less than significant VMT impact. The project VMT assessment is documented separately in the *Redlands Madera at Citrus Trail Vehicle Miles Traveled Assessment* (Ganddini Group, Inc., April 7, 2023)..

1. INTRODUCTION

This section provides an overview of the proposed project and the general scope of the analysis.

PURPOSE AND OBJECTIVES

The purpose of this study is to evaluate the potential for transportation impacts resulting from the development of the proposed project in the context of the City of Redlands's discretionary authority for conformance with locally established operational standards. Although this is a technical report, effort has been made to prepare the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with technical terms.

This study was prepared in consultation with the City of Redlands staff following the procedures and methodologies for assessing transportation impacts established by the City of Redlands. To assess the project's conformance with local operational standards, this study evaluates the project's effect on traffic operations and, if necessary, identifies recommended improvements or corrective measures to alleviate operational deficiencies substantially caused or worsened by the proposed project.

For compliance with California Environmental Quality Act (CEQA) requirements, a vehicle miles traveled (VMT) assessment is documented separately in the *Redlands Madera at Citrus Trail Vehicle Miles Traveled Assessment* (Ganddini Group, Inc., April 7, 2023).

PROJECT DESCRIPTION

The 9.0-acre project site (APN 0168-291-02) is located at the northwest corner of Wabash Avenue and Colton Avenue in the City of Redlands, California. The project site is currently vacant. Figure 1 and Figure 2 show the regional and project location maps.

The proposed project involves construction of a 103-dwelling unit single-family residential development. Vehicle access for the project site is proposed via three internal residential streets, of which one will connect to Colton Avenue and two will connect to Wabash Avenue. Figure 3 illustrates the project site plan.

SCOPE OF ANALYSIS

The scope of this analysis was determined in consultation with the City of Redlands as documented in the approved scoping agreement provided in Appendix B.

Study Area

Figure 4 illustrates the study area. In accordance with the City of Redlands requirements, the study area was determined in consultation with the City of Redlands engineering staff and consists of classified roadway intersections to which the project is forecast to contribute 50 or more peak hour trips. Based on the project trip generation and distribution forecasts presented later in this report, the study area consists of the following study intersections, each within the City of Redlands jurisdiction:

1. Judson Street (NS) at Colton Avenue (EW)[1]
2. Dearborn Street (NS) at Colton Avenue (EW)
3. Wabash Avenue (NS) at Colton Avenue (EW)
4. Wabash Avenue (NS) at Project North Driveway (EW)
5. Wabash Avenue (NS) at Project South Driveway (EW)
6. Project Driveway (NS) at Colton Avenue (EW)

Analysis Scenarios

This study includes an evaluation of the following analysis scenarios for weekday AM and PM peak hour conditions:

- Existing
- Existing Plus Project

[1] (NS) = north-south roadway; (EW) = east-west roadway.

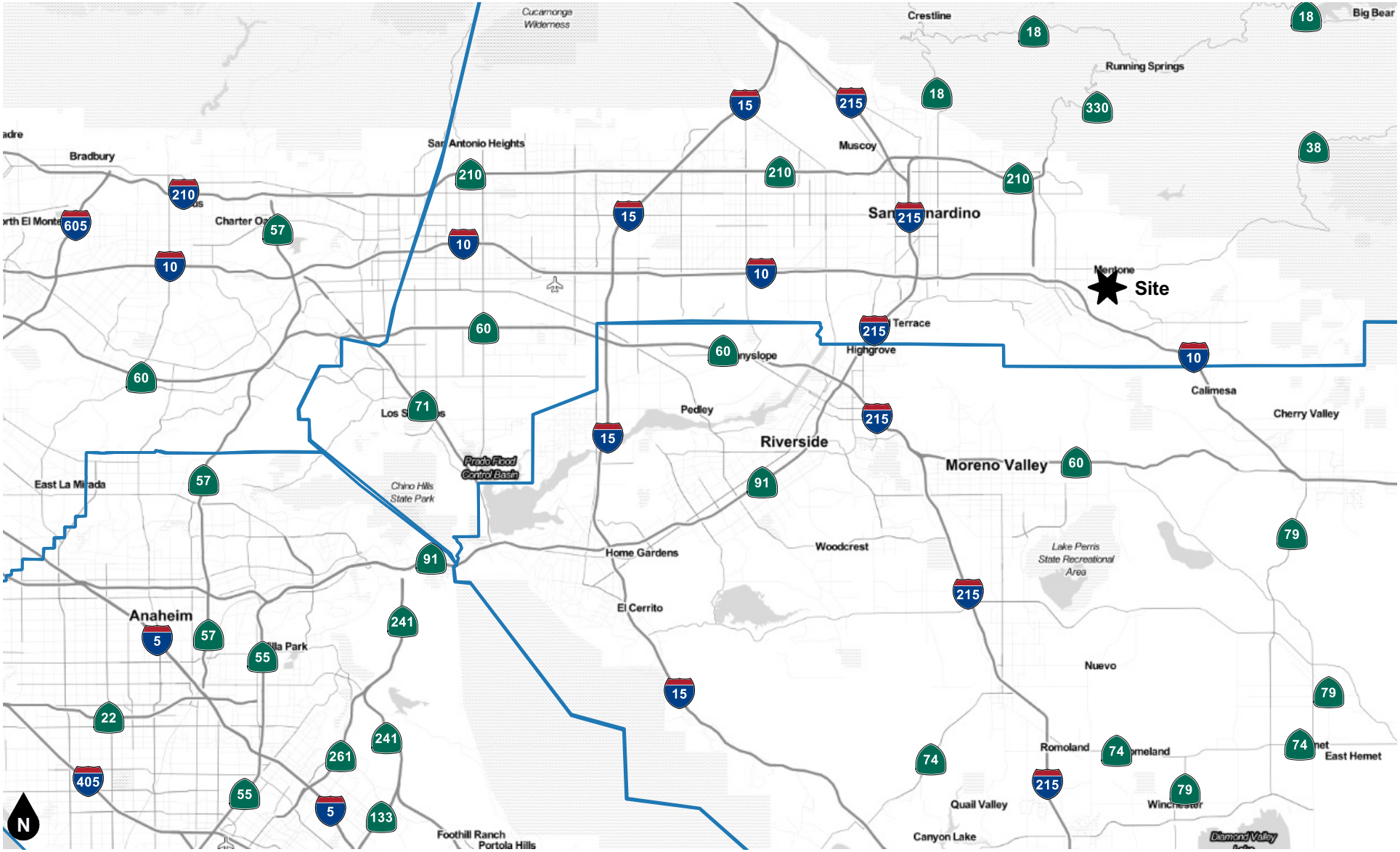


Figure 1
Regional Location map

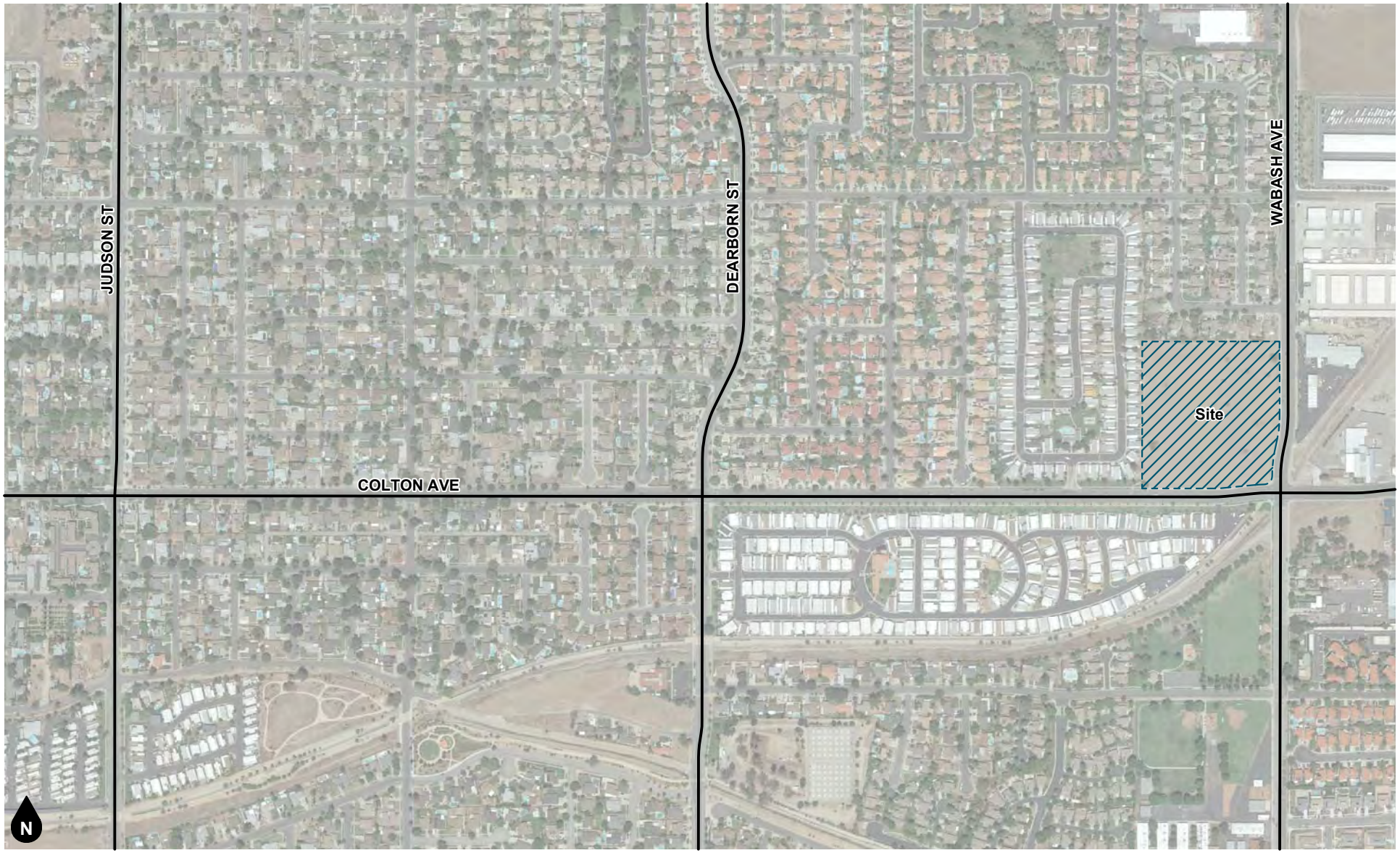
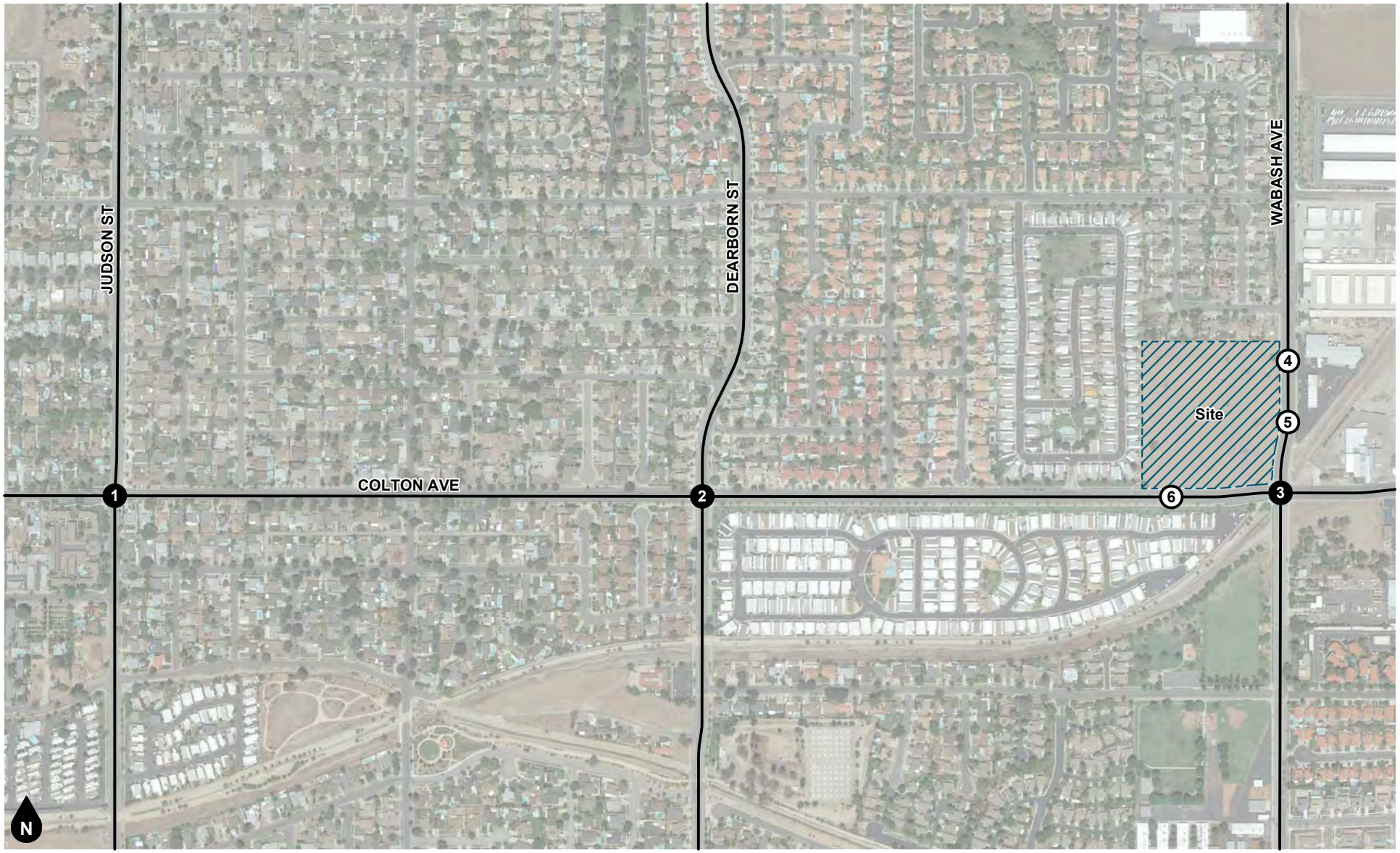


Figure 2
Project Location Map

Figure 3
Site Plan



Legend

(#) Study Intersection

(#) Project Driveway

Figure 4
Study Area

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. This traffic impact analysis is based on the City of Redlands requirements, which are based on the methodologies outline in the *County of San Bernardino Transportation Impact Study Guidelines* (July 2019) ["County TIA Guidelines"].

LEVEL OF SERVICE/OPERATIONAL ANALYSIS METHODOLOGY (NON-CEQA)

Level of Service analysis is performed to assess conformance with General Plan and operational standards established by the applicable agencies. In accordance with current CEQA provisions, a project's effect on automobile delay (as measured by Level of Service) shall not constitute a significant environmental impact.

Intersections: Highway Capacity Manual Delay Methodology

City of Redlands intersections are analyzed using the intersection delay methodology based on procedures contained in the *Highway Capacity Manual* (HCM) (Transportation Research Board, 7th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. At intersections with cross street stop control (i.e., one- or two-way stop control), the Level of Service is determined by the average control delay for the worst minor street approach or major street left-turn movement. Intersection delay analysis was performed with default capacity values and adjustment factors recommended in the HCM. The intersection Level of Service is based on the thresholds contained within the HCM.

Level of Service	Delay Methodology [1]	
	Signalized Intersection	Unsignalized Intersection
	Seconds per Vehicle	Seconds per Vehicle
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

1. Source: Transportation Research Board *Highway Capacity Manual* (7th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). Intersection analysis was performed using the Vistro software. The Level of Service analysis was performed in accordance with parameters specified in the County TIA Guidelines.

At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst minor street approach or major street left-turn movement.

Transportation Effects

The City of Redlands General Plan and Measure U Section 1A.60 Principle Six has established the minimum acceptable Level of Service (C or better) for roadway segment and peak hour intersection operations. Where the current Level of Service is lower than C, roadway improvements shall be provided such that the LOS is not reduced below the LOS at the time of the application, or as provided in Section 5.20 of the Redlands General Plan where a more intense Level of Service is specifically permitted, for Existing Plus Project conditions.

For study intersections within the City of Redlands, a project traffic impact requires improvement if the addition of project-generated trips is forecast to cause a degradation in Level of Service D, E, or F at a study intersection. For project impacts at facilities with existing acceptable Level of Service (C or better), the project shall provide improvements that would, at a minimum, provide Level of Service C or better. For project impacts at facilities with existing unacceptable Level of Service (D, E, or F), the project shall provide improvements that would, at a minimum, provide Level of Service that is equal to or better than existing conditions.

VEHICLE MILES TRAVELED ANALYTICAL METHODOLOGY (CEQA)

The metric used to evaluate the transportation impact of land use and transportation projects under CEQA is known as vehicle miles traveled (VMT). In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. The City of Redlands *CEQA Assessment VMT Analysis Guidelines*, June 2020 [City VMT Guidelines], were developed based on guidance from the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018). The project VMT assessment is documented separately in the *Redlands Madera at Citrus Trail Vehicle Miles Traveled Assessment* (Ganddini Group, Inc., April 7, 2023).

3. EXISTING CONDITIONS

This section describes the existing transportation setting of the project study area.

EXISTING ROADWAY SYSTEM

Figure 5 shows the lane geometry and intersection traffic controls for existing conditions based on a field survey of the study area. Regional access to the project site is provided by Interstate-10 approximately 2.5 miles west and SR-38 (Lugonia Avenue) 0.50 miles north of the project site. Local north-south circulation is provided by Wabash Avenue, Dearborn Street, and Judson Street and east-west circulation is provided by Colton Avenue.

Wabash Street: This four-lane undivided to four-lane divided (two-way left-turn lane) roadway trends in a north-south direction and is classified as a Minor Arterial (two-lane divided to four-lane undivided with various roadway cross-section) on the City of Redlands General Plan. On-street parking is prohibited on both the east and west side of the road north and south of Colton Avenue. There are currently no designated bicycle facilities in the project vicinity; however, a bike route is proposed for this roadway. Sidewalks are provided on both sides of the roadway, except for the northeast corner of Wabash Avenue and Colton Avenue. The posted speed is 40 miles per hour.

Dearborn Street: This two-undivided to two-lane divided (two-way left-turn lane) roadway trends in a north-south direction and is classified as a Collector (various roadway cross-section with 10 to 8-foot shoulders) on the City of Redlands General Plan. On-street parking is generally permitted on both the east and west side of the road. On-street bicycle lanes are provided on both sides of the roadway. Sidewalks are in the study area. The posted speed is 30 miles per hour.

Judson Street is a two-lane divided to three-lane divided (two-way left-turn lane) roadway trends in a north-south direction and is classified as a Minor Arterial (two-lane divided to four-lane undivided with various roadway cross-section) on the City of Redlands General Plan. On-street parking is generally permitted on both sides of the roadway. On-street bicycle lanes are provided on both sides of the road north of Colton Avenue and on the west side of the street south of Colton Avenue. On-street bicycle lane sharrows are provided on the east side of the road south of Colton Avenue. Sidewalks are provided on both sides of the road north of Colton Avenue and on the east side of the road south of Colton Avenue. The posted speed is 40 miles per hour.

Colton Avenue: This two-undivided to two-lane divided (two-way left-turn lane) roadway trends in an east-west direction and is classified as a Minor Arterial (two-lane divided to four-lane undivided with various roadway cross-section) on the City of Redlands General Plan. On-street parking is generally permitted on both the north and south side of the road. On-street bicycle lanes are not provided on either side of the road; however, a bike route is proposed for this roadway. Sidewalks are generally provided in the study area. The posted speed is 35 miles per hour from Judson Street to Dearborn Street and 40 miles per hour from Dearborn Street to Wabash Street.

PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown in Figure 6. As shown in Figure 6, sidewalks are not provided along the project site frontage, currently.

TRANSIT FACILITIES

Figure 7 shows the existing Omnitrans system map in the project vicinity. There are no bus routes in the study area; however, the site is 1.5 miles from Redlands/University Metrolink station.

General Plan Context

Figure 8 shows the City of Redlands General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Redlands standard roadway cross-sections are illustrated in Figure 9.

Bicycle Facilities Master Plan

The City of Redlands Bicycle Master Plan is shown in Figure 10. This figure shows the bicycle facilities master plan. As shown in Figure 10, there are proposed bike routes on Wabash Street and Colton Avenue

Designated Truck Routes

The City of Redlands Truck Routes are shown in Figure 11. This figure shows the designated truck routes. As shown in Figure 11, Wabash Street and Judson Street are designated truck routes on the City Plan.

Existing Roadway Volumes

Figure 12 shows the existing average daily traffic volumes. The existing average daily traffic volumes have been factored from peak hour intersection turning movement volumes at locations using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 11.5 = Leg Volume

Figure 13 and Figure 14 show the existing AM and PM peak hour intersection turning movement volumes. Existing peak hour intersection turning movement volumes are based upon AM peak period and PM peak period intersection turning movement counts obtained in April 2023 during typical weekday conditions. The weekday AM peak period was counted between 7:00 AM and 9:00 AM and the weekday PM peak period was counted between 4:00 PM and 6:00 PM; these periods generally capture the peak times for commuter traffic when the roadway system is typically experiencing peak demand. The actual peak hour within each two-hour count period is determined based on the sum of the four consecutive 15-minute periods with the highest total volume entering the intersection. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM and may vary at other intersections depending on the four consecutive 15-minute periods that have the highest total volume. Intersection turning movement count worksheets are provided in Appendix C.

Existing Intersection Level of Service

The study intersection Levels of Service for Existing conditions are shown in Table 1. Detailed Level of Service worksheets are provided in Appendix D.

As shown in Table 1, the study intersections currently operate within acceptable Levels of Service (C or better), except for the following intersection that is forecast to operate at Level of Service D during the peak hours:

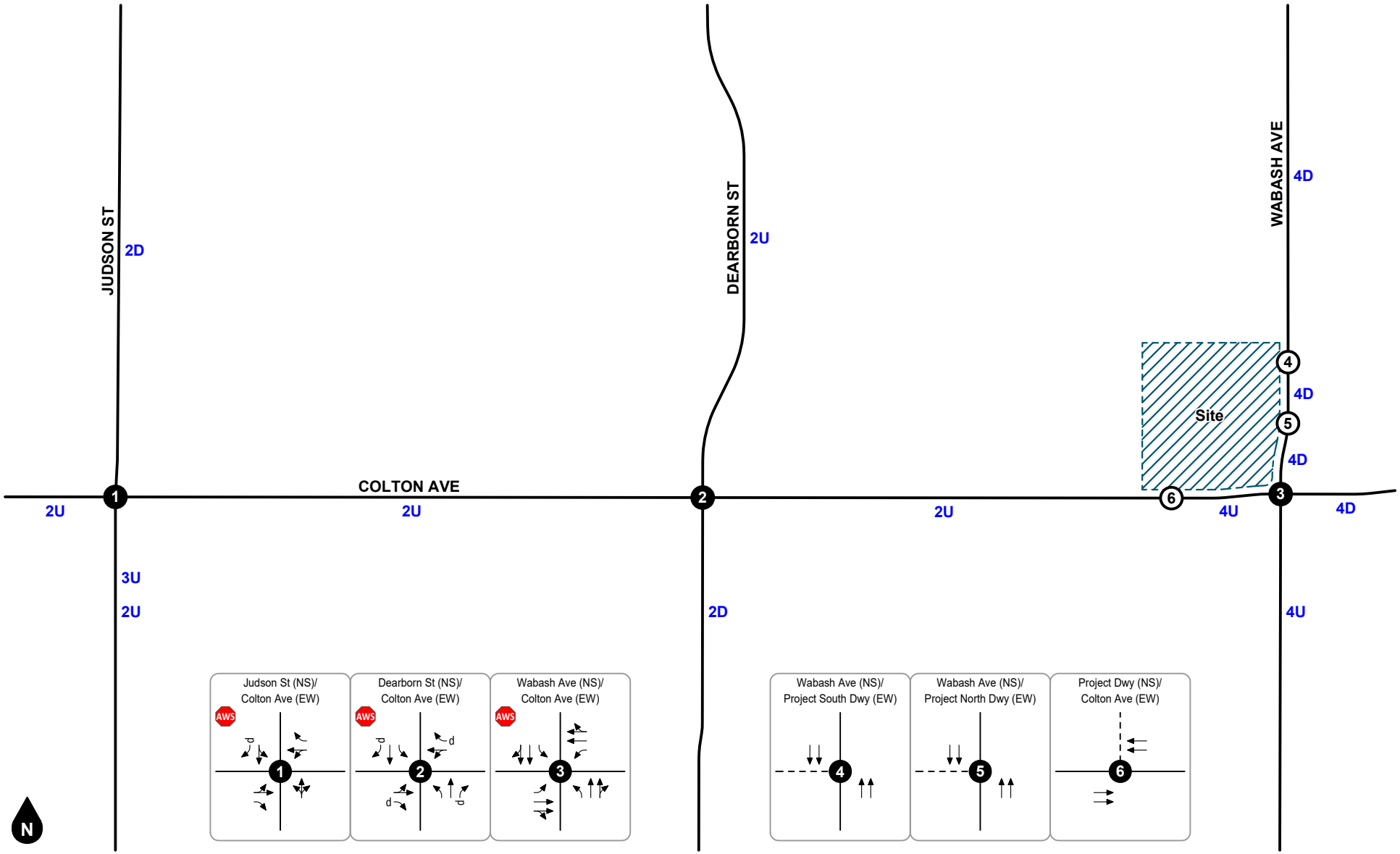
1. Judson Street (NS) at Colton Avenue (EW)

Table 1
Existing Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS
1. Judson Street at Colton Avenue	AWS	28.2	D	27.2	D
2. Dearborn Street at Colton Avenue	AWS	19.3	C	17.2	C
3. Wabash Avenue at Colton Avenue	AWS	11.1	B	10.9	B

Notes:

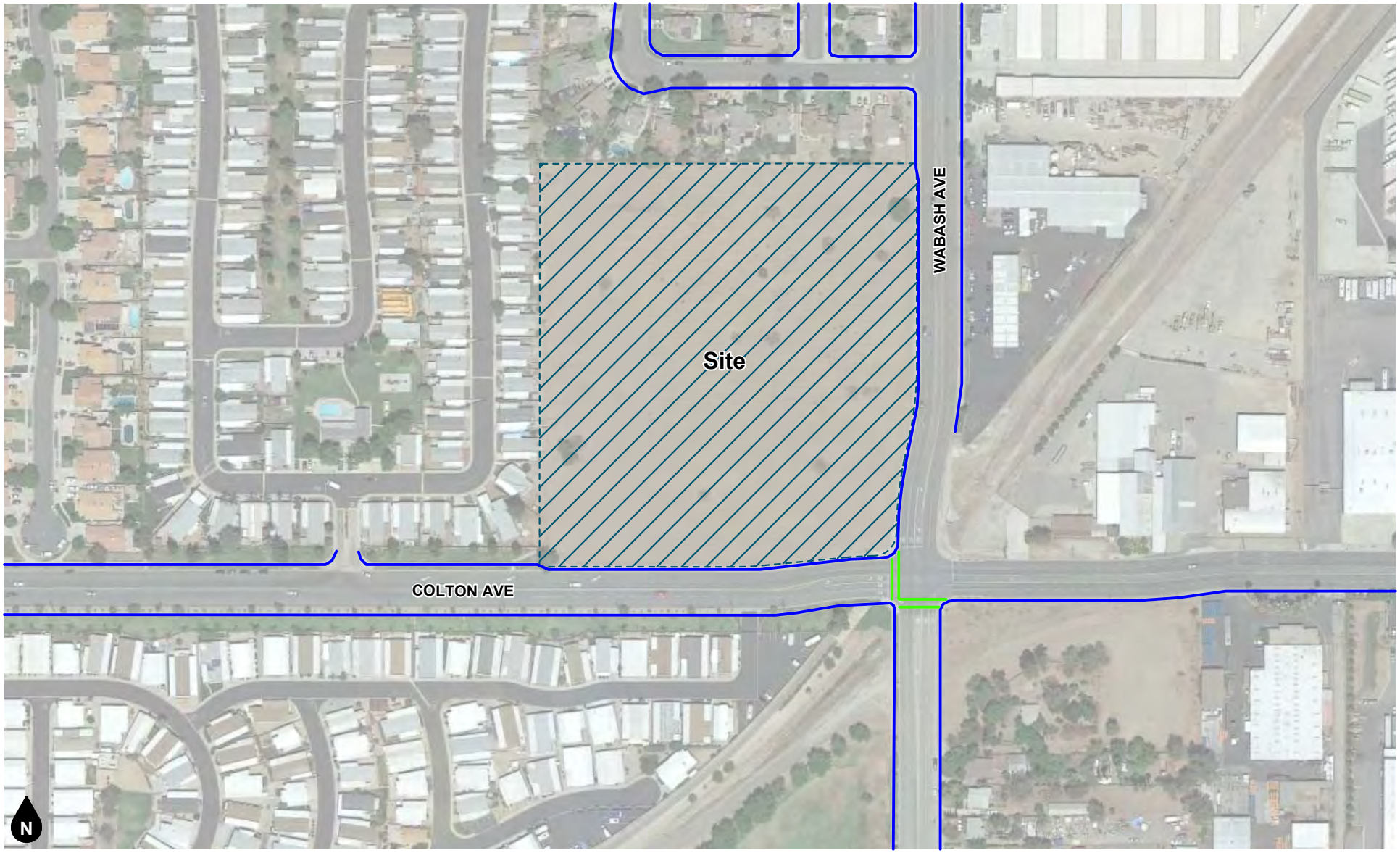
1. AWS = All Way Stop.
2. Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst minor street approach or major street left turn movement.
3. LOS = Level of Service



Legend

- Traffic Signal
- All Way Stop
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- d De Facto Right Turn Lane
- Project Driveway

Figure 5
Existing Lane Geometry and Intersection Traffic Controls



Legend
Sidewalk
Cross Walk

Figure 6
Existing Pedestrian Facilities

Figure 7
Existing Transit Routes

Source: Omnitrans

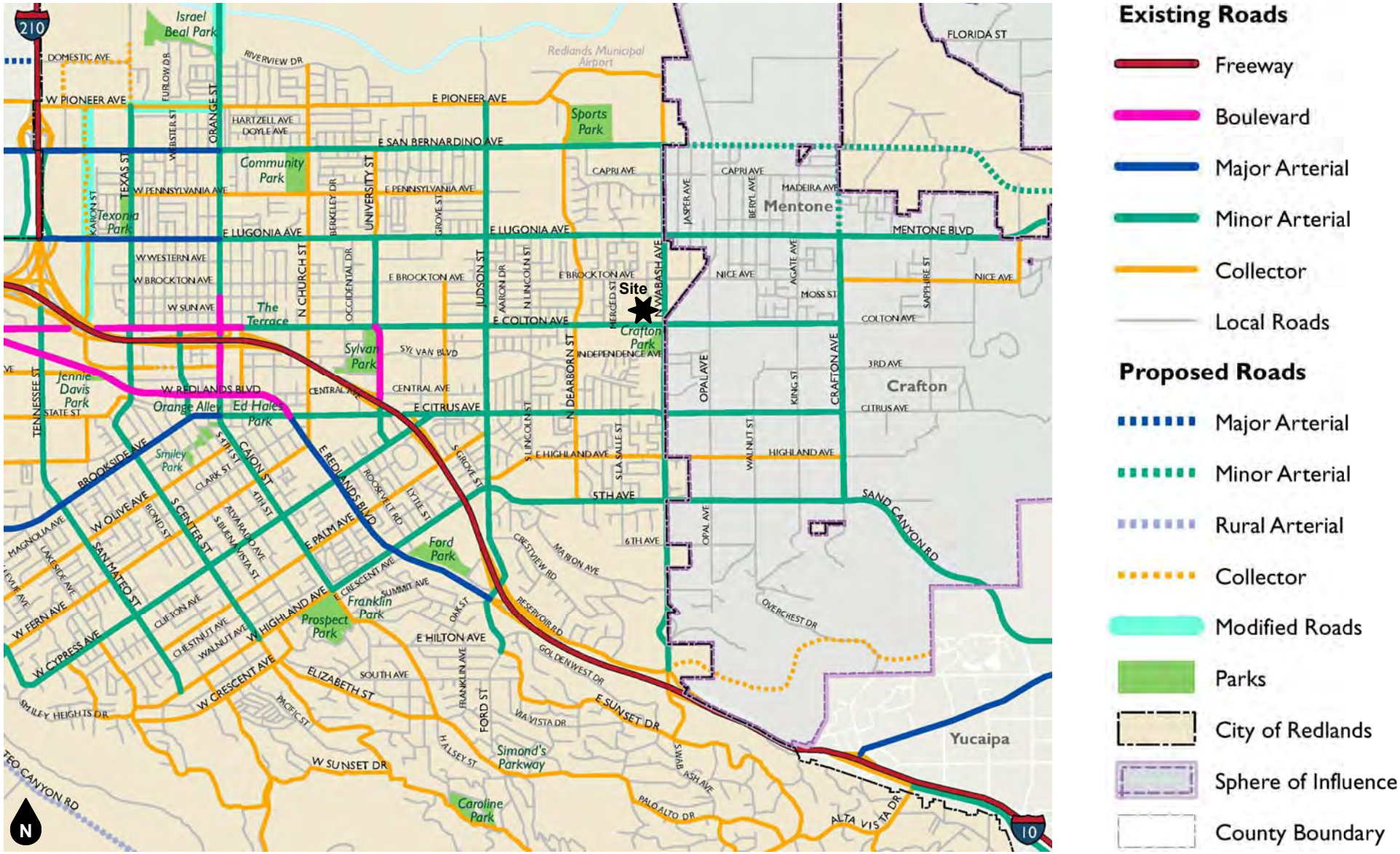
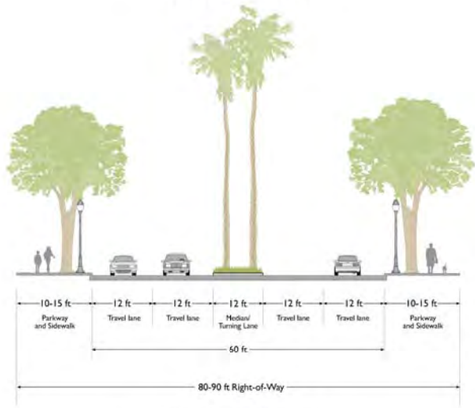


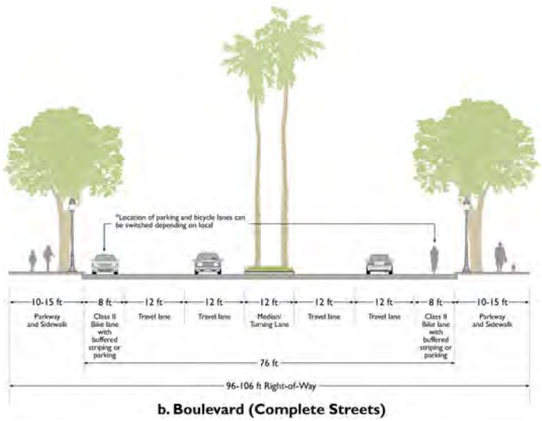
Figure 8
City of Redlands General Plan Circulation Element

Source: City of Redlands

BOULEVARDS

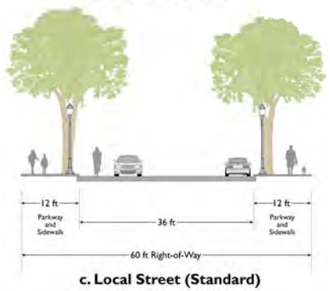


a. Boulevard (Standard)

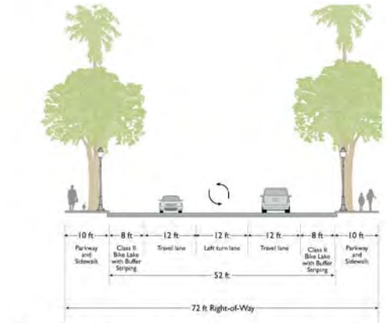


b. Boulevard (Complete Streets)

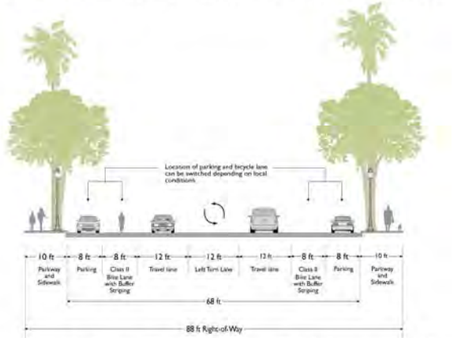
LOCAL STREET



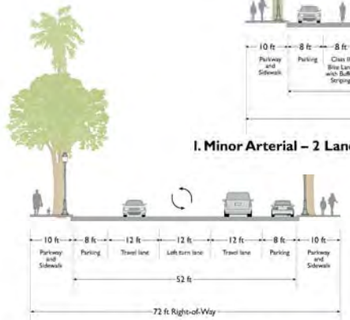
c. Local Street (Standard)



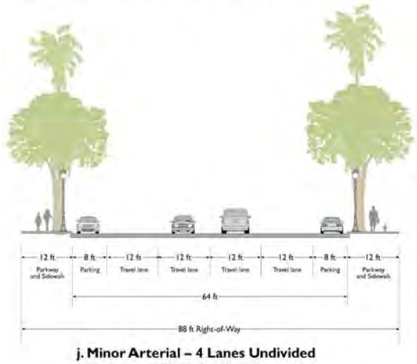
k. Minor Arterial – 2 Lanes Plus Left Turn Lane (Complete Streets)



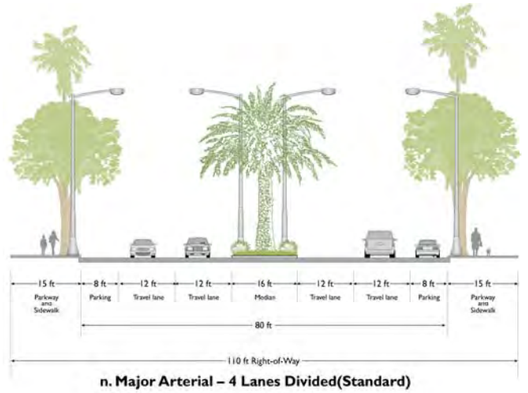
l. Minor Arterial – 2 Lanes Plus Left Turn Lane, Bicycle Lanes, and Parking (Complete Streets)



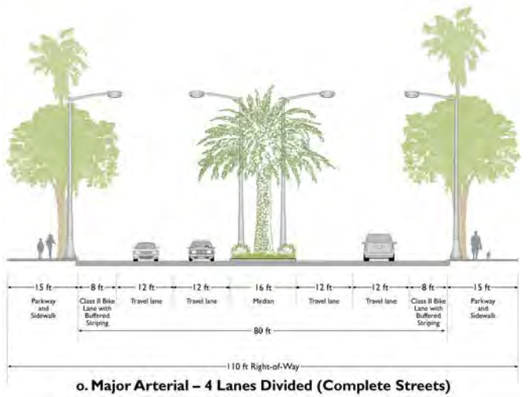
i. Minor Arterial – 2 Lanes Plus Left Turn Lane (Standard)



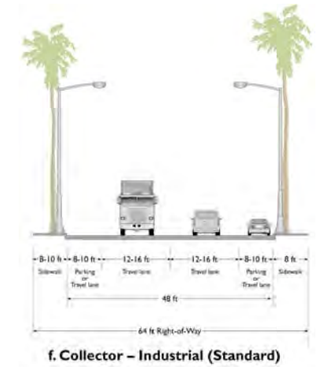
j. Minor Arterial – 4 Lanes Undivided (Standard)



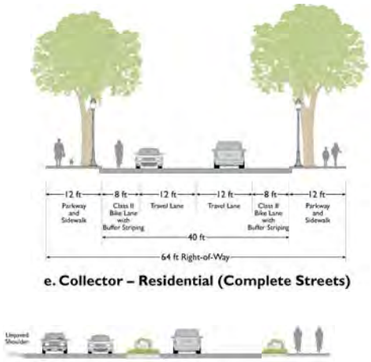
n. Major Arterial – 4 Lanes Divided(Standard)



o. Major Arterial – 4 Lanes Divided (Complete Streets)

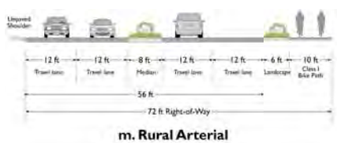


d. Collector – Residential (Standard)

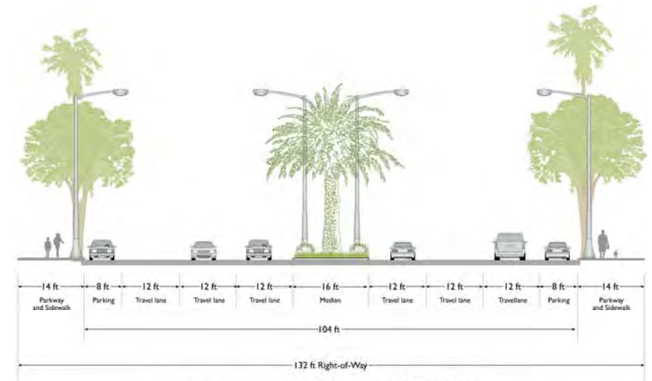


e. Collector – Residential (Complete Streets)

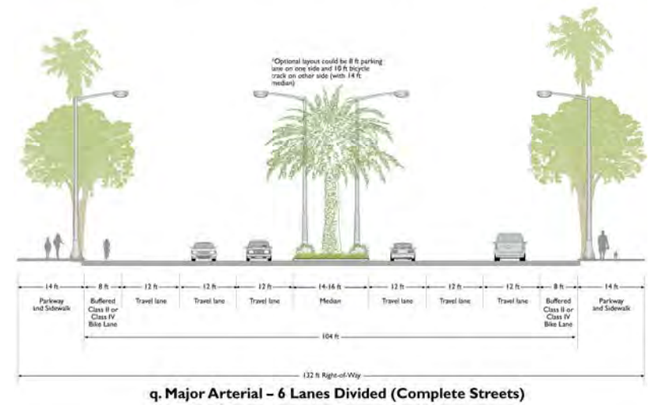
h. Alternative Collector



m. Rural Arterial

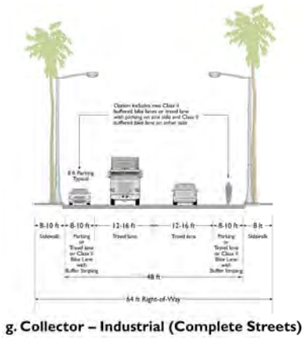


p. Major Arterial – 6 Lanes Divided (Standard)



q. Major Arterial – 6 Lanes Divided (Complete Streets)

f. Collector – Industrial (Standard)



g. Collector – Industrial (Complete Streets)

Figure 9
City of Redlands General Plan Roadway Cross-Sections

Source: City of Redlands

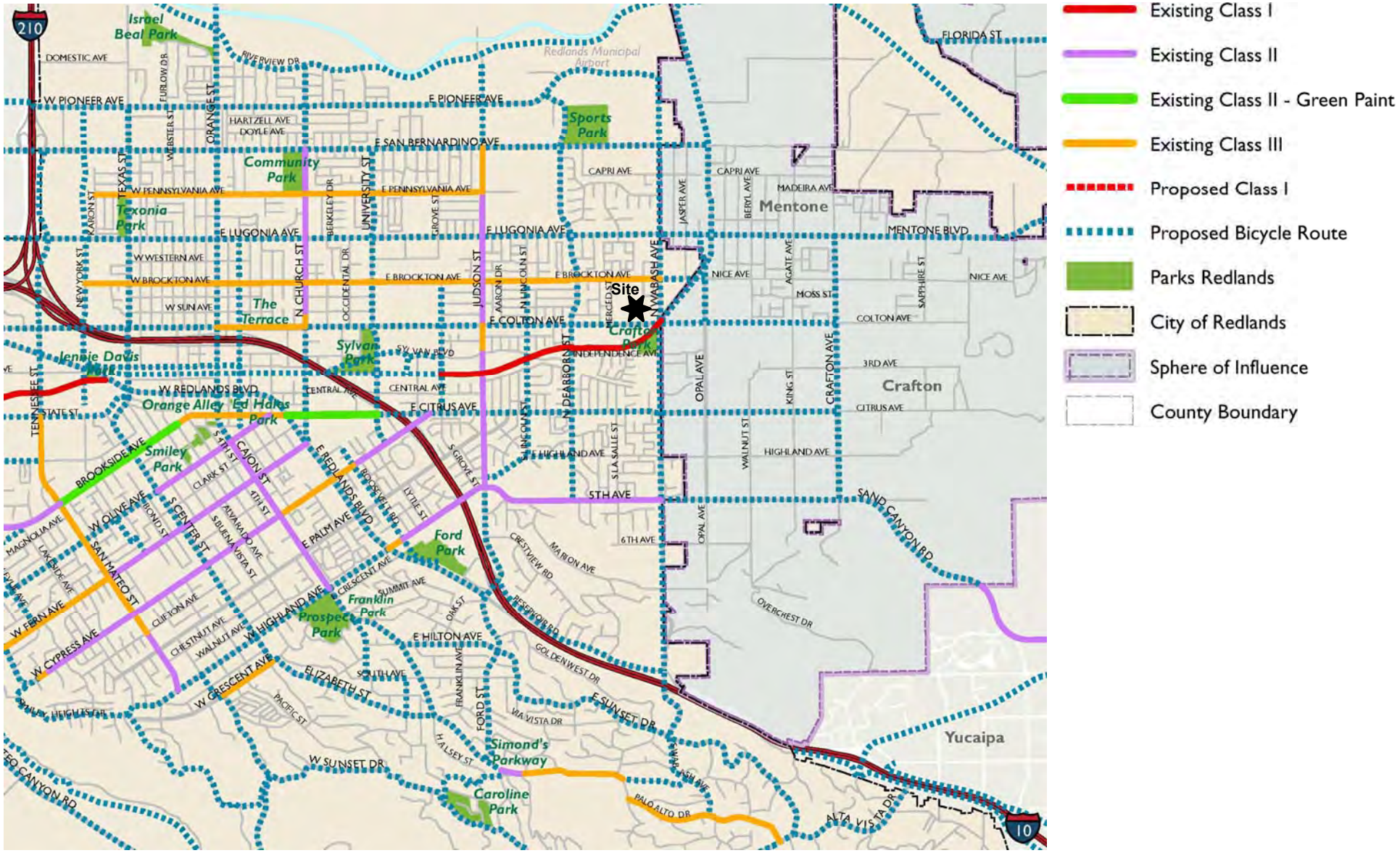


Figure 10
City of Redlands Bicycle Facilities Master Plan

Source: City of Redlands

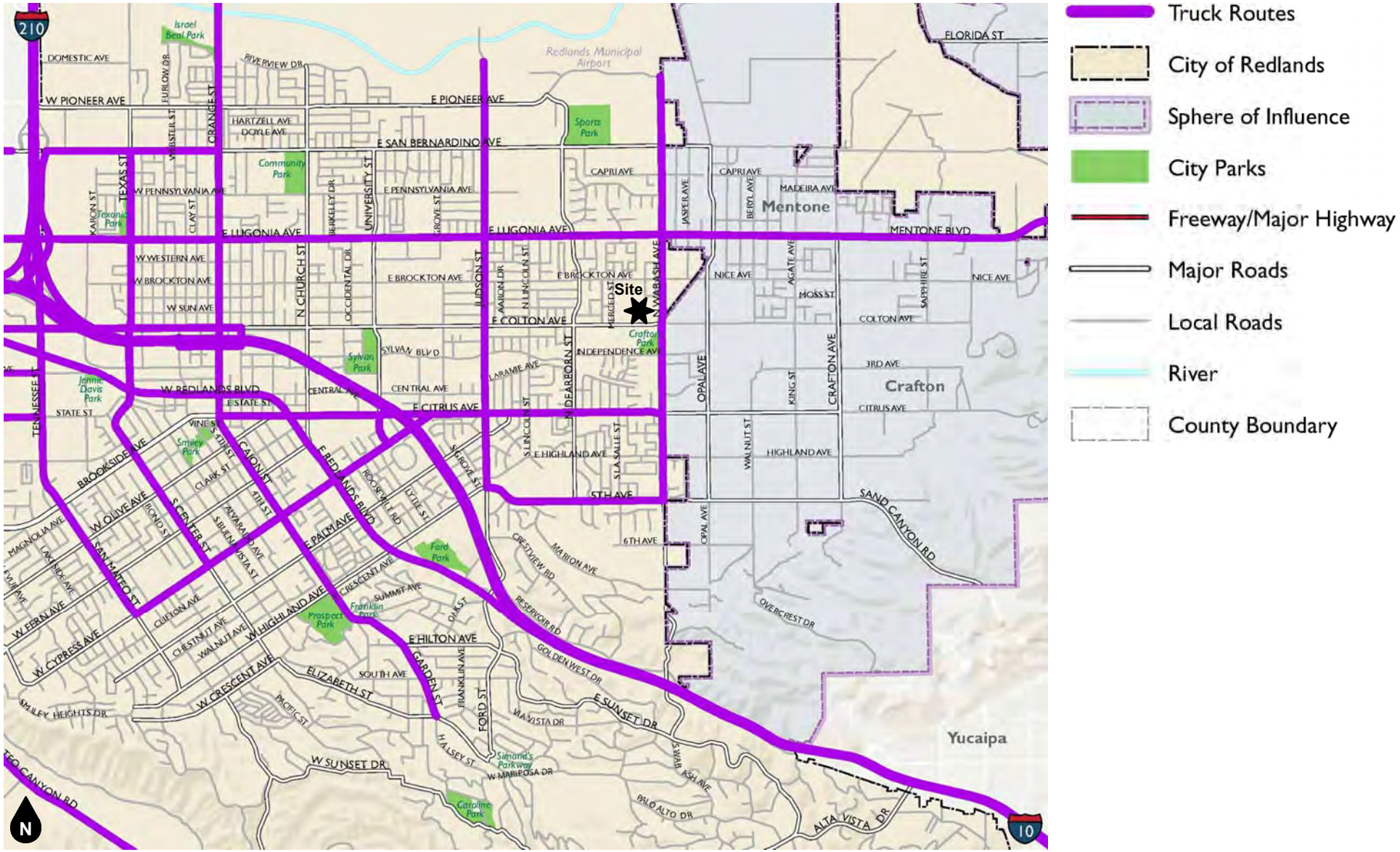
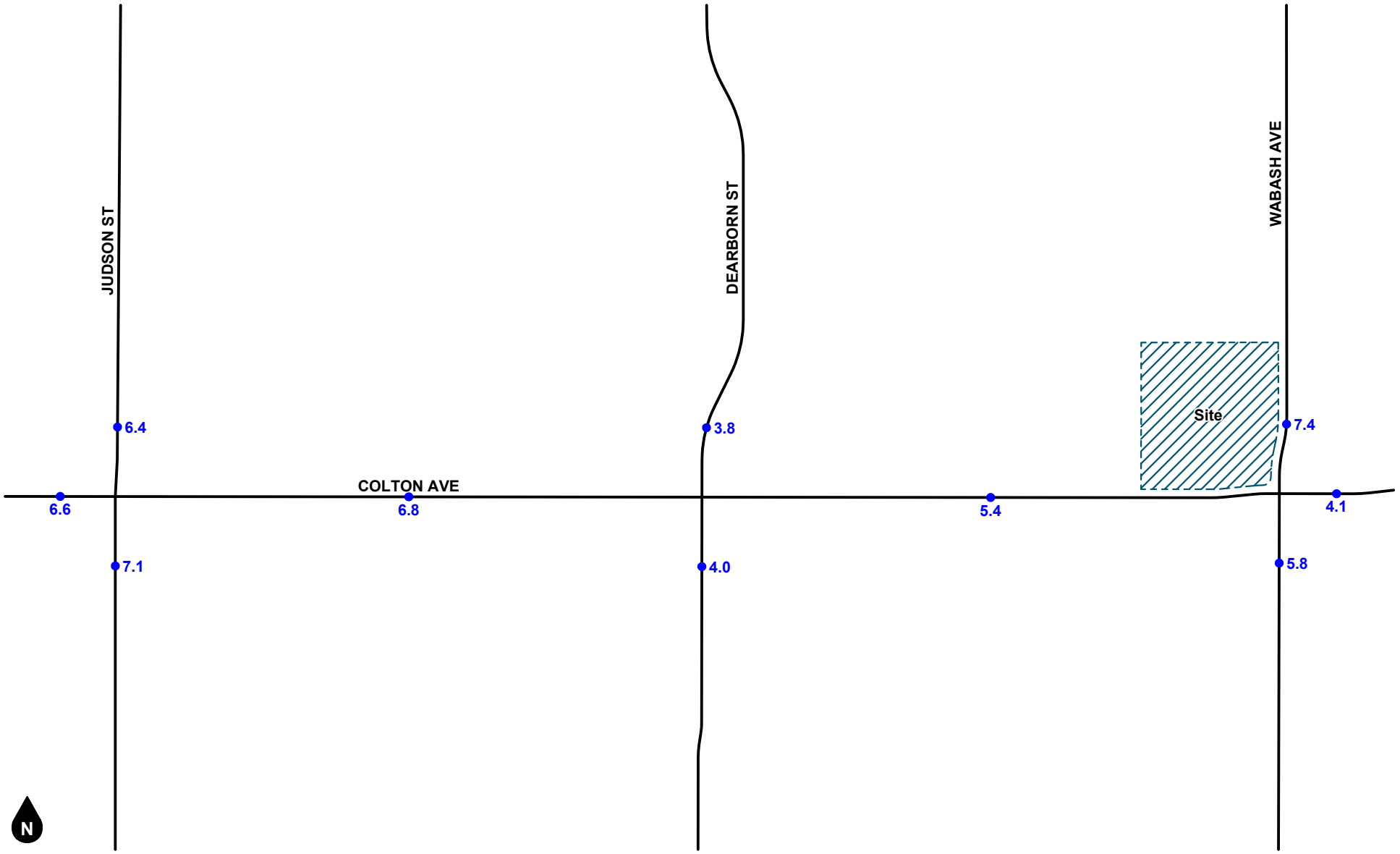


Figure 11
City of Redlands Truck Routes

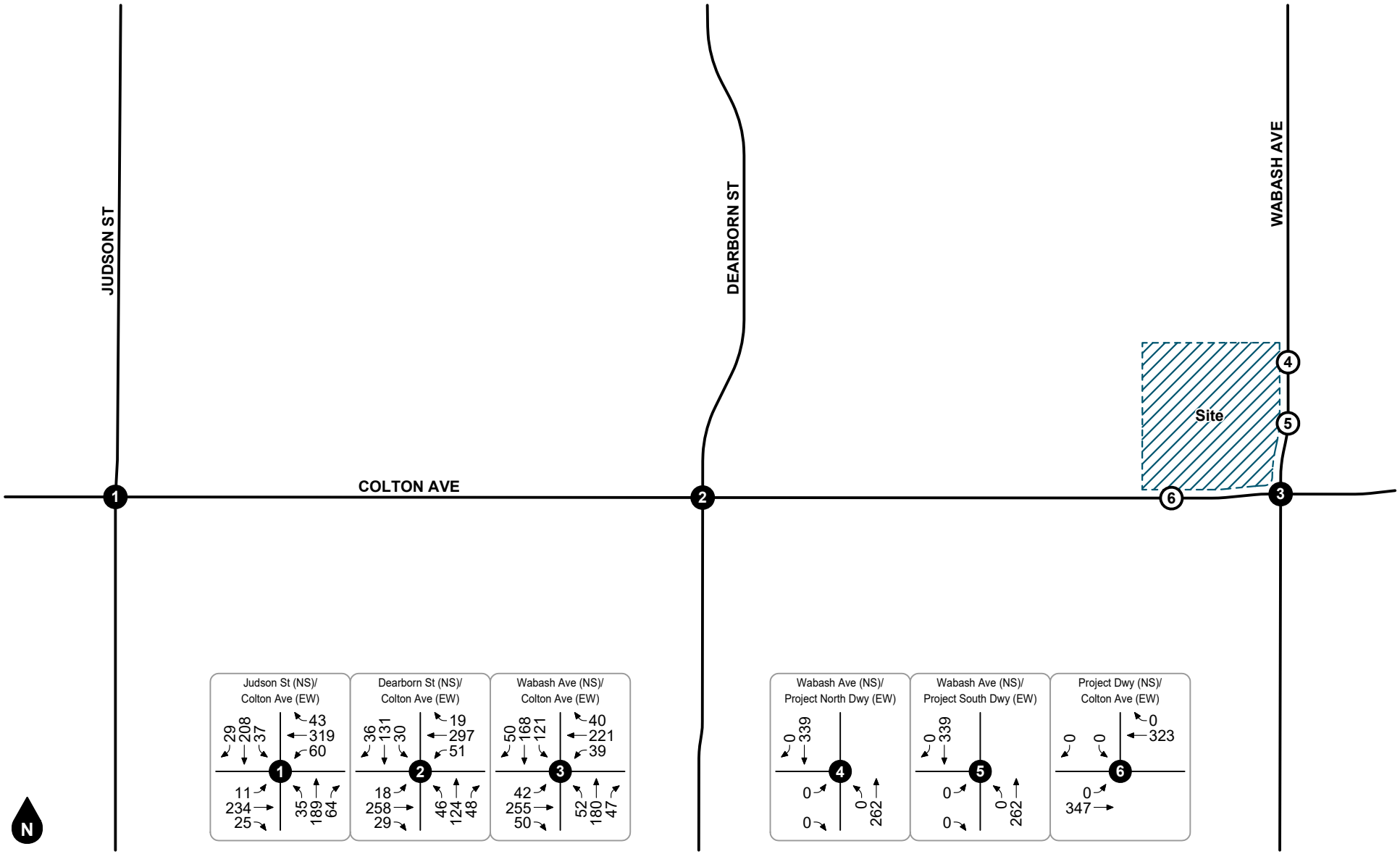
Source: City of Redlands



Legend

●## Vehicles Per Day (1,000's)

Figure 12
Existing Average Daily Traffic Volumes



Legend

- # Study Intersection
- (#) Project Driveway

Figure 13
Existing AM Peak Hour Intersection Turning Movement Volumes

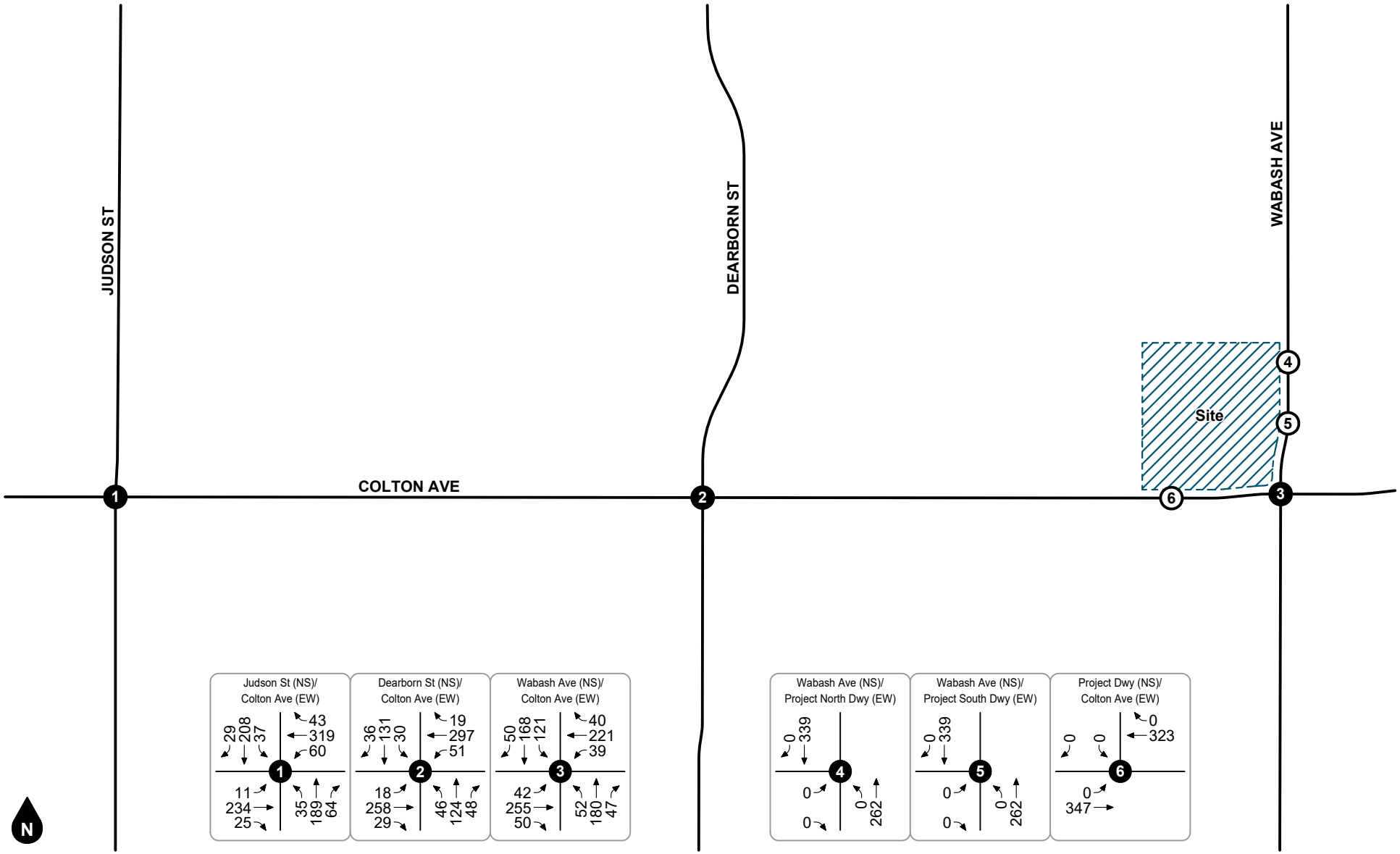


Figure 14
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated in the figures contained in this section.

PROJECT TRIP GENERATION

Table 2 shows the proposed project trip generation forecast is based on average rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) for Land Use Codes 210 (Single-family Detached Housing) and 215 (Single-family Attached Housing).

As shown in Table 2, the proposed project is forecast to generate a total of approximately 918 new daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION & ASSIGNMENT

Figure 15and Figure 16 show the forecast outbound and inbound directional distribution patterns for the project generated trips, respectively. The project trip distribution patterns were developed using engineering judgment in consultation with City of Redlands engineering staff based on a review of existing traffic data, surrounding land uses, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, project-generated average daily traffic volumes are shown in Figure 17. Project-generated AM peak hour and PM peak hour intersection turning movement volumes are shown in Figure 18 and Figure 19.

Table 2
Project Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Land Use Variable[2]	% In	% Out	Rate	% In	% Out	Rate	Daily Rate
Single-Family Detached Housing	ITE 210	DU	26%	74%	0.70	63%	37%	0.94	9.43
Single-Family Attached Housing	ITE 215	DU	31%	69%	0.48	57%	43%	0.57	7.20

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Source	Quantity	In	Out	Total	In	Out	Total	Daily
Single-Family Detached Housing	ITE 210	79 DU	14	41	55	47	27	74	745
Single-Family Attached Housing	ITE 215	24 DU	4	8	12	8	6	14	173
TOTAL PROJECT TRIPS			**18**	**49**	**67**	**55**	**33**	**88**	**918**

Notes:
1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code. All rates based on General Urban/Suburban setting.
2. DU = Dwelling Unit.

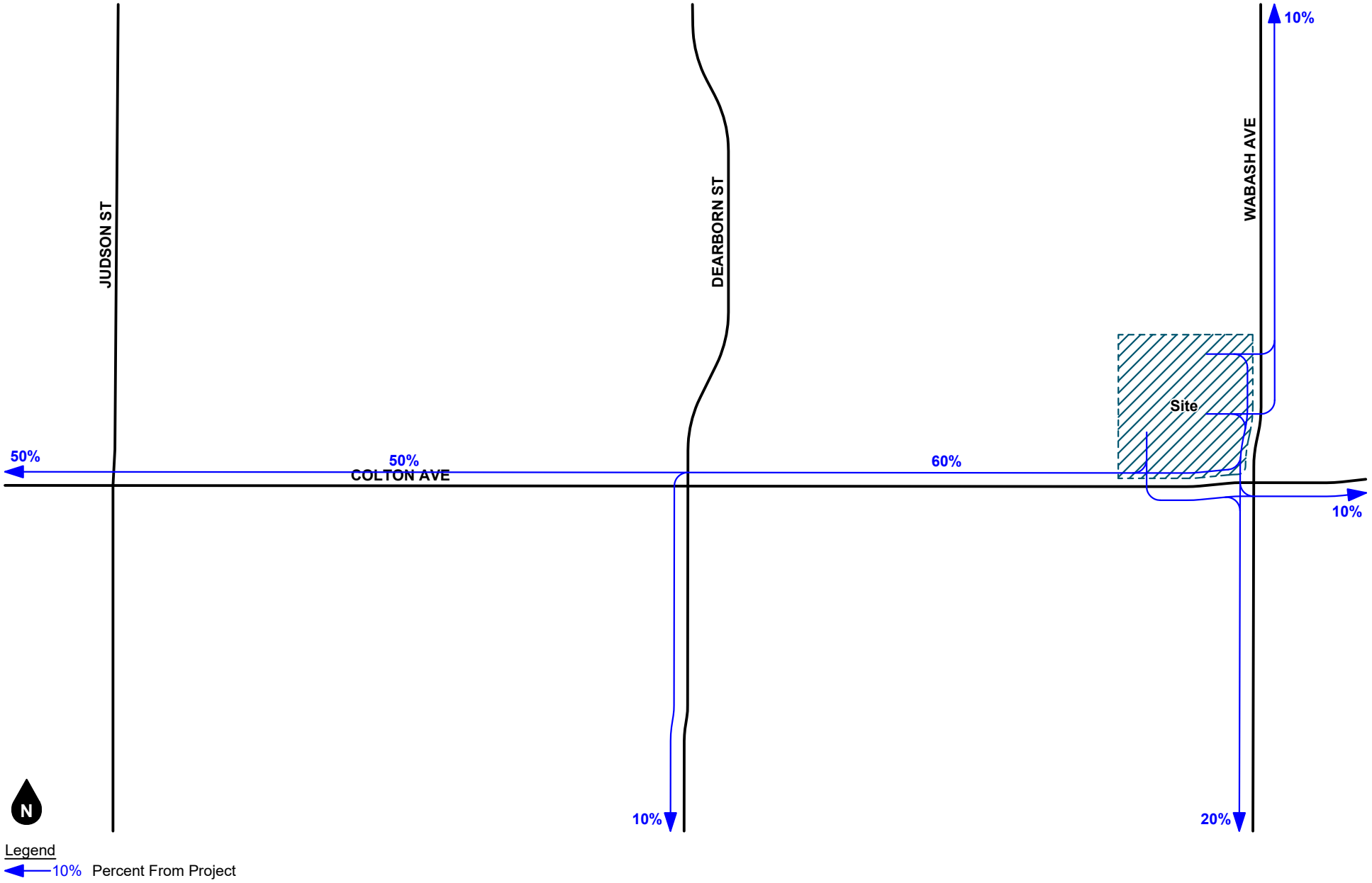


Figure 15
Project Trip Distribution (Outbound)

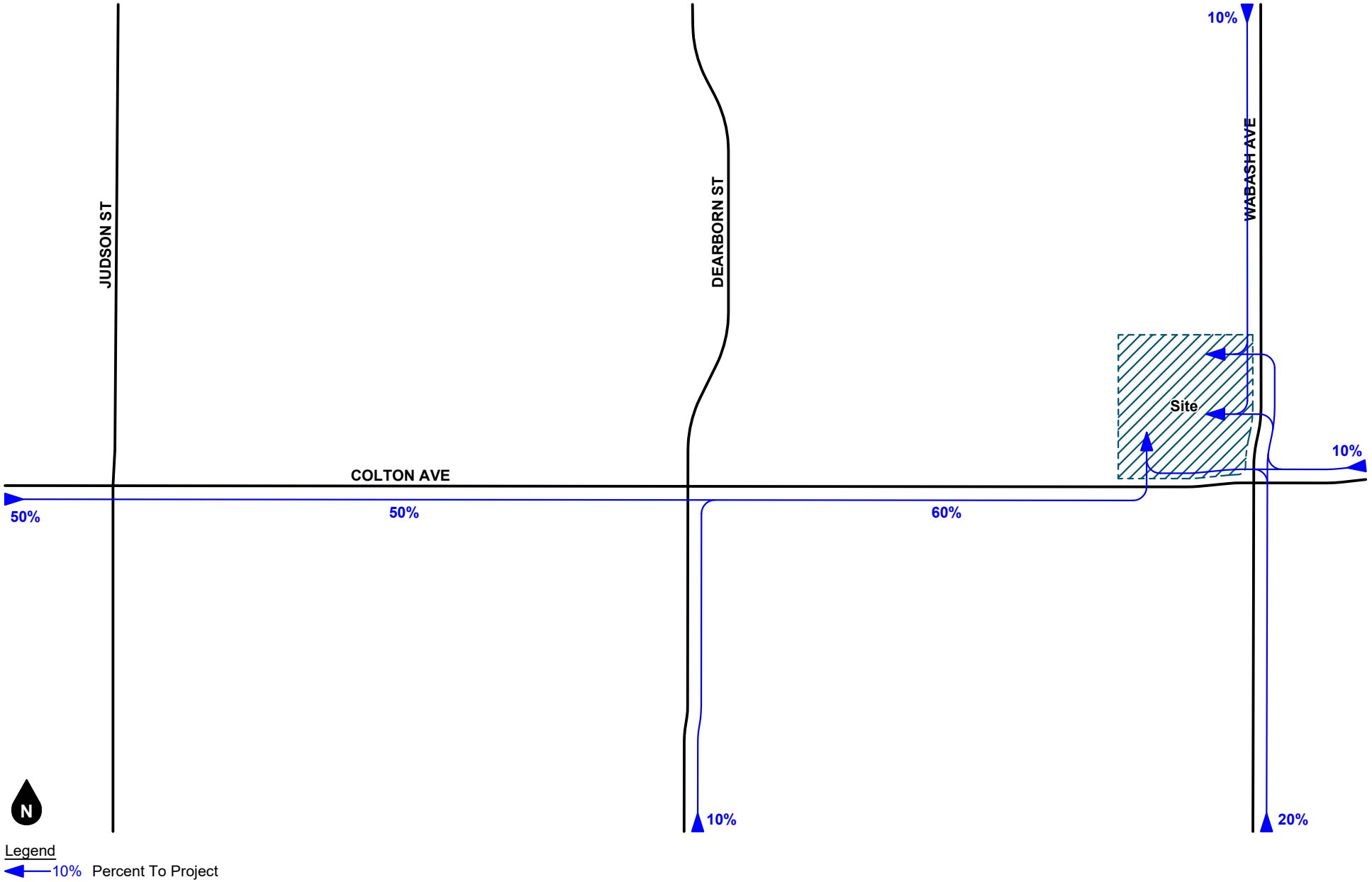


Figure 16
Project Trip Distribution (Inbound)

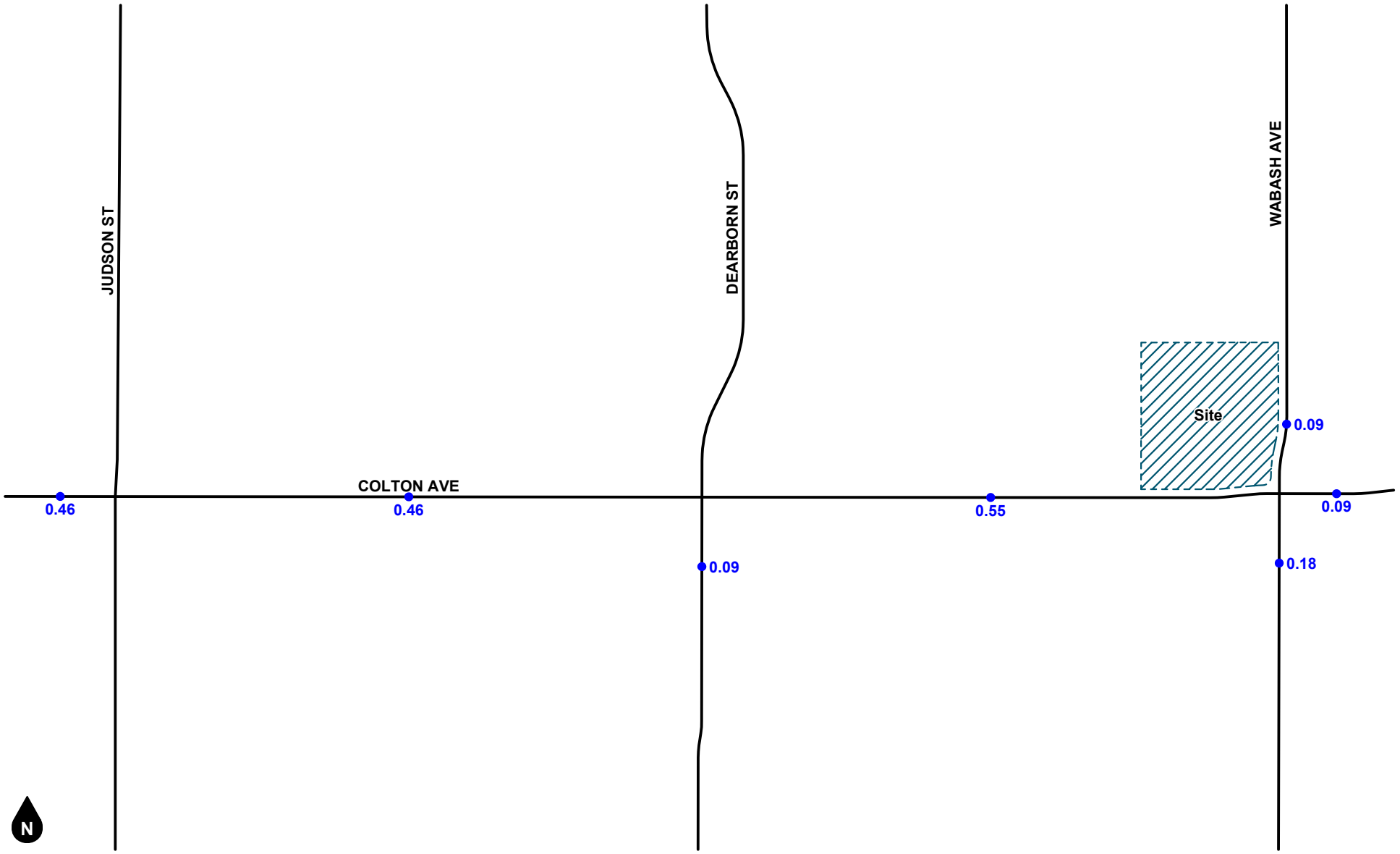
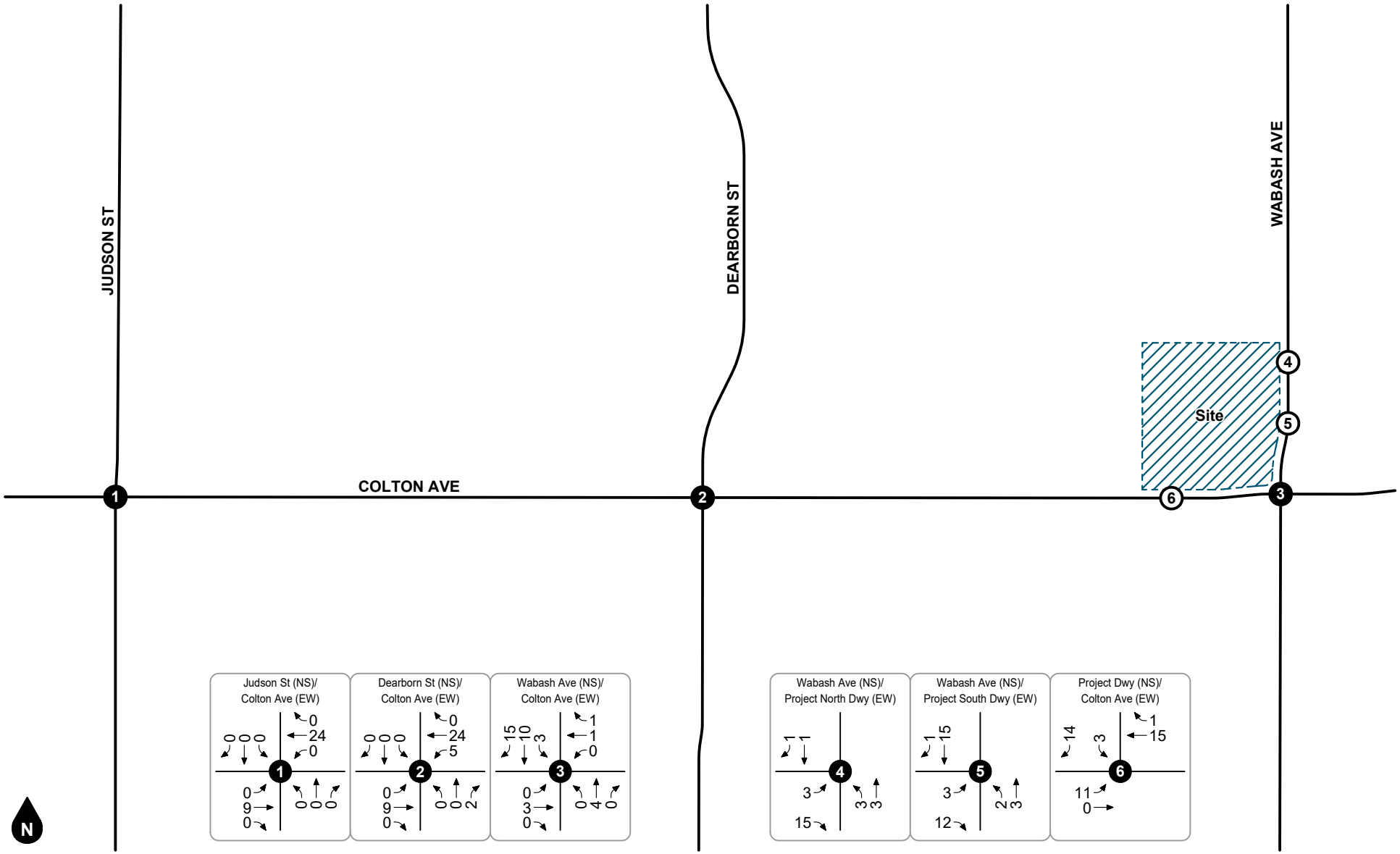


Figure 17
Project Average Daily Traffic Volumes



Legend

- # Study Intersection
- # Project Driveway

Figure 18
Project AM Peak Hour Intersection Turning Movement Volumes

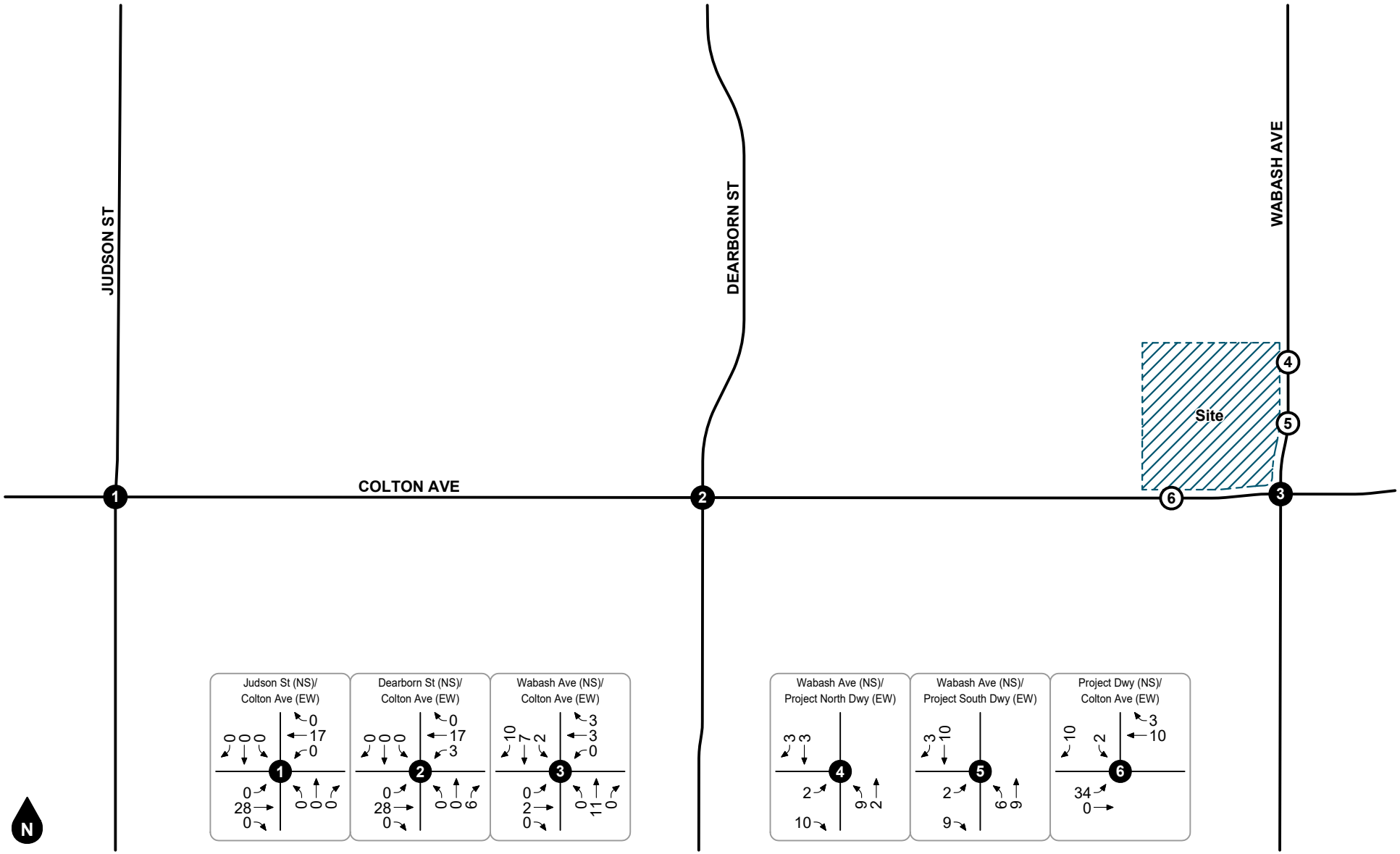


Figure 19
Project PM Peak Hour Intersection Turning Movement Volumes

5. EXISTING PLUS PROJECT VOLUME FORECASTS

This section describes how volume forecasts were developed. Forecast study area volumes are illustrated in the figures contained in this section.

The Existing Plus Project volume forecast was developed by adding project-generated trips to the Existing volumes. Existing Plus Project average daily traffic volumes are shown in Figure 20. Existing Plus Project AM peak hour and PM peak hour intersection turning movement volumes are shown in Figure 21 and Figure 22.

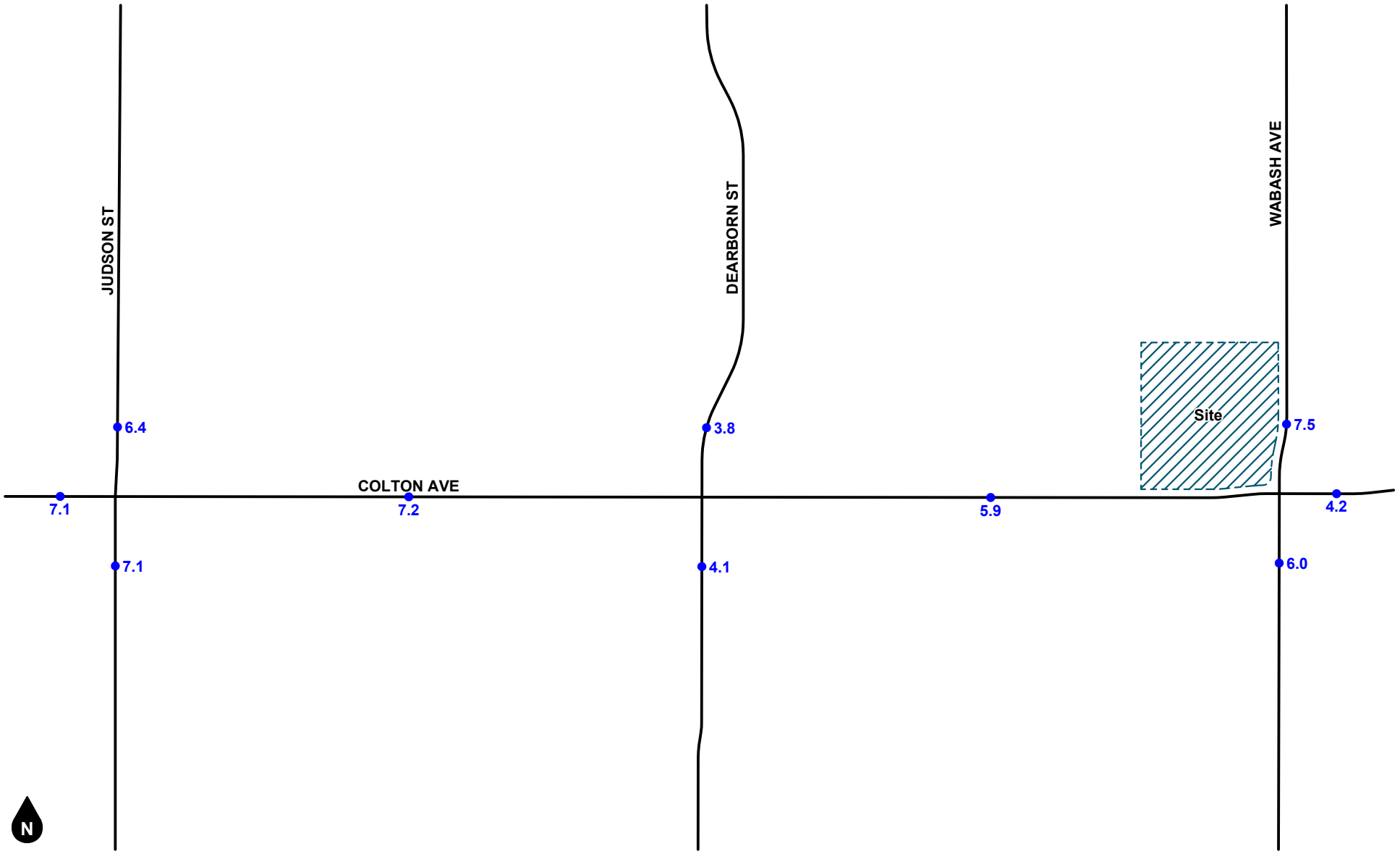


Figure 20
Existing Plus Project Average Daily Traffic Volumes

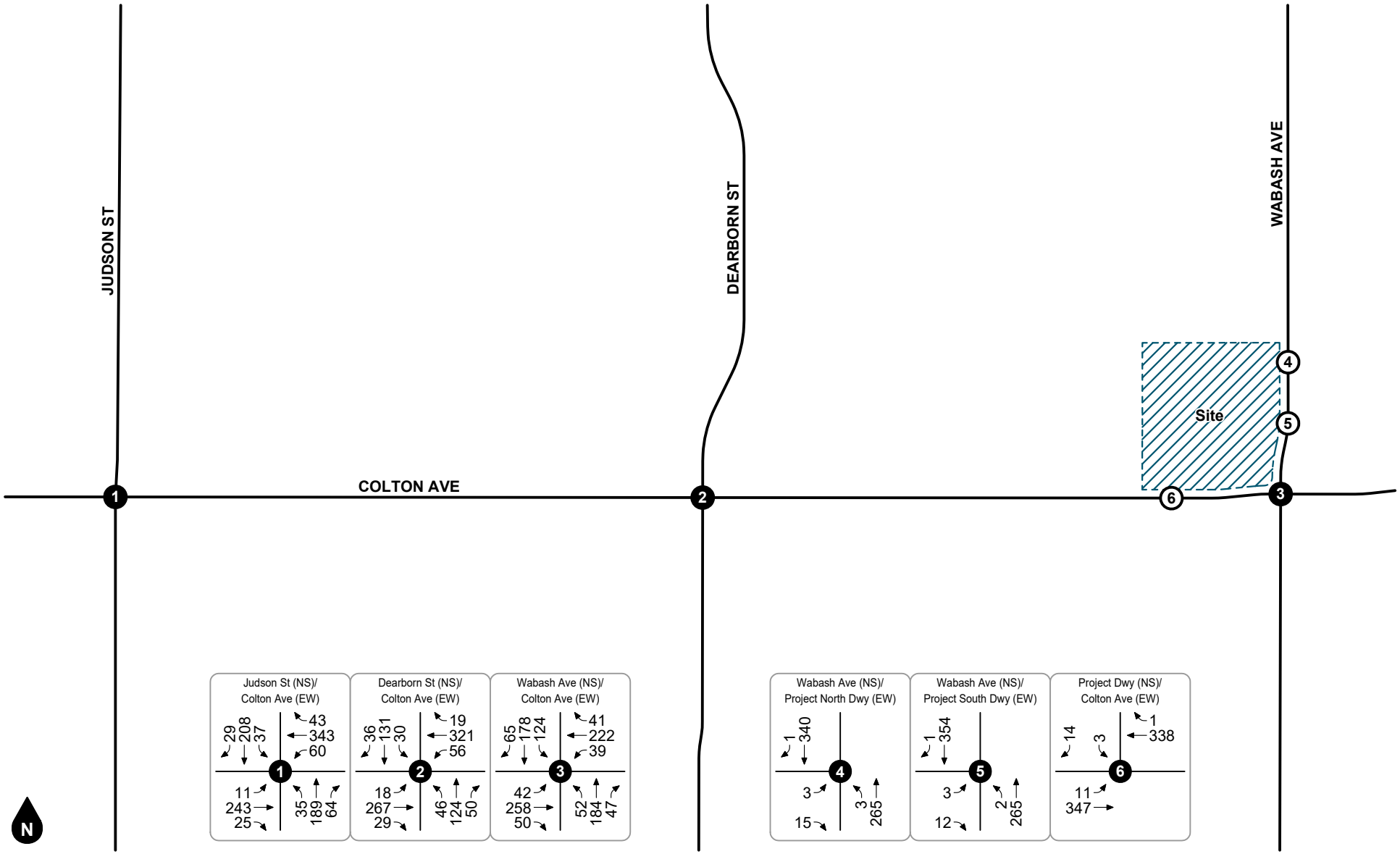
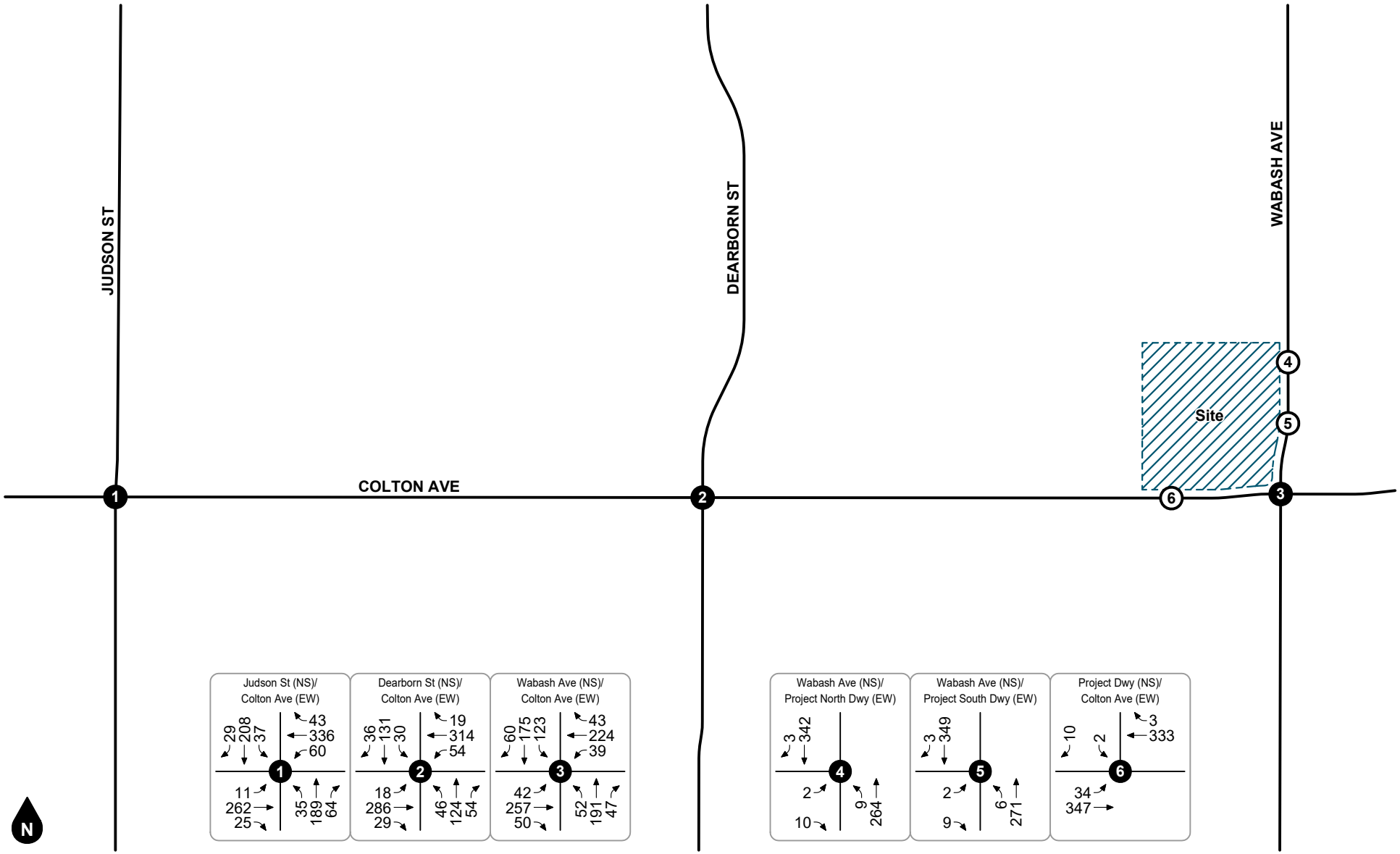


Figure 21
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

- # Study Intersection
- (#) Project Driveway

Figure 22
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes

6. EXISTING PLUS PROJECT LEVELS OF SERVICE

Detailed intersection Level of Service calculation worksheets are provided in Appendix D.

Project design features, such as improvements necessary to provide project site access, are assumed to be constructed by the proposed project and are described in further detail in the Site Access & Circulation section presented later in this report.

The study intersection Levels of Service for Existing Plus Project conditions are shown in Table 3. As shown in Table 3, the study intersections are forecast to operate within acceptable Levels of Service (C or better), except for the following intersection that is forecast to continue operating at Level of Service D during the peak hours:

1. Judson Street (NS) at Colton Avenue (EW)

As shown in Table 3, the Judson Street at Colton Avenue intersection operates at Level of Service D under pre-project conditions, and the addition of project trips does not degrade the Level of Service below the current Level of Service grade. Therefore, the proposed project is forecast to result in no substantial transportation effects at the study intersections for Existing Plus Project conditions.

Table 3
Existing Plus Project Intersection Levels of Service & Project-Related Effect

Study Intersection	Traffic Control[1]	Existing				Existing Plus Project				AM Peak Hour		PM Peak Hour	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay[2]	LOS[3]	Delay[2]	LOS	Delay[2]	LOS[3]	Delay[2]	LOS	Change	Substantial Effect?	Change	Substantial Effect?
1. Judson Street at Colton Avenue	AWS	28.2	D	27.2	D	33.3	D	32.3	D	+5.1	NO[4]	+5.1	NO[4]
2. Dearborn Street at Colton Avenue	AWS	19.3	C	17.2	C	22.5	C	19.5	C	+3.2	NO	+2.3	NO
3. Wabash Avenue at Colton Avenue	AWS	11.1	B	10.9	B	11.2	B	11.0	B	+0.1	NO	+0.1	NO
4. Wabash Ave at Project North Driveway	CSS	-		-		9.9	A	12.7	B	+9.9	NO	+12.7	NO
5. Wabash Ave at Project South Driveway	CSS	-		-		10.1	B	12.7	B	+10.1	NO	+12.7	NO
6. Project Driveway at Colton Avenue	CSS	-		-		10.1	B	13.9	B	+10.1	NO	+13.9	NO

Notes:

1. AWS = All Way Stop; CSS = Cross Street Stop.
2. Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst minor street approach or major street left turn movement.
3. LOS = Level of Service
4. Project contributions do not degrade level of service (LOS) from the current LOS grade to a higher grade.

7. SITE ACCESS & ON-SITE CIRCULATION

This section evaluates the project site access and on-site circulation. Vehicular access for the project site is proposed via three full access residential street connections. Two project connects are on Wabash Avenue and one project connection is on Colton Avenue.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project to provide project site access:

4. Wabash Avenue (NS) at Project North Driveway (EW)
   - Construct the project driveway to provide one inbound lane and one outbound lane.
   - Northbound: Maintain two existing through lanes and an existing two-way left turn lane median.
   - Southbound: Maintain two existing through lanes and an existing two-way left turn lane median.
   - Eastbound: Install stop control and construct one shared left-turn/right-turn lane

5. Wabash Avenue (NS) at Project South Driveway (EW)
   - Construct the project driveway to provide one inbound lane and one outbound lane.
   - Northbound: Maintain two existing through lanes and an existing two-way left turn lane median.
   - Southbound: Maintain two existing through lanes and an existing two-way left turn lane median.
   - Eastbound: Install stop control and construct one shared left-turn/right-turn lane

6. Project Driveway (NS) at Colton Avenue (EW)
   - Construct the project driveway to provide one inbound lane and one outbound lane.
   - Southbound: Install stop control and construct one shared left-turn/right-turn lane
   - Northbound: Maintain two existing through lanes.
   - Southbound: Maintain two existing through lanes.

This analysis also assumes the project shall comply with the following conditions as part of the City of Redlands standard development review process to ensure adequate geometric design and emergency access:

- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Redlands.

- All on-site and off-site roadway design, signing/striping, and traffic control improvements relating to the proposed project shall be submitted to the City for review and constructed following applicable State/Federal engineering standards to the satisfaction of the City of Redlands.

- The final grading, landscaping, and street improvement plans shall demonstrate that applicable sight distance requirements are met.

- The project shall comply with the City of Redlands municipal parking requirements which will be reviewed as a part of the standard development review process.

- Final project plans shall demonstrate adequate emergency vehicle access and circulation to the satisfaction of the City of Redlands Public Works and Fire Departments.

- A construction worksite traffic control plan shall comply with applicable engineering standards outlined in the California *Manual of Uniform Traffic Control Devices* and shall be submitted to the City for review and approval before the issuance of a grading permit or start of construction. The plan shall identify any

roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction-related trips shall be restricted to off-peak hours to the extent possible.

SITE ACCESS QUEUING ANALYSIS

Table 4 summarizes the results of the queue analysis to check for conflicts between the project driveways and the immediately intersection.
The forecasted queue lengths shown in Table 4 are based on the HCM 95th-percentile back-of-queue methodology as shown in the Level of Service worksheets provided in Appendix D.

As shown in Table 4, adequate storage length/intersection spacing is forecast to be provided at the project driveways and immediately adjacent intersection during the peak hours for the Existing Plus Project Conditions. In particular, the southbound left turn lane at Wabash Avenue/Colton Avenue [#3] provides approximately 130 feet of storage capacity. The distance between the Wabash Avenue/Project South Driveway [#5] is approximately 200 feet. The southbound queue length for the left turn and through lanes at Wabash Avenue/Colton Avenue [#3] are not forecast to exceed 30 feet and northbound queue length at Wabash Avenue/Project South Driveway [#5] is not forecast to exceed 20 feet; therefore, adequate storage length and intersection spacing is expected to be provided between Colton Avenue and the Project South Driveway on Wabash Avenue.

Table 4
Site Access Queuing Analysis

Study Intersection	Approach	Lane	Storage Length (Feet)[2]	Peak Hour 95th-Percentile Queue Length (Feet)[1]		Adequate Storage Provided
				Existing Plus Project		
				AM	PM	
3. Wabash Avenue at Colton Avenue	Northbound	Left	115	<20	<20	YES
	Northbound	Thru-Right	215	25	20	YES
	Southbound	Left	130	30	25	YES
	Southbound	Thru-Right	175	25	<20	YES
	Eastbound	Left	110	<20	<20	YES
	Eastbound	Thru	200	35	30	YES
4. Wabash Ave at Project North Driveway	Northbound	Left	300	<20	<20	YES
	Southbound	Thru-Right	280	<20	<20	YES
	Eastbound	Shared	65	<20	<20	YES
5. Wabash Ave at Project South Driveway	Northbound	Left	60	<20	<20	YES
	Southbound	Thru-Right	300	<20	<20	YES
	Eastbound	Shared	75	<20	<20	YES
6 Project Driveway at Colton Avenue	Southbound	Shared	75	<20	<20	YES
	Eastbound	Left-Thru	445	<20	<20	YES
	Westbound	Thru-Right	395	<20	<20	YES

Notes:

1. The forecast 95th-percentile queue lengths shown in the delay calculation worksheets have been rounded up to nearest 5-foot increment.
2. Length of turning lane storage or distance to the adjacent driveway.

8. CONCLUSIONS

This section summarizes the proposed project, operational findings, and identifies recommendations (if any) as specified in previous sections of this study.

PROJECT TRIP GENERATION

The proposed project is forecast to generate a total of approximately 918 daily trips, including 68 trips during the AM peak hour and 88 trips during the PM peak hour.

LEVEL OF SERVICE ANALYSIS

The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for the Existing and Existing Plus Project, except for the following intersection that is forecast to continue operating at Level of Service D during the peak hours:

1. Judson Street (NS) at Colton Avenue (EW)

The addition of project trips does not degrade the Level of Service below the current Level of Service grade. Therefore, the proposed project is forecast to result in no substantial transportation effects at the study intersections for Existing Plus Project conditions.

SUMMARY OF IMPROVEMENTS

Project design features, necessary to provide project access, are outlined in the Site Access & On-Site Circulation (Section 7).

No off-site improvements are warranted since the project is forecast to result in no substantial transportation effects at the study intersections for Existing Plus Project conditions. However, all development projects are required, as a condition of approval, to pay the Development Impact Fee in effect at the time of the building permit issuance.

VEHICLE MILES TRAVELED ANALYSIS

Based on review of the proposed development and location, the project satisfies the County-established VMT screening criteria. Therefore, preparation of a transportation impact study with vehicle miles traveled (VMT) analysis is not warranted and the proposed project may be presumed to result in a less than significant VMT impact. The project VMT assessment is documented separately in the *Redlands Madera at Citrus Trail Vehicle Miles Traveled Assessment* (Ganddini Group, Inc., April 7, 2023).

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Traffic Count Data
Appendix D Intersection Level of Service Worksheets

APPENDIX A

GLOSSARY

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
GFA	Gross Floor Area
LOS	Level of Service
PCE	Passenger Car Equivalent
SF	Square Foot
SP	Service Population
TSF	Thousand Square Feet
V/C	Volume to Capacity Ratio
VMT	Vehicle Miles Traveled

TERMS

ACTUATED SIGNAL CONTROL: A type of traffic signal control in which display of each phase depends on whether the corresponding phase detector has registered a service call or the phase is on recall.

ACTUATION: Detection of a roadway user that is forwarded to the signal controller.

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period is divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CALL: An indication within a signal controller that a particular phase is waiting for service, either through actuation from a roadway user or phase recall.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass through a roadway facility during a specified period.

CHANNELIZATION: The separation of conflicting traffic movements by use of pavement markings, raised curbs, or other suitable means to facilitate free flow movement.

CLEARANCE INTERVAL: Equal to the yellow plus all-red time, if any, when a traffic signal changes between phases (i.e., the amount of time between the end of a green light from one movement to the beginning of a green light for the next).

COORDINATED SIGNAL CONTROL: A type of traffic signal control in which non-coordinated phases associated with minor movements are constrained such that the coordinated phases are served at a specific time during the signal cycle, thus maintaining the efficient progression of traffic flow along the major roadway.

CONTROL DELAY: The portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign). It includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay.

CORDON: An imaginary boundary line around or across a study area across which vehicles, persons, or other information can be collected for survey and analytical purposes.

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic traveling at a given speed to radically alter their speed or trajectory.

CYCLE: A complete sequence of signal indications for all phases. Also known as a signal cycle.

CYCLE LENGTH: The total time for a traffic signal to complete one full cycle.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The total additional travel time experienced by a roadway user (driver, passenger, bicyclist, or pedestrian) beyond that required to travel at a desired speed.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device used to count or determine the presence of a roadway user.

DESIGN SPEED: A speed used for purposes of designing horizontal and vertical alignments of a highway.

DIRECTIONAL SPLIT: The percent of two-way traffic traveling in a specified direction.

DIVERSION: The rerouting of traffic from a normal path of travel between two points, such as to avoid congestion or perform a secondary trip.

FREE FLOW: Traffic flow that is unaffected by a traffic control and/or or upstream or downstream conditions.

GAP: Time or distance between two vehicles measured from rear bumper of the front vehicle to front bumper of the second vehicle.

GAP ACCEPTANCE: The method by which a driver accepts an available gap in traffic to enter or cross the road.

HEADWAY: Time or distance between two successive vehicles measured from same point on both vehicles (i.e., front bumper to front bumper). Also known as gap.

LEVEL OF SERVICE: A grading scale of quantitative performance measures representing the quality of service of a transportation facility or service from an average traveler's perspective.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MULTI-MODAL: More than one mode, such as automobile, transit, bicycle, and pedestrian.

OFFSET: The time interval between the beginning of a traffic signal cycle at one intersection and the beginning of signal cycle an adjacent intersection.

PLATOON: A set of vehicles traveling at similar speed and moving as a general group with clear separation between other vehicles ahead and behind.

PASSENGER CAR EQUIVALENT: A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEDESTRIAN CLEARANCE INTERVAL: Also known as the "Flashing Don't Walk" interval, it signals the end of pedestrian entry into the crosswalk following the "Walk" indication and provides time for pedestrians who have already entered the crosswalk to finishing crossing.

PEAK HOUR: The hour within a day in which the maximum volume occurs.

PEAK HOUR FACTOR: The peak hour volume divided by the four times the peak 15-minute flow rate.

PHASE: In traffic signals, the green, yellow, and red clearance intervals assigned to a specified traffic movement.

PRETIMED SIGNAL: A traffic signal operation in which the cycle length, phasing sequence, and phasing times are predetermined and fixed, regardless of actual demand for any given traffic movement. Also known as a fixed time signal.

PROGRESSION: The coordinated movement of vehicles through signalized intersections along a corridor.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

RECALL: A signal phasing operation in which a specified phase places a call to the signal controller each time a conflicting phase is served, thus ensuring the specified phase will be serviced again.

SEMI-ACTUATED CONTROL: A type of traffic signal control in which only the minor movements are provided detection.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queuing to occur.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle traveling at a given speed to bring the vehicle to a stop after an object on the road becomes visible, including reaction and response time.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors. Also known as a demand responsive signal.

TRIP OR TRIP END: The one-directional movement of a person or vehicle. Every trip has an origin and a destination at its respective ends (i.e., trip ends). In terms of site trip generation, the same vehicle entering and exiting a site generates two trips: one inbound trip and one outbound trip.

TRIP GENERATION RATE: The rate at which a land use generates trips per the specified land use variable, such per dwelling unit or per thousand square feet.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheelbase as well as the steering mechanism of the vehicle.

VEHICLE MILES TRAVELED: A measure of the amount and distance of automobile travel essentially calculated as the sum of each trip times the trip length.

APPENDIX B

SCOPING AGREEMENT

APPENDIX B

SCOPING AGREEMENT

MEMORANDUM OF UNDERSTANDING

TO: Don Young, Land Use Engineering Manager | CITY OF REDLANDS

FROM: Perrie Ilercil, PE (AZ) | GANDDINI GROUP, INC.

DATE: April 7, 2023

SUBJECT: **Madera at Citrus Trail Traffic Scoping Agreement**
19620

INTRODUCTION

The purpose of this scoping document is to outline the proposed traffic analysis parameters and assumptions for the Madera at Citrus Trail project for review/concurrence by the City of Redlands staff.

PROJECT DESCRIPTION

The 9.0-acre project site (APN 0168-291-02) is located at the northwest corner of Wabash Avenue and Colton Avenue in the City of Redlands, California. The project site is currently zoned residential and undeveloped. The proposed project involves a General Plan Amendment (GPA-0474) associated with the Zoning change (ZC-0474) from Low Density Residential (R1) to Medium Density Residential (R2) for the Tentative Tract Map (TTM20571) and Conditional Use Permit (CUP1171) of the development. The project location map is shown on Figure 1.

The proposed project includes the construction of a 103-dwelling unit single-family residential development. Vehicle access to the proposed project will be provided by three driveways one on Colton Avenue and two on Wabash Avenue. The project site plan is illustrated on Figure 2.

PROJECT TRIP GENERATION & DISTRIBUTION

Trip Generation

Table 1 shows the proposed project trips based on trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) for Land Use Codes 210 (Single-family Detached Housing) and 215 (Single-family Attached Housing).

As shown in Table 1, the proposed project is forecast to generate a total of approximately 918 daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

Project Trip Distributions

Figure 3 illustrates the forecast directional distribution patterns of the project generated trips. The project trip distribution patterns are developed from engineering judgement based on review of existing volume data, surrounding land uses, and the local and regional roadway facilities in the project vicinity.

STUDY AREA

Based on of the project trip generation and distribution patterns consists of the following study intersections:

1. Judson Street (NS) at Colton Avenue (EW)[1]
2. Dearborn Street (NS) at Colton Avenue (EW)
3. Wabash Avenue (NS) at Colton Avenue (EW)
4. Wabash Avenue (NS) at Project North Driveway (EW)
5. Wabash Avenue (NS) at Project South Driveway (EW)
6. Project Driveway (NS) at Colton Avenue (EW)

TRAFFIC COUNTS

New intersection turning movement counts will be collected at the study intersections during the typical weekday AM and PM peak hours (7:00 AM – 9:00 AM and 4:00 - 6:00 PM). The peak hour factor will be determined from the counts for study area intersections.

INTERSECTION ANALYSIS METHODOLOGY

In accordance with the City of Redlands standard procedures, and the County of San Bernardino *Transportation Impact Study Guidelines* (July 2019), intersections shall by analyzed using the intersection delay methodology based on procedures contained in the Transportation Research Board *Highway Capacity Manual* (HCM). Default values not specifically identified in the County guidelines will be based *Highway Capacity Manual* recommended values. Intersection analysis shall be performed using the Vistro software.

PERFORMANCE STANDARDS

The City of Redlands General Plan and Measure U Section 1A.60 Principle Six has established the minimum acceptable Level of Service (C or better) for roadway segment and peak hour intersection operations. Where the current Level of Service is lower C, roadway improvements shall be provided such that the LOS is not reduced below the LOS at the time of the application, or as provided in Section 5.20 of the Redlands General Plan where a more intense Level of Service is specifically permitted, for Existing Plus Project conditions.

ANALYSIS SCENARIOS

The traffic study shall evaluate the following analysis scenarios for typical weekday AM and PM peak hour conditions:

- Existing
- Existing Plus Project

SITE ACCESS & ON-SITE CIRCULATION

The traffic study will review site access considerations such as intersection traffic controls and lane configurations and if necessary, recommend improvements. Additionally, the traffic study will evaluate the project site ingress/egress regarding the proximity of the Wabash/Colton intersection relative to City of Redlands standards, including sight distance analysis for the project driveways.

[1] (NS) = north-south roadway; (EW) = east-west roadway.

VEHICLE MILES TRAVELED (VMT) ASSESSMENT

A VMT letter report supplemental to the traffic study shall be submitted to provide VMT screening analysis for CEQA compliance based on screening criteria established by the City of Redlands. The VMT letter report shall include a narrative of VMT requirements under CEQA and documentation of the project screening results based on the applicable criteria.

CONCLUSION

We appreciate the opportunity to provide this memorandum of understanding for your review. Should you have any questions or comments regarding the proposed scope, please contact me at (714) 795-3100 x 103 or 949-257-3126.

Table 1
Project Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Land Use Variable[2]	% In	% Out	Rate	% In	% Out	Rate	Daily Rate
Single-Family Detached Housing	ITE 210	DU	26%	74%	0.70	63%	37%	0.94	9.43
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Land Use	Source	Quantity	In	Out	Total	In	Out	Total	Daily
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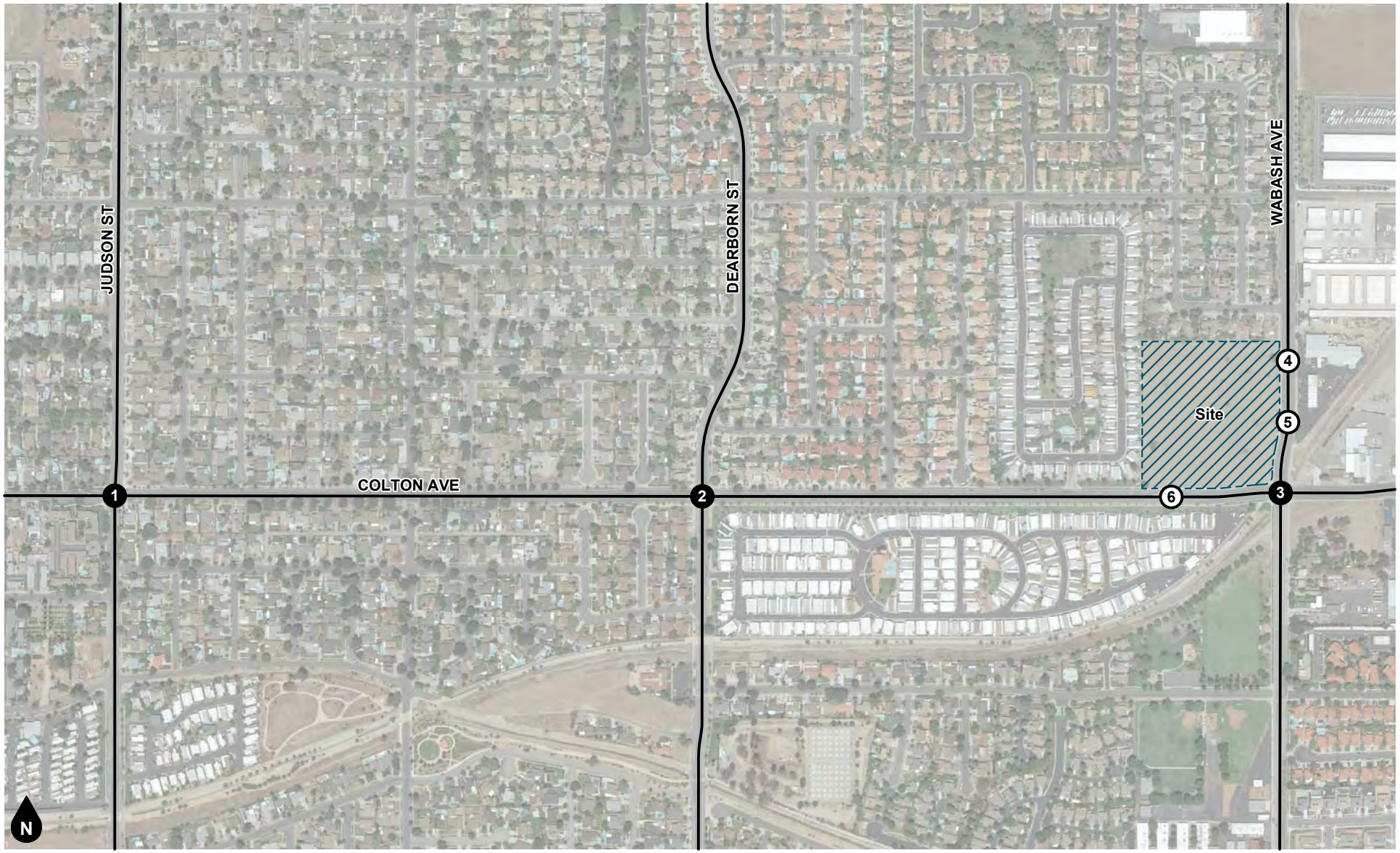
Single-Family Attached Housing	ITE 215	24 DU	4	8	12	8	6	14	173
TOTAL TRIPS GENERATED		**103 DU**	**18**	**49**	**67**	**55**	**33**	**88**	**918**

Notes:
1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.
   All rates based on General Urban/Suburban setting unless otherwise noted.
2. DU = Dwelling Units



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

Figure 2
Site Plan

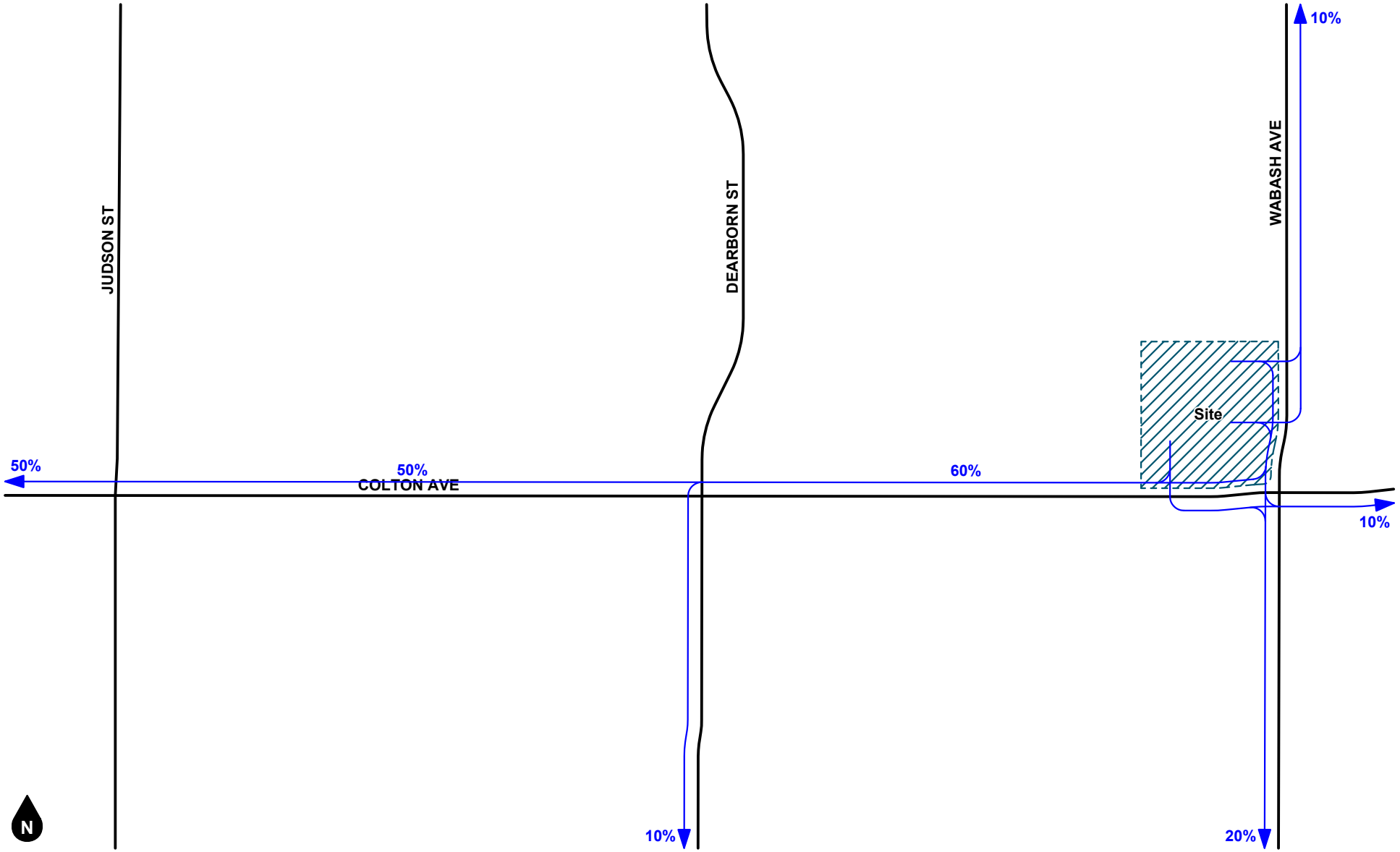


Figure 3
Project Trip Distribution

Perrie Ilercil

From: Don Young
Sent: Wednesday, April 12, 2023 4:21 PM
To: Perrie Ilercil; Sean Reilly
Cc: Pam Steel
Subject: Re: Madera at Citrus Trails Traffic Scoping Agreement and VMT Assessment

your submittals are acceptable. I will wait for submittal of the Measure U analysis.

From: Perrie Ilercil <perrie@ganddini.com>
Sent: Wednesday, April 12, 2023 11:48 AM
To: Sean Reilly
Cc: Pam Steel
Subject: Madera at Citrus Trails Traffic Scoping Agreement and VMT Assessment

[**NOTICE:** This message originated outside of City of Redlands -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Hi Sean,

See the attached files for your records and Don's review.

Don,
At your earliest convenience, let me know if you have any questions or concerns, so these can be addressed before counts are conducted.

Sincerely,

Perrie Ilercil, **PE (AZ)**
Senior Engineer

GANDDINI GROUP, INC.
555 Parkcenter Drive, Suite 225
Santa Ana, CA 92705
o. 714 795 3100 x 103
c. 949 257-3126
e: *perrie@ganddini.com*
www.ganddini.com

APPENDIX C

TRAFFIC COUNT DATA

APPENDIX C

TRAFFIC COUNT DATA

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Redlands
N/S: Judson Street
E/W: Colton Avenue
Weather: Clear

File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

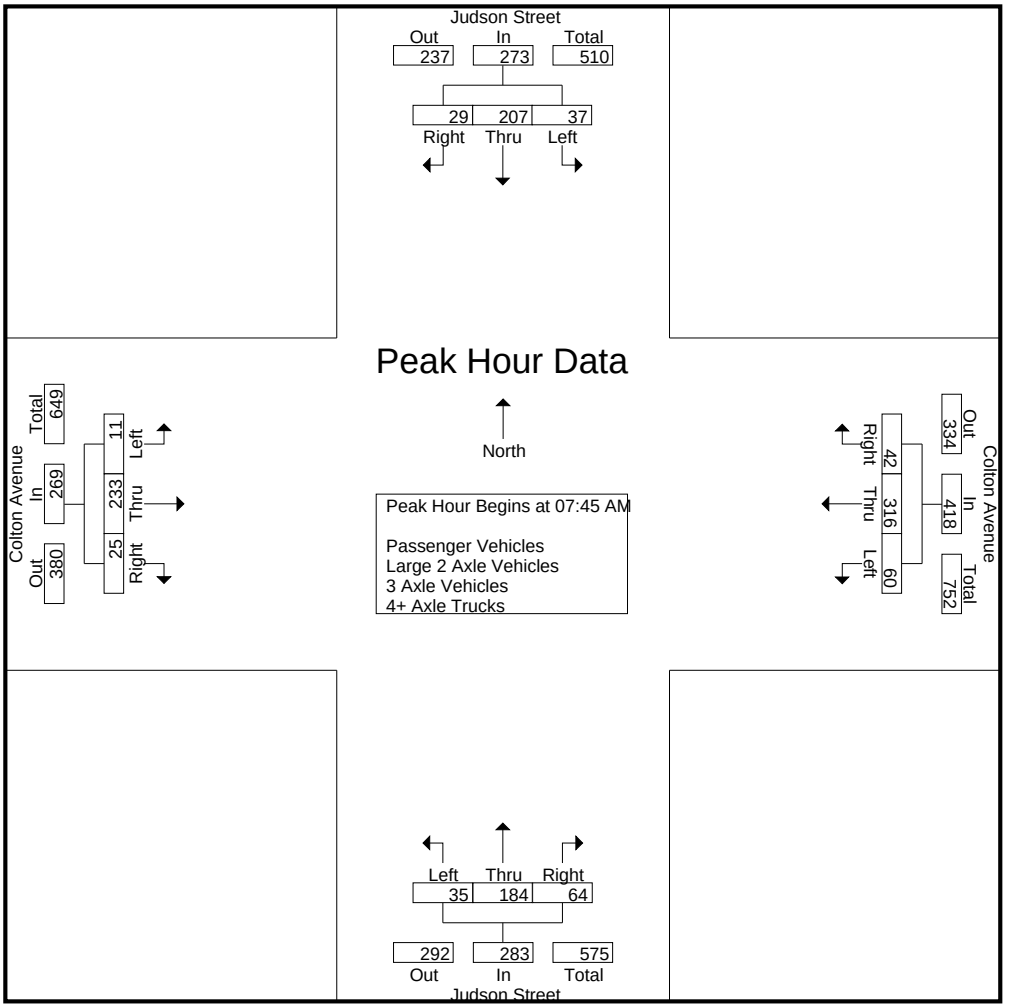
	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	33	2	37	5	77	3	85	4	17	7	28	4	15	2	21	171
07:15 AM	2	54	8	64	15	72	9	96	11	26	6	43	3	28	3	34	237
07:30 AM	5	57	7	69	6	83	5	94	13	35	3	51	1	47	11	59	273
07:45 AM	5	50	8	63	17	81	9	107	3	42	17	62	2	67	5	74	306
Total	14	194	25	233	43	313	26	382	31	120	33	184	10	157	21	188	987
08:00 AM	9	54	9	72	9	77	6	92	7	48	25	80	2	69	9	80	324
08:15 AM	15	60	7	82	18	87	16	121	17	43	7	67	2	53	5	60	330
08:30 AM	8	43	5	56	16	71	11	98	8	51	15	74	5	44	6	55	283
08:45 AM	2	42	3	47	14	47	3	64	5	30	5	40	4	21	0	25	176
Total	34	199	24	257	57	282	36	375	37	172	52	261	13	187	20	220	1113
Grand Total	48	393	49	490	100	595	62	757	68	292	85	445	23	344	41	408	2100
Apprch %	9.8	80.2	10		13.2	78.6	8.2		15.3	65.6	19.1		5.6	84.3	10		
Total %	2.3	18.7	2.3	23.3	4.8	28.3	3	36	3.2	13.9	4	21.2	1.1	16.4	2	19.4	
Passenger Vehicles	47	385	49	481	100	591	60	751	68	281	83	432	21	340	40	401	2065
% Passenger Vehicles	97.9	98	100	98.2	100	99.3	96.8	99.2	100	96.2	97.6	97.1	91.3	98.8	97.6	98.3	98.3
Large 2 Axle Vehicles	1	4	0	5	0	3	2	5	0	9	1	10	2	4	1	7	27
% Large 2 Axle Vehicles	2.1	1	0	1	0	0.5	3.2	0.7	0	3.1	1.2	2.2	8.7	1.2	2.4	1.7	1.3
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0
4+ Axle Trucks	0	4	0	4	0	1	0	1	0	1	1	2	0	0	0	0	7
% 4+ Axle Trucks	0	1	0	0.8	0	0.2	0	0.1	0	0.3	1.2	0.4	0	0	0	0	0.3

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	5	50	8	63	17	81	9	107	3	42	17	62	2	67	5	74	306
08:00 AM	9	54	**9**	72	9	77	6	92	7	48	**25**	**80**	2	**69**	**9**	**80**	324
08:15 AM	**15**	**60**	7	**82**	**18**	**87**	**16**	**121**	**17**	43	7	67	2	53	5	60	**330**
08:30 AM	8	43	5	56	16	71	11	98	8	**51**	15	74	**5**	44	6	55	283
Total Volume	37	207	29	273	60	316	42	418	35	184	64	283	11	233	25	269	1243
% App. Total	13.6	75.8	10.6		14.4	75.6	10		12.4	65	22.6		4.1	86.6	9.3		
PHF	.617	.863	.806	.832	.833	.908	.656	.864	.515	.902	.640	.884	.550	.844	.694	.841	.942

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Redlands
N/S: Judson Street
E/W: Colton Avenue
Weather: Clear

File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				07:30 AM			
+0 mins.	5	57	7	69	17	81	9	107	3	42	17	62	1	47	**11**	59
+15 mins.	5	50	8	63	9	77	6	92	7	48	**25**	**80**	**2**	67	5	74
+30 mins.	9	54	**9**	72	**18**	**87**	**16**	**121**	**17**	43	7	67	2	**69**	9	**80**
+45 mins.	**15**	**60**	7	**82**	16	71	11	98	8	**51**	15	74	2	53	5	60
Total Volume	34	221	31	286	60	316	42	418	35	184	64	283	7	236	30	273
% App. Total	11.9	77.3	10.8		14.4	75.6	10		12.4	65	22.6		2.6	86.4	11	
PHF	.567	.921	.861	.872	.833	.908	.656	.864	.515	.902	.640	.884	.875	.855	.682	.853

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File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023
Page No : 1

Groups Printed- Passenger Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	30	2	34	5	76	3	84	4	17	7	28	4	14	2	20	166
07:15 AM	2	54	8	64	15	72	9	96	11	26	5	42	3	28	3	34	236
07:30 AM	5	57	7	69	6	83	5	94	13	33	3	49	0	47	11	58	270
07:45 AM	5	50	8	63	17	81	8	106	3	41	17	61	2	65	5	72	302
Total	14	191	25	230	43	312	25	380	31	117	32	180	9	154	21	184	974
08:00 AM	9	53	9	71	9	77	6	92	7	45	25	77	2	68	8	78	318
08:15 AM	14	58	7	79	18	84	15	117	17	39	7	63	2	53	5	60	319
08:30 AM	8	43	5	56	16	71	11	98	8	51	14	73	5	44	6	55	282
08:45 AM	2	40	3	45	14	47	3	64	5	29	5	39	3	21	0	24	172
Total	33	194	24	251	57	279	35	371	37	164	51	252	12	186	19	217	1091
Grand Total	47	385	49	481	100	591	60	751	68	281	83	432	21	340	40	401	2065
Apprch %	9.8	80	10.2		13.3	78.7	8		15.7	65	19.2		5.2	84.8	10		
Total %	2.3	18.6	2.4	23.3	4.8	28.6	2.9	36.4	3.3	13.6	4	20.9	1	16.5	1.9	19.4	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	5	50	8	63	17	81	8	106	3	41	17	61	2	65	5	72	302
08:00 AM	9	53	**9**	71	9	77	6	92	7	45	**25**	**77**	2	**68**	**8**	**78**	318
08:15 AM	**14**	**58**	7	**79**	**18**	**84**	**15**	**117**	**17**	39	7	63	2	53	5	60	**319**
08:30 AM	8	43	5	56	16	71	11	98	8	**51**	14	73	**5**	44	6	55	282
Total Volume	36	204	29	269	60	313	40	413	35	176	63	274	11	230	24	265	1221
% App. Total	13.4	75.8	10.8		14.5	75.8	9.7		12.8	64.2	23		4.2	86.8	9.1		
PHF	.643	.879	.806	.851	.833	.932	.667	.882	.515	.863	.630	.890	.550	.846	.750	.849	.957

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City of Redlands
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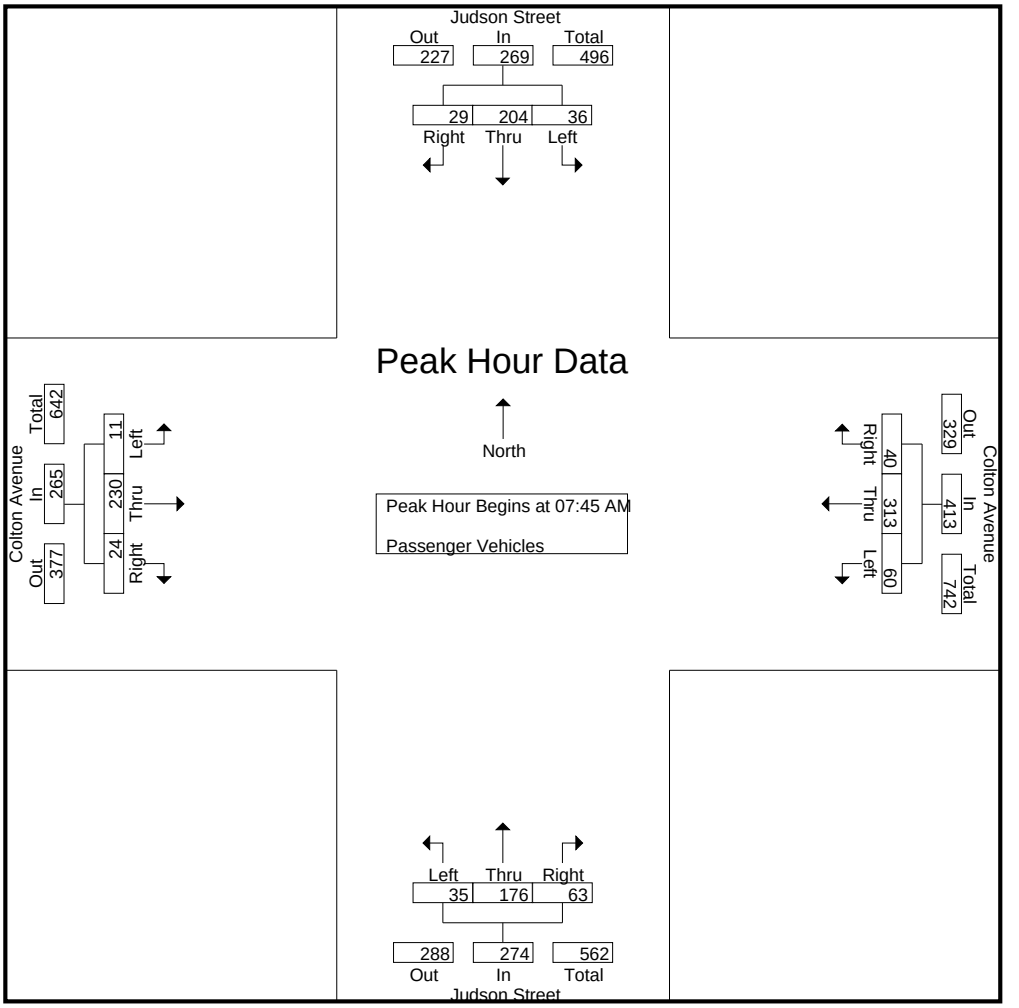
Site Code : 22523363
Start Date : 4/18/2023
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	5	50	8	63	17	81	8	106	3	41	17	61	2	65	5	72
+15 mins.	9	53	**9**	71	9	77	6	92	7	45	**25**	**77**	2	**68**	**8**	**78**
+30 mins.	**14**	**58**	7	**79**	**18**	**84**	**15**	**117**	**17**	39	7	63	2	53	5	60
+45 mins.	8	43	5	56	16	71	11	98	8	**51**	14	73	**5**	44	6	55
Total Volume	36	204	29	269	60	313	40	413	35	176	63	274	11	230	24	265
% App. Total	13.4	75.8	10.8		14.5	75.8	9.7		12.8	64.2	23		4.2	86.8	9.1	
PHF	.643	.879	.806	.851	.833	.932	.667	.882	.515	.863	.630	.890	.550	.846	.750	.849

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City of Redlands
N/S: Judson Street
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Weather: Clear

File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023

Groups Printed- Large 2 Axle Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	3
07:45 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	2	0	2	4
Total	0	1	0	1	0	1	1	2	0	3	0	3	1	3	0	4	10
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	1	2	5
08:15 AM	1	2	0	3	0	2	1	3	0	4	0	4	0	0	0	0	10
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	3	0	4	0	2	1	3	0	6	1	7	1	1	1	3	17
Grand Total	1	4	0	5	0	3	2	5	0	9	1	10	2	4	1	7	27
Apprch %	20	80	0		0	60	40		0	90	10		28.6	57.1	14.3		
Total %	3.7	14.8	0	18.5	0	11.1	7.4	18.5	0	33.3	3.7	37	7.4	14.8	3.7	25.9	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	**1**	1	0	1	0	1	0	**2**	0	**2**	4
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	**1**	2	5
08:15 AM	**1**	**2**	0	**3**	0	**2**	1	**3**	0	**4**	0	**4**	0	0	0	0	**10**
08:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
Total Volume	1	3	0	4	0	2	2	4	0	7	1	8	0	3	1	4	20
% App. Total	25	75	0		0	50	50		0	87.5	12.5		0	75	25		
PHF	.250	.375	.000	.333	.000	.250	.500	.333	.000	.438	.250	.500	.000	.375	.250	.500	.500

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City of Redlands
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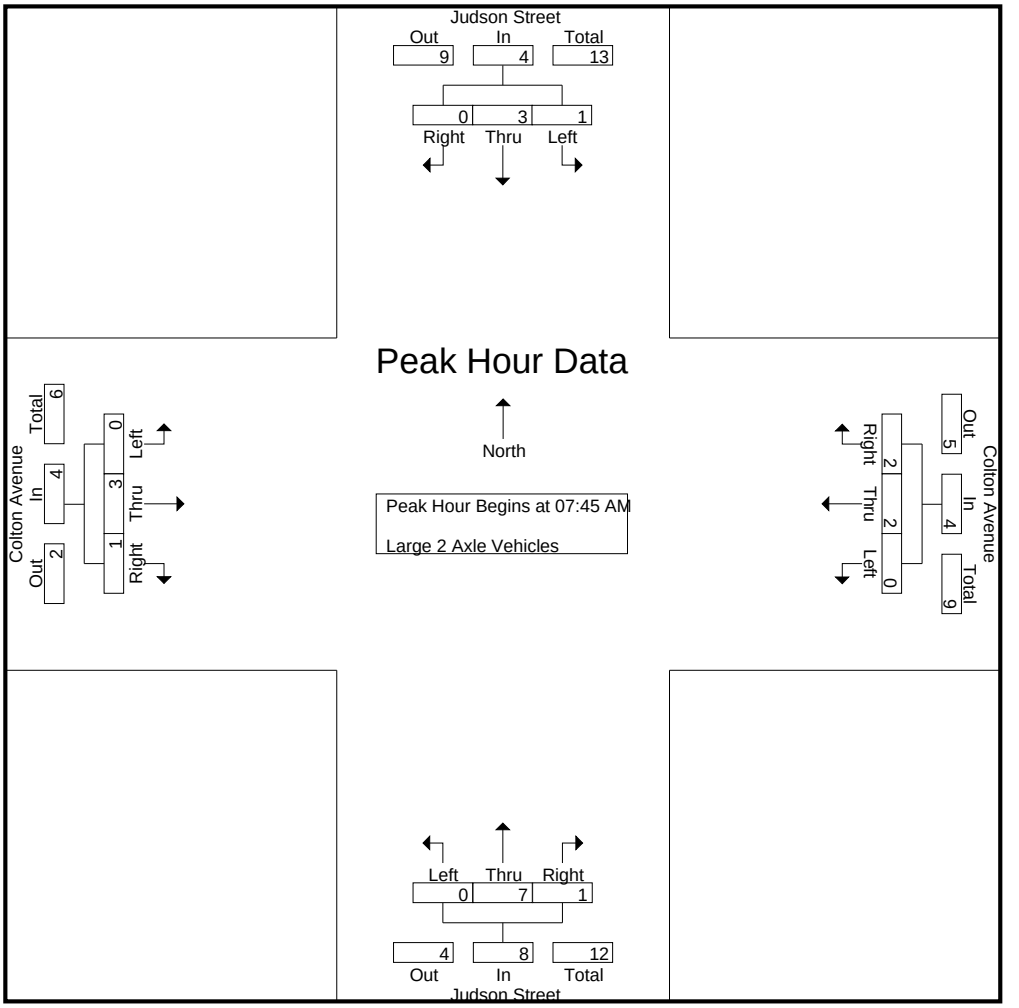
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	0	1	0	1	0	**2**	0	**2**
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	1	**1**	2
+30 mins.	**1**	**2**	0	**3**	0	**2**	1	**3**	0	**4**	0	**4**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
Total Volume	1	3	0	4	0	2	2	4	0	7	1	8	0	3	1	4
% App. Total	25	75	0		0	50	50		0	87.5	12.5		0	75	25	
PHF	.250	.375	.000	.333	.000	.250	.500	.333	.000	.438	.250	.500	.000	.375	.250	.500

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Site Code : 22523363
Start Date : 4/18/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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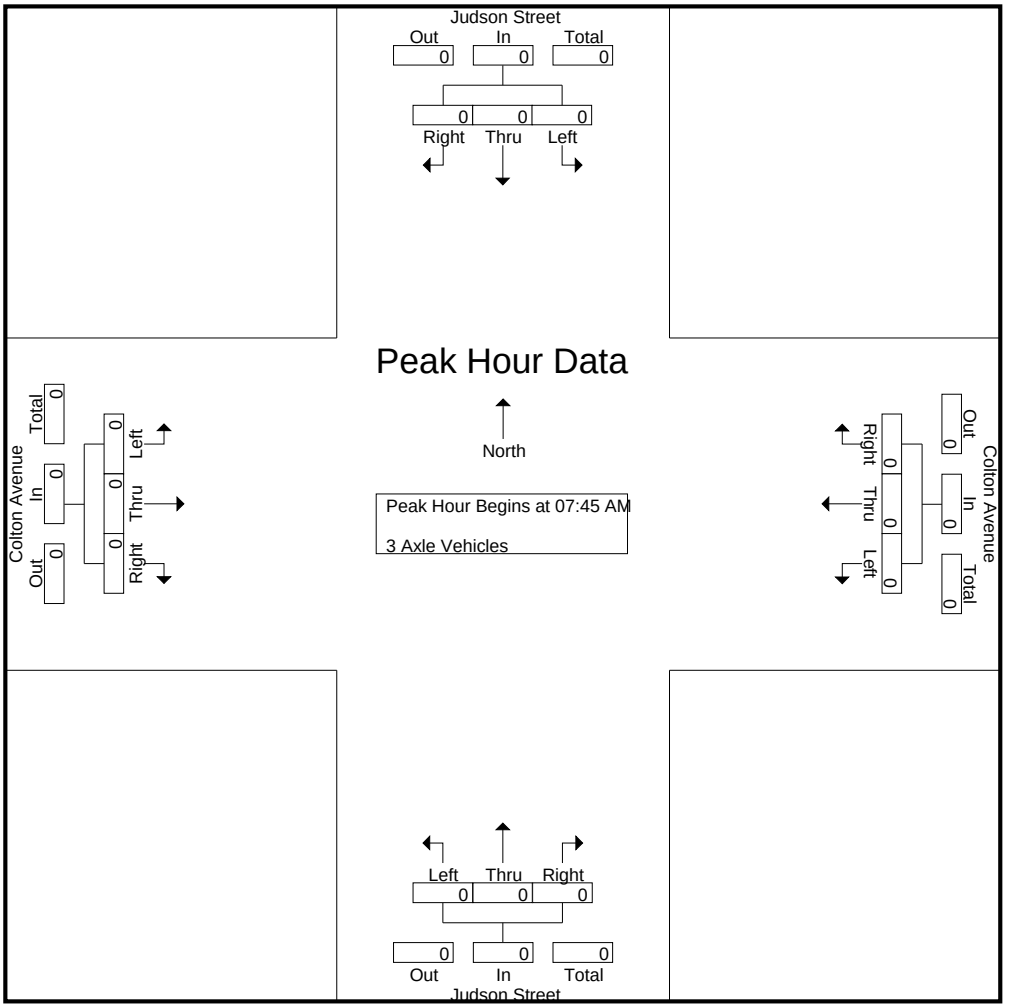

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
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City of Redlands
N/S: Judson Street
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File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023

Groups Printed- 4+ Axle Trucks

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Grand Total	0	4	0	4	0	1	0	1	0	1	1	2	0	0	0	0	7
Apprch %	0	100	0		0	100	0		0	50	50		0	0	0		
Total %	0	57.1	0	57.1	0	14.3	0	14.3	0	14.3	14.3	28.6	0	0	0	0	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
08:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.500

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City of Redlands
N/S: Judson Street
E/W: Colton Avenue
Weather: Clear

File Name : 01_RED_Jud_Col AM
Site Code : 22523363
Start Date : 4/18/2023
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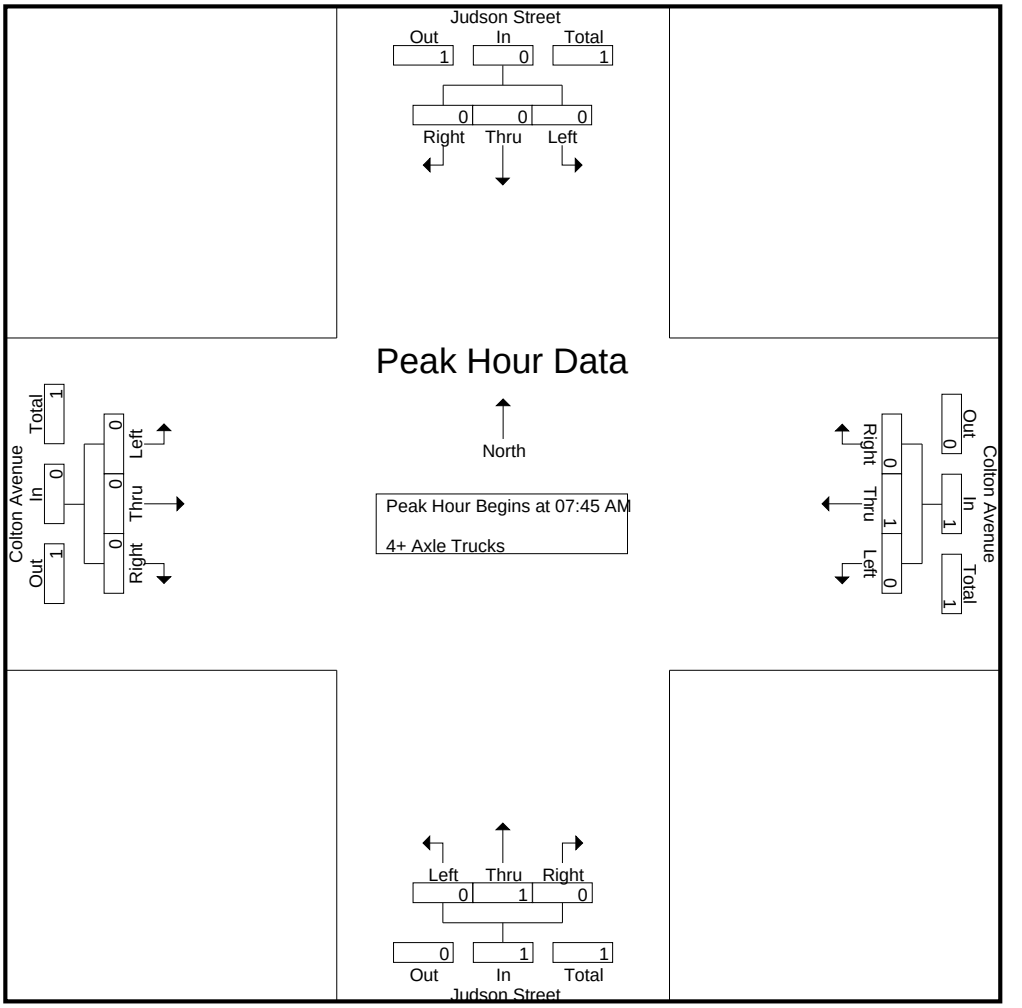

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	33	7	41	8	46	6	60	9	39	18	66	6	67	10	83	250
04:15 PM	2	43	3	48	7	52	5	64	6	55	11	72	8	75	7	90	274
04:30 PM	5	62	8	75	13	42	3	58	1	51	13	65	10	63	9	82	280
04:45 PM	4	44	5	53	10	61	9	80	6	62	10	78	8	62	6	76	287
Total	12	182	23	217	38	201	23	262	22	207	52	281	32	267	32	331	1091
05:00 PM	5	35	7	47	11	43	6	60	9	76	22	107	11	67	16	94	308
05:15 PM	8	65	4	77	8	53	3	64	3	57	14	74	7	54	18	79	294
05:30 PM	3	53	3	59	5	43	6	54	7	47	11	65	7	55	9	71	249
05:45 PM	9	48	3	60	4	46	4	54	10	50	16	76	2	66	9	77	267
Total	25	201	17	243	28	185	19	232	29	230	63	322	27	242	52	321	1118
Grand Total	37	383	40	460	66	386	42	494	51	437	115	603	59	509	84	652	2209
Apprch %	8	83.3	8.7		13.4	78.1	8.5		8.5	72.5	19.1		9	78.1	12.9		
Total %	1.7	17.3	1.8	20.8	3	17.5	1.9	22.4	2.3	19.8	5.2	27.3	2.7	23	3.8	29.5	
Passenger Vehicles	36	379	39	454	66	383	41	490	51	437	115	603	59	508	84	651	2198
% Passenger Vehicles	97.3	99	97.5	98.7	100	99.2	97.6	99.2	100	100	100	100	100	99.8	100	99.8	99.5
Large 2 Axle Vehicles	1	4	1	6	0	3	1	4	0	0	0	0	0	1	0	1	11
% Large 2 Axle Vehicles	2.7	1	2.5	1.3	0	0.8	2.4	0.8	0	0	0	0	0	0.2	0	0.2	0.5
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	62	**8**	75	**13**	42	3	58	1	51	13	65	10	63	9	82	280
04:45 PM	4	44	5	53	10	**61**	**9**	**80**	6	62	10	78	8	62	6	76	287
05:00 PM	5	35	7	47	11	43	6	60	**9**	**76**	**22**	**107**	**11**	**67**	16	**94**	**308**
05:15 PM	**8**	**65**	4	**77**	8	53	3	64	3	57	14	74	7	54	**18**	79	294
Total Volume	22	206	24	252	42	199	21	262	19	246	59	324	36	246	49	331	1169
% App. Total	8.7	81.7	9.5		16	76	8		5.9	75.9	18.2		10.9	74.3	14.8		
PHF	.688	.792	.750	.818	.808	.816	.583	.819	.528	.809	.670	.757	.818	.918	.681	.880	.949

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File Name : 01_RED_Jud_Col PM
Site Code : 22523363
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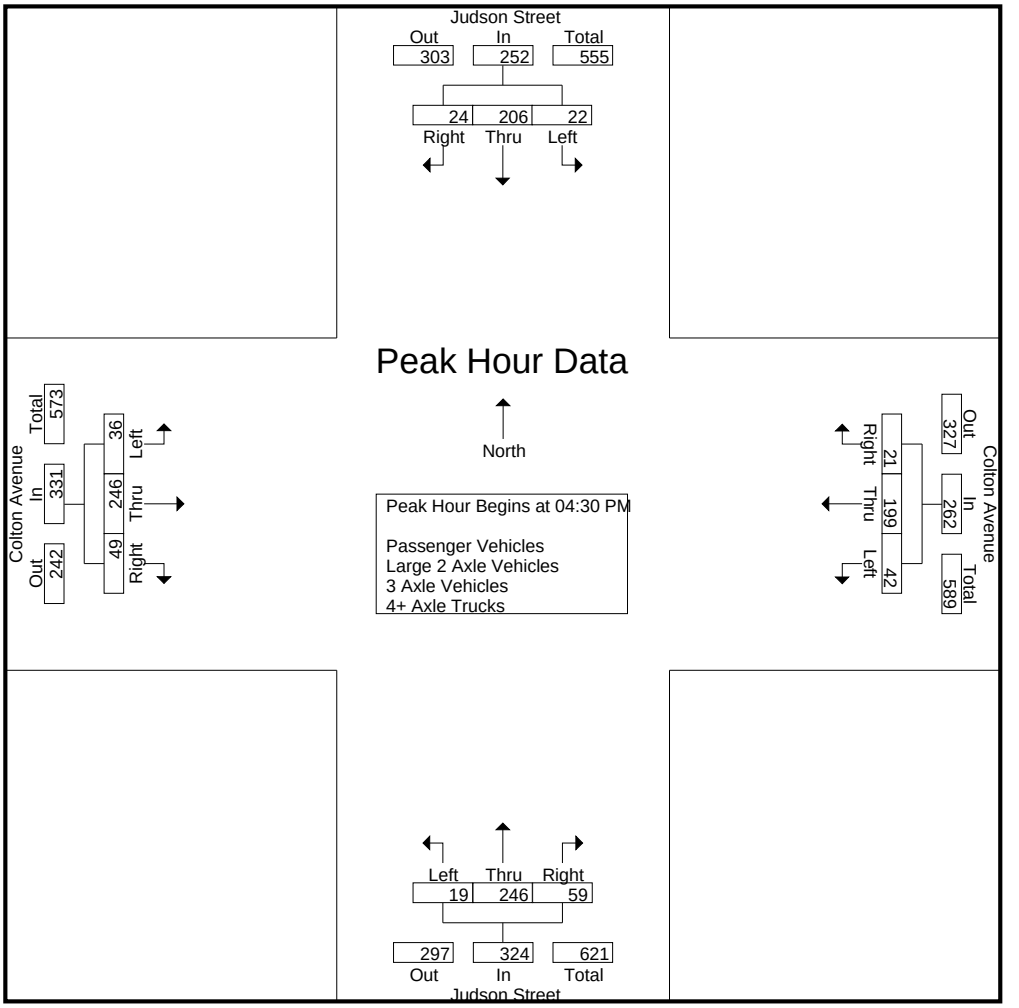

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	5	62	**8**	75	8	46	6	60	1	51	13	65	8	**75**	7	90
+15 mins.	4	44	5	53	7	52	5	64	6	62	10	78	10	63	9	82
+30 mins.	5	35	7	47	**13**	42	3	58	**9**	**76**	**22**	**107**	8	62	6	76
+45 mins.	**8**	**65**	4	**77**	10	**61**	**9**	**80**	3	57	14	74	**11**	67	**16**	**94**
Total Volume	22	206	24	252	38	201	23	262	19	246	59	324	37	267	38	342
% App. Total	8.7	81.7	9.5		14.5	76.7	8.8		5.9	75.9	18.2		10.8	78.1	11.1	
PHF	.688	.792	.750	.818	.731	.824	.639	.819	.528	.809	.670	.757	.841	.890	.594	.910

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Groups Printed- Passenger Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	30	7	37	8	46	6	60	9	39	18	66	6	67	10	83	246
04:15 PM	2	43	3	48	7	52	5	64	6	55	11	72	8	75	7	90	274
04:30 PM	5	61	8	74	13	41	3	57	1	51	13	65	10	63	9	82	278
04:45 PM	4	44	5	53	10	60	8	78	6	62	10	78	8	62	6	76	285
Total	11	178	23	212	38	199	22	259	22	207	52	281	32	267	32	331	1083
05:00 PM	5	35	7	47	11	42	6	59	9	76	22	107	11	66	16	93	306
05:15 PM	8	65	4	77	8	53	3	64	3	57	14	74	7	54	18	79	294
05:30 PM	3	53	2	58	5	43	6	54	7	47	11	65	7	55	9	71	248
05:45 PM	9	48	3	60	4	46	4	54	10	50	16	76	2	66	9	77	267
Total	25	201	16	242	28	184	19	231	29	230	63	322	27	241	52	320	1115
Grand Total	36	379	39	454	66	383	41	490	51	437	115	603	59	508	84	651	2198
Apprch %	7.9	83.5	8.6		13.5	78.2	8.4		8.5	72.5	19.1		9.1	78	12.9		
Total %	1.6	17.2	1.8	20.7	3	17.4	1.9	22.3	2.3	19.9	5.2	27.4	2.7	23.1	3.8	29.6	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	61	**8**	74	**13**	41	3	57	1	51	13	65	10	63	9	82	278
04:45 PM	4	44	5	53	10	**60**	**8**	**78**	6	62	10	78	8	62	6	76	285
05:00 PM	5	35	7	47	11	42	6	59	**9**	**76**	**22**	**107**	**11**	**66**	16	**93**	**306**
05:15 PM	**8**	**65**	4	**77**	8	53	3	64	3	57	14	74	7	54	**18**	79	294
Total Volume	22	205	24	251	42	196	20	258	19	246	59	324	36	245	49	330	1163
% App. Total	8.8	81.7	9.6		16.3	76	7.8		5.9	75.9	18.2		10.9	74.2	14.8		
PHF	.688	.788	.750	.815	.808	.817	.625	.827	.528	.809	.670	.757	.818	.928	.681	.887	.950

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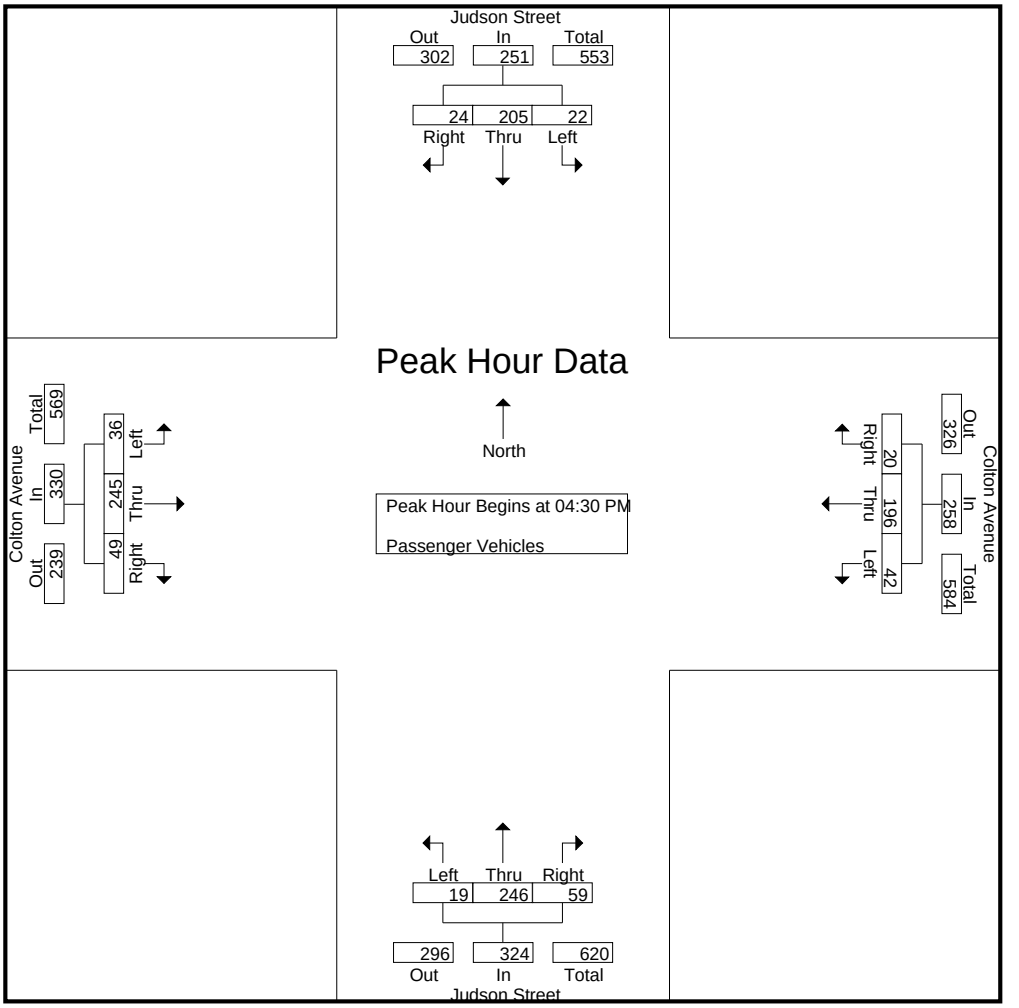

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	5	61	**8**	74	**13**	41	3	57	1	51	13	65	10	63	9	82
+15 mins.	4	44	5	53	10	**60**	**8**	**78**	6	62	10	78	8	62	6	76
+30 mins.	5	35	7	47	11	42	6	59	**9**	**76**	**22**	**107**	**11**	**66**	16	**93**
+45 mins.	**8**	**65**	4	**77**	8	53	3	64	3	57	14	74	7	54	**18**	79
Total Volume	22	205	24	251	42	196	20	258	19	246	59	324	36	245	49	330
% App. Total	8.8	81.7	9.6		16.3	76	7.8		5.9	75.9	18.2		10.9	74.2	14.8	
PHF	.688	.788	.750	.815	.808	.817	.625	.827	.528	.809	.670	.757	.818	.928	.681	.887

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Groups Printed- Large 2 Axle Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
Total	1	4	0	5	0	2	1	3	0	0	0	0	0	0	0	0	8
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Grand Total	1	4	1	6	0	3	1	4	0	0	0	0	0	1	0	1	11
Apprch %	16.7	66.7	16.7		0	75	25		0	0	0		0	100	0		
Total %	9.1	36.4	9.1	54.5	0	27.3	9.1	36.4	0	0	0	0	0	9.1	0	9.1	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0	0	0	0	0	**2**
04:45 PM	0	0	0	0	0	1	**1**	**2**	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	3	1	4	0	0	0	0	0	1	0	1	6
% App. Total	0	100	0		0	75	25		0	0	0		0	100	0		
PHF	.000	.250	.000	.250	.000	.750	.250	.500	.000	.000	.000	.000	.000	.250	.000	.250	.750

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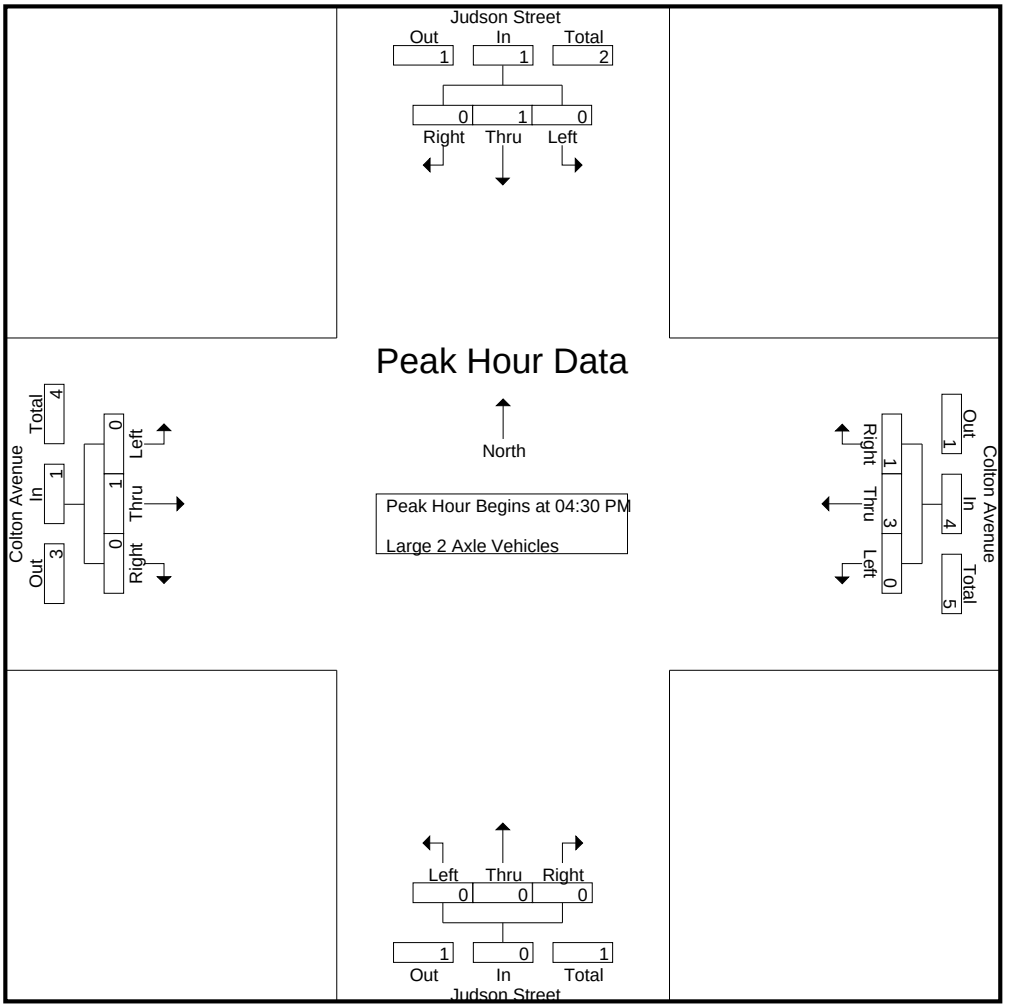

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	**1**	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	3	1	4	0	0	0	0	0	1	0	1
% App. Total	0	100	0		0	75	25		0	0	0		0	100	0	
PHF	.000	.250	.000	.250	.000	.750	.250	.500	.000	.000	.000	.000	.000	.250	.000	.250

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Groups Printed- 3 Axle Vehicles

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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E/W: Colton Avenue
Weather: Clear

File Name : 01_RED_Jud_Col PM
Site Code : 22523363
Start Date : 4/18/2023
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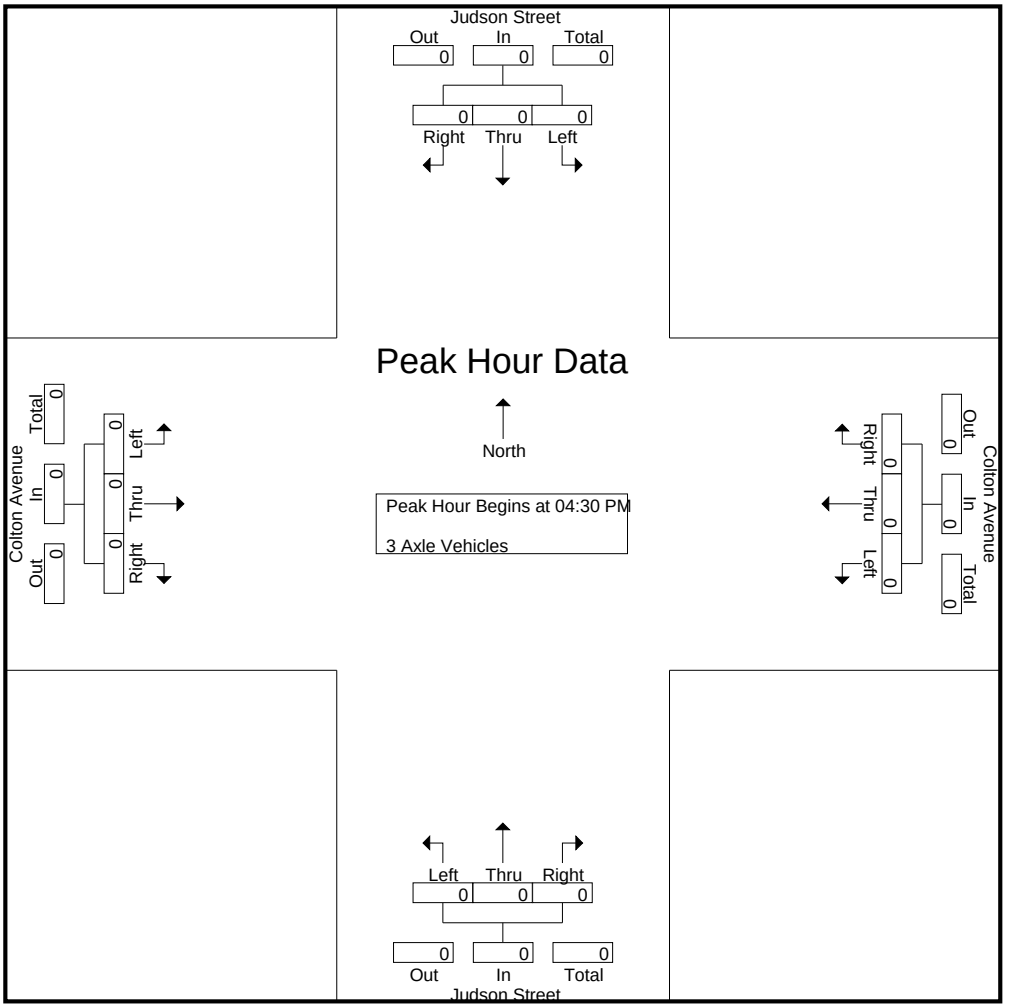

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Judson Street Southbound				Colton Avenue Westbound				Judson Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 01_RED_Jud_Col PM
Site Code : 22523363
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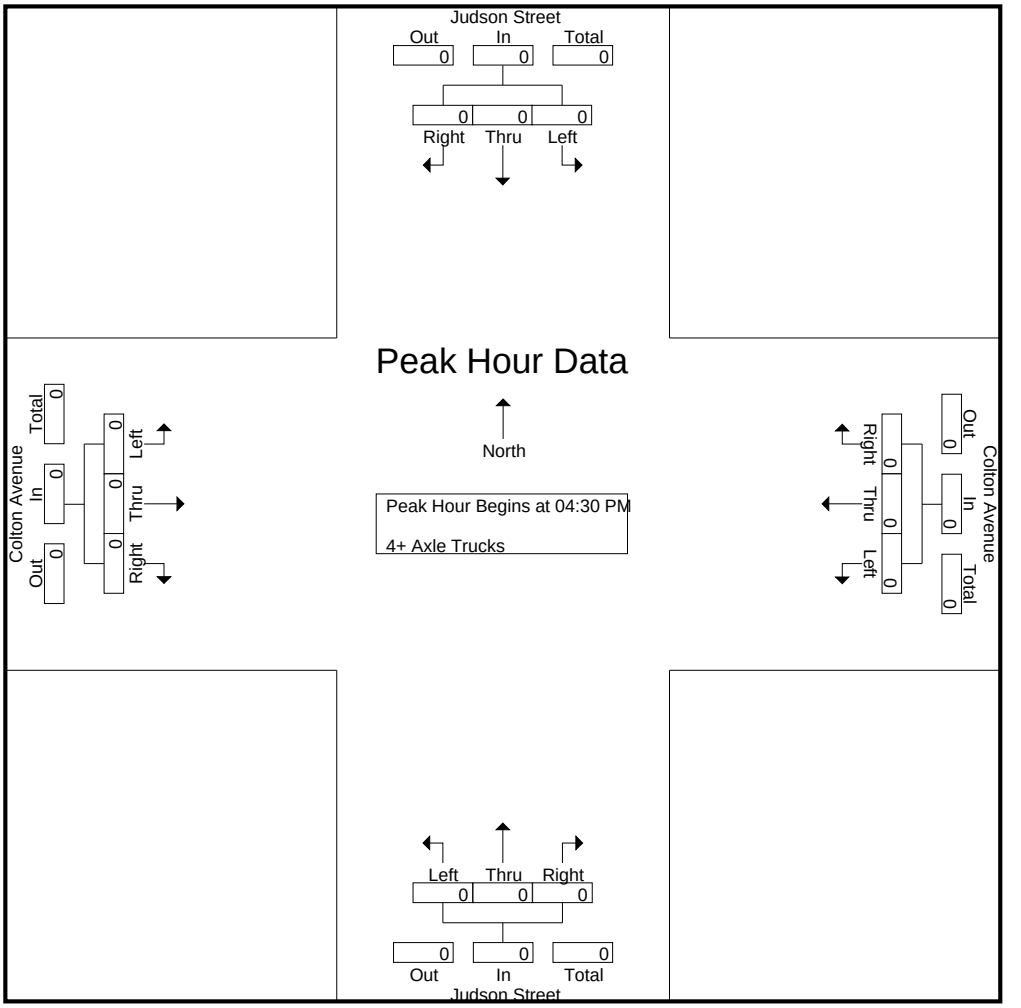

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Weather: Clear

File Name : 02_RED_Dear_Col AM
Site Code : 22523363
Start Date : 4/18/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	17	7	27	4	47	1	52	16	11	3	30	2	17	6	25	134
07:15 AM	5	28	13	46	6	63	5	74	13	16	2	31	4	28	4	36	187
07:30 AM	6	27	16	49	6	65	3	74	11	21	6	38	2	40	8	50	211
07:45 AM	10	48	9	67	12	66	5	83	14	33	13	60	3	69	8	80	290
Total	24	120	45	189	28	241	14	283	54	81	24	159	11	154	26	191	822
08:00 AM	8	20	11	39	13	73	2	88	10	30	19	59	9	79	5	93	279
08:15 AM	7	34	11	52	14	87	5	106	15	32	12	59	2	71	9	82	299
08:30 AM	5	29	5	39	11	68	7	86	7	29	2	38	4	38	7	49	212
08:45 AM	4	12	8	24	3	40	3	46	7	12	6	25	3	31	1	35	130
Total	24	95	35	154	41	268	17	326	39	103	39	181	18	219	22	259	920
Grand Total	48	215	80	343	69	509	31	609	93	184	63	340	29	373	48	450	1742
Apprch %	14	62.7	23.3		11.3	83.6	5.1		27.4	54.1	18.5		6.4	82.9	10.7		
Total %	2.8	12.3	4.6	19.7	4	29.2	1.8	35	5.3	10.6	3.6	19.5	1.7	21.4	2.8	25.8	
Passenger Vehicles	48	214	80	342	66	503	31	600	92	183	59	334	28	370	48	446	1722
% Passenger Vehicles	100	99.5	100	99.7	95.7	98.8	100	98.5	98.9	99.5	93.7	98.2	96.6	99.2	100	99.1	98.9
Large 2 Axle Vehicles	0	1	0	1	2	5	0	7	1	1	3	5	1	3	0	4	17
% Large 2 Axle Vehicles	0	0.5	0	0.3	2.9	1	0	1.1	1.1	0.5	4.8	1.5	3.4	0.8	0	0.9	1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	1.6	0.3	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
% 4+ Axle Trucks	0	0	0	0	1.4	0.2	0	0.3	0	0	0	0	0	0	0	0	0.1

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**10**	**48**	9	**67**	12	66	5	83	14	**33**	13	**60**	3	69	8	80	290
08:00 AM	8	20	**11**	39	13	73	2	88	10	30	**19**	59	**9**	**79**	5	**93**	279
08:15 AM	7	34	11	52	**14**	**87**	5	**106**	**15**	32	12	59	2	71	**9**	82	**299**
08:30 AM	5	29	5	39	11	68	**7**	86	7	29	2	38	4	38	7	49	212
Total Volume	30	131	36	197	50	294	19	363	46	124	46	216	18	257	29	304	1080
% App. Total	15.2	66.5	18.3		13.8	81	5.2		21.3	57.4	21.3		5.9	84.5	9.5		
PHF	.750	.682	.818	.735	.893	.845	.679	.856	.767	.939	.605	.900	.500	.813	.806	.817	.903

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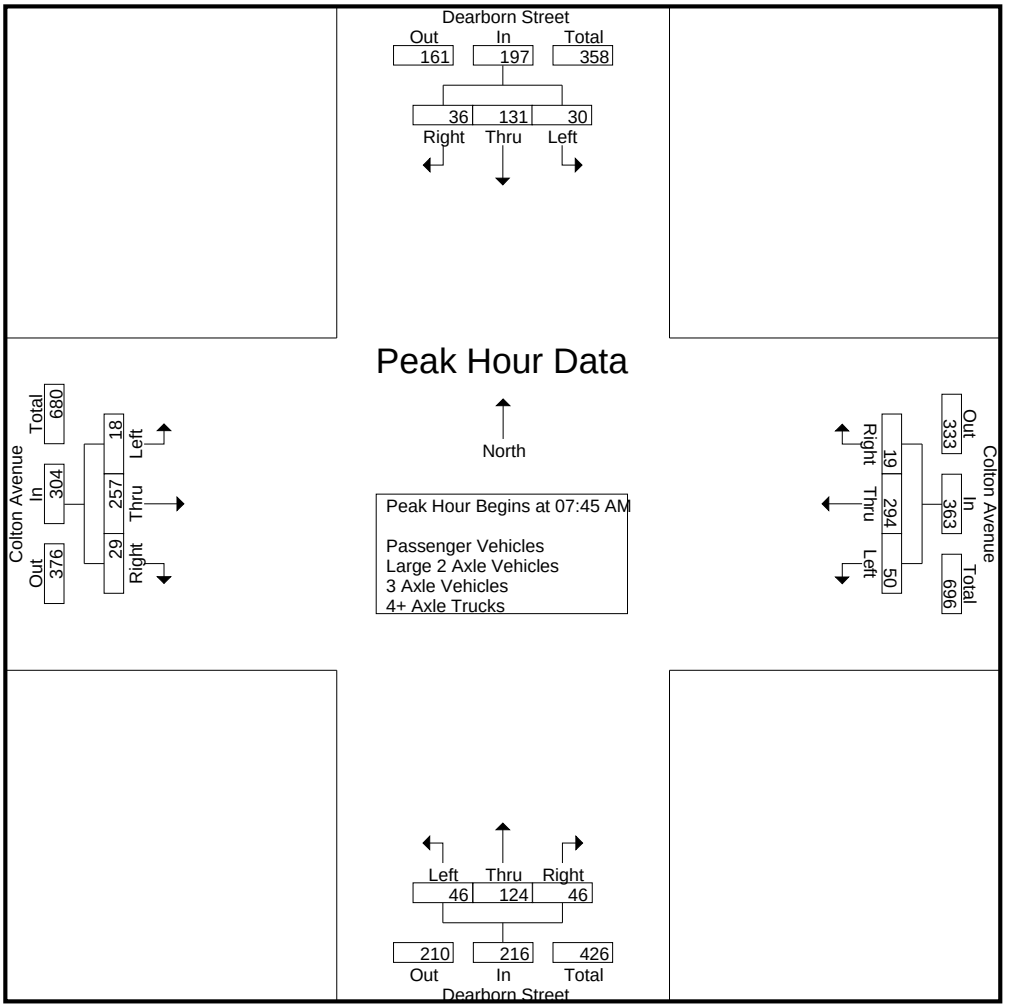
Weather: Clear

File Name : 02_RED_Dear_Col AM
Site Code : 22523363
Start Date : 4/18/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:30 AM				07:30 AM			
+0 mins.	6	27	**16**	49	12	66	5	83	11	21	6	38	2	40	8	50
+15 mins.	**10**	**48**	9	**67**	13	73	2	88	14	**33**	13	**60**	3	69	8	80
+30 mins.	8	20	11	39	**14**	**87**	5	**106**	10	30	**19**	59	**9**	**79**	5	**93**
+45 mins.	7	34	11	52	11	68	**7**	86	**15**	32	12	59	2	71	**9**	82
Total Volume	31	129	47	207	50	294	19	363	50	116	50	216	16	259	30	305
% App. Total	15	62.3	22.7		13.8	81	5.2		23.1	53.7	23.1		5.2	84.9	9.8	
PHF	.775	.672	.734	.772	.893	.845	.679	.856	.833	.879	.658	.900	.444	.820	.833	.820

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Weather: Clear

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Site Code : 22523363
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Groups Printed- Passenger Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	17	7	27	4	46	1	51	16	10	3	29	2	16	6	24	131
07:15 AM	5	28	13	46	6	62	5	73	13	16	2	31	4	28	4	36	186
07:30 AM	6	27	16	49	6	65	3	74	11	21	6	38	2	40	8	50	211
07:45 AM	10	48	9	67	12	65	5	82	14	33	13	60	2	68	8	78	287
Total	24	120	45	189	28	238	14	280	54	80	24	158	10	152	26	188	815
08:00 AM	8	20	11	39	13	73	2	88	10	30	16	56	9	79	5	93	276
08:15 AM	7	33	11	51	13	84	5	102	14	32	12	58	2	71	9	82	293
08:30 AM	5	29	5	39	10	68	7	85	7	29	2	38	4	37	7	48	210
08:45 AM	4	12	8	24	2	40	3	45	7	12	5	24	3	31	1	35	128
Total	24	94	35	153	38	265	17	320	38	103	35	176	18	218	22	258	907
Grand Total	48	214	80	342	66	503	31	600	92	183	59	334	28	370	48	446	1722
Apprch %	14	62.6	23.4		11	83.8	5.2		27.5	54.8	17.7		6.3	83	10.8		
Total %	2.8	12.4	4.6	19.9	3.8	29.2	1.8	34.8	5.3	10.6	3.4	19.4	1.6	21.5	2.8	25.9	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**10**	**48**	9	**67**	12	65	5	82	**14**	**33**	13	**60**	2	68	8	78	287
08:00 AM	8	20	**11**	39	**13**	73	2	88	10	30	**16**	56	**9**	**79**	5	**93**	276
08:15 AM	7	33	11	51	13	**84**	5	**102**	14	32	12	58	2	71	**9**	82	**293**
08:30 AM	5	29	5	39	10	68	**7**	85	7	29	2	38	4	37	7	48	210
Total Volume	30	130	36	196	48	290	19	357	45	124	43	212	17	255	29	301	1066
% App. Total	15.3	66.3	18.4		13.4	81.2	5.3		21.2	58.5	20.3		5.6	84.7	9.6		
PHF	.750	.677	.818	.731	.923	.863	.679	.875	.804	.939	.672	.883	.472	.807	.806	.809	.910

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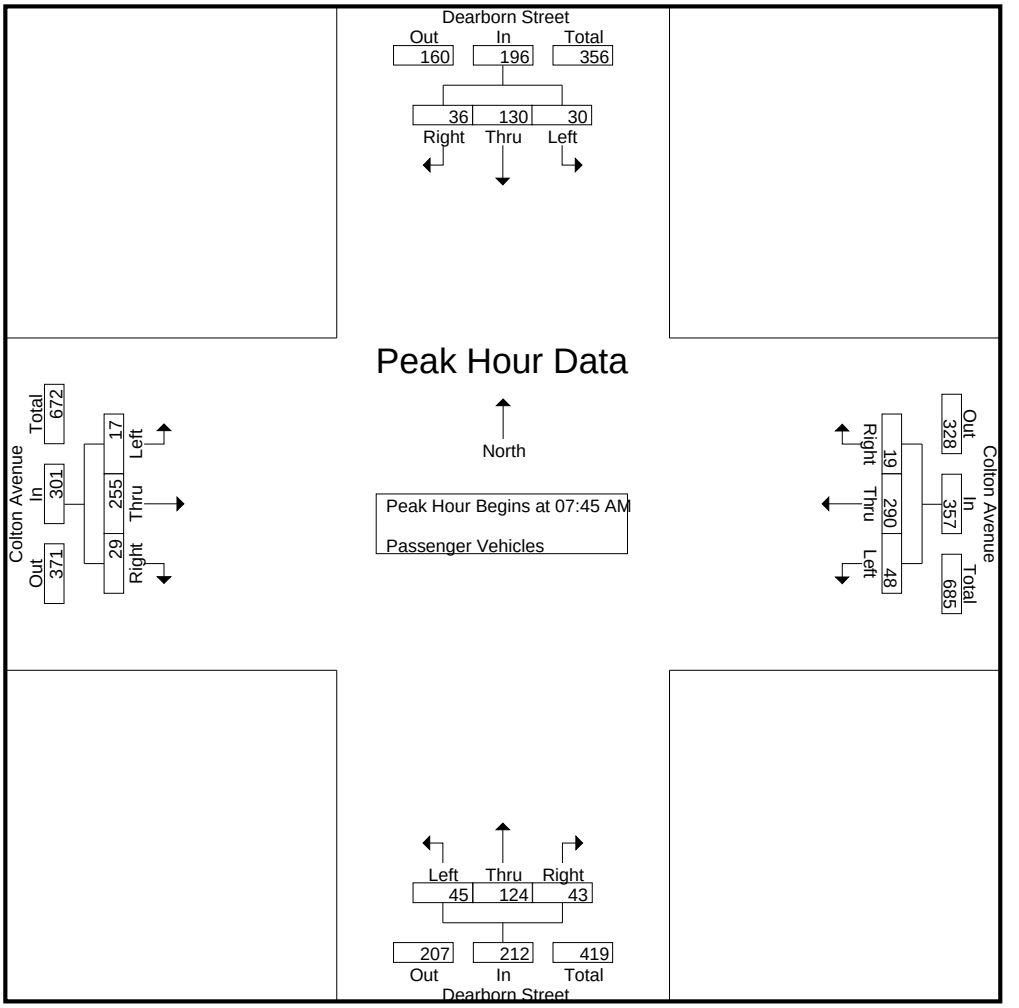

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	**10**	**48**	9	**67**	12	65	5	82	**14**	**33**	13	**60**	2	68	8	78
+15 mins.	8	20	**11**	39	**13**	73	2	88	10	30	**16**	56	**9**	**79**	5	**93**
+30 mins.	7	33	11	51	13	**84**	5	**102**	14	32	12	58	2	71	**9**	82
+45 mins.	5	29	5	39	10	68	**7**	85	7	29	2	38	4	37	7	48
Total Volume	30	130	36	196	48	290	19	357	45	124	43	212	17	255	29	301
% App. Total	15.3	66.3	18.4		13.4	81.2	5.3		21.2	58.5	20.3		5.6	84.7	9.6	
PHF	.750	.677	.818	.731	.923	.863	.679	.875	.804	.939	.672	.883	.472	.807	.806	.809

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Groups Printed- Large 2 Axle Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
Total	0	0	0	0	0	3	0	3	0	1	0	1	1	2	0	3	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
08:15 AM	0	1	0	1	1	2	0	3	1	0	0	1	0	0	0	0	5
08:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	2	2	0	4	1	0	3	4	0	1	0	1	10
Grand Total	0	1	0	1	2	5	0	7	1	1	3	5	1	3	0	4	17
Apprch %	0	100	0		28.6	71.4	0		20	20	60		25	75	0		
Total %	0	5.9	0	5.9	11.8	29.4	0	41.2	5.9	5.9	17.6	29.4	5.9	17.6	0	23.5	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	**1**	0	**2**	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	0	0	0	2
08:15 AM	0	**1**	0	**1**	**1**	**2**	0	**3**	**1**	0	0	1	0	0	0	0	**5**
08:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	1	0	1	2	3	0	5	1	0	2	3	1	2	0	3	12
% App. Total	0	100	0		40	60	0		33.3	0	66.7		33.3	66.7	0		
PHF	.000	.250	.000	.250	.500	.375	.000	.417	.250	.000	.250	.375	.250	.500	.000	.375	.600

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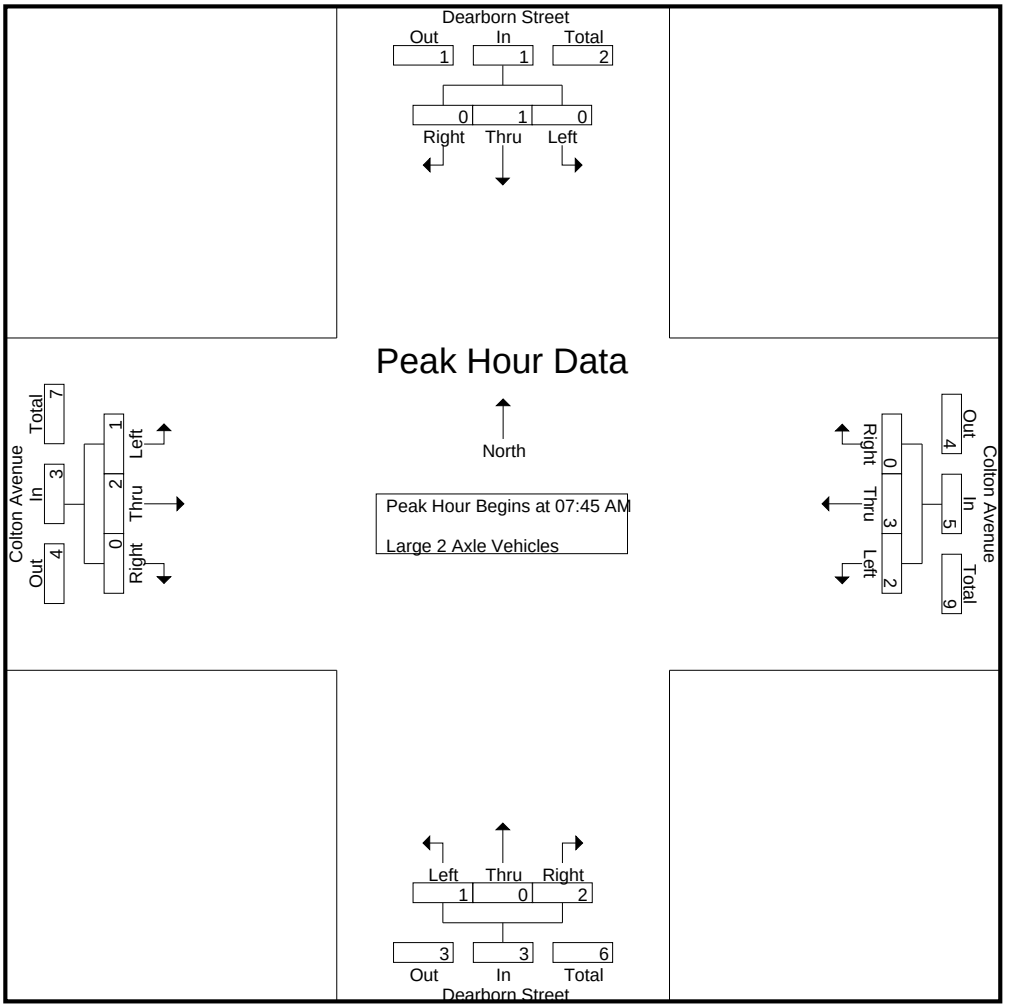

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	**1**	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	0	0	0
+30 mins.	0	**1**	0	**1**	**1**	**2**	0	**3**	**1**	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1
Total Volume	0	1	0	1	2	3	0	5	1	0	2	3	1	2	0	3
% App. Total	0	100	0		40	60	0		33.3	0	66.7		33.3	66.7	0	
PHF	.000	.250	.000	.250	.500	.375	.000	.417	.250	.000	.250	.375	.250	.500	.000	.375

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City of Redlands
N/S: Dearborn Street
E/W: Colton Avenue
Weather: Clear

File Name : 02_RED_Dear_Col AM
Site Code : 22523363
Start Date : 4/18/2023
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Groups Printed- 3 Axle Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	0	100		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**1**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250

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File Name : 02_RED_Dear_Col AM
Site Code : 22523363
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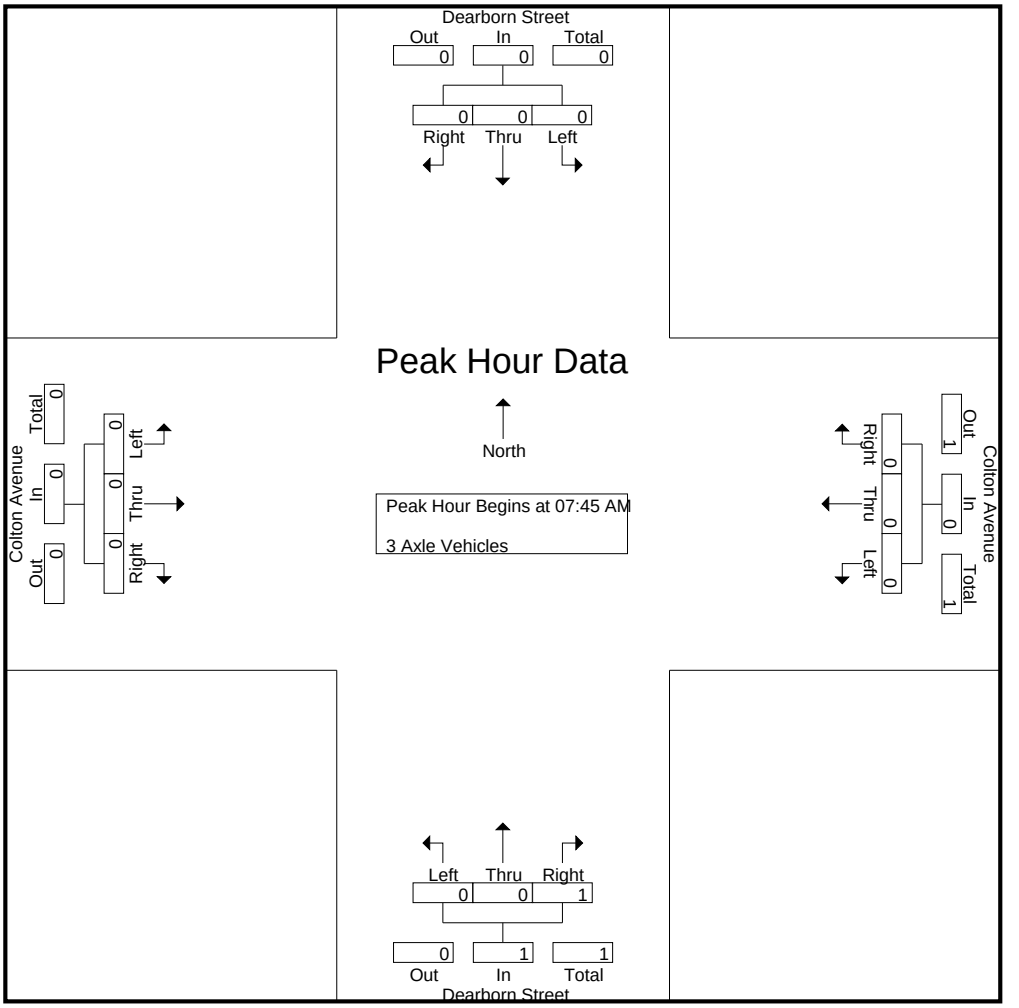

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		50	50	0		0	0	0		0	0	0		
Total %	0	0	0	0	50	50	0	100	0	0	0	0	0	0	0	0	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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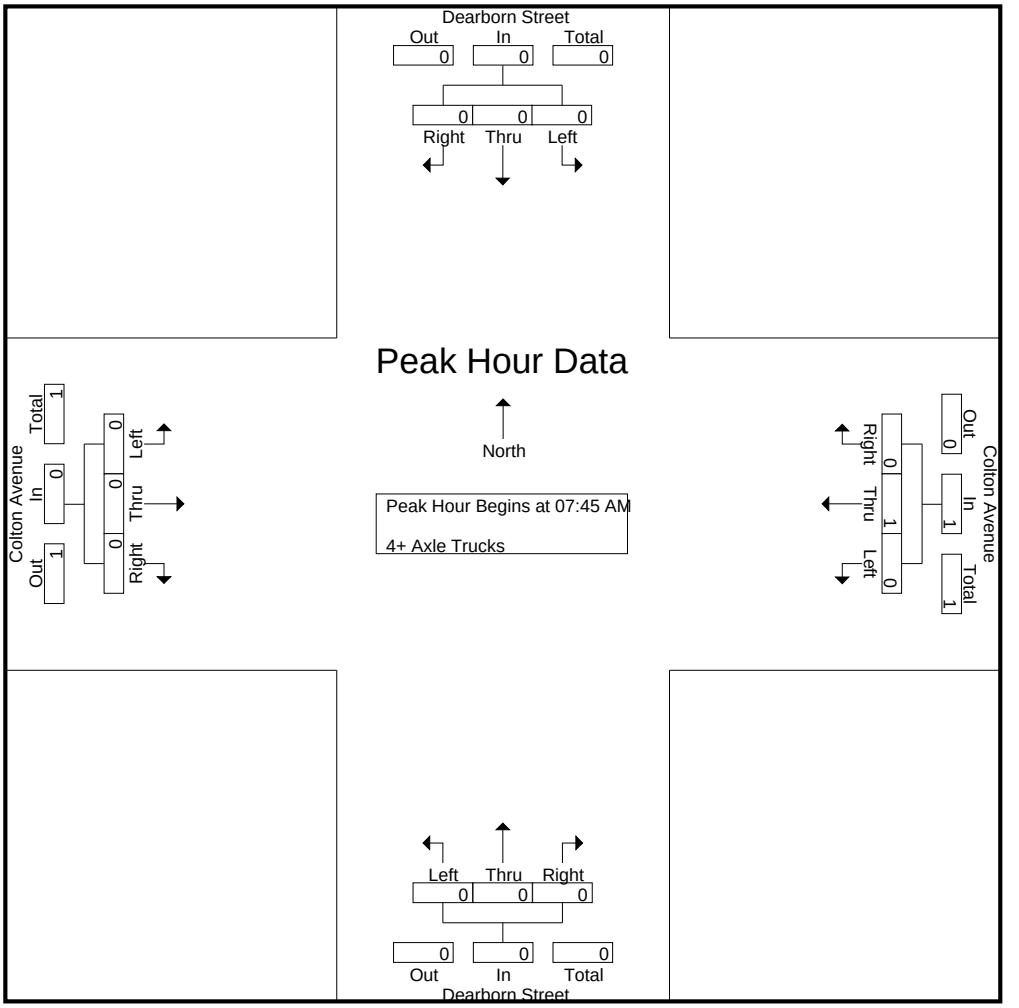

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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Site Code : 22523363
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	26	2	31	6	46	4	56	5	22	11	38	7	65	4	76	201
04:15 PM	7	16	8	31	3	48	3	54	6	16	6	28	12	54	11	77	190
04:30 PM	3	32	4	39	4	45	3	52	6	39	10	55	13	55	6	74	220
04:45 PM	6	26	6	38	3	60	1	64	8	29	6	43	10	49	7	66	211
Total	19	100	20	139	16	199	11	226	25	106	33	164	42	223	28	293	822
05:00 PM	3	29	5	37	6	45	2	53	5	30	3	38	13	67	10	90	218
05:15 PM	1	31	9	41	5	40	0	45	13	32	2	47	3	48	9	60	193
05:30 PM	2	23	4	29	7	35	2	44	8	32	10	50	7	49	5	61	184
05:45 PM	4	26	3	33	8	37	0	45	7	25	6	38	19	43	11	73	189
Total	10	109	21	140	26	157	4	187	33	119	21	173	42	207	35	284	784
Grand Total	29	209	41	279	42	356	15	413	58	225	54	337	84	430	63	577	1606
Apprch %	10.4	74.9	14.7		10.2	86.2	3.6		17.2	66.8	16		14.6	74.5	10.9		
Total %	1.8	13	2.6	17.4	2.6	22.2	0.9	25.7	3.6	14	3.4	21	5.2	26.8	3.9	35.9	
Passenger Vehicles	29	208	40	277	42	354	15	411	58	225	52	335	84	429	63	576	1599
% Passenger Vehicles	100	99.5	97.6	99.3	100	99.4	100	99.5	100	100	96.3	99.4	100	99.8	100	99.8	99.6
Large 2 Axle Vehicles	0	1	1	2	0	2	0	2	0	0	2	2	0	1	0	1	7
% Large 2 Axle Vehicles	0	0.5	2.4	0.7	0	0.6	0	0.5	0	0	3.7	0.6	0	0.2	0	0.2	0.4
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	**32**	4	39	4	45	**3**	52	6	**39**	**10**	**55**	**13**	55	6	74	**220**
04:45 PM	**6**	26	6	38	3	**60**	1	**64**	8	29	6	43	10	49	7	66	211
05:00 PM	3	29	5	37	**6**	45	2	53	5	30	3	38	13	**67**	**10**	**90**	218
05:15 PM	1	31	**9**	**41**	5	40	0	45	**13**	32	2	47	3	48	9	60	193
Total Volume	13	118	24	155	18	190	6	214	32	130	21	183	39	219	32	290	842
% App. Total	8.4	76.1	15.5		8.4	88.8	2.8		17.5	71	11.5		13.4	75.5	11		
PHF	.542	.922	.667	.945	.750	.792	.500	.836	.615	.833	.525	.832	.750	.817	.800	.806	.957

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Site Code : 22523363
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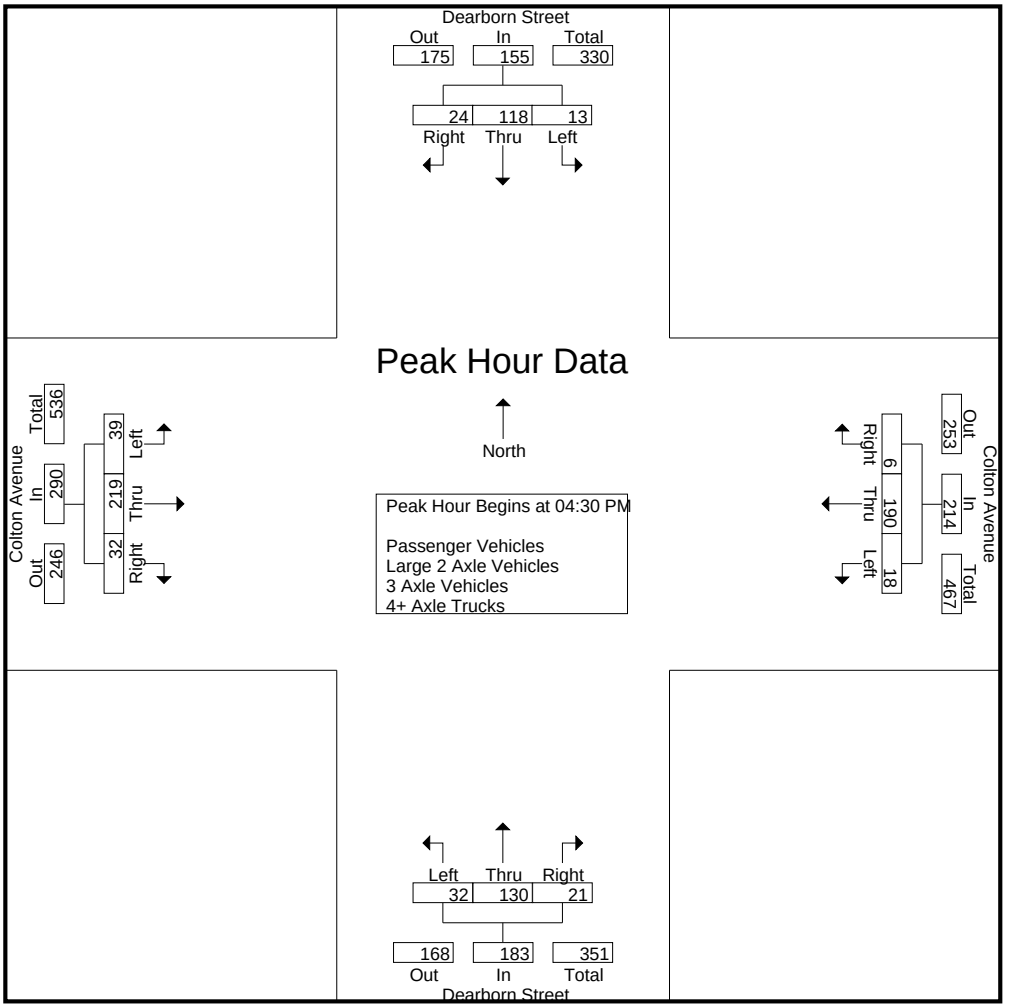

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	3	**32**	4	39	**6**	46	**4**	56	6	**39**	**10**	**55**	12	54	**11**	77
+15 mins.	**6**	26	6	38	3	48	3	54	8	29	6	43	**13**	55	6	74
+30 mins.	3	29	5	37	4	45	3	52	5	30	3	38	10	49	7	66
+45 mins.	1	31	**9**	**41**	3	**60**	1	**64**	**13**	32	2	47	13	**67**	10	**90**
Total Volume	13	118	24	155	16	199	11	226	32	130	21	183	48	225	34	307
% App. Total	8.4	76.1	15.5		7.1	88.1	4.9		17.5	71	11.5		15.6	73.3	11.1	
PHF	.542	.922	.667	.945	.667	.829	.688	.883	.615	.833	.525	.832	.923	.840	.773	.853

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Groups Printed- Passenger Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	25	2	30	6	46	4	56	5	22	10	37	7	65	4	76	199
04:15 PM	7	16	8	31	3	48	3	54	6	16	6	28	12	54	11	77	190
04:30 PM	3	32	3	38	4	45	3	52	6	39	9	54	13	55	6	74	218
04:45 PM	6	26	6	38	3	59	1	63	8	29	6	43	10	49	7	66	210
Total	19	99	19	137	16	198	11	225	25	106	31	162	42	223	28	293	817
05:00 PM	3	29	5	37	6	44	2	52	5	30	3	38	13	66	10	89	216
05:15 PM	1	31	9	41	5	40	0	45	13	32	2	47	3	48	9	60	193
05:30 PM	2	23	4	29	7	35	2	44	8	32	10	50	7	49	5	61	184
05:45 PM	4	26	3	33	8	37	0	45	7	25	6	38	19	43	11	73	189
Total	10	109	21	140	26	156	4	186	33	119	21	173	42	206	35	283	782
Grand Total	29	208	40	277	42	354	15	411	58	225	52	335	84	429	63	576	1599
Apprch %	10.5	75.1	14.4		10.2	86.1	3.6		17.3	67.2	15.5		14.6	74.5	10.9		
Total %	1.8	13	2.5	17.3	2.6	22.1	0.9	25.7	3.6	14.1	3.3	21	5.3	26.8	3.9	36	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	**32**	3	38	4	45	**3**	52	6	**39**	**9**	**54**	**13**	55	6	74	**218**
04:45 PM	**6**	26	6	38	3	**59**	1	**63**	8	29	6	43	10	49	7	66	210
05:00 PM	3	29	5	37	**6**	44	2	52	5	30	3	38	13	**66**	**10**	**89**	216
05:15 PM	1	31	**9**	**41**	5	40	0	45	**13**	32	2	47	3	48	9	60	193
Total Volume	13	118	23	154	18	188	6	212	32	130	20	182	39	218	32	289	837
% App. Total	8.4	76.6	14.9		8.5	88.7	2.8		17.6	71.4	11		13.5	75.4	11.1		
PHF	.542	.922	.639	.939	.750	.797	.500	.841	.615	.833	.556	.843	.750	.826	.800	.812	.960

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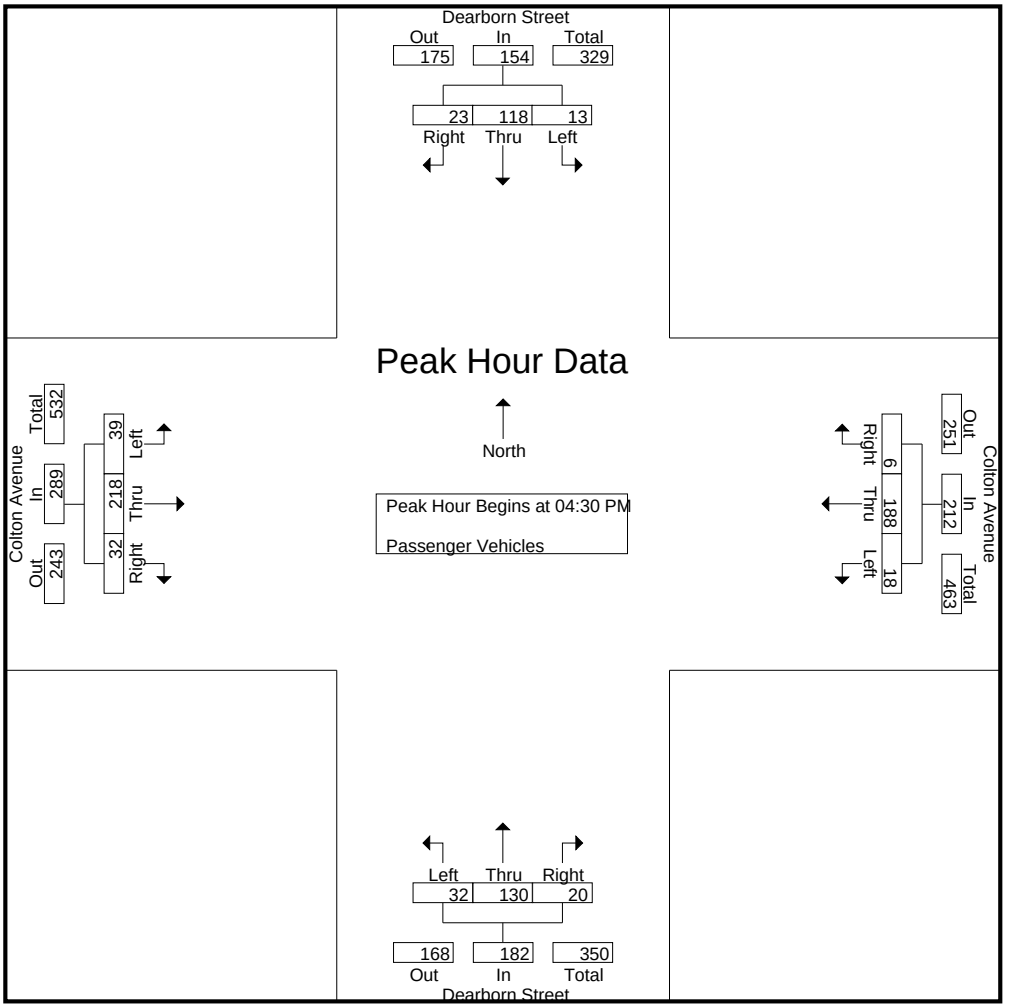

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	3	**32**	3	38	4	45	**3**	52	6	**39**	**9**	**54**	**13**	55	6	74
+15 mins.	**6**	26	6	38	3	**59**	1	**63**	8	29	6	43	10	49	7	66
+30 mins.	3	29	5	37	**6**	44	2	52	5	30	3	38	13	**66**	**10**	**89**
+45 mins.	1	31	**9**	**41**	5	40	0	45	**13**	32	2	47	3	48	9	60
Total Volume	13	118	23	154	18	188	6	212	32	130	20	182	39	218	32	289
% App. Total	8.4	76.6	14.9		8.5	88.7	2.8		17.6	71.4	11		13.5	75.4	11.1	
PHF	.542	.922	.639	.939	.750	.797	.500	.841	.615	.833	.556	.843	.750	.826	.800	.812

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Groups Printed- Large 2 Axle Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	1	0	1	0	0	2	2	0	0	0	0	5
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	1	1	2	0	2	0	2	0	0	2	2	0	1	0	1	7
Apprch %	0	50	50		0	100	0		0	0	100		0	100	0		
Total %	0	14.3	14.3	28.6	0	28.6	0	28.6	0	0	28.6	28.6	0	14.3	0	14.3	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**1**	**1**	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**2**
04:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	2	0	2	0	0	1	1	0	1	0	1	5
% App. Total	0	0	100		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250	.625

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City of Redlands
N/S: Dearborn Street
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Weather: Clear

File Name : 02_RED_Dear_Col PM
Site Code : 22523363
Start Date : 4/18/2023
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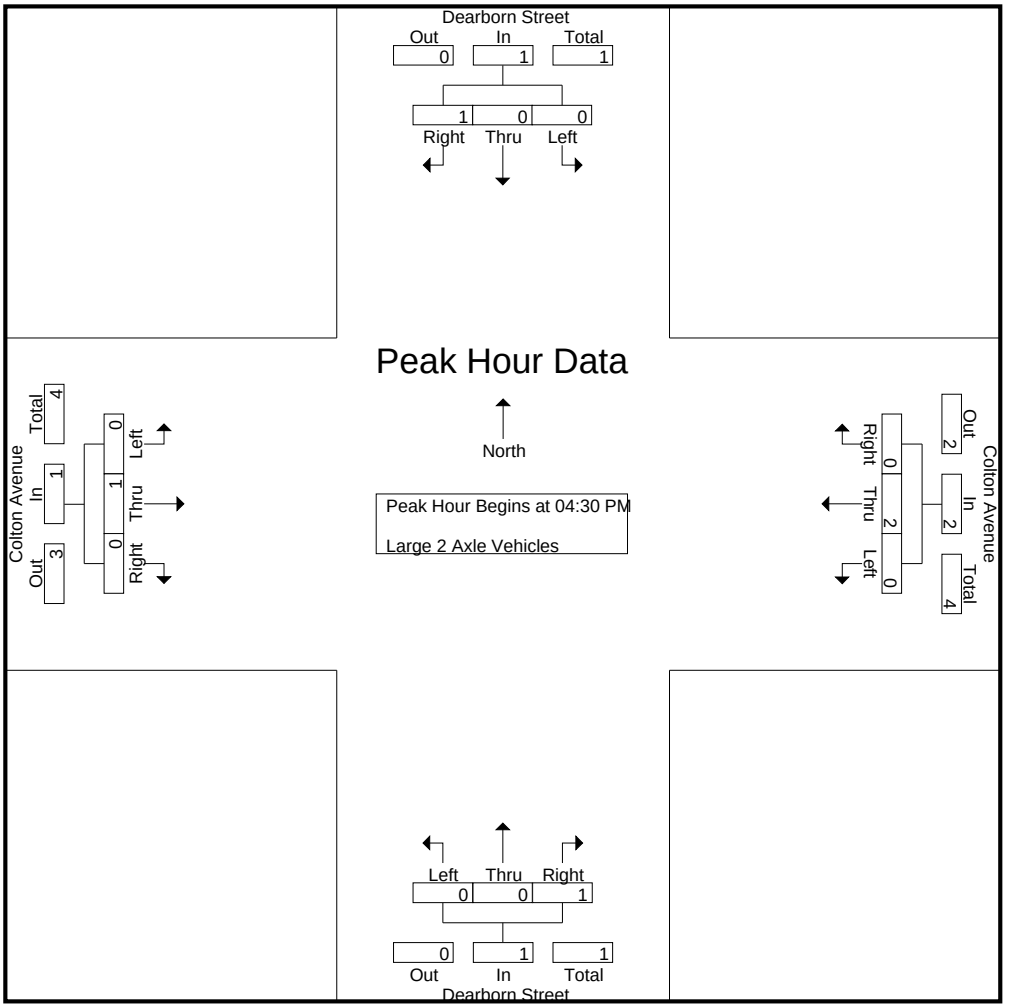

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	2	0	2	0	0	1	1	0	1	0	1
% App. Total	0	0	100		0	100	0		0	0	100		0	100	0	
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250

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Groups Printed- 3 Axle Vehicles

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Site Code : 22523363
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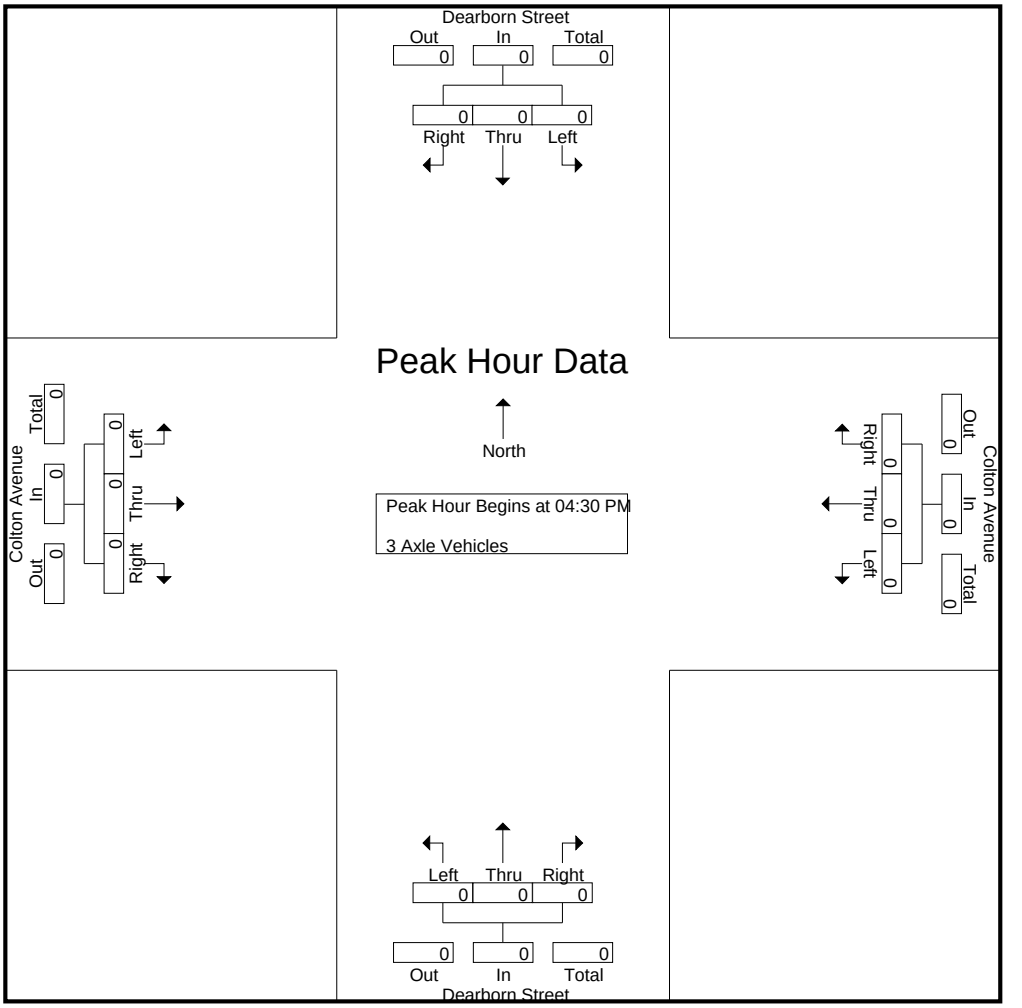

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Dearborn Street Southbound				Colton Avenue Westbound				Dearborn Street Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Weather: Clear

File Name : 02_RED_Dear_Col PM
Site Code : 22523363
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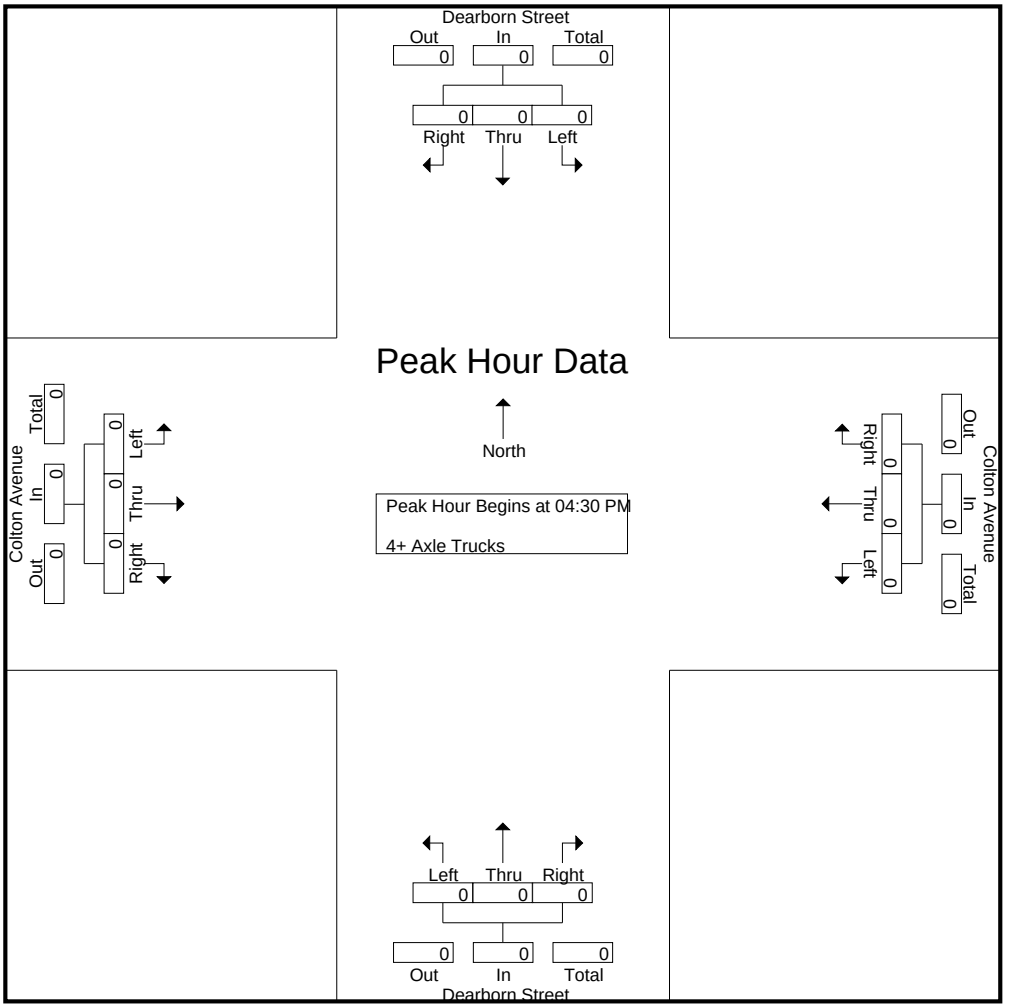

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Redlands
N/S: Wabash Avenue
E/W: Colton Avenue
Weather: Clear

File Name : 03_RED_Wab_Col AM
Site Code : 22523363
Start Date : 4/18/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	22	9	41	3	29	10	42	5	17	1	23	10	12	4	26	132
07:15 AM	19	27	20	66	12	35	13	60	5	23	5	33	7	30	4	41	200
07:30 AM	12	41	9	62	13	47	2	62	16	40	5	61	5	30	13	48	233
07:45 AM	16	58	10	84	15	42	7	64	22	44	12	78	9	62	25	96	322
Total	57	148	48	253	43	153	32	228	48	124	23	195	31	134	46	211	887
08:00 AM	40	27	15	82	7	56	14	77	13	56	17	86	14	77	10	101	346
08:15 AM	53	42	16	111	2	73	17	92	1	35	7	43	14	84	2	100	346
08:30 AM	19	29	15	63	0	47	15	62	4	32	3	39	9	33	4	46	210
08:45 AM	7	22	13	42	2	31	7	40	1	26	6	33	12	20	6	38	153
Total	119	120	59	298	11	207	53	271	19	149	33	201	49	214	22	285	1055
Grand Total	176	268	107	551	54	360	85	499	67	273	56	396	80	348	68	496	1942
Apprch %	31.9	48.6	19.4		10.8	72.1	17		16.9	68.9	14.1		16.1	70.2	13.7		
Total %	9.1	13.8	5.5	28.4	2.8	18.5	4.4	25.7	3.5	14.1	2.9	20.4	4.1	17.9	3.5	25.5	
Passenger Vehicles	175	264	105	544	51	353	85	489	66	269	51	386	80	340	68	488	1907
% Passenger Vehicles	99.4	98.5	98.1	98.7	94.4	98.1	100	98	98.5	98.5	91.1	97.5	100	97.7	100	98.4	98.2
Large 2 Axle Vehicles	0	4	2	6	2	5	0	7	1	1	2	4	0	6	0	6	23
% Large 2 Axle Vehicles	0	1.5	1.9	1.1	3.7	1.4	0	1.4	1.5	0.4	3.6	1	0	1.7	0	1.2	1.2
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.4	0	0.3	0	0.3	0	0.2	0.1
4+ Axle Trucks	1	0	0	1	1	2	0	3	0	2	3	5	0	1	0	1	10
% 4+ Axle Trucks	0.6	0	0	0.2	1.9	0.6	0	0.6	0	0.7	5.4	1.3	0	0.3	0	0.2	0.5

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	41	9	62	13	47	2	62	16	40	5	61	5	30	13	48	233
07:45 AM	16	**58**	10	84	**15**	42	7	64	**22**	44	12	78	9	62	**25**	96	322
08:00 AM	40	27	15	82	7	56	14	77	13	**56**	**17**	**86**	**14**	77	10	**101**	**346**
08:15 AM	**53**	42	**16**	**111**	2	**73**	**17**	**92**	1	35	7	43	14	**84**	2	100	346
Total Volume	121	168	50	339	37	218	40	295	52	175	41	268	42	253	50	345	1247
% App. Total	35.7	49.6	14.7		12.5	73.9	13.6		19.4	65.3	15.3		12.2	73.3	14.5		
PHF	.571	.724	.781	.764	.617	.747	.588	.802	.591	.781	.603	.779	.750	.753	.500	.854	.901

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File Name : 03_RED_Wab_Col AM
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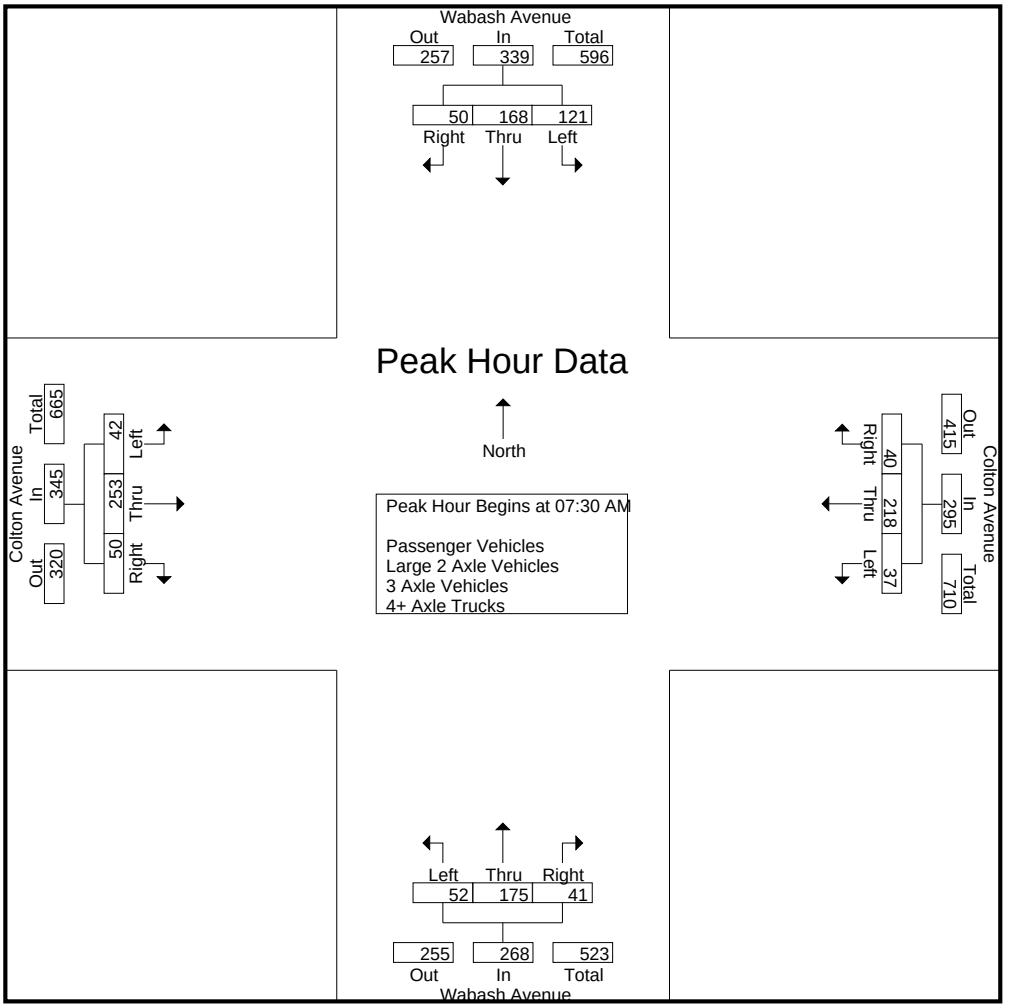

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	16	**58**	10	84	13	47	2	62	16	40	5	61	5	30	13	48
+15 mins.	40	27	15	82	**15**	42	7	64	**22**	44	12	78	9	62	**25**	96
+30 mins.	**53**	42	**16**	**111**	7	56	14	77	13	**56**	**17**	**86**	**14**	77	10	**101**
+45 mins.	19	29	15	63	2	**73**	**17**	**92**	1	35	7	43	14	**84**	2	100
Total Volume	128	156	56	340	37	218	40	295	52	175	41	268	42	253	50	345
% App. Total	37.6	45.9	16.5		12.5	73.9	13.6		19.4	65.3	15.3		12.2	73.3	14.5	
PHF	.604	.672	.875	.766	.617	.747	.588	.802	.591	.781	.603	.779	.750	.753	.500	.854

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File Name : 03_RED_Wab_Col AM
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Groups Printed- Passenger Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	21	8	39	2	29	10	41	5	17	1	23	10	11	4	25	128
07:15 AM	18	25	19	62	12	35	13	60	5	23	5	33	7	29	4	40	195
07:30 AM	12	40	9	61	11	47	2	60	16	38	4	58	5	30	13	48	227
07:45 AM	16	58	10	84	15	42	7	64	21	44	10	75	9	61	25	95	318
Total	56	144	46	246	40	153	32	225	47	122	20	189	31	131	46	208	868
08:00 AM	40	27	15	82	7	56	14	77	13	54	16	83	14	74	10	98	340
08:15 AM	53	42	16	111	2	69	17	88	1	35	7	43	14	84	2	100	342
08:30 AM	19	29	15	63	0	46	15	61	4	32	3	39	9	32	4	45	208
08:45 AM	7	22	13	42	2	29	7	38	1	26	5	32	12	19	6	37	149
Total	119	120	59	298	11	200	53	264	19	147	31	197	49	209	22	280	1039
Grand Total	175	264	105	544	51	353	85	489	66	269	51	386	80	340	68	488	1907
Apprch %	32.2	48.5	19.3		10.4	72.2	17.4		17.1	69.7	13.2		16.4	69.7	13.9		
Total %	9.2	13.8	5.5	28.5	2.7	18.5	4.5	25.6	3.5	14.1	2.7	20.2	4.2	17.8	3.6	25.6	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	40	9	61	11	47	2	60	16	38	4	58	5	30	13	48	227
07:45 AM	16	**58**	10	84	**15**	42	7	64	**21**	44	10	75	9	61	**25**	95	318
08:00 AM	40	27	15	82	7	56	14	77	13	**54**	**16**	**83**	**14**	74	10	98	340
08:15 AM	**53**	42	**16**	**111**	2	**69**	**17**	**88**	1	35	7	43	14	**84**	2	**100**	**342**
Total Volume	121	167	50	338	35	214	40	289	51	171	37	259	42	249	50	341	1227
% App. Total	35.8	49.4	14.8		12.1	74	13.8		19.7	66	14.3		12.3	73	14.7		
PHF	.571	.720	.781	.761	.583	.775	.588	.821	.607	.792	.578	.780	.750	.741	.500	.853	.897

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File Name : 03_RED_Wab_Col AM
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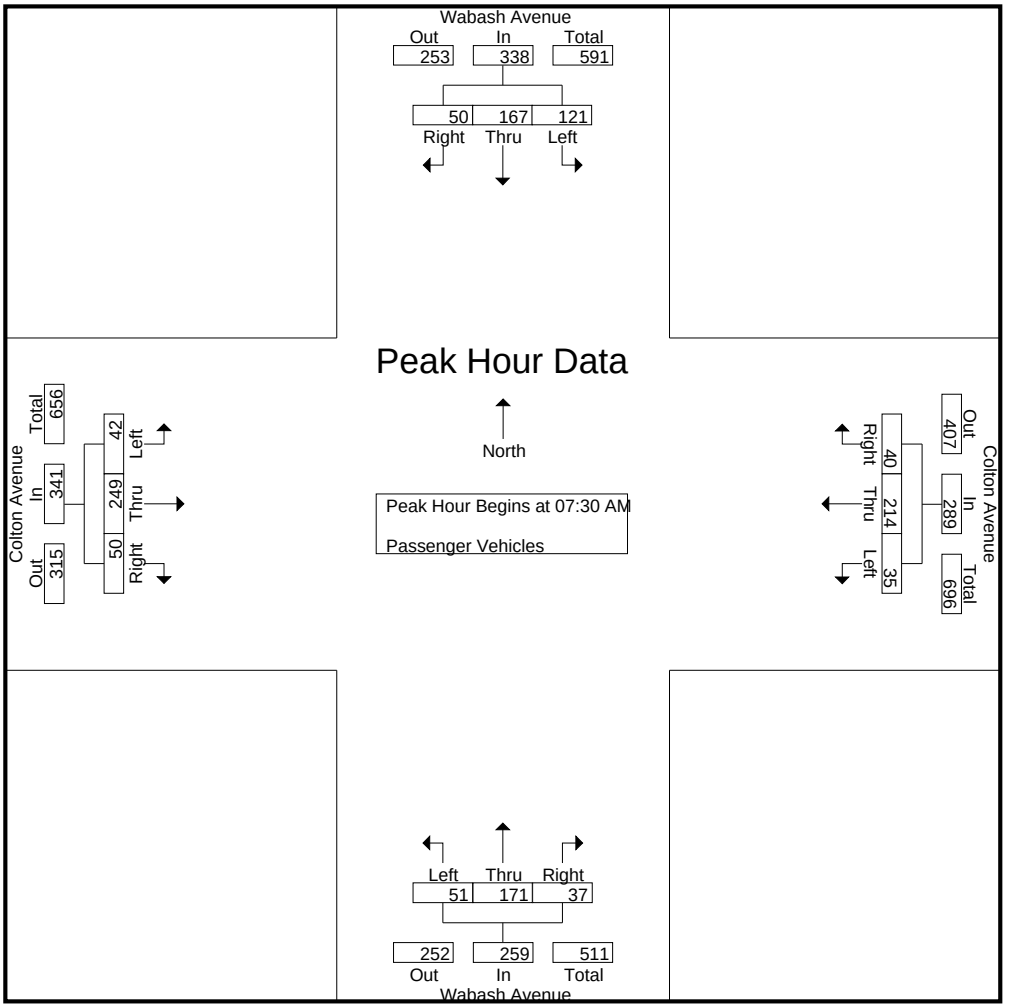

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	12	40	9	61	11	47	2	60	16	38	4	58	5	30	13	48
+15 mins.	16	**58**	10	84	**15**	42	7	64	**21**	44	10	75	9	61	**25**	95
+30 mins.	40	27	15	82	7	56	14	77	13	**54**	**16**	**83**	**14**	74	10	98
+45 mins.	**53**	42	**16**	**111**	2	**69**	**17**	**88**	1	35	7	43	14	**84**	2	**100**
Total Volume	121	167	50	338	35	214	40	289	51	171	37	259	42	249	50	341
% App. Total	35.8	49.4	14.8		12.1	74	13.8		19.7	66	14.3		12.3	73	14.7	
PHF	.571	.720	.781	.761	.583	.775	.588	.821	.607	.792	.578	.780	.750	.741	.500	.853

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Groups Printed- Large 2 Axle Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	1	0	0	1	0	0	0	0	0	1	0	1	4
07:15 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	1	0	1	3
Total	0	4	2	6	2	0	0	2	1	0	1	2	0	2	0	2	12
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1	3
Total	0	0	0	0	0	5	0	5	0	1	1	2	0	4	0	4	11
Grand Total	0	4	2	6	2	5	0	7	1	1	2	4	0	6	0	6	23
Apprch %	0	66.7	33.3		28.6	71.4	0		25	25	50		0	100	0		
Total %	0	17.4	8.7	26.1	8.7	21.7	0	30.4	4.3	4.3	8.7	17.4	0	26.1	0	26.1	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	**1**	0	0	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	0	1	0	1	**3**
08:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	**2**	0	**2**	3
08:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	3
Total Volume	0	1	0	1	1	3	0	4	1	1	1	3	0	3	0	3	11
% App. Total	0	100	0		25	75	0		33.3	33.3	33.3		0	100	0		
PHF	.000	.250	.000	.250	.250	.250	.000	.333	.250	.250	.250	.375	.000	.375	.000	.375	.917

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File Name : 03_RED_Wab_Col AM
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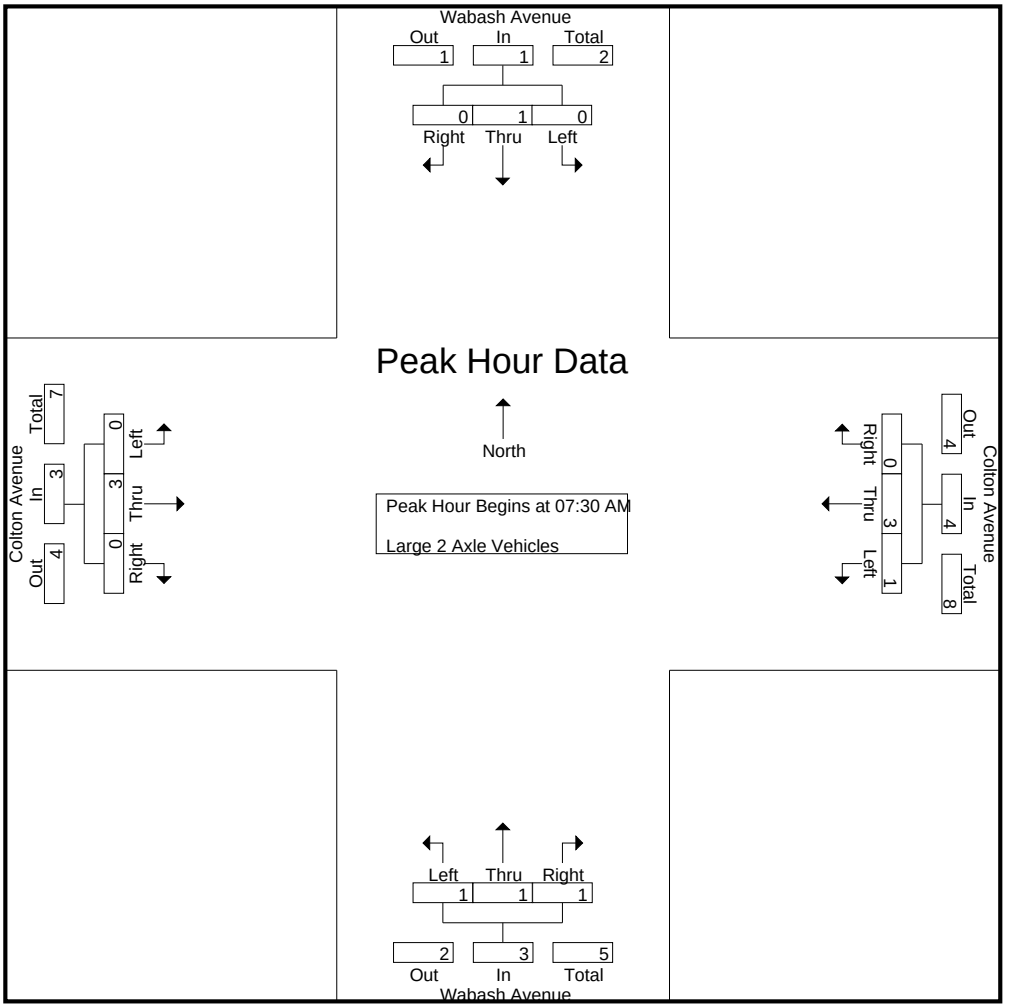

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	**1**	0	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	**2**	0	**2**
+45 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	1	3	0	4	1	1	1	3	0	3	0	3
% App. Total	0	100	0		25	75	0		33.3	33.3	33.3		0	100	0	
PHF	.000	.250	.000	.250	.250	.250	.000	.333	.250	.250	.250	.375	.000	.375	.000	.375

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Groups Printed- 3 Axle Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Apprch %	0	0	0		0	0	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	50	0	50	0	50	0	50	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	**2**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.250

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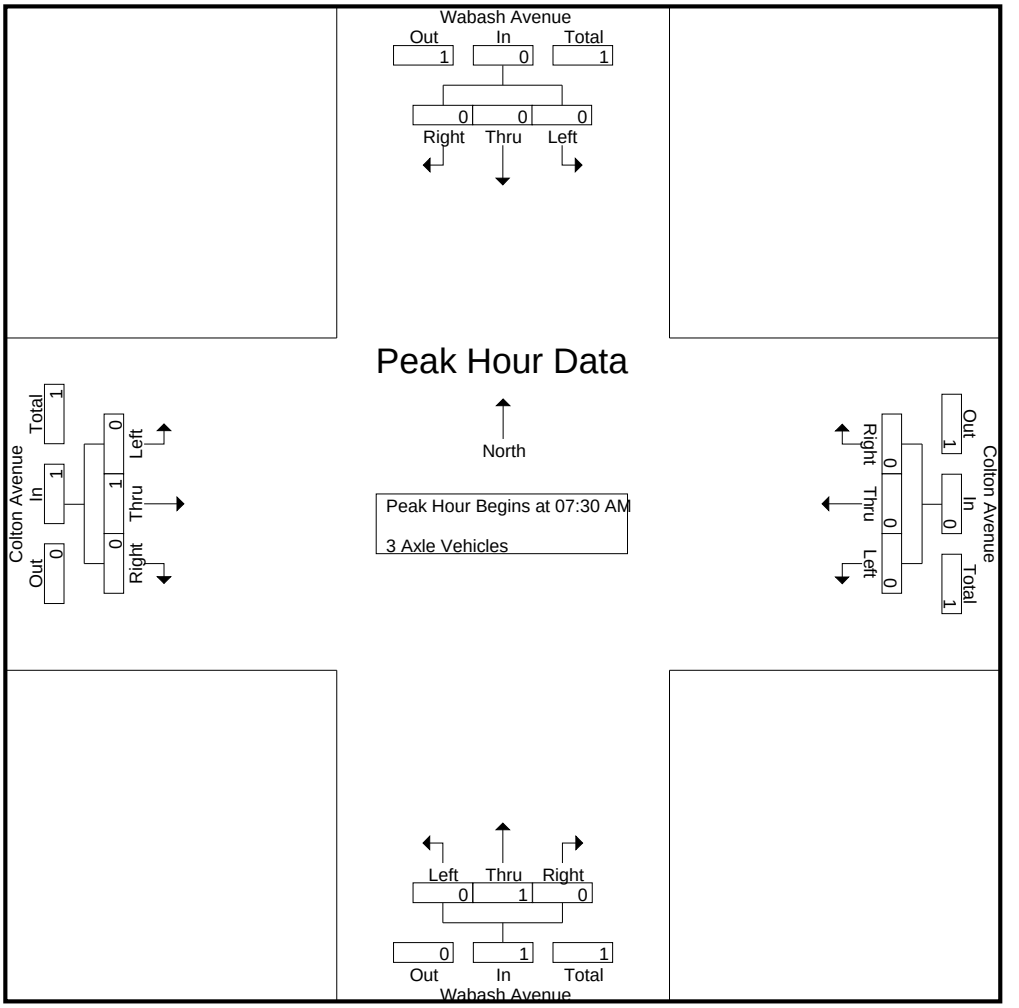

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250

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Groups Printed- 4+ Axle Trucks

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	1	0	0	1	0	2	1	3	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	1	0	0	1	1	0	0	1	0	2	2	4	0	1	0	1	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
Grand Total	1	0	0	1	1	2	0	3	0	2	3	5	0	1	0	1	10
Apprch %	100	0	0		33.3	66.7	0		0	40	60		0	100	0		
Total %	10	0	0	10	10	20	0	30	0	20	30	50	0	10	0	10	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**1**	0	0	**1**	0	**2**	**1**	**3**	0	0	0	0	**4**
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	1	0	2	0	2	3	5	0	0	0	0	7
% App. Total	0	0	0		50	50	0		0	40	60		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.250	.750	.417	.000	.000	.000	.000	.438

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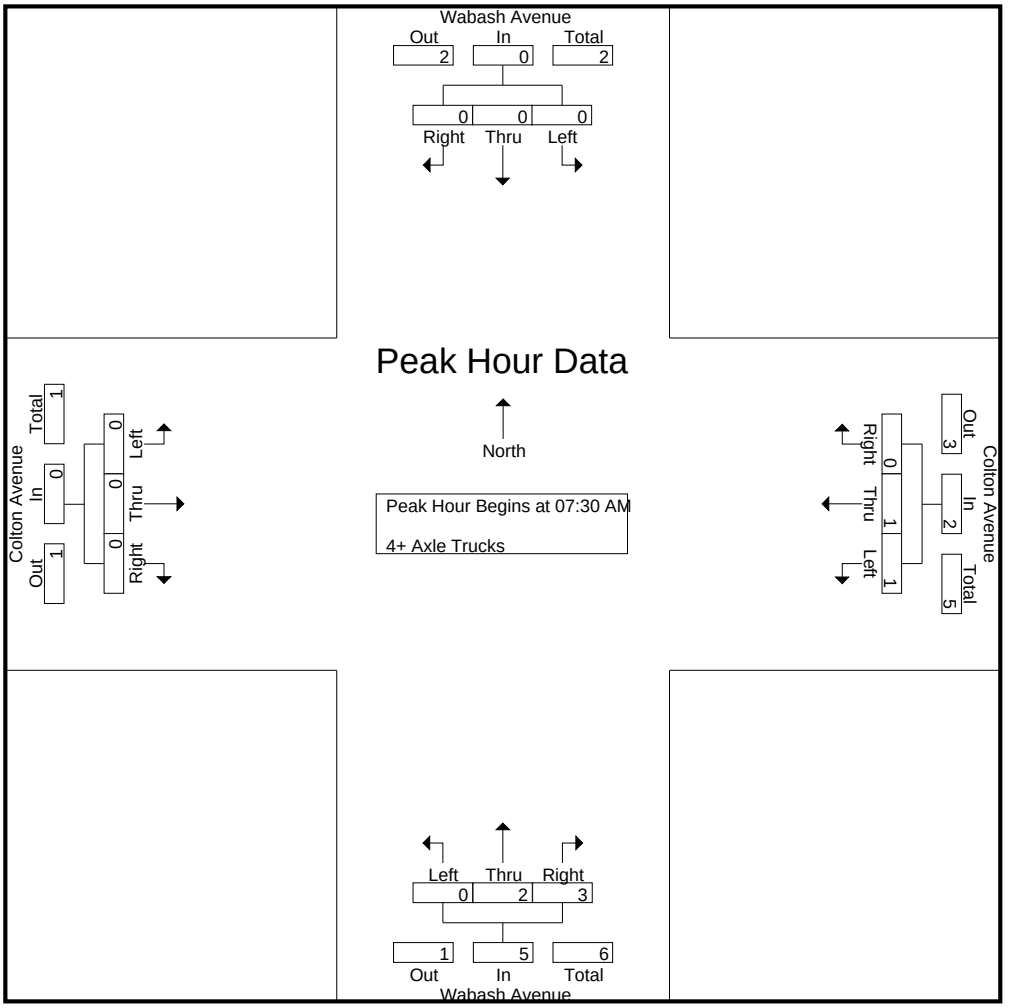

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	**1**	0	0	**1**	0	**2**	**1**	**3**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	2	3	5	0	0	0	0
% App. Total	0	0	0		50	50	0		0	40	60		0	0	0	
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.250	.750	.417	.000	.000	.000	.000

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File Name : 03_RED_Wab_Col PM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	53	17	75	3	35	9	47	3	40	2	45	18	43	5	66	233
04:15 PM	9	50	13	72	8	30	5	43	3	37	3	43	17	39	6	62	220
04:30 PM	10	58	18	86	3	31	9	43	1	52	4	57	13	35	10	58	244
04:45 PM	7	70	16	93	2	40	4	46	3	45	4	52	15	28	16	59	250
Total	31	231	64	326	16	136	27	179	10	174	13	197	63	145	37	245	947
05:00 PM	11	52	22	85	2	26	12	40	4	48	3	55	19	31	8	58	238
05:15 PM	14	67	13	94	2	24	13	39	6	37	5	48	15	31	7	53	234
05:30 PM	13	53	13	79	1	25	9	35	3	46	6	55	15	30	3	48	217
05:45 PM	8	54	16	78	5	31	7	43	5	38	2	45	18	26	5	49	215
Total	46	226	64	336	10	106	41	157	18	169	16	203	67	118	23	208	904
Grand Total	77	457	128	662	26	242	68	336	28	343	29	400	130	263	60	453	1851
Apprch %	11.6	69	19.3		7.7	72	20.2		7	85.8	7.2		28.7	58.1	13.2		
Total %	4.2	24.7	6.9	35.8	1.4	13.1	3.7	18.2	1.5	18.5	1.6	21.6	7	14.2	3.2	24.5	
Passenger Vehicles	74	455	128	657	25	240	66	331	28	342	28	398	130	260	60	450	1836
% Passenger Vehicles	96.1	99.6	100	99.2	96.2	99.2	97.1	98.5	100	99.7	96.6	99.5	100	98.9	100	99.3	99.2
Large 2 Axle Vehicles	3	2	0	5	0	2	1	3	0	1	1	2	0	3	0	3	13
% Large 2 Axle Vehicles	3.9	0.4	0	0.8	0	0.8	1.5	0.9	0	0.3	3.4	0.5	0	1.1	0	0.7	0.7
3 Axle Vehicles	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	3.8	0	0	0.3	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0	1.5	0.3	0	0	0	0	0	0	0	0	0.1

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	10	58	18	86	**3**	31	9	43	1	**52**	4	**57**	13	**35**	10	58	244
04:45 PM	7	**70**	16	93	2	**40**	4	**46**	3	45	4	52	15	28	**16**	**59**	**250**
05:00 PM	11	52	**22**	85	2	26	12	40	4	48	3	55	**19**	31	8	58	238
05:15 PM	**14**	67	13	**94**	2	24	**13**	39	**6**	37	**5**	48	15	31	7	53	234
Total Volume	42	247	69	358	9	121	38	168	14	182	16	212	62	125	41	228	966
% App. Total	11.7	69	19.3		5.4	72	22.6		6.6	85.8	7.5		27.2	54.8	18		
PHF	.750	.882	.784	.952	.750	.756	.731	.913	.583	.875	.800	.930	.816	.893	.641	.966	.966

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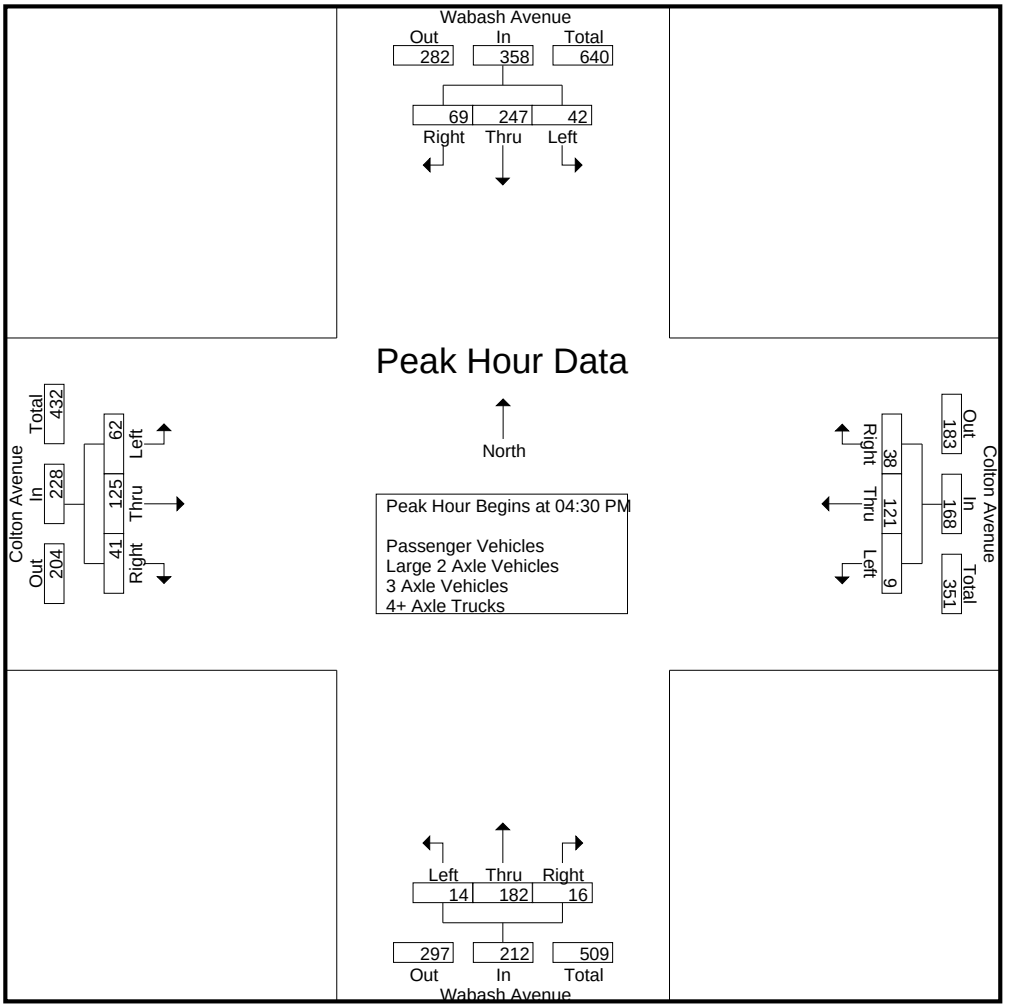

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	10	58	18	86	3	35	**9**	**47**	1	**52**	4	**57**	**18**	**43**	5	**66**
+15 mins.	7	**70**	16	93	**8**	30	5	43	3	45	4	52	17	39	6	62
+30 mins.	11	52	**22**	85	3	31	9	43	4	48	3	55	13	35	10	58
+45 mins.	**14**	67	13	**94**	2	**40**	4	46	**6**	37	**5**	48	15	28	**16**	59
Total Volume	42	247	69	358	16	136	27	179	14	182	16	212	63	145	37	245
% App. Total	11.7	69	19.3		8.9	76	15.1		6.6	85.8	7.5		25.7	59.2	15.1	
PHF	.750	.882	.784	.952	.500	.850	.750	.952	.583	.875	.800	.930	.875	.843	.578	.928

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City of Redlands
N/S: Wabash Avenue
E/W: Colton Avenue
Weather: Clear

File Name : 03_RED_Wab_Col PM
Site Code : 22523363
Start Date : 4/18/2023
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Groups Printed- Passenger Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	53	17	75	2	35	7	44	3	40	2	45	18	42	5	65	229
04:15 PM	8	49	13	70	8	30	5	43	3	37	2	42	17	39	6	62	217
04:30 PM	10	57	18	85	3	31	9	43	1	52	4	57	13	34	10	57	242
04:45 PM	6	70	16	92	2	38	4	44	3	45	4	52	15	28	16	59	247
Total	29	229	64	322	15	134	25	174	10	174	12	196	63	143	37	243	935
05:00 PM	10	52	22	84	2	26	12	40	4	48	3	55	19	30	8	57	236
05:15 PM	14	67	13	94	2	24	13	39	6	36	5	47	15	31	7	53	233
05:30 PM	13	53	13	79	1	25	9	35	3	46	6	55	15	30	3	48	217
05:45 PM	8	54	16	78	5	31	7	43	5	38	2	45	18	26	5	49	215
Total	45	226	64	335	10	106	41	157	18	168	16	202	67	117	23	207	901
Grand Total	74	455	128	657	25	240	66	331	28	342	28	398	130	260	60	450	1836
Apprch %	11.3	69.3	19.5		7.6	72.5	19.9		7	85.9	7		28.9	57.8	13.3		
Total %	4	24.8	7	35.8	1.4	13.1	3.6	18	1.5	18.6	1.5	21.7	7.1	14.2	3.3	24.5	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	10	57	18	85	**3**	31	9	43	1	**52**	4	**57**	13	**34**	10	57	242
04:45 PM	6	**70**	16	92	2	**38**	4	**44**	3	45	4	52	15	28	**16**	**59**	**247**
05:00 PM	10	52	**22**	84	2	26	12	40	4	48	3	55	**19**	30	8	57	236
05:15 PM	**14**	67	13	**94**	2	24	**13**	39	**6**	36	**5**	47	15	31	7	53	233
Total Volume	40	246	69	355	9	119	38	166	14	181	16	211	62	123	41	226	958
% App. Total	11.3	69.3	19.4		5.4	71.7	22.9		6.6	85.8	7.6		27.4	54.4	18.1		
PHF	.714	.879	.784	.944	.750	.783	.731	.943	.583	.870	.800	.925	.816	.904	.641	.958	.970

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File Name : 03_RED_Wab_Col PM
Site Code : 22523363
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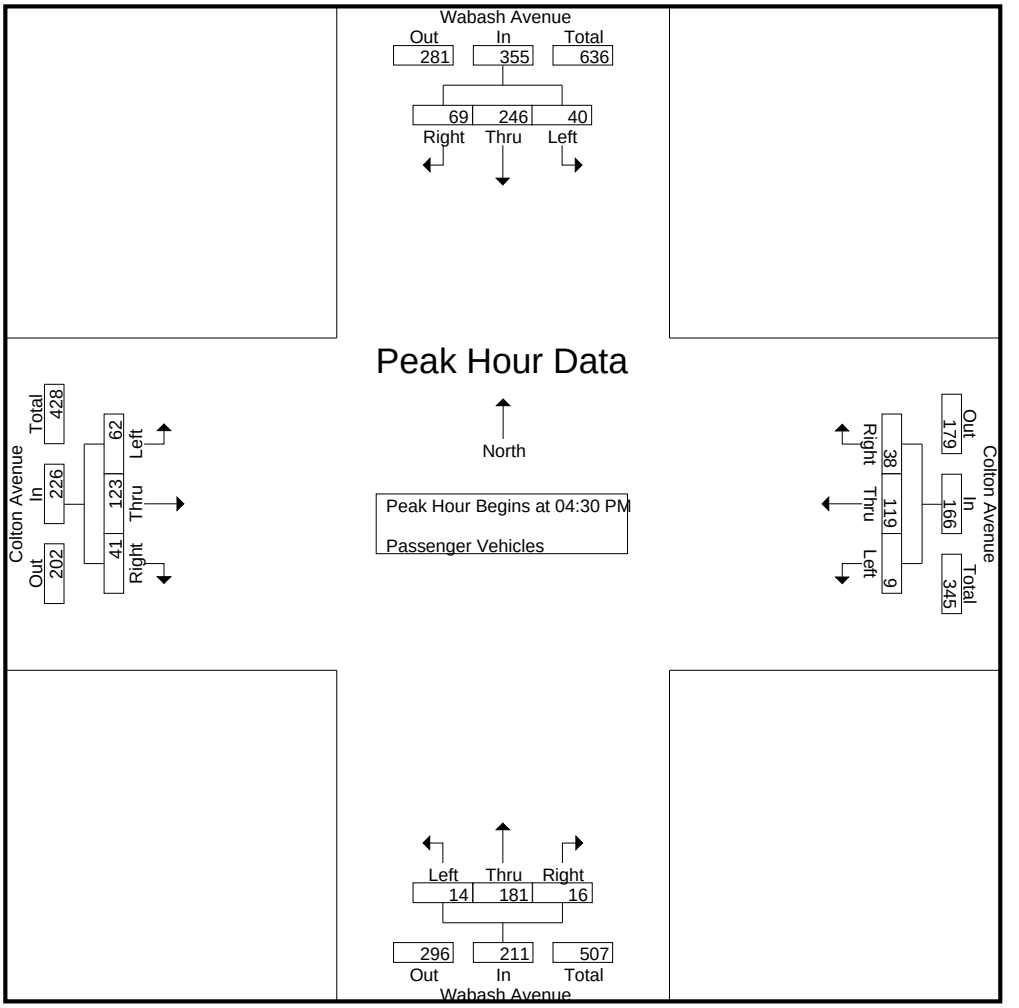

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	10	57	18	85	**3**	31	9	43	1	**52**	4	**57**	13	**34**	10	57
+15 mins.	6	**70**	16	92	2	**38**	4	**44**	3	45	4	52	15	28	**16**	**59**
+30 mins.	10	52	**22**	84	2	26	12	40	4	48	3	55	**19**	30	8	57
+45 mins.	**14**	67	13	**94**	2	24	**13**	39	**6**	36	**5**	47	15	31	7	53
Total Volume	40	246	69	355	9	119	38	166	14	181	16	211	62	123	41	226
% App. Total	11.3	69.3	19.4		5.4	71.7	22.9		6.6	85.8	7.6		27.4	54.4	18.1	
PHF	.714	.879	.784	.944	.750	.783	.731	.943	.583	.870	.800	.925	.816	.904	.641	.958

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File Name : 03_RED_Wab_Col PM
Site Code : 22523363
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Groups Printed- Large 2 Axle Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
04:15 PM	1	1	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
04:45 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Total	2	2	0	4	0	2	1	3	0	0	1	1	0	2	0	2	10
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Grand Total	3	2	0	5	0	2	1	3	0	1	1	2	0	3	0	3	13
Apprch %	60	40	0		0	66.7	33.3		0	50	50		0	100	0		
Total %	23.1	15.4	0	38.5	0	15.4	7.7	23.1	0	7.7	7.7	15.4	0	23.1	0	23.1	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	**1**	0	**1**	2
04:45 PM	**1**	0	0	1	0	**2**	0	**2**	0	0	0	0	0	0	0	0	**3**
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	2	1	0	3	0	2	0	2	0	1	0	1	0	2	0	2	8
% App. Total	66.7	33.3	0		0	100	0		0	100	0		0	100	0		
PHF	.500	.250	.000	.750	.000	.250	.000	.250	.000	.250	.000	.250	.000	.500	.000	.500	.667

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Weather: Clear

File Name : 03_RED_Wab_Col PM
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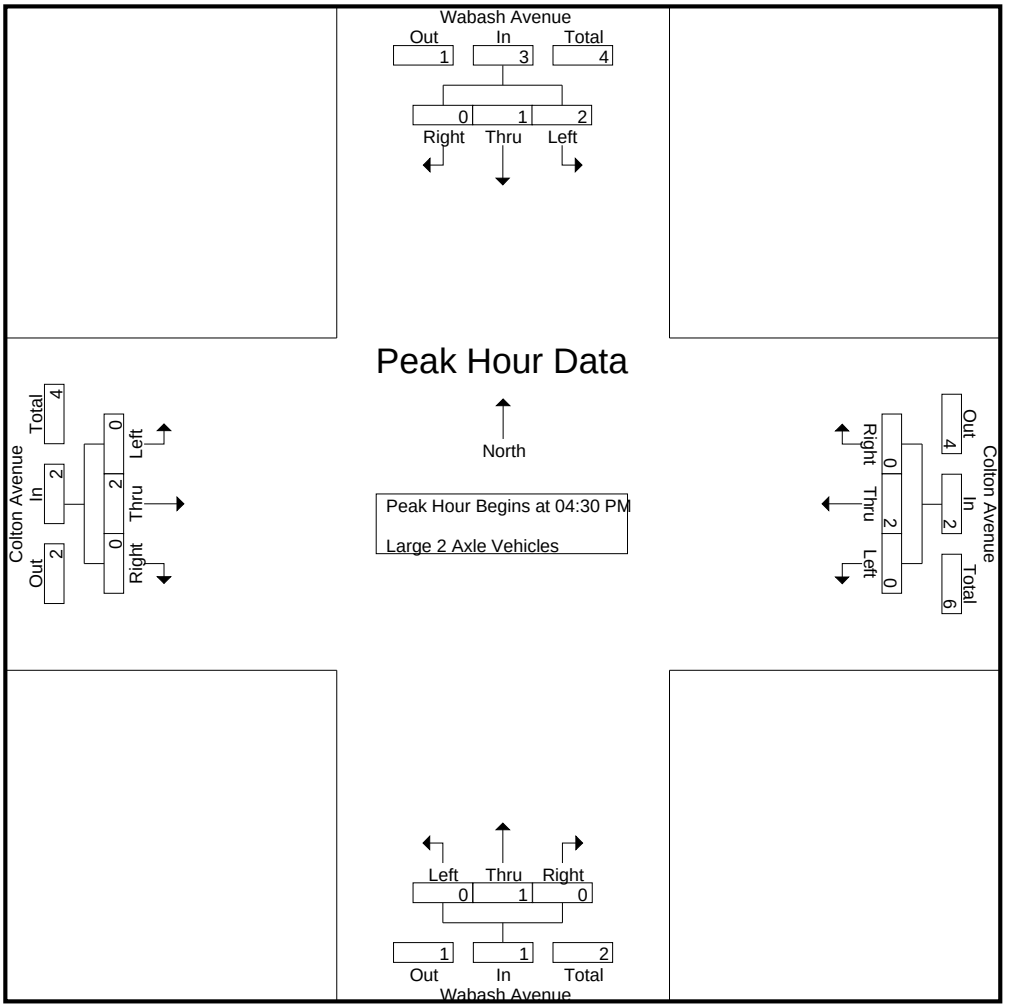

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+15 mins.	**1**	0	0	1	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	2	1	0	3	0	2	0	2	0	1	0	1	0	2	0	2
% App. Total	66.7	33.3	0		0	100	0		0	100	0		0	100	0	
PHF	.500	.250	.000	.750	.000	.250	.000	.250	.000	.250	.000	.250	.000	.500	.000	.500

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Weather: Clear

File Name : 03_RED_Wab_Col PM
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Groups Printed- 3 Axle Vehicles

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		100	0	0		0	0	0		0	0	0		
Total %	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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E/W: Colton Avenue
Weather: Clear

File Name : 03_RED_Wab_Col PM
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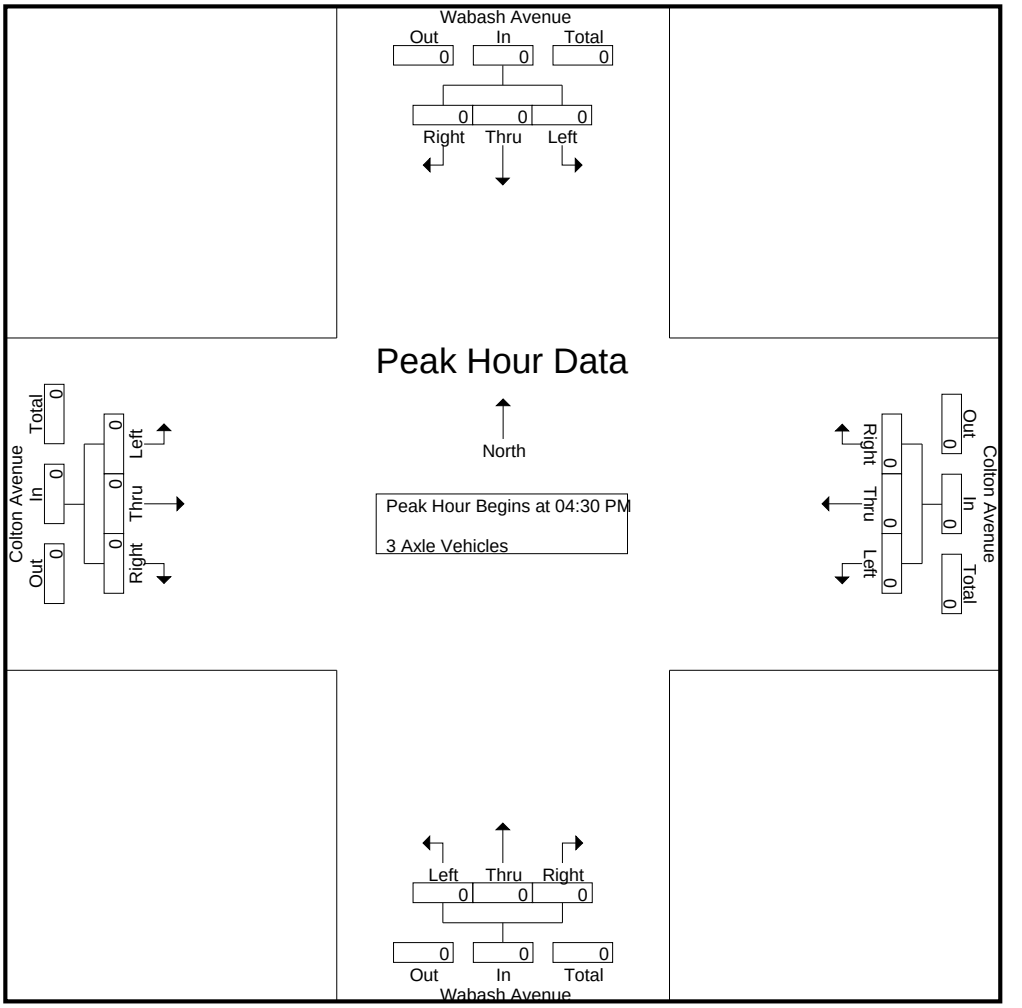

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Weather: Clear

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Groups Printed- 4+ Axle Trucks

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

	Wabash Avenue Southbound				Colton Avenue Westbound				Wabash Avenue Northbound				Colton Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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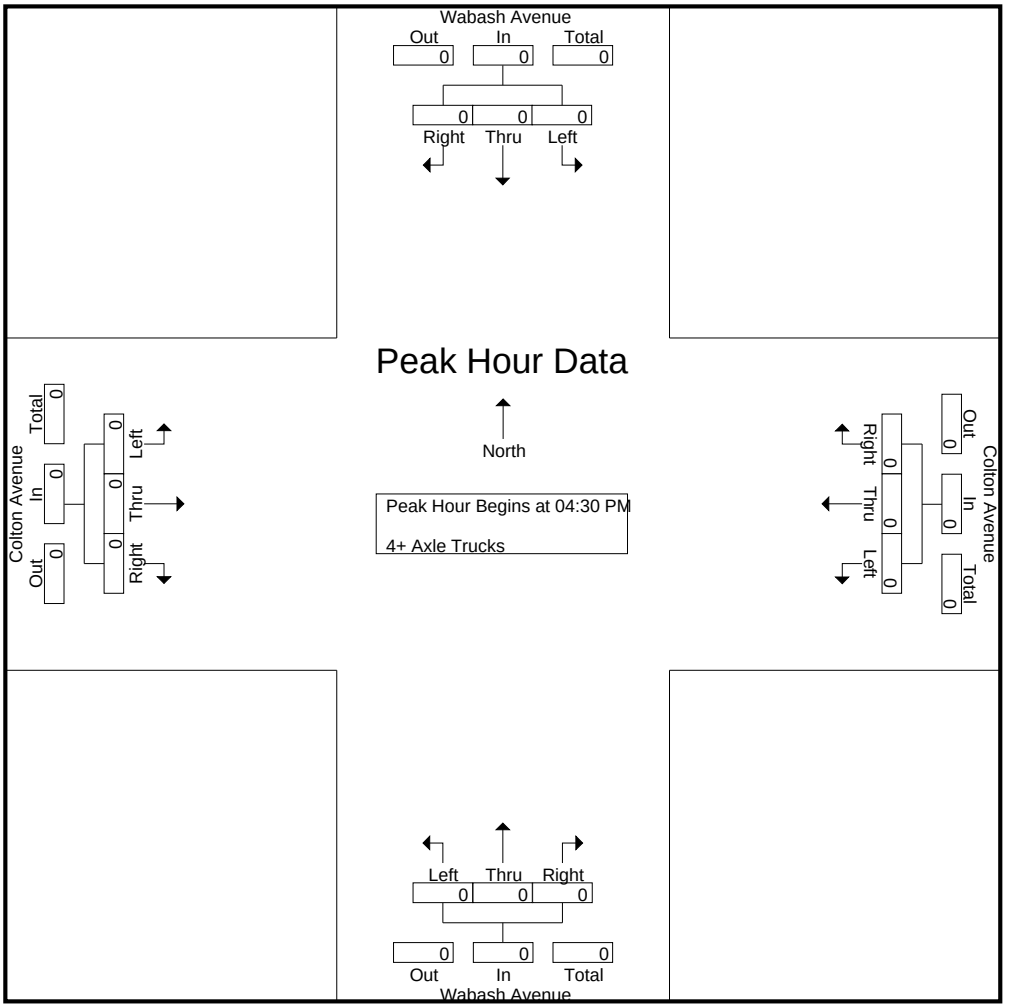

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

APPENDIX D

INTERSECTION LEVEL OF SERVICE WORKSHEETS

APPENDIX D

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING

AM PEAK HOUR

Intersection Level Of Service Report
Intersection 1: Judson St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.865

Intersection Setup

Name	Judson St			Judson St			Colton Ave			Colton Ave		
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	0	0	0	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	62.00	100.00	100.00	50.00
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]	35.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Judson St			Judson St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	35	189	64	37	208	29	11	234	25	60	319	43
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]	35	189	64	37	208	29	11	234	25	60	319	43
Peak Hour Factor	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417
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]	9	50	17	10	55	8	3	62	7	16	85	11
Total Analysis Volume [veh/h]	37	201	68	39	221	31	12	248	27	64	339	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	452	440	488	445	490	466	520
Degree of Utilization, x	0.68	0.59	0.06	0.58	0.06	0.86	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	4.95	3.71	0.20	3.64	0.17	8.97	0.29
95th-Percentile Queue Length [ft]	123.85	92.78	5.07	91.06	4.36	224.27	7.24
Approach Delay [s/veh]	26.13	20.76		20.50		39.39	
Approach LOS	D	C		C		E	
Intersection Delay [s/veh]	28.21						
Intersection LOS	D						

Intersection Level Of Service Report
Intersection 2: Dearborn St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

Intersection Setup

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
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	1	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	40.00	100.00	100.00	35.00	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]	35.00			40.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	46	124	48	30	131	36	18	258	29	51	297	19
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]	46	124	48	30	131	36	18	258	29	51	297	19
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
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]	13	34	13	8	36	10	5	71	8	14	82	5
Total Analysis Volume [veh/h]	51	137	53	33	145	40	20	286	32	56	329	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	428	455	501	426	454	499	501	557	517	579
Degree of Utilization, x	0.12	0.30	0.11	0.08	0.32	0.08	0.61	0.06	0.74	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.40	1.25	0.35	0.25	1.36	0.26	4.04	0.18	6.33	0.11
95th-Percentile Queue Length [ft]	10.07	31.28	8.82	6.26	34.00	6.51	100.95	4.56	158.22	2.82
Approach Delay [s/veh]	12.90			13.24			19.48		26.35	
Approach LOS	B			B			C		D	
Intersection Delay [s/veh]	19.35									
Intersection LOS	C									

Intersection Level Of Service Report
Intersection 3: Wabash Ave (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.299

Intersection Setup

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
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]	108.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	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]	40.00			40.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	52	180	47	121	168	50	42	255	50	39	221	40
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]	52	180	47	121	168	50	42	255	50	39	221	40
Peak Hour Factor	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010
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]	14	50	13	34	47	14	12	71	14	11	61	11
Total Analysis Volume [veh/h]	58	200	52	134	186	55	47	283	55	43	245	44
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	522	558	581	520	557	583	528	566	584	527	564	581
Degree of Utilization, x	0.11	0.23	0.22	0.26	0.22	0.21	0.09	0.30	0.29	0.08	0.26	0.25

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.37	0.86	0.82	1.02	0.82	0.77	0.29	1.25	1.19	0.27	1.01	0.98
95th-Percentile Queue Length [ft]	9.33	21.54	20.46	25.53	20.43	19.29	7.30	31.19	29.83	6.64	25.37	24.39
Approach Delay [s/veh]	10.75			11.18			11.39			10.98		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	11.09											
Intersection LOS	B											

PM PEAK HOUR

Intersection Level Of Service Report
Intersection 1: Judson St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	27.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.851

Intersection Setup

Name	Judson St			Judson St			Colton Ave			Colton Ave		
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	0	0	0	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	62.00	100.00	100.00	50.00
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]	35.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Judson St			Judson St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	35	189	64	37	208	29	11	234	25	60	319	43
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]	35	189	64	37	208	29	11	234	25	60	319	43
Peak Hour Factor	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489
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]	9	50	17	10	55	8	3	62	7	16	84	11
Total Analysis Volume [veh/h]	37	199	67	39	219	31	12	247	26	63	336	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	455	444	492	449	495	469	524
Degree of Utilization, x	0.67	0.58	0.06	0.58	0.05	0.85	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	4.78	3.61	0.20	3.56	0.17	8.61	0.28
95th-Percentile Queue Length [ft]	119.54	90.19	5.03	89.08	4.15	215.36	7.02
Approach Delay [s/veh]	25.33	20.31		20.14		37.48	
Approach LOS	D	C		C		E	
Intersection Delay [s/veh]	27.19						
Intersection LOS	D						

Intersection Level Of Service Report
Intersection 2: Dearborn St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
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	1	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	40.00	100.00	100.00	35.00	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]	35.00			40.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	46	124	48	30	131	36	18	258	29	51	297	19
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]	46	124	48	30	131	36	18	258	29	51	297	19
Peak Hour Factor	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568
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]	12	32	13	8	34	9	5	67	8	13	78	5
Total Analysis Volume [veh/h]	48	130	50	31	137	38	19	270	30	53	310	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	442	471	519	440	469	517	515	575	529	596
Degree of Utilization, x	0.11	0.28	0.10	0.07	0.29	0.07	0.56	0.05	0.69	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.36	1.12	0.32	0.23	1.20	0.24	3.42	0.16	5.23	0.10
95th-Percentile Queue Length [ft]	9.09	27.90	7.95	5.66	30.07	5.92	85.49	4.12	130.66	2.60
Approach Delay [s/veh]	12.32			12.60			17.41		22.29	
Approach LOS	B			B			C		C	
Intersection Delay [s/veh]	17.16									
Intersection LOS	C									

Intersection Level Of Service Report
Intersection 3: Wabash Ave (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.278

Intersection Setup

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
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]	108.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	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]	40.00			40.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	52	180	47	121	168	50	42	255	50	39	221	40
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]	52	180	47	121	168	50	42	255	50	39	221	40
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	13	47	12	31	43	13	11	66	13	10	57	10
Total Analysis Volume [veh/h]	54	186	49	125	174	52	43	264	52	40	229	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	524	561	585	523	561	589	530	569	589	528	566	584
Degree of Utilization, x	0.10	0.21	0.20	0.24	0.20	0.19	0.08	0.28	0.27	0.08	0.24	0.23

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.34	0.78	0.74	0.93	0.75	0.71	0.26	1.13	1.08	0.24	0.92	0.89
95th-Percentile Queue Length [ft]	8.58	19.60	18.60	23.13	18.68	17.63	6.59	28.22	26.98	6.12	23.10	22.21
Approach Delay [s/veh]	10.56			10.94			11.11			10.77		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	10.86											
Intersection LOS	B											

EXISTING PLUS PROJECT

AM PEAK HOUR

Intersection Level Of Service Report
Intersection 1: Judson St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	33.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.932

Intersection Setup

Name	Judson St			Judson St			Colton Ave			Colton Ave		
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	0	0	0	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	62.00	100.00	100.00	50.00
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]	35.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Judson St			Judson St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	35	189	64	37	208	29	11	234	25	60	319	43
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	9	0	0	24	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]	35	189	64	37	208	29	11	243	25	60	343	43
Peak Hour Factor	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417	0.9417
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]	9	50	17	10	55	8	3	65	7	16	91	11
Total Analysis Volume [veh/h]	37	201	68	39	221	31	12	258	27	64	364	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	439	428	474	435	479	459	511
Degree of Utilization, x	0.70	0.61	0.07	0.62	0.06	0.93	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	5.25	3.90	0.21	4.09	0.18	10.88	0.30
95th-Percentile Queue Length [ft]	131.37	97.62	5.24	102.16	4.47	271.96	7.38
Approach Delay [s/veh]	28.05	21.91		22.36		50.40	
Approach LOS	D	C		C		F	
Intersection Delay [s/veh]	33.25						
Intersection LOS	D						

Intersection Level Of Service Report
Intersection 2: Dearborn St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
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	1	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	40.00	100.00	100.00	35.00	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]	35.00			40.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	46	124	48	30	131	36	18	258	29	51	297	19
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	2	0	0	0	0	9	0	5	24	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]	46	124	50	30	131	36	18	267	29	56	321	19
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
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]	13	34	14	8	36	10	5	74	8	16	89	5
Total Analysis Volume [veh/h]	51	137	55	33	145	40	20	296	32	62	355	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	417	443	487	415	441	484	490	543	510	571
Degree of Utilization, x	0.12	0.31	0.11	0.08	0.33	0.08	0.65	0.06	0.82	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.41	1.30	0.38	0.26	1.41	0.27	4.52	0.19	7.96	0.11
95th-Percentile Queue Length [ft]	10.37	32.47	9.50	6.44	35.34	6.72	112.98	4.69	199.07	2.86
Approach Delay [s/veh]	13.26			13.66			21.30		32.87	
Approach LOS	B			B			C		D	
Intersection Delay [s/veh]	22.46									
Intersection LOS	C									

Intersection Level Of Service Report
Intersection 3: Wabash Ave (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
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]	108.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	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]	40.00			40.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	52	180	47	121	168	50	42	255	50	39	221	40
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	4	0	3	10	15	0	3	0	0	1	1
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]	52	184	47	124	178	65	42	258	50	39	222	41
Peak Hour Factor	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010
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]	14	51	13	34	49	18	12	72	14	11	62	11
Total Analysis Volume [veh/h]	58	204	52	138	198	72	47	286	55	43	246	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	521	556	579	519	555	586	527	564	582	525	562	580
Degree of Utilization, x	0.11	0.23	0.22	0.27	0.24	0.23	0.09	0.30	0.29	0.08	0.26	0.25

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.37	0.88	0.84	1.06	0.95	0.88	0.29	1.27	1.21	0.27	1.03	0.99
95th-Percentile Queue Length [ft]	9.35	22.04	20.96	26.59	23.66	22.09	7.32	31.73	30.37	6.66	25.80	24.78
Approach Delay [s/veh]	10.81			11.36			11.46			11.03		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	11.19											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Wabash Ave (NS) at Project North Dwy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Wabash Ave		Wabash Ave		Project North Dwy	
Approach	Northbound		Southbound		Eastbound	
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	1	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Wabash Ave		Wabash Ave		Project North Dwy	
Base Volume Input [veh/h]	0	262	339	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]	3	3	1	1	3	15
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	265	340	1	3	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	72	92	0	1	4
Total Analysis Volume [veh/h]	3	288	370	1	3	16
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]	8.01	0.00	0.00	0.00	12.49	9.46
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.19	0.00	0.00	0.00	1.95	1.95
d_A, Approach Delay [s/veh]	0.08		0.00		9.93	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Wabash Ave (NS) at Project South Dwy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Wabash Ave		Wabash Ave		Project South Dwy	
Approach	Northbound		Southbound		Eastbound	
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	1	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Wabash Ave		Wabash Ave		Project South Dwy	
Base Volume Input [veh/h]	0	262	339	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]	2	3	15	1	3	12
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	265	354	1	3	12
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	72	96	0	1	3
Total Analysis Volume [veh/h]	2	288	385	1	3	13
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]	8.05	0.00	0.00	0.00	12.61	9.49
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.13	0.00	0.00	0.00	1.69	1.69
d_A, Approach Delay [s/veh]	0.06		0.00		10.07	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Project Dwy (NS) at Colton Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Dwy		Colton Ave		Colton Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	120.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy		Colton Ave		Colton Ave	
Base Volume Input [veh/h]	0	0	0	347	323	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]	3	14	11	0	15	1
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	14	11	347	338	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	4	3	94	92	0
Total Analysis Volume [veh/h]	3	15	12	377	367	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.22	9.45	8.01	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.02	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.90	1.90	0.50	0.25	0.00	0.00
d_A, Approach Delay [s/veh]	10.07		0.25		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	B					

PM PEAK HOUR

Intersection Level Of Service Report
Intersection 1: Judson St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	32.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.914

Intersection Setup

Name	Judson St			Judson St			Colton Ave			Colton Ave		
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	0	0	0	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	62.00	100.00	100.00	50.00
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]	35.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Judson St			Judson St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	35	189	64	37	208	29	11	234	25	60	319	43
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	28	0	0	17	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]	35	189	64	37	208	29	11	262	25	60	336	43
Peak Hour Factor	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489	0.9489
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]	9	50	17	10	55	8	3	69	7	16	89	11
Total Analysis Volume [veh/h]	37	199	67	39	219	31	12	276	26	63	354	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	437	427	472	438	482	457	508
Degree of Utilization, x	0.69	0.60	0.07	0.66	0.05	0.91	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	5.19	3.87	0.21	4.62	0.17	10.28	0.29
95th-Percentile Queue Length [ft]	129.65	96.69	5.25	115.56	4.27	257.00	7.25
Approach Delay [s/veh]	27.90	21.85		24.14		47.33	
Approach LOS	D	C		C		E	
Intersection Delay [s/veh]	32.32						
Intersection LOS	D						

Intersection Level Of Service Report
Intersection 2: Dearborn St (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
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	1	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	40.00	100.00	100.00	35.00	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]	35.00			40.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dearborn St			Dearborn St			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	46	124	48	30	131	36	18	258	29	51	297	19
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	6	0	0	0	0	28	0	3	17	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]	46	124	54	30	131	36	18	286	29	54	314	19
Peak Hour Factor	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568
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]	12	32	14	8	34	9	5	75	8	14	82	5
Total Analysis Volume [veh/h]	48	130	56	31	137	38	19	299	30	56	328	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	428	456	501	426	454	499	505	562	518	581
Degree of Utilization, x	0.11	0.29	0.11	0.07	0.30	0.08	0.63	0.05	0.74	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.38	1.16	0.37	0.23	1.26	0.25	4.30	0.17	6.26	0.11
95th-Percentile Queue Length [ft]	9.40	29.11	9.37	5.86	31.46	6.16	107.58	4.22	156.54	2.67
Approach Delay [s/veh]	12.70			13.05			20.15		26.12	
Approach LOS	B			B			C		D	
Intersection Delay [s/veh]	19.48									
Intersection LOS	C									

Intersection Level Of Service Report
Intersection 3: Wabash Ave (NS) at Colton Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
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]	108.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	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]	40.00			40.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Wabash Ave			Wabash Ave			Colton Ave			Colton Ave		
Base Volume Input [veh/h]	52	180	47	121	168	50	42	255	50	39	221	40
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	11	0	2	7	10	0	2	0	0	3	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]	52	191	47	123	175	60	42	257	50	39	224	43
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	13	49	12	32	45	16	11	67	13	10	58	11
Total Analysis Volume [veh/h]	54	198	49	127	181	62	43	266	52	40	232	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	523	560	582	521	559	589	529	566	585	527	564	583
Degree of Utilization, x	0.10	0.22	0.21	0.24	0.22	0.21	0.08	0.28	0.27	0.08	0.25	0.24

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.34	0.84	0.80	0.95	0.82	0.77	0.26	1.15	1.10	0.25	0.96	0.92
95th-Percentile Queue Length [ft]	8.60	20.93	19.92	23.71	20.54	19.25	6.62	28.65	27.40	6.14	23.97	22.99
Approach Delay [s/veh]	10.68			11.06			11.18			10.86		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	10.96											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Wabash Ave (NS) at Project North Dwy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Wabash Ave		Wabash Ave		Project North Dwy	
Approach	Northbound		Southbound		Eastbound	
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	1	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Wabash Ave		Wabash Ave		Project North Dwy	
Base Volume Input [veh/h]	0	262	339	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]	9	2	3	3	2	10
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]	9	264	342	3	2	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	72	93	1	1	3
Total Analysis Volume [veh/h]	10	287	372	3	2	11
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	0.01
d_M, Delay for Movement [s/veh]	8.04	0.00	0.00	0.00	12.67	9.43
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.63	0.00	0.00	0.00	1.33	1.33
d_A, Approach Delay [s/veh]	0.27		0.00		9.93	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Wabash Ave (NS) at Project South Dwy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Wabash Ave		Wabash Ave		Project South Dwy	
Approach	Northbound		Southbound		Eastbound	
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	1	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Wabash Ave		Wabash Ave		Project South Dwy	
Base Volume Input [veh/h]	0	262	339	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]	6	9	10	3	2	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]	6	271	349	3	2	9
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	74	95	1	1	2
Total Analysis Volume [veh/h]	7	295	379	3	2	10
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	0.01
d_M, Delay for Movement [s/veh]	8.05	0.00	0.00	0.00	12.70	9.45
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.44	0.00	0.00	0.00	1.25	1.25
d_A, Approach Delay [s/veh]	0.19		0.00		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Project Dwy (NS) at Colton Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Dwy		Colton Ave		Colton Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	120.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy		Colton Ave		Colton Ave	
Base Volume Input [veh/h]	0	0	0	347	323	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]	2	10	34	0	10	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]	2	10	34	347	333	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	9	94	90	1
Total Analysis Volume [veh/h]	2	11	37	377	362	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.95	9.40	8.03	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.38	1.38	1.57	0.79	0.00	0.00
d_A, Approach Delay [s/veh]	10.10		0.72		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.54					
Intersection LOS	B					

GANDDINI GROUP INC.

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April 7, 2023

Ms. Pam Steele
MIG INC.
1650 Spruce Street, Suite 106
Riverside, California 92507

RE: Madera at Citrus Trail Vehicle Miles Traveled (VMT) Screening Assessment
Project No. 19620

Dear Ms. Steele:

Ganddini Group, Inc. is pleased to provide this Vehicle Miles Traveled (VMT) Screening Assessment for the proposed Madera at Citrus Trail project in the City of Redlands. The purpose of this screening assessment is to provide a preliminary review of the proposed project's potential for vehicle miles traveled (VMT) impacts with respect to California Environmental Quality Act (CEQA) requirements. We trust the findings of this analysis will aid you and the City of Redlands in assessing the project.

PROJECT DESCRIPTION

The 9.0-acre project site (APN 0168-291-02) is located at the northwest corner of Wabash Avenue and Colton Avenue in the City of Redlands, California. The project site is currently zoned residential and undeveloped. The proposed project involves a General Plan Amendment (GPA-0474) associated with the Zoning change (ZC-0474) from Low Density Residential (R1) to Medium Density Residential (R2) for the Tentative Tract Map (TTM20571) and Conditional Use Permit (CUP1171) of the development.

The proposed project includes the construction of a 103-dwelling unit single-family residential development. Vehicle access to the proposed project will be provided by three driveways one on Colton Avenue and two on Wabash Avenue. The proposed site plan is shown in Attachment A.

PROJECT TRIPS

Table 1 shows the proposed project trips based on trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) for Land Use Codes 210 (Single-family Detached Housing) and 215 (Single-family Attached Housing).

As shown in Table 1, the proposed project is forecast to generate a total of approximately 918 daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

VEHICLE MILES TRAVELED (VMT) SCREENING CRITERIA (CEQA)

The project VMT screening assessment has been prepared in accordance with the City of Redlands *CEQA Assessment VMT Analysis Guidelines*, June 2020 [City VMT Guidelines], which were developed based on guidance from the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"]. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. The OPR Technical

Advisory provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City VMT Guidelines identify screening criteria for certain types of projects that typically reduce VMT and may be presumed to result in a less than significant VMT impact. To qualify for VMT screening, the project need only satisfy one of the following screening criteria:

- Transit Priority Area (TPA) Screening
  - Projects located within one-half mile radius of major transit stop[1] or high-quality transit corridor[2]
- Low VMT Area Screening
  - Site location can be verified with the web-based or map-based VMT Screening Tool[3]
- Project Type Screening
  - Local serving land use
  - Projects generating less than 3,000 metric ton of carbon-dioxide equivalents per year (MTCO2e/yr)[4]

TRANSIT PRIORITY AREA (TPA) SCREENING

Projects located within a TPA, defined as within one-half mile of a major transit stop or high-quality transit corridor, may be presumed to result in a less than significant VMT impact absent substantial evidence to the contrary. This presumption may not apply, however, if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75.
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the jurisdiction with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

Based on a review of the San Bernardino County Transpiration Authority (SBCTA) VMT Screening Tool, the proposed project is not located within a TPA; therefore, the project does not satisfy the TPA screening criteria.

LOW VMT AREA SCREENING

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population (residential plus employment) that is similar to the existing land uses in the low VMT area.

As prescribed in the City VMT Guidelines, the San Bernardino County Transpiration Authority (SBCTA) VMT Screening Tool was used to assess low VMT area screening for the project. The SBCTA VMT Screening Tool

[1] A major transit stop is defined as an existing rail transit station, ferry terminal with bus or rail service, or the intersection of two or more major bus routes with less than 15-minute headways during the peak commute hours (Pub. Resources Code, § 21064.3.).

[2] Fixed route bus service with less than 15-minute headways during the peak commute hours (Pub. Resources Code, § 21155).

[3] The SBCTA VMT Screening Tool was developed from the San Bernardino Transportation Analysis Model (SBTAM) travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs).

[4] As identified in the City of Redlands VMT Guideline "Attachment 1 *Substantial Evidence for Trip-Based Screening Threshold*'

was developed using the county travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The proposed project is consistent with existing land uses in the project TAZ, and there does not appear to be anything unique about the project that would otherwise be mis-represented utilizing the data from the VMT Screening Tool. Since the proposed project consists of residential uses only, the proposed project would satisfy the low VMT screening criteria if it is located in a TAZ where the average total daily origin-destination VMT per service population is 15 percent (15%) below the County regional average total daily origin-destination VMT per service population.

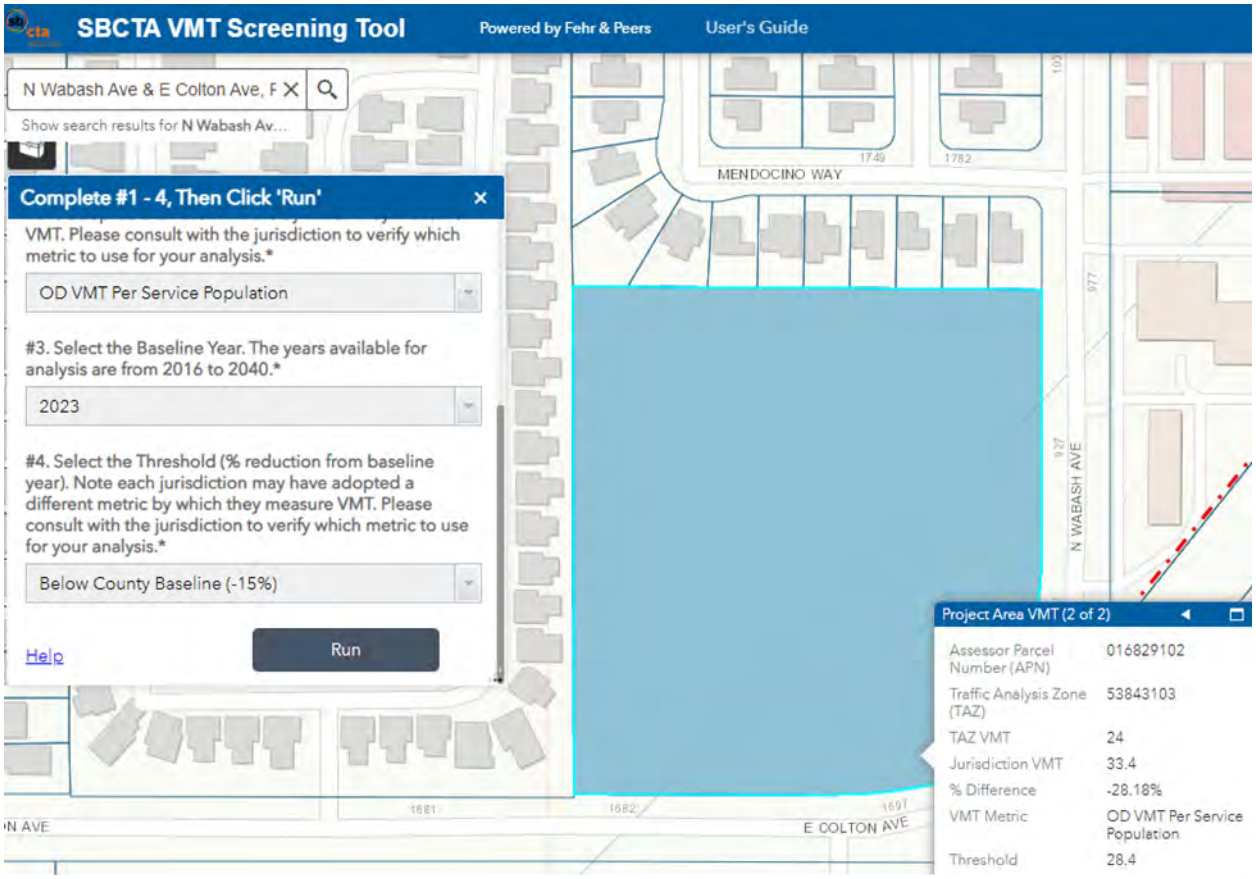

Exhibit A – SBCTA VMT Screening Tool Results

Exhibit A shows the SBCTA VMT Screening Tool results for the project site. which is located in TAZ 53843103. As shown in Exhibit A, the baseline year (2023) origin-destination average daily VMT per service population for the project TAZ is equal to 24.0, which is less than 15 percent (15%) below the County baseline (28.4 VMT per service population). Therefore, the proposed project satisfies the City of Redlands established screening criteria for projects located in a low VMT area, and the project can be presumed to result in a less than significant VMT impact.

PROJECT TYPE SCREENING

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects with stores less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel. In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools
- Local Parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g., non-destination hotels)
- Student housing projects on or adjacent to a college campus
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (public libraries, fires stations, local government)
- Local-serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects which generate less than 3,000 MTCO2e per year can be presumed to have a less than significant impact on VMT. Projects which generate less than 3,000 MTCO2e per year[5] include the following:
  - Single-family residential – 167 dwelling units or fewer
  - Multi-family residential (1-2 stories) – 232 dwelling units or fewer
  - Multi-family residential (3+ stories) – 299 dwelling units or fewer
  - Office – 59,100 square feet or less
  - Local-serving retail center – 112,400 square feet or less (no stores larger than 50,000 square feet)
  - Warehousing – 463,400 square feet or less
  - Light industrial – 74,600 square feet or less

As previously shown in Table 1, the proposed project consists of less than 167 single-family dwelling units; therefore, the proposed project satisfies the City-established project type screening criteria and may be presumed to result in a less than significant VMT impact.

CONCLUSIONS

The proposed project is forecast to generate a total of approximately 918 daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

[5] Based on CALEEMod calculations using ITE trip generation rates and SBTAM trip lengths, project size for a variety of land uses which would generate less than the SCAQMD (South Coast Air Quality Management District) threshold of 3,000 metric tons of CO2 equivalents per year was determined.

Ms. Pam Steele
MIG INC.
April 7, 2023

The proposed project satisfies the City-established for low VMT area screening and project type screening criteria as adopted by the City of Redlands and is presumed to result in a less than significant VMT impact.

It has been a pleasure to assist you with this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,
GANDDINI GROUP, INC.

Perrie Ilercil, P.E. (AZ)
Senior Engineer

Giancarlo Ganddini, PE, PTP
Principal

Table 1
Project Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Land Use Variable[2]	% In	% Out	Rate	% In	% Out	Rate	Daily Rate
Single-Family Detached Housing	ITE 210	DU	26%	74%	0.70	63%	37%	0.94	9.43
Single-Family Attached Housing	ITE 215	DU	31%	69%	0.48	57%	43%	0.57	7.20

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Source	Quantity	In	Out	Total	In	Out	Total	Daily
Single-Family Detached Housing	ITE 210	79 DU	14	41	55	47	27	74	745
Single-Family Attached Housing	ITE 215	24 DU	4	8	12	8	6	14	173
TOTAL TRIPS GENERATED		**103 DU**	**18**	**49**	**67**	**55**	**33**	**88**	**918**

Notes:
1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code. All rates based on General Urban/Suburban setting unless otherwise noted.
2. DU = Dwelling Units

ATTACHMENT A

SITE PLAN

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	WUCOLS (Zone 3)	SIZE
	TREES			
	Acacia stenophylla	Shoestring Acacia	L	24" Box
	Magnolia grandiflora 'Alta'	Southern Magnolia	M	24" Box
	Cercidium hyb. 'Desert Museum'	Hybrid Palo Verde	L	24" Box
	Arbutus 'Marina'	Strawberry Tree	L	24" Box
	Bauhinia purpurea	Orchid Tree	M	24" Box
	Lagerstroemia hybrids 'Natchez'	Crape Myrtle (White)	M	24" Box
	Cupressus sempervirens 'Monshel'	Tiny Tower Cypress	L	24" Box
	Strelitzia nicholai	Giant Bird-of-Paradise	M	24" Box
	Cedrus deodara	Deodar Cedar	L	24" Box
	Citrus sinensis	Orange Trees	M	24" Box
	Geijera parviflora	Australian Willow	L	24" Box
	Jacaranda mimosifolia	Jacaranda	M	36" Box
	Schinus molle	California Pepper Tree	L	36" Box
	Ulmus parvifolia 'True Green'	Evergreen Elm	M	24" Box
	PALMS			
	Phoenix dactylifera	Date Palm	L	16' BTH
	Washingtonia robusta	Mexican Fan Palm	L	24" Box
	Brahea armata	Mexican Blue Palm	L	24" Box
	Syagrus romanzoffianum	Queen Palm	M	24" Box
	SHRUBS			
	Agave 'Blue Flame'	Blue Flame Agave	L	5G
	Agave desmettiana ' Variegata'	Dwarf Century Plant	L	5G
	Aloe arborescens	Tree Aloe	L	15G
	Bougainvillea 'La Jolla'	Bougainvillea	L	5G
	Buxus microphylla japonica	Japanese Boxwood	M	1G
	Carex divulsa	Berkeley Sedge	L	5G
	Carissa grandiflora 'Green Carpet'	Natal Plum	L	1G
	Chondropetalum tectorum	Cape Rush	L	5G
	Cordyline australis 'Red Star'	Red Grass Palm	L	15G
	Dianella revoluta 'DR5000'	Little Rev Flax Lily	M	1G
	Dianella tasmanica 'Silver Streak'	Silver Streak Flax Lily	M	5G
	Hesperaloe parviflora	Red Yucca	L	5G
	Ilex crenata 'Sky Pencil'	Sky Pencil Ilex	M	15G
	Juniperus scopulorum 'Skyrocket'	Skyrocket Juniper	M	15G
	Lantana hybrids 'New Gold'	New Gold Lantana	L	5G
	Ligustrum japonicum 'Texanum'	Wax Leaf Privet	M	5G
	Miscanthus sinensis 'Strictus'	Porcupine Grass	M	5G
	Olea europaea 'Montra' P.P.#6266	Little Ollie Dwarf Olive	L	5G
	Podocarpus elongatus 'Monmal'	Icee Blue Yellow-Wood	M	15G
	Rhaphiolepis indica 'Clara'	Dwarf Indian Hawthorne	M	5G
	Rosa f. 'Trumpeter'	Trumpeter Rose	M	5G
	Senecio mandraliscae	Blue Chalk Sticks	L	Root Cut
	Stipa tenuissima	Mexican Feather Grass	L	5G
	Tecoma stans 'Sierra Apricot'	Sierra Apricot	L	5G
	Trachelospermum jasminoides	Star Jasmine	M	5G
	Westringia 'Wynyabbie Gem'	Coast Rosemary	L	5G
	Yucca gloriosa	Spanish Dagger	L	5G
	Yucca recurvifolia	Pendulous Yucca	L	5G

LEGEND

1. COMMUNITY PARK
   - TOT LOT
   - DOG PARK
   - BBQ AREA
   - VINE COVERED SHADE STRUCTURE
2. COMMON AREA LANDSCAPE (TYP.)
3. PRIVATE OPEN SPACE (TYP.)
4. MOTOR COURT (SEE SHEET L2 FOR ENLARGEMENT)
5. COMMUNITY MONUMENTATION
6. ENTRANCE TO "ORANGE-BLOSSOM TRAIL"

MADERA AT CITRUS TRAIL

CONCEPTUAL LANDSCAPE PLAN

L1

0' 15' 30' 60'

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JOB# 22-026 DATE: 07-29-22