Revised Traffic Impact Analysis

VICTORY HEIGHTS

Prepared for:
Blue Fern

September 3, 2024

Prepared by:

12131 113th Avenue NE, Suite 203
Kirkland, WA 98034-7120
Phone: 425-821-3665
www.transpogroup.com

1.23112.00

Table of Contents

Appendix

Figures

Tables

Introduction

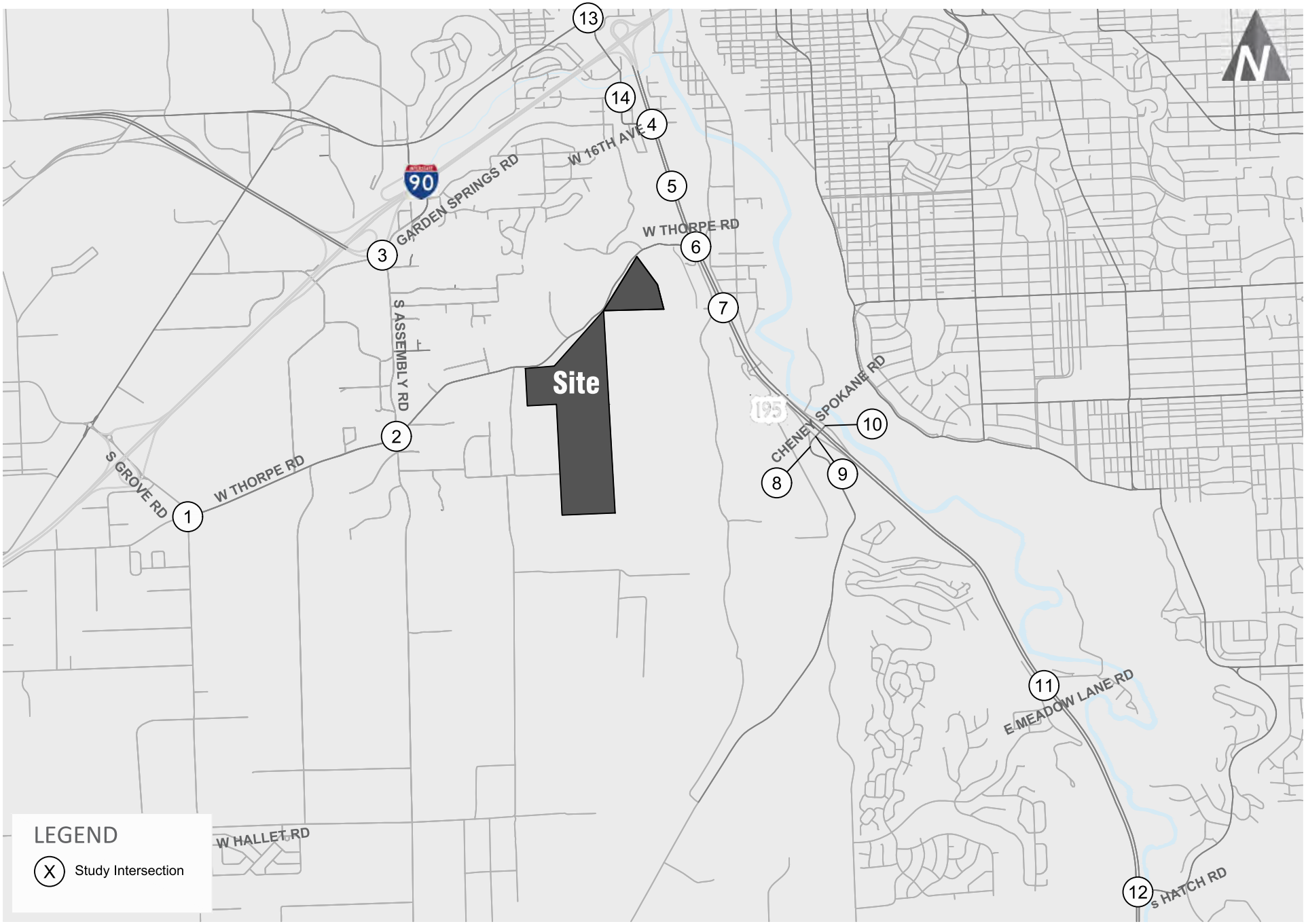
This traffic impact analysis (TIA) identifies potential transportation-related impacts associated with the construction of the proposed residential development located south of W Thorpe Road and east of S Trainor Road in the City of Spokane. Based on jurisdictional standards, the applicant will be paying substantial impact fees that would be available to the City to reduce or offset significant transportation related impacts that the project may have on the surrounding transportation system. The scope of the analysis and the key study assumptions have been coordinated through a scoping process with the City of Spokane and Washington Department of Transportation (WSDOT) staff.

Project Description

The project site is located south of W Thorpe Road and east of S Trainor Road. The site vicinity and study intersections are shown in Figure 1. The project would construct a 1,003 lot residential development, consisting of 220 townhomes and 783 single-family homes. Access to the site is provided via five driveways along W Thorpe Road as well as a connection to W 41st Avenue. The site plan is shown in Figure 2. The project is anticipated to be constructed and occupied over eight phases, with first phase initiated in 2025 (occupancy in 2026) and the final phase completed by 2035. The preliminary phasing is summarized in Table 1. Note the analysis focuses on the project full buildout conditions.

Table 1. Development Phasing Summary

Phase	Development per Phase			Cumulative Development		
	Attached	Detached	Total Lots	Attached	Detached	Total Lots
1	84	32	116	84	32	116
2	-	54	54	84	86	170
3	71	48	119	155	134	289
4	-	195	195	155	329	484
5	-	236	236	155	565	720
6	-	83	83	155	648	803
7	-	103	103	155	751	906
8	65	32	97	220	783	1,003
Total	**220**	**783**	**1,003**	**220**	**783**	**1,003**

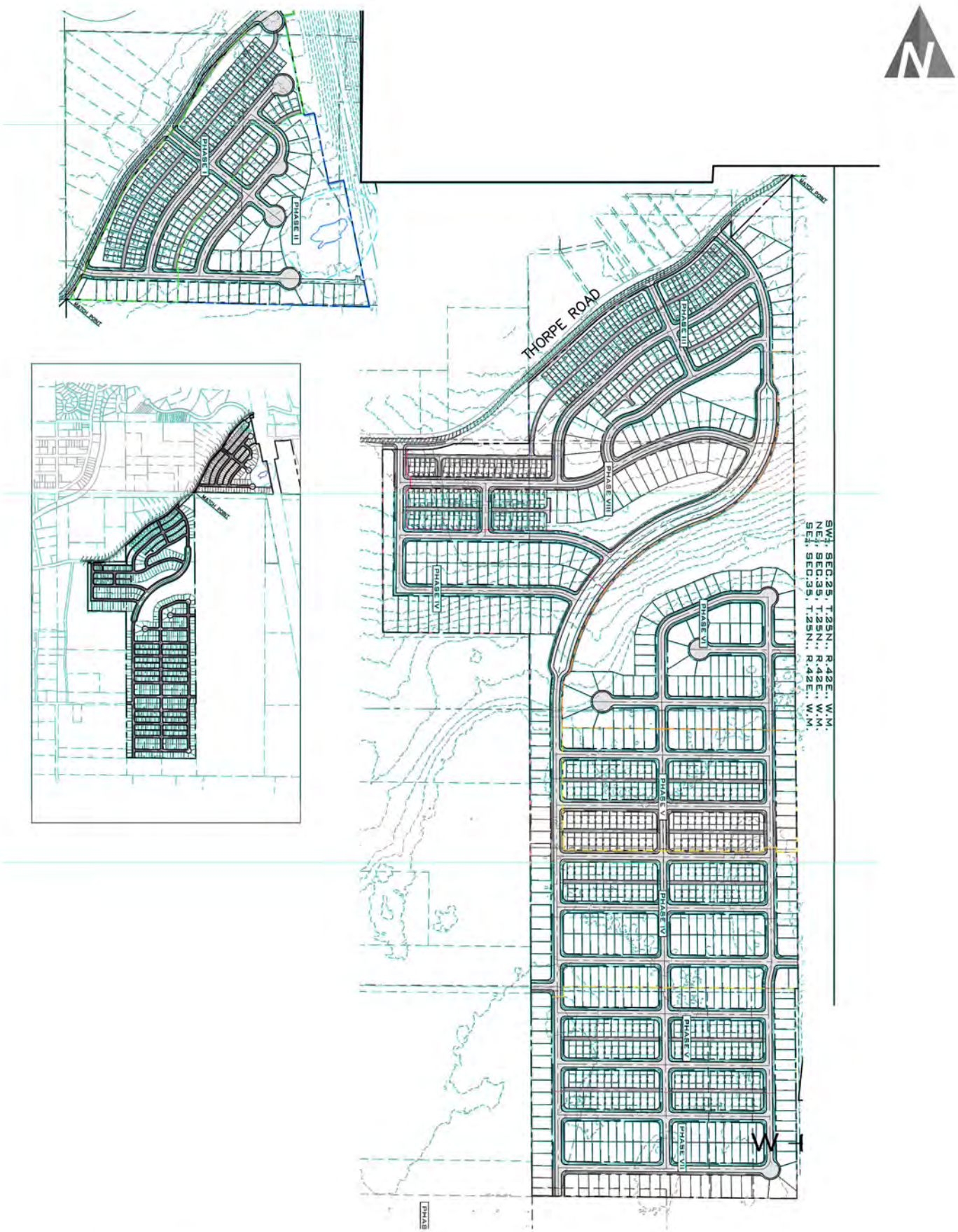


Site Vicinity and Study Intersections

FIGURE 1

Blue Fern Victory Heights

transpogroup



Preliminary Site Plan

Victory Heights

FIGURE 2

transpogroup

Study Scope

As coordinated with the City of Spokane and WSDOT staff and based on the anticipated trip distribution patterns of the project related traffic, the following intersections were selected for analysis:

1. S Grove Road/W Thorpe Road
2. S Assembly Road/W Thorpe Road
3. S Assembly Road/Garden Springs Road
4. US 195/W 16th Avenue
5. US 195/North J-turn
6. US 195/W Thorpe Road
7. US 195/South J-turn
8. US 195/Cheney Spokane SB Ramp West
9. US 195/Cheney Spokane SB Ramp
10. US 195/Cheney Spokane NB Ramp
11. US 195/E Meadowlane Road
12. US 195/S Hatch Road
13. S Government Way/ W Sunset Boulevard
14. S Lindeke Street/W 14th Avenue

In addition to the study area intersections identified above, the volumes of the US 195/I-90 eastbound (EB) interchange were evaluated along with the site accesses.

The analysis conducted focused on the following areas for existing, future (2035) without-project, and future (2035) with-project full buildout conditions in the vicinity of the project site under weekday AM and PM peak hour conditions:

- Review/documentation of the surrounding street system
- Review of transit service and facilities in the area
- Review of non-motorized facilities
- Documentation of the existing and forecast future without-project weekday peak hour traffic volumes
- Analysis of traffic operations
- Analysis of the Thorpe tunnel capacity using the Vissim, a micro-simulation model
- Review of traffic safety

Future (2035) with-project conditions were estimated by adding site-generated traffic to future without-project volumes. The project's impacts on the surrounding transportation system were identified by comparing the future with-project conditions to the future without-project conditions. Additionally, a review of regional improvements in the area is reviewed under the future (2035) conditions.

This analysis reflects an update to the *Victory Heights Traffic Impact Analysis* (Transpo Group, July 2024) in response to the comments received from City of Spokane and WSDOT staff. The compilation of comments received and the responses are included in Appendix G.

Existing and Future Without-Project Conditions

This section describes both existing and future (2035) without-project conditions within the identified study area. Characteristics are provided for the roadway network, non-motorized facilities, transit service, traffic volumes, traffic operations, and traffic safety.

Roadway Network

The following sections describe the existing roadway network within the vicinity of the proposed project and anticipated changes resulting from planned improvements.

Existing

The primary roadways within the study area and their characteristics near study intersections are described in Table 2.

Table 2. Existing Conditions Summary

Roadway	Street Classification	Speed Limit (mph)	No. of Lanes	Non-Motorized Facilities
US 195	Urban Other Freeways/Expressways	55	4/5	None
W Thorpe Road	Urban Minor Arterial	20-35[1]	2	Sidewalks[2]
S Grove Road	Urban Minor Arterial	45	2	Sidewalks[3]
S Assembly Road	Urban Major Collector	35	2	None
Garden Springs Road	Urban Major Collector	25	2	None
Cheney Spokane Road	Urban Minor Arterial	35	4/5	Sidewalks
S Hatch Road	Urban Minor Arterial	35	2	None
E Meadowlane Road	Urban Major Collector	25-30	2	None
W 14th Avenue	Urban Minor Arterial	25	2	Sidewalks
W 16th Avenue	Urban Minor Arterial	25	2	Sidewalks
S Lindeke Street	Minor Arterial	25	2	Sidewalks
S Government Way	Urban Major Collector / Urban Minor Arterial[4]	30	2	Sidewalks
S Sunset Boulevard	Urban Other Principal Arterial	40	5	Signalized Crossings Bicycle Lanes Sidewalks

City of Spokane, 2023
1. Posted speed limit 20 mph between W Westwood Lane and US 195 and 30 mph east of US 195.
2. Provided on north side between S Grove Road and S Abbott Road
3. Provided south of W Thorpe Road.
4. Urban Major Collector within the study area up to W Sunset Boulevard and Urban Minor Arterial from W Sunset Boulevard.

Planned Improvements

Based on a review of both the City of Spokane's *2023-2028 Citywide Capital Improvement Program,* Spokane County's *2023-2028 Six-Year Transportation Improvement Program, WSDOT's improvement plans,* and consistency with previous traffic studies in the area, the following planned improvements have been assumed in the analysis:

- **US 195 & 16th Avenue Intersection Modification –** Construct improvements to allow only right-in/right-out and left-in access from the west leg at 16th Avenue W & US 195. This project is currently unfunded. However it was incorporated into the analysis as it is expected to be constructed by the development community as a condition of approval for several projects.

- **Grove Road Reconstruction –** This project is planned to reconstruct Grove Road to a 3-lane roadway from W Thorpe Road to I-90 EB ramp. This project is fully funded by Spokane County and will be completed by 2029.
- **Thorpe Road Reconstruction –** Thorpe Road is planned to be reconstructed to an urban section between W Westbow Road and S Grove Road. Improvements are planned for 2030 and partially funded by the County.
- **Grove Road/Thorpe Road Intersection –** Intersection improvements are planned for the S Grove Road/W Thorpe Road intersection converting the intersection into a single lane roundabout with north and south legs having 3 approach legs. This project is anticipated to be completed by 2026 and is partially funded by the County.
- **Meadow Lane Road/US 195 Intersection** – Intersection improvements are planned for anticipated traffic growth and congestion mitigation. Meadow Lane Road will have J-turn which will restrict all left-turns and through movements from the side streets.
- **South Inland Empire Way Extension –** S Inland Empire way will be extended to the south to be connected to the US 195/Cheney-Spokane Road ramps. This will divert downtown trips from taking US 195. Given the assumed inclusion of pipeline development projects (discussed in greater detail below), this planned improvement project was included in the future (2035) without-project conditions.

In addition to the planned improvements identified above, the *US 195/I-90 Transportation Study* (December 2021) was reviewed. As noted in the study, *"[w]hen implemented, the recommendations…will create a more connected network for local trips, improve safety, preserve capacity on US 195 for regional trips, extend the life of the US 195/I-90 interchange, and provide more connections for walking, biking, and using transit to travel within the study area and to key destinations in the Spokane region.*" Key investments in the plan identified within the vicinity of the Victory Heights study area include the Lindeke Street and Inland Empire Way Connections. Both connections parallel US 195 and provide an alternative to the US 195/I-90 interchange. The Inland Empire connection is located to the east of US 195 and is noted above to be assumed under the background condition associated with the implementation of pipeline development projects in close proximity to that roadway.

The Lindeke Street extension would be located west of US 195 and would extend from its existing terminus at 16th Avenue and Thorpe Road. Components that would also be implemented as a result of the Lindeke Street extension would include the following:

- Closure of the west leg of the intersection of 16th Ave
- Thorpe/Lindeke Roundabout
- South Thorpe J-turn closure
- Fish Lake Trail bridge/16th replacement

The timing and funding of the Lindeke Street extension which provides regional benefits and connectivity has not been identified and therefore is not assumed in the future (2035) without or with-project analyses.

The City is also conducting a design feasibility study of a Thorpe Road crossing (either over or under) of US 195. This connection would likely be in place of the Lindeke Street extension and associated projects as identified in the *US 195/I-90 Transportation Study* as the Thorpe Road crossing would be in conflict with the Thorpe/Lindeke Roundabout. However, there are numerous benefits of the crossing which meet the objective of the US 195/I-90 Transportation Study. These benefits include:

- Connecting Thorpe Road to Inland Empire – improving connectivity
- Allowing for northbound access from US 195 to Thorpe Road west of US 195 – eliminating the need for the North J-Turn location, and therefore improving safety by removing a conflict point along US 195

- Not providing access to northbound US 195 – Extend the life of the US 195/I-90 interchange by providing an alternative route
- Connectivity to/from Thorpe Road and southbound US 195 would be maintained

Non-Motorized Facilities

The primary non-motorized facility is the study area is the Fish Lake Trail. This is a shared use path that extends from West Spokane to Queen Lucas Lake and is planned to connect the Centennial Trail to Fish Lake Regional Park in the future. The trail is located east of the site and is elevated above Thorpe Road; however, the trailhead is located to the north of the project at Government Way and Milton Street which due to limited connectivity in the vicinity is approximately 4 miles from the site.

Additionally, Table 2 above shows sidewalks are provided intermittently along W Thorpe Road, S Grove Road, Cheney Spokane Road, and W 16th Avenue. There are no marked crossings at the study intersections or bike lanes provided in the study area. However, the *US 195/I-90 Transportation Study* (December 2021) identifies "*[t]here are a several shared use facilities (roads where a bike route is designated but there are no bike lanes or areas specifically designated for bikes) within the study area including: Thorpe Road, W Westwood Lane, S Lindeke Street, Inland Empire Way north of W 23rd Avenue, Cheney-Spokane Road south of the Yokes Retail Center, Qualchan Drive, W Lincoln Boulevard, Eagle Ridge Boulevard, Hatch Road from US 195 to 57th Avenue.*"

Transit Service

Transit service in the vicinity of the project site is provided by Spokane Transit. The nearest stop to the project site is located approximately 3 miles north of the site along W Sunset Boulevard and 3 miles east of site along W 14th Avenue. There are limited pedestrian facilities along walking routes to transit stops in the area. The transit routes servicing the study area are summarized in Table 3 including days of operation, service routes, and headways.

Table 3. Transit Route Summary

Route	Hours of Operation		Weekday Peak Period Headway[1]
	Weekdays	Saturday/Sunday	
42 – South Adams	6:05 a.m. – 10:15 p.m.	Sat: 7:05 a.m. – 10:15 p.m. Sun: 8:05 a.m. – 7:15 p.m.	30
43 – Lincoln/37th Ave	5:30 a.m. – 10:50 p.m.	Sat: 6:25 a.m. – 10:50 p.m. Sun: 7:25 a.m. – 7: 50 p.m.	30
60 – Airport via Brownes Add	6:35 a.m. – 11:10 p.m.	Sat: 5:40 a.m. – 11:10 p.m. Sun: 7:40 a.m. – 7:15 p.m.	30
61 – Hwy 2 via Brownes Add	5:10 a.m. – 10:45 p.m.	Sat: 6:05 a.m. – 10:45 p.m. Sun: 7:05 a.m. – 7:45 p.m.	30

Source: Spokane Transit Authority, 2023
1. Headways in minutes during weekday AM and PM peak periods.

Traffic Volumes

The following section summarizes the existing and future (2035) without-project traffic volume forecasts for both the study intersections as well as the I-90 interchange study locations.

Study Intersections Traffic Volumes

Existing weekday AM (7-9 a.m.) and PM peak period (4-6 p.m.) traffic volumes were collected at the study area intersections in March 2023 as available.[1] The existing weekday AM and PM peak hour traffic volumes are shown on Figure 3. Volumes are rounded to the nearest 5 vehicles to account for the daily fluctuations in traffic volumes.[2] Detailed traffic counts are provided in Appendix A.

Future (2035) without-project traffic volumes are comprised of background traffic growth, and traffic generated from the planned "pipeline" developments. An annual growth rate of 1.0 percent was applied as directed by City and WSDOT staff. In addition to the annual growth rate, traffic from approved, but not yet occupied development projects in the vicinity of the project were identified by City/WSDOT staff and included in the future (2035) without project analysis. The projects include:

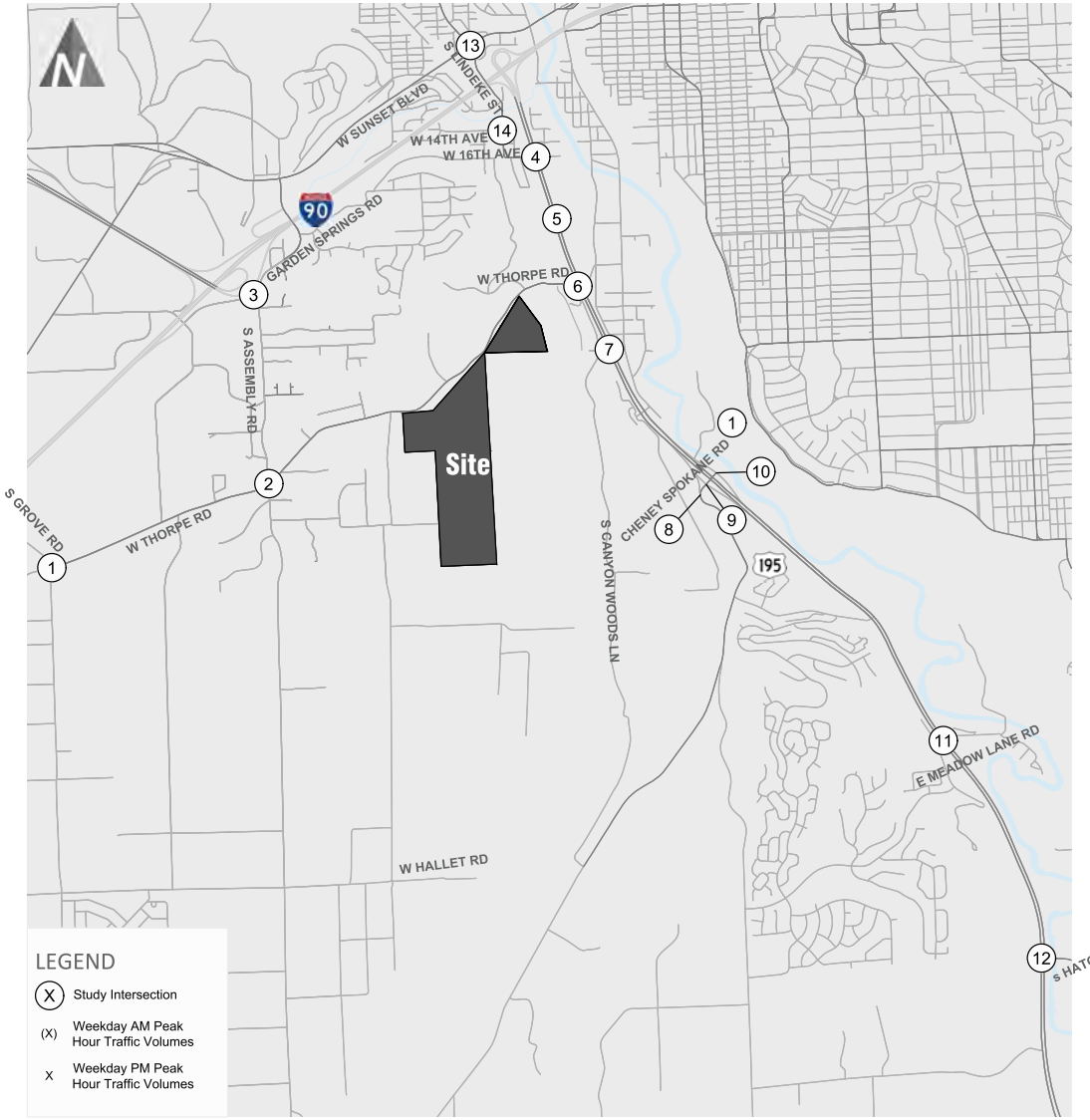
1. Wheatland Estates – 167 single-family residential lots
2. Marshall Creek Estates – 425 single-family residential lots
3. Qualchan View Estates – 160 single-family residential lots
4. Garden Springs Apartments – Six 36-unit apartment buildings
5. Abbott Grove Industrial Park – 2,365,961 square foot industrial park
6. Tangle Ridge Estates – 45 single-family residential lots
7. Latah Glen Residential Community – 157 space manufactured home development
8. The Greens at Meadowlane – 36 single-family residential lots
9. The Greens at Meadowlane 2 – 25 single-family residential lots
10. Aspen Park – 296 single-family residential lots and 160 multifamily apartments
11. Crystal Ridge – 56 single-family residential lots
12. Needham Hill Addition – 306 single-family residential units
13. West Plains Logistics – 568,040 square foot warehouse and industrial development
14. Canyon Bluffs – 64 single-family residential units and 432 multifamily residential units
15. The Summit – 99 single-family residential lots
16. Parthenon Pointe Apartments – three story apartments with up to 96 units or continuing care retirement with 150 units.
17. Prose Spokane - 348 multifamily residential units with 504 parking stalls

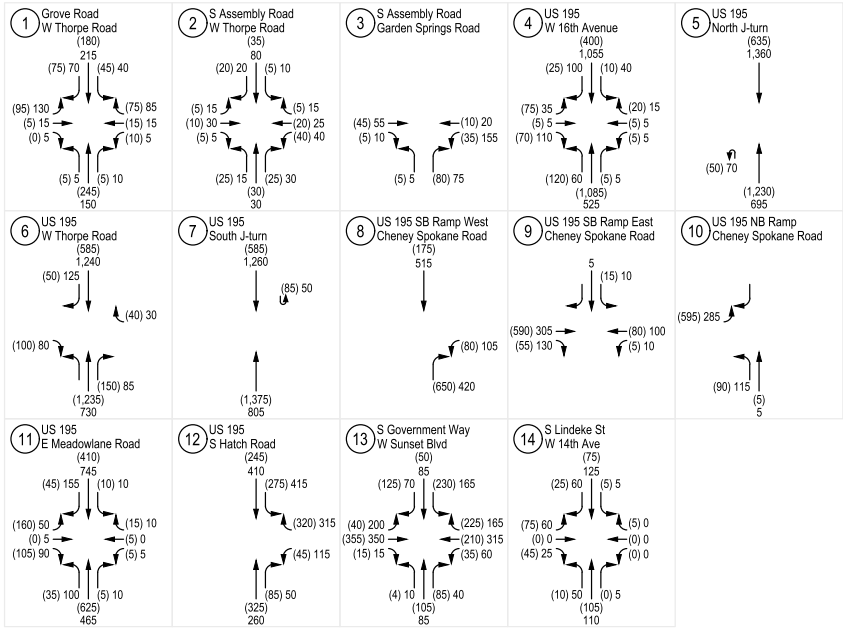
Additionally, a background shift was assumed for the addition of the Inland Empire extension as this connection is a condition of the pipeline developments whose trips are assumed in the analysis. The analysis assumed that up to 40 percent of trips utilizing the Cheney Spokane northbound US 195 on-ramp to I-90 eastbound would shift to use the new connection. This percentage was identified through conversations with City of Spokane and WSDOT staff.

The forecast future 2035 without-project weekday peak hour traffic volumes are shown in Figure 4. The locations of the pipeline projects relative site are shown on Appendix B.

[1] Note that the City requested the addition of the study intersection of S Lindeke Street/W 14th Avenue. This location was being impacted by construction at the time of the study update such that previously collected traffic counts from 2022 were assumed for the analysis.

[2] Existing movements of less than 5 vehicles were not rounded.



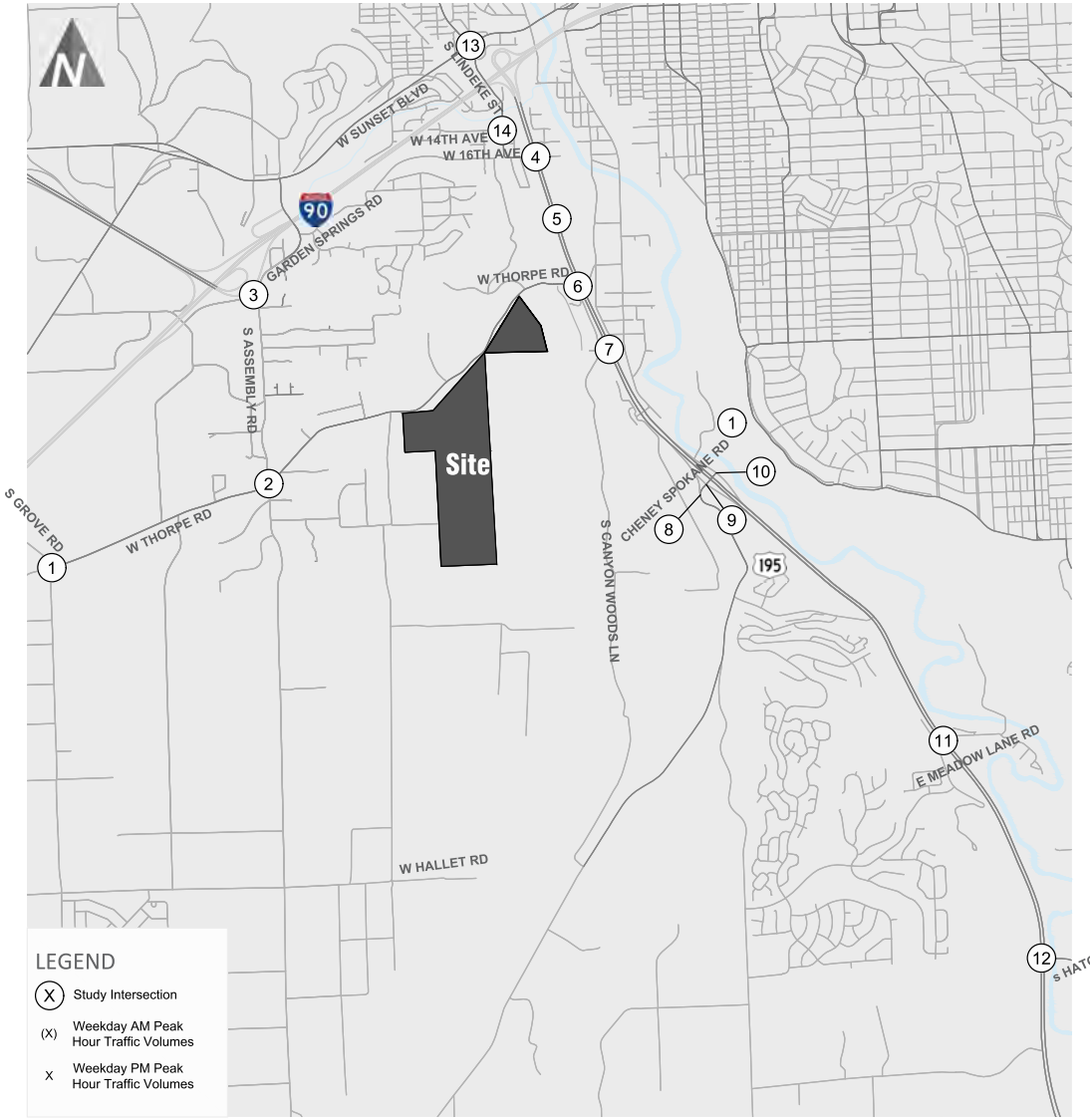


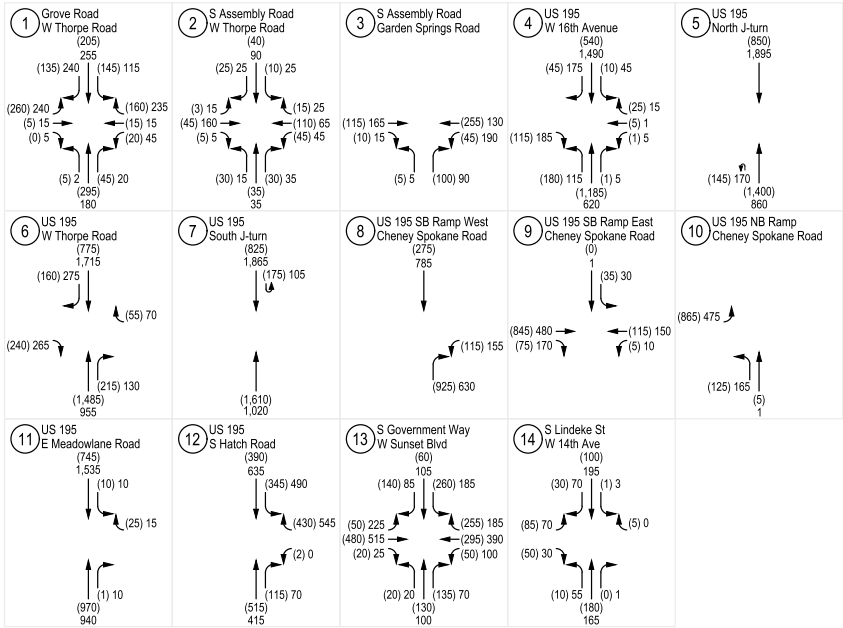
Existing Weekday Peak Hour Traffic Volumes

Blue Fern Victory Heights

FIGURE 3

transpogroup





Future (2035) Without-Project Weekday Peak Hour Traffic Volumes

Blue Fern Victory Heights

FIGURE 4

transpogroup

Traffic Operations

The following section summarizes the existing and future (2035) without-project traffic operations for the study intersections.

The operational characteristics of an intersection are determined by calculating the intersection level of service (LOS). At signalized, all-way stop-controlled (AWSC), and roundabout controlled intersections, LOS is measured in average control delay per vehicle and is reported using the intersection delay. At two-way stop-controlled (TWSC) intersections, delay is reported for the worst movement. Traffic operations and average vehicle delay can be described qualitatively with a range of levels of service (LOS A through LOS F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays. Appendix C contains a detailed explanation of LOS criteria and definitions.

Analysis parameters such as lane channelization and signal timing were maintained for future (2035) without-project conditions from existing conditions with the exception of the planned improvements as described above. Peak hour factor (PHF) adjustments were assumed for the future (2035) conditions consistent with NCHRP Report 599 guidelines which specify typical intersection PHF based on the total entering vehicles. This adjustment is appropriate given the future horizon year of +10 years and the associated growth as well as the change in travel patterns in the study area.

Weekday AM and PM peak hour traffic operations for existing and future (2035) without-project conditions were evaluated based on the procedures identified in the *Highway Capacity Manual* (HCM 6th Edition) using *Synchro 12*. *Synchro 12* is a software program that uses *HCM* methodology to evaluate intersection LOS and average vehicle delay. The roundabout controlled intersection was evaluated using Sidra and the volume to capacity (v/c) ratios for the roundabout controlled locations are also reported. Results for the existing and future without-project operations analyses are summarized in Table 4. Detailed LOS worksheets for each intersection analysis are included in Appendix D.

The City of Spokane and WSDOT (for US 195) have adopted a LOS D as the minimum for signalized intersections and LOS E as the minimum for unsignalized intersections.

As shown in Table 4, the study intersections meet the respective standards under existing conditions with the exception of four locations during the AM and/or PM peak hours. These locations include W 16th Avenue, E Meadowlane Road, and S Hatch Road intersections along US 195 as well as the US 195 NB Ramp/Cheney Spokane Road intersection.

Table 4. Existing and Future (2035) Without-Project AM and PM Peak Hour LOS Summary

Intersection	Traffic Control	Existing			2035 Without-Project		
		LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM/ v/c[4]
AM Peak Hour							
1. S Grove Rd/W Thorpe Road	AWSC/ Future RAB	B	12.5	-	A	7.8	0.43
2. S Assembly Rd/W Thorpe Road	AWSC	A	7.5	-	A	8.3	-
3. S Assembly Rd/Garden Springs Road	TWSC	A	8.9	NB	A	9.6	NB
4. US 195/W 16th Avenue	TWSC	**F**	**163.6**	**EB**	E	45.5	WB
5. US 195/North J-turn	TWSC	A	9.2	NBL	B	11.1	NBL
6. US 195/W Thorpe Road	TWSC	C	15.5	WB	C	19.0	WB
7. US 195/South J-turn	TWSC	C	15.5	SBL	D	25.5	SBL
8. US 195 SB Ramp/Cheney Spokane Rd	TWSC	B	10.3	WB	B	11.9	WB
9. US 195 SB Ramp East/Cheney Spokane Rd	TWSC	C	17.8	SB	E	24.7	SB
10. US 195 NB Ramp/Cheney Spokane Rd	TWSC	**F**	**156.8**	**NB**	**F**	**543.9**	**NB**
11. US 195/E Meadowlane Road	TWSC	**F**	**81.0**	**EB**	B	13.3	WB
12. US 195/S Hatch Road	TWSC	E	44.1	WBL	C	23.6	WB
13. S Government Way/ W Sunset Blvd	Signal	B	18.5	-	C	23.0	-
14. S Lindeke Street/W 14th Avenue	TWSC	B	10.5	EB	B	11.6	EB
PM Peak Hour							
1. S Grove Rd/W Thorpe Road	AWSC/ Future RAB	B	12.5	-	A	7.0	0.35
2. S Assembly Rd/W Thorpe Road	AWSC	A	8.0	-	A	9.4	-
3. S Assembly Rd/Garden Springs Road	TWSC	A	9.2	NB	B	10.3	NB
4. US 195/W 16th Ave	TWSC	**F**	**100.0**	**EB**	**F**	**127.2**	**WB**
5. US 195/North J-turn	TWSC	C	16.0	NBL	E	40.1	NBL
6. US 195/W Thorpe Rd	TWSC	C	17.3	EB	**F**	**95.7**	**EB**
7. US 195/South J-turn	TWSC	B	10.2	SBL	B	12.3	SBL
8. US 195 SB Ramp/Cheney Spokane Road	TWSC	B	14.8	WB	D	28.3	WB
9. US 195 SB Ramp East/Cheney Spokane Rd	TWSC	B	12.4	SB	C	16.5	SB
10. US 195 NB Ramp/Cheney Spokane Road	TWSC	C	18.1	NB	**F**	**55.0**	**NB**
11. US 195/E Meadowlane Road	TWSC	E	49.7	EB	B	12.2	WB
12. US 195/S Hatch Road	TWSC	**F**	**370.2**	**WBL**	D	25.6	WB
13. S Government Way/ W Sunset Boulevard	Signal	C	21.3	-	C	21.6	-
14. S Lindeke Street/W 14th Avenue	TWSC	B	12.1	EB	B	14.4	EB

Note: TWSC = two-way stop-controlled, AWSC = all-way stop-controlled, RAB = roundabout. **Bold** text indicates intersection operates below standard.
1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 6th Edition)
2. Average delay per vehicle in seconds.
3. Worst Movement (WM) shown for two-way stop-controlled intersections. EB = eastbound approach, WB = westbound approach, SB = southbound approach, NBL = northbound left-turn movement, SBL = southbound left-turn movement, WBL = westbound left-turn movement.
4. Volume to capacity is reported for roundabouts.

Under the future (2035) without-project conditions, the study intersections meet the respective standards with the exception of three locations during the AM and/or PM peak hours. These locations include W 16th Avenue and W Thorpe Road along US 195 as well as the US 195 NB Ramp/Cheney Spokane Road intersection. These 3 locations are discussed below.

US 195/W 16th Avenue - The stop-controlled approaches of the US 195/W 16th Avenue intersection are shown to operate at LOS F under existing conditions during the AM and PM peak hour and future without-project conditions during the weekday PM peak hour. This

improvement in operations is related to the future modification at the intersection on the west leg to restrict eastbound left-turn movements. Traffic counts showed 5 or fewer vehicles making westbound through/left turn movements during the weekday AM and PM peak hours.

US 195/W Thorpe Road - The eastbound right-turn movement at the intersection is forecast to degrade to operate at LOS F during the PM peak hour under future (2035) conditions. This LOS F condition degrades from LOS C under existing conditions due to the addition of background traffic (growth and pipeline developments) along Thorpe Road in conflict with the high volumes along US 195. Additionally, the 95th percentile queues of the eastbound right-turn movement are forecast to be approximately 10 vehicles (or approximately 250 feet) under the future (2035) without-project weekday PM peak hour condition. The J turns constructed north and south of this intersection accommodate the left-turns that would normally access this intersection.

US 195 NB Ramp/Cheney Spokane Road - The northbound left-turn movement at the intersection is forecast to operate at LOS F during the existing and future (2035) without-project conditions during the AM peak hour and degrading to operate at LOS F during the PM peak hour under future (2035) conditions. The increases in delay range are 37 and 387 seconds in the PM and AM peak hours, respectively. The increases in delay are due to the addition of background traffic (growth and pipeline developments) along Cheney Spokane Road for the northbound US 195 on-ramp and the Inland Empire connection in conflict with the northbound off-ramp US 195 vehicles. *Note this level of service deficiency has not previously been identified at this location in traffic impact analyses for projects in the vicinity due to the non-traditional movements at the intersection and limitations of the software.*

Thorpe Tunnel Analysis

In addition to the analysis completed at the intersections and US 195/I-90 interchange as described above, the two existing tunnels located along Thorpe Road located east of the project site and west of US 195 were evaluated. The two tunnels on Thorpe Road include a longer west tunnel under the active BNSF rail line (see Figure 5) and the shorter east tunnel under Fish Lake Trail.

Figure 5. West/BNSF Tunnel along Thorpe Rd

The eastern tunnel is located approximately 480 feet west of US 195. Both tunnels have cross sections that include approximately a 5 foot sidewalk, 18 feet of width for vehicular travel, and a

1 foot curb on the south side for a total width of approximately 24 feet. Each tunnel has a height limitation of 13 feet and 2 aligning on the south side of the tunnel at the 1 foot curb that exists. Current operations are limited to 9-foot travel lanes and signage identifies “One truck at a time in tunnel”, frequently resulting in single lane operations today.

A Vissim analysis of the existing tunnel was conducted to forecast the impacts of increased future vehicle demands to use Thorpe Road between Westwood Lane and US 195, and especially the impacts of those increased demands on delays associated with travel through the narrow tunnels on Thorpe Road and the access to US 195. All Vissim analysis was conducted using PTV Vissim software (version 2022-07).

The analysis of the tunnels is not based on any adopted concurrency LOS, because this is not an intersection-based analysis. The City’s request for the analysis is to identify impacts for purposes of SEPA. As there are no adopted standards, per concurrency, this analysis focuses on the interaction of vehicles between the tunnels and the adjacent US 195/Thorpe intersection and identifies when the flow of vehicles is not possible.

Existing Conditions Model Development

The models used for this analysis were developed from a Vissim model that was initially developed for this study by the City of Spokane and provided to Transpo Group. The model extents (see highlighted yellow roadways in Figure 6) include the intersection of Westwood Lane and Thorpe Road in the west, the intersection of Thorpe Road and US 195 Southbound in the east, and the two narrow tunnels on Thorpe Rd between them as described above.

The model was adjusted to match aerial imagery and vehicle demands were added to match the traffic count data at Westwood Lane and the southbound direction of US 195. The model also uses North American fleet vehicle standards and Vissim default values for driver behavior characteristics. Vehicle classes in the model include cars, larger SUVs, trucks, and buses. Vehicle fleet mixes were set to be consistent across the entire Vissim network and were set to 74% cars, 19% SUVs, 6% trucks, and 1% buses.

Background Imagery Source: Bing Maps

Figure 6. Vissim Model Network Extents

The narrow tunnels were modeled in Vissim using a set of priority rules to control yielding behavior at the tunnel entrances based on the vehicle class of the vehicle approaching the tunnel entrance and the classes of vehicles currently traveling in the tunnel in the opposite direction.

- **Cars** will yield at the entrance to a tunnel if *any* SUV, Truck, or Bus is currently in the tunnel traveling in the opposite direction. Cars will still enter the tunnel if cars only are traveling in the tunnel in the opposite direction.
- **SUVs, Trucks, & Buses** will yield at the entrance to a narrow tunnel if *any vehicle* (Car, SUV, Truck, or Bus) is currently in the tunnel traveling in the opposite direction.

Demand Conditions

Demand scenarios were tested for both the existing demands (i.e. counts) and future without-project conditions aligning with each of the eight years of the project development phases (illustrated in Table 1 above). The without-project scenario demands were consistent with the forecasts described above including pipeline developments traffic along with general background traffic growth (1 percent annual growth). Table 5 presents the PM peak hour demands for each scenario split by those trips that will travel through the Thorpe Road tunnels in each direction, as well as the US 195 through trips traveling southbound past Thorpe Road.

Table 5. Vissim Scenarios: Peak Hour Demands by Phase (Existing and Without-Project)

Vissim Scenario #	Phase (Year) & Development Conditions	Total PM Peak Hour Demands (vph)		
		Thorpe Tunnels EB	Thorpe Tunnels WB	US 195 SBT
1	Existing (2023)	80	125	1,240
2	ϕ1 (2026) Baseline	266	281	1,598
3	ϕ2 (2027) Baseline	267	282	1,610
4	ϕ3 (2029) Baseline	269	285	1,636
5	ϕ4 (2030) Baseline	270	286	1,649
6	ϕ5 (2032) Baseline	271	289	1,676
7	ϕ6 (2033) Baseline	272	290	1,690
8	ϕ7 (2034) Baseline	273	291	1,703
9	ϕ8 (2035) Baseline	275	294	1,717

Note: EB = eastbound, WB = Westbound, SBT = southbound through.

The future forecast volumes were also assumed to have a vehicle fleet mix consistent with the existing conditions traffic: 74% cars, 19% SUVs, 6% trucks, and 1% buses.

The analysis evaluates the current tunnel conditions with the scenario volumes as illustrated above. Each simulation scenario was then simulated with 10 random seeds, and the average of those 10 seeds was used to report the selected performance measures. The performance measures tabulated included systemwide network results (average delay per vehicle and unserved vehicles), as well as the average travel times and delays per vehicle for defined sections of the roadway (e.g., traveling through a tunnel, corridor travel time, etc.), and the throughput volumes and 50th and 95th percentile queue lengths for defined sections of the roadway network (e.g., approach to the tunnels, the merge to SB US 195, or approaches to Westwood Lane. The full set of detailed performance metrics is included in Appendix H.

Vissim Scenario Results

The simulation results (see Table 6) showed that under the current tunnel conditions following the completion of the background pipeline projects by 2026, Thorpe Road has queues extending to or through the adjacent tunnels and/or intersections and therefore preventing the flow of vehicles. As noted above, there are no adopted standards per concurrency, this analysis focuses on the interaction of vehicles between the tunnels and the adjacent US 195/Thorpe intersection.

The primary cause for the congestion with the minimal tested increased demands is the queuing that develops at the existing stop sign for traffic to turn from Thorpe Road to southbound US 195. Once this queue extends back into the east tunnel, congestion increases exponentially as the westbound approach to the east tunnel begins to queue from the blocked tunnel, and the system congestion begins to increase exponentially. The current tunnel conditions shows the existing system cannot accommodate the forecasted growth from background pipeline developments, regardless of additional traffic from the Victory Heights development.

Note that the poor operations at the Thorpe Road/US 195 intersection are generally consistent with the findings above in the intersection level of service and queueing analysis.

Table 6. Vissim Results: Current Tunnel Conditions

			Networkwide Results		Average Travel Time (sec)			50th Percentile Max Queue (ft)			95th Percentile Max Queue (ft)		
Development Phases Years: Without (Baseline) and With Project Build		Fail ?	Unserved Vehicles (Latent Demant) (veh)	Average Vehicle Delay (sec/veh)	WB Thorpe from SB195 ML	EB Thorpe to SB 195 ML	SB 195 Through Trip	WB Queue at East Tunnel	EB Queue at Westwood	EB Queue at Right Turn to SB 195	WB Queue at East Tunnel	EB Queue at Westwood	EB Queue at Right Turn to SB 195
Existing (2023)		--	0	3	100	104	43	8	0	69	25	1	77
Baseline	ϕ1 (2026)	Fail	20	90	848	407	121	606	102	602	278	391	659
	ϕ2 (2027)	Fail	66	119	753	406	190	631	176	471	411	835	664
	ϕ3 (2029)	Fail	52	103	870	417	163	650	92	599	269	489	683
	ϕ4 (2030)	Fail	55	115	770	425	159	642	263	477	405	734	634
	ϕ5 (2032)	Fail	57	116	801	430	176	628	275	493	385	691	675
	ϕ6 (2033)	Fail	49	110	788	426	166	622	301	532	307	605	684
	ϕ7 (2034)	Fail	90	127	764	435	215	646	308	479	357	676	660
	ϕ8 (2035)	Fail	88	120	906	450	199	618	352	476	349	635	657

The congestion and queueing in the vissim analysis for the without-project condition was identified to be due primarily to the eastbound right-turn from Thorpe Road to southbound US 195. Given that, it is anticipated that the addition of an acceleration lane along US 195 would resolve this condition. An improvement scenario was evaluated assuming the addition of an acceleration lane to SB US 195 from Thorpe Rd providing a lane without conflicting vehicles to enter US 195 and subsequently change lanes into the mainline SB 195 traffic flows.[3] The results of this acceleration improvement for the baseline condition are illustrated below in Table 7.

Table 7. Vissim Results: Added Acceleration Lane to SB US 195 at Thorpe Road (Without-Project)

			Networkwide Results		Average Travel Time (sec)			50th Percentile Max Queue (ft)			95th Percentile Max Queue (ft)		
Development Phases Years: Without (Baseline) and With Project Build		Fail ?	Unserved Vehicles (Latent Demant) (veh)	Average Vehicle Delay (sec/veh)	WB Thorpe from SB195 ML	EB Thorpe to SB 195 ML	SB 195 Through Trip	WB Queue at East Tunnel	EB Queue at Westwood	EB Queue at Right Turn to SB 195	WB Queue at East Tunnel	EB Queue at Westwood	EB Queue at Right Turn to SB 195
Existing (2023)		--	0	1	100	80	43	9	0	0	25	1	0
Baseline	ϕ1 (2026)	--	0	4	110	90	43	63	14	0	138	61	0
	ϕ2 (2027)	--	0	4	111	90	43	67	16	0	161	51	0
	ϕ3 (2029)	--	0	4	111	90	44	68	15	0	157	26	0
	ϕ4 (2030)	--	0	4	111	91	43	62	20	0	163	26	0
	ϕ5 (2032)	--	0	4	110	91	44	70	11	0	149	39	0
	ϕ6 (2033)	--	0	4	111	91	44	71	15	0	160	32	0
	ϕ7 (2034)	--	0	4	111	91	44	73	15	0	167	44	0
	ϕ8 (2035)	--	0	5	112	92	44	66	18	0	160	47	0

The table shows that a new acceleration lane would allow eastbound Thorpe Road traffic to more efficiently and safely merge onto the southbound US 195 mainline lanes and allowing for acceptable operating conditions under the without-project conditions. While some additional delays and some queueing would be seen at the tunnels as traffic continues to operate under the self-regulated one-way flows for larger vehicles, traffic flows through the tunnel would not create significant queuing levels or result in impacts to US 195 operations.

Note that, although shown to be needed under the future without-project conditions, the addition of the acceleration lane along southbound US 195 from Thorpe Road was not assumed in the

[3] The vissim analysis had assumed the removal of the stop sign; however, based on conversations with City staff this would alternatively be designed to provide the acceleration lane while maintaining the stop sign, similar to the configuration of the westbound approach of Thorpe at US 195. This allows for continued use of the south j-turn.

LOS analysis for the primary traffic operations analysis completed above, nor is it assumed in the future (2035) with-project LOS analysis.

Traffic Safety

This section summarizes the five-year crash summary at the study intersections as well as the expected and predicted intersection crashes for the state intersections.

Analysis of Existing Intersection Crashes

The five most recent years of collision records (January 1, 2017 to December 31, 2021)[4] provided by the Washington State Department of Transportation (WSDOT) were reviewed within the study area to identify any existing traffic safety issues at the study intersections. A summary of the total and average annual number of reported collisions at the study intersections are provided in Table 8.

Table 8. Five-Year Collision Summary (2017-2021) at the Study Intersections

Location	Number of Collisions					Total	Annual Average	Collisions per MEV[1]
	2017	2018	2019	2020	2021			
1. S Grove Rd/W Thorpe Road	2	2	1	1	1	7	1.40	0.51
2. S Assembly Rd/W Thorpe Road	0	1	1	1	0	3	0.60	0.52
3. S Assembly Rd/Garden Springs Road	0	0	0	0	0	0	0.00	0.00
4. US 195/W 16th Avenue	9	3	5	4	10	31	6.20	0.87
5. US 195/North J-turn	0	1	0	0	1	2	0.40	0.05
6. US 195/W Thorpe Road	9	8	3	2	2	24	4.80	0.57
7. US 195/South J-turn	0	0	0	1	1	2	0.40	0.05
8. US 195 SB Ramp/Cheney Spokane Road	0	0	0	4	0	4	0.80	0.21
9. US 195 SB Ramp East/Cheney Spokane Road	0	0	0	0	1	1	0.20	0.10
10. US 195 NB Ramp/Cheney Spokane Road	0	1	0	1	1	3	0.60	0.41
11. US 195/E Meadowlane Road	4	3	4	3	4	18	3.60	0.60
12. US 195/S Hatch Road	4	3	2	3	5	17	3.40	0.59
13. S Government Way/ W Sunset Boulevard	2	4	6	2	1	15	3.00	0.53
14. S Lindeke Street/W 14th Avenue	3	2	2	3	0	10	2.00	1.52

Source: WSDOT May 2023
Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.
1. MEV = Million entering vehicles.

As shown in Table 5, the US 195/W 16th Avenue and US 195/W Thorpe Road intersections experienced the most collisions at approximately 6 and 5 collisions per year, respectively. The most common collision type at both intersections were angle and rear end. No fatalities occurred at the study intersections and the majority of the collisions were property damage only. Improvements have been constructed or will be constructed in the near future at both, such that safety conditions should improve as left-turn movements are being restricted at both locations. One pedestrian or bicyclist collisions were reported at the study intersections over the five-year period at the intersection of S Lindeke Street/W 14th Avenue in 2017 where a passenger vehicle and a cyclist got into a collision while the vehicle was going straight in dark. It is to be noted that the cyclist was under the influence of alcohol.

[4] These were the 5 most recent years of collision data available at the time of the onset of the study.

The collisions per million entering vehicles (MEV) represents the number of collisions per one million entering vehicles at each intersection. The US 195/16th Ave intersection had the highest rate of approximately 0.87 collisions per MEV. Intersections with a rate greater than 1.0 collision per MEV are typically considered for further investigation to determine whether adverse conditions exist. As shown in Table 5, no study intersections experienced a rate of collisions per MEV greater than 1.0. With the exception of S Lindeke Street/W 14th Avenue with MEV of 1.52. The MEV at the intersection is significantly higher than of other intersections from lower volume the intersection handles. However, average annual collision rate 2 is low. Overall, no traffic safety issues requiring improvements were identified.

Expected and Predicted Intersection Crashes

Additional safety analysis was completed for WSDOT operated intersections in which improvements are planned using HSM spreadsheets[5] and Crash Modification Factors (CMFs) as coordinated with the City and WSDOT staff. HSM spreadsheets were developed by the TRB Highway Safety Performance Committee and are used to calculate expected and predicted crash rates by severity by inputting intersection parameters such as AADT by approach, number of lanes, lighting availability, and other parameters.

Table 9 below summarizes the findings completed for the future (2035) conditions. Full details including calculations and severity distributions are shown in Appendix E.

Table 9. Injury and Fatal Crash Reduction Summary at WSDOT US-195 Intersections

Location	Injury and Fatal Crash Frequency (crashes per year)[1]		
	Expected Crash Frequency	Predicted Crash Frequency	Annual Crash Reduction
4. US 195/W 16th Avenue	2.0	0.7	-1.2
5. US 195/North J-turn	0.3	1.0	0.0
6. US 195/W Thorpe Road	2.4	2.2	-0.1
7. US 195/South J-turn	0.3	0.8	0.0
8. US 195 SB Ramp West/Cheney Spokane Road	0.4	0.5	0.0
9. US 195 SB Ramp/Cheney Spokane Road	0.1	0.1	0.0
10. US 195 NB Ramp/Cheney Spokane Road	0.1	0.1	0.1
11. US 195/E Meadowlane Road	1.2	0.6	-0.6
12. US 195/S Hatch Road	0.9	0.4	-0.6

1. Based on a combined CMF calculated per the HSM spreadsheet using WSDOT collision data.

Based on the expected and predicted average crash frequency, the US 195/W 16th Avenue intersection has the largest potential for safety improvements with a reduction of 1.2 crashes per year. As previously mentioned, improvements to this intersection are planned to reduce conflicts turning conflicts. It is predicted that the North and South J-turn intersections are not anticipated to result in a decrease in injury and fatal crashes.

[5] http://safetyperformance.org/tools/

Project Impacts

The following sections summarize the proposed project's impacts on the surrounding street system. First, traffic volumes generated by the proposed project are estimated and then distributed and assigned to adjacent roadways within the study area. Next, project trips are added to future without-project traffic volumes and the potential impact to traffic operations are identified.

Trip Generation

Trip generation for the proposed project was based on established trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). As previously described, the project includes the development of 1,003 residential lots with a mix of 220 townhomes and 783 single-family homes. For the proposed land uses, Single-Family Attached Housing (LU #215) and Single-Family Detached Housing (LU #210) were used. Table 10 summarizes the resulting weekday daily, AM and PM peak hour vehicle trip generation for the proposed uses. Detailed trip generation calculations are provided in Appendix F.

Table 10. Estimated Weekday Vehicle Trip Generation

Land Use[1]	Size	Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
Single-Family Attached Housing (LU 215)	220 du	1,626	34	75	109	73	55	128
Single-Family Detached Housing (LU 210)	783 du	6,702	126	359	485	433	255	688
Total	**1,003 du**	**8,328**	**160**	**434**	**594**	**506**	**310**	**816**

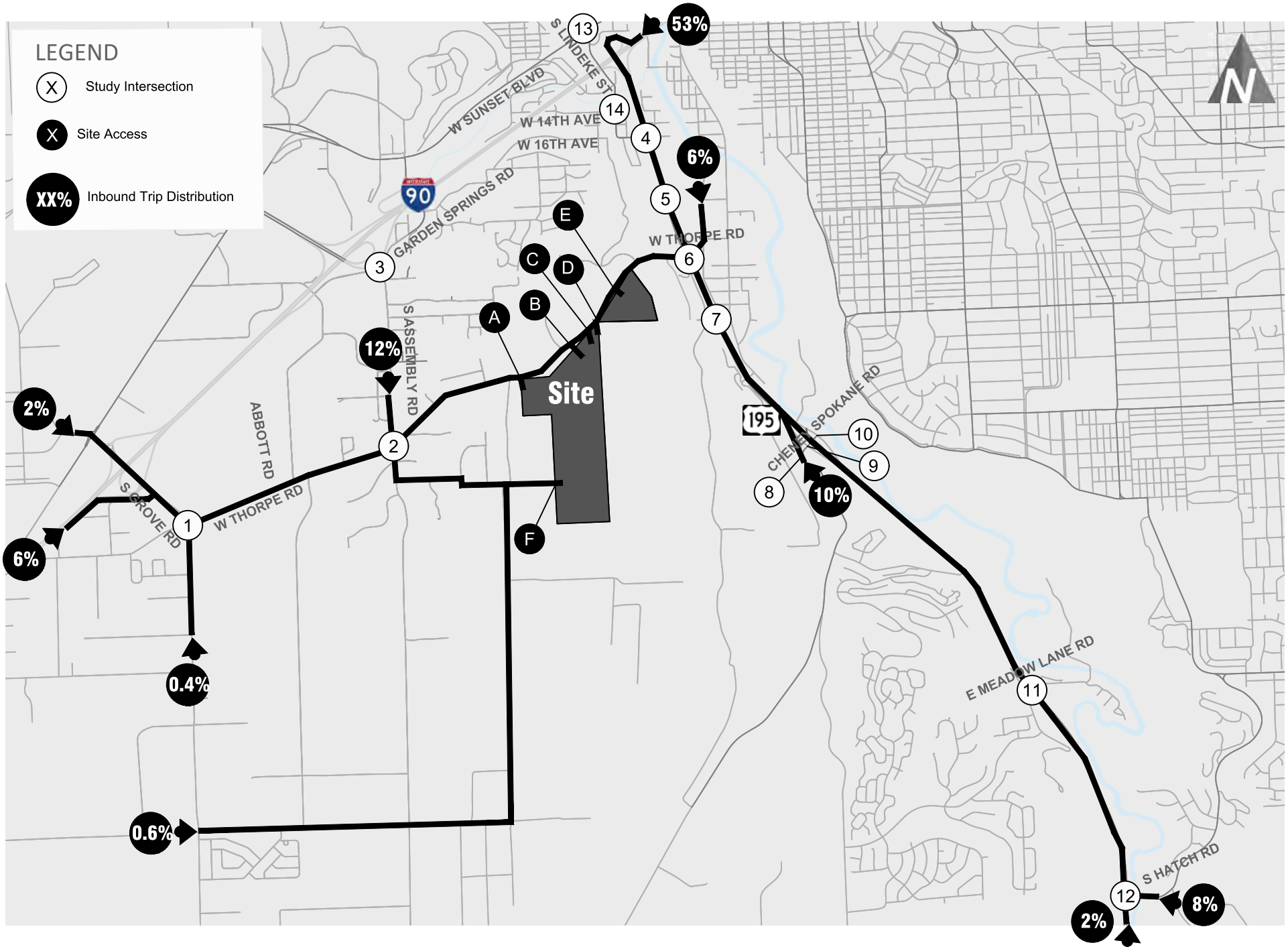
Note: du = dwelling units
1. ITE *Trip Generation Manual*, 11th Edition (2021)

As shown in Table 10, the proposed development is anticipated to generate 8,328 new weekday daily trips with 594 occurring during the AM peak hour and 816 occurring during the PM peak hour.

Trip Distribution & Assignment

Trip distribution patterns for the proposed uses to and from the site were developed based on review of previous studies in the area and coordination with WSDOT and the City of Spokane. The project trips shown in Table 10 were distributed and assigned to the surrounding roadways based on the distribution shown in Figure 7 and Figure 8. The weekday AM and PM peak hour assignment is shown in Figure 9.

As illustrated in the figures, the assumed project trip assignment as identified by City staff assigns all 40 percent of outbound project trips destined for eastbound I-90 to travel eastbound along Thorpe Road to southbound US-195, then requiring the vehicles to turn around via the south J-turn and access the metered eastbound I-90 on-ramp. Although not assumed, drivers may alternatively choose to travel westbound from the site along Thorpe Road and access I-90 via the Grove Road interchange, which is a slightly longer path but less circuitous and less congested based on the operational without-project analysis above.

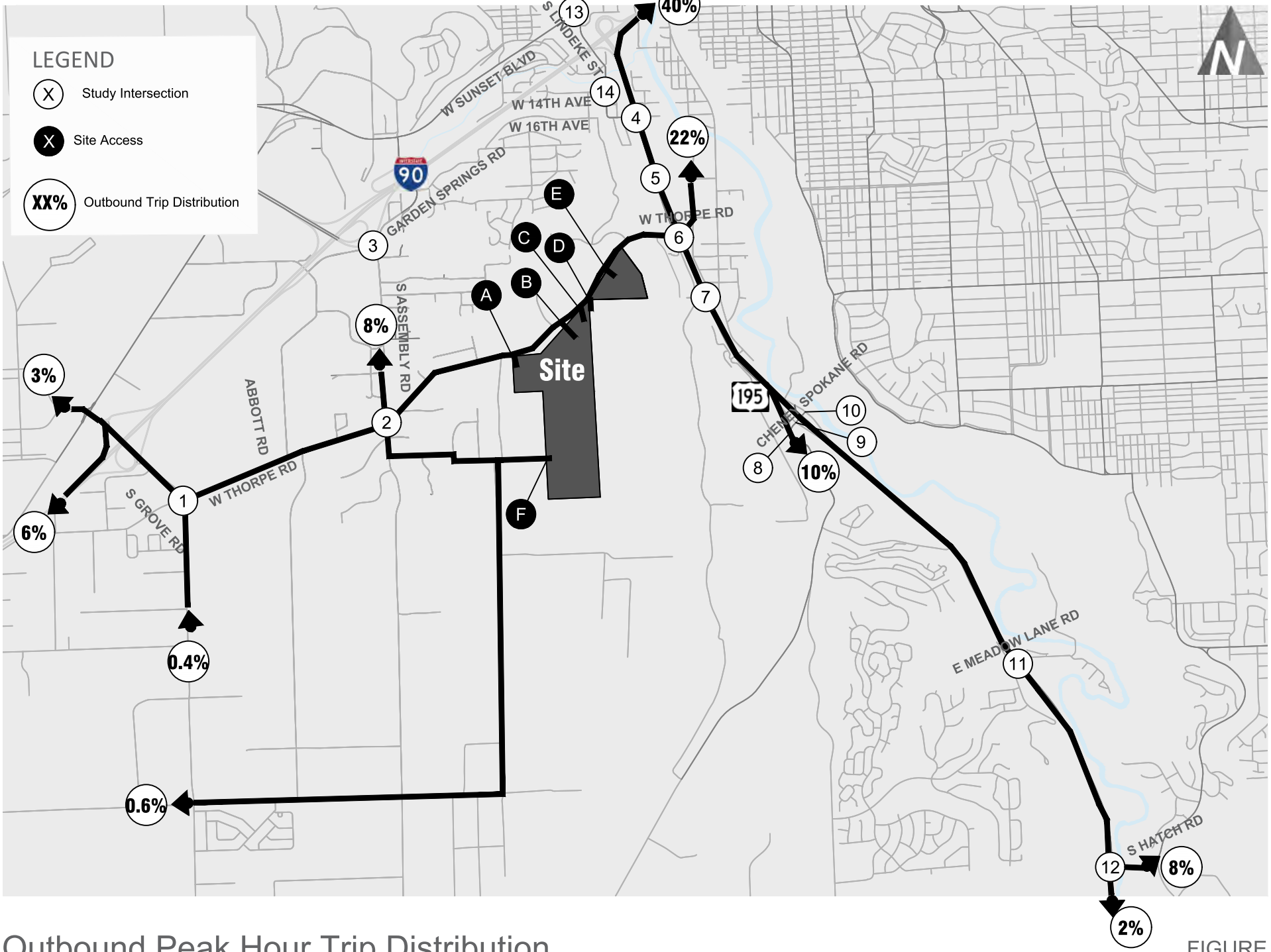


Inbound Peak Hour Trip Distribution

FIGURE 7

Blue Fern Victory Heights

transpogroup

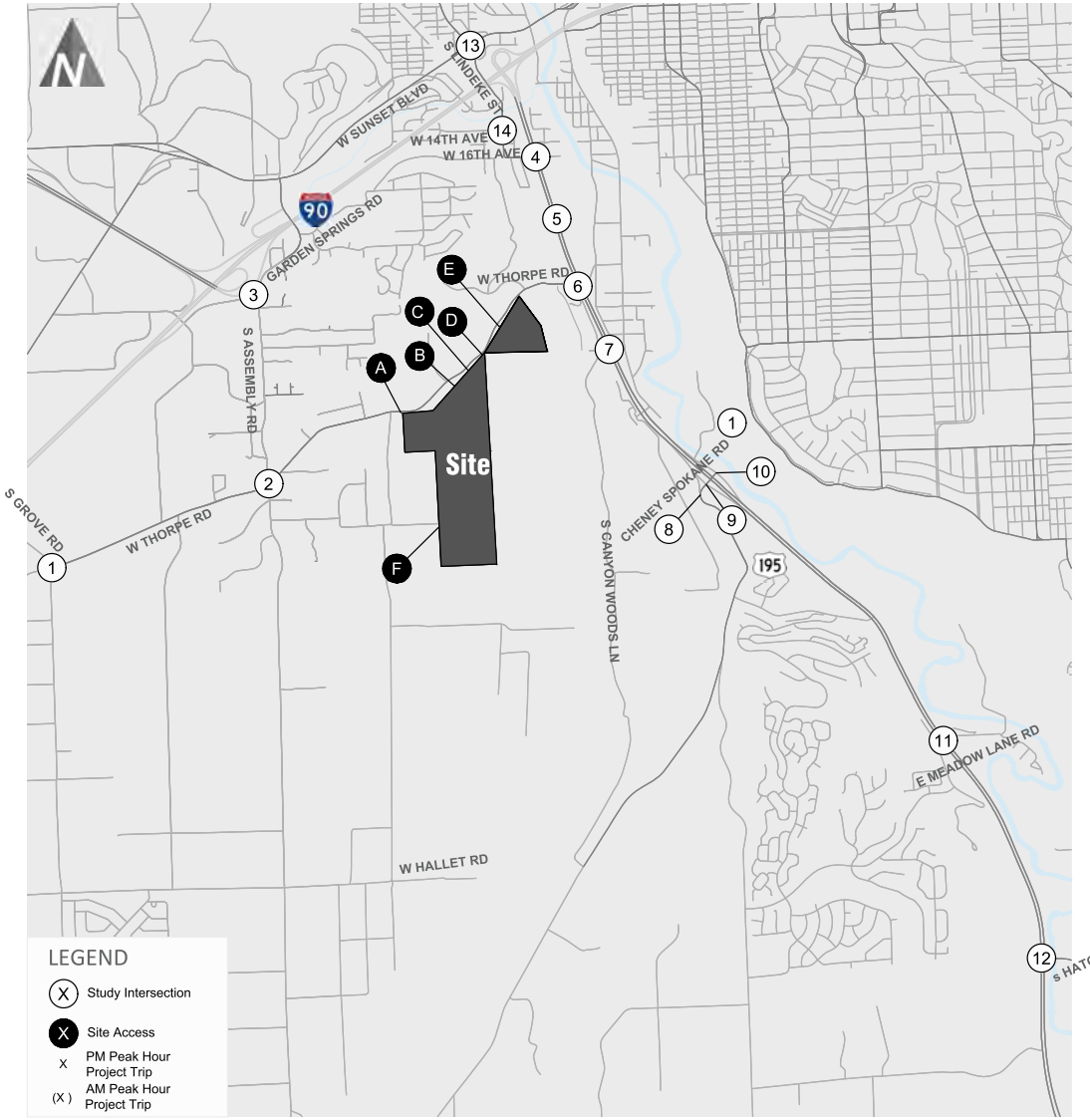


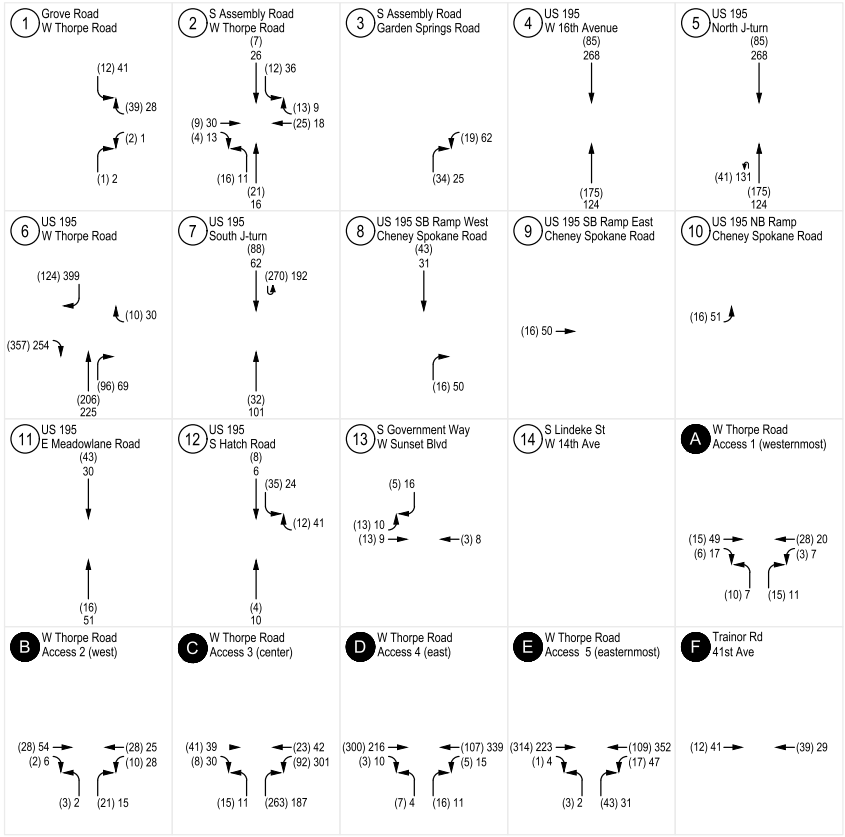
Outbound Peak Hour Trip Distribution

FIGURE 8

Blue Fern Victory Heights

transpogroup





Project Trip Assignment

Blue Fern Victory Heights

FIGURE 9

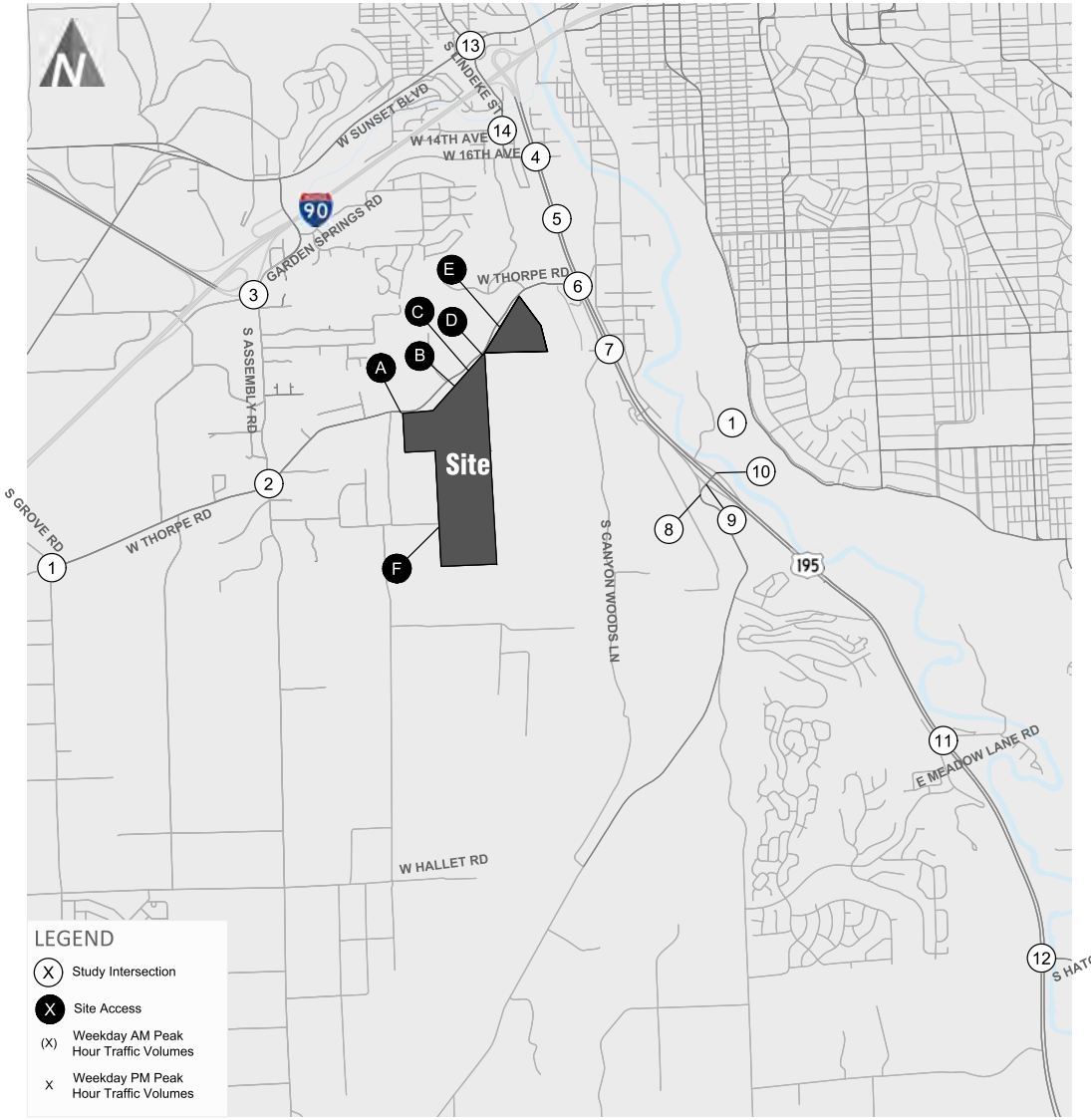
transpogroup

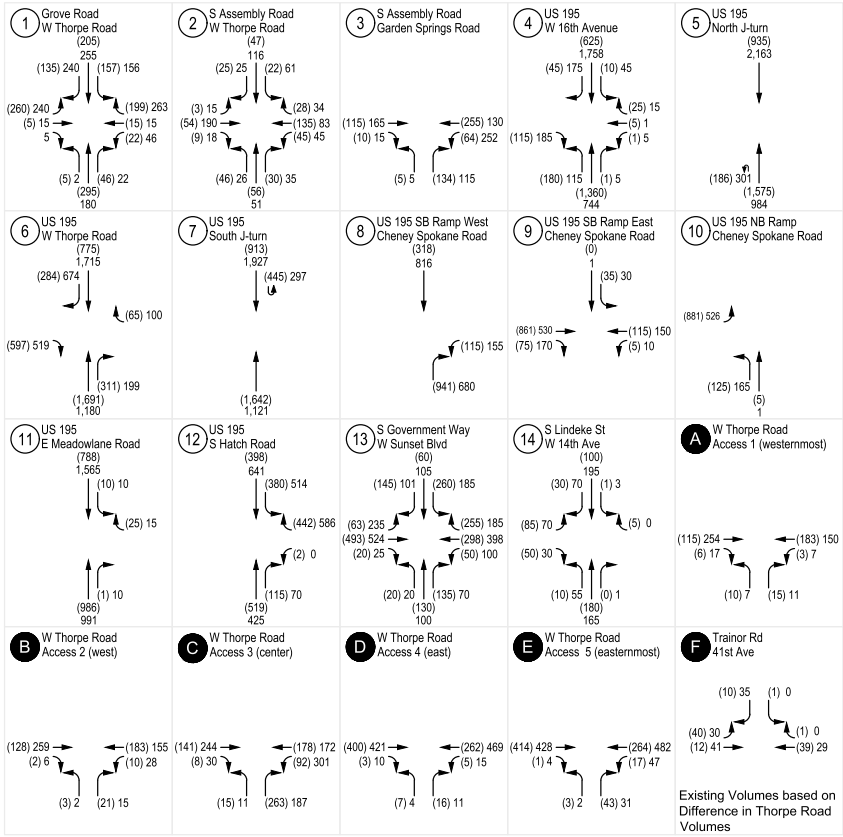
Traffic Volumes Impact

The project traffic was added to future (2035) without-project weekday peak hour traffic volumes to form the basis of the with-project analysis. The resulting future 2035 with-project weekday AM and PM peak hour traffic volumes are shown on Figure 10.

In addition to the with-project traffic volumes at the study intersections, the traffic volumes were also estimated at the US 195 to I-90 eastbound ramp as coordinated with WSDOT. Traffic volumes for the US 195 to I-90 interchange analysis were provided by WSDOT based on Permanent Traffic Recorder (PTR) data from March 2023 and tube count data collected August 2023 at the US 195/I-90 interchange.

The future (2035) without-project ramp volumes were forecast consistent with the methodology described above for the study intersections which included applying an annual growth rate of 1.0 percent to existing volumes, adding traffic generated from the 17 pipeline developments, and the adjustments associated with the extension of Inland Empire. Figure 11 shows the I-90 eastbound on-ramp from US 195 during both the weekday AM and PM peak hours under existing and future (2035) conditions.



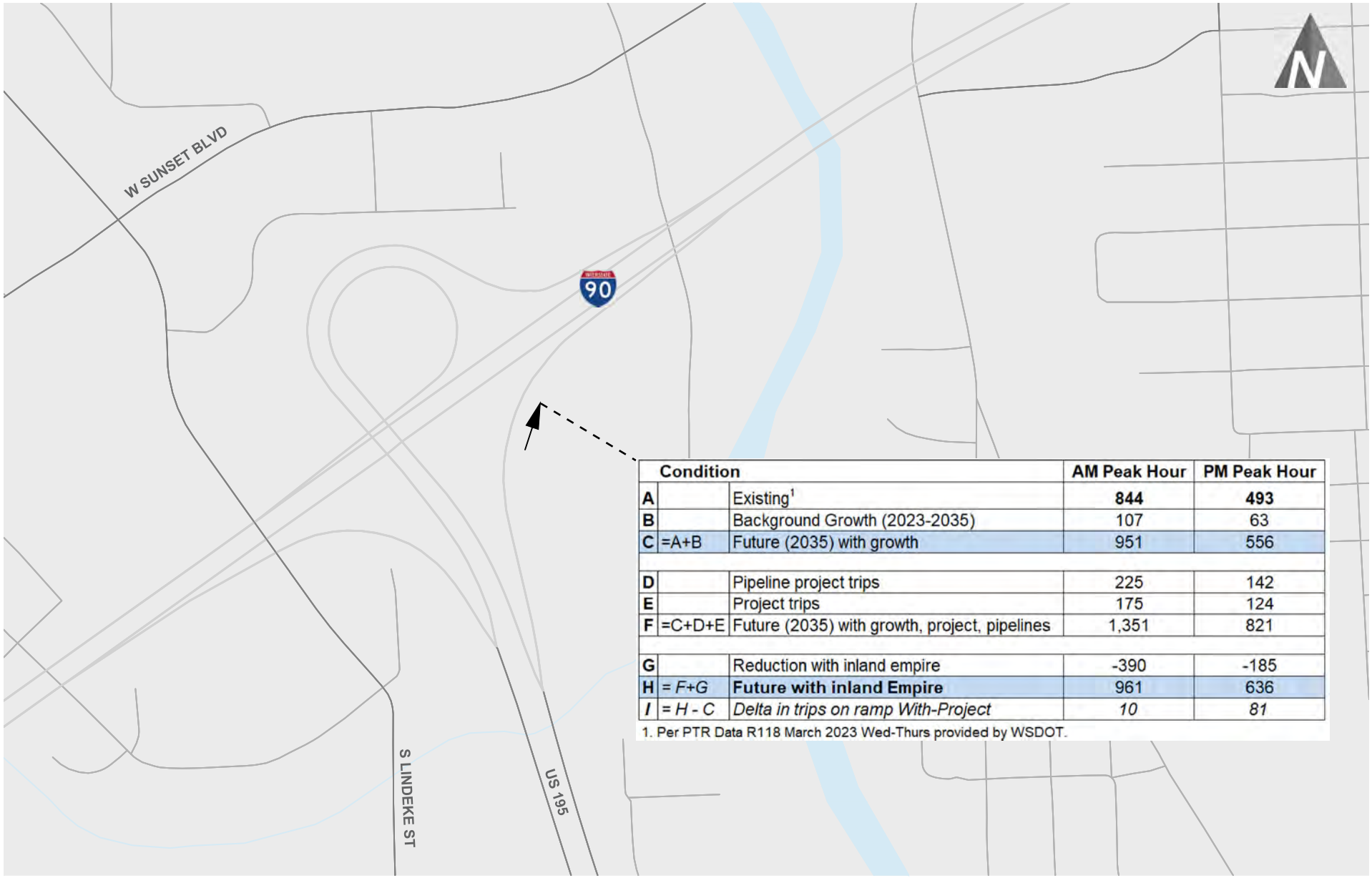


Future (2035) With-Project Weekday Peak Hour Traffic Volumes

Blue Fern Victory Heights

FIGURE **10**

transpogroup



	Condition		AM Peak Hour	PM Peak Hour
A		Existing[1]	**844**	**493**
B		Background Growth (2023-2035)	107	63
C	=A+B	Future (2035) with growth	951	556
D		Pipeline project trips	225	142
E		Project trips	175	124
F	=C+D+E	Future (2035) with growth, project, pipelines	1,351	821
G		Reduction with inland empire	-390	-185
H	*= F+G*	**Future with inland Empire**	961	636
I	*= H - C*	*Delta in trips on ramp With-Project*	*10*	*81*

1. Per PTR Data R118 March 2023 Wed-Thurs provided by WSDOT.

Future Without and With-Project (2035) WSDOT I-90 Interchange Volumes

FIGURE **11**

Victory Heights

transpogroup

Traffic Operations Impact

A future (2035) with-project level of service analysis was conducted for the weekday peak hours at the study intersections to analyze traffic impacts of the proposed project. The same methodologies were applied as described for existing and future without-project conditions. A comparison of future (2035) without-project and with-project weekday peak hour traffic operations is summarized in Table 11. Detailed LOS worksheets are provided in Appendix D.

Table 11. Future Without-Project and With-Project Peak Hour LOS Summary

Intersection	Traffic Control	2035 Without-Project			2035 With-Project		
		LOS[1]	Delay[2]	WM[3]/ v/c[4]	LOS	Delay	WM/ v/c
AM Peak Hour							
1. S Grove Rd/W Thorpe Rd	RAB	A	7.8	0.43	A	7.9	0.44
2. S Assembly Rd/W Thorpe Rd	AWSC	A	8.3	-	A	8.9	-
3. S Assembly Rd/Garden Springs Rd	TWSC	A	9.6	NB	A	9.8	NB
4. US 195/W 16th Ave	TWSC	E	45.5	WB	**F**	**72.0**	**WB**
5. US 195/North J-turn	TWSC	B	11.1	NBL	B	12.4	NBL
6. US 195/W Thorpe Rd	TWSC	C	19.0	WB	**F**	**86.0**	**EB**
7. US 195/South J-turn	TWSC	D	25.5	SBL	**F**	**211.7**	**SBL**
8. US 195 SB Ramp/Cheney Spokane Rd	TWSC	B	11.9	WB	B	12.5	WB
9. US 195 SB Ramp East/Cheney Spokane Rd	TWSC	E	24.7	SB	E	25.4	SB
10. US 195 NB Ramp/Cheney Spokane Rd	TWSC	**F**	**543.9**	**NB**	**F**	**582.5**	**NB**
11. US 195/E Meadowlane Rd	TWSC	B	13.3	WB	B	13.4	WB
12. US 195/S Hatch Rd	TWSC	C	23.6	WB	C	25.0	WB
13. S Government Way/ W Sunset Blvd	Signal	C	23.0	-	C	20.6	-
14. S Lindeke Street/W 14th Ave	TWSC	B	11.6	EB	B	11.6	EB
PM Peak Hour							
1. S Grove Rd/W Thorpe Rd	RAB	A	7.0	0.35	A	7.2	0.39
2. S Assembly Rd/W Thorpe Rd	AWSC	A	9.4	-	B	11.1	-
3. S Assembly Rd/Garden Springs Rd	TWSC	B	10.3	NB	B	10.7	NB
4. US 195/W 16th Ave	TWSC	**F**	**127.2**	**WB**	**F**	**582.8**	**WB**
5. US 195/North J-turn	TWSC	E	40.1	NBL	**F**	**294.1**	**NBL**
6. US 195/W Thorpe Rd	TWSC	**F**	**95.7**	**EB**	**F**	**479.9**	**EB**
7. US 195/South J-turn	TWSC	B	12.3	SBL	C	20.9	SBL
8. US 195 SB Ramp/Cheney Spokane Rd	TWSC	D	28.3	WB	D	30.7	WB
9. US 195 SB Ramp East/Cheney Spokane Rd	TWSC	C	16.5	SB	C	17.5	SB
10. US 195 NB Ramp/Cheney Spokane Rd	TWSC	**F**	**55.0**	**NB**	**F**	**83.5**	**NB**
11. US 195/E Meadowlane Rd	TWSC	B	12.2	WB	B	12.6	WB
12. US 195/S Hatch Rd	TWSC	D	25.6	WB	D	31.8	WB
13. S Government Way/ W Sunset Blvd	Signal	C	21.6	-	C	21.8	-
14. S Lindeke Street/W 14th Ave	TWSC	B	14.4	EB	B	14.4	EB

Note: TWSC = two-way stop-controlled, AWSC = all-way stop-controlled, RAB = roundabout. **Bold** text indicates intersection operates below standard.

1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 6th Edition)
2. Average delay per vehicle in seconds.
3. Worst Movement (WM) shown for two-way stop-controlled intersections. EB = eastbound approach, WB = westbound approach, SB = southbound approach, NBL = northbound left-turn movement, SBL = southbound left-turn movement, WBL = westbound left-turn movement.
4. Volume to capacity is reported for roundabouts.

As shown in Table 11, the study intersections are forecast to operate below the respective standard with the exception of 5 study intersections during the AM and/or PM peak hours which are discussed below.

US 195/W 16th Avenue – The intersection is forecast to operate at LOS F during both the weekday AM and PM peak hours with-project, degrading from LOS E and LOS F operations under without-project conditions. As identified above, the poor operations of the westbound approach are associated with low turning movement volumes (5 vehicles or less).

US 195/North J-turn – This northbound J-turn movement is forecast to operate at LOS B during the AM peak hour during both the without and with-project conditions. During the PM peak hour, the northbound J-turn movement is forecast to degrade from operating at LOS E under without-project conditions to LOS F with the project. Queueing is reviewed in the table below.

US 195/W Thorpe Road – The eastbound right-turn movement is forecast to operate at LOS F during both the weekday AM and PM peak hours with-project, degrading from LOS C and LOS F operations during the AM and PM peak hours, respectively, under without-project conditions. Queueing is reviewed in the table below.

US 195/South J-turn – The southbound left-turn movement is forecast to operate at LOS C during the weekday PM peak hours with-project. During the weekday AM peak hour the southbound left turn movement is forecast to degrade from LOS D to LOS F. Queueing is reviewed in the table below.

US 195 NB Ramp East/Cheney Spokane Road – The northbound left-turn movement of this intersection is forecast to operate at LOS F during both the weekday AM and PM peak hours both without and with the project.

Further review of these locations is provided in the Findings, Road Improvements and Mitigation section below.

A queuing analysis was conducted at the North J-Turn, W Thorpe Road, and South J-Turn intersections along US 195 during both AM and PM peak hours. The 95th percentile queues were reviewed in synchro consistent with the methodology for the intersection LOS analysis above.

Table 12. 95th Percentile Queueing Summary along US 195

Location	Movement	Storage Length (ft)[1]	95th Percentile Queues (ft)		
			Existing	2035 Without-Project	2035 With-Project
AM Peak Hour					
5. US 195/North J-turn	NBL	350	<25	25	30
6. US 195/W Thorpe Rd	EBR	480	<25	55	465
7. US 195/South J-turn	SBL	315	<25	*75*	***585***
PM Peak Hour					
5. US 195/North J-turn	NBL	350	<25	105	**490**
6. US 195/W Thorpe Rd	EBR	480	<25	260	**980**
7. US 195/South J-turn	SBL	315	<25	25	100

Notes: EBR = Eastbound right-turn, NBR = Northbound right-turn, SBL = Southbound left-turn, NBL = Northbound left-turn.
Bold text indicates vehicle queue lengths exceeds available storage.
1. Storage length based on the length of the pocket for turning movements and the distance between the next adjacent intersection or driveway for through movements. Storage for EBR along Thorpe Road represents distance from US195 to eastern tunnel.
2. Queue lengths rounded to the nearest 25 feet. Queue lengths at unsignalized intersections assume a queue length of 25 feet per car.

As shown in Table 12, per the non-simulation analysis, with the addition of the project, the NBL at US 195/North J-Turn and EBR at US 195 EB/W Thorpe Road during the PM peak hour as well as the SBL at the US 195/South J-Turn are forecast to exceed the available storage. Further review of these locations is provided in the Findings, Road Improvements and Mitigation section below. Additionally, simulation at US 195 EB/W Thorpe Road is provided in the Vissim analysis below.

Thorpe Tunnel Impacts

As identified above, the analysis of the tunnels is not based on any adopted concurrency LOS, because this is not an intersection-based analysis. The City's request for the analysis is to identify impacts for purposes of SEPA. As there are no adopted standards, per concurrency, this analysis focuses on the interaction of vehicles between the tunnels and the adjacent US 195/Thorpe intersection and identifies when the flow of vehicles is not possible.

Additionally, as noted above, the tunnels are currently substandard as a matter of engineering design. Each tunnel has a height limitation of 13 feet and 2 aligning on the south side of the tunnel at the 1 foot curb that exists. Current operations are limited to 9-foot travel lanes and signage identifies "One truck at a time in tunnel", frequently resulting in single lane operations today.

The improvements discussed below are concepts which would alleviate the existing conditions regardless of the project as requested by City staff and reflect the City's preferred improvement strategy's. There are additional improvement options that could be considered that are not reflected below following conversations with City staff.

With-project operations for each of the eight years of the project development phases were evaluated by adding the forecasted demands specific to the planned project development phases to the without-project demands. Table 13 presents the PM peak hour demands for each project phase split by those trips that will travel through the Thorpe Road tunnels in each direction, as well as the US 195 through trips traveling southbound past Thorpe Road.

Table 13. Vissim Scenarios: Peak Hour Demands by Phase (With-Project)

Vissim Scenario #	Phase (Year) & Development Conditions	Total PM Peak Hour Demands (vph)		
		Thorpe Tunnels EB	Thorpe Tunnels WB	US 195 SBT
12	ϕ1 (2026) with Project	291	317	1,598
13	ϕ2 (2027) with Project	307	342	1,610
14	ϕ3 (2029) with Project	336	385	1,636
15	ϕ4 (2030) with Project	389	471	1,649
16	ϕ5 (2032) with Project	453	577	1,676
17	ϕ6 (2033) with Project	476	614	1,690
18	ϕ7 (2034) with Project	505	660	1,703
19	ϕ8 (2035) with Project	529	693	1,717

Note: EB = eastbound, WB = westbound, SBT = southbound through.

The future forecast volumes were established using the trip distributions described in Trip Distribution & Assignment section and were also assumed to have a vehicle fleet mix consistent with the existing conditions traffic: 74% cars, 19% SUVs, 6% trucks, and 1% buses.

The methodology for the with-project evaluation is consistent with the without-project conditions as described above. The full set of detailed performance metrics is included in Appendix H.

Numerous improvements options were evaluated at the tunnels and the adjacent US 195 intersection that continue to add improvements to the existing facility over time to alleviate the forecast congestion. After a review of the Vissim simulation results of the tested improvements and development timeline results, a series of staged improvements that could be implemented over time were identified and are summarized below beginning with Stage 1 aligning with the acceleration lane identified above under the without-project evaluation. It should be noted that the analysis results are dependent on the trip generation and distribution assumptions outlined previously in this report. As time progresses and individual initial pipeline developments and project phases are built, conditions should be monitored and compared against the underlying assumptions. For example, should project site traffic choose to enter and/or exit the site using roadways other than US 195 via Thorpe Road such as using the Grove Road interchange to

access I-90 eastbound as described above, the timeline between staged improvements should be reevaluated with observed changes in traffic demands for Thorpe Road.

- ***With the acceleration lane along southbound US 195*** - The with-project conditions were evaluated with the acceleration lane along southbound US 195 as it is recognized without the acceleration lane, the proposed project would only further accelerate the queueing and congestion identified in the existing and without-project vissim analysis (see Table 6). As shown above, the simulation results showed that under the current tunnel conditions following the completion of the background pipeline projects by 2026, Thorpe Road has queues extending to or through the adjacent tunnels and/or intersections and therefore preventing the flow of vehicles. The primary cause for the congestion is the queuing that develops at the existing stop sign for traffic to turn from Thorpe Road to southbound US 195. The analysis further identified that with the addition of an acceleration lane along southbound US 195 at Thorpe Road, the deficiency identified under the future without-project conditions, would be resolved.
- ***Add signal Controls to both tunnels*** – Acceleration lane as well as add signalized controls for both of the tunnels.
- ***Widen East Tunnel*** – Acceleration lane, signalized controls for the western tunnel, and widening of the eastern tunnel to allow for two-way travel (signal at the eastern tunnel no longer needed).
- ***Widen West Tunnel*** – Acceleration lane and both tunnels widened allowing for two-way travel (signals at the tunnels no longer needed).

As noted above, there are numerous alternatives for system improvements to US 195, Thorpe Road and its tunnels. The below is only one potential staging approach to such improvements, aligning with the City's preference identified through conversations with staff.

Table 14. Tunnel Staging Overview

Stage	Improvement	Improvement Triggered by:	Weekday PM Peak Hour Project Trips	
			Total	Assumed Through Tunnel[1]
1	Add Southbound Acceleration Lane on US 195 from Thorpe Road	Background Growth: *future (2027) without-project conditions*	-	-
2	Add Signal Controls to Both Tunnels	Victory Heights Phase 4	207	172
3	Widen the East Tunnel	Victory Heights Phase 5	379	308
4	Widen the West Tunnel	Victory Heights Phase 6	587	471

1. The project trips through the tunnel align with the assumed project trip distribution.

As shown in the table, the analysis suggests there would be recommended improvements in the vicinity of the tunnels aligning with the project's phases 4-6. The total weekday PM peak hour project trips with each of these phases is shown as well as the assumed project trips through the tunnel. The trips through the tunnel are assumed per the project's trip distribution as coordinated with City staff, equating to approximately 80 percent of project trips through the tunnel. If development trips or background assumptions do not materialize as anticipated in the forecasts, these improvement recommendations and timelines would need to be revaluated.

Site Access Analysis

As noted above, the site will be accessed via six proposed driveways, along W Thorpe Road and S Trainor Road. Trips were assigned to the site driveways based on relative development density of the site plan, location of access points, and distribution patterns for the project trips. The operations at the driveways were evaluated consistent with the methodology for the off-site intersections described above. 0 summarizes the traffic operations at the site driveways under

with-project weekday AM and PM peak hour conditions. Detailed LOS worksheets are provided in Appendix D.

Table 15. Site Access Future (2035) With-Project Weekday Peak Hour LOS Summary

Site Access	AM Peak Hour			PM Peak Hour		
	LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM
A. W Thorpe Road/Westernmost Site Access	A	9.0	NB	B	10.6	NB
B. W Thorpe Road/West Site Access	A	9.7	NB	B	10.2	NB
C. W Thorpe Road/Central Site Access	B	11.6	NB	B	13.7	NB
D. W Thorpe Road/East Site Access	B	12.2	NB	B	13.4	NB
E. W Thorpe Road/Easternmost Site Access	B	11.8	NB	B	12.1	NB
F. S Trainor Road/W 41st Avenue	A	8.4	SB	A	8.6	SB

1. Level of Service (A – F) as defined by the *Highway Capacity Manual, 6th Edition* (TRB, 2017)
2. Average delay per vehicle in seconds.
3. Worst Movement reported for stop-controlled intersections. WB = westbound, NB = northbound.

As shown in 0, the site access driveways are forecast to operate at LOS B or better during the weekday AM and PM peak hour with the project.

Non-Motorized Impacts

The nearest stop to the project site is located approximately 3 miles north of the site along W Sunset Boulevard and 3 miles east of site along W 14th Avenue. Sidewalks will be constructed along the project frontages increasing the pedestrian network in the area.

Findings, Road Improvements, and Mitigation

As illustrated above, the proposed project would construct up to 220 townhomes and 783 single-family homes and is anticipated to generate 8,328 new daily trips with 594 occurring during the AM peak hour trips and 816 occurring during the PM peak hour trips.

With the completion of the project, it is anticipated that 5 intersections would operate below standard during the AM and/or PM peak hours including W 16th Avenue, North J-turn, W Thorpe Road, Cheney Spokane Road along US 195. In addition to impacts at the study intersections, impacts to the adjacent Thorpe Tunnels and US 195 to I-90 eastbound ramp were identified.

There are a number of regional improvements that are in varying stages of feasibility and implementation. These projects include the Inland Empire Extension, the Lindeke Street extension project, the Thorpe Road crossing, and updates to the tunnels.

Overview of Improvements

An overview of the improvements in the area and the trigger of when the improvements are needed are provided below in Table 16. A summary map of the improvements is provided in Figure 12. Note that the findings of improvements and timing is based on the volume forecasts assumptions in the analysis above including background growth, pipeline development, distribution of project trips, etc. If these assumptions do not come to fruition, the findings and recommendations would also change.

Table 16. Summary of Identified Improvements

Intersection	Improvement[1]	Timing[2]
4. US 195/W 16th Ave	Delay related to a limited number of trips (1-5 in the AM and PM peak hours). Options to consider allowing for continued LOS F operations for the limited number of vehicles or to restrict the WBL similar to the imposed EBL restriction.	Without-Project
5. US 195/North J-turn	Extend queue storage to accommodate northbound queueing.	Triggered with the development of Victory Heights **Phase 5** (379 PM peak hour project trips)
6. US 195/W Thorpe Rd	Add Southbound Acceleration Lane on US 195 from Thorpe Road	Without-Project
7. US 195/South J-turn	Close South J-turn.	Triggered with the development of Victory Heights **Phase 5** (280 AM peak hour project trips)
10. US 195 NB Ramp/Cheney Spokane Rd	Preliminary review suggests the need of a roundabout as signal and all-way stop resulted in excessive eastbound queuing. Further review would be needed by WSDOT through an intersection control evaluation (ICE).	Without-Project
Regional Project[3]		
A. Inland Empire connection to US 195 ramp	Extend the current terminus of Inland Empire to the south connecting with US 195 ramp	Without-Project
B. Modify Thorpe Road Tunnels.	• Signalizing tunnels • Widening tunnels *** Modifications at the adjacent US 195/W Thorpe Rd shown to be needed without-project recommending a Southbound Acceleration Lane on US 195 from Thorpe Road to not impact tunnels.*	Currently deficient to accommodate two-way traffic for larger width trucks, limited in height for larger vehicles. The Vissim model showed updates to the tunnels are triggered with Victory Heights **Phase 4** (172 PM peak hour project trips through the tunnel). *Assumes the implementation of Southbound Acceleration Lane on US 195 from Thorpe Road already in place.*
C. US 195 to I-90 EB Ramp	The volumes at this location are mitigated by providing alternative connections such as Inland Empire, Lindeke Street Extension, Thorpe Road Crossing, etc.	Without-Project.
D. Lindeke Street Extension	• Extension of Lindeke St • Closure of west leg of US 195/16th Ave • Closure of South J-Turn lane • Roundabout at Thorpe Rd/Lindeke St • Fish Lake Trail Bridge Replacement	Triggered by closure of US 195/South J-Turn
E. Thorpe Road Crossing (alternative to Lindeke Extension)	Feasibility study is currently being conducted.	Triggered by closure of US 195/South J-Turn

1. Victory Heights will mitigate its added traffic impacts to the region through payment of its Traffic Impact Fees discussed below.
2. Assuming the traffic volume forecasts per the analysis above including assumptions of background growth, pipeline development, distribution of project trips, etc.
3. These regional projects are all identified within the *US 195/I-90 Transportation Study* (December 2021).

As shown in the table, there are a number of regional improvements that are being considered, all of which are included in the *US 195/I-90 Transportation Study* (December 2021). The implementation of these regional improvement projects are anticipated to generally resolve the operational challenges identified above.[6] Confirmation of the acceptable operations with the implementation of the regional improvements are reviewed in the section below.

[6] An exception being the US 195 NB Ramp/Cheney Spokane Rd intersection as this operational challenge is a background condition that was not previously identified in traffic studies due to limitations of the software and non-traditional movements of the intersection.

Improvement Map

Victory Heights

FIGURE 12

transpogroup

Regional Improvement Implementation Review

The *US 195/I-90 Transportation Study* (December 2021) has identified a large number of projects that would benefit the region including 5 regional projects shown in Table 16. At this time the Thorpe Road Crossing is undergoing a feasibility study; however, as the study is not complete, the benefits and feasibility of this alternative improvement are unknown and therefore was not evaluated at this time. Instead, the regional improvement implementation review focuses on the implementation of the other improvements including the Inland Empire Extension and Lindeke Street Extension. Note the future (2035) without-project and with-project analysis above already included the Inland Empire connection as the City had previously conditioned the included pipeline developments to include this connection.

Based on coordination with City and WSDOT staff, the Lindeke Street Extension and corresponding improvements, aligning with the *US 195/I-90 Transportation Study* (December 2021) were evaluated to determine future operating conditions with the project. Elements of the US 195 plan reflected in this analysis include:

- Lindeke Street extension from existing terminal to Thorpe Road
- South Thorpe J-turn closure
- Fish Lake Trail bridge/16th replacement
- 16th Avenue West leg closure
- Thorpe Road /Lindeke Street Roundabout

The effects of these identified improvements that would be implemented at the study intersections with the Lindeke Street Extension project are reviewed below. The traffic volumes and traffic operations at the study intersections as a result of the Lindeke Street Extension project and associated elements are reviewed below. The Thorpe Road/Lindeke Street roundabout is included as a study intersection.

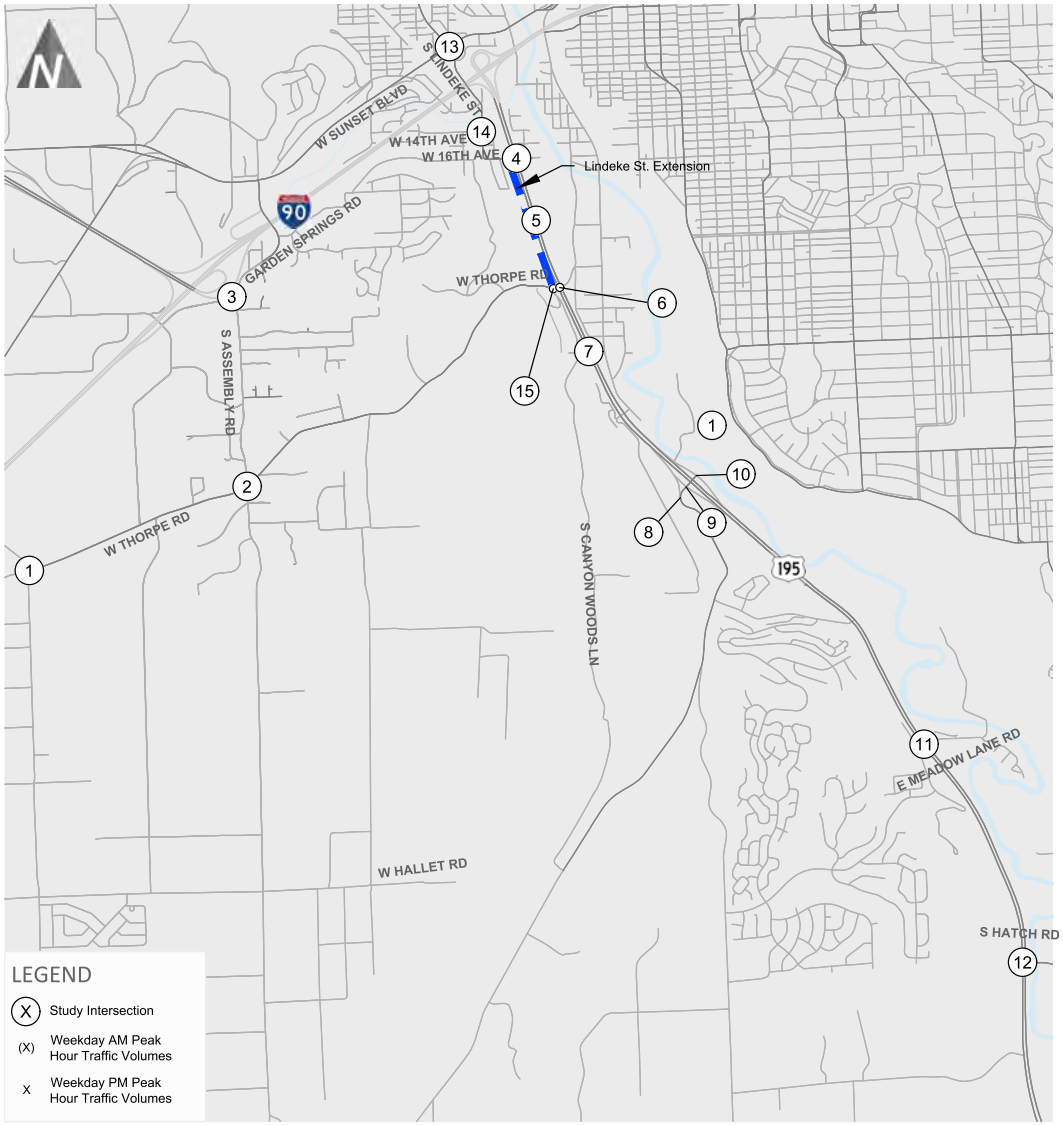
Traffic Volume Forecasts

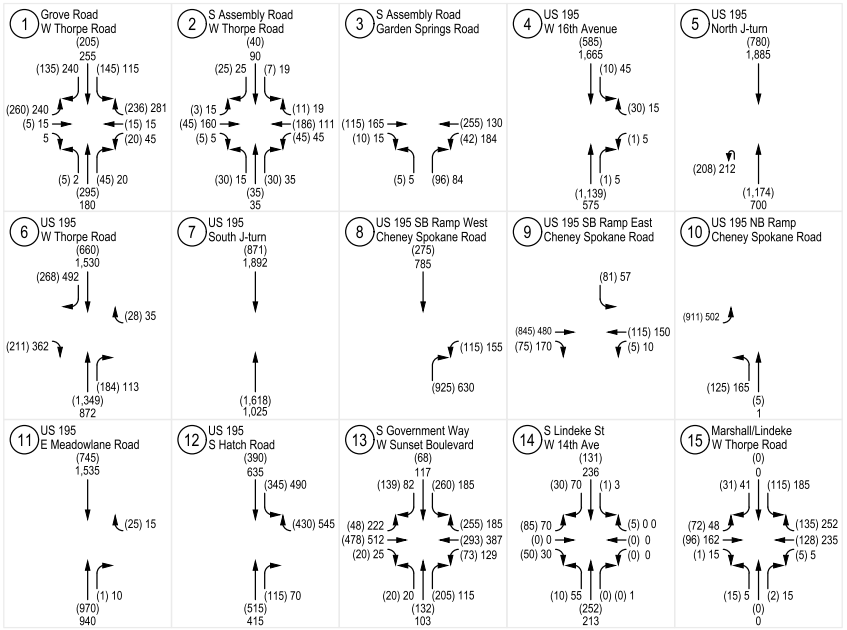
Traffic volumes with the Lindeke Street extension regional improvement was reviewed under future (2035) conditions both with and without the project. As outlined above, the Lindeke Street Extension includes numerous elements that result in shifts in vehicles in the area. The key shifts assumed in the analysis include:

- The addition of the Lindeke Street providing an alternative path to downtown and general draw of local traffic from drivers who use alternative routes today
- The closure of the west leg of the US 195/16th Avenue intersection resulting in shifts of:
    - Northbound left-turn vehicles to use the north J-turn to Thorpe Road or the I-90 westbound ramp
    - Eastbound right turn vehicles to use Lindeke Street to Thorpe Road
- The closure of the South J-Turn resulting in shifts of vehicles to alternative routes such as Cheney Spokane Overpass to US 195 or Inland Empire, Lindeke Road, or routing further to the west to the Grove Street on-ramp

The detailed traffic volume shifts are included are detailed in Appendix I. The resulting future (2035) peak hour traffic volumes with the regional improvement both without and with the project are illustrated in Figure 13 and Figure 14, respectively.

An additional consideration as part of the Lindeke Street extension was to review volumes to the US-195 ramp to eastbound I-90, consistent with the traffic volumes forecasts above. The resulting volumes are summarized in Figure 15.



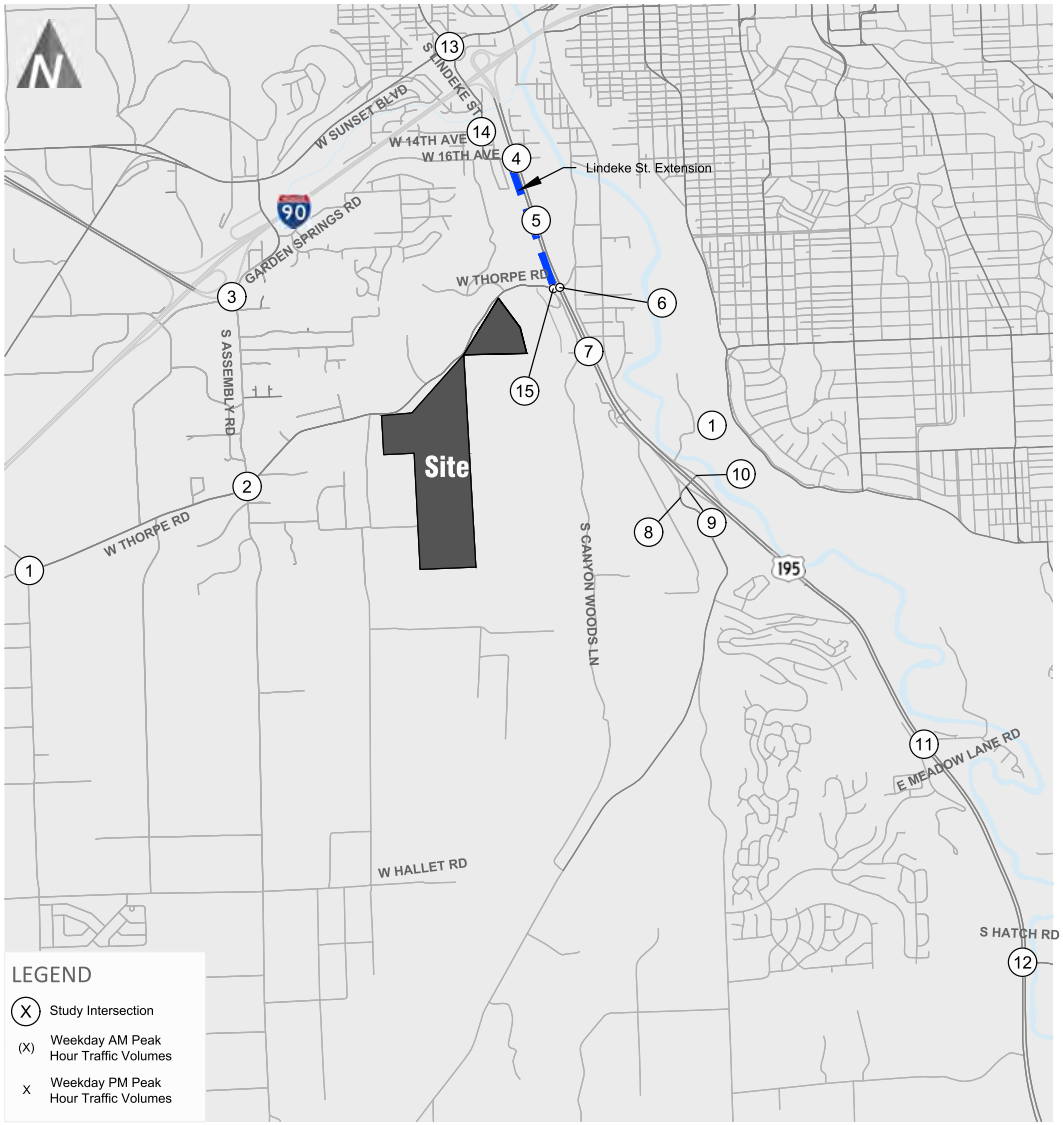


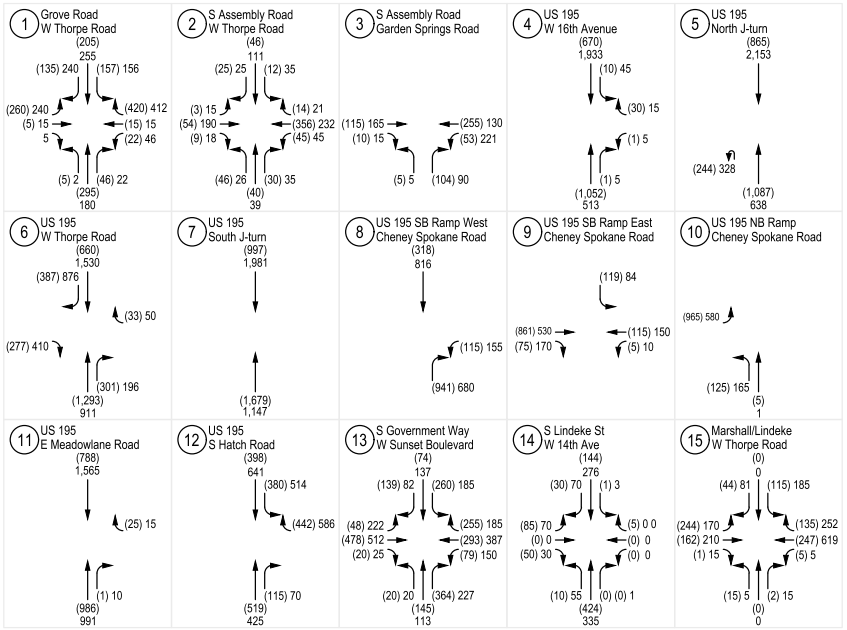
Regional Improvement Review - Future (2035) Without-Project Peak Hour Traffic Volumes at Study Intersections

Victory Heights

FIGURE
13

transpogroup



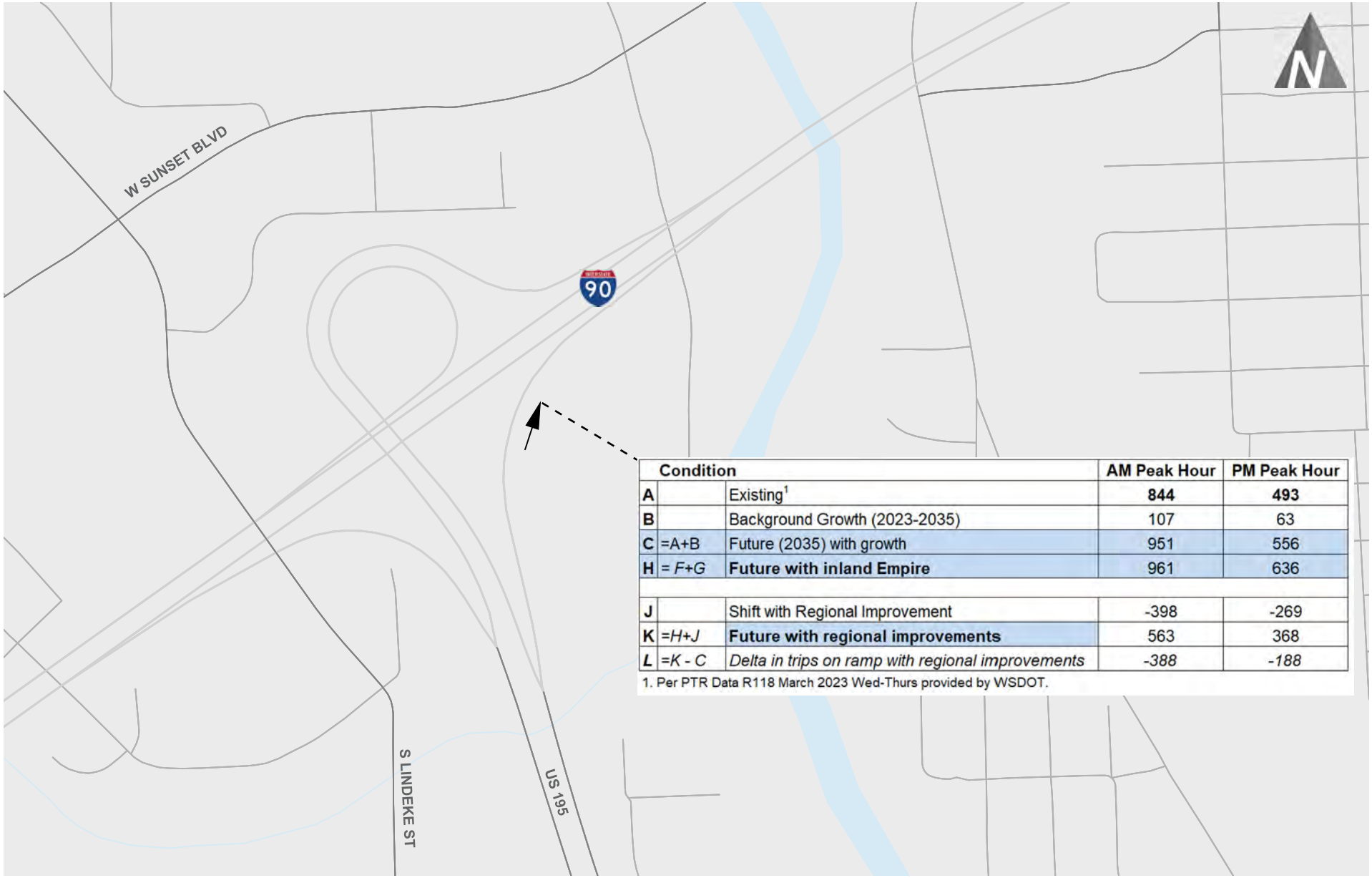


Regional Improvement Review - Future (2035) With-Project Peak Hour Traffic Volumes at Study Intersections

Victory Heights

FIGURE **14**

transpogroup



		Condition	AM Peak Hour	PM Peak Hour
A		Existing[1]	**844**	**493**
B		Background Growth (2023-2035)	107	63
C	=A+B	Future (2035) with growth	951	556
H	= *F+G*	**Future with inland Empire**	961	636
J		Shift with Regional Improvement	-398	-269
K	=*H+J*	**Future with regional improvements**	563	368
L	=*K - C*	*Delta in trips on ramp with regional improvements*	*-388*	*-188*

1. Per PTR Data R118 March 2023 Wed-Thurs provided by WSDOT.

Regional Improvement Review - Future (2035) Peak Hour Traffic Volumes US 195 to I-90 Eastbound On-Ramp

FIGURE **15**

Victory Heights

transpogroup

As identified above, the intent of the regional projects as noted in the *US 195/I-90 Transportation Study* (December 2021), is to *"create a more connected network for local trips, improve safety, preserve capacity on US 195 for regional trips, extend the life of the US 195/I-90 interchange".* Figure 15 demonstrates the implementation of the regional improvement project, the Lindeke Street extension, provides for a reduction in vehicles at the US 195 to I-90 Eastbound ramp, meeting the goals identified the *US 195/I-90 Transportation Study*.

Traffic Operations

The traffic operations with the implementation of the Lindeke Street Extension project were evaluated under future (2035) with-project weekday AM and PM conditions and compared to the future (2035) without- and with-project conditions. The operations are summarized in Table 17 below. The operational methodology assumed is consistent with the analysis completed for the project above. Detailed LOS worksheets are provided in Appendix D.

As shown in the table, with the implementation of the Lindeke Street extension project identified in the US 195/I-90 Transportation Study (December 2021) and corresponding elements, the intersections are shown to improve to meet standards with the exceptions as noted below.

US 195/North J-Turn – The northbound approach of the North J-turn operates at LOS F during the PM peak hours both with and without the project with the Lindeke Street extension. Note that the addition of the Lindeke Street extension itself provides relief from the North J-Turn movement; however, the closure of the west leg of 16th Avenue results in shifts in traffic and an increase in vehicles using the North J-Turn. The 95th percentile queue is estimated to be approximately 23 vehicles with the Lindeke Street extension project representing a slight increase in queueing relative to the future (2035) with-project condition. Maintaining the northern J-turn is necessary to provide connectivity to/from the south along US 195 to Thorpe west of US 195 and development to the north. As noted in Table 16, it is anticipated the northbound left-turn lane would be extended to accommodate the extended queue.

US 195/Thorpe Road – The eastbound right turn movement of this intersection is forecast to operate at LOS F with or without the project in the PM peak hour. As noted in Table 16, an acceleration lane along southbound US 195 to receive the eastbound right turn vehicles from Thorpe Road is recommended. This acceleration lane is further necessary with the addition of the closely spaced US 195/Thorpe Road roundabout controlled intersection.

US 195 NB Ramp/Cheney Spokane Road– The northbound left-turn movement of this intersection is forecast to continue to operate at LOS F during both the weekday AM and PM peak hours both with and without the project with Lindeke Street Extension. As noted in Table 16, preliminary review suggests the need of a roundabout as signal and all-way stop resulted in excessive eastbound queuing. Further review would be needed by WSDOT through an intersection control evaluation (ICE). *Note this level of service deficiency has not previously been identified at this location in traffic impact analyses for projects in the vicinity due to the non-traditional movements at the intersection and limitations of the software.*

The alternative Thorpe Road Crossing improvement project currently being studied is anticipated to provide congestion relief for both the North J-Turn and Cheney Spokane overpass intersections that is not provided from the Lindeke Street extension.

Table 17. Regional Improvement Review - AM and PM Peak Hour LOS Summary

	2035 Without-Project *With Lindeke St. Extension Project*			2035 With-Project *With Lindeke St. Extension Project*		
Intersection	**LOS[1]**	**Delay[2]**	**WM[3] or v/c[4]**	**LOS**	**Delay**	**WM or v/c**
AM Peak Hour						
1. S Grove Rd/W Thorpe Rd	A	7.8	0.43	A	8.9	0.66
2. S Assembly Rd/W Thorpe Rd	A	9.9	-	A	9.9	-
3. S Assembly Rd/Garden Springs Rd	A	9.6	NB	A	9.7	NB
4. US 195/W 16th Ave	C	15.2	WB	B	14.4	WB
5. US 195/North J-turn	B	11.3	NBL	B	12.7	NBL
6. US 195/W Thorpe Rd	C	16.1	WB	C	15.7	WB
7. US 195/South J-turn	A	0.0	-	A	0.0	-
8. US 195 SB Ramp/Cheney Spokane Rd	B	11.9	WB	B	12.5	WB
9. US 195 SB Ramp E/Cheney Spokane Rd	D	31.9	SB	E	44.7	SB
10. US 195 NB Ramp/Cheney Spokane Rd	**F**	**686.8**	**NB**	**F**	**883.4**	**NB**
11. US 195/E Meadowlane Rd	B	13.3	WB	B	13.4	WB
12. US 195/S Hatch Rd	C	23.6	WB	C	25.0	WB
13. S Government Way/ W Sunset Blvd	D	50.7	-	D	50.7	-
14. S Lindeke St/W 14th Ave	B	12.9	EB	C	16.2	EB
15. W Thorpe Rd/S Lindeke St	A	6.4	0.23	A	7.3	0.38
PM Peak Hour						
1. S Grove Rd/W Thorpe Rd	A	7.0	0.40	A	7.4	0.56
2. S Assembly Rd/W Thorpe Rd	B	10.7	-	B	10.7	-
3. S Assembly Rd/Garden Springs Rd	B	10.3	NB	B	10.5	NB
4. US 195/W 16th Ave	C	22.2	WB	C	23.7	WB
5. US 195/North J-turn	**F**	**56.3**	**NBL**	**F**	**343.9**	**NBL**
6. US 195/W Thorpe Rd	**F**	**145.1**	**EB**	**F**	**205.3**	**EB**
7. US 195/South J-turn	A	0.0	-	A	0.0	-
8. US 195 SB Ramp/Cheney Spokane Rd	D	28.3	WB	D	30.7	WB
9. US 195 SB Ramp E/Cheney Spokane Rd	C	17.7	SB	C	20.6	SB
10. US 195 NB Ramp/Cheney Spokane Rd	**F**	**68.0**	**NB**	**F**	**136.4**	**NB**
11. US 195/E Meadowlane Rd	B	12.2	WB	B	12.6	WB
12. US 195/S Hatch Rd	D	25.6	WB	D	31.8	WB
13. S Government Way/ W Sunset Blvd	D	46.5	-	D	46.5	-
14. S Lindeke St/W 14th Ave	C	16.3	EB	C	21.0	EB
15. W Thorpe Rd/S Lindeke St	A	5.9	0.38	A	7.3	0.75

Note: TWSC = two-way stop-controlled, AWSC = all-way stop-controlled, RAB = roundabout. **Bold** text indicates intersection operates below standard.

1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 6th Edition)
2. Average delay per vehicle in seconds.
3. Worst Movement (WM) shown for two-way stop-controlled intersections. EB = eastbound approach, WB = westbound approach, SB = southbound approach, NBL = northbound left-turn movement, SBL = southbound left-turn movement, WBL = westbound left-turn movement.
4. Volume to capacity is reported for roundabouts.

Traffic Impact Fees

The project's transportation impact fees were estimated per the City of Spokane's *Transportation Impact Fee Schedule* effective June 12, 2024 for the Latah District. Per the current fee schedule, the estimated fee for the project is $6,684,133.81 (see details in Table 18). The final fee will be calculated by City of Spokane at time of permit issuance.

Table 18. Estimated Transportation Impact Fee

Land Use	Size	Fee per unit[1]	Estimated Transportation Impact Fee
Single-Family Attached Housing (LU 215)	220 du	$4,422.88	$973,033.60
Single-Family Detached Housing (LU 210)	783 du	$7,293.87	$5,711,100.21
Total	**1,003 du**	**-**	**$6,684,133.81**

Note: du = dwelling units
1. City of Spokane's *Transportation Impact Fee Schedule* effective June 12, 2024 for the Latah District.

The project is shown to result in a significant amount of impact fees paid to the jurisdiction. Those fees are appropriate to address the project's impacts proportionate share of the improvements identified in Table 16 above.

Appendix A: Traffic Counts

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	30	2	0	14	2	0	17	1	0	18	1	0	31	2	0	23	1	0	20	4	0	19	6	0	24	2	0	23	0	0	9	1	0	12	3
	Through	0	1	1	0	2	0	0	1	0	0	2	1	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	1	0	0	2	0	0	2	0
	Right	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
	App. Total	0	31	3	0	17	2	0	18	1	0	20	2	0	32	2	0	23	1	0	22	4	0	19	7	0	26	2	0	26	0	0	11	1	0	14	3
	Pct HV		9%			11%			5%			9%			6%			4%			15%			27%			7%			0%			8%			18%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	0	0	0	2	0	0	6	0	0	0	0	0	1	1	0	2	0	0	0	2	0	1	2	0	2	0	0	5	0	0	2	1
	Through	0	3	1	0	5	0	0	3	0	0	3	0	0	3	0	0	5	0	0	2	0	0	4	1	0	3	0	0	1	1	0	4	0	0	2	0
	Right	0	16	4	0	17	1	0	13	3	0	16	1	0	23	3	0	16	2	0	11	2	0	18	0	0	10	4	0	18	3	0	10	1	0	7	1
	App. Total	0	21	5	0	22	1	0	18	3	0	25	1	0	26	3	0	22	3	0	15	2	0	22	3	0	14	6	0	21	4	0	19	1	0	11	2
	Pct HV		19%			4%			14%			4%			10%			12%			12%			12%			30%			16%			5%			15%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	1	0	0	2	1	0	0	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0
	Through	0	61	2	0	34	1	0	46	0	0	55	5	0	81	5	0	47	6	0	37	4	0	41	4	0	65	4	0	61	2	0	38	6	0	38	3
	Right	0	1	0	0	2	0	0	0	0	0	1	0	0	3	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	1	0	2	0	0	1	0
	App. Total	0	63	2	0	37	1	0	48	1	0	56	5	0	84	5	0	49	6	0	39	4	0	43	4	0	65	4	0	65	4	0	40	6	0	39	3
	Pct HV		3%			3%			2%			8%			6%			11%			9%			9%			6%			6%			13%			7%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	6	0	0	8	2	0	8	4	0	7	5	0	4	2	0	10	4	0	20	1	0	6	3	0	6	1	0	11	2	0	9	2	0	1	4
	Through	0	13	1	0	19	3	0	39	1	0	54	4	0	42	5	0	30	3	0	34	4	0	38	6	0	18	2	0	24	4	0	22	3	0	26	4
	Right	0	11	1	0	18	2	0	22	0	0	11	2	0	18	2	0	17	2	0	6	2	0	8	3	0	10	4	0	13	3	0	12	2	0	11	1
	App. Total	0	30	2	0	45	7	0	69	5	0	72	11	0	64	9	0	57	9	0	60	7	0	52	12	0	34	7	0	48	9	0	43	7	0	38	9
	Pct HV		6%			13%			7%			13%			12%			14%			10%			19%			17%			16%			14%			19%	
Total Class Volume		0	145	12	0	121	11	0	153	10	0	173	19	0	206	19	0	151	19	0	136	17	0	136	26	0	139	19	0	160	17	0	113	15	0	102	17
Total Interval Volume			157			132			163			192			225			170			153			162			158			177			128			119	
Intersection Pct HV			8%			8%			6%			10%			8%			11%			11%			16%			12%			10%			12%			14%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	1	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	1	0	0	0	0	0	0	0	0	0	0
Total		0	2	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	644	8.1%
6:45 AM	712	8.3%
7:00 AM	**750**	**8.9%**
7:15 AM	740	10.0%
7:30 AM	710	11.4%
7:45 AM	643	12.6%
8:00 AM	650	12.2%
8:15 AM	625	12.3%
8:30 AM	582	11.7%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights Thorpe Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:00 AM BK	7:00 AM PC	7:00 AM HV	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	17	1	0	18	1	0	31	2	0	23	1
	Through	0	1	0	0	2	1	0	1	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	18	1	0	20	2	0	32	2	0	23	1
	Pct HV		5%			9%			6%			4%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	6	0	0	0	0	0	1	1
	Through	0	3	0	0	3	0	0	3	0	0	5	0
	Right	0	13	3	0	16	1	0	23	3	0	16	2
	App. Total	0	18	3	0	25	1	0	26	3	0	22	3
	Pct HV		14%			4%			10%			12%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	1	0	0	0	0	0	0	0	1	0
	Through	0	46	0	0	55	5	0	81	5	0	47	6
	Right	0	0	0	0	1	0	0	3	0	0	1	0
	App. Total	0	48	1	0	56	5	0	84	5	0	49	6
	Pct HV		2%			8%			6%			11%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	8	4	0	7	5	0	4	2	0	10	4
	Through	0	39	1	0	54	4	0	42	5	0	30	3
	Right	0	22	0	0	11	2	0	18	2	0	17	2
	App. Total	0	69	5	0	72	11	0	64	9	0	57	9
	Pct HV		7%			13%			12%			14%	
Total Class Volume		0	153	10	0	173	19	0	206	19	0	151	19
Total Interval Volume			163			192			225			170	
Intersection Pct Trucks			6%			10%			8%			11%	

Approach

Receiving

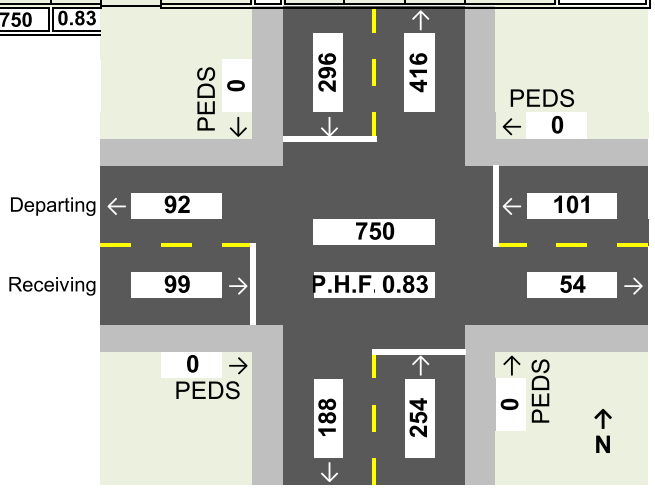
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	5	94		5%	94.95%
EBT	1	5		20%	5.05%
EBR	0	0			0.00%
Total	6	99	0.73	6%	100.00%
WBU	0	0			0.00%
WBL	1	10		10%	9.90%
WBT	0	14		0%	13.86%
WBR	9	77		12%	76.24%
Total	10	101	0.87	10%	100.00%
NBU	0	0			0.00%
NBL	1	4		25%	1.57%
NBT	16	245		7%	96.46%
NBR	0	5		0%	1.97%
Total	17	254	0.71	7%	100.00%
SBU	0	0			0.00%
SBL	15	44		34%	14.86%
SBT	13	178		7%	60.14%
SBR	6	74		8%	25.00%
Total	34	296	0.89	11%	100.00%
Total	**67**	**750**	**0.83**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	4	25%	4.35%	
WBT	14	0%	15.22%	
SBR	74	8%	80.43%	
Total	92	8%	100.00%	
WBU	0		0.00%	Westbound
SBL	44	34%	81.48%	
EBT	5	20%	9.26%	
NBR	5	0%	9.26%	
Total	54	30%	100.00%	
NBU	0		0.00%	Northbound
WBL	10	10%	5.32%	
SBT	178	7%	94.68%	
EBR	0		0.00%	
Total	188	7%	100.00%	
SBU	0		0.00%	Southbound
EBL	94	5%	22.60%	
NBT	245	7%	58.89%	
WBR	77	12%	18.51%	
Total	416	7%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:00	7:15	7:30	7:45	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	18	3	0	31	0	0	27	0	0	32	0	0	40	1	0	26	3	0	20	0	0	18	1	0	18	0	0	14	1	0	13	1	0	14	1
	Through	0	1	0	0	4	1	0	0	1	0	2	0	0	10	0	0	2	0	0	4	0	0	1	0	0	3	0	0	2	0	0	1	0	0	4	0
	Right	0	0	0	0	2	0	0	0	0	0	3	0	0	2	0	0	1	0	0	2	1	0	1	1	0	1	0	0	2	0	0	0	0	0	1	0
	App. Total	0	19	3	0	37	1	0	27	1	0	37	0	0	52	1	0	29	3	0	26	1	0	20	2	0	22	0	0	18	1	0	14	1	0	19	1
	Pct HV	14%			3%			4%			0%			2%			9%			4%			9%			0%			5%			7%			5%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	1	0	0	2	0	0	1	0	0	2	0	0	4	0	0	5	0	0	5	0	0	0	0	0	3	1	0	0	0
	Through	0	3	1	0	3	1	0	3	1	0	3	0	0	3	0	0	6	0	0	2	0	0	4	1	0	5	0	0	3	0	0	3	0	0	4	0
	Right	0	14	1	0	6	0	0	13	0	0	10	2	0	43	1	0	18	0	0	21	0	0	18	0	0	15	1	0	10	1	0	13	0	0	7	0
	App. Total	0	18	2	0	11	1	0	17	1	0	15	2	0	47	1	0	26	0	0	27	0	0	27	1	0	25	1	0	13	1	0	19	1	0	11	0
	Pct HV	10%			8%			6%			12%			2%			0%			0%			4%			4%			7%			5%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
	Through	0	39	1	0	32	1	0	39	3	0	33	0	0	42	0	0	31	0	0	29	1	0	36	0	0	34	2	0	29	1	0	27	2	0	38	1
	Right	0	2	0	0	2	2	0	3	2	0	1	0	0	4	0	0	1	0	0	1	0	0	3	0	0	2	0	0	2	0	0	2	0	0	3	0
	App. Total	0	41	1	0	34	3	0	42	5	0	34	0	0	46	0	0	34	0	0	33	2	0	40	0	0	36	2	0	32	1	0	29	2	0	41	1
	Pct HV	2%			8%			11%			0%			0%			0%			6%			0%			5%			3%			6%			2%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	6	7	0	11	2	0	9	0	0	6	1	0	7	3	0	14	0	0	4	0	0	6	0	0	10	1	0	6	0	0	5	0	0	7	0
	Through	0	30	2	0	48	3	0	43	2	0	50	2	0	51	4	0	61	1	0	44	0	0	58	0	0	48	1	0	56	2	0	52	0	0	60	0
	Right	0	15	4	0	19	4	0	14	3	0	22	2	0	11	1	0	15	4	0	10	1	0	21	1	0	10	2	0	13	1	0	10	1	0	10	1
	App. Total	0	51	13	0	78	9	0	66	5	0	78	5	0	69	8	0	90	5	0	58	1	0	85	1	0	68	4	0	75	3	0	67	1	0	77	1
	Pct HV	20%			10%			7%			6%			10%			5%			2%			1%			6%			4%			1%			1%		
Total Class Volume		0	129	19	0	160	14	0	152	12	0	164	7	0	214	10	0	179	8	0	144	4	0	172	4	0	151	7	0	138	6	0	129	5	0	148	3
Total Interval Volume		148			174			164			171			224			187			148			176			158			144			134			151		
Intersection Pct HV		13%			8%			7%			4%			4%			4%			3%			2%			4%			4%			4%			2%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	657	7.9%
3:45 PM	733	5.9%
4:00 PM	**746**	**5.0%**
4:15 PM	730	4.0%
4:30 PM	735	3.5%
4:45 PM	669	3.4%
5:00 PM	626	3.4%
5:15 PM	612	3.6%
5:30 PM	587	3.6%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Thorpe Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/22/2023

Counter: Analyst
Miovision: BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:00 PM BK	4:00 PM PC	4:00 PM HV	4:15 PM BK	4:15 PM PC	4:15 PM HV	4:30 PM BK	4:30 PM PC	4:30 PM HV	4:45 PM BK	4:45 PM PC	4:45 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	27	0	0	32	0	0	40	1	0	26	3
	Through	0	0	1	0	2	0	0	10	0	0	2	0
	Right	0	0	0	0	3	0	0	2	0	0	1	0
	App. Total	0	27	1	0	37	0	0	52	1	0	29	3
	Pct HV		4%			0%			2%			9%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	1	0	0	2	0
	Through	0	3	1	0	3	0	0	3	0	0	6	0
	Right	0	13	0	0	10	2	0	43	1	0	18	0
	App. Total	0	17	1	0	15	2	0	47	1	0	26	0
	Pct HV		6%			12%			2%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	2	0
	Through	0	39	3	0	33	0	0	42	0	0	31	0
	Right	0	3	2	0	1	0	0	4	0	0	1	0
	App. Total	0	42	5	0	34	0	0	46	0	0	34	0
	Pct HV		11%			0%			0%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	9	0	0	6	1	0	7	3	0	14	0
	Through	0	43	2	0	50	2	0	51	4	0	61	1
	Right	0	14	3	0	22	2	0	11	1	0	15	4
	App. Total	0	66	5	0	78	5	0	69	8	0	90	5
	Pct HV		7%			6%			10%			5%	
Total Class Volume		0	152	12	0	164	7	0	214	10	0	179	8
Total Interval Volume			164			171			224			187	
Intersection Pct Trucks			7%			4%			4%			4%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	4	129		3%	86.00%
EBT	1	15		7%	10.00%
EBR	0	6		0%	4.00%
Total	5	150	0.71	3%	100.00%
WBU	0	0			0.00%
WBL	0	6		0%	5.50%
WBT	1	16		6%	14.68%
WBR	3	87		3%	79.82%
Total	4	109	0.57	4%	100.00%
NBU	0	0			0.00%
NBL	0	2		0%	1.24%
NBT	3	148		2%	91.93%
NBR	2	11		18%	6.83%
Total	5	161	0.86	3%	100.00%
SBU	0	0			0.00%
SBL	4	40		10%	12.27%
SBT	9	214		4%	65.64%
SBR	10	72		14%	22.09%
Total	23	326	0.86	7%	100.00%
Total	37	746	0.83		

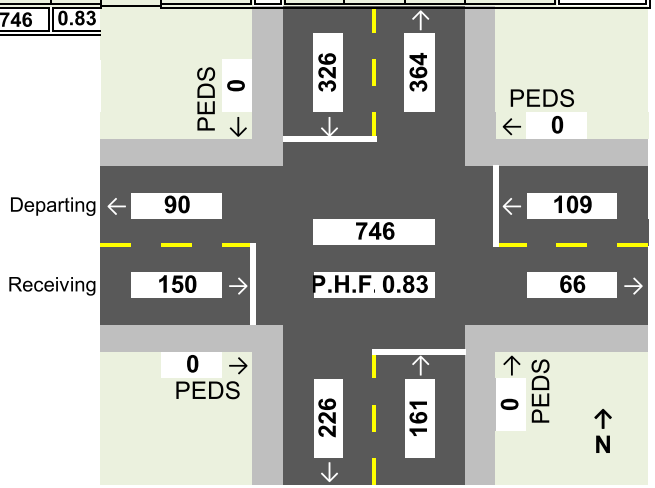
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	2	0%	2.22%	
WBT	16	6%	17.78%	
SBR	72	14%	80.00%	
Total	90	12%	100.00%	
WBU	0		0.00%	Westbound
SBL	40	10%	60.61%	
EBT	15	7%	22.73%	
NBR	11	18%	16.67%	
Total	66	11%	100.00%	
NBU	0		0.00%	Northbound
WBL	6	0%	2.65%	
SBT	214	4%	94.69%	
EBR	6	0%	2.65%	
Total	226	4%	100.00%	
SBU	0		0.00%	Southbound
EBL	129	3%	35.44%	
NBT	148	2%	40.66%	
WBR	87	3%	23.90%	
Total	364	3%	100.00%	

Total: 746
5%

Pedestrian Volumes

APPROACH	MOVEMENT	4:00	4:15	4:30	4:45	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — Assembly Road
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	1	0	0	0	0	0	2	1	0	2	0	0	1	0	0	0	0	0	0	0	0	3	0	0	2	0	0	1	0
	Through	0	2	0	0	0	1	0	1	0	0	2	2	0	4	0	0	3	0	0	1	0	0	5	0	0	0	0	0	5	1	0	2	0	0	3	0
	Right	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0
	App. Total	0	3	0	0	2	2	0	2	0	0	2	2	0	6	1	0	7	0	0	3	0	0	6	0	0	1	0	0	9	1	0	4	0	0	4	0
	Pct HV	0%			50%			0%			50%			14%			0%			0%			0%			0%			10%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	5	0	0	4	0	0	8	0	0	4	0	0	9	0	0	7	0	0	12	0	0	12	0	0	2	0	0	4	0	0	5	0
	Through	0	5	0	0	7	1	0	4	0	0	6	0	0	2	2	0	5	0	0	4	0	0	7	0	0	4	0	0	5	0	0	8	0	0	2	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0
	App. Total	0	8	0	0	12	1	0	8	0	0	14	0	0	8	2	0	14	0	0	14	0	0	20	0	0	16	0	0	7	0	0	12	0	0	11	0
	Pct HV	0%			8%			0%			0%			20%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	5	1	0	4	0	0	6	0	0	5	0	0	7	0	0	6	1	0	3	0	0	6	1	0	2	0	0	4	0	0	5	1
	Through	0	2	0	0	3	0	0	4	0	0	11	0	0	16	0	0	11	0	0	2	0	0	7	0	0	11	0	0	9	0	0	3	1	0	9	0
	Right	0	4	0	0	3	0	0	2	0	0	2	0	0	3	0	0	6	0	0	5	0	0	8	0	0	7	0	0	6	0	0	5	0	0	5	0
	App. Total	0	11	0	0	11	1	0	10	0	0	19	0	0	24	0	0	24	0	0	14	1	0	18	0	0	24	1	0	17	0	0	12	1	0	19	1
	Pct HV	0%			8%			0%			0%			0%			0%			7%			0%			4%			0%			8%			5%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	1	0	3	0	0	2	0	0	0	0	0	2	0	0	1	0	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
	Through	0	2	0	0	2	2	0	6	0	0	6	1	0	2	0	0	9	1	0	7	0	0	6	0	0	10	1	0	3	0	0	5	0	0	4	0
	Right	0	4	1	0	7	0	0	5	0	0	9	1	0	10	0	0	2	1	0	2	0	0	6	2	0	5	1	0	5	0	0	3	0	0	1	0
	App. Total	0	7	2	0	12	2	0	13	0	0	15	2	0	14	0	0	12	2	0	11	0	0	13	2	0	16	2	0	9	0	0	9	0	0	6	0
	Pct HV	22%			14%			0%			12%			0%			14%			0%			13%			11%			0%			0%			0%		
Total Class Volume		0	29	2	0	37	6	0	33	0	0	50	4	0	52	3	0	57	2	0	42	1	0	57	2	0	57	3	0	42	1	0	37	1	0	40	1
Total Interval Volume		31			43			33			54			55			59			43			59			60			43			38			41		
Intersection Pct HV		6%			14%			0%			7%			5%			3%			2%			3%			5%			2%			3%			2%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	161	7.5%
6:45 AM	185	7.0%
7:00 AM	201	4.5%
7:15 AM	211	4.7%
7:30 AM	216	3.7%
7:45 AM	**221**	**3.6%**
8:00 AM	205	3.4%
8:15 AM	200	3.5%
8:30 AM	182	3.3%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Thorpe Road & Assembly Road
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV	8:15 AM BK	8:15 AM PC	8:15 AM HV	8:30 AM BK	8:30 AM PC	8:30 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	1	0	0	0	0	0	0	0
	Through	0	3	0	0	1	0	0	5	0	0	0	0
	Right	0	2	0	0	1	0	0	1	0	0	1	0
	App. Total	0	7	0	0	3	0	0	6	0	0	1	0
	Pct HV	0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	9	0	0	7	0	0	12	0	0	12	0
	Through	0	5	0	0	4	0	0	7	0	0	4	0
	Right	0	0	0	0	3	0	0	1	0	0	0	0
	App. Total	0	14	0	0	14	0	0	20	0	0	16	0
	Pct HV	0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	1	0	0	0	0	0	0	0
	Left	0	7	0	0	6	1	0	3	0	0	6	1
	Through	0	11	0	0	2	0	0	7	0	0	11	0
	Right	0	6	0	0	5	0	0	8	0	0	7	0
	App. Total	0	24	0	0	14	1	0	18	0	0	24	1
	Pct HV	0%			7%			0%			4%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	1	0	0	1	0
	Through	0	9	1	0	7	0	0	6	0	0	10	1
	Right	0	2	1	0	2	0	0	6	2	0	5	1
	App. Total	0	12	2	0	11	0	0	13	2	0	16	2
	Pct HV	14%			0%			13%			11%		
Total Class Volume		0	57	2	0	42	1	0	57	2	0	57	3
Total Interval Volume		59			43			59			60		
Intersection Pct Trucks		3%			2%			3%			5%		

Approach

Receiving

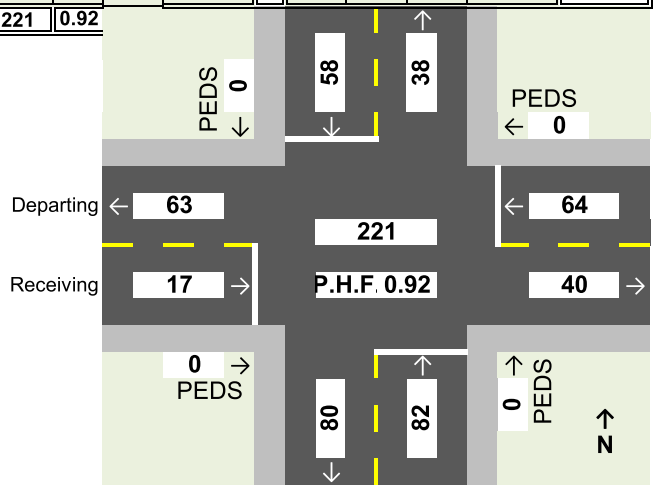
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	3		0%	17.65%
EBT	0	9		0%	52.94%
EBR	0	5		0%	29.41%
Total	0	17	0.61	0%	100.00%
WBU	0	0			0.00%
WBL	0	40		0%	62.50%
WBT	0	20		0%	31.25%
WBR	0	4		0%	6.25%
Total	0	64	0.80	0%	100.00%
NBU	0	1		0%	1.22%
NBL	2	24		8%	29.27%
NBT	0	31		0%	37.80%
NBR	0	26		0%	31.71%
Total	2	82	0.82	2%	100.00%
SBU	0	0			0.00%
SBL	0	5		0%	8.62%
SBT	2	34		6%	58.62%
SBR	4	19		21%	32.76%
Total	6	58	0.81	10%	100.00%
Total	**8**	**221**	**0.92**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	24	8%	38.10%	
WBT	20	0%	31.75%	
SBR	19	21%	30.16%	
Total	63	10%	100.00%	
WBU	0		0.00%	Westbound
SBL	5	0%	12.50%	
EBT	9	0%	22.50%	
NBR	26	0%	65.00%	
Total	40	0%	100.00%	
NBU	1	0%	1.25%	Northbound
WBL	40	0%	50.00%	
SBT	34	6%	42.50%	
EBR	5	0%	6.25%	
Total	80	3%	100.00%	
SBU	0		0.00%	Southbound
EBL	3	0%	7.89%	
NBT	31	0%	81.58%	
WBR	4	0%	10.53%	
Total	38	0%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:45	8:00	8:15	8:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — Assembly Road
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	4	1	0	7	2	0	0	2	0	3	0	0	9	0	0	5	0	0	4	0	0	4	0	0	2	0	0	4	0	0	4	0	0	3	0
	Through	0	6	0	0	7	1	0	5	1	0	3	0	0	11	0	0	8	0	0	10	0	0	5	0	0	8	0	0	3	0	0	3	0	0	8	0
	Right	0	2	0	0	6	0	0	2	0	0	3	0	0	4	0	0	2	0	0	1	0	0	0	0	0	2	0	0	5	0	0	2	0	0	4	0
	App. Total	0	12	1	0	20	3	0	7	3	0	9	0	0	24	0	0	15	0	0	15	0	0	9	0	0	12	0	0	12	0	0	9	0	0	15	0
	Pct HV	8%			13%			30%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	7	0	0	7	0	0	6	0	0	3	0	0	7	0	0	9	0	0	11	0	0	4	0	0	17	0	0	12	0	0	11	0	0	9	0
	Through	0	3	0	0	5	0	0	2	0	0	1	0	0	4	0	0	8	0	0	3	0	0	8	0	0	6	0	0	3	0	0	8	0	0	1	0
	Right	0	0	0	0	3	0	0	3	0	0	1	0	0	2	0	0	4	0	0	2	0	0	4	0	0	4	0	0	2	0	0	2	0	0	1	0
	App. Total	0	10	0	0	15	0	0	11	0	0	5	0	0	13	0	0	21	0	0	16	0	0	16	0	0	27	0	0	17	0	0	21	0	0	11	0
	Pct HV	0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	4	0	0	2	0	0	3	0	0	2	0	0	2	0	0	3	0	0	3	0	0	5	0	0	6	0	0	2	0	0	3	0	0	2	0
	Through	0	6	1	0	12	0	0	8	0	0	7	1	0	5	0	0	10	0	0	5	0	0	4	0	0	9	0	0	6	0	0	2	0	0	4	0
	Right	0	14	0	0	5	0	0	7	0	0	6	0	0	2	0	0	6	0	0	6	0	0	7	0	0	10	0	0	2	0	0	1	0	0	7	0
	App. Total	0	24	1	0	19	0	0	18	0	0	15	1	0	9	0	0	19	0	0	14	0	0	16	0	0	25	0	0	10	0	0	6	0	0	13	0
	Pct HV	4%			0%			0%			6%			0%			0%			0%			0%			0%			0%			0%			0%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	3	0	0	1	0	0	2	0	0	3	0	0	4	0	0	1	0	0	2	0	0	3	1	0	1	0	0	1	0	0	1	0
	Through	0	6	0	0	17	1	0	12	1	0	19	0	0	9	0	0	18	0	0	24	0	0	15	0	0	23	1	0	20	0	0	19	0	0	22	0
	Right	0	2	1	0	2	0	0	3	0	0	5	0	0	8	0	0	4	0	0	5	0	0	6	0	0	5	0	0	1	0	0	5	1	0	5	0
	App. Total	0	13	1	0	22	1	0	16	1	0	26	0	0	20	0	0	26	0	0	30	0	0	23	0	0	31	2	0	22	0	0	25	1	0	28	0
	Pct HV	7%			4%			6%			0%			0%			0%			0%			0%			6%			0%			4%			0%		
Total Class Volume		0	59	3	0	76	4	0	52	4	0	55	1	0	66	0	0	81	0	0	75	0	0	64	0	0	95	2	0	61	0	0	61	1	0	67	0
Total Interval Volume		62			80			56			56			66			81			75			64			97			61			62			67		
Intersection Pct HV		5%			5%			7%			2%			0%			0%			0%			0%			2%			0%			2%			0%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	254	4.7%
3:45 PM	258	3.5%
4:00 PM	259	1.9%
4:15 PM	278	0.4%
4:30 PM	286	0.0%
4:45 PM	**317**	**0.6%**
5:00 PM	297	0.7%
5:15 PM	284	1.1%
5:30 PM	287	1.0%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Thorpe Road & Assembly Road
JOB NO. 23-81
DATE OF COUNT: 3/22/2023

Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV	5:30 PM BK	5:30 PM PC	5:30 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	4	0	0	4	0	0	2	0
	Through	0	8	0	0	10	0	0	5	0	0	8	0
	Right	0	2	0	0	1	0	0	0	0	0	2	0
	App. Total	0	15	0	0	15	0	0	9	0	0	12	0
	Pct HV		0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	9	0	0	11	0	0	4	0	0	17	0
	Through	0	8	0	0	3	0	0	8	0	0	6	0
	Right	0	4	0	0	2	0	0	4	0	0	4	0
	App. Total	0	21	0	0	16	0	0	16	0	0	27	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	3	0	0	5	0	0	6	0
	Through	0	10	0	0	5	0	0	4	0	0	9	0
	Right	0	6	0	0	6	0	0	7	0	0	10	0
	App. Total	0	19	0	0	14	0	0	16	0	0	25	0
	Pct HV		0%			0%			0%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	4	0	0	1	0	0	2	0	0	3	1
	Through	0	18	0	0	24	0	0	15	0	0	23	1
	Right	0	4	0	0	5	0	0	6	0	0	5	0
	App. Total	0	26	0	0	30	0	0	23	0	0	31	2
	Pct HV		0%			0%			0%			6%	
Total Class Volume		0	81	0	0	75	0	0	64	0	0	95	2
Total Interval Volume			81			75			64			97	
Intersection Pct Trucks			0%			0%			0%			2%	

Approach

Receiving

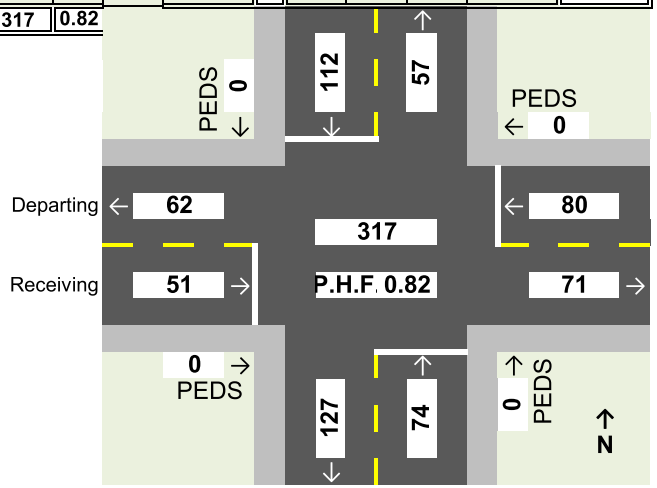
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	15		0%	29.41%
EBT	0	31		0%	60.78%
EBR	0	5		0%	9.80%
Total	0	51	0.85	0%	100.00%
WBU	0	0			0.00%
WBL	0	41		0%	51.25%
WBT	0	25		0%	31.25%
WBR	0	14		0%	17.50%
Total	0	80	0.74	0%	100.00%
NBU	0	0			0.00%
NBL	0	17		0%	22.97%
NBT	0	28		0%	37.84%
NBR	0	29		0%	39.19%
Total	0	74	0.74	0%	100.00%
SBU	0	0			0.00%
SBL	1	11		9%	9.82%
SBT	1	81		1%	72.32%
SBR	0	20		0%	17.86%
Total	2	112	0.85	2%	100.00%
Total	**2**	**317**	**0.82**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	17	0%	27.42%	
WBT	25	0%	40.32%	
SBR	20	0%	32.26%	
Total	62	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	11	9%	15.49%	
EBT	31	0%	43.66%	
NBR	29	0%	40.85%	
Total	71	1%	100.00%	
NBU	0		0.00%	Northbound
WBL	41	0%	32.28%	
SBT	81	1%	63.78%	
EBR	5	0%	3.94%	
Total	127	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	15	0%	26.32%	
NBT	28	0%	49.12%	
WBR	14	0%	24.56%	
Total	57	0%	100.00%	
Total	**317**			

Pedestrian Volumes

APPROACH	MOVEMENT	4:45	5:00	5:15	5:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter: BNG
Analyst: BNG

Garden Springs Road
&
Assembly Road

AM PEAK HOURS

15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	5	1	0	2	1	0	5	0	0	5	0	0	14	0	0	13	0	0	14	1	0	3	0	0	12	0	0	14	0	0	12	0	0	5	0
	Right	0	0	1	0	0	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	1	0	3	1	0	2	0	0	2	0	0	0	0	0	0	0
	App. Total	0	5	2	0	2	1	0	6	0	0	6	1	0	15	0	0	14	1	0	14	2	0	6	1	0	14	0	0	16	0	0	12	0	0	5	0
	Pct HV	29%			33%			0%			14%			0%			7%			13%			14%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	2	0	7	2	0	6	0	0	6	0	0	7	0	0	10	1	0	11	0	0	10	1	0	7	0	0	10	0	0	7	0	0	9	0
	Through	0	3	0	0	11	0	0	1	1	0	3	0	0	3	0	0	4	0	0	2	0	0	2	0	0	8	0	0	15	0	0	5	0	0	1	2
	App. Total	0	8	2	0	18	2	0	7	1	0	9	0	0	10	0	0	14	1	0	13	0	0	12	1	0	15	0	0	25	0	0	12	0	0	10	2
	Pct HV	20%			10%			13%			0%			0%			7%			0%			8%			0%			0%			0%			17%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	1	0	0	1	0	0	2	0	0	0	0	0	1	0	0	1	0	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0
	Right	0	9	0	0	16	0	0	19	0	0	27	0	0	23	1	0	18	0	0	12	0	0	8	0	0	17	0	0	9	0	0	8	1	0	16	0
	App. Total	0	9	0	0	17	0	0	20	0	0	29	0	0	23	1	0	19	0	0	13	0	0	10	0	0	19	0	0	10	0	0	9	1	0	16	0
	Pct HV	0%			0%			0%			0%			4%			0%			0%			0%			0%			0%			10%			0%		
Total Class Volume		0	22	4	0	37	3	0	33	1	0	44	1	0	48	1	0	47	2	0	40	2	0	28	2	0	48	0	0	51	0	0	33	1	0	31	2
Total Interval Volume		26			40			34			45			49			49			42			30			48			51			34			33		
Intersection Pct HV		15%			8%			3%			2%			2%			4%			5%			7%			0%			0%			3%			6%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @											
		6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	145	0.0%
6:45 AM	168	0.6%
7:00 AM	177	0.6%
7:15 AM	**185**	**0.5%**
7:30 AM	170	0.6%
7:45 AM	169	0.0%
8:00 AM	171	0.0%
8:15 AM	163	0.6%
8:30 AM	166	0.6%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Garden Springs Road & Assembly Road
JOB NO. 23-81
DATE OF COUNT: 3/22/2023

Counter: Miovision
Analyst: BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	5	0	0	14	0	0	13	0	0	14	1
	Right	0	1	1	0	1	0	0	1	1	0	0	1
	App. Total	0	6	1	0	15	0	0	14	1	0	14	2
	Pct HV	14%			0%			7%			13%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	6	0	0	7	0	0	10	1	0	11	0
	Through	0	3	0	0	3	0	0	4	0	0	2	0
	App. Total	0	9	0	0	10	0	0	14	1	0	13	0
	Pct HV	0%			0%			7%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	0	0	0	1	0	0	1	0
	Right	0	27	0	0	23	1	0	18	0	0	12	0
	App. Total	0	29	0	0	23	1	0	19	0	0	13	0
	Pct HV	0%			4%			0%			0%		
Total Class Volume		0	44	1	0	48	1	0	47	2	0	40	2
Total Interval Volume		45			49			49			42		
Intersection Pct Trucks		2%			2%			4%			5%		

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBT	1	47		2%	88.68%
EBR	3	6		50%	11.32%
Total	4	53	0.83	8%	100.00%
WBU	0	0			0.00%
WBL	1	35		3%	74.47%
WBT	0	12		0%	25.53%
Total	1	47	0.78	2%	100.00%
NBU	0	0			0.00%
NBL	0	4		0%	4.71%
NBR	1	81		1%	95.29%
Total	1	85	0.73	1%	100.00%
Total	**4**	**185**	**0.94**		

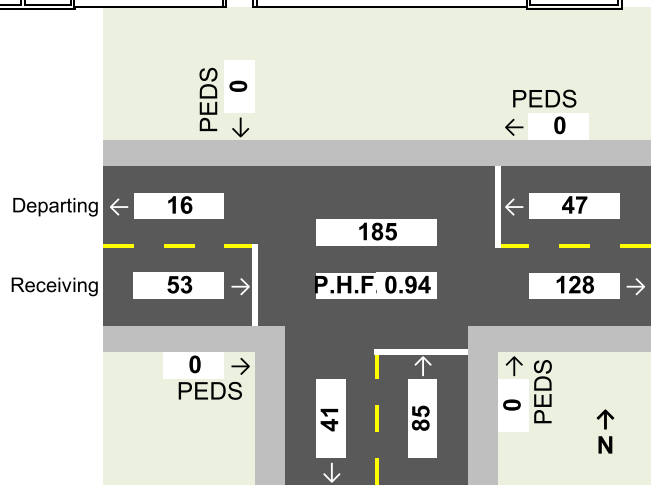
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
WBT	12	0%	75.00%	
NBL	4	0%	25.00%	
Total	16	0%	100.00%	
WBU	0		0.00%	Westbound
NBR	81	1%	63.28%	
EBT	47	2%	36.72%	
Total	128	2%	100.00%	
NBU	0		0.00%	Northbound
WBL	35	3%	85.37%	
EBR	6	50%	14.63%	
Total	41	10%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Traffic Counts & Surveys Inc.



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter: BNG
Analyst: BNG

Garden Springs Road
&
Assembly Road

PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	18	1	0	10	0	0	7	0	0	7	0	0	21	0	0	11	0	0	5	0	0	16	1	0	10	0	0	10	0	0	6	0	0	7	0
	Right	0	2	0	0	2	1	0	2	0	0	1	0	0	1	0	0	1	0	0	4	0	0	3	0	0	1	0	0	3	0	0	1	0	0	2	0
	App. Total	0	20	1	0	12	1	0	9	0	0	8	0	0	22	0	0	12	0	0	9	0	0	19	1	0	11	0	0	13	0	0	7	0	0	9	0
	Pct HV		5%			8%			0%			0%			0%			0%			0%			5%			0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	22	1	0	31	0	0	27	0	0	35	0	0	32	1	0	37	0	0	38	0	0	47	0	0	36	0	0	33	0	0	28	1	0	30	0
	Through	0	4	0	0	4	0	0	9	0	0	9	0	0	4	0	0	5	0	0	5	0	0	5	0	0	10	0	0	7	0	0	8	0	0	6	0
	App. Total	0	26	1	0	35	0	0	36	0	0	44	0	0	36	1	0	42	0	0	43	0	0	52	0	0	46	0	0	40	0	0	36	1	0	36	0
	Pct HV		4%			0%			0%			0%			3%			0%			0%			0%			0%			0%			3%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0
	Right	0	16	1	0	19	0	0	18	0	0	16	3	0	25	0	0	17	0	0	17	0	0	15	0	0	16	0	0	18	0	0	7	0	0	17	0
	App. Total	0	16	1	0	21	0	0	20	0	0	16	3	0	25	0	0	19	0	0	18	0	0	16	0	0	17	0	0	18	0	0	8	0	0	18	0
	Pct HV		6%			0%			0%			16%			0%			0%			0%			0%			0%			0%			0%			0%	
Total Class Volume		0	62	3	0	68	1	0	65	0	0	68	3	0	83	1	0	73	0	0	70	0	0	87	1	0	74	0	0	71	0	0	51	1	0	63	0
Total Interval Volume			65			69			65			71			84			73			70			88			74			71			52			63	
Intersection Pct HV			5%			1%			0%			4%			1%			0%			0%			1%			0%			0%			2%			0%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	270	2.6%
3:45 PM	289	1.7%
4:00 PM	293	1.4%
4:15 PM	298	1.3%
4:30 PM	**315**	**0.6%**
4:45 PM	305	0.3%
5:00 PM	303	0.3%
5:15 PM	285	0.7%
5:30 PM	260	0.4%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Garden Springs Road & Assembly Road
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter: Analyst
Miovision: BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:30 PM BK	PC	HV	4:45 PM BK	PC	HV	5:00 PM BK	PC	HV	5:15 PM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	21	0	0	11	0	0	5	0	0	16	1
	Right	0	1	0	0	1	0	0	4	0	0	3	0
	App. Total	0	22	0	0	12	0	0	9	0	0	19	1
	Pct HV	0%			0%			0%			5%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	32	1	0	37	0	0	38	0	0	47	0
	Through	0	4	0	0	5	0	0	5	0	0	5	0
	App. Total	0	36	1	0	42	0	0	43	0	0	52	0
	Pct HV	3%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	1	0	0	1	0
	Right	0	25	0	0	17	0	0	17	0	0	15	0
	App. Total	0	25	0	0	19	0	0	18	0	0	16	0
	Pct HV	0%			0%			0%			0%		
Total Class Volume		0	83	1	0	73	0	0	70	0	0	87	1
Total Interval Volume		84			73			70			88		
Intersection Pct Trucks		1%			0%			0%			1%		

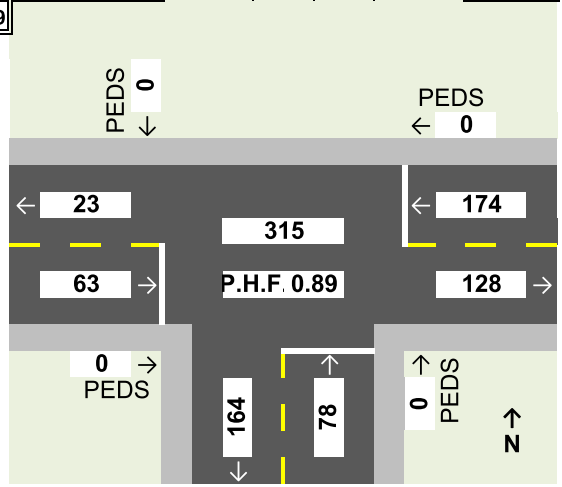
Approach — Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBT	1	54		2%	85.71%
EBR	0	9		0%	14.29%
Total	1	63	0.72	2%	100.00%
WBU	0	0			0.00%
WBL	1	155		1%	89.08%
WBT	0	19		0%	10.92%
Total	1	174	0.84	1%	100.00%
NBU	0	0			0.00%
NBL	0	4		0%	5.13%
NBR	0	74		0%	94.87%
Total	0	78	0.78	0%	100.00%
Total	**1**	**315**	**0.89**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
WBT	19	0%	82.61%	
NBL	4	0%	17.39%	
Total	23	0%	100.00%	
WBU	0		0.00%	Westbound
NBR	74	0%	57.81%	
EBT	54	2%	42.19%	
Total	128	1%	100.00%	
NBU	0		0.00%	Northbound
WBL	155	1%	94.51%	
EBR	9	0%	5.49%	
Total	164	1%	100.00%	

Pedestrian Volumes APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

WEE COUNT LLC.
E. 1110 EXCELSIOR RD.
SPOKANE, WA., 99224
(509) 979-3331

Turn Count Summary

Location: US 195 Hwy at W. 16th Ave., Spokane Wa.
GPS Coordinates: Lat=47.541046, Lon=-117.393286
Date: 2023-01-24
Day of week: Tuesday
Weather: Overcast
Analyst: Mike McCluskey

Total vehicle traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	15	255	16	0	2	1	16	120	3	7	1	27	463
16:15	7	248	22	2	0	2	17	143	1	11	2	31	486
16:30	10	257	32	0	0	5	13	136	3	5	0	26	487
16:45	7	268	26	1	0	4	12	120	0	12	1	31	482
17:00	15	284	20	1	1	3	16	133	3	6	0	20	502
17:15	11	274	27	0	0	8	17	115	0	3	0	28	483
17:30	21	241	14	0	0	6	16	127	2	7	0	24	458
17:45	11	193	11	2	2	8	16	85	2	8	1	29	368

Car traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	15	253	16	0	2	1	16	111	3	7	1	27	452
16:15	7	244	22	2	0	2	17	136	1	11	2	31	475
16:30	10	257	32	0	0	5	13	131	3	5	0	26	482
16:45	7	267	26	1	0	4	12	117	0	12	1	31	478
17:00	15	283	20	1	1	3	16	131	3	6	0	20	499
17:15	11	273	27	0	0	8	17	114	0	3	0	28	481
17:30	21	239	14	0	0	6	16	123	2	7	0	24	452
17:45	11	191	11	2	2	8	16	83	2	8	1	29	364

Truck traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	2	0	0	0	0	0	6	0	0	0	0	8
16:15	0	4	0	0	0	0	0	4	0	0	0	0	8
16:30	0	0	0	0	0	0	0	3	0	0	0	0	3
16:45	0	1	0	0	0	0	0	2	0	0	0	0	3
17:00	0	1	0	0	0	0	0	2	0	0	0	0	3
17:15	0	1	0	0	0	0	0	1	0	0	0	0	2
17:30	0	2	0	0	0	0	0	4	0	0	0	0	6
17:45	0	1	0	0	0	0	0	2	0	0	0	0	3

Bicycles traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	0	0	0	0	0	0	3	0	0	0	0	3
16:15	0	0	0	0	0	0	0	3	0	0	0	0	3
16:30	0	0	0	0	0	0	0	2	0	0	0	0	2
16:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	0	0	0	0	0	0	0	0	0	1

Pedestrian volumes

Interval starts	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Peak Hour

16:15 - 17:15

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	39	1057	100	4	1	14	58	532	7	34	3	108	1957
Factor	0.65	0.93	0.78	0.50	0.25	0.70	0.85	0.93	0.58	0.71	0.38	0.87	0.97
Approach Factor	0.94			0.95			0.93			0.82			

Peak Hour Vehicle Summary

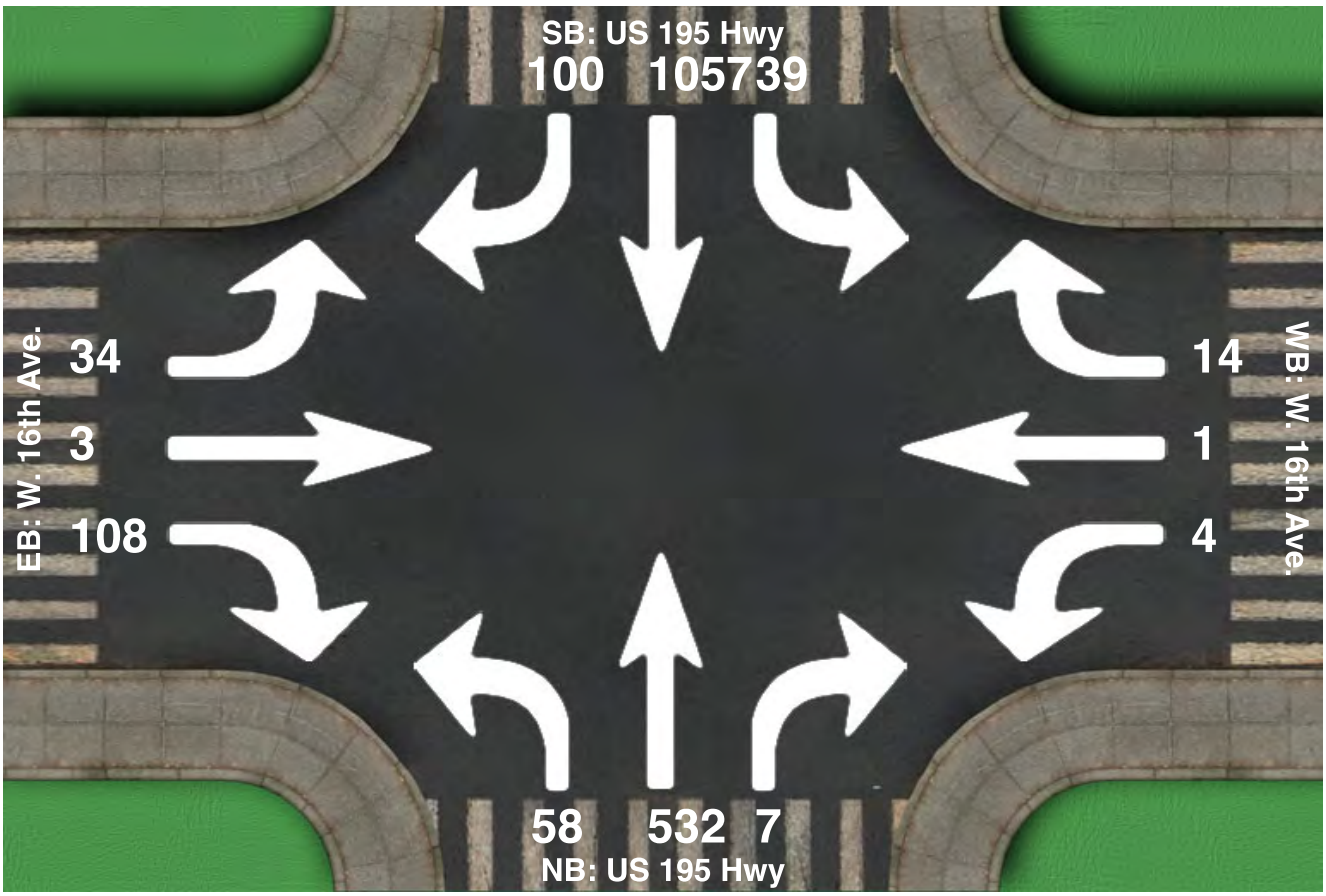
Vehicle	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	39	1051	100	4	1	14	58	515	7	34	3	108	1934
Truck	0	6	0	0	0	0	0	11	0	0	0	0	17
Bicycles	0	0	0	0	0	0	0	6	0	0	0	0	6

Peak Hour Pedestrians

	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Peak Hour

Location: US 195 Hwy at W. 16th Ave., Spokane Wa.
GPS Coordinates: Lat=47.541046, Lon=-117.393286
Date: 2023-01-24
Day of week: Tuesday
Weather: Overcast
Analyst: Mike McCluskey



Intersection Peak Hour

16:15 - 17:15

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	39	1057	100	4	1	14	58	532	7	34	3	108	1957
Factor	0.65	0.93	0.78	0.50	0.25	0.70	0.85	0.93	0.58	0.71	0.38	0.87	0.97
Approach Factor	0.94			0.95			0.93			0.82			

WEE COUNT LLC.
E. 1110 EXCELSIOR RD.
SPOKANE, WA., 99224
(509) 979-3331

Turn Count Summary

Location: US 195 Hwy at 16th Ave, Spokane Wa
GPS Coordinates: Lat=47.541032, Lon=-117.393297
Date: 2023-01-31
Day of week: Tuesday
Weather: Clear
Analyst: Mike McCluskey

Total vehicle traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	106	12	0	0	4	12	201	0	11	1	13	361
07:15	2	77	2	1	0	7	23	275	2	17	0	17	423
07:30	2	103	2	0	1	7	26	334	0	21	0	16	512
07:45	5	110	13	0	1	3	32	257	0	17	1	16	455
08:00	2	117	12	0	2	5	37	222	1	18	0	24	440
08:15	0	119	13	0	1	5	33	183	0	19	0	20	393
08:30	5	106	14	0	0	7	13	170	1	8	0	20	344
08:45	5	102	9	0	1	5	14	159	0	15	0	9	319

Car traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	100	11	0	0	4	12	198	0	11	1	13	351
07:15	2	72	2	1	0	7	23	271	1	17	0	17	413
07:30	2	98	2	0	1	6	26	332	0	21	0	16	504
07:45	5	101	11	0	1	3	32	255	0	17	1	16	442
08:00	2	108	12	0	2	4	37	220	0	18	0	23	426
08:15	0	112	13	0	1	5	33	179	0	19	0	19	381
08:30	4	97	14	0	0	6	13	168	0	8	0	20	330
08:45	5	93	9	0	1	5	14	153	0	15	0	9	304

Truck traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	4	0	0	0	0	0	3	0	0	0	0	7
07:15	0	2	0	0	0	0	0	2	0	0	0	0	4
07:30	0	3	0	0	0	0	0	2	0	0	0	0	5
07:45	0	8	0	0	0	0	0	2	0	0	0	0	10
08:00	0	9	0	0	0	0	0	2	0	0	0	0	11
08:15	0	7	0	0	0	0	0	2	0	0	0	0	9
08:30	1	9	0	0	0	0	0	2	0	0	0	0	12
08:45	0	7	0	0	0	0	0	6	0	0	0	0	13

Bicycles traffic

Interval starts	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	2	1	0	0	0	0	0	0	0	0	0	3
07:15	0	3	0	0	0	0	0	2	1	0	0	0	6
07:30	0	2	0	0	0	1	0	0	0	0	0	0	3
07:45	0	1	2	0	0	0	0	0	0	0	0	0	3
08:00	0	0	0	0	0	1	0	0	1	0	0	1	3
08:15	0	0	0	0	0	0	0	2	0	0	0	1	3
08:30	0	0	0	0	0	1	0	0	1	0	0	0	2
08:45	0	2	0	0	0	0	0	0	0	0	0	0	2

Pedestrian volumes

Interval starts	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Peak Hour

07:15 - 08:15

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	11	407	29	1	4	22	118	1088	3	73	1	73	1830
Factor	0.55	0.87	0.56	0.25	0.50	0.79	0.80	0.81	0.38	0.87	0.25	0.76	0.89
Approach Factor	0.85			0.84			0.84			0.88			

Peak Hour Vehicle Summary

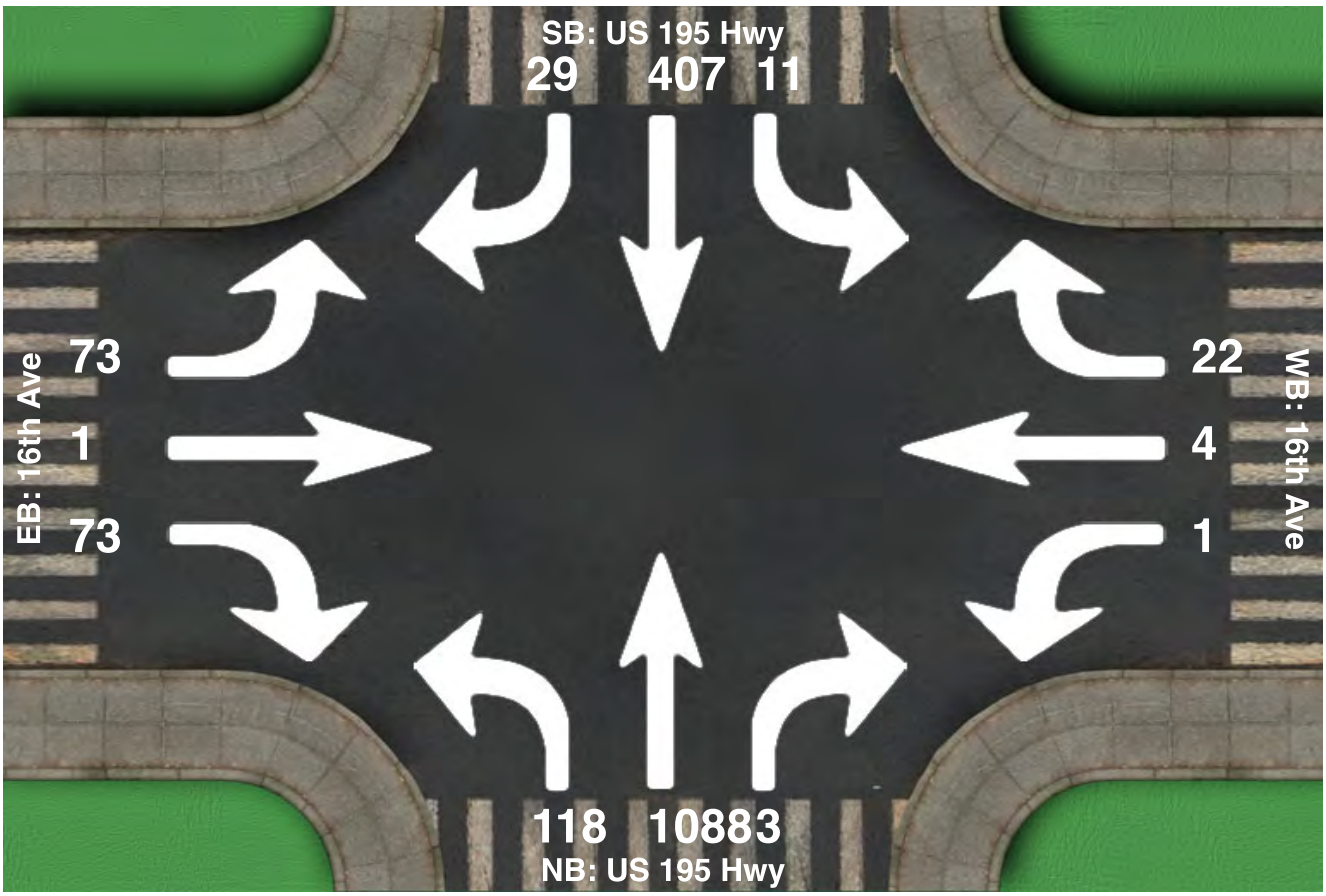
Vehicle	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	11	379	27	1	4	20	118	1078	1	73	1	72	1785
Truck	0	22	0	0	0	0	0	8	0	0	0	0	30
Bicycles	0	6	2	0	0	2	0	2	2	0	0	1	15

Peak Hour Pedestrians

	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Peak Hour

Location: US 195 Hwy at 16th Ave, Spokane Wa
GPS Coordinates: Lat=47.541032, Lon=-117.393297
Date: 2023-01-31
Day of week: Tuesday
Weather: Clear
Analyst: Mike McCluskey



Intersection Peak Hour

07:15 - 08:15

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	11	407	29	1	4	22	118	1088	3	73	1	73	1830
Factor	0.55	0.87	0.56	0.25	0.50	0.79	0.80	0.81	0.38	0.87	0.25	0.76	0.89
Approach Factor	0.85			0.84			0.84			0.88			

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — North J-turn (Thorpe Road)
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	9	1	0	1	0	0	8	0	0	11	1	0	17	0	0	10	0	0	10	0	0	13	0	0	15	0	0	5	0	0	7	0	0	5	0
	App. Total	0	9	1	0	1	0	0	8	0	0	11	1	0	17	0	0	10	0	0	10	0	0	13	0	0	15	0	0	5	0	0	7	0	0	5	0
	Pct HV		10%			0%			0%			8%			0%			0%			0%			0%			0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	9	1	0	1	0	0	8	0	0	11	1	0	17	0	0	10	0	0	10	0	0	13	0	0	15	0	0	5	0	0	7	0	0	5	0
	Through	0	194	3	0	225	4	0	232	1	0	293	4	0	336	5	0	330	6	0	248	6	0	260	6	0	217	4	0	211	5	0	174	5	0	190	8
	App. Total	0	203	4	0	226	4	0	240	1	0	304	5	0	353	5	0	340	6	0	258	6	0	273	6	0	232	4	0	216	5	0	181	5	0	195	8
	Pct HV		2%			2%			0%			2%			1%			2%			2%			2%			2%			2%			3%			4%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	70	17	0	73	17	0	95	8	0	149	12	0	143	9	0	142	16	0	154	11	0	166	11	0	133	13	0	130	16	0	121	13	0	113	5
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	70	17	0	73	17	0	95	8	0	149	12	0	143	9	0	142	16	0	154	11	0	166	11	0	133	13	0	130	16	0	121	13	0	113	5
	Pct HV		20%			19%			8%			7%			6%			10%			7%			6%			9%			11%			10%			4%	
Total Class Volume		0	282	22	0	300	21	0	343	9	0	464	18	0	513	14	0	492	22	0	422	17	0	452	17	0	380	17	0	351	21	0	309	18	0	313	13
Total Interval Volume			304			321			352			482			527			514			439			469			397			372			327			326	
Intersection Pct HV			7%			7%			3%			4%			3%			4%			4%			4%			4%			6%			6%			4%	

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	1,459	4.8%
6:45 AM	1,682	3.7%
7:00 AM	1,875	3.4%
7:15 AM	**1,962**	**3.6%**
7:30 AM	1,949	3.6%
7:45 AM	1,819	4.0%
8:00 AM	1,677	4.3%
8:15 AM	1,565	4.7%
8:30 AM	1,422	4.9%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights North J-turn (Thorpe Road) & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 7:15 AM BK	PC	HV	7:30 AM BK	PC	HV	7:45 AM BK	PC	HV	8:00 AM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	11	1	0	17	0	0	10	0	0	10	0
	App. Total	0	11	1	0	17	0	0	10	0	0	10	0
	Pct HV		8%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	11	1	0	17	0	0	10	0	0	10	0
	Through	0	293	4	0	336	5	0	330	6	0	248	6
	App. Total	0	304	5	0	353	5	0	340	6	0	258	6
	Pct HV		2%			1%			2%			2%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	149	12	0	143	9	0	142	16	0	154	11
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	149	12	0	143	9	0	142	16	0	154	11
	Pct HV		7%			6%			10%			7%	
Total Class Volume		0	464	18	0	513	14	0	492	22	0	422	17
Total Interval Volume			482			527			514			439	
Intersection Pct Trucks			4%			3%			4%			4%	

Approach

Receiving

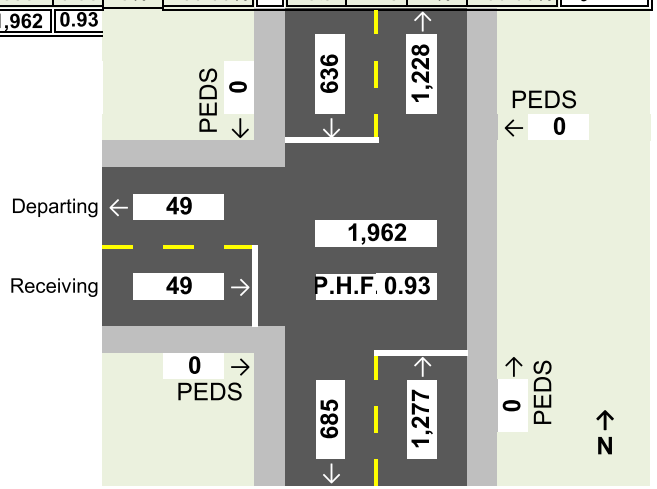
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBR	1	49		2%	100.00%
Total	1	49	0.72	2%	100.00%
NBU	0	0			0.00%
NBL	1	49		2%	3.84%
NBT	21	1228		2%	96.16%
Total	22	1277	0.89	2%	100.00%
SBU	0	0			0.00%
SBT	48	636		8%	100.00%
SBR	0	0			0.00%
Total	48	636	0.96	8%	100.00%
Total	**71**	**1,962**	**0.93**		
					4%

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0	0%	0.00%	Eastbound
NBL	49	100%	100.00%	
SBR	0	0%	0.00%	
Total	49	2%	100.00%	
NBU	0	0%	0.00%	Northbound
EBR	49	100%	7.15%	
SBT	636	####	92.85%	
Total	685	7%	100.00%	
SBU	0	0%	0.00%	Southbound
NBT	1228	####	100.00%	
EBL	0	0%	0.00%	
Total	1228	2%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	**0**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	0	0	0	**0**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — North J-turn (Thorpe Road)
JOB NO. 23-81 — &
DATE OF COUNT: 3/22/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

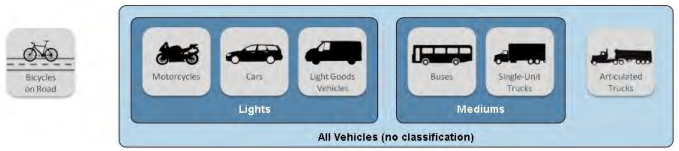
APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	10	0	0	18	0	0	13	0	0	12	0	0	18	0	0	14	0	0	15	0	0	19	0	0	21	0	0	18	0	0	14	1	0	12	0
	App. Total	0	10	0	0	18	0	0	13	0	0	12	0	0	18	0	0	14	0	0	15	0	0	19	0	0	21	0	0	18	0	0	14	1	0	12	0
	Pct HV		0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			7%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	10	0	0	18	0	0	13	0	0	12	0	0	18	0	0	14	0	0	15	0	0	19	0	0	21	0	0	18	0	0	14	1	0	12	0
	Through	0	162	6	0	198	14	0	169	17	0	169	16	0	157	6	0	153	6	0	136	5	0	214	6	0	168	6	0	185	6	0	140	4	0	150	1
	App. Total	0	172	6	0	216	14	0	182	17	0	181	16	0	175	6	0	167	6	0	151	5	0	233	6	0	189	6	0	203	6	0	154	5	0	162	1
	Pct HV		3%			6%			9%			8%			3%			3%			3%			3%			3%			3%			3%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	287	5	0	296	5	0	299	3	0	327	5	0	322	4	0	323	3	0	331	4	0	376	0	0	321	3	0	269	2	0	205	4	0	194	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	287	5	0	296	5	0	299	3	0	327	5	0	322	4	0	323	3	0	331	4	0	376	0	0	321	3	0	269	2	0	205	4	0	194	0
	Pct HV		2%			2%			1%			2%			1%			1%			1%			0%			1%			1%			2%			0%	
Total Class Volume		0	469	11	0	530	19	0	494	20	0	520	21	0	515	10	0	504	9	0	497	9	0	628	6	0	531	9	0	490	8	0	373	10	0	368	1
Total Interval Volume			480			549			514			541			525			513			506			634			540			498			383			369	
Intersection Pct HV			2%			3%			4%			4%			2%			2%			2%			1%			2%			2%			3%			0%	

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)



Intersection Total One Hour Volumes		Pct HV
3:30 AM	2,084	3.4%
3:45 AM	2,129	3.3%
4:00 AM	2,093	2.9%
4:15 AM	2,085	2.4%
4:30 AM	2,178	1.6%
4:45 AM	**2,193**	**1.5%**
5:00 AM	2,178	1.5%
5:15 AM	2,055	1.6%
5:30 AM	1,790	1.6%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights North J-turn (Thorpe Road) & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/22/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:45 PM BK	PC	HV	5:00 PM BK	PC	HV	5:15 PM BK	PC	HV	5:30 PM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	14	0	0	15	0	0	19	0	0	21	0
	App. Total	0	14	0	0	15	0	0	19	0	0	21	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	14	0	0	15	0	0	19	0	0	21	0
	Through	0	153	6	0	136	5	0	214	6	0	168	6
	App. Total	0	167	6	0	151	5	0	233	6	0	189	6
	Pct HV		3%			3%			3%			3%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	323	3	0	331	4	0	376	0	0	321	3
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	323	3	0	331	4	0	376	0	0	321	3
	Pct HV		1%			1%			0%			1%	
Total Class Volume		0	504	9	0	497	9	0	628	6	0	531	9
Total Interval Volume			513			506			634			540	
Intersection Pct Trucks			2%			2%			1%			2%	

Approach

Receiving

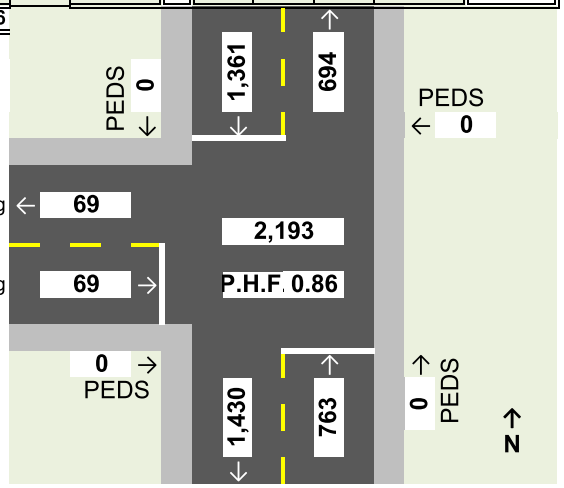
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBR	0	69		0%	100.00%
Total	0	69	0.82	0%	100.00%
NBU	0	0			0.00%
NBL	0	69		0%	9.04%
NBT	23	694		3%	90.96%
Total	23	763	0.80	3%	100.00%
SBU	0	0			0.00%
SBT	10	1361		1%	100.00%
SBR	0	0			0.00%
Total	10	1361	0.90	1%	100.00%
Total	**33**	**2,193**	**0.86**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0	0%	0.00%	Eastbound
NBL	69	0%	100.00%	
SBR	0	0%	0.00%	
Total	69	0%	100.00%	
NBU	0	0%	0.00%	Northbound
EBR	69	0%	4.83%	
SBT	1361	####	95.17%	
Total	1430	1%	100.00%	
SBU	0	0%	0.00%	Southbound
NBT	694	####	100.00%	
EBL	0	0%	0.00%	
Total	694	3%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	4:45	5:00	5:15	5:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/16/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	19	0	0	21	1	0	13	0	0	30	1	0	22	0	0	27	0	0	21	1	0	22	2	0	25	0	0	24	0	0	16	1	0	21	0
	App. Total	0	19	0	0	21	1	0	13	0	0	30	1	0	22	0	0	27	0	0	21	1	0	22	2	0	25	0	0	24	0	0	16	1	0	21	0
	Pct HV	0%			5%			0%			3%			0%			0%			5%			8%			0%			0%			6%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	10	0	0	3	0	0	7	0	0	8	1	0	10	1	0	9	0	0	9	2	0	5	1	0	1	1	0	10	0	0	4	0	0	11	0
	App. Total	0	10	0	0	3	0	0	7	0	0	8	1	0	10	1	0	9	0	0	9	2	0	5	1	0	1	1	0	10	0	0	4	0	0	11	0
	Pct HV	0%			0%			0%			11%			9%			0%			18%			17%			50%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	193	4	0	223	4	0	233	1	0	296	4	0	343	4	0	331	6	0	249	4	0	268	5	0	231	3	0	206	5	0	177	5	0	184	8
	Right	0	11	0	0	19	0	0	17	1	0	20	1	0	44	0	0	53	0	0	29	1	0	32	1	0	23	1	0	16	0	0	12	1	0	16	0
	App. Total	0	204	4	0	242	4	0	250	2	0	316	5	0	387	4	0	384	6	0	278	5	0	300	6	0	254	4	0	222	5	0	189	6	0	200	8
	Pct HV	2%			2%			1%			2%			1%			2%			2%			2%			2%			2%			3%			4%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	56	17	0	71	17	0	85	7	0	137	11	0	129	9	0	130	14	0	145	11	0	149	10	0	111	13	0	124	16	0	109	13	0	104	5
	Right	0	14	0	0	2	0	0	10	1	0	12	1	0	14	0	0	12	2	0	9	0	0	17	1	0	22	0	0	6	0	0	12	0	0	9	0
	App. Total	0	70	17	0	73	17	0	95	8	0	149	12	0	143	9	0	142	16	0	154	11	0	166	11	0	133	13	0	130	16	0	121	13	0	113	5
	Pct HV	20%			19%			8%			7%			6%			10%			7%			6%			9%			11%			10%			4%		
Total Class Volume		0	303	21	0	339	22	0	365	10	0	503	19	0	562	14	0	562	22	0	462	19	0	493	20	0	413	18	0	386	21	0	330	20	0	345	13
Total Interval Volume		324			361			375			522			576			584			481			513			431			407			350			358		
Intersection Pct HV		6%			6%			3%			4%			2%			4%			4%			4%			4%			5%			6%			4%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	2	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	2	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	1,582	4.6%
6:45 AM	1,834	3.5%
7:00 AM	2,057	3.2%
7:15 AM	**2,163**	**3.4%**
7:30 AM	2,154	3.5%
7:45 AM	2,009	3.9%
8:00 AM	1,832	4.3%
8:15 AM	1,701	4.6%
8:30 AM	1,546	4.7%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Thorpe Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/16/2023
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	30	1	0	22	0	0	27	0	0	21	1
	App. Total	0	30	1	0	22	0	0	27	0	0	21	1
	Pct HV	3%			0%			0%			5%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	8	1	0	10	1	0	9	0	0	9	2
	App. Total	0	8	1	0	10	1	0	9	0	0	9	2
	Pct HV	11%			9%			0%			18%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	296	4	0	343	4	0	331	6	0	249	4
	Right	0	20	1	0	44	0	0	53	0	0	29	1
	App. Total	0	316	5	0	387	4	0	384	6	0	278	5
	Pct HV	2%			1%			2%			2%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	137	11	0	129	9	0	130	14	0	145	11
	Right	0	12	1	0	14	0	0	12	2	0	9	0
	App. Total	0	149	12	0	143	9	0	142	16	0	154	11
	Pct HV	7%			6%			10%			7%		
Total Class Volume		0	503	19	0	562	14	0	562	22	0	462	19
Total Interval Volume		522			576			584			481		
Intersection Pct Trucks		4%			2%			4%			4%		

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBT	0	0			0.00%
EBR	2	102		2%	100.00%
Total	2	102	0.82	2%	100.00%
WBU	0	0			0.00%
WBL	0	0			0.00%
WBT	0	0			0.00%
WBR	4	40		10%	100.00%
Total	4	40	0.91	10%	100.00%
NBU	0	0			0.00%
NBL	0	0			0.00%
NBT	18	1237		1%	89.31%
NBR	2	148		1%	10.69%
Total	20	1385	0.89	1%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	45	586		8%	92.14%
SBR	3	50		6%	7.86%
Total	48	636	0.96	8%	100.00%
Total	**74**	**2,163**	**0.93**		

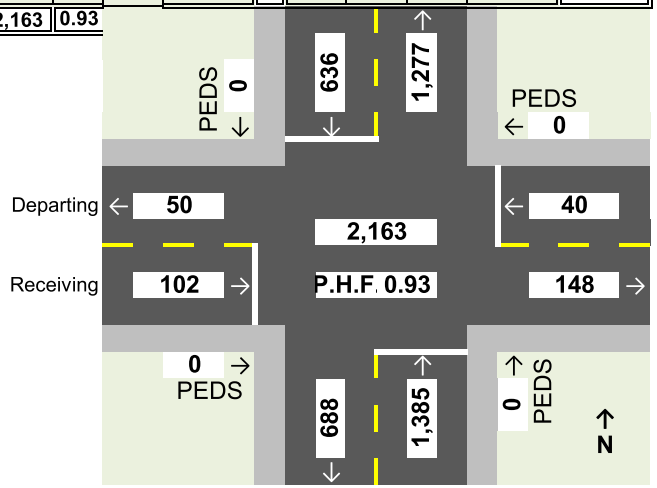
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	0		0.00%	
WBT	0		0.00%	
SBR	50	6%	100.00%	
Total	50	6%	100.00%	
WBU	0		0.00%	Westbound
SBL	0		0.00%	
EBT	0		0.00%	
NBR	148	1%	100.00%	
Total	148	1%	100.00%	
NBU	0		0.00%	Northbound
WBL	0		0.00%	
SBT	586	8%	85.17%	
EBR	102	2%	14.83%	
Total	688	7%	100.00%	
SBU	0		0.00%	Southbound
EBL	0		0.00%	
NBT	1237	1%	96.87%	
WBR	40	10%	3.13%	
Total	1277	2%	100.00%	
Total	**2,163**			

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Traffic Counts & Surveys Inc.



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Thorpe Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/16/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	36	1	0	24	0	0	19	0	0	12	0	0	28	2	0	24	0	0	18	0	0	18	0	0	19	0	0	18	0	0	26	0	0	23	0
	App. Total	0	36	1	0	24	0	0	19	0	0	12	0	0	28	2	0	24	0	0	18	0	0	18	0	0	19	0	0	18	0	0	26	0	0	23	0
	Pct HV	3%			0%			0%			0%			7%			0%			0%			0%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	5	1	0	6	0	0	14	0	0	9	0	0	11	0	0	5	0	0	8	0	0	11	0	0	8	0	0	5	0	0	12	0	0	7	0
	App. Total	0	5	1	0	6	0	0	14	0	0	9	0	0	11	0	0	5	0	0	8	0	0	11	0	0	8	0	0	5	0	0	12	0	0	7	0
	Pct HV	17%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	167	5	0	210	14	0	168	17	0	172	16	0	164	6	0	162	6	0	143	5	0	222	6	0	181	6	0	198	6	0	142	4	0	155	1
	Right	0	20	0	0	16	1	0	14	1	0	18	0	0	15	1	0	26	0	0	17	0	0	16	0	0	26	0	0	20	0	0	14	0	0	15	0
	App. Total	0	187	5	0	226	15	0	182	18	0	190	16	0	179	7	0	188	6	0	160	5	0	238	6	0	207	6	0	218	6	0	156	4	0	170	1
	Pct HV	3%			6%			9%			8%			4%			3%			3%			2%			3%			3%			3%			1%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	263	4	0	261	4	0	269	2	0	303	5	0	300	4	0	298	3	0	301	4	0	341	0	0	288	3	0	237	2	0	182	3	0	179	0
	Right	0	24	1	0	35	1	0	30	1	0	24	0	0	22	0	0	25	0	0	30	0	0	35	0	0	33	0	0	32	0	0	23	1	0	15	0
	App. Total	0	287	5	0	296	5	0	299	3	0	327	5	0	322	4	0	323	3	0	331	4	0	376	0	0	321	3	0	269	2	0	205	4	0	194	0
	Pct HV	2%			2%			1%			2%			1%			1%			1%			0%			1%			1%			2%			0%		
Total Class Volume		0	515	12	0	552	20	0	514	21	0	538	21	0	540	13	0	540	9	0	517	9	0	643	6	0	555	9	0	510	8	0	399	8	0	394	1
Total Interval Volume		527			572			535			559			553			549			526			649			564			518			407			395		
Intersection Pct HV		2%			3%			4%			4%			2%			2%			2%			1%			2%			2%			2%			0%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	1	0	0	3	0	0	1	1
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	1	0	0	3	0	0	1	1

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	2,193	3.4%
3:45 PM	2,219	3.4%
4:00 PM	2,196	2.9%
4:15 PM	2,187	2.4%
4:30 PM	2,277	1.6%
4:45 PM	**2,288**	**1.4%**
5:00 PM	2,257	1.4%
5:15 PM	2,138	1.4%
5:30 PM	1,884	1.4%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Thorpe Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/16/2023

Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV	5:30 PM BK	5:30 PM PC	5:30 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	24	0	0	18	0	0	18	0	0	19	0
	App. Total	0	24	0	0	18	0	0	18	0	0	19	0
	Pct HV		0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	5	0	0	8	0	0	11	0	0	8	0
	App. Total	0	5	0	0	8	0	0	11	0	0	8	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	162	6	0	143	5	0	222	6	0	181	6
	Right	0	26	0	0	17	0	0	16	0	0	26	0
	App. Total	0	188	6	0	160	5	0	238	6	0	207	6
	Pct HV		3%			3%			2%			3%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	298	3	0	301	4	0	341	0	0	288	3
	Right	0	25	0	0	30	0	0	35	0	0	33	0
	App. Total	0	323	3	0	331	4	0	376	0	0	321	3
	Pct HV		1%			1%			0%			1%	
Total Class Volume		0	540	9	0	517	9	0	643	6	0	555	9
Total Interval Volume			549			526			649			564	
Intersection Pct Trucks			2%			2%			1%			2%	

Approach

Receiving

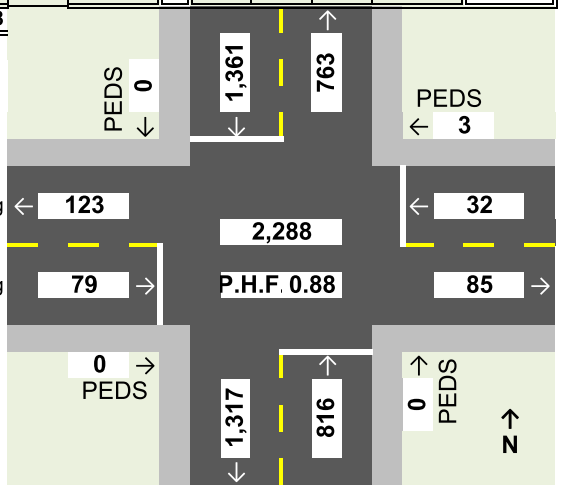
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBT	0	0			0.00%
EBR	0	79		0%	100.00%
Total	0	79	0.82	0%	100.00%
WBU	0	0			0.00%
WBL	0	0			0.00%
WBT	0	0			0.00%
WBR	0	32		0%	100.00%
Total	0	32	0.73	0%	100.00%
NBU	0	0			0.00%
NBL	0	0			0.00%
NBT	23	731		3%	89.58%
NBR	0	85		0%	10.42%
Total	23	816	0.84	3%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	10	1238		1%	90.96%
SBR	0	123		0%	9.04%
Total	10	1361	0.90	1%	100.00%
Total	**33**	**2,288**	**0.88**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	0		0.00%	
WBT	0		0.00%	
SBR	123	0%	100.00%	
Total	123	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	0		0.00%	
EBT	0		0.00%	
NBR	85	0%	100.00%	
Total	85	0%	100.00%	
NBU	0		0.00%	Northbound
WBL	0		0.00%	
SBT	1238	1%	94.00%	
EBR	79	0%	6.00%	
Total	1317	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	0		0.00%	
NBT	731	3%	95.81%	
WBR	32	0%	4.19%	
Total	763	3%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	4:45	5:00	5:15	5:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	3	0	3
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	3	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — South J Turn (Thorpe Road)
JOB NO. 23-81 — &
DATE OF COUNT: 3/16/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	18	0	0	16	0	0	9	0	0	18	0	0	32	0	0	17	0	0	19	0	0	16	0	0	16	0	0	6	0	0	10	0	0	15	1
	App. Total	0	18	0	0	16	0	0	9	0	0	18	0	0	32	0	0	17	0	0	19	0	0	16	0	0	16	0	0	6	0	0	10	0	0	15	1
	Pct HV		0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			6%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	204	2	0	242	0	0	250	1	0	316	4	0	387	3	0	384	2	0	278	2	0	300	5	0	254	3	0	222	4	0	189	5	0	200	1
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	204	2	0	242	0	0	250	1	0	316	4	0	387	3	0	384	2	0	278	2	0	300	5	0	254	3	0	222	4	0	189	5	0	200	1
	Pct HV		1%			0%			0%			1%			1%			1%			1%			2%			1%			2%			3%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	18	0	0	16	0	0	9	0	0	18	0	0	32	0	0	17	0	0	19	0	0	16	0	0	16	0	0	6	0	0	10	0	0	15	1
	Through	0	57	8	0	76	13	0	89	2	0	149	8	0	119	8	0	140	8	0	147	6	0	155	5	0	120	6	0	142	11	0	115	9	0	110	0
	App. Total	0	75	8	0	92	13	0	98	2	0	167	8	0	151	8	0	157	8	0	166	6	0	171	5	0	136	6	0	148	11	0	125	9	0	125	1
	Pct HV		10%			12%			2%			5%			5%			5%			3%			3%			4%			7%			7%			1%	
Total Class Volume		0	297	10	0	350	13	0	357	3	0	501	12	0	570	11	0	558	10	0	463	8	0	487	10	0	406	9	0	376	15	0	324	14	0	340	3
Total Interval Volume			307			363			360			513			581			568			471			497			415			391			338			343	
Intersection Pct HV			3%			4%			1%			2%			2%			2%			2%			2%			2%			4%			4%			1%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	1,543	0.0%
6:45 AM	1,817	0.0%
7:00 AM	2,022	0.0%
7:15 AM	**2,133**	**0.0%**
7:30 AM	2,117	0.0%
7:45 AM	1,951	0.0%
8:00 AM	1,774	0.0%
8:15 AM	1,641	0.0%
8:30 AM	1,487	0.0%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights South J Turn (Thorpe Road) & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/16/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 7:15 AM BK	PC	HV	7:30 AM BK	PC	HV	7:45 AM BK	PC	HV	8:00 AM BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	18	0	0	32	0	0	17	0	0	19	0
	App. Total	0	18	0	0	32	0	0	17	0	0	19	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	316	4	0	387	3	0	384	2	0	278	2
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	316	4	0	387	3	0	384	2	0	278	2
	Pct HV		1%			1%			1%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	18	0	0	32	0	0	17	0	0	19	0
	Through	0	149	8	0	119	8	0	140	8	0	147	6
	App. Total	0	167	8	0	151	8	0	157	8	0	166	6
	Pct HV		5%			5%			5%			3%	
Total Class Volume		0	501	12	0	570	11	0	558	10	0	463	8
Total Interval Volume			513			581			568			471	
Intersection Pct Trucks			2%			2%			2%			2%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	0	0			0.00%
WBR	0	86		0%	100.00%
Total	0	86	0.67	0%	100.00%
NBU	0	0			0.00%
NBT	11	1376		1%	100.00%
NBR	0	0			0.00%
Total	11	1376	0.88	1%	100.00%
SBU	0	0			0.00%
SBL	0	86		0%	12.82%
SBT	30	585		5%	87.18%
Total	30	671	0.96	4%	100.00%
Total	**41**	**2,133**	**0.92**		

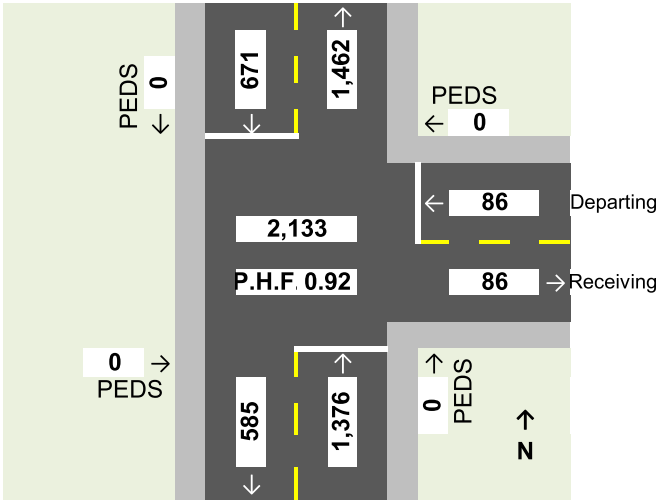
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	86	0%	100.00%	
NBR	0		0.00%	
Total	86		100.00%	
NBU	0		0.00%	Northbound
SBT	585	5%	100.00%	
WBL	0		0.00%	
Total	585	5%	100.00%	
SBU	0		0.00%	Southbound
WBR	86	0%	5.88%	
NBT	1376	1%	94.12%	
Total	1462	1%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	**0**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	0	0	0	**0**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — South J Turn (Thorpe Road)
JOB NO. 23-81 — &
DATE OF COUNT: 3/16/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	22	1	0	8	0	0	11	0	0	8	0	0	14	0	0	19	0	0	11	0	0	11	0	0	11	0	0	14	0	0	14	0	0	14	0
	App. Total	0	22	1	0	8	0	0	11	0	0	8	0	0	14	0	0	19	0	0	11	0	0	11	0	0	11	0	0	14	0	0	14	0	0	14	0
	Pct HV		4%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	187	3	0	226	11	0	182	11	0	190	9	0	179	4	0	188	2	0	160	3	0	238	5	0	207	3	0	218	3	0	156	0	0	170	1
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	187	3	0	226	11	0	182	11	0	190	9	0	179	4	0	188	2	0	160	3	0	238	5	0	207	3	0	218	3	0	156	0	0	170	1
	Pct HV		2%			5%			6%			5%			2%			1%			2%			2%			1%			1%			0%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	22	1	0	8	0	0	11	0	0	8	0	0	14	0	0	19	0	0	11	0	0	11	0	0	11	0	0	14	0	0	14	0	0	14	0
	Through	0	277	4	0	277	2	0	277	2	0	307	2	0	314	1	0	303	1	0	308	3	0	348	0	0	296	3	0	241	2	0	194	2	0	188	0
	App. Total	0	299	5	0	285	2	0	288	2	0	315	2	0	328	1	0	322	1	0	319	3	0	359	0	0	307	3	0	255	2	0	208	2	0	202	0
	Pct HV		2%			1%			1%			1%			0%			0%			1%			0%			1%			1%			1%			0%	
Total Class Volume		0	508	9	0	519	13	0	481	13	0	513	11	0	521	5	0	529	3	0	490	6	0	608	5	0	525	6	0	487	5	0	378	2	0	386	1
Total Interval Volume			517			532			494			524			526			532			496			613			531			492			380			387	
Intersection Pct HV			2%			2%			3%			2%			1%			1%			1%			1%			1%			1%			1%			0%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	2,067	2.2%
3:45 PM	2,076	2.0%
4:00 PM	2,076	1.5%
4:15 PM	2,078	1.2%
4:30 PM	2,167	0.9%
4:45 PM	**2,172**	**0.9%**
5:00 PM	2,132	1.0%
5:15 PM	2,016	0.9%
5:30 PM	1,790	0.8%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — South J Turn (Thorpe Road) & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/16/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:45 PM BK	PC	HV	5:00 PM BK	PC	HV	5:15 PM BK	PC	HV	5:30 PM BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	19	0	0	11	0	0	11	0	0	11	0
	App. Total	0	19	0	0	11	0	0	11	0	0	11	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	188	2	0	160	3	0	238	5	0	207	3
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	188	2	0	160	3	0	238	5	0	207	3
	Pct HV		1%			2%			2%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	19	0	0	11	0	0	11	0	0	11	0
	Through	0	303	1	0	308	3	0	348	0	0	296	3
	App. Total	0	322	1	0	319	3	0	359	0	0	307	3
	Pct HV		0%			1%			0%			1%	
Total Class Volume		0	529	3	0	490	6	0	608	5	0	525	6
Total Interval Volume			532			496			613			531	
Intersection Pct Trucks			1%			1%			1%			1%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	0	0			0.00%
WBR	0	52		0%	100.00%
Total	0	52	0.68	0%	100.00%
NBU	0	0			0.00%
NBT	13	806		2%	100.00%
NBR	0	0			0.00%
Total	13	806	0.83	2%	100.00%
SBU	0	0			0.00%
SBL	0	52		0%	3.96%
SBT	7	1262		1%	96.04%
Total	7	1314	0.92	1%	100.00%
Total	**20**	**2,172**	**0.89**		

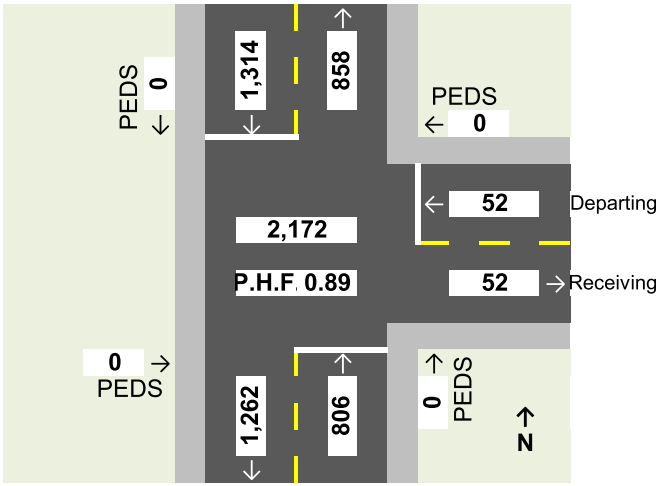
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	52	0%	100.00%	
NBR	0		0.00%	
Total	52	0%	100.00%	
NBU	0		0.00%	Northbound
SBT	1262	1%	100.00%	
WBL	0		0.00%	
Total	1262	1%	100.00%	
SBU	0		0.00%	Southbound
WBR	52	0%	6.06%	
NBT	806	2%	93.94%	
Total	858	2%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	4:45	5:00	5:15	5:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Cheney-Spokane Rd
JOB NO. 23-78 — &
DATE OF COUNT: 3/14/2023 — SR 195 SB West
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	8	0	0	12	0	0	22	0	0	23	0	0	26	0	0	17	0	0	15	0	0	17	1	0	22	1	0	38	1	0	25	0	0	25	1
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	8	0	0	12	0	0	22	0	0	23	0	0	26	0	0	17	0	0	15	0	0	17	1	0	22	1	0	38	1	0	25	0	0	25	1
	Pct HV		0%			0%			0%			0%			0%			0%			0%			6%			4%			3%			0%			4%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	100	2	0	86	2	0	117	4	0	159	8	0	204	1	0	149	3	0	123	2	0	85	2	0	106	2	0	91	3	0	90	2	0	101	2
	App. Total	0	100	2	0	86	2	0	117	4	0	159	8	0	204	1	0	149	3	0	123	2	0	85	2	0	106	2	0	91	3	0	90	2	0	101	2
	Pct HV		2%			2%			3%			5%			0%			2%			2%			2%			2%			3%			2%			2%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	15	3	0	34	2	0	30	1	0	44	5	0	45	2	0	35	3	0	39	4	0	55	1	0	53	1	0	50	0	0	58	1	0	46	4
	App. Total	0	15	3	0	34	2	0	30	1	0	44	5	0	45	2	0	35	3	0	39	4	0	55	1	0	53	1	0	50	0	0	58	1	0	46	4
	Pct HV		17%			6%			3%			10%			4%			8%			9%			2%			2%			0%			2%			8%	
Total Class Volume		0	123	5	0	132	4	0	169	5	0	226	13	0	275	3	0	201	6	0	177	6	0	157	4	0	181	4	0	179	4	0	173	3	0	172	7
Total Interval Volume			128			136			174			239			278			207			183			161			185			183			176			179	
Intersection Pct HV			4%			3%			3%			5%			1%			3%			3%			2%			2%			2%			2%			4%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	677	2.4%
6:45 AM	827	1.8%
7:00 AM	898	1.8%
7:15 AM	**907**	**1.5%**
7:30 AM	829	1.0%
7:45 AM	736	1.2%
8:00 AM	712	1.3%
8:15 AM	705	1.3%
8:30 AM	723	1.2%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Cheney-Spokane Rd & SR 195 SB West
JOB NO. 23-78
DATE OF COUNT: 3/14/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 7:15 AM BK	PC	HV	7:30 AM BK	PC	HV	7:45 AM BK	PC	HV	8:00 AM BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	23	0	0	26	0	0	17	0	0	15	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	23	0	0	26	0	0	17	0	0	15	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	159	8	0	204	1	0	149	3	0	123	2
	App. Total	0	159	8	0	204	1	0	149	3	0	123	2
	Pct HV		5%			0%			2%			2%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	44	5	0	45	2	0	35	3	0	39	4
	App. Total	0	44	5	0	45	2	0	35	3	0	39	4
	Pct HV		10%			4%			8%			9%	
Total Class Volume		0	226	13	0	275	3	0	201	6	0	177	6
Total Interval Volume			239			278			207			183	
Intersection Pct Trucks			5%			1%			3%			3%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	0	81		0%	100.00%
WBR	0	0			0.00%
Total	0	81	0.78	0%	100.00%
NBU	0	0			0.00%
NBT	0	0			0.00%
NBR	14	649		2%	100.00%
Total	14	649	0.79	2%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	14	177		8%	100.00%
Total	14	177	0.90	8%	100.00%
Total	**28**	**907**	**0.82**		

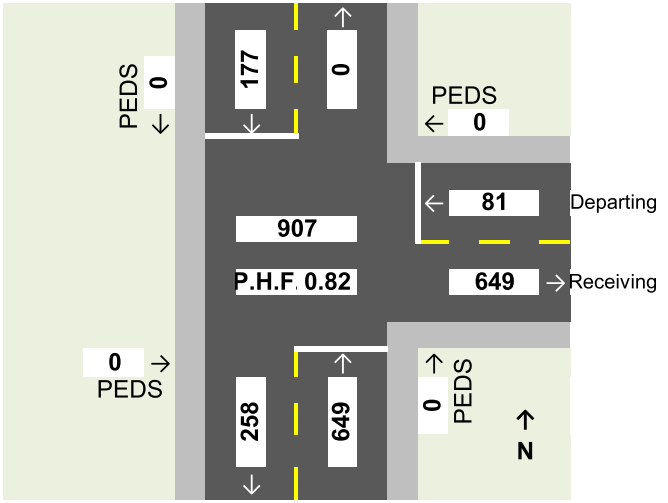
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	0		0.00%	
NBR	649	2%	100.00%	
Total	649		100.00%	
NBU	0		0.00%	Northbound
SBT	177	8%	68.60%	
WBL	81	0%	31.40%	
Total	258	5%	100.00%	
SBU	0			Southbound
WBR	0			
NBT	0			
Total	0			

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Cheney-Spokane Rd
JOB NO. 23-78 — &
DATE OF COUNT: 3/14/2023 — SR 195 SB West
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	20	0	0	26	1	0	28	1	0	19	0	0	26	0	0	32	1	0	22	0	0	24	0	0	23	0	0	28	0	0	14	0	0	16	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	20	0	0	26	1	0	28	1	0	19	0	0	26	0	0	32	1	0	22	0	0	24	0	0	23	0	0	28	0	0	14	0	0	16	0
	Pct HV		0%			4%			3%			0%			0%			3%			0%			0%			0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	83	0	0	115	1	0	104	1	0	103	4	0	83	2	0	113	1	0	117	1	0	104	1	0	93	2	0	101	0	0	79	0	0	63	0
	App. Total	0	83	0	0	115	1	0	104	1	0	103	4	0	83	2	0	113	1	0	117	1	0	104	1	0	93	2	0	101	0	0	79	0	0	63	0
	Pct HV		0%			1%			1%			4%			2%			1%			1%			1%			2%			0%			0%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	102	1	0	119	2	0	126	2	0	117	2	0	123	4	0	142	0	0	117	0	0	129	0	0	98	1	0	92	0	0	66	0	0	77	0
	App. Total	0	102	1	0	119	2	0	126	2	0	117	2	0	123	4	0	142	0	0	117	0	0	129	0	0	98	1	0	92	0	0	66	0	0	77	0
	Pct HV		1%			2%			2%			2%			3%			0%			0%			0%			1%			0%			0%			0%	
Total Class Volume		0	205	1	0	260	4	0	258	4	0	239	6	0	232	6	0	287	2	0	256	1	0	257	1	0	214	3	0	221	0	0	159	0	0	156	0
Total Interval Volume			206			264			262			245			238			289			257			258			217			221			159			156	
Intersection Pct HV			0%			2%			2%			2%			3%			1%			0%			0%			1%			0%			0%			0%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	977	1.5%
3:45 PM	1,009	2.0%
4:00 PM	1,034	1.7%
4:15 PM	1,029	1.5%
4:30 PM	**1,042**	**1.0%**
4:45 PM	1,021	0.7%
5:00 PM	953	0.5%
5:15 PM	855	0.5%
5:30 PM	753	0.4%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Cheney-Spokane Rd & SR 195 SB West
JOB NO. 23-78
DATE OF COUNT: 3/14/2023

Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:30 PM BK	PC	HV	4:45 PM BK	PC	HV	5:00 PM BK	PC	HV	5:15 PM BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	26	0	0	32	1	0	22	0	0	24	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	26	0	0	32	1	0	22	0	0	24	0
	Pct HV		0%			3%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	83	2	0	113	1	0	117	1	0	104	1
	App. Total	0	83	2	0	113	1	0	117	1	0	104	1
	Pct HV		2%			1%			1%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	123	4	0	142	0	0	117	0	0	129	0
	App. Total	0	123	4	0	142	0	0	117	0	0	129	0
	Pct HV		3%			0%			0%			0%	
Total Class Volume		0	232	6	0	287	2	0	256	1	0	257	1
Total Interval Volume			238			289			257			258	
Intersection Pct Trucks			3%			1%			0%			0%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	1	105		1%	100.00%
WBR	0	0			0.00%
Total	1	105	0.80	1%	100.00%
NBU	0	0			0.00%
NBT	0	0			0.00%
NBR	5	422		1%	100.00%
Total	5	422	0.89	1%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	4	515		1%	100.00%
Total	4	515	0.91	1%	100.00%
Total	**10**	**1,042**	**0.90**		

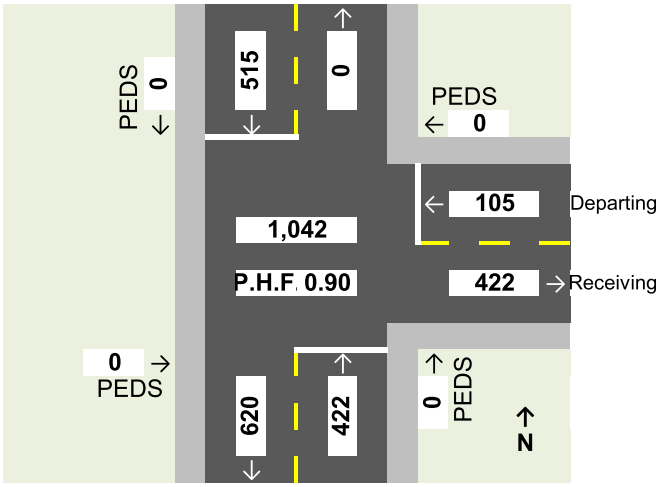
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	0		0.00%	
NBR	422	1%	100.00%	
Total	422	1%	100.00%	
NBU	0		0.00%	Northbound
SBT	515	1%	83.06%	
WBL	105	1%	16.94%	
Total	620	1%	100.00%	
SBU	0			Southbound
WBR	0			
NBT	0			
Total	0			

Pedestrian Volumes

APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Cheney-Spokane Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195 SB Ramps
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	92	1	0	80	2	0	108	3	0	147	6	0	190	1	0	136	3	0	108	1	0	74	1	0	98	2	0	82	3	0	77	2	0	83	1
	Right	0	8	1	0	6	0	0	9	1	0	12	2	0	14	0	0	13	0	0	15	1	0	11	1	0	8	0	0	9	0	0	13	0	0	18	1
	App. Total	0	100	2	0	86	2	0	117	4	0	159	8	0	204	1	0	149	3	0	123	2	0	85	2	0	106	2	0	91	3	0	90	2	0	101	2
	Pct HV		2%			2%			3%			5%			0%			2%			2%			2%			2%			3%			2%			2%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	2	0	0	2	1	0	2	0	0	0	0	0	3	0	0	1	0
	Through	0	8	0	0	12	0	0	22	0	0	23	0	0	26	0	0	17	0	0	15	0	0	17	1	0	22	1	0	38	1	0	25	0	0	25	1
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	9	0	0	13	0	0	22	0	0	24	0	0	28	0	0	17	0	0	17	0	0	19	2	0	24	1	0	38	1	0	28	0	0	26	1
	Pct HV		0%			0%			0%			0%			0%			0%			0%			10%			4%			3%			0%			4%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV																																				
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	1	0	1	1	0	1	0	0	2	1	0	3	0	0	3	0	0	7	1	0	4	0	0	3	1	0	2	0	0	0	0	0	0	1
	Through	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	2	0	1	1	0	1	0	0	2	1	0	3	0	0	3	0	0	7	1	0	4	0	0	4	1	0	2	0	0	0	0	0	0	1
	Pct HV		100%			50%			0%			33%			0%			0%			13%			0%			20%			0%						100%	
Total Class Volume		0	109	4	0	100	3	0	140	4	0	185	9	0	235	1	0	169	3	0	147	3	0	108	4	0	134	4	0	131	4	0	118	2	0	127	4
Total Interval Volume			113			103			144			194			236			172			150			112			138			135			120			131	
Intersection Pct HV			4%			3%			3%			5%			0%			2%			2%			4%			3%			3%			2%			3%	

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	1	0	1
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	554	3.6%
6:45 AM	677	2.5%
7:00 AM	746	2.3%
7:15 AM	**752**	**2.1%**
7:30 AM	670	1.6%
7:45 AM	572	2.4%
8:00 AM	535	2.8%
8:15 AM	505	2.8%
8:30 AM	524	2.7%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Cheney-Spokane Road & SR 195 SB Ramps
JOB NO. 23-81
DATE OF COUNT: 3/14/2023
Counter: Analyst
Miovision: BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	147	6	0	190	1	0	136	3	0	108	1
	Right	0	12	2	0	14	0	0	13	0	0	15	1
	App. Total	0	159	8	0	204	1	0	149	3	0	123	2
	Pct HV		5%			0%			2%			2%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	0	0	0	2	0
	Through	0	23	0	0	26	0	0	17	0	0	15	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	24	0	0	28	0	0	17	0	0	17	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	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
	Pct HV												
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	1	0	3	0	0	3	0	0	7	1
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	2	1	0	3	0	0	3	0	0	7	1
	Pct HV		33%			0%			0%			13%	
Total Class Volume		0	185	9	0	235	1	0	169	3	0	147	3
Total Interval Volume			194			236			172			150	
Intersection Pct Trucks			5%			0%			2%			2%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBT	11	592		2%	91.22%
EBR	3	57		5%	8.78%
Total	14	649	0.79	2%	100.00%
WBU	0	0			0.00%
WBL	0	5		0%	5.81%
WBT	0	81		0%	94.19%
WBR	0	0			0.00%
Total	0	86	0.77	0%	100.00%
NBU	0	0			
NBL	0	0			
NBT	0	0			
NBR	0	0			
Total	0	0			
SBU	0	0			0.00%
SBL	2	17		12%	100.00%
SBT	0	0			0.00%
SBR	0	0			0.00%
Total	2	17	0.53	12%	100.00%
Total	**16**	**752**	**0.80**		

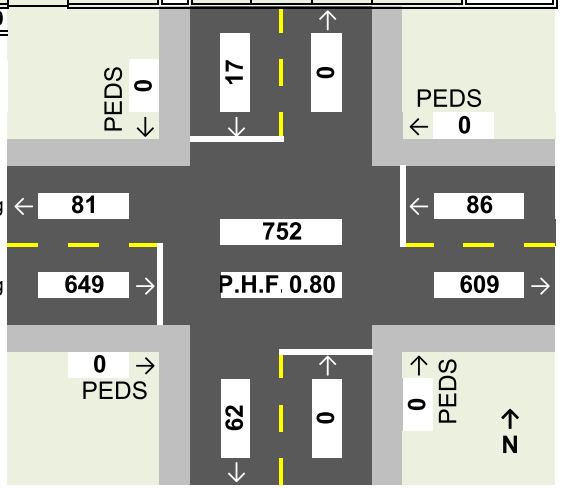
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	0		0.00%	
WBT	81	0%	100.00%	
SBR	0		0.00%	
Total	81	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	17	12%	2.79%	
EBT	592	2%	97.21%	
NBR	0		0.00%	
Total	609	2%	100.00%	
NBU	0		0.00%	Northbound
WBL	5	0%	8.06%	
SBT	0		0.00%	
EBR	57	5%	91.94%	
Total	62	5%	100.00%	
SBU	0			Southbound
EBL	0			
NBT	0			
WBR	0			
Total	0			

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Cheney-Spokane Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195 SB Ramps
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	54	0	0	82	0	0	66	0	0	70	3	0	47	2	0	82	1	0	84	1	0	66	1	0	67	1	0	73	0	0	60	0	0	55	0
	Right	0	29	0	0	33	1	0	38	1	0	33	1	0	36	0	0	31	0	0	33	0	0	38	0	0	26	1	0	28	0	0	19	0	0	8	0
	App. Total	0	83	0	0	115	1	0	104	1	0	103	4	0	83	2	0	113	1	0	117	1	0	104	1	0	93	2	0	101	0	0	79	0	0	63	0
	Pct HV	0%			1%			1%			4%			2%			1%			1%			1%			2%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	2	0	0	3	0	0	0	0	0	2	0	0	3	0	0	1	0	0	4	0	0	1	0	0	2	0	0	4	0	0	0	0
	Through	0	19	0	0	26	1	0	28	1	0	19	0	0	25	0	0	32	1	0	22	0	0	24	0	0	23	0	0	28	0	0	14	0	0	16	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	21	0	0	28	1	0	31	1	0	19	0	0	27	0	0	35	1	0	23	0	0	28	0	0	24	0	0	30	0	0	18	0	0	16	0
	Pct HV	0%			3%			3%			0%			0%			3%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV																																				
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	4	1	0	1	1	0	3	0	0	4	0	0	1	0	0	2	0	0	3	0	0	2	0	0	1	0	0	2	0	0	2	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	3	0	0	4	1	0	1	1	0	3	0	0	5	0	0	2	0	0	2	0	0	3	0	0	2	0	0	1	0	0	2	0	0	2	0
	Pct HV	0%			20%			50%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Total Class Volume		0	107	0	0	147	3	0	136	3	0	125	4	0	115	2	0	150	2	0	142	1	0	135	1	0	119	2	0	132	0	0	99	0	0	81	0
Total Interval Volume		107			150			139			129			117			152			143			136			121			132			99			81		
Intersection Pct HV		0%			2%			2%			3%			2%			1%			1%			1%			2%			0%			0%			0%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	1	1	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	1	1	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	525	1.9%
3:45 PM	535	2.2%
4:00 PM	537	2.0%
4:15 PM	541	1.7%
4:30 PM	548	1.1%
4:45 PM	**552**	**1.1%**
5:00 PM	532	0.8%
5:15 PM	488	0.6%
5:30 PM	433	0.5%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights Cheney-Spokane Road & SR 195 SB Ramps
JOB NO. 23-81
DATE OF COUNT: 3/14/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV	5:30 PM BK	5:30 PM PC	5:30 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	82	1	0	84	1	0	66	1	0	67	1
	Right	0	31	0	0	33	0	0	38	0	0	26	1
	App. Total	0	113	1	0	117	1	0	104	1	0	93	2
	Pct HV		1%			1%			1%			2%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	1	0	0	4	0	0	1	0
	Through	0	32	1	0	22	0	0	24	0	0	23	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	35	1	0	23	0	0	28	0	0	24	0
	Pct HV		3%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	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
	Pct HV												
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	3	0	0	2	0
	Through	0	1	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	2	0	0	2	0	0	3	0	0	2	0
	Pct HV		0%			0%			0%			0%	
Total Class Volume		0	150	2	0	142	1	0	135	1	0	119	2
Total Interval Volume			152			143			136			121	
Intersection Pct Trucks			1%			1%			1%			2%	

Approach

Receiving

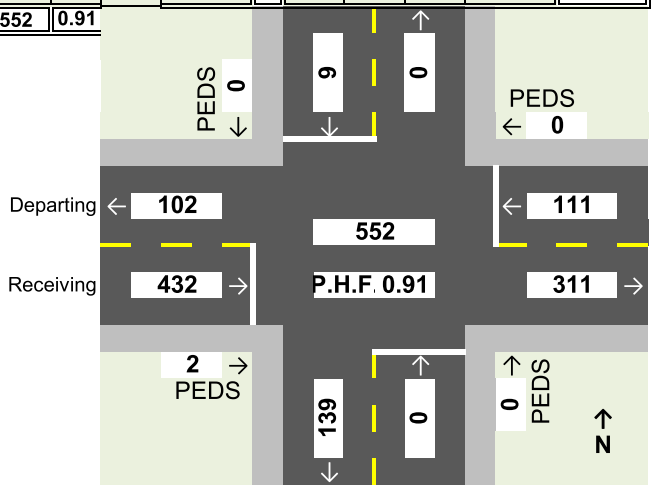
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	0			0.00%
EBT	4	303		1%	70.14%
EBR	1	129		1%	29.86%
Total	5	432	0.92	1%	100.00%
WBU	0	0			0.00%
WBL	0	9		0%	8.11%
WBT	1	102		1%	91.89%
WBR	0	0			0.00%
Total	1	111	0.77	1%	100.00%
NBU	0	0			
NBL	0	0			
NBT	0	0			
NBR	0	0			
Total	0	0			
SBU	0	0			0.00%
SBL	0	8		0%	88.89%
SBT	0	1		0%	11.11%
SBR	0	0			0.00%
Total	0	9	0.75	0%	100.00%
Total	**6**	**552**	**0.91**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	0		0.00%	
WBT	102	1%	100.00%	
SBR	0		0.00%	
Total	102	1%	100.00%	
WBU	0		0.00%	Westbound
SBL	8	0%	2.57%	
EBT	303	1%	97.43%	
NBR	0		0.00%	
Total	311	1%	100.00%	
NBU	0		0.00%	Northbound
WBL	9	0%	6.47%	
SBT	1	0%	0.72%	
EBR	129	1%	92.81%	
Total	139	1%	100.00%	
SBU	0			Southbound
EBL	0			
NBT	0			
WBR	0			
Total	0			

Pedestrian Volumes APPROACH	MOVEMENT	4:45	5:00	5:15	5:30	Confli. Ped TOTAL
Eastbound	Crosswalk	1	1	0	0	**2**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	0	0	0	**0**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	1	1	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights
JOB NO. 21-83
DATE OF COUNT: 3/14/2023
Counter: Miovision
Analyst: BNG

Cheney-Spokane Road
&
SR 195 NB Ramps

AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	93	2	0	85	4	0	113	2	0	145	7	0	193	1	0	130	3	0	115	2	0	80	1	0	94	3	0	85	3	0	77	1	0	85	1
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	93	2	0	85	4	0	113	2	0	145	7	0	193	1	0	130	3	0	115	2	0	80	1	0	94	3	0	85	3	0	77	1	0	85	1
	Pct HV		2%			4%			2%			5%			1%			2%			2%			1%			3%			3%			1%			1%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	8	0	0	13	0	0	23	0	0	27	0	0	27	0	0	14	0	0	17	0	0	21	2	0	28	1	0	33	1	0	27	0	0	27	2
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	8	0	0	13	0	0	23	0	0	27	0	0	29	3	0	14	0	0	17	0	0	21	2	0	28	1	0	33	1	0	27	0	0	27	2
	Pct HV		0%			0%			0%			0%			9%			0%			0%			9%			3%			3%			0%			7%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV																																				
Total Class Volume		0	101	2	0	98	4	0	136	2	0	172	7	0	222	4	0	144	3	0	132	2	0	101	3	0	122	4	0	118	4	0	104	1	0	112	3
Total Interval Volume		103			102			138			179			226			147			134			104			126			122			105			115		
Intersection Pct HV		2%			4%			1%			4%			2%			2%			1%			3%			3%			3%			1%			3%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	2	0	1
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	2	0	1

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	522	2.9%
6:45 AM	645	2.6%
7:00 AM	**690**	**2.3%**
7:15 AM	686	2.3%
7:30 AM	611	2.0%
7:45 AM	511	2.3%
8:00 AM	486	2.7%
8:15 AM	457	2.6%
8:30 AM	468	2.6%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Cheney-Spokane Road & SR 195 NB Ramps
JOB NO. 21-83
DATE OF COUNT: 3/14/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 7:00 AM BK	PC	HV	7:15 AM BK	PC	HV	7:30 AM BK	PC	HV	7:45 AM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	113	2	0	145	7	0	193	1	0	130	3
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	113	2	0	145	7	0	193	1	0	130	3
	Pct HV		2%			5%			1%			2%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	23	0	0	27	0	0	27	0	0	14	0
	Through	0	0	0	0	0	0	0	2	3	0	0	0
	App. Total	0	23	0	0	27	0	0	29	3	0	14	0
	Pct HV		0%			0%			9%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	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
	Pct HV												
Total Class Volume		0	136	2	0	172	7	0	222	4	0	144	3
Total Interval Volume			138			179			226			147	
Intersection Pct Trucks			1%			4%			2%			2%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	13	594		2%	100.00%
EBR	0	0			0.00%
Total	13	594	0.77	2%	100.00%
NBU	0	0			0.00%
NBL	0	91		0%	94.79%
NBT	3	5		60%	5.21%
Total	3	96	0.75	3%	100.00%
SBU	0	0			
SBT	0	0			
SBR	0	0			
Total	0	0			
Total	**16**	**690**	**0.76**		

Departing

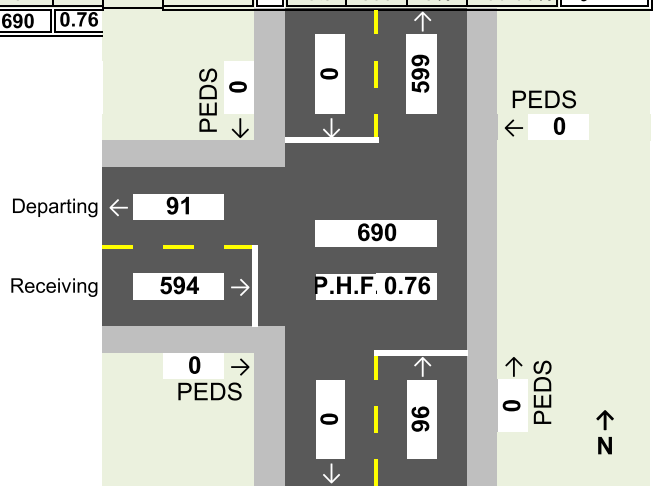
Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0	0%	0.00%	Eastbound
NBL	91	0%	100.00%	
SBR	0	0%	0.00%	
Total	91	0%	100.00%	
NBU	0	0%		Northbound
EBR	0	0%		
SBT	0	0%		
Total	0			
SBU	0	0%	0.00%	Southbound
NBT	5	300%	0.83%	
EBL	594	####	99.17%	
Total	599	3%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:00	7:15	7:30	7:45	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Traffic Counts & Surveys Inc.



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights
JOB NO. 21-83
DATE OF COUNT: 3/14/2023
Counter: Miovision
Analyst: BNG

Cheney-Spokane Road
&
SR 195 NB Ramps

PM PEAK HOURS
15 Minute Period Beginning @

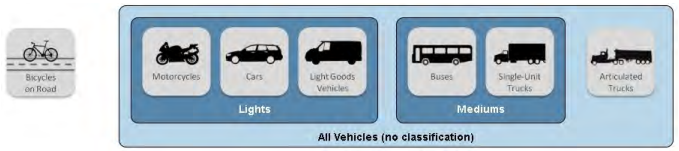
APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	57	0	0	86	2	0	69	2	0	69	4	0	54	2	0	82	2	0	86	1	0	66	1	0	71	1	0	76	0	0	57	1	0	57	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	57	0	0	86	2	0	69	2	0	69	4	0	54	2	0	82	2	0	86	1	0	66	1	0	71	1	0	76	0	0	57	1	0	57	0
	Pct HV		0%			2%			3%			5%			4%			2%			1%			1%			1%			0%			2%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	21	0	0	27	1	0	31	1	0	21	0	0	25	0	0	36	1	0	21	0	0	30	0	0	25	0	0	28	0	0	18	0	0	16	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	21	0	0	27	1	0	32	1	0	21	0	0	25	0	0	36	1	0	21	0	0	30	0	0	25	0	0	28	0	0	18	0	0	16	0
	Pct HV		0%			4%			3%			0%			0%			3%			0%			0%			0%			0%			0%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV																																				
Total Class Volume		0	78	0	0	113	3	0	101	3	0	90	4	0	79	2	0	118	3	0	107	1	0	96	1	0	96	1	0	104	0	0	75	1	0	73	0
Total Interval Volume			78			116			104			94			81			121			108			97			97			104			76			73	
Intersection Pct HV			0%			3%			3%			4%			2%			2%			1%			1%			1%			0%			1%			0%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)



Intersection Total One Hour Volumes		Pct HV
3:30 AM	392	2.6%
3:45 AM	395	3.0%
4:00 AM	**400**	**3.0%**
4:15 AM	404	2.5%
4:30 AM	407	1.7%
4:45 AM	423	1.4%
5:00 AM	406	0.7%
5:15 AM	374	0.8%
5:30 AM	350	0.6%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Cheney-Spokane Road & SR 195 NB Ramps
JOB NO. 21-83
DATE OF COUNT: 3/14/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:00 PM BK	PC	HV	4:15 PM BK	PC	HV	4:30 PM BK	PC	HV	4:45 PM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	69	2	0	69	4	0	54	2	0	82	2
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	69	2	0	69	4	0	54	2	0	82	2
	Pct HV		3%			5%			4%			2%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	31	1	0	21	0	0	25	0	0	36	1
	Through	0	1	0	0	0	0	0	0	0	0	0	0
	App. Total	0	32	1	0	21	0	0	25	0	0	36	1
	Pct HV		3%			0%			0%			3%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	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
	Pct HV												
Total Class Volume		0	101	3	0	90	4	0	79	2	0	118	3
Total Interval Volume			104			94			81			121	
Intersection Pct Trucks			3%			4%			2%			2%	

Approach

Receiving

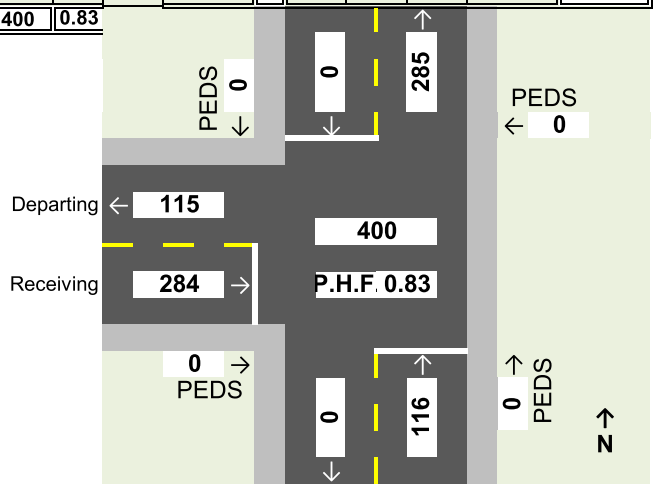
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	10	284		4%	100.00%
EBR	0	0			0.00%
Total	10	284	0.85	4%	100.00%
NBU	0	0			0.00%
NBL	2	115		2%	99.14%
NBT	0	1		0%	0.86%
Total	2	116	0.78	2%	100.00%
SBU	0	0			
SBT	0	0			
SBR	0	0			
Total	0	0			
Total	**12**	**400**	**0.83**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0	0%	0.00%	Eastbound
NBL	115	200%	100.00%	
SBR	0	0%	0.00%	
Total	115	2%	100.00%	
NBU	0	0%		Northbound
EBR	0	0%		
SBT	0	0%		
Total	0			
SBU	0	0%	0.00%	Southbound
NBT	1	0%	0.35%	
EBL	284	####	99.65%	
Total	285	4%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:00	7:15	7:30	7:45	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Meadowlane
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	34	0	0	39	0	0	32	0	0	43	0	0	67	0	0	37	0	0	27	0	0	27	0	0	34	0	0	22	0	0	19	0	0	19	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	13	0	0	15	1	0	13	1	0	13	1	0	16	1	0	22	1	0	35	1	0	29	0	0	38	2	0	18	0	0	18	0	0	10	0
	App. Total	0	47	0	0	54	1	0	45	1	0	56	1	0	83	1	0	59	1	0	62	1	0	56	0	0	72	2	0	40	0	0	37	0	0	29	0
	Pct HV		0%			2%			2%			2%			1%			2%			2%			0%			3%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	3	0	0	1	0	0	1	0	0	5	0	0	2	0	0	3	0	0	3	1	0	3	0	0	5	0	0	7	0	0	2	2
	App. Total	0	0	0	0	5	0	0	1	0	0	1	0	0	7	0	0	3	1	0	3	0	0	3	1	0	3	0	0	8	0	0	9	0	0	3	2
	Pct HV					0%			0%			0%			0%			25%			0%			25%			0%			0%			0%			40%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Left	0	2	2	0	3	0	0	5	0	0	8	1	0	4	0	0	4	0	0	2	1	0	21	0	0	22	0	0	23	0	0	10	0	0	6	0
	Through	0	107	3	0	106	3	0	125	2	0	193	3	0	188	4	0	138	3	0	134	2	0	147	8	0	133	6	0	123	5	0	119	3	0	107	11
	Right	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	3	0
	App. Total	0	109	5	0	109	3	0	131	2	0	201	4	0	193	4	0	143	3	0	136	3	0	168	8	0	155	6	0	149	5	0	131	3	0	116	11
	Pct HV		4%			3%			2%			2%			2%			2%			2%			5%			4%			3%			2%			9%	
Southbound	U-Turn	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2	0	0	2	0	0	2	0	0	1	0
	Left	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	4	0	0	3	0	0	0	1
	Through	0	49	10	0	55	14	0	69	5	0	88	9	0	89	9	0	80	10	0	96	8	0	102	16	0	92	8	0	58	12	0	71	8	0	81	5
	Right	0	3	1	0	7	0	0	6	1	0	4	1	0	5	0	0	9	2	0	18	0	0	12	1	0	12	0	0	14	0	0	12	0	0	11	1
	App. Total	0	54	11	0	62	14	0	75	6	0	94	10	0	94	10	0	91	12	0	117	8	0	116	17	0	107	8	0	78	12	0	88	8	0	93	7
	Pct HV		17%			18%			7%			10%			10%			12%			6%			13%			7%			13%			8%			7%	
Total Class Volume		0	210	16	0	230	18	0	252	9	0	352	15	0	377	15	0	296	17	0	318	12	0	343	26	0	337	16	0	275	17	0	265	11	0	241	20
Total Interval Volume			226			248			261			367			392			313			330			369			353			292			276			261	
Intersection Pct HV			7%			7%			3%			4%			4%			5%			4%			7%			5%			6%			4%			8%	

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	1,102	5.3%
6:45 AM	1,268	4.5%
7:00 AM	1,333	4.2%
7:15 AM	1,402	4.2%
7:30 AM	**1,404**	**5.0%**
7:45 AM	1,365	5.2%
8:00 AM	1,344	5.3%
8:15 AM	1,290	5.4%
8:30 AM	1,182	5.4%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Meadowlane & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/14/2023

Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV	8:15 AM BK	8:15 AM PC	8:15 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	67	0	0	37	0	0	27	0	0	27	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	16	1	0	22	1	0	35	1	0	29	0
	App. Total	0	83	1	0	59	1	0	62	1	0	56	0
	Pct HV		1%			2%			2%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	1	0	0	0	0	0	0	0
	Through	0	0	0	0	0	1	0	0	0	0	0	0
	Right	0	5	0	0	2	0	0	3	0	0	3	1
	App. Total	0	7	0	0	3	1	0	3	0	0	3	1
	Pct HV		0%			25%			0%			25%	
Northbound	U-Turn	0	0	0	0	1	0	0	0	0	0	0	0
	Left	0	4	0	0	4	0	0	2	1	0	21	0
	Through	0	188	4	0	138	3	0	134	2	0	147	8
	Right	0	1	0	0	0	0	0	0	0	0	0	0
	App. Total	0	193	4	0	143	3	0	136	3	0	168	8
	Pct HV		2%			2%			2%			5%	
Southbound	U-Turn	0	0	0	0	0	0	0	1	0	0	2	0
	Left	0	0	1	0	2	0	0	2	0	0	0	0
	Through	0	89	9	0	80	10	0	96	8	0	102	16
	Right	0	5	0	0	9	2	0	18	0	0	12	1
	App. Total	0	94	10	0	91	12	0	117	8	0	116	17
	Pct HV		10%			12%			6%			13%	
Total Class Volume		0	377	15	0	296	17	0	318	12	0	343	26
Total Interval Volume			392			313			330			369	
Intersection Pct Trucks			4%			5%			4%			7%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	158		0%	60.08%
EBT	0	0			0.00%
EBR	3	105		3%	39.92%
Total	3	263	0.78	1%	100.00%
WBU	0	0			0.00%
WBL	0	3		0%	16.67%
WBT	1	1		100%	5.56%
WBR	1	14		7%	77.78%
Total	2	18	0.64	11%	100.00%
NBU	0	1		0%	0.15%
NBL	1	32		3%	4.86%
NBT	17	624		3%	94.83%
NBR	0	1		0%	0.15%
Total	18	658	0.84	3%	100.00%
SBU	0	3		0%	0.65%
SBL	1	5		20%	1.08%
SBT	43	410		10%	88.17%
SBR	3	47		6%	10.11%
Total	47	465	0.87	10%	100.00%
Total	**70**	**1,404**	**0.90**		

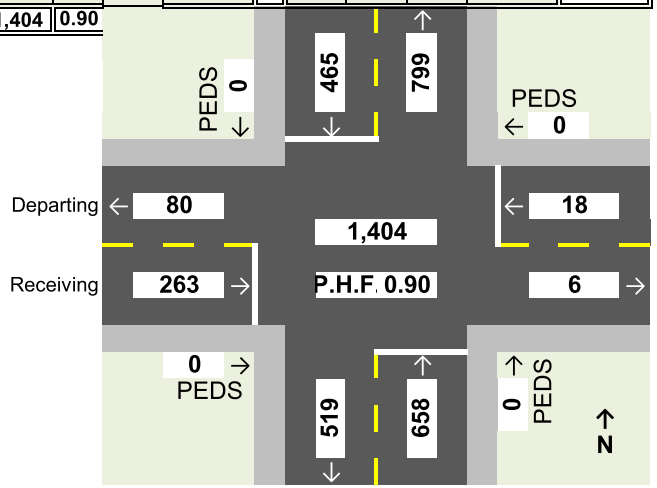
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	32	3%	40.00%	
WBT	1	100%	1.25%	
SBR	47	6%	58.75%	
Total	80	6%	100.00%	
WBU	0		0.00%	Westbound
SBL	5	20%	83.33%	
EBT	0		0.00%	
NBR	1	0%	16.67%	
Total	6	17%	100.00%	
NBU	1	0%	0.19%	Northbound
WBL	3	0%	0.58%	
SBT	410	10%	79.00%	
EBR	105	3%	20.23%	
Total	519	9%	100.00%	
SBU	3	0%	0.38%	Southbound
EBL	158	0%	19.77%	
NBT	624	3%	78.10%	
WBR	14	7%	1.75%	
Total	799	2%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:30	7:45	8:00	8:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Traffic Counts & Surveys Inc.



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Victory Heights — Meadowlane
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	11	0	0	12	0	0	14	0	0	12	0	0	10	0	0	12	0	0	14	0	0	12	0	0	11	0	0	11	0	0	14	0	0	13	0
	Through	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	14	1	0	15	1	0	18	1	0	12	0	0	26	0	0	18	0	0	24	0	0	20	0	0	18	0	0	20	0	0	6	0	0	9	0
	App. Total	0	25	1	0	27	2	0	32	2	0	24	0	0	36	0	0	30	0	0	39	0	0	32	0	0	29	0	0	31	0	0	20	0	0	22	0
	Pct HV	4%			7%			6%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	1	0	0	2	0	0	1	0	0	2	0	0	3	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0
	Through	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	3	0	0	1	0	0	7	0	0	4	0	0	6	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	0
	App. Total	0	3	0	0	3	1	0	8	1	0	6	0	0	7	0	0	5	0	0	3	0	0	1	0	0	1	0	0	1	0	0	2	0	0	4	0
	Pct HV	0%			25%			11%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Left	0	36	0	0	19	0	0	19	0	0	22	1	0	19	0	0	28	0	0	27	0	0	24	0	0	21	0	0	13	0	0	15	0	0	19	0
	Through	0	112	5	0	104	10	0	111	5	0	100	5	0	109	7	0	128	8	0	79	9	0	117	6	0	117	7	0	86	14	0	66	4	0	79	3
	Right	0	1	0	0	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	4	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0
	App. Total	0	149	5	0	124	11	0	131	6	0	124	6	0	129	7	0	158	8	0	111	9	0	143	6	0	140	7	0	99	14	0	82	4	0	98	3
	Pct HV	3%			8%			4%			5%			5%			5%			8%			4%			5%			12%			5%			3%		
Southbound	U-Turn	0	0	0	0	0	0	0	3	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Left	0	3	0	0	1	0	0	5	0	0	3	0	0	1	0	0	3	0	0	1	0	0	2	0	0	1	0	0	2	0	0	3	0	0	4	0
	Through	0	158	4	0	160	1	0	162	1	0	179	4	0	181	4	0	166	6	0	174	6	0	208	0	0	152	2	0	133	3	0	116	1	0	107	1
	Right	0	32	0	0	26	1	0	28	1	0	34	0	0	39	0	0	36	0	0	36	0	0	45	0	0	30	0	0	30	0	0	24	0	0	29	0
	App. Total	0	193	4	0	187	2	0	198	2	0	218	4	0	222	4	0	205	6	0	211	6	0	255	0	0	183	2	0	166	3	0	143	1	0	140	1
	Pct HV	2%			1%			1%			2%			2%			3%			3%			0%			1%			2%			1%			1%		
Total Class Volume		0	370	10	0	341	16	0	369	11	0	372	10	0	394	11	0	398	14	0	364	15	0	431	6	0	353	9	0	297	17	0	247	5	0	264	4
Total Interval Volume		380			357			380			382			405			412			379			437			362			314			252			268		
Intersection Pct HV		3%			4%			3%			3%			3%			3%			4%			1%			2%			5%			2%			1%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	1,499	3.1%
3:45 PM	1,524	3.1%
4:00 PM	1,579	2.9%
4:15 PM	1,578	3.2%
4:30 PM	**1,633**	**2.8%**
4:45 PM	1,590	2.8%
5:00 PM	1,492	3.2%
5:15 PM	1,365	2.7%
5:30 PM	1,196	2.9%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Meadowlane & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/14/2023

Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:30 PM BK	4:30 PM PC	4:30 PM HV	4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	10	0	0	12	0	0	14	0	0	12	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0
	Right	0	26	0	0	18	0	0	24	0	0	20	0
	App. Total	0	36	0	0	30	0	0	39	0	0	32	0
	Pct HV		0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	2	0	0	3	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	6	0	0	3	0	0	0	0	0	0	0
	App. Total	0	7	0	0	5	0	0	3	0	0	1	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	1	0	0	1	0	0	0	0
	Left	0	19	0	0	28	0	0	27	0	0	24	0
	Through	0	109	7	0	128	8	0	79	9	0	117	6
	Right	0	1	0	0	1	0	0	4	0	0	2	0
	App. Total	0	129	7	0	158	8	0	111	9	0	143	6
	Pct HV		5%			5%			8%			4%	
Southbound	U-Turn	0	1	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	3	0	0	1	0	0	2	0
	Through	0	181	4	0	166	6	0	174	6	0	208	0
	Right	0	39	0	0	36	0	0	36	0	0	45	0
	App. Total	0	222	4	0	205	6	0	211	6	0	255	0
	Pct HV		2%			3%			3%			0%	
Total Class Volume		0	394	11	0	398	14	0	364	15	0	431	6
Total Interval Volume			405			412			379			437	
Intersection Pct Trucks			3%			3%			4%			1%	

Approach

Receiving

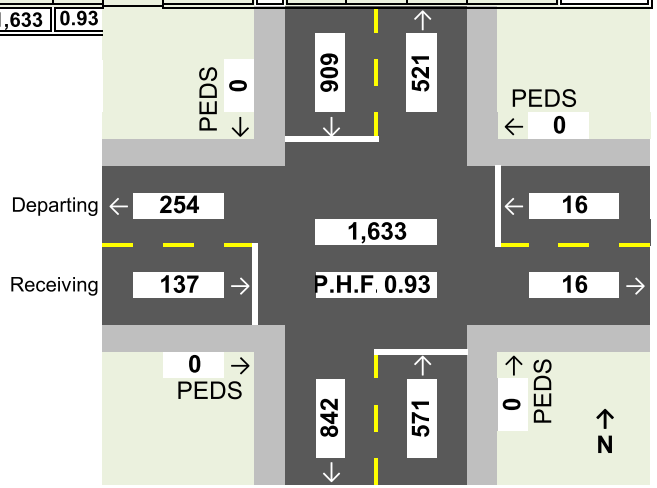
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	48		0%	35.04%
EBT	0	1		0%	0.73%
EBR	0	88		0%	64.23%
Total	0	137	0.88	0%	100.00%
WBU	0	0			0.00%
WBL	0	7		0%	43.75%
WBT	0	0			0.00%
WBR	0	9		0%	56.25%
Total	0	16	0.57	0%	100.00%
NBU	0	2		0%	0.35%
NBL	0	98		0%	17.16%
NBT	30	463		6%	81.09%
NBR	0	8		0%	1.40%
Total	30	571	0.86	5%	100.00%
SBU	0	1		0%	0.11%
SBL	0	7		0%	0.77%
SBT	16	745		2%	81.96%
SBR	0	156		0%	17.16%
Total	16	909	0.89	2%	100.00%
Total	**46**	**1,633**	**0.93**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	98	0%	38.58%	
WBT	0		0.00%	
SBR	156	0%	61.42%	
Total	254	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	7	0%	43.75%	
EBT	1	0%	6.25%	
NBR	8	0%	50.00%	
Total	16	0%	100.00%	
NBU	2	0%	0.24%	Northbound
WBL	7	0%	0.83%	
SBT	745	2%	88.48%	
EBR	88	0%	10.45%	
Total	842	2%	100.00%	
SBU	1	0%	0.19%	Southbound
EBL	48	0%	9.21%	
NBT	463	6%	88.87%	
WBR	9	0%	1.73%	
Total	521	6%	100.00%	
Total	**1,633**		**3%**	

Pedestrian Volumes

APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Hatch Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	4	0	0	13	1	0	7	0	0	13	0	0	20	0	0	6	0	0	8	0	0	12	0	0	13	0	0	16	0	0	12	1	0	13	0
	Right	0	59	3	0	51	0	0	59	1	0	90	0	0	99	4	0	75	0	0	55	1	0	88	0	0	73	0	0	66	1	0	58	1	0	48	0
	App. Total	0	63	3	0	64	1	0	66	1	0	103	0	0	119	4	0	81	0	0	63	1	0	100	0	0	86	0	0	82	1	0	70	2	0	61	0
	Pct HV	5%			2%			1%			0%			3%			0%			2%			0%			0%			1%			3%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	59	2	0	50	3	0	74	2	0	99	3	0	94	0	0	69	3	0	86	2	0	65	6	0	79	5	0	71	3	0	78	2	0	69	9
	Right	0	11	0	0	4	0	0	8	1	0	23	0	0	20	0	0	19	0	0	21	0	0	23	0	0	27	0	0	18	0	0	11	0	0	18	0
	App. Total	0	70	2	0	54	3	0	82	3	0	122	3	0	114	0	0	89	3	0	107	2	0	88	6	0	106	5	0	89	3	0	89	2	0	87	9
	Pct HV	3%			5%			4%			2%			0%			3%			2%			6%			5%			3%			2%			9%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0
	Left	0	33	0	0	28	2	0	38	0	0	46	2	0	55	1	0	61	1	0	70	2	0	81	1	0	67	3	0	55	3	0	43	0	0	42	0
	Through	0	37	10	0	40	13	0	43	5	0	47	12	0	56	8	0	37	11	0	62	9	0	52	11	0	57	14	0	31	10	0	42	11	0	54	5
	App. Total	0	70	10	0	68	15	0	81	5	0	93	14	0	111	9	0	98	12	0	132	11	0	135	12	0	124	17	0	88	13	0	85	11	0	96	5
	Pct HV	13%			18%			6%			13%			8%			11%			8%			8%			12%			13%			11%			5%		
Total Class Volume		0	203	15	0	186	19	0	229	9	0	318	17	0	344	13	0	268	15	0	302	14	0	323	18	0	316	22	0	259	17	0	244	15	0	244	14
Total Interval Volume		218			205			238			335			357			283			316			341			338			276			259			258		
Intersection Pct HV		7%			9%			4%			5%			4%			5%			4%			5%			7%			6%			6%			5%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	996	0.1%
6:45 AM	1,135	0.1%
7:00 AM	1,213	0.1%
7:15 AM	1,291	0.0%
7:30 AM	**1,297**	**0.0%**
7:45 AM	1,278	0.0%
8:00 AM	1,271	0.0%
8:15 AM	1,214	0.0%
8:30 AM	1,131	0.0%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Hatch Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/14/2023
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 7:30 AM BK	PC	HV	7:45 AM BK	PC	HV	8:00 AM BK	PC	HV	8:15 AM BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	20	0	0	6	0	0	8	0	0	12	0
	Right	0	99	4	0	75	0	0	55	1	0	88	0
	App. Total	0	119	4	0	81	0	0	63	1	0	100	0
	Pct HV		3%			0%			2%			0%	
Northbound	U-Turn	0	0	0	0	1	0	0	0	0	0	0	0
	Through	0	94	0	0	69	3	0	86	2	0	65	6
	Right	0	20	0	0	19	0	0	21	0	0	23	0
	App. Total	0	114	0	0	89	3	0	107	2	0	88	6
	Pct HV		0%			3%			2%			6%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	2	0
	Left	0	55	1	0	61	1	0	70	2	0	81	1
	Through	0	56	8	0	37	11	0	62	9	0	52	11
	App. Total	0	111	9	0	98	12	0	132	11	0	135	12
	Pct HV		8%			11%			8%			8%	
Total Class Volume		0	344	13	0	268	15	0	302	14	0	323	18
Total Interval Volume			357			283			316			341	
Intersection Pct Trucks			4%			5%			4%			5%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	0	46		0%	12.50%
WBR	5	322		2%	87.50%
Total	5	368	0.75	1%	100.00%
NBU	0	1		0%	0.24%
NBT	11	325		3%	79.46%
NBR	0	83		0%	20.29%
Total	11	409	0.90	3%	100.00%
SBU	0	2		0%	0.38%
SBL	5	272		2%	52.31%
SBT	39	246		16%	47.31%
Total	44	520	0.88	8%	100.00%
Total	**60**	**1,297**	**0.91**		

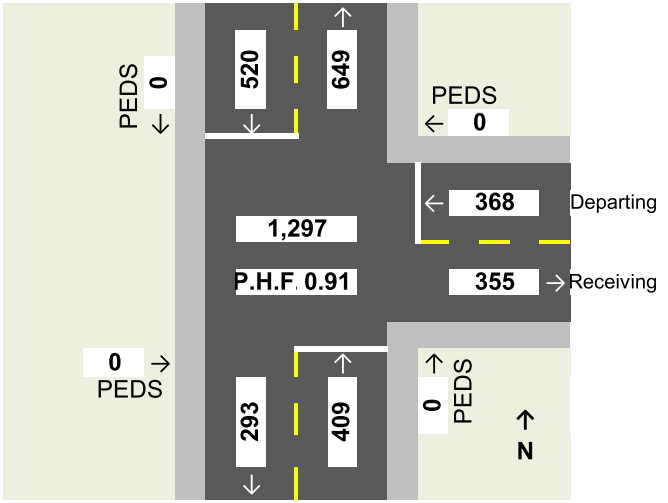
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	272	2%	76.62%	
NBR	83	0%	23.38%	
Total	355		100.00%	
NBU	1	0%	0.34%	Northbound
SBT	246	16%	83.96%	
WBL	46	0%	15.70%	
Total	293	13%	100.00%	
SBU	2	0%	0.31%	Southbound
WBR	322	2%	49.61%	
NBT	325	3%	50.08%	
Total	649	2%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:30	7:45	8:00	8:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights — Hatch Road
JOB NO. 23-81 — &
DATE OF COUNT: 3/14/2023 — SR 195
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	30	0	0	19	0	0	13	0	0	21	0	0	38	0	0	15	1	0	23	0	0	38	0	0	21	0	0	15	0	0	15	0	0	18	0
	Right	0	79	1	0	68	1	0	69	1	0	68	1	0	73	1	0	88	1	0	71	0	0	81	0	0	75	0	0	59	0	0	48	0	0	63	1
	App. Total	0	109	1	0	87	1	0	82	1	0	89	1	0	111	1	0	103	2	0	94	0	0	119	0	0	96	0	0	74	0	0	63	0	0	81	1
	Pct HV		1%			1%			1%			1%			1%			2%			0%			0%			0%			0%			0%			1%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0
	Through	0	67	5	0	52	9	0	67	5	0	51	6	0	58	5	0	70	7	0	46	8	0	60	6	0	55	9	0	39	11	0	36	4	0	38	3
	Right	0	16	2	0	19	0	0	14	0	0	22	1	0	6	1	0	12	0	0	16	0	0	17	0	0	11	0	0	18	0	0	14	0	0	15	0
	App. Total	0	83	7	0	71	9	0	81	5	0	73	7	0	64	6	0	82	7	0	62	8	0	78	6	0	66	9	0	57	11	0	51	4	0	54	3
	Pct HV		8%			11%			6%			9%			9%			8%			11%			7%			12%			16%			7%			5%	
Southbound	U-Turn	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Left	0	75	2	0	92	0	0	73	0	0	102	0	0	98	0	0	109	1	0	102	0	0	103	0	0	70	1	0	75	0	0	58	0	0	66	1
	Through	0	104	3	0	86	2	0	102	3	0	100	4	0	107	4	0	79	5	0	95	6	0	115	0	0	101	1	0	79	3	0	70	1	0	54	1
	App. Total	0	180	5	0	178	2	0	175	3	0	202	4	0	205	4	0	188	6	0	197	6	0	218	0	0	172	2	0	154	3	0	128	1	0	120	2
	Pct HV		3%			1%			2%			2%			2%			3%			3%			0%			1%			2%			1%			2%	
Total Class Volume		0	372	13	0	336	12	0	338	9	0	364	12	0	380	11	0	373	15	0	353	14	0	415	6	0	334	11	0	285	14	0	242	5	0	255	6
Total Interval Volume			385			348			347			376			391			388			367			421			345			299			247			261	
Intersection Pct HV			3%			3%			3%			3%			3%			4%			4%			1%			3%			5%			2%			2%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	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

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	1,456	3.2%
3:45 PM	1,462	3.0%
4:00 PM	1,502	3.1%
4:15 PM	1,522	3.4%
4:30 PM	**1,567**	**2.9%**
4:45 PM	1,521	3.0%
5:00 PM	1,432	3.1%
5:15 PM	1,312	2.7%
5:30 PM	1,152	3.1%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Victory Heights Hatch Road & SR 195
JOB NO. 23-81
DATE OF COUNT: 3/14/2023

Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:30 PM			4:45 PM			5:00 PM			5:15 PM		
		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	38	0	0	15	1	0	23	0	0	38	0
	Right	0	73	1	0	88	1	0	71	0	0	81	0
	App. Total	0	111	1	0	103	2	0	94	0	0	119	0
	Pct HV		1%			2%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	1	0
	Through	0	58	5	0	70	7	0	46	8	0	60	6
	Right	0	6	1	0	12	0	0	16	0	0	17	0
	App. Total	0	64	6	0	82	7	0	62	8	0	78	6
	Pct HV		9%			8%			11%			7%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	98	0	0	109	1	0	102	0	0	103	0
	Through	0	107	4	0	79	5	0	95	6	0	115	0
	App. Total	0	205	4	0	188	6	0	197	6	0	218	0
	Pct HV		2%			3%			3%			0%	
Total Class Volume		0	380	11	0	373	15	0	353	14	0	415	6
Total Interval Volume			391			388			367			421	
Intersection Pct Trucks			3%			4%			4%			1%	

Approach

Departing

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
WBU	0	0			0.00%
WBL	1	115		1%	26.74%
WBR	2	315		1%	73.26%
Total	3	430	0.90	1%	100.00%
NBU	0	1		0%	0.32%
NBT	26	260		10%	83.07%
NBR	1	52		2%	16.61%
Total	27	313	0.88	9%	100.00%
SBU	0	0			0.00%
SBL	1	413		0%	50.12%
SBT	15	411		4%	49.88%
Total	16	824	0.94	2%	100.00%
Total	**46**	**1,567**	**0.93**		

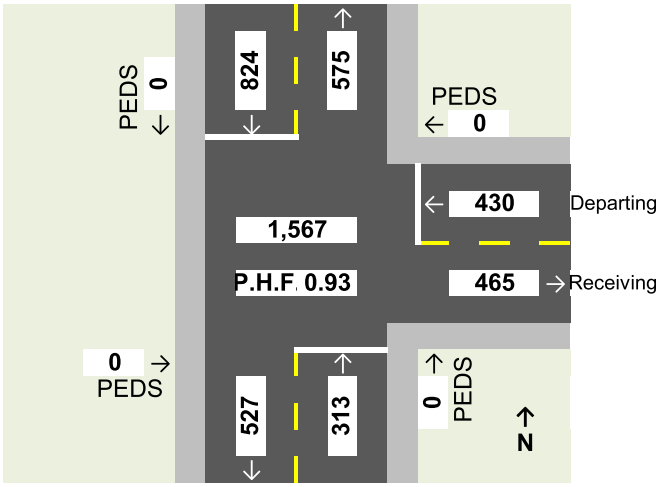
Receiving

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
WBU	0		0.00%	Westbound
SBL	413	0%	88.82%	
NBR	52	2%	11.18%	
Total	465	0%	100.00%	
NBU	1	0%	0.19%	Northbound
SBT	411	4%	77.99%	
WBL	115	1%	21.82%	
Total	527	3%	100.00%	
SBU	0		0.00%	Southbound
WBR	315	1%	54.78%	
NBT	260	10%	45.22%	
Total	575	5%	100.00%	

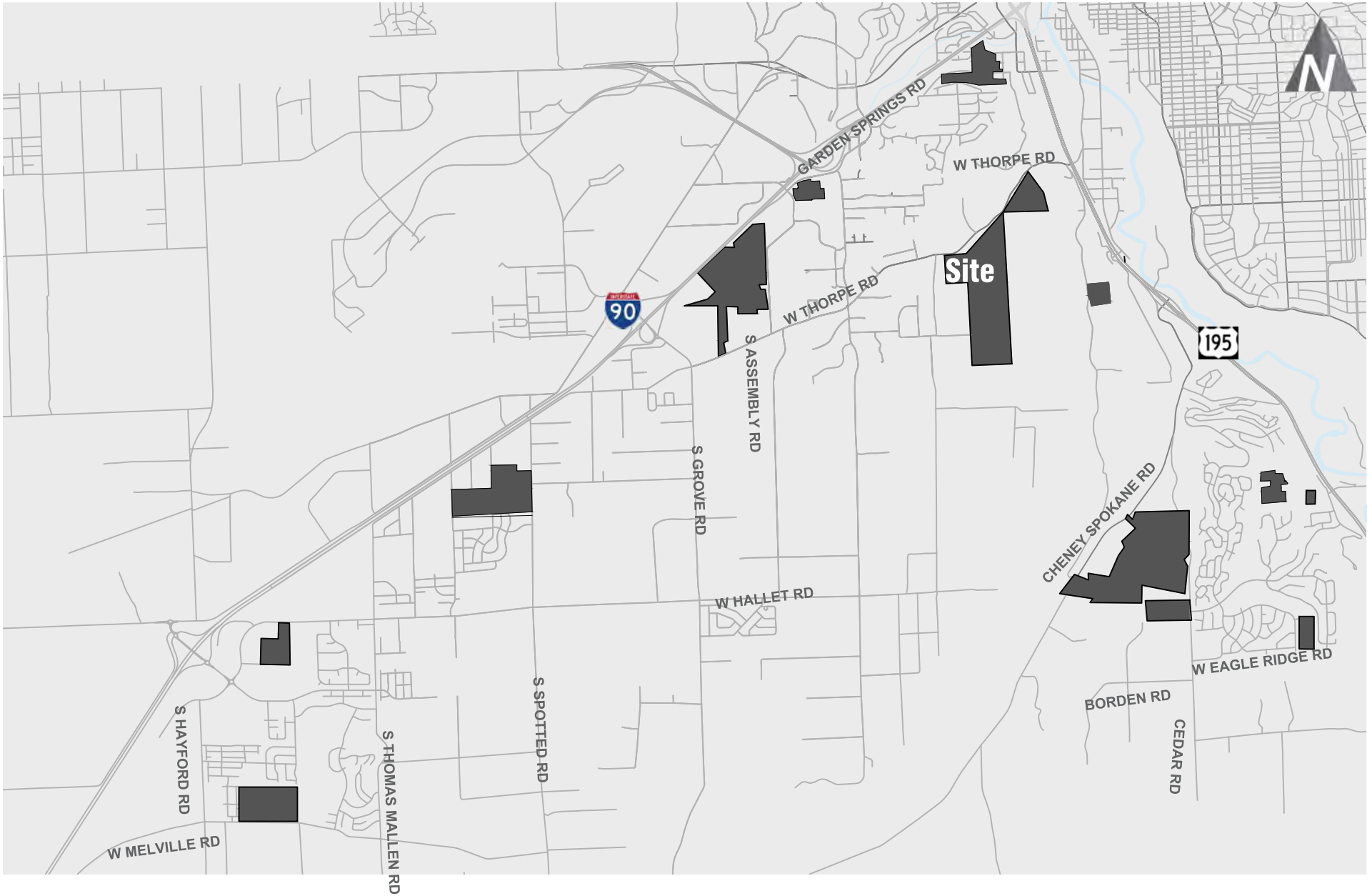
Pedestrian Volumes

APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



Appendix B: Locations of Pipeline Projects



Pipeline Locations Relative to Project Site

Blue Fern Victory Heights

APPENDIX **B**

transpogroup

Appendix C: LOS Definitions

Highway Capacity Manual 2010/6th Edition

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* and 6th Edition (Transportation Research Board, 2010 and 2016, respectively).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.

1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F[1]	>50

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.

1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

Appendix D: LOS Worksheets

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	95	5	0	10	15	75	4	245	5	45	180	75
Future Vol, veh/h	95	5	0	10	15	75	4	245	5	45	180	75
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	6	6	6	10	10	10	7	7	7	11	11	11
Mvmt Flow	114	6	0	12	18	90	5	295	6	54	217	90
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay, s/veh	11	9.8	12.6	13.7
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	95%	40%	0%	15%
Vol Thru, %	96%	5%	60%	0%	60%
Vol Right, %	2%	0%	0%	100%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	254	100	25	75	300
LT Vol	4	95	10	0	45
Through Vol	245	5	15	0	180
RT Vol	5	0	0	75	75
Lane Flow Rate	306	120	30	90	361
Geometry Grp	2	4a	5	5	2
Degree of Util (X)	0.45	0.211	0.057	0.149	0.519
Departure Headway (Hd)	5.289	6.293	6.847	5.931	5.174
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	679	570	522	604	698
Service Time	3.325	4.341	4.597	3.68	3.208
HCM Lane V/C Ratio	0.451	0.211	0.057	0.149	0.517
HCM Control Delay, s/veh	12.6	11	10	9.7	13.7
HCM Lane LOS	B	B	A	A	B
HCM 95th-tile Q	2.3	0.8	0.2	0.5	3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	10	5	40	20	4	25	30	25	5	35	20
Future Vol, veh/h	3	10	5	40	20	4	25	30	25	5	35	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	10	10	10
Mvmt Flow	3	11	5	43	22	4	27	33	27	5	38	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.3	7.7	7.5	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	17%	63%	8%
Vol Thru, %	38%	56%	31%	58%
Vol Right, %	31%	28%	6%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	18	64	60
LT Vol	25	3	40	5
Through Vol	30	10	20	35
RT Vol	25	5	4	20
Lane Flow Rate	87	20	70	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.022	0.082	0.074
Departure Headway (Hd)	4.013	4.083	4.264	4.108
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	884	863	831	863
Service Time	2.076	2.171	2.338	2.175
HCM Lane V/C Ratio	0.098	0.023	0.084	0.075
HCM Control Delay, s/veh	7.5	7.3	7.7	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.3	0.2

Intersection	
Int Delay, s/veh	5.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	45	5	35	10	4	80
Future Vol, veh/h	45	5	35	10	4	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	2	2	1	1
Mvmt Flow	48	5	37	11	4	85

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	136	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	85	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1553	-	860	1020
Stage 1	-	-	-	-	974	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	839	1020
Mov Cap-2 Maneuver	-	-	-	-	839	-
Stage 1	-	-	-	-	974	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.7	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1010	-	-	1553	-
HCM Lane V/C Ratio	0.088	-	-	0.024	-
HCM Control Delay (s/veh)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	14.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	1	70	1	4	20	120	1085	1	10	400	25
Future Vol, veh/h	75	1	70	1	4	20	120	1085	1	10	400	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	5	5	5
Mvmt Flow	84	1	79	1	4	22	135	1219	1	11	449	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1367	1975	239	1737	1989	610	477	0	0	1220	0	0
Stage 1	485	485	-	1490	1490	-	-	-	-	-	-	-
Stage 2	882	1490	-	247	499	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.12	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.21	-	-	2.25	-	-
Pot Cap-1 Maneuver	108	63	768	57	62	442	1089	-	-	551	-	-
Stage 1	537	555	-	132	189	-	-	-	-	-	-	-
Stage 2	312	189	-	741	547	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	86	54	768	45	53	442	1089	-	-	551	-	-
Mov Cap-2 Maneuver	86	54	-	45	53	-	-	-	-	-	-	-
Stage 1	470	544	-	116	166	-	-	-	-	-	-	-
Stage 2	252	166	-	650	536	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	163.6	29.5	0.9	0.3
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1089	-	-	149	175	551	-	-
HCM Lane V/C Ratio	0.124	-	-	1.101	0.161	0.02	-	-
HCM Control Delay (s/veh)	8.8	-	-	163.6	29.5	11.7	-	-
HCM Lane LOS	A	-	-	F	D	B	-	-
HCM 95th %tile Q (veh)	0.4	-	-	8.8	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	50	1230	635	0
Future Vol, veh/h	0	50	50	1230	635	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	8	8
Mvmt Flow	0	54	54	1323	683	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	342	683	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	654	906	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	654	906	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	906	-	654	-
HCM Lane V/C Ratio	0.059	-	0.082	-
HCM Control Delay (s/veh)	9.2	-	11	-
HCM Lane LOS	A	-	B	-
HCM 95th %tile Q (veh)	0.2	-	0.3	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	100	0	0	40	0	1235	150	0	585	50
Future Vol, veh/h	0	0	100	0	0	40	0	1235	150	0	585	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	150	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	10	10	10	1	1	1	8	8	8
Mvmt Flow	0	0	108	0	0	43	0	1328	161	0	629	54

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	315	-	-	664	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	7.1	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.4	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	681	0	0	385	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	681	-	-	385	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.3	15.5	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	681	385	-
HCM Lane V/C Ratio	-	-	0.158	0.112	-
HCM Control Delay (s/veh)	-	-	11.3	15.5	-
HCM Lane LOS	-	-	B	C	-
HCM 95th %tile Q (veh)	-	-	0.6	0.4	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1375	0	85	585
Future Vol, veh/h	0	85	1375	0	85	585
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	4	4
Mvmt Flow	0	92	1495	0	92	636

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	748	0	-	1495	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.24	-
Pot Cap-1 Maneuver	0	359	-	0	435	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	359	-	-	435	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	18.5	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	359	435	-
HCM Lane V/C Ratio	-	0.257	0.212	-
HCM Control Delay (s/veh)	-	18.5	15.5	-
HCM Lane LOS	-	C	C	-
HCM 95th %tile Q (veh)	-	1	0.8	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	0	0	650	0	175
Future Vol, veh/h	80	0	0	650	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	2	2	8	8
Mvmt Flow	98	0	0	793	0	213

Major/Minor	Minor1		Major2	
Conflicting Flow All	213	-	-	-
Stage 1	0	-	-	-
Stage 2	213	-	-	-
Critical Hdwy	6.4	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-
Follow-up Hdwy	3.5	-	-	-
Pot Cap-1 Maneuver	780	0	0	-
Stage 1	-	0	0	-
Stage 2	827	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	780	-	-	-
Mov Cap-2 Maneuver	780	-	-	-
Stage 1	-	-	-	-
Stage 2	827	-	-	-

Approach	WB	SB
HCM Control Delay, s/v	10.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	780	-
HCM Lane V/C Ratio	0.125	-
HCM Control Delay (s/veh)	10.3	-
HCM Lane LOS	B	-
HCM 95th %tile Q (veh)	0.4	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	590	55	5	80	0	0	0	0	15	0	0
Future Vol, veh/h	0	590	55	5	80	0	0	0	0	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	12	12	12
Mvmt Flow	0	738	69	6	100	0	0	0	0	19	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	807	0	0	885	919	100
Stage 1	-	-	-	-	-	-	112	112	-
Stage 2	-	-	-	-	-	-	773	807	-
Critical Hdwy	-	-	-	4.1	-	-	6.52	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	5.62	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.608	4.108	3.408
Pot Cap-1 Maneuver	0	-	-	827	-	0	303	261	929
Stage 1	0	-	-	-	-	0	888	784	-
Stage 2	0	-	-	-	-	0	438	380	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	827	-	-	301	0	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	0	-
Stage 1	-	-	-	-	-	-	888	0	-
Stage 2	-	-	-	-	-	-	434	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.6	17.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	827	-	301
HCM Lane V/C Ratio	-	-	0.008	-	0.062
HCM Control Delay (s/veh)	-	-	9.4	0	17.8
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q (veh)	-	-	0	-	0.2

Intersection	
Int Delay, s/veh	21.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰						↰				
Traffic Vol, veh/h	595	0	0	0	0	0	90	5	0	0	0	0
Future Vol, veh/h	595	0	0	0	0	0	90	5	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	0	0	0	3	3	3	0	0	0
Mvmt Flow	783	0	0	0	0	0	118	7	0	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	-	1566	1566	-
Stage 1	-	-	-	1566	1566	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	6.43	6.53	-
Critical Hdwy Stg 1	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.527	4.027	-
Pot Cap-1 Maneuver	-	-	0	122	111	0
Stage 1	-	-	0	188	171	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %		-				
Mov Cap-1 Maneuver	-	-	-	122	0	-
Mov Cap-2 Maneuver	-	-	-	122	0	-
Stage 1	-	-	-	188	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s/v		156.8
HCM LOS		F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT
Capacity (veh/h)	122	-	-
HCM Lane V/C Ratio	1.025	-	-
HCM Control Delay (s/veh)	156.8	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q (veh)	7	-	-

Intersection	
Int Delay, s/veh	15.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	0	105	3	1	15	35	625	1	10	410	45
Future Vol, veh/h	160	0	105	3	1	15	35	625	1	10	410	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	425	-	-	300	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	11	11	11	3	3	3	10	10	10
Mvmt Flow	178	0	117	3	1	17	39	694	1	11	456	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	904	1251	228	1023	1301	348	506	0	0	695	0	0
Stage 1	478	478	-	773	773	-	-	-	-	-	-	-
Stage 2	426	773	-	250	528	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.72	6.72	7.12	4.16	-	-	4.3	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.72	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.72	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.61	4.11	3.41	2.23	-	-	2.3	-	-
Pot Cap-1 Maneuver	234	173	778	178	148	623	1048	-	-	845	-	-
Stage 1	540	556	-	339	386	-	-	-	-	-	-	-
Stage 2	579	409	-	707	504	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	218	164	778	146	141	623	1048	-	-	845	-	-
Mov Cap-2 Maneuver	218	164	-	146	141	-	-	-	-	-	-	-
Stage 1	520	549	-	326	372	-	-	-	-	-	-	-
Stage 2	541	394	-	593	497	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	81	15.4	0.5	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1048	-	-	305	367	845	-	-
HCM Lane V/C Ratio	0.037	-	-	0.965	0.058	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-	81	15.4	9.3	-	-
HCM Lane LOS	A	-	-	F	C	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	9.9	0.2	0	-	-

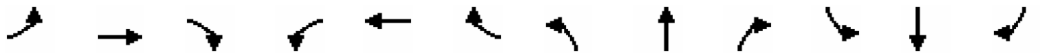
Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	320	325	85	275	245
Future Vol, veh/h	45	320	325	85	275	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	3	3	8	8
Mvmt Flow	49	352	357	93	302	269

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1143	225	0	0	450	0
Stage 1	404	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.26	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.28	-
Pot Cap-1 Maneuver	195	781	-	-	1065	-
Stage 1	646	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	781	-	-	1065	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	312	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	17.1	0	5.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	140	781	1065	-
HCM Lane V/C Ratio	-	-	0.353	0.45	0.284	-
HCM Control Delay (s/veh)	-	-	44.1	13.3	9.7	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q (veh)	-	-	1.5	2.4	1.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	355	15	35	210	225	4	105	85	230	50	125
Future Volume (veh/h)	40	355	15	35	210	225	4	105	85	230	50	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	43	386	16	38	228	245	4	114	92	250	54	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	5	5	5	2	2	2	3	3	3
Cap, veh/h	90	489	414	82	906	404	610	896	666	616	813	725
Arrive On Green	0.05	0.27	0.27	0.05	0.26	0.26	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1753	1841	1560	1739	3469	1547	1193	1943	1444	1167	1763	1572
Grp Volume(v), veh/h	43	386	16	38	228	245	4	103	103	250	54	136
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1739	1735	1547	1193	1777	1610	1167	1763	1572
Q Serve(g_s), s	1.4	11.6	0.5	1.3	3.1	8.3	0.1	2.0	2.2	9.4	1.0	3.0
Cycle Q Clear(g_c), s	1.4	11.6	0.5	1.3	3.1	8.3	3.2	2.0	2.2	11.5	1.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		1.00
Lane Grp Cap(c), veh/h	90	489	414	82	906	404	610	819	743	616	813	725
V/C Ratio(X)	0.48	0.79	0.04	0.46	0.25	0.61	0.01	0.13	0.14	0.41	0.07	0.19
Avail Cap(c_a), veh/h	456	941	798	452	1774	791	610	819	743	616	813	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	20.4	16.3	27.7	17.4	19.3	10.4	9.2	9.2	12.6	8.9	9.5
Incr Delay (d2), s/veh	3.9	2.9	0.0	4.1	0.1	1.5	0.0	0.3	0.4	0.4	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.9	0.2	0.6	1.2	2.9	0.0	0.7	0.7	2.2	0.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.4	23.3	16.3	31.8	17.6	20.8	10.4	9.5	9.6	13.0	9.0	9.6
LnGrp LOS	C	C	B	C	B	C	B	A	A	B	A	A
Approach Vol, veh/h		445			511			210			440	
Approach Delay, s/veh		23.8			20.2			9.6			11.5	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	7.3	20.3		32.0	7.6	20.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	15.5	30.5		27.5	15.5	30.5				
Max Q Clear Time (g_c+I1), s		5.2	3.3	13.6		13.5	3.4	10.3				
Green Ext Time (p_c), s		1.2	0.0	2.2		1.8	0.0	2.2				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	17.4
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	75	0	45	0	0	5	10	105	0	5	75	25
Future Vol, veh/h	75	0	45	0	0	5	10	105	0	5	75	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	2	2	2
Mvmt Flow	82	0	49	0	0	5	11	114	0	5	82	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	245	242	96	266	255	114	109	0	0	114	0	0
Stage 1	106	106	-	136	136	-	-	-	-	-	-	-
Stage 2	139	136	-	130	119	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	709	660	960	691	652	944	1494	-	-	1475	-	-
Stage 1	900	807	-	872	788	-	-	-	-	-	-	-
Stage 2	864	784	-	878	801	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	698	652	960	650	644	944	1494	-	-	1475	-	-
Mov Cap-2 Maneuver	698	652	-	650	644	-	-	-	-	-	-	-
Stage 1	893	804	-	865	782	-	-	-	-	-	-	-
Stage 2	852	778	-	830	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.6	8.8	0.6	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1494	-	-	778	944	1475	-	-
HCM Lane V/C Ratio	0.007	-	-	0.168	0.006	0.004	-	-
HCM Control Delay (s/veh)	7.4	0	-	10.6	8.8	7.5	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.6	0	0	-	-

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	130	15	5	5	15	85	2	150	10	40	215	70
Future Vol, veh/h	130	15	5	5	15	85	2	150	10	40	215	70
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	4	4	4	3	3	3	7	7	7
Mvmt Flow	157	18	6	6	18	102	2	181	12	48	259	84
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay, s/veh	11.6	9.6	10.7	14.5
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	1%	87%	25%	0%	12%
Vol Thru, %	93%	10%	75%	0%	66%
Vol Right, %	6%	3%	0%	100%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	150	20	85	325
LT Vol	2	130	5	0	40
Through Vol	150	15	15	0	215
RT Vol	10	5	0	85	70
Lane Flow Rate	195	181	24	102	392
Geometry Grp	2	4a	5	5	2
Degree of Util (X)	0.294	0.301	0.044	0.163	0.559
Departure Headway (Hd)	5.428	6.004	6.573	5.733	5.138
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	662	598	544	624	701
Service Time	3.472	4.051	4.323	3.483	3.174
HCM Lane V/C Ratio	0.295	0.303	0.044	0.163	0.559
HCM Control Delay, s/veh	10.7	11.6	9.6	9.6	14.5
HCM Lane LOS	B	B	A	A	B
HCM 95th-tile Q	1.2	1.3	0.1	0.6	3.5

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	30	5	40	25	15	15	30	30	10	80	20
Future Vol, veh/h	15	30	5	40	25	15	15	30	30	10	80	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	18	37	6	49	30	18	18	37	37	12	98	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.9	8.1	7.7	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	30%	50%	9%
Vol Thru, %	40%	60%	31%	73%
Vol Right, %	40%	10%	19%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	50	80	110
LT Vol	15	15	40	10
Through Vol	30	30	25	80
RT Vol	30	5	15	20
Lane Flow Rate	91	61	98	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.107	0.076	0.121	0.16
Departure Headway (Hd)	4.212	4.511	4.457	4.307
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	853	796	807	834
Service Time	2.227	2.528	2.472	2.322
HCM Lane V/C Ratio	0.107	0.077	0.121	0.161
HCM Control Delay, s/veh	7.7	7.9	8.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.4	0.6

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	55	10	155	20	4	75
Future Vol, veh/h	55	10	155	20	4	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	62	11	174	22	4	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	73	0	438	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1533	-	580	1001
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	703	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1533	-	513	1001
Mov Cap-2 Maneuver	-	-	-	-	513	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.8	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	955	-	-	1533	-
HCM Lane V/C Ratio	0.093	-	-	0.114	-
HCM Control Delay (s/veh)	9.2	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.3	-	-	0.4	-

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	3	110	4	1	15	60	525	5	40	1055	100
Future Vol, veh/h	35	3	110	4	1	15	60	525	5	40	1055	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	1	1	1
Mvmt Flow	36	3	113	4	1	15	62	541	5	41	1088	103

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1617	1892	596	1296	1941	273	1191	0	0	546	0	0
Stage 1	1222	1222	-	668	668	-	-	-	-	-	-	-
Stage 2	395	670	-	628	1273	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	2.21	-	-
Pot Cap-1 Maneuver	70	71	452	122	66	731	582	-	-	1026	-	-
Stage 1	194	254	-	419	459	-	-	-	-	-	-	-
Stage 2	607	459	-	442	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	61	452	78	57	731	582	-	-	1026	-	-
Mov Cap-2 Maneuver	60	61	-	78	57	-	-	-	-	-	-	-
Stage 1	173	244	-	374	410	-	-	-	-	-	-	-
Stage 2	530	410	-	314	231	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	100	22.7	1.2	0.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	582	-	-	169	224	1026	-	-
HCM Lane V/C Ratio	0.106	-	-	0.903	0.092	0.04	-	-
HCM Control Delay (s/veh)	11.9	-	-	100	22.7	8.7	-	-
HCM Lane LOS	B	-	-	F	C	A	-	-
HCM 95th %tile Q (veh)	0.4	-	-	6.6	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	70	70	695	1360	0
Future Vol, veh/h	0	70	70	695	1360	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	0	81	81	808	1581	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	791	1581	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	4.16	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	2.23	-	-	-
Pot Cap-1 Maneuver	0	337	407	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	337	407	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	19.1	1.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	407	-	337	-
HCM Lane V/C Ratio	0.2	-	0.242	-
HCM Control Delay (s/veh)	16	-	19.1	-
HCM Lane LOS	C	-	C	-
HCM 95th %tile Q (veh)	0.7	-	0.9	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	80	0	0	30	0	730	85	0	1240	125
Future Vol, veh/h	0	0	80	0	0	30	0	730	85	0	1240	125
Conflicting Peds, #/hr	3	0	0	0	0	3	0	0	0	3	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	150	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	0	0	91	0	0	34	0	830	97	0	1409	142

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	705	-	-	418	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	383	0	0	589	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	383	-	-	587	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.3	11.5	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	383	587	-
HCM Lane V/C Ratio	-	-	0.237	0.058	-
HCM Control Delay (s/veh)	-	-	17.3	11.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q (veh)	-	-	0.9	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	805	0	50	1260
Future Vol, veh/h	0	50	805	0	50	1260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	56	904	0	56	1416

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	452	0	-	904	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.21	-
Pot Cap-1 Maneuver	0	560	-	0	754	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	560	-	-	754	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.1	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	560	754	-
HCM Lane V/C Ratio	-	0.1	0.075	-
HCM Control Delay (s/veh)	-	12.1	10.2	-
HCM Lane LOS	-	B	B	-
HCM 95th %tile Q (veh)	-	0.3	0.2	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	105	0	0	420	0	515
Future Vol, veh/h	105	0	0	420	0	515
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	117	0	0	467	0	572

Major/Minor	Minor1			Major2	
Conflicting Flow All	572	-		-	-
Stage 1	0	-		-	-
Stage 2	572	-		-	-
Critical Hdwy	6.41	-		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.41	-		-	-
Follow-up Hdwy	3.509	-		-	-
Pot Cap-1 Maneuver	483	0		0	-
Stage 1	-	0		0	-
Stage 2	567	0		0	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	483	-		-	-
Mov Cap-2 Maneuver	483	-		-	-
Stage 1	-	-		-	-
Stage 2	567	-		-	-

Approach	WB	SB
HCM Control Delay, s/v	14.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	483	-
HCM Lane V/C Ratio	0.242	-
HCM Control Delay (s/veh)	14.8	-
HCM Lane LOS	B	-
HCM 95th %tile Q (veh)	0.9	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	305	130	10	100	0	0	0	0	10	1	0
Future Vol, veh/h	0	305	130	10	100	0	0	0	0	10	1	0
Conflicting Peds, #/hr	2	0	2	0	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	335	143	11	110	0	0	0	0	11	1	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	480	0	0	539	612	112
Stage 1	-	-	-	-	-	-	132	132	-
Stage 2	-	-	-	-	-	-	407	480	-
Critical Hdwy	-	-	-	4.11	-	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	-	-	-	2.209	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1088	-	0	507	411	947
Stage 1	0	-	-	-	-	0	899	791	-
Stage 2	0	-	-	-	-	0	676	558	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1088	-	-	501	0	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	501	0	-
Stage 1	-	-	-	-	-	-	899	0	-
Stage 2	-	-	-	-	-	-	669	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.8	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1088	-	501
HCM Lane V/C Ratio	-	-	0.01	-	0.024
HCM Control Delay (s/veh)	-	-	8.3	0	12.4
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q (veh)	-	-	0	-	0.1

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰						↰				
Traffic Vol, veh/h	285	0	0	0	0	0	115	1	0	0	0	0
Future Vol, veh/h	285	0	0	0	0	0	115	1	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	4	4	4	0	0	0	2	2	2	0	0	0
Mvmt Flow	343	0	0	0	0	0	139	1	0	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	-	686	686	-
Stage 1	-	-	-	686	686	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	4.14	-	-	6.42	6.52	-
Critical Hdwy Stg 1	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.236	-	-	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	0	413	370	0
Stage 1	-	-	0	500	448	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %		-				
Mov Cap-1 Maneuver	-	-	-	413	0	-
Mov Cap-2 Maneuver	-	-	-	413	0	-
Stage 1	-	-	-	500	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s/v		18.1
HCM LOS		C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT
Capacity (veh/h)	413	-	-
HCM Lane V/C Ratio	0.338	-	-
HCM Control Delay (s/veh)	18.1	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q (veh)	1.5	-	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	1	90	5	0	10	100	465	10	10	745	155
Future Vol, veh/h	50	1	90	5	0	10	100	465	10	10	745	155
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	425	-	-	300	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	5	5	5	2	2	2
Mvmt Flow	54	1	97	5	0	11	108	500	11	11	801	167

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1289	1550	401	1145	1712	256	968	0	0	511	0	0
Stage 1	823	823	-	722	722	-	-	-	-	-	-	-
Stage 2	466	727	-	423	990	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	123	115	604	157	91	749	689	-	-	1050	-	-
Stage 1	338	391	-	389	434	-	-	-	-	-	-	-
Stage 2	551	432	-	585	327	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	96	604	114	76	749	689	-	-	1050	-	-
Mov Cap-2 Maneuver	106	96	-	114	76	-	-	-	-	-	-	-
Stage 1	285	387	-	328	366	-	-	-	-	-	-	-
Stage 2	458	364	-	485	324	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	49.7	19.6	1.9	0.1
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	223	262	1050	-	-
HCM Lane V/C Ratio	0.156	-	-	0.68	0.062	0.01	-	-
HCM Control Delay (s/veh)	11.2	-	-	49.7	19.6	8.5	-	-
HCM Lane LOS	B	-	-	E	C	A	-	-
HCM 95th %tile Q (veh)	0.6	-	-	4.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	32.1

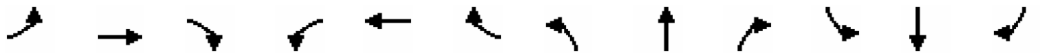
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	115	315	260	50	415	410
Future Vol, veh/h	115	315	260	50	415	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	1	9	9	2	2
Mvmt Flow	124	339	280	54	446	441

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1420	167	0	0	334	0
Stage 1	307	-	-	-	-	-
Stage 2	1113	-	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.14	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.22	-
Pot Cap-1 Maneuver	129	851	-	-	1222	-
Stage 1	722	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 82	851	-	-	1222	-
Mov Cap-2 Maneuver	~ 82	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	177	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	107.8	0	4.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	82	851	1222	-
HCM Lane V/C Ratio	-	-	1.508	0.398	0.365	-
HCM Control Delay (s/veh)	-	-	$ 370.2	12	9.6	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q (veh)	-	-	9.9	1.9	1.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	350	15	60	315	165	10	85	40	165	85	70
Future Volume (veh/h)	200	350	15	60	315	165	10	85	40	165	85	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	213	372	16	64	335	176	11	90	43	176	90	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	265	518	432	115	685	300	622	1060	477	646	859	639
Arrive On Green	0.15	0.28	0.28	0.06	0.19	0.19	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1781	1870	1558	1781	3554	1559	1231	2400	1081	1267	1946	1448
Grp Volume(v), veh/h	213	372	16	64	335	176	11	66	67	176	82	82
Grp Sat Flow(s),veh/h/ln	1781	1870	1558	1781	1777	1559	1231	1791	1691	1267	1791	1603
Q Serve(g_s), s	7.2	11.2	0.5	2.2	5.2	6.4	0.3	1.3	1.4	5.8	1.7	1.9
Cycle Q Clear(g_c), s	7.2	11.2	0.5	2.2	5.2	6.4	2.2	1.3	1.4	7.3	1.7	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		0.90
Lane Grp Cap(c), veh/h	265	518	432	115	685	300	622	791	747	646	791	708
V/C Ratio(X)	0.80	0.72	0.04	0.56	0.49	0.59	0.02	0.08	0.09	0.27	0.10	0.12
Avail Cap(c_a), veh/h	443	916	763	443	1741	764	622	791	747	646	791	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	20.3	16.4	28.3	22.4	22.9	10.9	10.1	10.1	12.2	10.2	10.2
Incr Delay (d2), s/veh	5.6	1.9	0.0	4.2	0.5	1.8	0.1	0.2	0.2	0.2	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.7	0.2	1.0	2.1	2.3	0.1	0.5	0.5	1.5	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.3	22.2	16.5	32.4	22.9	24.7	10.9	10.3	10.3	12.5	10.2	10.3
LnGrp LOS	C	C	B	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		601			575			144			340	
Approach Delay, s/veh		25.3			24.5			10.4			11.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	8.5	21.8		32.0	13.8	16.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	15.5	30.5		27.5	15.5	30.5				
Max Q Clear Time (g_c+I1), s		4.2	4.2	13.2		9.3	9.2	8.4				
Green Ext Time (p_c), s		0.7	0.1	2.1		1.4	0.3	2.8				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			20.9									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	0	25	0	0	0	50	110	5	5	125	60
Future Vol, veh/h	60	0	25	0	0	0	50	110	5	5	125	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	66	0	27	0	0	0	55	121	5	5	137	66

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	414	416	170	428	447	124	203	0	0	126	0	0
Stage 1	180	180	-	234	234	-	-	-	-	-	-	-
Stage 2	234	236	-	194	213	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	552	530	879	541	509	932	1375	-	-	1467	-	-
Stage 1	826	754	-	774	715	-	-	-	-	-	-	-
Stage 2	774	713	-	812	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	532	505	879	505	485	932	1375	-	-	1467	-	-
Mov Cap-2 Maneuver	532	505	-	505	485	-	-	-	-	-	-	-
Stage 1	790	751	-	741	684	-	-	-	-	-	-	-
Stage 2	741	682	-	783	727	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.1	0	2.3	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	602	-	1467	-	-
HCM Lane V/C Ratio	0.04	-	-	0.155	-	0.004	-	-
HCM Control Delay (s/veh)	7.7	0	-	12.1	0	7.5	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	0.5	-	0	-	-

MOVEMENT SUMMARY

Site: 1 [Grove Rd & Thorpe Rd Baseline AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

2035 Baseline AM
Site Category: Victory Heights
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Grove Rd															
3	L2	All MCs	5	7.0	5	7.0	0.432	12.8	LOS B	2.3	61.3	0.59	0.62	0.61	33.7
8	T1	All MCs	324	7.0	324	7.0	0.432	7.0	LOS A	2.3	61.3	0.59	0.62	0.61	34.4
18	R2	All MCs	49	7.0	49	7.0	0.432	6.8	LOS A	2.3	61.3	0.59	0.62	0.61	34.1
Approach			379	7.0	379	7.0	0.432	7.0	LOS A	2.3	61.3	0.59	0.62	0.61	34.4
East: Thorpe Rd															
1	L2	All MCs	22	10.0	22	10.0	0.291	13.6	LOS B	1.4	38.7	0.63	0.69	0.63	33.3
6	T1	All MCs	16	10.0	16	10.0	0.291	7.8	LOS A	1.4	38.7	0.63	0.69	0.63	34.1
16	R2	All MCs	176	10.0	176	10.0	0.291	7.7	LOS A	1.4	38.7	0.63	0.69	0.63	33.8
Approach			214	10.0	214	10.0	0.291	8.3	LOS A	1.4	38.7	0.63	0.69	0.63	33.8
North: Grove Rd															
7	L2	All MCs	159	11.0	159	11.0	0.210	10.2	LOS B	1.0	28.1	0.17	0.55	0.17	33.4
4	T1	All MCs	225	11.0	225	11.0	0.210	4.3	LOS A	1.0	28.4	0.17	0.47	0.17	35.1
14	R2	All MCs	148	11.0	148	11.0	0.210	4.4	LOS A	1.0	28.4	0.17	0.41	0.17	35.5
Approach			533	11.0	533	11.0	0.210	6.1	LOS A	1.0	28.4	0.17	0.48	0.17	34.7
West: Thorpe Rd															
5	L2	All MCs	286	6.0	286	6.0	0.306	11.6	LOS B	1.2	31.1	0.45	0.71	0.45	32.0
2	T1	All MCs	5	6.0	5	6.0	0.306	5.8	LOS A	1.2	31.1	0.45	0.71	0.45	32.7
12	R2	All MCs	1	6.0	1	6.0	0.306	5.6	LOS A	1.2	31.1	0.45	0.71	0.45	32.4
Approach			292	6.0	292	6.0	0.306	11.5	LOS B	1.2	31.1	0.45	0.71	0.45	32.0
All Vehicles			1419	8.7	1419	8.7	0.432	7.8	LOS A	2.3	61.3	0.41	0.59	0.41	33.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	45	5	45	110	15	30	35	30	10	40	25
Future Vol, veh/h	3	45	5	45	110	15	30	35	30	10	40	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	10	10	10
Mvmt Flow	3	49	5	49	120	16	33	38	33	11	43	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.9	8.7	8.1	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	6%	26%	13%
Vol Thru, %	37%	85%	65%	53%
Vol Right, %	32%	9%	9%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	53	170	75
LT Vol	30	3	45	10
Through Vol	35	45	110	40
RT Vol	30	5	15	25
Lane Flow Rate	103	58	185	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.128	0.072	0.226	0.103
Departure Headway (Hd)	4.458	4.489	4.394	4.57
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	798	819	785
Service Time	2.481	2.512	2.412	2.595
HCM Lane V/C Ratio	0.128	0.073	0.226	0.104
HCM Control Delay, s/veh	8.1	7.9	8.7	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.9	0.3

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	10	45	255	5	100
Future Vol, veh/h	115	10	45	255	5	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	2	2	1	1
Mvmt Flow	122	11	48	271	5	106

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	133	0	495	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1452	-	536	925
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	703	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1452	-	515	925
Mov Cap-2 Maneuver	-	-	-	-	515	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	676	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	891	-	-	1452	-
HCM Lane V/C Ratio	0.125	-	-	0.033	-
HCM Control Delay (s/veh)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	115	1	5	25	180	1185	1	10	540	45
Future Vol, veh/h	0	0	115	1	5	25	180	1185	1	10	540	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	5	5	5
Mvmt Flow	0	0	122	1	5	27	191	1261	1	11	574	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	311	1953	2288	631	622	0	0	1262	0	0
Stage 1	-	-	-	1644	1644	-	-	-	-	-	-	-
Stage 2	-	-	-	309	644	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	7.5	6.5	6.9	4.12	-	-	4.2	-	-
Critical Hdwy Stg 1	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.21	-	-	2.25	-	-
Pot Cap-1 Maneuver	0	0	691	39	40	429	962	-	-	531	-	-
Stage 1	0	0	-	106	159	-	-	-	-	-	-	-
Stage 2	0	0	-	682	471	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	691	27	31	429	962	-	-	531	-	-
Mov Cap-2 Maneuver	-	-	-	27	31	-	-	-	-	-	-	-
Stage 1	-	-	-	85	127	-	-	-	-	-	-	-
Stage 2	-	-	-	550	461	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.3	45.5	1.3	0.2
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	962	-	-	691	121	531	-	-
HCM Lane V/C Ratio	0.199	-	-	0.177	0.273	0.02	-	-
HCM Control Delay (s/veh)	9.7	-	-	11.3	45.5	11.9	-	-
HCM Lane LOS	A	-	-	B	E	B	-	-
HCM 95th %tile Q (veh)	0.7	-	-	0.6	1	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	145	145	1400	850	0
Future Vol, veh/h	0	145	145	1400	850	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	8	8
Mvmt Flow	0	156	156	1505	914	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	457	914	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	551	742	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	551	742	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14.1	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	742	-	551	-
HCM Lane V/C Ratio	0.21	-	0.283	-
HCM Control Delay (s/veh)	11.1	-	14.1	-
HCM Lane LOS	B	-	B	-
HCM 95th %tile Q (veh)	0.8	-	1.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	240	0	0	55	0	1485	215	0	775	160
Future Vol, veh/h	0	0	240	0	0	55	0	1485	215	0	775	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	150	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	10	10	10	1	1	1	8	8	8
Mvmt Flow	0	0	255	0	0	59	0	1580	229	0	824	170

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	412	-	-	790	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	7.1	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.4	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	589	0	0	316	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	589	-	-	316	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.7	19	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	589	316	-
HCM Lane V/C Ratio	-	-	0.433	0.185	-
HCM Control Delay (s/veh)	-	-	15.7	19	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q (veh)	-	-	2.2	0.7	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	175	1610	0	175	825
Future Vol, veh/h	0	175	1610	0	175	825
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	1	4	4
Mvmt Flow	0	186	1713	0	186	878

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	857	0	-	1713	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.24	-
Pot Cap-1 Maneuver	0	305	-	0	358	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	305	-	-	358	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	33.7	0	4.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	305	358	-
HCM Lane V/C Ratio	-	0.61	0.52	-
HCM Control Delay (s/veh)	-	33.7	25.5	-
HCM Lane LOS	-	D	D	-
HCM 95th %tile Q (veh)	-	3.8	2.9	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	115	0	0	925	0	275
Future Vol, veh/h	115	0	0	925	0	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	2	2	8	8
Mvmt Flow	140	0	0	1128	0	335

Major/Minor	Minor1			Major2	
Conflicting Flow All	335	-		-	-
Stage 1	0	-		-	-
Stage 2	335	-		-	-
Critical Hdwy	6.4	-		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.4	-		-	-
Follow-up Hdwy	3.5	-		-	-
Pot Cap-1 Maneuver	664	0		0	-
Stage 1	-	0		0	-
Stage 2	729	0		0	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	664	-		-	-
Mov Cap-2 Maneuver	664	-		-	-
Stage 1	-	-		-	-
Stage 2	729	-		-	-

Approach	WB	SB
HCM Control Delay, s/v	11.9	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	664	-
HCM Lane V/C Ratio	0.211	-
HCM Control Delay (s/veh)	11.9	-
HCM Lane LOS	B	-
HCM 95th %tile Q (veh)	0.8	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	845	75	5	115	0	0	0	0	35	0	0
Future Vol, veh/h	0	845	75	5	115	0	0	0	0	35	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	12	12	12
Mvmt Flow	0	929	82	5	126	0	0	0	0	38	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	1011	0	0	1106	1147	126
Stage 1	-	-	-	-	-	-	136	136	-
Stage 2	-	-	-	-	-	-	970	1011	-
Critical Hdwy	-	-	-	4.1	-	-	6.52	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	5.62	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.608	4.108	3.408
Pot Cap-1 Maneuver	0	-	-	694	-	0	223	191	898
Stage 1	0	-	-	-	-	0	866	765	-
Stage 2	0	-	-	-	-	0	353	305	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	694	-	-	221	0	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	0	-
Stage 1	-	-	-	-	-	-	866	0	-
Stage 2	-	-	-	-	-	-	350	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.4	24.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	694	-	221
HCM Lane V/C Ratio	-	-	0.008	-	0.174
HCM Control Delay (s/veh)	-	-	10.2	0	24.7
HCM Lane LOS	-	-	B	A	C
HCM 95th %tile Q (veh)	-	-	0	-	0.6

Intersection	
Int Delay, s/veh	71.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰						↰				
Traffic Vol, veh/h	865	0	0	0	0	0	125	5	0	0	0	0
Future Vol, veh/h	865	0	0	0	0	0	125	5	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	0	0	0	3	3	3	0	0	0
Mvmt Flow	951	0	0	0	0	0	137	5	0	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	-	1902	1902	-
Stage 1	-	-	-	1902	1902	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	6.43	6.53	-
Critical Hdwy Stg 1	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.527	4.027	-
Pot Cap-1 Maneuver	-	-	0	~ 75	69	0
Stage 1	-	-	0	~ 128	116	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %		-				
Mov Cap-1 Maneuver	-	-	-	~ 75	0	-
Mov Cap-2 Maneuver	-	-	-	~ 75	0	-
Stage 1	-	-	-	~ 128	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s/v		$ 543.9
HCM LOS		F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT
Capacity (veh/h)	75	-	-
HCM Lane V/C Ratio	1.905	-	-
HCM Control Delay (s/veh)	$ 543.9	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q (veh)	12.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	25	970	1	10	745
Future Vol, veh/h	0	25	970	1	10	745
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	11	11	3	3	10	10
Mvmt Flow	0	28	1078	1	11	828

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	540	0	0	1079	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.12	-	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.41	-	-	2.3	-
Pot Cap-1 Maneuver	0	464	-	-	597	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	464	-	-	597	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	464	597	-
HCM Lane V/C Ratio	-	-	0.06	0.019	-
HCM Control Delay (s/veh)	-	-	13.3	11.1	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q (veh)	-	-	0.2	0.1	-

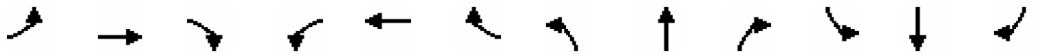
Intersection	
Int Delay, s/veh	8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	430	515	115	345	390
Future Vol, veh/h	2	430	515	115	345	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	3	3	8	8
Mvmt Flow	2	473	566	126	379	429

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1602	346	0	0	692	0
Stage 1	629	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.26	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.28	-
Pot Cap-1 Maneuver	97	653	-	-	860	-
Stage 1	496	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	653	-	-	860	-
Mov Cap-2 Maneuver	54	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	184	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.6	0	5.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	860	-
HCM Lane V/C Ratio	-	-	0.724	0.441	-
HCM Control Delay (s/veh)	-	-	23.6	12.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q (veh)	-	-	6.2	2.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	480	20	50	295	255	20	130	135	260	60	140
Future Volume (veh/h)	50	480	20	50	295	255	20	130	135	260	60	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	54	522	22	54	321	277	22	141	147	283	65	152
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	5	5	5	2	2	2	3	3	3
Cap, veh/h	263	609	516	98	824	368	503	719	641	478	713	636
Arrive On Green	0.15	0.33	0.33	0.06	0.24	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1753	1841	1560	1739	3469	1547	1164	1777	1585	1083	1763	1572
Grp Volume(v), veh/h	54	522	22	54	321	277	22	141	147	283	65	152
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1739	1735	1547	1164	1777	1585	1083	1763	1572
Q Serve(g_s), s	1.8	17.9	0.6	2.0	5.3	11.3	0.9	3.5	4.1	15.7	1.5	4.3
Cycle Q Clear(g_c), s	1.8	17.9	0.6	2.0	5.3	11.3	5.2	3.5	4.1	19.9	1.5	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	609	516	98	824	368	503	719	641	478	713	636
V/C Ratio(X)	0.21	0.86	0.04	0.55	0.39	0.75	0.04	0.20	0.23	0.59	0.09	0.24
Avail Cap(c_a), veh/h	401	815	691	398	1536	685	503	719	641	478	713	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	21.2	15.4	31.1	21.7	24.0	15.0	13.1	13.2	19.8	12.5	13.3
Incr Delay (d2), s/veh	0.4	7.0	0.0	4.7	0.3	3.1	0.2	0.6	0.8	5.3	0.3	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.3	0.2	1.0	2.1	4.2	0.2	1.4	1.5	4.3	0.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.6	28.1	15.4	35.8	22.0	27.1	15.2	13.7	14.1	25.1	12.7	14.2
LnGrp LOS	C	C	B	D	C	C	B	B	B	C	B	B
Approach Vol, veh/h		598			652			310			500	
Approach Delay, s/veh		27.4			25.3			14.0			20.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	8.3	27.4		32.0	14.6	21.1				
Change Period (Y+Rc), s		4.6	4.5	5.0		4.6	4.5	5.0				
Max Green Setting (Gmax), s		27.4	15.5	30.0		27.4	15.5	30.0				
Max Q Clear Time (g_c+I1), s		7.2	4.0	19.9		21.9	3.8	13.3				
Green Ext Time (p_c), s		1.7	0.1	2.5		1.3	0.1	2.8				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			23.0									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	85	0	50	0	0	5	10	180	0	1	100	30
Future Vol, veh/h	85	0	50	0	0	5	10	180	0	1	100	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	2	2	2
Mvmt Flow	92	0	54	0	0	5	11	196	0	1	109	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	349	346	126	373	362	196	142	0	0	196	0	0
Stage 1	128	128	-	218	218	-	-	-	-	-	-	-
Stage 2	221	218	-	155	144	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	606	577	924	588	569	850	1453	-	-	1377	-	-
Stage 1	876	790	-	789	726	-	-	-	-	-	-	-
Stage 2	781	723	-	852	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	598	572	924	550	564	850	1453	-	-	1377	-	-
Mov Cap-2 Maneuver	598	572	-	550	564	-	-	-	-	-	-	-
Stage 1	869	789	-	783	720	-	-	-	-	-	-	-
Stage 2	770	717	-	801	781	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.6	9.3	0.4	0.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	688	850	1377	-	-
HCM Lane V/C Ratio	0.007	-	-	0.213	0.006	0.001	-	-
HCM Control Delay (s/veh)	7.5	0	-	11.6	9.3	7.6	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.8	0	0	-	-

MOVEMENT SUMMARY

Site: 1 [Grove Rd & Thorpe Rd Future AM - MIT (Site Folder: With Lindeke Extension - without-project)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

2035 Baseline - MIT AM
Site Category: Victory Heights
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Grove Rd															
3	L2	All MCs	5	7.0	5	7.0	0.432	12.8	LOS B	2.3	61.3	0.59	0.62	0.61	33.7
8	T1	All MCs	324	7.0	324	7.0	0.432	7.0	LOS A	2.3	61.3	0.59	0.62	0.61	34.4
18	R2	All MCs	49	7.0	49	7.0	0.432	6.8	LOS A	2.3	61.3	0.59	0.62	0.61	34.1
Approach			379	7.0	379	7.0	0.432	7.0	LOS A	2.3	61.3	0.59	0.62	0.61	34.4
East: Thorpe Rd															
1	L2	All MCs	22	10.0	22	10.0	0.405	14.2	LOS B	2.2	60.3	0.68	0.72	0.71	33.1
6	T1	All MCs	16	10.0	16	10.0	0.405	8.4	LOS A	2.2	60.3	0.68	0.72	0.71	33.9
16	R2	All MCs	259	10.0	259	10.0	0.405	8.3	LOS A	2.2	60.3	0.68	0.72	0.71	33.6
Approach			298	10.0	298	10.0	0.405	8.7	LOS A	2.2	60.3	0.68	0.72	0.71	33.6
North: Grove Rd															
7	L2	All MCs	159	11.0	159	11.0	0.211	10.2	LOS B	1.0	28.5	0.17	0.55	0.17	33.4
4	T1	All MCs	225	11.0	225	11.0	0.211	4.3	LOS A	1.1	28.8	0.17	0.47	0.17	35.1
14	R2	All MCs	148	11.0	148	11.0	0.211	4.4	LOS A	1.1	28.8	0.17	0.41	0.17	35.4
Approach			533	11.0	533	11.0	0.211	6.1	LOS A	1.1	28.8	0.17	0.48	0.17	34.7
West: Thorpe Rd															
5	L2	All MCs	286	6.0	286	6.0	0.305	11.6	LOS B	1.2	31.0	0.45	0.71	0.45	32.0
2	T1	All MCs	5	6.0	5	6.0	0.305	5.8	LOS A	1.2	31.0	0.45	0.71	0.45	32.7
Approach			291	6.0	291	6.0	0.305	11.5	LOS B	1.2	31.0	0.45	0.71	0.45	32.0
All Vehicles			1501	8.8	1501	8.8	0.432	7.9	LOS A	2.3	61.3	0.43	0.61	0.44	33.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	45	5	45	186	11	30	35	30	7	40	25
Future Vol, veh/h	3	45	5	45	186	11	30	35	30	7	40	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	10	10	10
Mvmt Flow	3	49	5	49	202	12	33	38	33	8	43	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8	9.5	8.4	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	6%	19%	10%
Vol Thru, %	37%	85%	77%	56%
Vol Right, %	32%	9%	5%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	53	242	72
LT Vol	30	3	45	7
Through Vol	35	45	186	40
RT Vol	30	5	11	25
Lane Flow Rate	103	58	263	78
Geometry Grp	1	1	1	1
Degree of Util (X)	0.133	0.073	0.322	0.103
Departure Headway (Hd)	4.641	4.581	4.408	4.744
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	772	781	815	755
Service Time	2.671	2.613	2.432	2.776
HCM Lane V/C Ratio	0.133	0.074	0.323	0.103
HCM Control Delay, s/veh	8.4	8	9.5	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.2	1.4	0.3

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	10	42	255	5	96
Future Vol, veh/h	115	10	42	255	5	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	2	2	1	1
Mvmt Flow	122	11	45	271	5	102

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	133	0	489	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1452	-	540	925
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1452	-	521	925
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	682	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	891	-	-	1452	-
HCM Lane V/C Ratio	0.121	-	-	0.031	-
HCM Control Delay (s/veh)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	1	0	30	0	1139	1	10	585	0
Future Vol, veh/h	0	0	0	1	0	30	0	1139	1	10	585	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	5	5	5
Mvmt Flow	0	0	0	1	0	32	0	1212	1	11	622	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	311	1546	1857	607	622	0	0	1213	0	0
Stage 1	-	-	-	1213	1213	-	-	-	-	-	-	-
Stage 2	-	-	-	333	644	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	7.5	6.5	6.9	4.12	-	-	4.2	-	-
Critical Hdwy Stg 1	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.21	-	-	2.25	-	-
Pot Cap-1 Maneuver	0	0	691	79	74	444	962	-	-	554	-	-
Stage 1	0	0	-	196	257	-	-	-	-	-	-	-
Stage 2	0	0	-	660	471	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	691	78	73	444	962	-	-	554	-	-
Mov Cap-2 Maneuver	-	-	-	78	73	-	-	-	-	-	-	-
Stage 1	-	-	-	196	257	-	-	-	-	-	-	-
Stage 2	-	-	-	647	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	15.2	0	0.2
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	962	-	-	-	386	554	-	-
HCM Lane V/C Ratio	-	-	-	-	0.085	0.019	-	-
HCM Control Delay (s/veh)	0	-	-	0	15.2	11.6	-	-
HCM Lane LOS	A	-	-	A	C	B	-	-
HCM 95th %tile Q (veh)	0	-	-	-	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	208	208	1174	780	0
Future Vol, veh/h	0	208	208	1174	780	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	8	8
Mvmt Flow	0	224	224	1262	839	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	420	839	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	582	791	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	582	791	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15	1.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	791	-	582	-
HCM Lane V/C Ratio	0.283	-	0.384	-
HCM Control Delay (s/veh)	11.3	-	15	-
HCM Lane LOS	B	-	C	-
HCM 95th %tile Q (veh)	1.2	-	1.8	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↱			↱		↑↑	↱		↑↑	↱
Traffic Vol, veh/h	0	0	211	0	0	28	0	1349	184	0	660	268
Future Vol, veh/h	0	0	211	0	0	28	0	1349	184	0	660	268
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	150	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	10	10	10	1	1	1	8	8	8
Mvmt Flow	0	0	224	0	0	30	0	1435	196	0	702	285

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	351	-	-	718	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	7.1	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.4	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	645	0	0	354	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	645	-	-	354	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	13.5	16.1	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	645	354	-
HCM Lane V/C Ratio	-	-	0.348	0.084	-
HCM Control Delay (s/veh)	-	-	13.5	16.1	-
HCM Lane LOS	-	-	B	C	-
HCM 95th %tile Q (veh)	-	-	1.6	0.3	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1618	0	0	871
Future Vol, veh/h	0	0	1618	0	0	871
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	1	4	4
Mvmt Flow	0	0	1721	0	0	927

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	861	0	-	1721	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.18	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.24	-
Pot Cap-1 Maneuver	0	303	-	0	355	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	303	-	-	355	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	355	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	0	0	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q (veh)	-	-	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	115	0	0	925	0	275
Future Vol, veh/h	115	0	0	925	0	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	2	2	8	8
Mvmt Flow	140	0	0	1128	0	335

Major/Minor	Minor1			Major2	
Conflicting Flow All	335	-		-	-
Stage 1	0	-		-	-
Stage 2	335	-		-	-
Critical Hdwy	6.4	-		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	5.4	-		-	-
Follow-up Hdwy	3.5	-		-	-
Pot Cap-1 Maneuver	664	0		0	-
Stage 1	-	0		0	-
Stage 2	729	0		0	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	664	-		-	-
Mov Cap-2 Maneuver	664	-		-	-
Stage 1	-	-		-	-
Stage 2	729	-		-	-

Approach	WB	SB
HCM Control Delay, s/v	11.9	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	664	-
HCM Lane V/C Ratio	0.211	-
HCM Control Delay (s/veh)	11.9	-
HCM Lane LOS	B	-
HCM 95th %tile Q (veh)	0.8	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	845	75	5	115	0	0	0	0	81	0	0
Future Vol, veh/h	0	845	75	5	115	0	0	0	0	81	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	12	12	12
Mvmt Flow	0	929	82	5	126	0	0	0	0	89	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	1011	0	0	1106	1147	126
Stage 1	-	-	-	-	-	-	136	136	-
Stage 2	-	-	-	-	-	-	970	1011	-
Critical Hdwy	-	-	-	4.1	-	-	6.52	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	5.62	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.608	4.108	3.408
Pot Cap-1 Maneuver	0	-	-	694	-	0	223	191	898
Stage 1	0	-	-	-	-	0	866	765	-
Stage 2	0	-	-	-	-	0	353	305	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	694	-	-	221	0	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	0	-
Stage 1	-	-	-	-	-	-	866	0	-
Stage 2	-	-	-	-	-	-	350	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.4	31.9
HCM LOS			D

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	694	-	221
HCM Lane V/C Ratio	-	-	0.008	-	0.403
HCM Control Delay (s/veh)	-	-	10.2	0	31.9
HCM Lane LOS	-	-	B	A	D
HCM 95th %tile Q (veh)	-	-	0	-	1.8

Intersection	
Int Delay, s/veh	85.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰						↰				
Traffic Vol, veh/h	911	0	0	0	0	0	125	5	0	0	0	0
Future Vol, veh/h	911	0	0	0	0	0	125	5	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	0	0	0	3	3	3	0	0	0
Mvmt Flow	1001	0	0	0	0	0	137	5	0	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	-	2002	2002	-
Stage 1	-	-	-	2002	2002	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	6.43	6.53	-
Critical Hdwy Stg 1	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.527	4.027	-
Pot Cap-1 Maneuver	-	-	0	~ 65	59	0
Stage 1	-	-	0	~ 114	103	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %		-				
Mov Cap-1 Maneuver	-	-	-	~ 65	0	-
Mov Cap-2 Maneuver	-	-	-	~ 65	0	-
Stage 1	-	-	-	~ 114	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s/v		$ 686.8
HCM LOS		F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT
Capacity (veh/h)	65	-	-
HCM Lane V/C Ratio	2.198	-	-
HCM Control Delay (s/veh)	$ 686.8	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q (veh)	13.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	25	970	1	10	745
Future Vol, veh/h	0	25	970	1	10	745
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	11	11	3	3	10	10
Mvmt Flow	0	28	1078	1	11	828

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	540	0	0	1079	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.12	-	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.41	-	-	2.3	-
Pot Cap-1 Maneuver	0	464	-	-	597	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	464	-	-	597	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	464	597	-
HCM Lane V/C Ratio	-	-	0.06	0.019	-
HCM Control Delay (s/veh)	-	-	13.3	11.1	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q (veh)	-	-	0.2	0.1	-

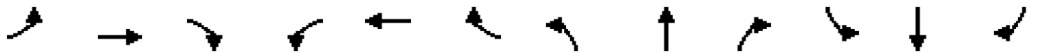
Intersection	
Int Delay, s/veh	8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	430	515	115	345	390
Future Vol, veh/h	2	430	515	115	345	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	3	3	8	8
Mvmt Flow	2	473	566	126	379	429

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1602	346	0	0	692	0
Stage 1	629	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.26	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.28	-
Pot Cap-1 Maneuver	97	653	-	-	860	-
Stage 1	496	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	653	-	-	860	-
Mov Cap-2 Maneuver	54	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	184	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.6	0	5.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	860	-
HCM Lane V/C Ratio	-	-	0.724	0.441	-
HCM Control Delay (s/veh)	-	-	23.6	12.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q (veh)	-	-	6.2	2.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	478	20	73	293	255	20	132	205	260	68	139
Future Volume (veh/h)	48	478	20	73	293	255	20	132	205	260	68	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	52	520	22	79	318	277	22	143	223	283	74	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	5	5	5	2	2	2	3	3	3
Cap, veh/h	281	605	513	118	820	366	491	708	631	407	702	626
Arrive On Green	0.16	0.33	0.33	0.07	0.24	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1753	1841	1560	1739	3469	1547	1156	1777	1585	1008	1763	1572
Grp Volume(v), veh/h	52	520	22	79	318	277	22	143	223	283	74	151
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1739	1735	1547	1156	1777	1585	1008	1763	1572
Q Serve(g_s), s	1.8	18.2	0.7	3.1	5.3	11.5	0.9	3.6	6.8	18.8	1.8	4.4
Cycle Q Clear(g_c), s	1.8	18.2	0.7	3.1	5.3	11.5	5.3	3.6	6.8	25.6	1.8	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	281	605	513	118	820	366	491	708	631	407	702	626
V/C Ratio(X)	0.19	0.86	0.04	0.67	0.39	0.76	0.04	0.20	0.35	0.70	0.11	0.24
Avail Cap(c_a), veh/h	395	803	680	392	1513	675	491	708	631	407	702	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	21.6	15.7	31.3	22.1	24.4	15.5	13.5	14.5	23.4	13.0	13.8
Incr Delay (d2), s/veh	0.3	7.3	0.0	6.4	0.3	3.2	0.0	0.1	0.3	5.1	0.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	8.4	0.2	1.4	2.1	4.3	0.2	1.4	2.3	4.7	0.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	28.9	15.8	37.7	22.4	27.7	15.6	13.7	14.8	28.5	13.1	14.0
LnGrp LOS	C	C	B	D	C	C	B	B	B	C	B	B
Approach Vol, veh/h		594			674			388			508	
Approach Delay, s/veh		28.1			26.3			14.4			22.0	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	9.2	27.6		32.0	15.5	21.3				
Change Period (Y+Rc), s		4.6	4.5	5.0		4.6	4.5	5.0				
Max Green Setting (Gmax), s		27.4	15.5	30.0		27.4	15.5	30.0				
Max Q Clear Time (g_c+I1), s		8.8	5.1	20.2		27.6	3.8	13.5				
Green Ext Time (p_c), s		2.2	0.1	2.4		0.0	0.1	2.8				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	23.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	85	0	50	0	0	5	10	252	0	1	131	30
Future Vol, veh/h	85	0	50	0	0	5	10	252	0	1	131	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	2	2	2
Mvmt Flow	92	0	54	0	0	5	11	274	0	1	142	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	460	457	159	484	473	274	175	0	0	274	0	0
Stage 1	161	161	-	296	296	-	-	-	-	-	-	-
Stage 2	299	296	-	188	177	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	512	500	886	496	493	770	1414	-	-	1289	-	-
Stage 1	841	765	-	717	672	-	-	-	-	-	-	-
Stage 2	710	668	-	818	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	504	495	886	462	488	770	1414	-	-	1289	-	-
Mov Cap-2 Maneuver	504	495	-	462	488	-	-	-	-	-	-	-
Stage 1	833	764	-	711	666	-	-	-	-	-	-	-
Stage 2	699	662	-	767	755	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.9	9.7	0.3	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1414	-	-	600	770	1289	-	-
HCM Lane V/C Ratio	0.008	-	-	0.245	0.007	0.001	-	-
HCM Control Delay (s/veh)	7.6	0	-	12.9	9.7	7.8	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	1	0	0	-	-

MOVEMENT SUMMARY

Site: 15 [Thorpe Rd / Lindeke Connection / Marshall Rd - AM - MIT (Site Folder: With Lindeke Extension - without-project)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

2035 Baseline - MIT AM
Site Category: MIT
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Marshall Rd															
3	L2	All MCs	16	0.0	16	0.0	0.017	10.8	LOS B	0.1	1.8	0.38	0.61	0.38	32.7
8	T1	All MCs	1	0.0	1	0.0	0.017	4.8	LOS A	0.1	1.8	0.38	0.61	0.38	33.4
18	R2	All MCs	2	0.0	2	0.0	0.017	4.9	LOS A	0.1	1.8	0.38	0.61	0.38	33.1
Approach			20	0.0	20	0.0	0.017	9.8	LOS A	0.1	1.8	0.38	0.61	0.38	32.8
East: Thorpe Rd															
1	L2	All MCs	5	5.0	5	5.0	0.227	10.2	LOS B	1.2	30.1	0.25	0.43	0.25	35.0
6	T1	All MCs	141	5.0	141	5.0	0.227	4.3	LOS A	1.2	30.1	0.25	0.43	0.25	35.9
16	R2	All MCs	148	5.0	148	5.0	0.227	4.4	LOS A	1.2	30.1	0.25	0.43	0.25	35.5
Approach			295	5.0	295	5.0	0.227	4.4	LOS A	1.2	30.1	0.25	0.43	0.25	35.7
North: Lindeke Connection															
7	L2	All MCs	126	4.0	126	4.0	0.129	10.5	LOS B	0.6	15.6	0.31	0.60	0.31	32.9
4	T1	All MCs	1	4.0	1	4.0	0.129	4.5	LOS A	0.6	15.6	0.31	0.60	0.31	33.6
14	R2	All MCs	34	4.0	34	4.0	0.129	4.6	LOS A	0.6	15.6	0.31	0.60	0.31	33.3
Approach			162	4.0	162	4.0	0.129	9.2	LOS A	0.6	15.6	0.31	0.60	0.31	33.0
West: Thorpe Rd															
5	L2	All MCs	79	5.0	79	5.0	0.147	10.4	LOS B	0.7	18.4	0.28	0.52	0.28	33.8
2	T1	All MCs	105	5.0	105	5.0	0.147	4.4	LOS A	0.7	18.4	0.28	0.52	0.28	34.6
12	R2	All MCs	1	5.0	1	5.0	0.147	4.5	LOS A	0.7	18.4	0.28	0.52	0.28	34.3
Approach			186	5.0	186	5.0	0.147	6.9	LOS A	0.7	18.4	0.28	0.52	0.28	34.3
All Vehicles			662	4.6	662	4.6	0.227	6.5	LOS A	1.2	30.1	0.28	0.50	0.28	34.5

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [Grove Rd & Thorpe Rd Baseline PM (Site Folder: General)]

2035 Baseline PM
Site Category: Victory Heights
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Grove Rd														
3	L2	2	3.0	2	3.0	0.228	11.6	LOS B	1.0	26.8	0.48	0.55	0.48	36.5
8	T1	180	3.0	198	3.0	0.228	5.8	LOS A	1.0	26.8	0.48	0.55	0.48	36.4
18	R2	20	3.0	22	3.0	0.228	5.6	LOS A	1.0	26.8	0.48	0.55	0.48	35.2
Approach		202	3.0	222	3.0	0.228	5.8	LOS A	1.0	26.8	0.48	0.55	0.48	36.2
East: Thorpe Rd														
1	L2	45	4.0	49	4.0	0.347	12.2	LOS B	1.7	45.1	0.55	0.70	0.55	36.3
6	T1	15	4.0	16	4.0	0.347	6.4	LOS A	1.7	45.1	0.55	0.70	0.55	36.2
16	R2	235	4.0	258	4.0	0.347	6.2	LOS A	1.7	45.1	0.55	0.70	0.55	35.0
Approach		295	4.0	324	4.0	0.347	7.1	LOS A	1.7	45.1	0.55	0.70	0.55	35.2
North: Grove Rd														
7	L2	115	7.0	126	7.0	0.258	10.2	LOS B	1.3	35.1	0.22	0.51	0.22	36.2
4	T1	255	7.0	280	7.0	0.258	4.4	LOS A	1.3	35.4	0.22	0.49	0.22	36.5
14	R2	240	7.0	264	7.0	0.258	4.4	LOS A	1.3	35.4	0.21	0.44	0.21	36.0
Approach		610	7.0	670	7.0	0.258	5.5	LOS A	1.3	35.4	0.22	0.48	0.22	36.3
West: Thorpe Rd														
5	L2	240	3.0	264	3.0	0.291	11.6	LOS B	1.2	30.6	0.47	0.75	0.47	34.2
2	T1	15	3.0	16	3.0	0.291	5.8	LOS A	1.2	30.6	0.47	0.75	0.47	34.1
12	R2	5	3.0	5	3.0	0.291	5.6	LOS A	1.2	30.6	0.47	0.75	0.47	33.1
Approach		260	3.0	286	3.0	0.291	11.1	LOS B	1.2	30.6	0.47	0.75	0.47	34.1
All Vehicles		1367	5.0	1502	5.0	0.347	7.0	LOS A	1.7	45.1	0.37	0.59	0.37	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	160	5	45	65	25	15	35	35	25	90	25
Future Vol, veh/h	15	160	5	45	65	25	15	35	35	25	90	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	18	195	6	55	79	30	18	43	43	30	110	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.8	9.2	8.7	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	8%	33%	18%
Vol Thru, %	41%	89%	48%	64%
Vol Right, %	41%	3%	19%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	180	135	140
LT Vol	15	15	45	25
Through Vol	35	160	65	90
RT Vol	35	5	25	25
Lane Flow Rate	104	220	165	171
Geometry Grp	1	1	1	1
Degree of Util (X)	0.139	0.291	0.219	0.233
Departure Headway (Hd)	4.829	4.769	4.794	4.907
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	736	749	742	727
Service Time	2.902	2.831	2.86	2.973
HCM Lane V/C Ratio	0.141	0.294	0.222	0.235
HCM Control Delay, s/veh	8.7	9.8	9.2	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	1.2	0.8	0.9

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	15	190	130	5	90
Future Vol, veh/h	165	15	190	130	5	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	185	17	213	146	6	101

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	202	0	766	194
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	572	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1376	-	374	853
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1376	-	311	853
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	473	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	4.8	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	781	-	-	1376	-
HCM Lane V/C Ratio	0.137	-	-	0.155	-
HCM Control Delay (s/veh)	10.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q (veh)	0.5	-	-	0.5	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	185	5	1	15	115	620	5	45	1490	175
Future Vol, veh/h	0	0	185	5	1	15	115	620	5	45	1490	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	1	1	1
Mvmt Flow	0	0	191	5	1	15	119	639	5	46	1536	180

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	858	1740	2688	322	1716	0	0	644	0	0
Stage 1	-	-	-	880	880	-	-	-	-	-	-	-
Stage 2	-	-	-	860	1808	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	7.5	6.5	6.9	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.22	-	-	2.21	-	-
Pot Cap-1 Maneuver	0	0	304	57	22	680	365	-	-	944	-	-
Stage 1	0	0	-	312	368	-	-	-	-	-	-	-
Stage 2	0	0	-	321	132	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	304	15	14	680	365	-	-	944	-	-
Mov Cap-2 Maneuver	-	-	-	15	14	-	-	-	-	-	-	-
Stage 1	-	-	-	210	248	-	-	-	-	-	-	-
Stage 2	-	-	-	114	126	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	34.8	127.2	3	0.2
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	304	49	944	-	-
HCM Lane V/C Ratio	0.325	-	-	0.627	0.442	0.049	-	-
HCM Control Delay (s/veh)	19.5	-	-	34.8	127.2	9	-	-
HCM Lane LOS	C	-	-	D	F	A	-	-
HCM 95th %tile Q (veh)	1.4	-	-	3.9	1.6	0.2	-	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	170	170	860	1895	0
Future Vol, veh/h	0	170	170	860	1895	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	0	181	181	915	2016	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1008	2016	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	4.16	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	2.23	-	-	-
Pot Cap-1 Maneuver	0	242	275	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	242	275	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	53.8	6.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	275	-	242	-
HCM Lane V/C Ratio	0.658	-	0.747	-
HCM Control Delay (s/veh)	40.1	-	53.8	-
HCM Lane LOS	E	-	F	-
HCM 95th %tile Q (veh)	4.2	-	5.3	-

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	265	0	0	70	0	955	130	0	1715	275
Future Vol, veh/h	0	0	265	0	0	70	0	955	130	0	1715	275
Conflicting Peds, #/hr	3	0	0	0	0	3	0	0	0	3	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	150	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	0	0	282	0	0	74	0	1016	138	0	1824	293

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	912	-	-	511	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 280	0	0	513	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	~ 280	-	-	512	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	95.7	13.2	0	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	280	512	-
HCM Lane V/C Ratio	-	-	1.007	0.145	-
HCM Control Delay (s/veh)	-	-	95.7	13.2	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q (veh)	-	-	10.4	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	105	1020	0	105	1865
Future Vol, veh/h	0	105	1020	0	105	1865
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	118	1146	0	118	2096

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	573	0	-	1146	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.21	-
Pot Cap-1 Maneuver	0	468	-	0	611	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	468	-	-	611	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.3	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	468	611	-
HCM Lane V/				