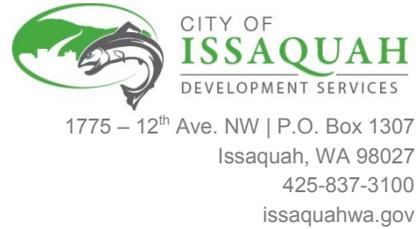


# Transportation Concurrency Certificate Application *with Trip Calculator*



This supplemental form provides the City of Issaquah with the information needed to issue a Concurrency Certificate for a development. Please complete the entire form and return it to the Permit Center.

The City's review will: 1) evaluate whether the proposed land use type, location, and size is consistent with the City's land use forecasts used for concurrency modeling, and, 2) the City will use the Trip Calculator to determine whether the proposed trips are within the citywide Trip Bank capacity.

## A. General Information

Project Name: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

## B. Trip Calculator

Please complete the Trip Calculator to provide the applicant's estimate of how a development meets the citywide Trip Bank.

Prior Uses	Number	Unit of Measure	Trips per unit	Total
Proposed Uses				

Trips (Proposed): \_\_\_\_\_  
- Trips (Prior): \_\_\_\_\_  
Net Trips: \_\_\_\_\_

## C. Concurrency Application Fee

A concurrency application fee is due at the time of your land use application submittal. Fee amount is calculated as:

(Net Trips) \_\_\_\_\_ X \$52.50 = \_\_\_\_\_ (fee includes technology surcharge)

## D. Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is required if your project has a 30 or more net trip increase. A TIA may be required even if the 30-trip limit hasn't been met. Please see our [TIA requirements](#) for more information.

- My project generates 30 or more trips and requires a Traffic Impact Analysis or staff has determined a TIA is required

**Staff Use Only**  
 Permit Number: \_\_\_\_\_ Date Received: \_\_\_\_\_  
 Staff Contact: \_\_\_\_\_

## E. Table of Vehicle Trip Ends

This table for informational purposes only and is not required to be submitted with your application

ITE Code	ITE Land Use Category	Unit of Measure	Vehicle Trip Ends <sup>1</sup>
110	General Light Industrial	square foot	0.00097
130	Industrial Park	square foot	0.00085
140	Manufacturing	square foot	0.00073
151	Mini-warehouse	square foot	0.00026
210	Single Family House	dwelling	1.00000
220	Apartment	dwelling	0.62000
230	Condominium/Townhouse	dwelling	0.52000
240	Mobile Home	dwelling	0.59000
251	Senior Adult Housing-detached	dwelling	0.27000
252	Senior Adult Housing-attached	dwelling	0.25000
253	Congregate Care Facility	dwelling	0.17000
254	Assisted Living	bed	0.22000
310	Hotel	room	0.60000
320	Motel	room	0.47000
441	Live Theater	seat	0.02000
443	Movie Theater Without Matinee	seat	0.07000
445	Multiplex Movie Theater	square foot	0.00491
492	Health/Fitness Club	square foot	0.00353
521	Elementary School	square foot	0.00121
522	Middle/Junior High School	square foot	0.00119
530	High School	square foot	0.00097
560	Church	square foot	0.00055
565	Day Care Center	square foot	0.01234
590	Library	square foot	0.00730
610	Hospital	square foot	0.00093
620	Nursing Home	bed	0.22000
710	Office	square foot	0.00149
720	Medical Office	square foot	0.00357
732	Post Office	square foot	0.01122
750	Office Park	square foot	0.00148
760	R&D Center	square foot	0.00107
770	Business Park	square foot	0.00126
812	Building Materials & Lumber	square foot	0.00449
814	Variety Store	square foot	0.00682
815	Free-standing Discount Store	square foot	0.00557
816	Hardware/Paint Store	square foot	0.00484
817	Nursery (Garden Center)	square foot	0.00694
820	Shopping Center	square foot	0.00371
841	New Car Sales	square foot	0.00262

<b>ITE Code</b>	<b>ITE Land Use Category</b>	<b>Unit of Measure</b>	<b>Vehicle Trip Ends<sup>1</sup></b>
843	Auto Parts Sales	square foot	0.00598
848	Tire Store	square foot	0.00415
850	Supermarket	square foot	0.00948
851	Convenience Market-24 hr	square foot	0.05241
854	Discount Supermarket	square foot	0.00834
857	Discount Club	square foot	0.00418
862	Home Improvement Superstore	square foot	0.00231
863	Electronics Superstore	square foot	0.00450
880	Pharmacy/Drugstore: no drive-up	square foot	0.00840
881	Pharmacy/Drugstore: w/ drive-up	square foot	0.00981
890	Furniture Store	square foot	0.00045
896	Video Rental	square foot	0.01360
911	Walk-in Bank	square foot	0.01213
912	Drive-in Bank	square foot	0.02430
925	Drinking Place	square foot	0.01134
931	Quality Restaurant	square foot	0.00749
932	High-Turnover (Sit-Down) Restaurant	square foot	0.00985
933	Fast Food: no drive-up	square foot	0.02615
934	Fast Food: w/ drive-up	square foot	0.03265
936	Coffee/Donut Shop: no drive-up	square foot	0.04075
937	Coffee/Donut Shop: w/ drive-up	square foot	0.04280
941	Quick Lubrication Shop	square foot	0.00519
943	Auto Parts & Service Center	service stall	4.46000
944	Service Station	fuel position	13.87000
947	Self-service Car Wash	wash stall	8.00000

1. ITE Trip Generation (9th Edition, 2012): 4-6 PM Peak Hour Trip Ends.

## MEMORANDUM

**DATE:** October 14, 2015

**TO:** Doug Schlepp  
City of Issaquah

**FROM:** Jeff Schramm  
TENW

**SUBJECT:** Riva Townhomes – Issaquah, WA  
Traffic Impact Analysis  
TENW Project No. 4966

---

The purpose of this memorandum is to summarize the Traffic Impact Analysis (TIA) conducted for the proposed Riva Townhomes residential development located on Newport Way NW in the City of Issaquah. The analysis is presented consistent with the City's adopted Guidelines for preparation of a TIA, and supplements the City's recently adopted Transportation Concurrency and multi-modal transportation impact fees.

### TIA Guidelines

A TIA is required by the City to evaluate the impacts of proposed land use developments on the existing transportation network, and to identify consistent and appropriate mitigation measures. This TIA was prepared to be consistent with the City's TIA Guidelines which were recently adopted on April 8, 2015.

The City recently conducted a City-wide transportation concurrency assessment for system-wide concurrency intersections that accounted for future planned growth. The mitigation for the planned growth is payment of a transportation impact fee that is used by the City to administer transportation improvements to accommodate the planned growth. As a result, a system-wide intersection capacity analysis is not required for individual developments as long as the type, amount, and location of a proposed development is consistent with the City's future planned growth. The proposed Riva Townhomes project is consistent with the City's future planned growth in the Central Issaquah Plan.

Further, the City-wide concurrency assessment does not negate the need for a localized analysis of traffic impacts in the immediate vicinity of a development project's site access, and/or other non-motorized, safety, geometric, construction, or non-motorized impacts. As such, it is the intent of this TIA document to provide a localized analysis of traffic impacts of the proposed Riva Townhomes project on Newport Way.

The remainder of this TIA document provides the localized traffic impact analysis for the proposed Riva Townhomes development on Newport Way NW. Measures used to evaluate traffic impacts include trip generation; intersection LOS, delays, and queues; safety, channelization and frontage, site access control, neighborhood impacts, and impacts to bikes/pedestrians. Consideration of these elements addresses traffic scoping comments provided by the City in an email dated September 13, 2015.

## Project Description

The proposed Riva Townhomes development site is located on the north and east side of Newport Way and west of SR-900 as shown in the **Figure 1** vicinity map. The preliminary site plan includes 36 townhomes on a site that is currently vacant. Vehicle access to the site is proposed at a new access aligned with NW Oakcrest Drive. Full project buildout of the development is anticipated to be 2017. A Preliminary site plan is provided in **Figure 2**.

## Trip Generation

The trip generation estimate for the proposed 36-unit Riva Townhomes development was based on the methodology included in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9<sup>th</sup> edition for Land Use Code (LUC) 230 (Residential Condominium/Townhouse).

The resulting weekday daily, AM, and PM peak hour trip generation associated with the proposed Riva Townhomes development is summarized in **Table 1** below.

**Table 1**  
**Trip Generation Summary – Riva Townhomes (36 Units)**

Time Period	ITE Trip Rate	New Vehicle Trips Generated		
		In	Out	Total
Weekday Daily	5.81	105	104	209
Weekday AM Peak Hour	0.44	3	13	16
Weekday PM Peak Hour	0.52	13	6	19

As shown in **Table 1**, the proposed Riva Townhomes project is estimated to generate 209 new weekday daily trips, with 16 new trips occurring during the weekday AM peak hour (3 in, 13 out) and 19 new trips occurring during the weekday PM peak hour (13 in, 6 out).

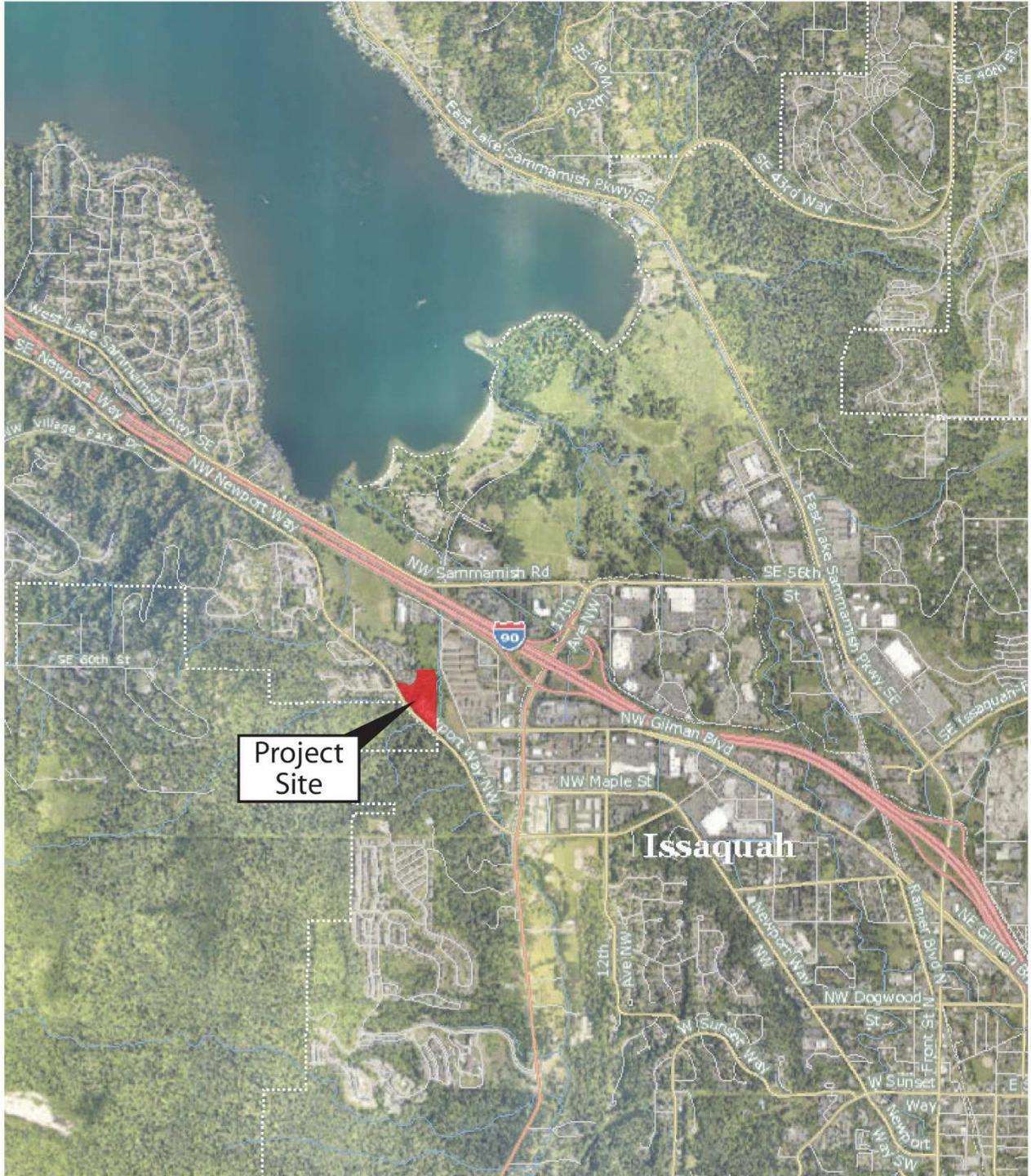
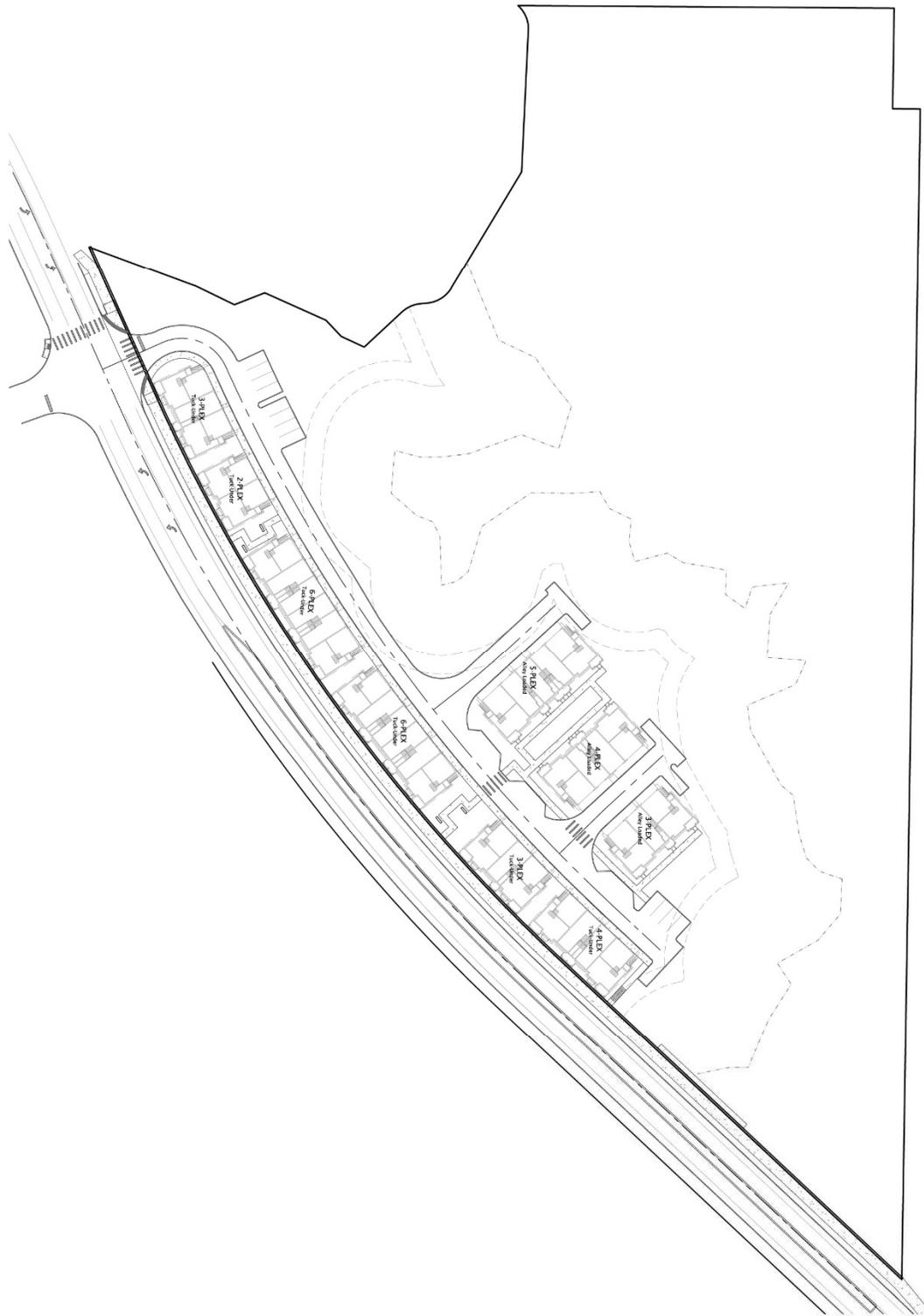


Figure 1: Site Vicinity





**Figure 2:** Preliminary Site Plan



## Future Traffic Volumes

The traffic volumes used in this TIA were based on weekday AM and PM peak hour turning movement counts conducted on Thursday September 24, 2015 at the Newport Way intersection with NW Oakcrest Drive. To estimate future peak hour traffic volumes on Newport Way without the project for the anticipated 2017 year of project buildout, traffic was included from anticipated growth of approved development projects (a.k.a. pipeline development) in the area and a growth rate. To account for future growth in traffic on Newport Way, a 2 percent annual growth rate was applied to the existing traffic volumes along with traffic generated by the Gateway Apartments and Gateway Senior Housing developments.

A summary of the existing and future without-project traffic volumes during the weekday AM and PM peak hours is illustrated in **Figure 3**.

The distribution of the project trips by vehicles generated by the proposed Riva Townhomes development during the AM and PM peak hours was based on existing travel patterns in the area, and a recent turning movement count collected at the Newport Way NW / NW Oakcrest intersection. The new peak hour project-generated trips were generally distributed to the vicinity street system as follows:

### AM Peak Hour

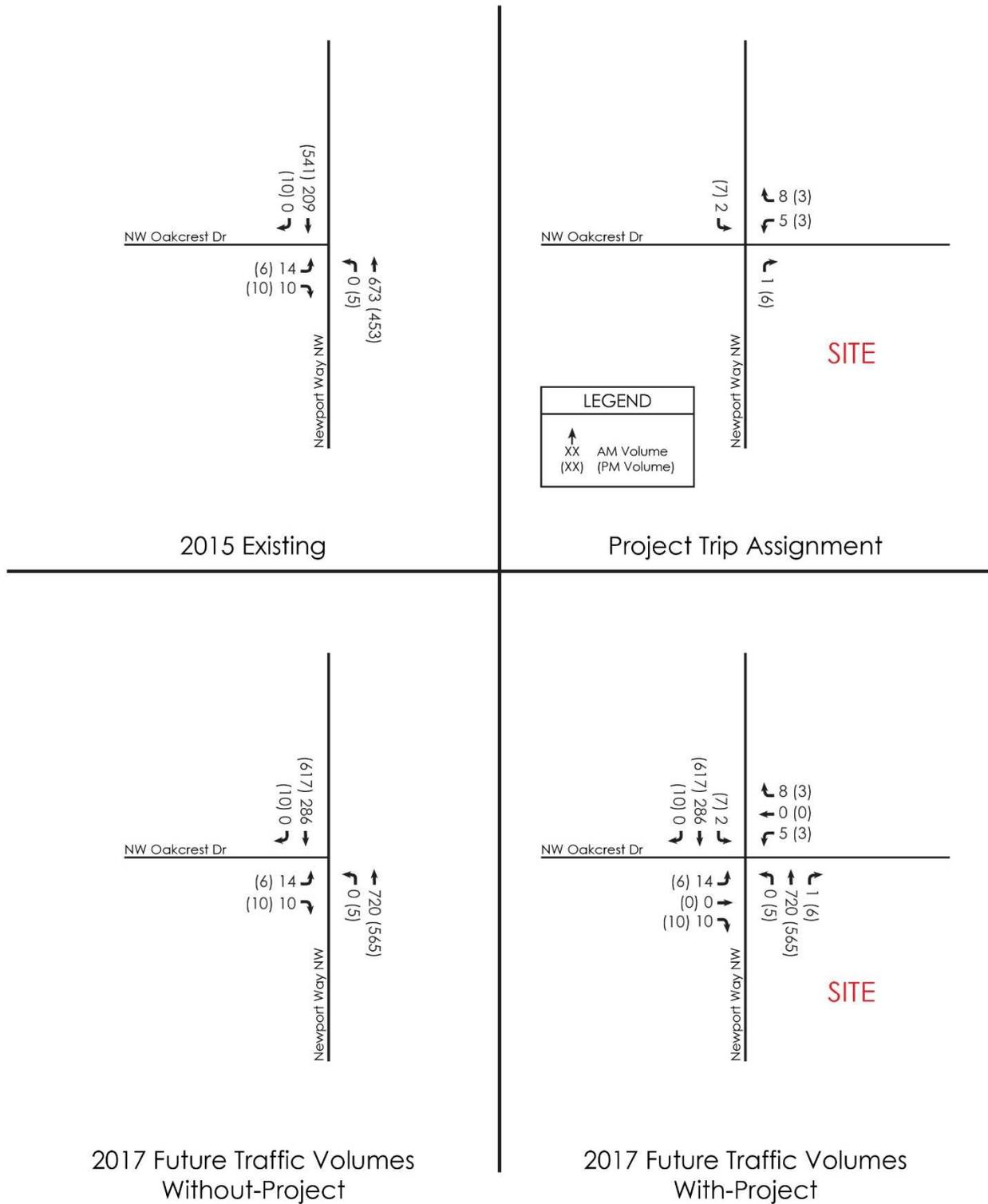
- 60 percent to/from the north on Newport Way NW
- 40 percent to/from the south on Newport Way NW

### PM Peak Hour

- 50 percent to/from the north on Newport Way NW
- 50 percent to/from the south on Newport Way NW

Estimating trip distribution from existing counts in the area is a legitimate method, and was used for the Gateway projects on Newport Way NW, since side-street traffic at NW Oakcrest Drive is predominately residential. While use of the City's traffic model may provide slightly different distribution patterns, we don't expect those to be significantly different than the distribution patterns based on the existing traffic counts in the area.

Project trips generated by the Riva Townhomes project during the weekday AM and PM peak hours were added to the 2017 without-project traffic volumes, resulting in 2017 peak hour traffic volumes when the project is expected to be open. A summary of the peak hour traffic volumes used for the LOS analyses at the proposed site access intersection on Newport Way NW are provided in **Figure 3**. Detailed traffic count information is provided in **Attachment A**.



**Figure 3:** AM and PM Peak Hour Traffic Volumes



## Intersection LOS

The City's adopted standard is LOS D consistent with the latest edition of the *Highway Capacity Manual*. According to the City's TIA Guidelines, a development that exceeds the maximum allowable delay at a driveway or local roadway not included in the City's transportation concurrency analysis is considered as having a probably significant adverse impact and will be required to mitigate that impact.

Weekday AM and PM peak hour LOS, delays, and queues were evaluated at the location of the proposed access onto Newport Way NW. LOS and queues were evaluated for future with-project conditions in 2017 assuming a stop sign would control the side-street turns. The LOS analysis also assumed the proposed frontage improvements along Newport Way, which include road widening to accommodate a new 12-foot-wide center turn lane, 5-foot bicycle lane, 5-foot landscape strip, and 10-foot shared multimodal path.

The results of the LOS analysis are summarized in the **Table 2** below. Detailed LOS results are provided in **Attachment B**.

**Table 2. Site Access LOS Summary**

Site Access Location (movement)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	LOS <sup>1</sup>	Delay <sup>2</sup> (sec/veh)	95 <sup>th</sup> % Queue <sup>3</sup>	LOS	Delay (sec/veh)	95 <sup>th</sup> % Queue
<u>Newport Way NW / Oakcrest Drive:</u>						
NB Left-Turn (main street)	A	0.0	0 veh	A	8.9	0 veh
SB Left-Turn (main street into Riva)	A	9.2	0 veh	A	8.8	0 veh
EB Shared Left-Thru-Right (side-street Oakcrest Dr)	B	14.5	< 1 veh	C	15.4	< 1 veh
WB Shared Left-Thru-Right (side-street Riva site access)	C	15.3	< 1 veh	C	15.7	< 1 veh

1. LOS = Level of Service.

2. Delay refers to average control delay in seconds per vehicle

3. 95<sup>th</sup> percentile queues represent maximum queues that occur during the peak hours.

As shown in **Table 2**, side-street turns from the proposed site access onto Newport Way NW are anticipated to operate at LOS C or better in the AM and PM peak hours.

## Channelization & Frontage

Consistent with City road standards and the *Central Issaquah Plan*, the Riva Townhomes project will widen the east side of Newport Way along its property frontage to provide new half-street improvements. These include road widening to accommodate a new 12-foot-wide center turn lane, 5-foot bicycle lane, 5-foot landscape strip, and 10-foot shared multimodal path.

As part of the proposed channelization and frontage evaluation, the need for both left-turn and right-turn lanes were evaluated at the site access location on Newport Way. A right-turn lane would not be recommended based on low peak hour traffic volumes. Widening on Newport Way NW to include a center turn lane is consistent with the planned channelization and frontage requirements for the nearby Gateway Apartments

and Gateway Senior Housing projects. The center left-turn lane is also expected to improve safety by removing left-turning traffic from the through travel lanes on Newport Way NW. The center turn-lane and median along Newport Way is a programmed improvement in the City's six-year Transportation Improvement Plan (TIP) and consistent with the City's *Central Issaquah Plan*.

## Sight Distance Evaluation

Entering sight distance (ESD) was evaluated at the location of the proposed site access driveway on Newport Way NW at the NW Oakcrest Drive intersection for the Riva Townhomes development. The entering sight distance was reviewed based on City roadway standards for a minor arterial, which require 390 feet ESD for left-turns from a driveway and 335 feet ESD for right-turns. These requirements are consistent with City of Issaquah Adopted Street Standards, Standard Detail T-01 based on a posted speed of 30 mph and 35 mph design speed. Entering sight distance was verified to be in excess of 390 feet for a left turning vehicle and 335 feet for a right turning vehicle, therefore meeting minimum entering sight distance standards at the proposed site access location onto Newport Way NW.

## Safety

According to the City's TIA Guidelines, the addition of 10 or more peak hour trips to a High Accident Location (HAL) will be considered a probably significant adverse impact. When a development proposal impacts a HAL, the City may require reasonable mitigation even if the LOS thresholds are not exceeded. The City may also consider other safety threshold requirements. At the time of this TIA, it was not known whether the City has designated this section of Newport Way NW as a HAL. The Riva Townhomes project will add more than 10 peak hour trips to Newport Way.

The current posted speed along this section of Newport Way NW is 30 mph, which was recently changed by the City.

To evaluate safety, history collisions along Newport Way NW in the study area were documented for the three-year period January 1, 2012 to December 31, 2014. Collision data was provided by WSDOT for this most recent period. Summaries of the total, yearly average, and collisions per million entering vehicles (MEV) are provided in **Table 3** below.

**Table 3**  
**Collision Data Summary, January 1, 2012 to December 31, 2014**

Newport Way Segment	2012	2013	2014	3-Year Total Collisions	Average Annual Collisions	Collisions per MEV <sup>1</sup>
Lakemont Blvd SE to SE 54 <sup>th</sup> St	6	2	4	12	4.0	1.06
SE 54 <sup>th</sup> St to NW Oakcrest Dr	0	1	4	5	1.67	0.44
NW Oakcrest Dr to SR 900	0	0	0	0	0.00	0.00
<b>TOTAL:</b>	<b>6</b>	<b>3</b>	<b>8</b>	<b>17</b>	<b>5.67</b>	<b>1.50</b>

Source: WSDOT Collision Records.

<sup>1</sup> MEV = Million Entering Vehicles.

## Pedestrian & Bicycle Impacts

The current posted speed on Newport Way NW west of SR-900 is 30 mph. Bicycle lanes currently exist along both sides of Newport Way NW and would be maintained with future development and widening proposed at the site access intersection. The *Central Issaquah Plan* identifies this section of Newport Way NW as a “Parkway” that will include a center turn lane and maintain bicycle lanes on both sides.

There is an existing marked crosswalk on west side of the NW Oakcrest Drive intersection with Newport Way that includes pedestrian crossing warning signs, pedestrian activated LED flashers, and a radar speed sign at the marked crosswalk for westbound travelers on Newport Way.

The City has also recently commissioned a City-wide Pedestrian Crossing Study to evaluate priority public pedestrian crossings. One of the locations included in that study is Newport Way between 54<sup>th</sup> Street and SR-900. The findings of this Study are forthcoming, and are expected to be integrated with the consideration of pedestrian and bicycle facilities along Newport Way at the Oakcrest Drive intersection.

Depending on the recommendations from the City’s Pedestrian Crossing Study, consideration may be given to relocating the radar speed sign to the east of the crosswalk so westbound drivers have more time to reduce speed in advance of the crossing. The City may also consider implementing a newer technology in place of the current LED flashers for improved visibility by considering a Rectangular Rapid Flashing Beacon (RRFB).

## Neighborhood Impacts

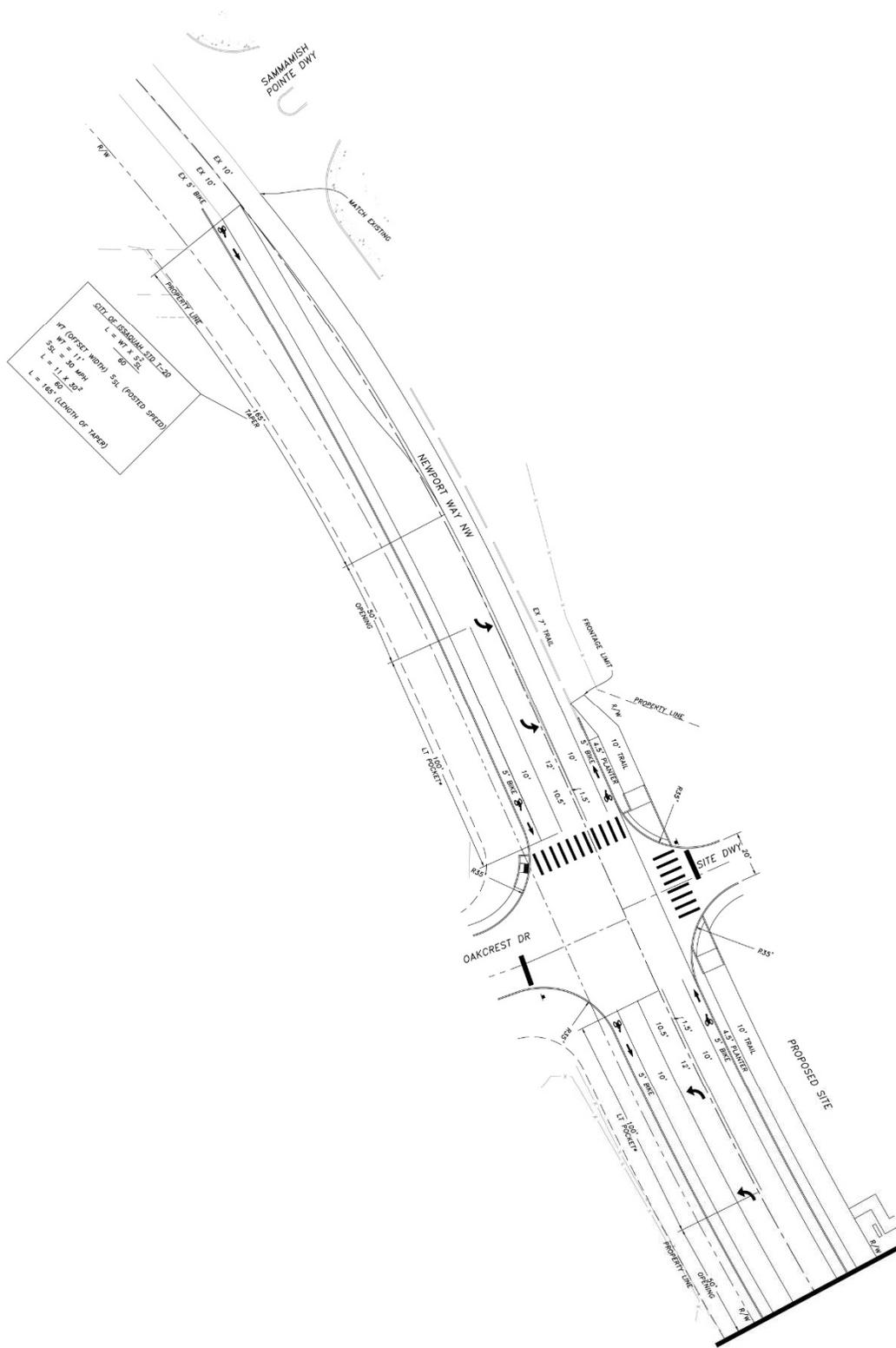
In the project vicinity, Newport Way NW is currently 2-lane minor arterial road that carries traffic between Lakemont Boulevard (in Bellevue to the west) and SR-900 to the east. There are turn lanes provided at a few locations with intersections serving larger residential developments.

The *Central Issaquah Plan* identifies this section of Newport Way NW as a “Parkway” to include a center turn lane with bicycle lanes maintained on both sides. The addition of a center turn lane on Newport Way NW will provide about 40 percent additional capacity<sup>1</sup> compared to a 2-lane road, as well as safer travel allowing turning vehicles a separate turn lane from through traffic.

The future anticipated frontage and road section required for the Riva Townhomes project includes a 10-foot wide multimodal path along the northerly property, together with a landscape stripe separating the trail from the on-street bicycle lane and west-bound travel lanes. Where a center turn lane is not required, a landscape median would separate the east-bound travel and bike lanes. A 10-foot travel lane is proposed to promote slower speeds along the corridor, together with 5-foot bike lanes on both sides. This proposed road section is illustrated in **Figure 4**.

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<sup>1</sup> Source: *King County Roadway Link Capacity Values*. 2-lane urban road has 13,200 ADT two-way capacity and 760 peak hour one-way capacity. 3-lane urban road has 19,220 ADT two-way capacity and 1,030 peak hour one-way capacity.



**Figure 4:** Proposed Newport Way NW Channelization Layout



If you have any questions regarding the information presented in this analysis, please contact me at 425-250-0581 or [schramm@tenw.com](mailto:schramm@tenw.com).

cc: Stacia Bloom, Core Design  
Jeff Haynie, P.E. – TENW Principal

Attachments: A. Traffic Counts  
B. LOS Analysis Results

# ATTACHMENT A

## Traffic Counts



Location: 1 NEWPORT WAY NW & NW OAKCREST DR AM

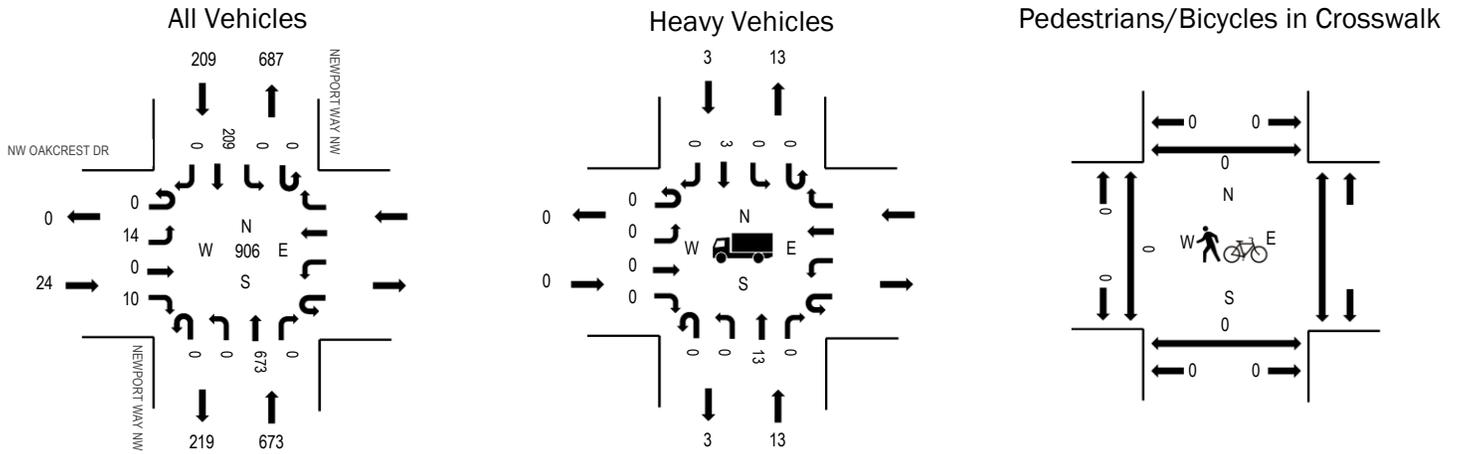
Date and Start Time: Thursday, September 24, 2015

Peak Hour: 07:45 AM - 08:45 AM

(303) 216-2439

www.alltrafficdata.net

**Peak Hour**



	HV%	PHF
EB	0.0%	0.60
WB		
NB	1.9%	0.90
SB	1.4%	0.83
All	1.8%	0.94

**Traffic Counts - All Vehicles**

Interval Start Time	NW OAKCREST DR				Westbound				NEWPORT WAY NW Northbound				NEWPORT WAY NW Southbound				Total	Rolling Hour
	Eastbound				U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	U-Turn	Left	Thru	Right														
7:00:00 AM	0	1	0	5					0	0	104	0	0	0	56	0	166	779
7:15:00 AM	0	2	0	2					0	1	132	0	0	0	39	0	176	854
7:30:00 AM	0	2	0	0					0	1	183	0	0	0	25	1	212	904
7:45:00 AM	0	3	0	2					0	0	177	0	0	0	43	0	225	906
8:00:00 AM	0	2	0	1					0	0	186	0	0	0	52	0	241	868
8:15:00 AM	0	2	0	4					0	0	157	0	0	0	63	0	226	
8:30:00 AM	0	7	0	3					0	0	153	0	0	0	51	0	214	
8:45:00 AM	0	1	0	3					0	1	128	0	0	0	53	1	187	
Count Total	0	20	0	20					0	3	1,220	0	0	0	382	2	1,647	
Peak Hour	0	14	0	10					0	0	673	0	0	0	209	0	906	

**Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk**

Interval Start Time	Heavy Vehicle Totals					Pedestrians/Bikes in Crosswalk				
	EB	WB	NB	SB	Total	West	East	South	North	Total
7:00:00 AM	0		5	3	8	0		0	0	0
7:15:00 AM	0		3	1	4	0		0	1	1
7:30:00 AM	0		4	0	4	0		0	1	1
7:45:00 AM	0		2	0	2	0		0	0	0
8:00:00 AM	0		2	1	3	0		0	0	0
8:15:00 AM	0		4	1	5	0		0	0	0
8:30:00 AM	0		5	1	6	0		0	0	0
8:45:00 AM	0		7	2	9	0		0	0	0
Count Total	0		32	9	41	0		0	2	2
Peak Hour	0		13	3	16	0		0	0	0



Location: 1 NEWPORT WAY NW & NW OAKCREST DR PM

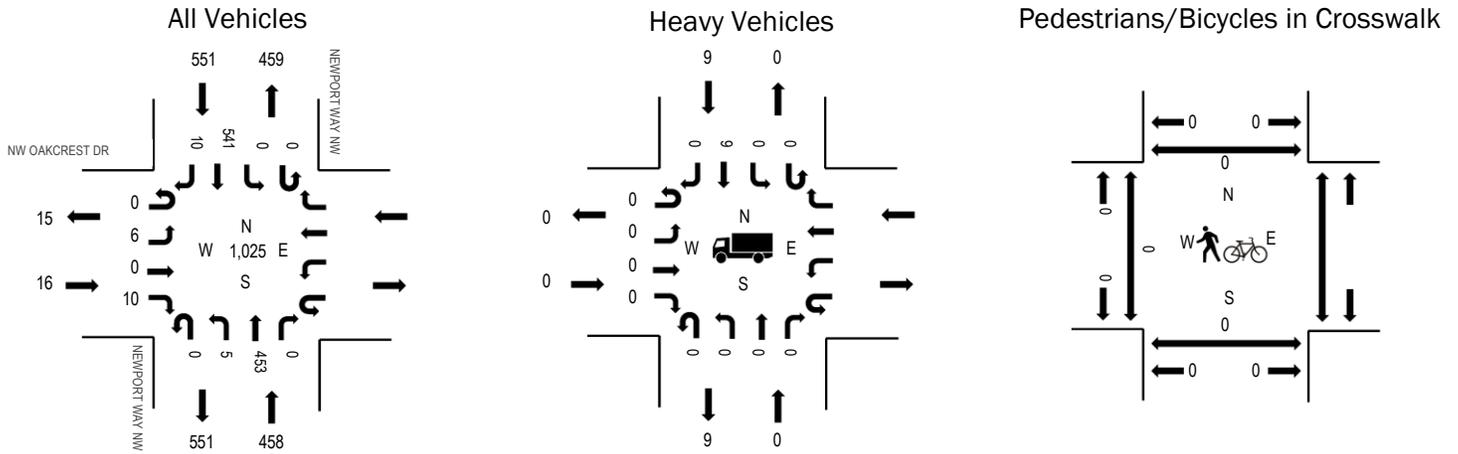
Date and Start Time: Thursday, September 24, 2015

Peak Hour: 04:45 PM - 05:45 PM

(303) 216-2439

www.alltrafficdata.net

**Peak Hour**



	HV%	PHF
EB	0.0%	0.67
WB		
NB	0.0%	0.88
SB	1.6%	0.95
All	0.9%	0.93

**Traffic Counts - All Vehicles**

Interval Start Time	NW OAKCREST DR				Westbound				NEWPORT WAY NW Northbound				NEWPORT WAY NW Southbound				Total	Rolling Hour
	Eastbound				U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	U-Turn	Left	Thru	Right														
4:00:00 PM	0	2	0	2					0	5	83	0	0	0	98	2	192	891
4:15:00 PM	0	0	0	3					0	2	81	0	0	0	151	1	238	953
4:30:00 PM	0	1	0	2					0	2	88	0	0	0	125	1	219	968
4:45:00 PM	0	1	0	5					0	3	100	0	0	0	130	3	242	1,025
5:00:00 PM	0	4	0	1					0	1	103	0	0	0	143	2	254	981
5:15:00 PM	0	1	0	1					0	1	120	0	0	0	127	3	253	
5:30:00 PM	0	0	0	3					0	0	130	0	0	0	141	2	276	
5:45:00 PM	0	0	0	5					0	5	88	0	0	0	98	2	198	
Count Total	0	9	0	22					0	19	793	0	0	0	1,013	16	1,872	
Peak Hour	0	6	0	10					0	5	453	0	0	0	541	10	1,025	

**Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk**

Interval Start Time	Heavy Vehicle Totals					Pedestrians/Bikes in Crosswalk				
	EB	WB	NB	SB	Total	West	East	South	North	Total
4:00:00 PM	0		1	3	4	0		0	0	0
4:15:00 PM	1		0	4	5	2		0	0	2
4:30:00 PM	0		1	2	3	0		0	0	0
4:45:00 PM	0		0	1	1	0		0	0	0
5:00:00 PM	0		0	1	1	0		0	0	0
5:15:00 PM	0		0	2	2	0		0	0	0
5:30:00 PM	0		0	5	5	0		0	0	0
5:45:00 PM	0		0	1	1	0		0	0	0
Count Total	1		2	19	22	2		0	0	2
Peak Hour	0		0	9	9	0		0	0	0

## ATTACHMENT B

### LOS Analysis Results

Lanes, Volumes, Timings

1: Newport Way NW & NW Oakcrest Drive/Site Access

10/9/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	0	10	5	0	8	0	720	1	2	286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			207			200			192	
Travel Time (s)		6.5			5.6			4.5			4.4	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	0	10	5	0	8	0	720	1	2	286	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									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	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	2	2	2	1	1	1
Mvmt Flow	15	0	11	5	0	9	0	766	1	2	304	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1080	1076	304	1080	1075	766	304	0	0	767	0	0
Stage 1	309	309	-	766	766	-	-	-	-	-	-	-
Stage 2	771	767	-	314	309	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	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	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	197	221	740	197	221	406	1257	-	-	851	-	-
Stage 1	705	663	-	398	415	-	-	-	-	-	-	-
Stage 2	396	414	-	701	663	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	193	220	740	194	220	406	1257	-	-	851	-	-
Mov Cap-2 Maneuver	304	323	-	309	324	-	-	-	-	-	-	-
Stage 1	705	661	-	398	415	-	-	-	-	-	-	-
Stage 2	388	414	-	689	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	15.3	0	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1257	-	-	403	362	851	-	-
HCM Lane V/C Ratio	-	-	-	0.063	0.038	0.003	-	-
HCM Control Delay (s)	0	-	-	14.5	15.3	9.2	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Lanes, Volumes, Timings

1: Newport Way NW & NW Oakcrest Drive/Site Access

10/9/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	10	3	0	3	5	565	6	7	617	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			184			200			192	
Travel Time (s)		6.5			5.0			4.5			4.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											

**Intersection**

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	0	10	3	0	3	5	565	6	7	617	10
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									
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	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	0	0	0	2	2	2
Mvmt Flow	6	0	11	3	0	3	5	608	6	8	663	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1307	1309	669	1311	1311	611	674	0	0	614	0	0
Stage 1	684	684	-	622	622	-	-	-	-	-	-	-
Stage 2	623	625	-	689	689	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.12	-	-
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	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	138	161	461	137	160	497	927	-	-	965	-	-
Stage 1	442	452	-	478	482	-	-	-	-	-	-	-
Stage 2	477	480	-	439	450	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	136	159	461	132	158	497	927	-	-	965	-	-
Mov Cap-2 Maneuver	268	282	-	263	282	-	-	-	-	-	-	-
Stage 1	440	448	-	475	479	-	-	-	-	-	-	-
Stage 2	471	477	-	425	446	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	15.7	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	363	344	965	-	-
HCM Lane V/C Ratio	0.006	-	-	0.047	0.019	0.008	-	-
HCM Control Delay (s)	8.9	-	-	15.4	15.7	8.8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-