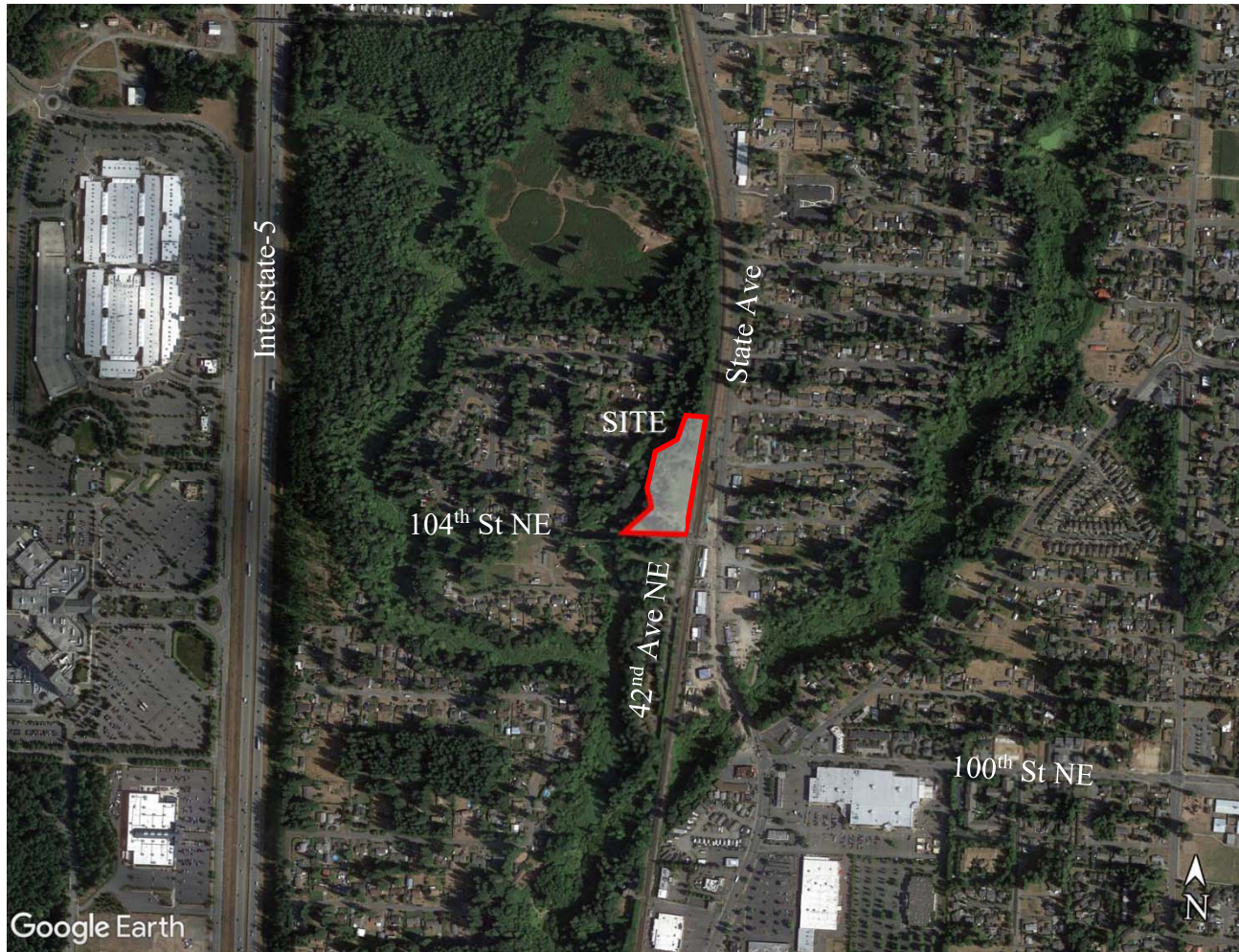


**MEMORANDUM**

To: Jesse Hannahs, PE, City of Marysville  
From: Brad Lincoln, PE  
Subject: Gert's Commercial  
Traffic Analysis  
Date: August 5, 2021  
Project: GTC #21-217



Gibson Traffic Consultants, Inc. (GTC) has been retained to provide a traffic analysis for the Gert's Commercial development. The site is located along the north side of 104<sup>th</sup> Street NE, west of State Avenue. A site vicinity map is included in Figure 1.



**Figure 1: Site Vicinity Map**

The Gert's Commercial development is proposed to consist of multiple buildings totaling 27,978 square-feet (SF) for office and warehouse use. The site is anticipated to be split 20% office and 80% warehouse. There is one existing single-family residential unit on the site that will be removed and is creditable to the development. The site is proposed to have one access to 104<sup>th</sup> Street NE that will align with 42<sup>nd</sup> Avenue NE. Brad Lincoln, responsible for this memorandum, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

## 1. TRIP GENERATION

The trip generation calculations for the Gert's Commercial development are based on data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 10<sup>th</sup> Edition (2017)*. The following ITE Land Use Codes have been utilized for the trip generation calculations:

- ITE Land Use Code 150, Warehouse – 22,378 SF (proposed)
- ITE Land Use Code 710, General Office Building – 5,600 SF (proposed)
- ITE Land Use Code 210, Single-Family Detached Housing – 1 unit (removed)

The trip generation of the Gert's Commercial development is summarized in Table 1.

**Table 1: Trip Generation Summary**

Land Use	Size	Average Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			Inbound	Outbound	Total	Inbound	Outbound	Total
Warehouse ITE LUC 150	22,378 SF	38.94	2.93	0.87	3.80	1.15	3.10	4.25
General Office ITE LUC 710	5,600 SF	54.54	5.59	0.91	6.50	1.03	5.41	6.44
Single-Family Housing ITE LUC 210	-1 unit	-9.44	-0.19	-0.55	-0.74	-0.63	-0.37	-1.00
<b>TOTAL</b>		<b>84.04</b>	<b>8.33</b>	<b>1.23</b>	<b>9.56</b>	<b>1.55</b>	<b>8.14</b>	<b>9.69</b>

The Gert's Commercial development is anticipated to generate approximately 84 new average daily trips with 10 new AM peak-hour trips and 10 new PM peak-hour trips. The trip generation calculations are included in the attachments.

## 2. TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution for the development is based on trip distribution data established by the City of Marysville. It is anticipated that 50% of the trips generated by the development will travel to and from the north along State Avenue. Approximately 40% of the trips generated by the development will travel to and from the south along State Avenue. The remaining 10% of the trips generated by the development are anticipated to travel to and from local areas in the site vicinity. The distribution of trips in the vicinity of the site is not anticipated to change with future roadway connections.

The City of Marysville threshold for level of service is 25 PM peak-hour trips. Additionally, the City of Marysville has an interlocal agreement with Snohomish County that requires Snohomish County intersections impacted with 3 directional peak-hour trips to be identified. The development does not generate 25 PM peak-hour trips and therefore analysis of impacts to City of Marysville intersections is not required. The development generates more than 3 directional peak-hour trips, but is not anticipated to impact any intersections beyond the intersections of State Avenue at 104<sup>th</sup> Street NE and State Avenue at 116<sup>th</sup> Street NE with 3 directional peak-hour trips. Neither of these intersections are Snohomish County key intersections. The development will therefore not impact any Snohomish County key intersections with 3 directional peak-hour trips.

### 3. TRAFFIC MITIGATION FEES

The City of Marysville has an interlocal agreement with Snohomish County that provides for the payment of traffic mitigation fees to Snohomish County for City of Marysville developments. The City of Marysville also has an understanding with WSDOT for the payment of traffic mitigation fees.

#### 3.1. City of Marysville

The City of Marysville traffic mitigation fees have been calculated using the commercial rate of \$2,220 and the residential rate of \$6,300 per PM peak-hour trip. The traffic mitigation fees are summarized in Table 2.

**Table 2: Traffic Mitigation Fee Summary**

Land Use	Size	Type	Fee per PM Peak-Hour Trip	PM Peak-Hour Trips	Traffic Mitigation Fee
Warehouse ITE LUC 150	22,378 SF	Commercial	\$2,220	4.25	\$9,435.00
General Office ITE LUC 710	5,600 SF	Commercial	\$2,220	6.44	\$14,296.80
Single-Family Housing ITE LUC 210	-1 unit	Residential	\$6,300	-1.00	-\$6,300.00
<b>TOTAL</b>					<b>\$17,431.80</b>

The Gert's Commercial development is anticipated to have total traffic mitigation fees of \$17,431.80 with credit for the existing single-family residential unit.

#### 3.2. Snohomish County

The City of Marysville and Snohomish County have an interlocal agreement that provides for the payment of traffic mitigation for impacts to Snohomish County roadways by developments in the City of Marysville. Traffic mitigation fees are based on predetermined area impacts or impacts to actual improvement projects. None of the Snohomish County improvement projects will be impacted by more than 50% of the trips generated by the Gert's Commercial development. Snohomish County traffic mitigation fees should therefore not be required for the Gert's Commercial development.

### **3.3. Washington State Department of Transportation**

There are no current WSDOT improvement projects listed on the WSDOT Exhibit C List that are significantly impacted by trips from the Gert's Commercial development. WSDOT traffic mitigation fees should therefore not be required for the Gert's Commercial development.

# **Attachments**

Trip Generation for: Weekday  
(a.k.a.): Average Weekday Daily Trips (AWDT)

LAND USES	VARIABLE	ITE LU code	NET EXTERNAL TRIPS BY TYPE														
			IN BOTH DIRECTIONS					DIRECTIONAL ASSIGNMENTS									
			Gross Trips		Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW
Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In	Out	In	Out	In	Out	
Warehouse	22.378 ksf	150	1.74	50%	50%	38.94	0%	0.00	0%	0.00	38.94	0%	0.00	0.00	0.00	19.47	19.47
General Light Industrial	5.600 ksf	710	9.74	50%	50%	54.54	0%	0.00	0%	0.00	54.54	0%	0.00	0.00	0.00	27.27	27.27
Single-Family (removed)	-1 units	210	9.44	50%	50%	-9.44	0%	0.00	0%	0.00	-9.44	0%	0.00	0.00	0.00	-4.72	-4.72
<b>Totals</b>						84.04		0.00		0.00	84.04		0.00	0.00	0.00	42.02	42.02

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**Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 7 and 9 AM  
 (a.k.a.): Weekday AM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips						Internal Crossover		IN BOTH DIRECTIONS				NET EXTERNAL TRIPS BY TYPE					
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	TOTAL In+Out (Total)	PASS-BY		DIVERTED LINK		NEW In+Out (Total)	PASS-BY		DIVERTED LINK		NEW In	NEW Out
										% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)		In	Out	In	Out		
Warehouse	22.378 ksf	150	0.17	77%	23%	3.80	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.93	0.87
General Light Industrial	5.600 ksf	710	1.16	86%	14%	6.50	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.59	0.91
Single-Family (removed)	-1 units	210	0.74	25%	75%	-0.74	0%	0.00	0.00	0.00	0.00	-0.74	0.00	0.00	0.00	0.00	0.00	0.00	-0.19	-0.55
<b>Totals</b>						9.56		0.00	0.00	0.00	0.00	9.56	0.00	0.00	0.00	0.00	0.00	0.00	8.33	1.23

Gert's Commercial  
GTC #21-217

**Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM  
(a.k.a.): Weekday PM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips						Internal Crossover		IN BOTH DIRECTIONS				NET EXTERNAL TRIPS BY TYPE								
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	TOTAL In+Out (Total)	PASS-BY		DIVERTED LINK		NEW In+Out (Total)	PASS-BY		DIVERTED LINK		NEW In	NEW Out			
										% IN	% OUT	% of Ext. Trips	In+Out (Total)		% of Ext. Trips	In+Out (Total)	In	Out			In	Out	
Warehouse	22.378 ksf	150	0.19	27%	73%	4.25	0%	0.00	0.00	0.00	4.25	0%	0.00	0.00	0.00	0.00	0.00	0.00	4.25	0.00	0.00	1.15	3.10
General Light Industrial	5.600 ksf	710	1.15	16%	84%	6.44	0%	0.00	0.00	0.00	6.44	0%	0.00	0.00	0.00	0.00	0.00	0.00	6.44	0.00	0.00	1.03	5.41
Single-Family (removed)	-1 units	210	1.00	63%	37%	-1.00	0%	0.00	0.00	0.00	-1.00	0%	0.00	0.00	0.00	0.00	0.00	-1.00	0.00	0.00	-0.63	-0.37	
<b>Totals</b>						9.69		0.00	0.00	0.00	9.69		0.00	0.00	0.00	0.00	0.00	9.69	0.00	0.00	1.55	8.14	