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**GTC**

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## **BEC Investments Traffic Impact Analysis**

**Jurisdiction: City of Mukilteo**

**June 2019**



GTC #19-102

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## 1. INTRODUCTION

Gibson Traffic Consultants, Inc. (GTC) has been retained to complete a traffic impact analysis (TIA) for the proposed BEC Investments development which will build 4,200 SF of automobile sales (used) and repair. The development is located at 12900 Beverly Park Road and is currently vacant. Access is proposed on the north side of the site. A site vicinity map is included in Figure 1.

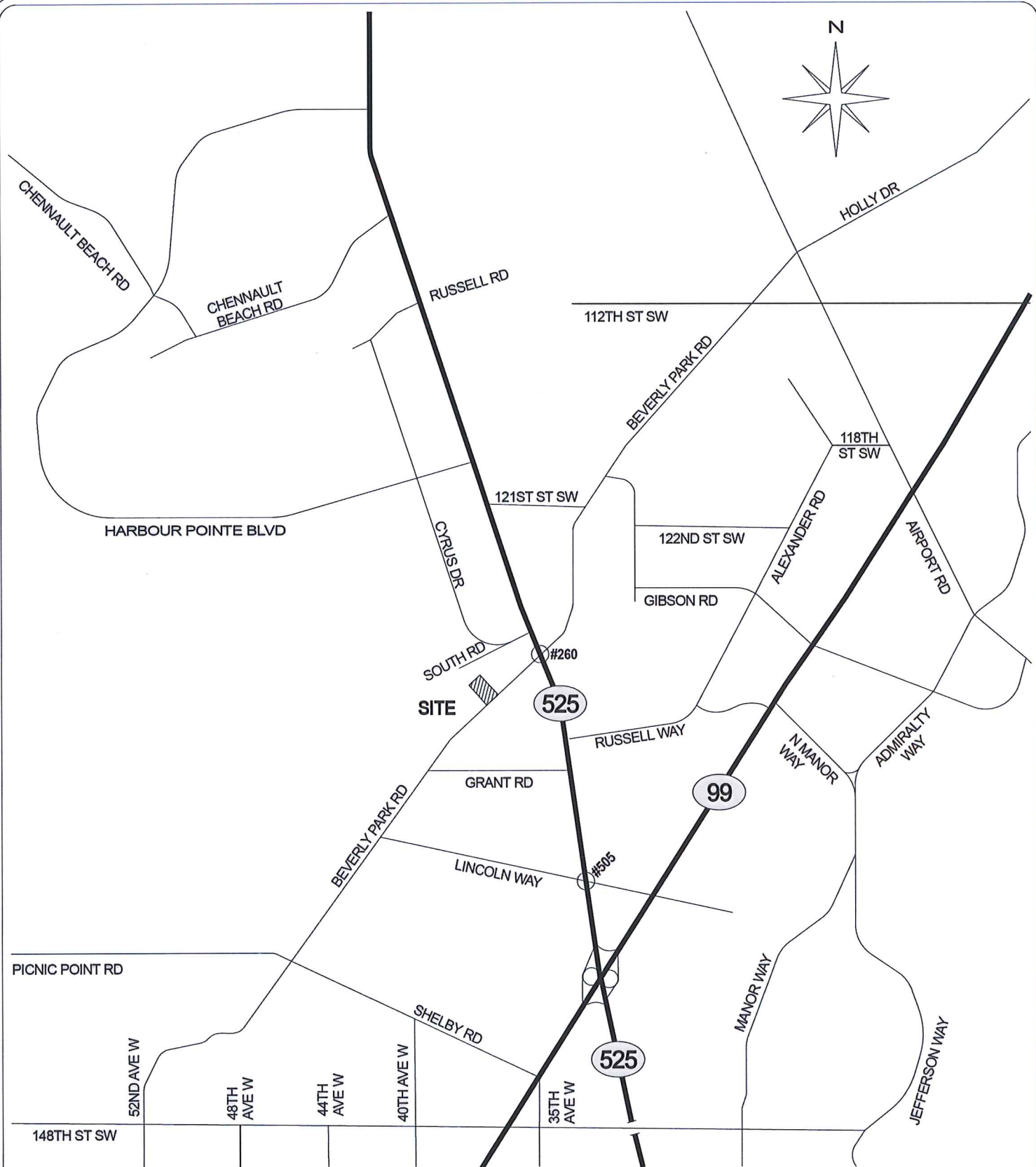
Site traffic generation estimates are based on LUC 841, automobile sales (used), in the Institute of Transportation Engineers (ITE) *Trip Generation, 10<sup>th</sup> Edition* (2017) using average trip generation rates to estimate the weekday daily, AM peak-hour, and PM peak-hour trips. Automobile Sales (used) also includes sale of parts and repair services therefore the entire site square footage was combined.

Matthew Palmer, responsible for the traffic analysis and report, is a licensed professional engineer (Civil) in the State of Washington and a current member of the Washington State section of ITE.

## 2. PROPOSED SITE DEVELOPMENT & ACCESS

The proposed BEC Investments development will consist of 4,200 SF of used automobile sales. Access to the development would be through a full access to Beverly Park Road approximately on the north side of the site. The development is scheduled for occupancy by the end of 2019 or early 2020.

The proposed commercial development is located on the west side of Beverly Park Road. Beverly Park Road is a 3-lane roadway, one lane in each direction and a two-way left-turn lane, with a posted speed limit of 35 mph. There is a bike lane, curb, gutter, and sidewalk along both sides of the roadway. Community Transit provides bus service along Beverly Park Road via route 113 which connects the City of Mukilteo to the Ash Way Park & Ride.



**GIBSON TRAFFIC CONSULTANTS**

**TRAFFIC IMPACT STUDY**  
GTC #19-102

**BEC INVESTMENTS**  
(4,200 SF)

**CITY OF MUKILTEO**

**LEGEND**



DEVELOPMENT SITE



KEY INTERSECTION

**FIGURE 1**

**SITE VICINITY MAP**



### 3. FUTURE CONDITIONS

#### 3.1 Trip Generation

GTC utilized the trip generation rates for Land Use Code 841, Automobile Sales (Used) in the Institute of Transportation Engineers (ITE) *Trip Generation, 10<sup>th</sup> Edition* (2017). A pass-by rate of 25% was utilized consistent with that of other general retail uses when a pass-by rate isn't identified. The trip generation is summarized in Table 1.

**Table 1: New Trip Generation Summary**

Proposed Land Use	Variable	Average Daily Trips	AM Peak-Hour			PM Peak-Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total
Automobile Sales (Used)	4,200 SF	113.65	6.80	2.15	8.95	7.40	8.35	15.75
Pass-By		-28.41	-1.70	-0.54	-2.24	-1.85	-2.09	-3.94
Total		85.24	5.10	1.61	6.71	5.55	6.26	11.81

#### 3.2 Trip Distribution

Trip distribution is based on the existing approved distribution in the site vicinity. It is anticipated that 45% of the site traffic would travel to and from the south on SR-525 and 20% to and from the north. Another 15% would travel to and from the southwest on Beverly Park Road and 20% to and from the northeast. A detailed trip distribution for the AM and PM peak-hour are included in Figure 2 and Figure 3, respectively.

Snohomish County key intersections impacted with 3 or more directional PM peak-hour trips must be identified to satisfy the interlocal agreement between the City of Mukilteo and Snohomish County has been provided. The development will impact two key intersections with three or more development trips in the AM peak hour and zero in the PM peak-hour. The impacts to the key intersection are summarized in Table 2 for the AM peak-hour and Table 3 for the PM peak-hour. The peak-hour key intersection volumes are also shown in graphical form in Figure 4.

**Table 2: AM Peak-Hour Key Intersection Volumes**

<b>Intersection</b>	<b>EBL</b>	<b>EBT</b>	<b>EBR</b>	<b>WBL</b>	<b>WBT</b>	<b>WBR</b>	<b>NBL</b>	<b>NBT</b>	<b>NBR</b>	<b>SBL</b>	<b>SBT</b>	<b>SBR</b>
#260: SR-525 at Beverly Park Rd	1	0	1	0	1	0	2	0	0	0	0	1

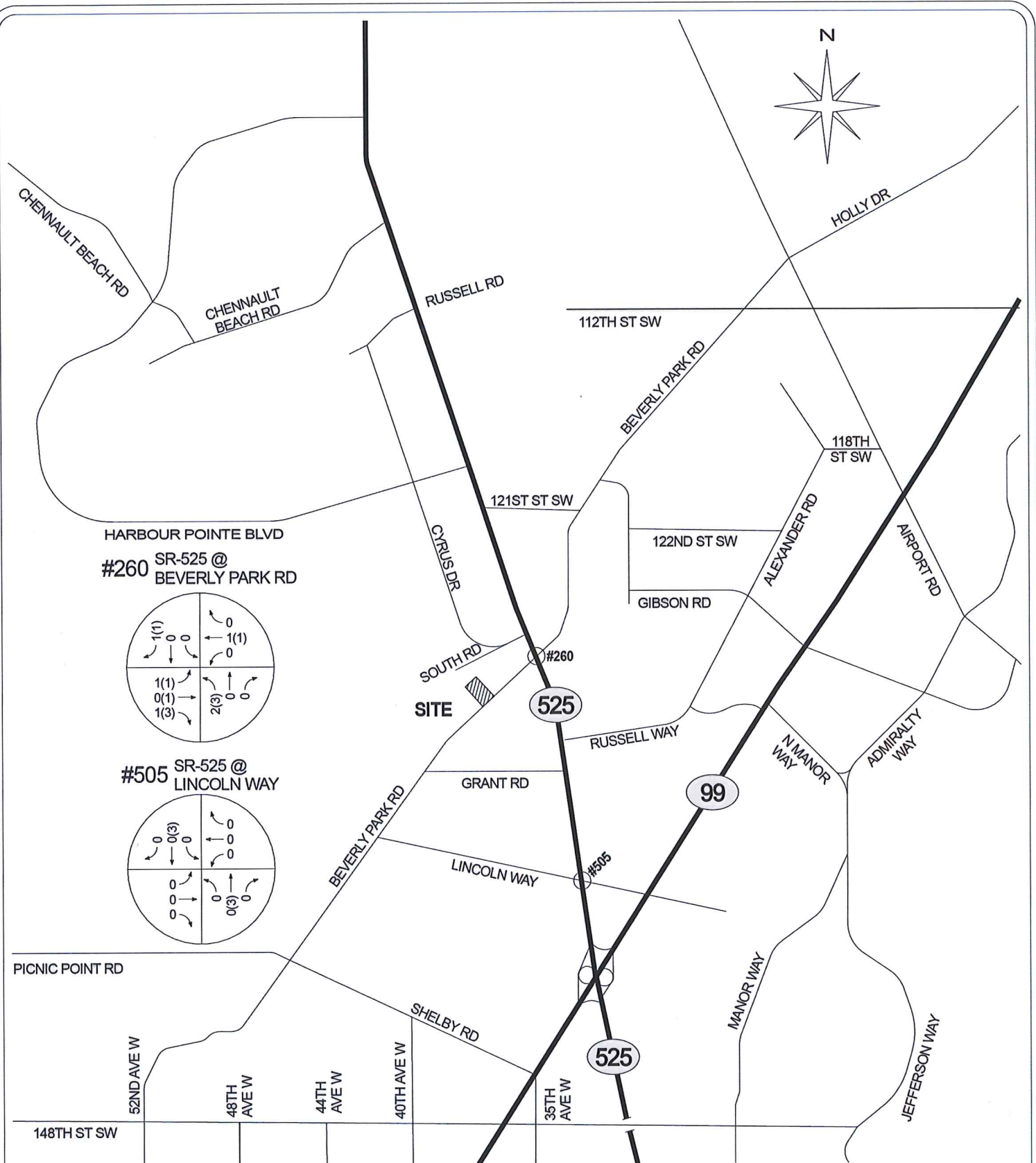
**Table 3: PM Peak-Hour Key Intersection Volumes**

<b>Intersection</b>	<b>EBL</b>	<b>EBT</b>	<b>EBR</b>	<b>WBL</b>	<b>WBT</b>	<b>WBR</b>	<b>NBL</b>	<b>NBT</b>	<b>NBR</b>	<b>SBL</b>	<b>SBT</b>	<b>SBR</b>
#260: SR-525 at Beverly Park Rd	1	1	3	0	1	0	3	0	0	0	0	1
#505: SR-525 at Lincoln Way	0	0	0	0	0	0	0	3	0	0	3	0









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**TRAFFIC IMPACT STUDY**  
GTC #19-102

**BEC INVESTMENTS**  
(4,200 SF)

**CITY OF MUKILTEO**

**LEGEND**

AM (PM) → PEAK HOUR  
TURNING MOVEMENT VOLUMES

**FIGURE 4**  
**KEY INTERSECTION**  
**TURNING MOVEMENTS**  
**AM/PM PEAK-HOUR**

#### **4. TRAFFIC MITIGATION**

The Washington Growth Management Act and Revised Code of Washington 82.02.050(2) authorize local jurisdictions to establish proportionate share traffic mitigation fees in order to fund capital facilities, such as roads and intersections.

##### **4.1 City of Mukilteo**

The City of Mukilteo assesses traffic impact fees based on \$1,875 per new PM peak-hour trip. The tenant improvement will generate 11.81 new PM peak-hour trips and therefore is obligated to pay a traffic mitigation fee of \$22,143.75 to the City of Mukilteo.

##### **4.2 Snohomish County**

The development is required to contribute a proportionate share mitigating payment for its impacts to arterial capacity within Transportation Service Area D (TSA D), as identified in the Snohomish County/City of Mukilteo mitigation agreement. The County has identified the mitigation fee of \$227 per ADT for new daily trips on the County road system for commercial applications within TSA D. The total number of new development generated ADT would be 85.24 trips. The standard default estimated percentage of trips impacting County roads is 70%, equivalent to 59.67 new ADT. Thus, the subject development would have mitigation payments of \$13,545.00.

# **Trip Generation**

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

NET EXTERNAL TRIPS BY TYPE														
IN BOTH DIRECTIONS										DIRECTIONAL ASSIGNMENTS				
LAND USES	VARIABLE	ITE LU code	Gross Trips			Internal Crossover		TOTAL	PASS-BY		DIVERGED LINK		NEW	
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips		% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In	Out
Automobile Sales (Used)	4.200 KSF	841	27.06	50%	50%	113.65	0%	0	25%	28.41	0%	85.24	14	14
TOTAL						113.65		0		28.41	0	85.24	14	14
													42.62	42.62
													42.62	42.62



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

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	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	% of Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out	
Automobile Sales (Used)	4,200 KSF	841	2.13	76%	24%	8.95	0%	0	9	25%	2.24	0%	0	6.71	1.70	0.54	0	0	5.10	1.61	
TOTAL						8.95		0	9		2.24		0	6.71	1.70	0.54	0	0	5.10	1.61	

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

NET EXTERNAL TRIPS BY TYPE																						
IN BOTH DIRECTIONS																						
DIRECTIONAL ASSIGNMENTS																						
LAND USES	VARIABLE	ITE LU code	Gross Trips					Internal Crossover		TOTAL In+Out (Total)	PASS-BY		DIVERTED LINK		NEW In+Out (Total)	PASS-BY		DIVERTED LINK		NEW		
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	% of Trips In+Out (Total)	% of Ext. Trips		In+Out (Total)	% of Ext. Trips	In+Out (Total)	In		Out	In	Out	In	Out	In	Out
Automobile Sales (Used)	4.200 KSF	841	3.75	47%	53%	15.75	0%	0	0	16	25%	3.94	0%	0	11.81	1.85	2.09	0	0	5.55	6.26	
TOTAL						15.75		0	0	16		3.94		0	11.81	1.85	2.09	0	0	5.55	6.26	

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AM Peak-Hour

%	New ADT	New AM Peak Hour Trips		
		In	Out	Total
100%	85.24	5.10	1.61	6.71
1%	0.85	0.05	0.02	0.07
2%	1.70	0.10	0.03	0.13
3%	2.56	0.15	0.05	0.20
4%	3.41	0.20	0.06	0.27
5%	4.26	0.26	0.08	0.34
6%	5.11	0.31	0.10	0.40
7%	5.97	0.36	0.11	0.47
8%	6.82	0.41	0.13	0.54
9%	7.67	0.46	0.14	0.60
10%	8.52	0.51	0.16	0.67
11%	9.38	0.56	0.18	0.74
12%	10.23	0.61	0.19	0.81
13%	11.08	0.66	0.21	0.87
14%	11.93	0.71	0.23	0.94
15%	12.79	0.77	0.24	1.01
16%	13.64	0.82	0.26	1.07
17%	14.49	0.87	0.27	1.14
18%	15.34	0.92	0.29	1.21
19%	16.20	0.97	0.31	1.27
20%	17.05	1.02	0.32	1.34
21%	17.90	1.07	0.34	1.41
22%	18.75	1.12	0.35	1.48
23%	19.61	1.17	0.37	1.54
24%	20.46	1.22	0.39	1.61
25%	21.31	1.28	0.40	1.68
26%	22.16	1.33	0.42	1.74
27%	23.01	1.38	0.43	1.81
28%	23.87	1.43	0.45	1.88
29%	24.72	1.48	0.47	1.95
30%	25.57	1.53	0.48	2.01
31%	26.42	1.58	0.50	2.08
32%	27.28	1.63	0.52	2.15
33%	28.13	1.68	0.53	2.21
34%	28.98	1.73	0.55	2.28
35%	29.83	1.79	0.56	2.35
36%	30.69	1.84	0.58	2.42
37%	31.54	1.89	0.60	2.48
38%	32.39	1.94	0.61	2.55
39%	33.24	1.99	0.63	2.62
40%	34.10	2.04	0.64	2.68
41%	34.95	2.09	0.66	2.75
42%	35.80	2.14	0.68	2.82
43%	36.65	2.19	0.69	2.89
44%	37.51	2.24	0.71	2.95
45%	38.36	2.30	0.72	3.02
46%	39.21	2.35	0.74	3.09
47%	40.06	2.40	0.76	3.15
48%	40.92	2.45	0.77	3.22
49%	41.77	2.50	0.79	3.29
50%	42.62	2.55	0.81	3.36
51%	43.47	2.60	0.82	3.42
52%	44.32	2.65	0.84	3.49
53%	45.18	2.70	0.85	3.56
54%	46.03	2.75	0.87	3.62
55%	46.88	2.81	0.89	3.69
56%	47.73	2.86	0.90	3.76
57%	48.59	2.91	0.92	3.82
58%	49.44	2.96	0.93	3.89
59%	50.29	3.01	0.95	3.96
60%	51.14	3.06	0.97	4.03
61%	52.00	3.11	0.98	4.09
62%	52.85	3.16	1.00	4.16
63%	53.70	3.21	1.01	4.23
64%	54.55	3.26	1.03	4.29
65%	55.41	3.32	1.05	4.36
66%	56.26	3.37	1.06	4.43
67%	57.11	3.42	1.08	4.50
68%	57.96	3.47	1.09	4.56
69%	58.82	3.52	1.11	4.63
70%	59.67	3.57	1.13	4.70
71%	60.52	3.62	1.14	4.76
72%	61.37	3.67	1.16	4.83
73%	62.23	3.72	1.18	4.90
74%	63.08	3.77	1.19	4.97
75%	63.93	3.83	1.21	5.03
76%	64.78	3.88	1.22	5.10
77%	65.63	3.93	1.24	5.17
78%	66.49	3.98	1.26	5.23
79%	67.34	4.03	1.27	5.30
80%	68.19	4.08	1.29	5.37
81%	69.04	4.13	1.30	5.44
82%	69.90	4.18	1.32	5.50
83%	70.75	4.23	1.34	5.57
84%	71.60	4.28	1.35	5.64
85%	72.45	4.34	1.37	5.70
86%	73.31	4.39	1.38	5.77
87%	74.16	4.44	1.40	5.84
88%	75.01	4.49	1.42	5.90
89%	75.86	4.54	1.43	5.97
90%	76.72	4.59	1.45	6.04
91%	77.57	4.64	1.47	6.11
92%	78.42	4.69	1.48	6.17
93%	79.27	4.74	1.50	6.24
94%	80.13	4.79	1.51	6.31
95%	80.98	4.85	1.53	6.37
96%	81.83	4.90	1.55	6.44
97%	82.68	4.95	1.56	6.51
98%	83.54	5.00	1.58	6.58
99%	84.39	5.05	1.59	6.64
100%	85.24	5.10	1.61	6.71



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PM Peak-Hour

%	New ADT	New PM Peak Hour Trips		
		In	Out	Total
100%	85.24	5.55	6.26	11.81
1%	0.85	0.06	0.06	0.12
2%	1.70	0.11	0.13	0.24
3%	2.56	0.17	0.19	0.35
4%	3.41	0.22	0.25	0.47
5%	4.26	0.28	0.31	0.59
6%	5.11	0.33	0.38	0.71
7%	5.97	0.39	0.44	0.83
8%	6.82	0.44	0.50	0.94
9%	7.67	0.50	0.56	1.06
10%	8.52	0.56	0.63	1.18
11%	9.38	0.61	0.69	1.30
12%	10.23	0.67	0.75	1.42
13%	11.08	0.72	0.81	1.54
14%	11.93	0.78	0.88	1.65
15%	12.79	0.83	0.94	1.77
16%	13.64	0.89	1.00	1.89
17%	14.49	0.94	1.06	2.01
18%	15.34	1.00	1.13	2.13
19%	16.20	1.05	1.19	2.24
20%	17.05	1.11	1.25	2.36
21%	17.90	1.17	1.31	2.48
22%	18.75	1.22	1.38	2.60
23%	19.61	1.28	1.44	2.72
24%	20.46	1.33	1.50	2.83
25%	21.31	1.39	1.57	2.95
26%	22.16	1.44	1.63	3.07
27%	23.01	1.50	1.69	3.19
28%	23.87	1.55	1.75	3.31
29%	24.72	1.61	1.82	3.42
30%	25.57	1.67	1.88	3.54
31%	26.42	1.72	1.94	3.66
32%	27.28	1.78	2.00	3.78
33%	28.13	1.83	2.07	3.90
34%	28.98	1.89	2.13	4.02
35%	29.83	1.94	2.19	4.13
36%	30.69	2.00	2.25	4.25
37%	31.54	2.05	2.32	4.37
38%	32.39	2.11	2.38	4.49
39%	33.24	2.16	2.44	4.61
40%	34.10	2.22	2.50	4.72
41%	34.95	2.28	2.57	4.84
42%	35.80	2.33	2.63	4.96
43%	36.65	2.39	2.69	5.08
44%	37.51	2.44	2.75	5.20
45%	38.36	2.50	2.82	5.31
46%	39.21	2.55	2.88	5.43
47%	40.06	2.61	2.94	5.55
48%	40.92	2.66	3.00	5.67
49%	41.77	2.72	3.07	5.79
50%	42.62	2.78	3.13	5.91
51%	43.47	2.83	3.19	6.02
52%	44.32	2.89	3.26	6.14
53%	45.18	2.94	3.32	6.26
54%	46.03	3.00	3.38	6.38
55%	46.88	3.05	3.44	6.50
56%	47.73	3.11	3.51	6.61
57%	48.59	3.16	3.57	6.73
58%	49.44	3.22	3.63	6.85
59%	50.29	3.27	3.69	6.97
60%	51.14	3.33	3.76	7.09
61%	52.00	3.39	3.82	7.20
62%	52.85	3.44	3.88	7.32
63%	53.70	3.50	3.94	7.44
64%	54.55	3.55	4.01	7.56
65%	55.41	3.61	4.07	7.68
66%	56.26	3.66	4.13	7.79
67%	57.11	3.72	4.19	7.91
68%	57.96	3.77	4.26	8.03
69%	58.82	3.83	4.32	8.15
70%	59.67	3.89	4.38	8.27
71%	60.52	3.94	4.44	8.39
72%	61.37	4.00	4.51	8.50
73%	62.23	4.05	4.57	8.62
74%	63.08	4.11	4.63	8.74
75%	63.93	4.16	4.70	8.86
76%	64.78	4.22	4.76	8.98
77%	65.63	4.27	4.82	9.09
78%	66.49	4.33	4.88	9.21
79%	67.34	4.38	4.95	9.33
80%	68.19	4.44	5.01	9.45
81%	69.04	4.50	5.07	9.57
82%	69.90	4.55	5.13	9.68
83%	70.75	4.61	5.20	9.80
84%	71.60	4.66	5.26	9.92
85%	72.45	4.72	5.32	10.04
86%	73.31	4.77	5.38	10.16
87%	74.16	4.83	5.45	10.27
88%	75.01	4.88	5.51	10.39
89%	75.86	4.94	5.57	10.51
90%	76.72	5.00	5.63	10.63
91%	77.57	5.05	5.70	10.75
92%	78.42	5.11	5.76	10.87
93%	79.27	5.16	5.82	10.98
94%	80.13	5.22	5.88	11.10
95%	80.98	5.27	5.95	11.22
96%	81.83	5.33	6.01	11.34
97%	82.68	5.38	6.07	11.46
98%	83.54	5.44	6.13	11.57
99%	84.39	5.49	6.20	11.69
100%	85.24	5.55	6.26	11.81



# Site Plan

