



ACCESS MEMORANDUM

To: Roland Storme, Local Agency and Development Services Manager
From: Matthew Palmer, PE *MJP*
Subject: SR-20 Access Analysis at MP 95.10
Date: September 19, 2019
Project: Skagit Aggregates, GTC #19-155

Gibson Traffic Consultants, Inc. (GTC) has been retained to provide trip generation and access analysis for a WSDOT Application for Access Connection.

The expansion site is located on the south side of SR-20 at MP 95.13. The site is east of the town of Concrete and west of the town of Rockport (SR-530). The access is existing today, and it serves the existing gravel mine and the existing Skagit County Public Works transfer station.

1. EXISTING CONDITIONS

SR-20 is a 2-lane roadway that is generally aligned east-west in the site vicinity. The roadway has 11-foot travel lanes with varying widths of paved shoulder (primarily 8 feet) and a ditch along the south side of the roadway. The posted speed limit in the site vicinity is 55 mph.

PM peak-hour count data was collected along SR-20 at the site existing site access, by Traffic Data Gathering (TDG) on August 7, 2019. The data shows that there are 258 total intersection trips occurring during the PM peak-hour¹. The TDG data was compared to data from the WSDOT *2016 Annual Traffic Report* (2016 ATR). The 2016 ATR volumes at MP 94.37 is 2,700 daily trips; the PM peak-hour typically represents 8-10% of the daily trips; therefore, the counts are consistent with the daily trip generation in the area. The 2016 ATR includes data from 2013 which shows there to be 2,500 ADT on SR-20 in the site vicinity. This equates to a 2.6% annual compounding growth rate over the 3 years.

2. SITE DEVELOPMENT

The subject site is currently approximately 10 acres and the expansion of the site would add an additional 30 acres. With the expansion the site is not anticipated to exceed its current material maximum output of 50,000 tons per year. The expansion will simply extend the life of the mine out at least an additional 20 years.

¹ Based on highest peak-hour of the data between 3:30 and 6:00 PM.

2.1. Trip Generation

Trip generation calculations for the Skagit Aggregates gravel mine is based on the information provided by the client and prior GTC experience pertaining to similar earthmoving activities. As stated by the client, the amount of material extracted will be 50,000 tons/year, which is consistent with amount of material extracted in 2018. Each truck and trailer combination can carry approximately 30 tons of material and single truck can carry approximately 15 tons.

Based on the estimates from other trucking operations it is anticipated that 70% of the trips will be truck and trailer and 30% single trucks. It is also anticipated that the operation would have up to 312 workdays a year; therefore, to move 50,000 tons would require an estimated 14 truck trips in & out per day (7 loads per day). It is anticipated that the in/out percentages will reflect that of gravel mines and other heavy truck operations with 15% of the ADT occurring during the AM peak-hour and as a “worst case” 15% during the PM peak-hour.

The Skagit Aggregates gravel mine site is anticipated to generate **14 average daily trips (ADT)** with **2 AM peak-hour truck trips (1 inbound/1 outbound)** and **2 PM peak-hour truck trips (1 inbound/1 outbound)**. A trip generation summary has been included in Table 1. The trip generation calculations have been included in the attachments.

The trip generation of the site is summarized in Table 1.

Table 1: Trip Generation Summary

Land Use	Units	Average Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
Gravel Mine	7 Trucks	14	1	1	2	1	1	2

It is important to note that the trip generation for the site is currently occurring and that there will likely be no additional trips with the expansion as the output of the gravel mine isn't increasing. The trips calculated being added to the existing count should therefore be considered conservative.

The trip generation calculations are included in the attachments.

3. ACCESS ANALYSIS

The gravel mine expansion is proposed to utilize the existing full access to SR-20 at MP 95.13.

3.1. Access Classification

This section of SR-20 is identified as a managed access Class 2 facility. Per *Exhibit 540-1* of the WSDOT *Design Manual*, a Class 2 facility has the limitation of not allowing a private access connection unless no other reasonable access exists. The property is land locked with an access easement through the adjacent parcel, parcel ID P44866 located at 50796 State Route 20; therefore, the continued use of the existing access should be allowed. In addition, *Exhibit 540-1* identifies the required access spacing of 660 feet for connections located on the same side of the highway. To the west of the access there is approximately 1,480 feet of separation from the adjacent access; however, to the east there is 390 feet of separation to an existing access serving a house and a couple of sheds. With the low volumes of these two driveways it is anticipated that there will not be any negative interaction that would preclude the use of the existing access to continue with the gravel mine expansion.

3.2. Collision History

Collision data was requested from WSDOT from January 2014 through December 2018 for the section of SR-20 from MP 95.03 to 95.23 (access is located at approximately MP 95.13). There was one rear end collision in this section of SR-20 for the last 5 years.

3.3. Channelization Warrant Analysis

The access has been analyzed using WSDOT channelization warrants to determine if right-turn and left-turn channelization are warranted. The right-turn warrants are based on WSDOT *Design Manual, Right-Turn Lane Guidelines (Exhibit 1310-11, November 2015)* and the left-turn warrants are based on WSDOT *Design Manual, Left-Turn Storage Guidelines: Two-Lane, Unsignalized (Exhibit 1310-7a, November 2015)*. The PM peak-hour turning movement volumes at the access are based on applying a 2.6% annually compounding growth rate to the PM peak-hour volumes and adding the site's PM peak-hour trips to the existing PM peak-hour volumes on SR-20. The turning movement calculations are included in the attachments. Based on the low turning volumes and the low amount of through traffic a right-turn and left-turn is not warranted.

3.4. Intersection Operation

The intersection has been analyzed to determine the level of service (LOS) for the intersection. The intersection level of service analysis has been performed using the same turning movement volumes used for the channelization warrant analysis and the existing channelization. The intersection is anticipated to operate at LOS B with a single outbound lane. This is better than WSDOT's most stringent standard of LOS C and should therefore be considered acceptable.

3.5. Sight Distance

SR-20 has a 55-mph speed limit in the site vicinity. A 55-mph design speed per *Exhibit 1340-3* of the WSDOT *Design Manual* requires intersection sight distances of 495 feet to both the east and west of the access. Based on preliminary field work GTC staff anticipates that there is over 600 feet of intersection sight distances in both directions at the existing/proposed site access location.

4. CONCLUSIONS

The subject site is anticipated to expand by approximately 30 acres; however, the anticipated extraction of material from the site is to remain at a maximum of 50,000 tons/year. The 30 acres will allow the life of the gravel mine to extend out at least an additional 20 years. The site is likely not to generate many new trips due to the existing operation continuing. Based on the proposed future trips along SR-20 and the access, the volumes will not warrant a left or right-turn pocket on SR-20. The site access is anticipated to operate at LOS B or better. There was no collision history to indicate that the existing access would have an operational deficiency and need to be altered in any way. There is also more than sufficient sight distance for a vehicle to stop on SR-20 if something is in the roadway at the access point. For these reasons the access permit should be granted under the existing configuration of the access.

Trip Generation Calculations

1-YEAR TRIP GENERATION

50,000 tons total in 1 year 50,000 tons/year

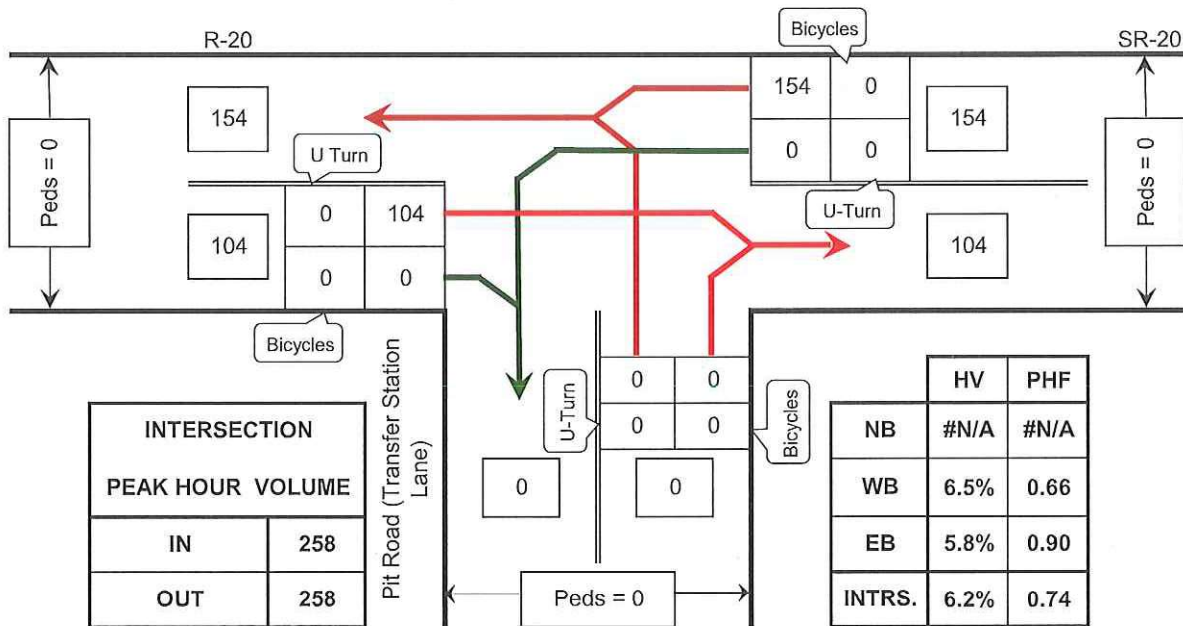
tons/truck	30 T & T	70%	In a Year	In + Out
tons/truck	15 Single	30%	50,000 tons	per day
tons/truck	0 SU	0%	1,961 truck trips	14
Hours per Day	10			
Days/Week	6			
Weeks/Year	52			
Days/Year	312			
			Total	14

	Total	In	Out
Daily	14	7	7
15% of Daily is AM peak-hour	2	1	1
15% of Daily is PM peak-hour	2	1	1

Volume Data and Calculations

TURNING MOVEMENTS DIAGRAM

3:37 - 6:00 PM PEAK HOUR: 4:45 PM TO 5:45 PM



HV = Heavy Vehicles
PHF = Peak Hour Factor

50796 SR-20

Concrete, WA

COUNTED BY: TDG

DATE OF COUNT: Wed. 8/7/19

REDUCTION DATE: Thu. 8/8/19

TIME OF COUNT: 3:37 - 6:00 PM



TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: 50796 SR-20 Concrete, WA DATE OF COUNT: Wed. 8/7/19 TIME OF COUNT: 3:37 - 6:00 PM COUNTED BY: TDS DATE OF REDUCTION: 8/8/2019

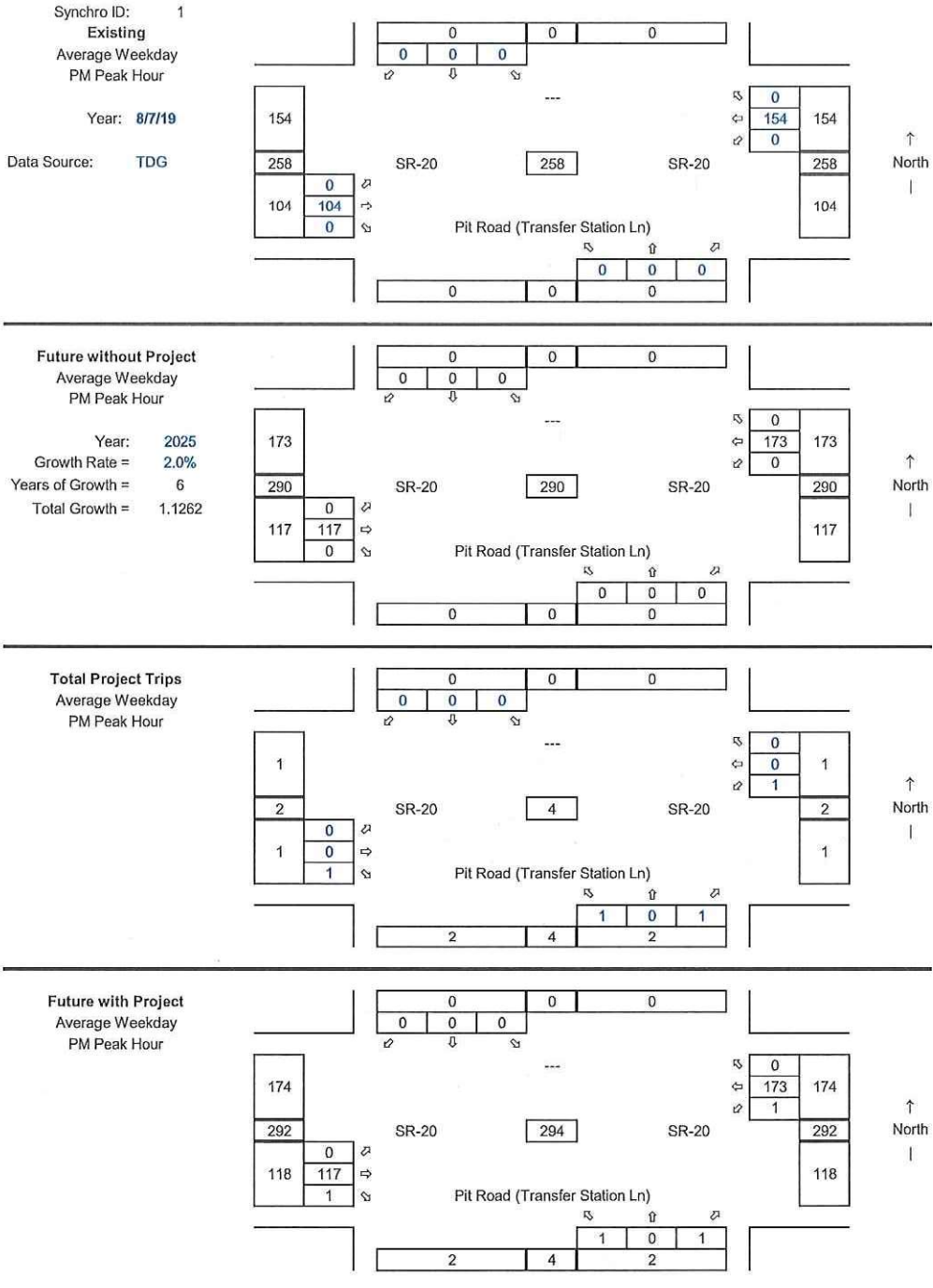
TIME INTERVAL ENDING AT	FROM NORTH ON						FROM SOUTH ON Pit Road (Transfer Station Lane)						FROM EAST ON SR-20						FROM WEST ON R-20						INTERVAL TOTALS						
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV		U-Turn	Left	Thru	Right		
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PEAK HOUR TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
ALL MOVEMENTS	#N/A						#N/A						6.5%						154						104						258
% HV	#N/A						#N/A						6.5%						5.8%						0.50						6.2%
PEAK HOUR FACTOR	#N/A						#N/A						0.66						0.66						0.50						0.74

HV = Heavy Vehicle
PHF = Peak Hour Factor

3:37 - 6:00 PM PEAK HOUR: 4:45 PM TO 5:45 PM

ROLLING HOUR COUNT

TIME INTERVAL	FROM NORTH ON						FROM SOUTH ON Pit Road (Transfer Station Lane)						FROM EAST ON SR-20						FROM WEST ON R-20						INTERVAL TOTALS			
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV		U-Turn	Left	Thru
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:37 - 6:00 PM 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



2016 Annual Traffic Report



Washington State
Department of Transportation

In cooperation with the
United States Department of Transportation
Federal Highway Administration

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
 T R I P S Y S T E M
 ANNUAL TRAFFIC REPORT

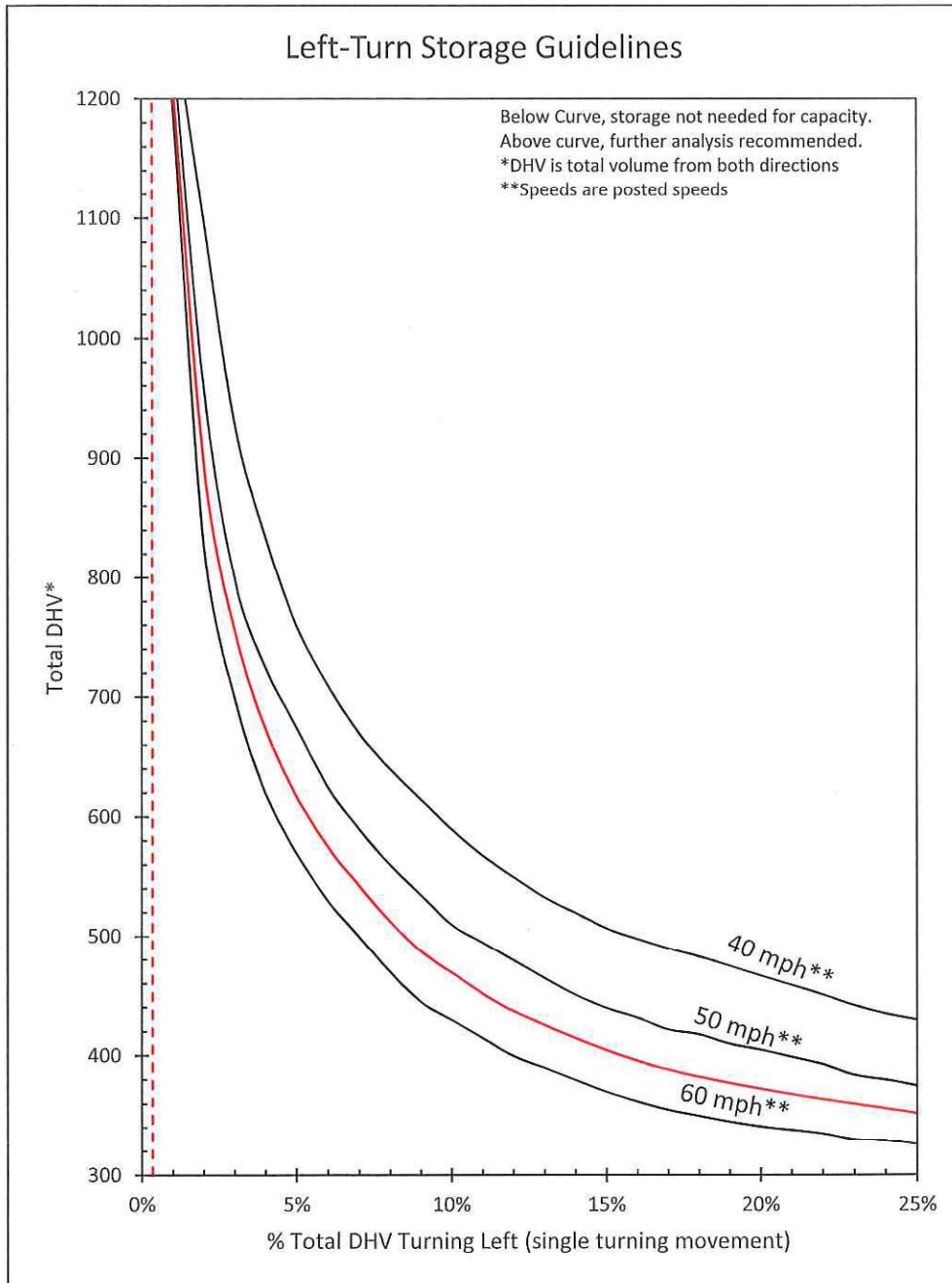
STATE ROUTE	STATE ROUTE MILEPOST	LOCATION	COUPLER CLASS	FUNCT CLASS	TRUCK PERCENTAGES		AVERAGE DAILY TRAFFIC VOLUME			
					SINGL	DBL	2013 UNITS	2014 UNITS	2015 UNITS	2016 UNITS
020	094.37	AFTER JCT SAUK CONNECTION RD	2	2			2500	2500*	2600	2700
020	097.65	BEFORE JCT SR 530 WYE CONN	2	2			2300	2100*	2200	2300
020	097.69	AFTER JCT SR 530-E SAUK RD	2	2			2100	2000*	2100	2200
020	106.11	BEFORE JCT CASCADE RD	2	2			2300	1900*	2000	2100
020	106.12	AFTER JCT CASCADE RD WYE CONN	2	2			1600	1600*	1800	1900
020	117.29	AFTER JCT THORNTON CREEK RD	2	2			1500	1500*	1600	1700
020	125.96	AFTER JCT DIABLO RD WYE CONN	2	2				1200*	1300	1400
020	136.24	AT LILLIAN CREEK BRIDGE	2	2			940	910*	990	1100
020	166.99	BEFORE JCT CUTTHROAT CR RD	2	2			950	880*	950	1000
020	166.99	AFTER JCT CUTTHROAT CR RD	2	2			960	890*	970	1100
020	184.17	BEFORE JCT WOLF CREEK RD	2	2			1200	1200	1400*	1600
020	191.90	AT PTR LOCATION R037	2	05 02 07			1600*	1700*	1800*	2000+
020	192.84	AT CHEWUCH CREEK BRIDGE	2	2			2900	2900	3300*	3500
020	193.35	BEFORE JCT MAIN ST	2	2			3900	4000	4400*	4600
020	193.47	AFTER JCT TWIN LAKES RD WYE CONN	2	2			4300	4400	4700*	5000
020	201.41	AT TWISP RIVER BRIDGE	2	2			4100	4100	3800*	4000
020	201.83	AFTER JCT TWISP CARLTON RD WYE CONN	2	2			5500	5500	5100*	5400
020	204.09	BEFORE JCT SR 153	2	2			3000*	3100	3000*	3200
020	204.09	AFTER JCT SR 153	2	2			1400*	1400	1300*	1400
020	230.60	BEFORE JCT OLD 97	2	2			1600*	1700	1700	1800*
020	230.60	AFTER JCT OLD 97	2	2			3800*	3800	4000	3800*
020	232.76	BEFORE JCT IONE ST	2	2			5000*	5100	5300	5000*
020	232.81	AFTER JCT SR 215	2	2			2600*	2600	2800	2500*
020	233.31	BEFORE JCT SR 97	2	2			2300*	2300	2300	2200*
020	261.97	AFTER JCT SR 97 WYE CONN	2	2			3000*	3000	3000	2600*
020	262.83	AT BONAPARTE CREEK BRIDGE	2	2			1700*	1700	1700	1600*
020	274.72	BEFORE JCT AENEAS VALLEY RD	2	2			1300*	1300	1300	1400*
020	274.72	AFTER JCT AENEAS VALLEY RD	2	2			800*	810	800	910*

* BASED ON ACTUAL COUNT
 + SOURCE OF TRUCK PERCENTAGES

Warrants and Level of Service

GIBSON TRAFFIC CONSULTANTS

Pit Road (Transfer Station Lane) at SR-20



Total DHV: 290
Left Turns: 1
% Left: 0.3%

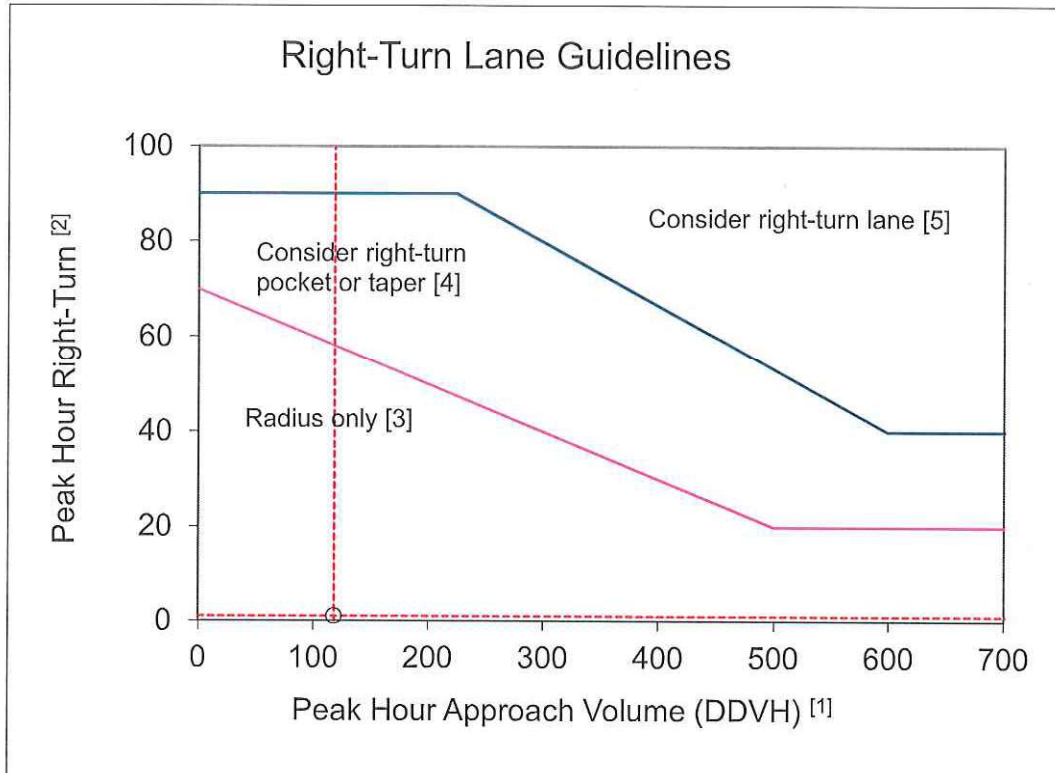
Posted Speed: 55 mph

-Note the 290 trips does not make it on to the graph.

Based on WSDOT November 2015 Design Manual: Exhibit 1310-7a, Page 1310-14.

GIBSON TRAFFIC CONSULTANTS

Pit Road (Transfer Station Lane) at SR-20



Right Turn Volume: 1 [DDHV] Posted Speed: 55 mph
 Adjusted Right Turn Volume: 1 [DDHV]
 Pk Hr Curb Ln Approach Vol: 118 [DDHV]

[1] For two-lane highways, use the peak hour DDHV (through + right turn).
 For multilane, high speed highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right turn).

[2] When all three of the following conditions are met, reduce the right-turn DDHV by 20:
 - The posted speed is 45 mph or less
 - The right-turn volume is greater than 40 VPH
 - The peak hour approach volume (DDHV) is less than 300 VPH.

[3] For right-turn corner design, see Exhibit 1310-6.

[4] For right-turn pocket or taper design, see Exhibit 1310-12.

[5] For right-turn lane design, see Exhibit 1310-13.

Based on WSDOT November 2015 Design Manual: Exhibit 1310-11, Page 1310-27.

Intersection

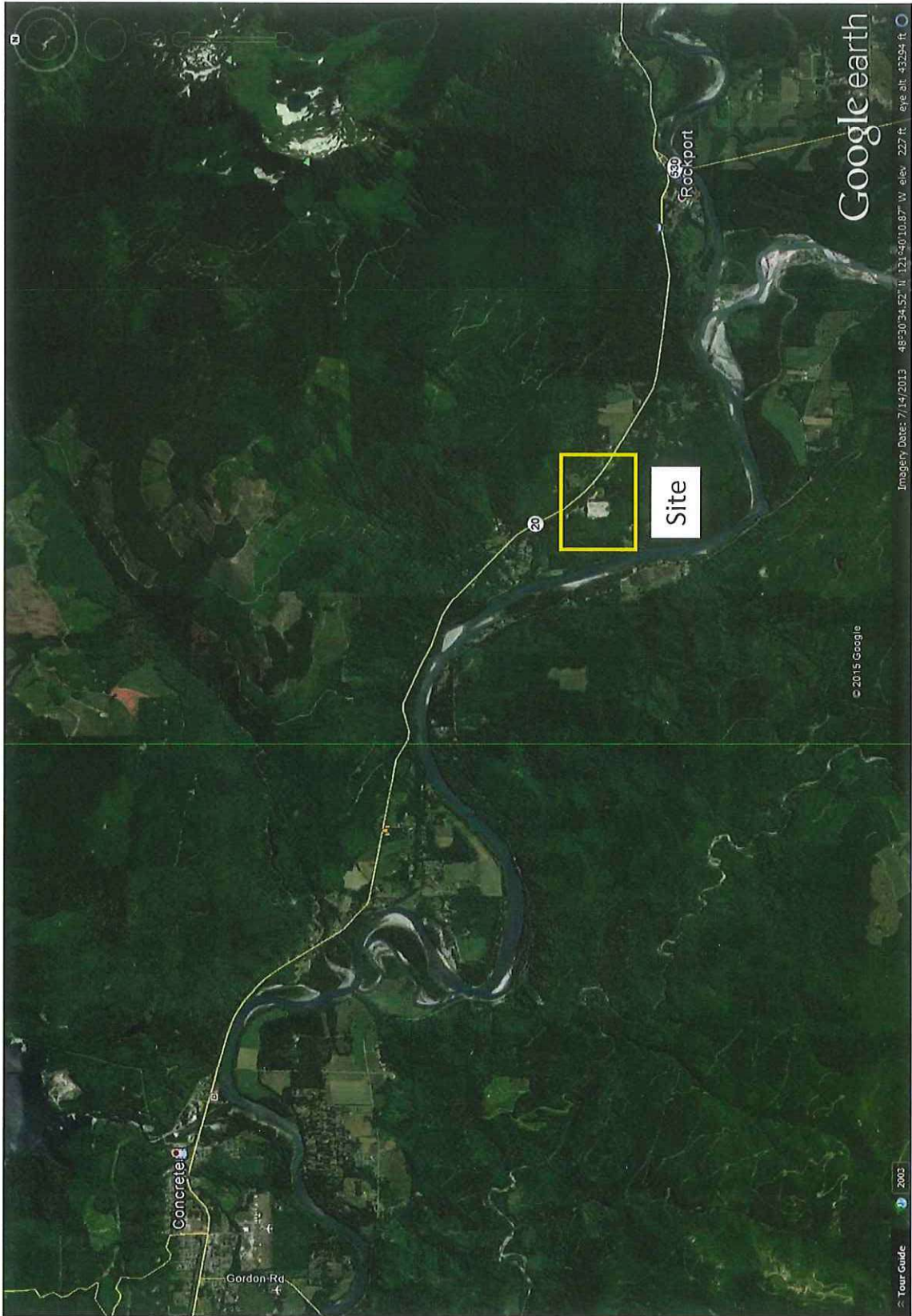
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	117	1	1	173	1	1
Future Vol, veh/h	117	1	1	173	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	158	1	1	234	1	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	159	0	395 159
Stage 1	-	-	-	-	159 -
Stage 2	-	-	-	-	236 -
Critical Hdwy	-	-	4.16	-	6.46 6.26
Critical Hdwy Stg 1	-	-	-	-	5.46 -
Critical Hdwy Stg 2	-	-	-	-	5.46 -
Follow-up Hdwy	-	-	2.254	-	3.554 3.354
Pot Cap-1 Maneuver	-	-	1396	-	602 876
Stage 1	-	-	-	-	860 -
Stage 2	-	-	-	-	794 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1396	-	601 876
Mov Cap-2 Maneuver	-	-	-	-	601 -
Stage 1	-	-	-	-	859 -
Stage 2	-	-	-	-	794 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	713	-	-	1396	-
HCM Lane V/C Ratio	0.004	-	-	0.001	-
HCM Control Delay (s)	10.1	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access and Collision Information



LIMITED ACCESS AND MANAGED ACCESS MASTER PLAN FOR NORTHWEST REGION

SR	Spur or Couplet	Begin MP	Begin Eq	End MP	End Eq	Plan Title	Speed Limit	Current Access	M/A Class	Established L/A	Planned L/A	L/A Acquired	Modification Date
20		48.01		50.3		Jct S.S.H. No. 1-D to Swinomish Slough	55	L/A		Partial L/A		Yes - All	12/31/2003
20		50.3		54.95		March Point Rd to Fredonia	55	L/A		Partial L/A		Yes - All	12/31/2003
20		54.95		57.7		Fredonia - Avon Road	55	M/A	???		Partial L/A		12/31/2003
20		57.7		59.37		Bayview - Burlington Naval Access Road	35-55	M/A	Class 3 M/A		Partial L/A		12/31/2003
20		59.37		59.5		SR 5: Skagit River to Jct SR 20	35	M/A	Class 3 M/A				6/9/2003
20		59.5		59.63		SR 5: Skagit River to Jct Sr 20	35	L/A		Full L/A		Yes - All	9/19/2003
20		59.63		59.7		SR 5: Skagit River to Jct SR 20	35	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		59.7		60.19		NO PLAN	30-35	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		60.19		60.55		Avon Avenue Route in Burlington	30	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		60.55		60.88		Cascade Highway Butler - Burlington Section	30	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		60.88		63.18		N. Regent Street Vic. to Sterling Road Vic	30-50	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		63.18		63.5		Sterling Road Intersection	50	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		63.5		64.76		Lateral Highway NO. 19	35-50	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		64.76		65.19		SR 9: Howey Road to Sedro Woolley	35	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		65.19		66.08		SR 9: Sedro Woolley Vicinity	35	M/A	Class 4 M/A		Modified L/A		12/31/2003
20		66.08		66.29		SR 9 (North Leg) to Sedro Woolley E.C.L.	35	M/A	Class 3 M/A		Modified L/A		12/31/2003
20		66.29		71.36		Sedro Woolley E.C.L. to Concrete W.C.L.	35/55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		71.36		76.64		Minkler Lake to Alder Creek	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		76.64		77.97		Hamilton Vicinity	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		77.97		79.58		Minkler Lake to Alder Creek	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		79.58		81.81		G.H. Clark Road No. 311	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		81.81		87.65		Birdsview to Concrete	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		87.65		88.21		Concrete Vicinity	55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		88.21		88.93		Concrete Vicinity	55-35	M/A	Class 3 M/A		Modified L/A		12/31/2003
20		88.93		89.82		Concrete Vicinity	35-50	M/A	Class 3 M/A		Modified L/A		12/31/2003
20		89.82		90.04		Concrete: D St. to East Corporate Limits	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		90.04		90.38		Concrete: East Corporate Limits to MP 35.70	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		90.38		91.14		Permanent Highway NO. 16	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		91.14		92.79		Lateral Highway NO. 16	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		92.79		93.06		Van Horn Vicinity	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		93.06		95.42		Faber Hill Vicinity	50-55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		95.42		97.9		Rockport West	50-55	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		97.9		103		Shular Rd to Corkindale Creek	50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		103		105.56		Rocky Creek to Marblemount vic	35-50	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		105.56		106.51		Marblemount Vic: MP105.58 to MP106.53	35	M/A	Class 2 M/A		Modified L/A		12/31/2003
20		106.51		110.53		MP 106.53 to Bacon Creek Bridge	35-50	M/A	Class 2 M/A		Partial L/A		12/31/2003
20		110.53		110.7		Bacon Creek Bridge to New Halem Vicinity	30-50	M/A	Class 2 M/A		Partial L/A		12/31/2003
20		110.7		110.7		Bacon Creek Bridge to New Halem Vicinity	50	L/A&M/A		Partial L/A		Yes-Left	12/31/2003
20		110.7		116.94		Bacon Creek Bridge to New Halem Vicinity	50	L/A&M/A		Partial L/A		Yes-Right	12/31/2003
20		116.94		119.65		Bacon Creek Bridge to New Halem Vicinity	50	L/A		Partial L/A		Yes - All	12/31/2003
20		119.65		119.78		Bacon Creek Bridge to New Halem Vicinity	30	L/A		Partial L/A		Yes - All	12/31/2003
20		119.78		120.94		New Halem Vicinity	30	M/A	Class 2 M/A		Partial L/A		12/31/2003
20		119.78	LT	119.89	LT	New Halem Vicinity	30	L/A LT		Partial L/A		Yes - All	12/31/2003
20		120.94		125.83		New Halem To Diablo Dam	30-50	M/A	Class 2 M/A		Partial L/A		12/31/2003
20		125.83		127.54		Diablo Dam to Thunder Arm (59)	50	M/A	Class 2 M/A		Partial L/A		12/31/2003
20		127.54		130.29		Diablo Dam to Thunder Arm (76)	50	L/A		Partial L/A		Yes - All	12/31/2003
20		130.29		148.09		Thunder Arm to Granite Cr. Crossing	50-60	L/A		Partial L/A		Yes - All	12/31/2003
90		0		.42		Connecticut St. I/C: 4th Ave. S. and Transit Ramps		L/A		Full L/A		???	9/25/2002
90		.11		.18		SR 5, Seattle Freeway/Plum St. to Jackson St.		L/A		Full L/A		???	9/25/2002
90		.18		1.33		Jct. SR 5 to W. Shore Mercer Island, Sec. 1, Jct. SR 5 to Brandner Place S.		L/A		Full L/A		???	9/25/2002
90		1.33		3.25		Jct. SR 5 to W. Shore Mercer Island, Sec. 2, Brandner Place S. to W. Shore Mercer Island (Begin Route MP 1.94)	30-60	L/A		Full L/A		Yes - All	12/31/2003
90		3.25		4.27		Mercer Island: W. Shore to E. Channel Br. Sec. 1, W. Shore to 76th Ave. Vic.	60	L/A		Full L/A		Yes - All	12/31/2003
90		4.27		4.94		Mercer Island: W. Shore to E. Channel Br. Sec. 2, 76th Ave. Vic. to Shorewood Dr. Vic.	60	L/A		Full L/A		Yes - All	12/31/2003
90		4.94		6.21		Mercer Island: W. Shore to E. Channel Br. Sec. 3, Shorewood Dr. Vic. to E. Channel Br.	60	L/A		Full L/A		Yes - All	12/31/2003
90		6.21		7.71		E. Channel Br. to Richards Rd.	60	L/A		Full L/A		Yes - All	12/31/2003
90		7.71		11.73		Richards Rd. to Lk. Sammamish	60	L/A		Full L/A		Yes - All	12/31/2003
90		11.73		15.87		Lk. Sammamish to E. Issaquah I/C	60	L/A		Full L/A		Yes - All	12/31/2003
90		15.87		23.73		E. Issaquah I/C to Echo Lk. I/C	60/70	L/A		Full L/A		Yes - All	12/31/2003
90		23.73		30.99		Echo Lk. I/C to Tanner	70	L/A		Full L/A		Yes - All	12/31/2003
90		30.84		34.49		Tanner to Lower Crossing Snoqualmie R.	70	L/A		Full L/A		Yes - All	12/31/2003
92		0		8.26		???	???	M/A???	???	???	???	???	12/31/2003
96		0		6.75		???	???	M/A???	???	???	???	???	12/31/2003
99		5.7		6.15		Milton NCL to King Co. Line	50	M/A	Class 3 M/A			???	9/25/2002
99		6.15		20.26		???	???	???	???	???	???	???	9/25/2002
99		20.26		20.52		SR 518, Riverton Heights: SR 509 to SR 5	45	L/A	???	Full L/A		Yes - All	12/30/2003
99		20.52		22.53		???	???	???	???	???	???	???	9/25/2002
99		22.53		25.61		South 118th St. to Jct. SSH No. 1-K	45/60	L/A		Full L/A		Yes - All	12/30/2003
99		25.61		25.96		S. Kenyon St. Vic.	60/40	L/A		Full L/A		Yes - All	12/30/2003
99		25.96		27.18	B	Duwamish Waterway Vic.	40	M/A	???	Full L/A			12/31/2003
99		26.91		29.2		First Ave. S. Br. to Spokane St.	40-50	M/A	Class 4 M/A	Full L/A			12/31/2003
99		29.2		32.58		Spokane St. to Thomas St.	50/40	M/A	Class 1 M/A				12/31/2003
99		32.58		37.46		Thomas St. to N. 85th St.	40-30	M/A	Class 3 M/A				9/25/2002
99		37.46		43.5		N. 85th to King/Snohomish Co. Line	35/40	M/A	Class 4 M/A				9/25/2002
99		43.5		43.74		SR 104, 236th St. SW to Meridian Ave.	45	L/A		Partial L/A		Yes - All	12/30/2003
99		43.74		48.92		SR 104 I/C to Lynnwood NCL	45	M/A	Class 4 M/A				12/30/2003
99		48.92		50.36		Lynnwood NCL to SR 525	50	M/A	Class 3 M/A				8/27/2003
99		50.36		50.96		Shelby Road to Lincoln Way	50	L/A		Full L/A		Yes - All	9/19/2003
99		50.96		53.43		SR 525 to Everett Mall Way	50	M/A	Class 3 M/A				8/27/2003
99		53.43		55.11		Everett Mall Way to I 5	40/35	M/A	Class 4 M/A				9/25/2002
99		55.11		55.41		SR 5 Swamp Crk. to Jct. SSH No. 2-J	35	L/A		Full L/A		Yes - All	12/31/2003
104		24.53		24.68		Kingston Ferry Terminal to Illinois Ave.	25	M/A	Class 4 M/A		Partial L/A		12/30/2003
104		24.69		25.81	B	Edmonds Ferry Terminal to 5th Ave.	40	L/A		Partial L/A		Yes - All	12/30/2003
104		25.9	A	27.69		???	35/40	???	???	???	???	???	8/27/2003
104		27.69		28.34		236th St. SW to Meridian Ave.	40	L/A		Partial L/A		Yes - All	12/30/2003
104		28.34		29.49		???	40	???	???	???	???	???	9/25/2002
104		29.49		29.83		SR 5: E. 200th to Swamp Crk.	40	???	???	Full L/A		Yes - All	12/30/2003
104		29.83		32.28		???	40/30	???	???	???	???	???	12/31/2003
123		.23		16.34		???	50/45	???	???	???	???	???	12/31/2003
161		30.3		32.06	B	102nd Ave E. to Milton Way	40/45	M/A	Class 3 M/A	Modified L/A			12/31/2003
161		32.76		34.15		S 360th St Vic to SR 5 Vic		M/A	Class 3 M/A				8/27/2003
161		34.15		34.29		SR 5, Pierce Co. Line to Jct. SSH No. 5-A	45	L/A		Full L/A		Yes - All	12/30/2003

Highway Classification Description Table

Highway Classification & Definition	Permits Allowed			Minimum Access Spacing	Access Limitations
	Non-Conforming	Variance	Conforming		
Class 1* Mobility is primary function	Yes	No	No	1320'	1 access only to contiguous parcels under same ownership. Private direct access not allowed unless no other reasonable access exists. (Must use county road system if possible.)*
Class 2* Mobility Favored over Access	Yes	Yes	No	660'	1 access only to contiguous parcels under same ownership unless frontage > 1320'. Private direct access not allowed unless no other reasonable access exists. (Must use county road system if possible.)*
Class 3 Balance between Mobility and Access in areas with less than Maximum Buildout	Yes	Yes	Yes	330'	1 access only to contiguous parcels under same ownership. Joint access for subdivisions preferred, but private direct access allowed with reason.
Class 4 Balance between Mobility and Access in areas nearing Maximum Buildout	Yes	Yes	Yes	250'	1 access only to contiguous parcels under same ownership.
Class 5 Access needs may have priority over Mobility needs	Yes	Yes	Yes	125'	More than 1 connection per ownership allowed with reason.

* The access connection shall continue until such time that other reasonable access to a highway with a less restrictive access control classification or acceptable access to the general street system becomes available and is permitted.

Use the design template that will best accommodate the intended use of the driveway, unless a smaller driveway is appropriate and will not adversely affect the traveled way of the state highway. If necessary, use turn simulation software (such as AutoTURN®) to verify the driveway design will adequately accommodate the largest vehicle that will regularly use the driveway.

1340.05 Sidewalks

If a driveway connection has (or will have) adjacent sidewalk, use the applicable Cement Concrete Driveway Entrance [Standard Plan F-80.10](#) and width issued on the access permit. The design and construction of any sidewalk shall be compliant with [Chapter 1510](#) and Section F of the [Standard Plans](#), in addition to the latest Americans with Disabilities Act criteria.

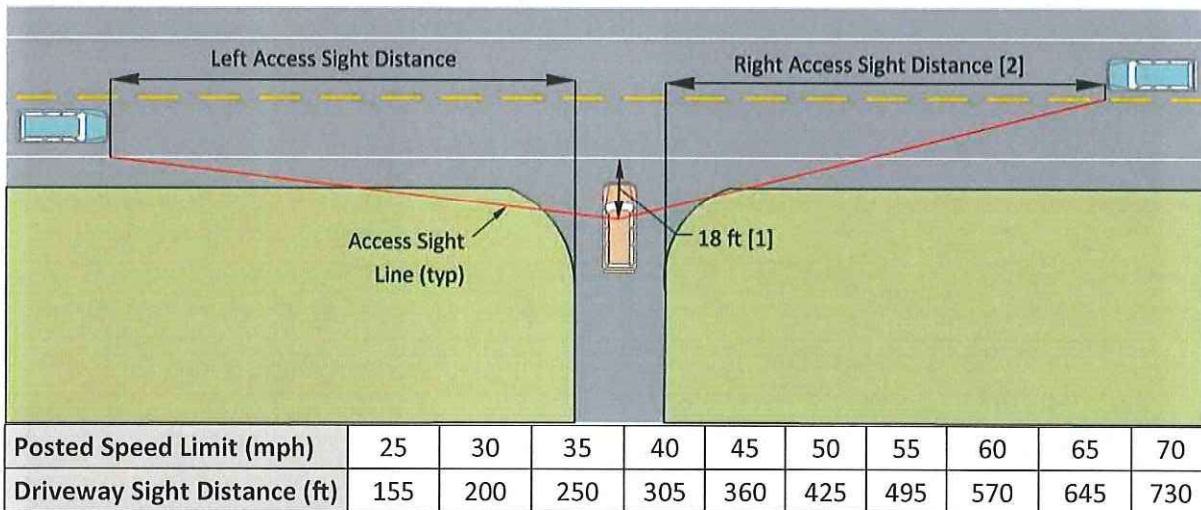
1340.06 Driveway Sight Distance (Eye height – 3.5 ft., Object height – 3.5 ft.)

A driver on the highway needs to see far enough ahead to assess developing situations and take actions appropriate for the conditions, such as when a vehicle is either entering or leaving the highway at a driveway.

In addition, drivers entering the highway from a driveway also need to see enough of the highway, whether to the left or right, so they can take actions appropriate for the conditions to enter the highway in a reasonably safe manner.

Design and locate driveways such that the sight distances meet or exceed the distances shown in [Exhibit 1340-3](#); these distances may require an approaching vehicle to reduce speed or stop to prevent a collision. In addition, provide decision sight distance for through traffic at all utility and special-use driveways on facilities with limited access control (see [Chapter 1260](#)).

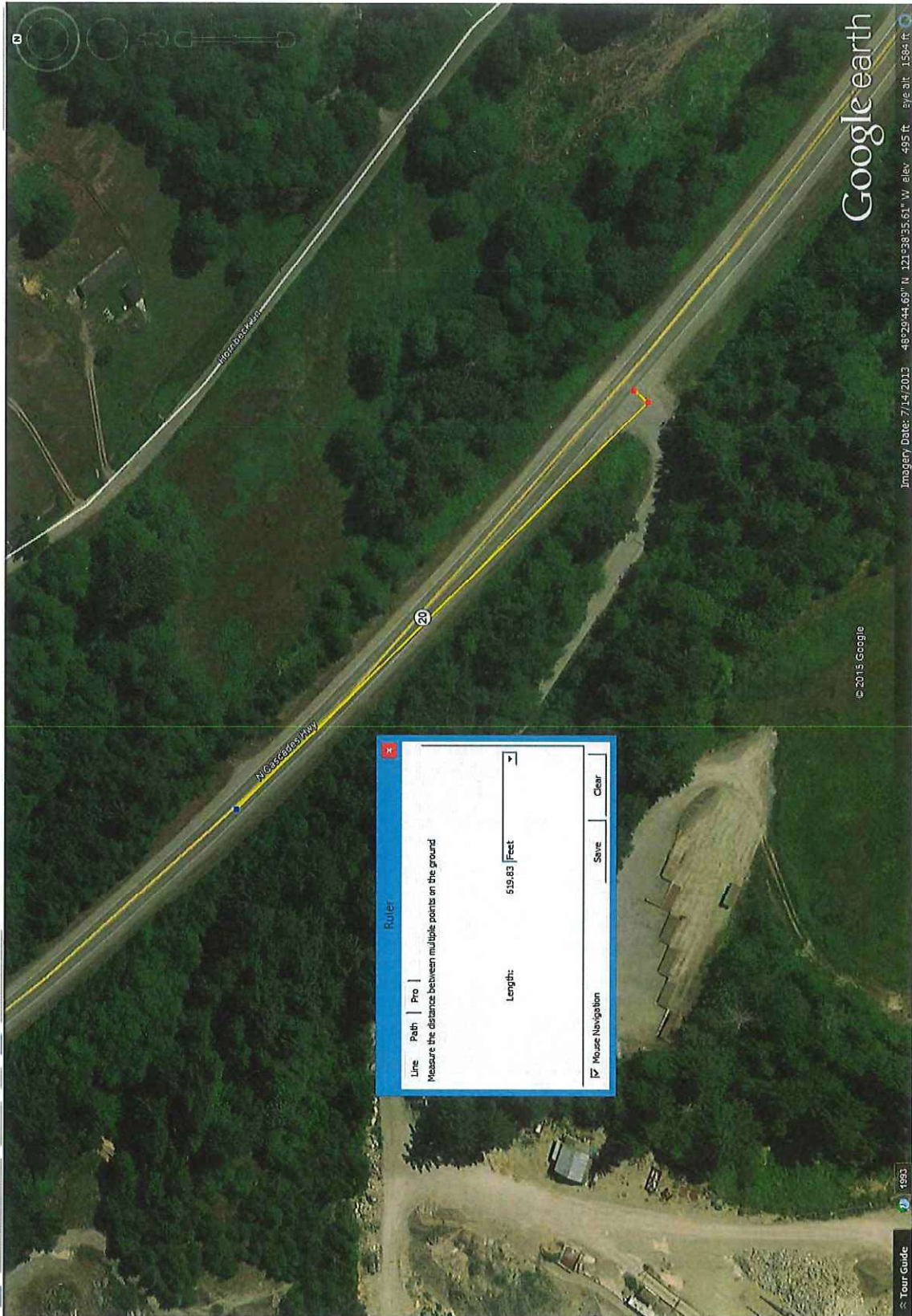
For road approaches with AWDVTE greater than 1,500, use intersection sight distance criteria (see [Chapter 1310](#)). Areas along driveway legs and across their included corners should be clear of obstructions that might block or affect a driver’s view of potentially conflicting vehicles.



Notes:

- [1] Measured from the edge of through lane. If the desirable 18-foot setback cannot be achieved, obtain as much as practicable, down to a 10-foot minimum.
- [2] Not required for driveways restricted to right in/right out.

Driveway Sight Distance
Exhibit 1340-3





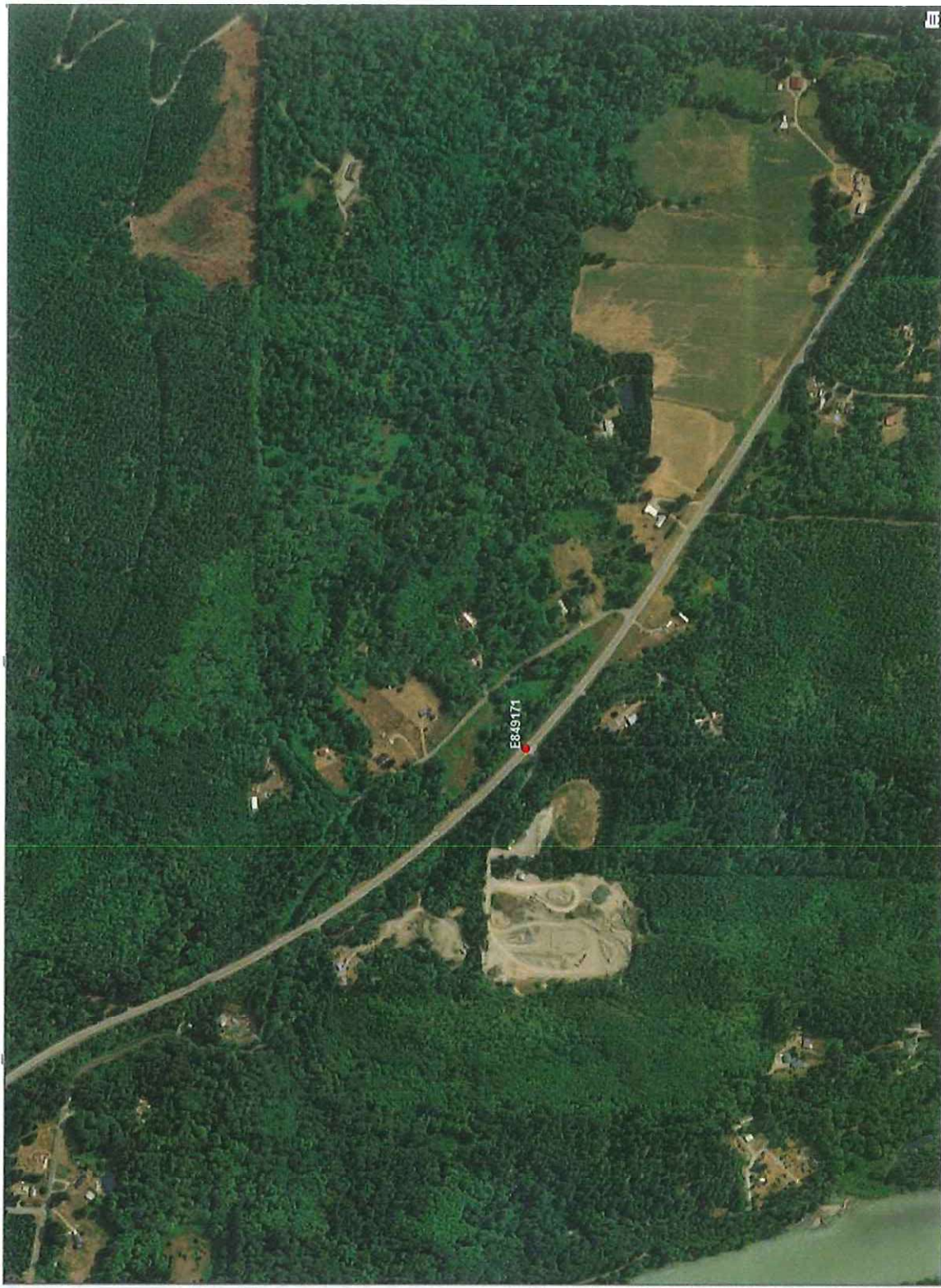


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JURISDICTION State Route	COUNTY Skagit	CITY	PRIMARY TRAFFICWAY 20	DIST FROM REF POINT 0 95.12	MILEPOST	REPORT NUMBER E849171	DATE 2018-10-12 11:17	TIME Suspected Minor Injury	MOST SEVERE INJURY TYPE	# I F V E K E # N A E D E # J T H S # P B I K E # V E K E # N A E D E # J T H S	VEHICLE 1 TYPE Passenger Car	VEHICLE 2 TYPE Pickup, Panel Truck or Vanette under 10,000 lb	JUNCTION RELATIONSHIP At Driveway
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<p>WEATHER Clear or Partly Cloudy</p>	<p>ROADWAY SURFACE CONDITION Dry</p>	<p>LIGHTING CONDITION Daylight</p>	<p>FIRST COLLISION TYPE / OBJECT STRUCK From same direction - both going straight - one stopped - rear-end</p>	<p>VEHICLE 1 ACTION Going Straight Ahead</p>	<p>VEHICLE 2 ACTION Stopped for Traffic</p>	<p>VEHICLE 1 COMPASS DIRECTION FROM East</p>
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VEHICLE 1 COMPASS DIRECTION TO West	VEHICLE 2 COMPASS DIRECTION FROM Vehicle Stopped	VEHICLE 2 COMPASS DIRECTION TO Vehicle Stopped	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1) Exceeding Reas. Safe Speed	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward) Lane 1 Decreasing Milepost	WA STATE PLANE SOUTH - X 2010 - FORWARD 1363331.91	WA STATE PLANE SOUTH - Y 2010 - FORWARD 1155349.68
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