

# Technical Memorandum

May 17, 2024

Project# 30268.0

To: Shea Peterson, P.E.  
City of Walla Walls  
15 North 3<sup>rd</sup> Avenue  
Walla Walla, WA 99362

From: Matt Hughart, AICP, Corrie Parish, & Julia Kuhn, PE

CC: Doug Botimer, Gary Hall P.E.

RE: The Ponds Development Transportation Assessment

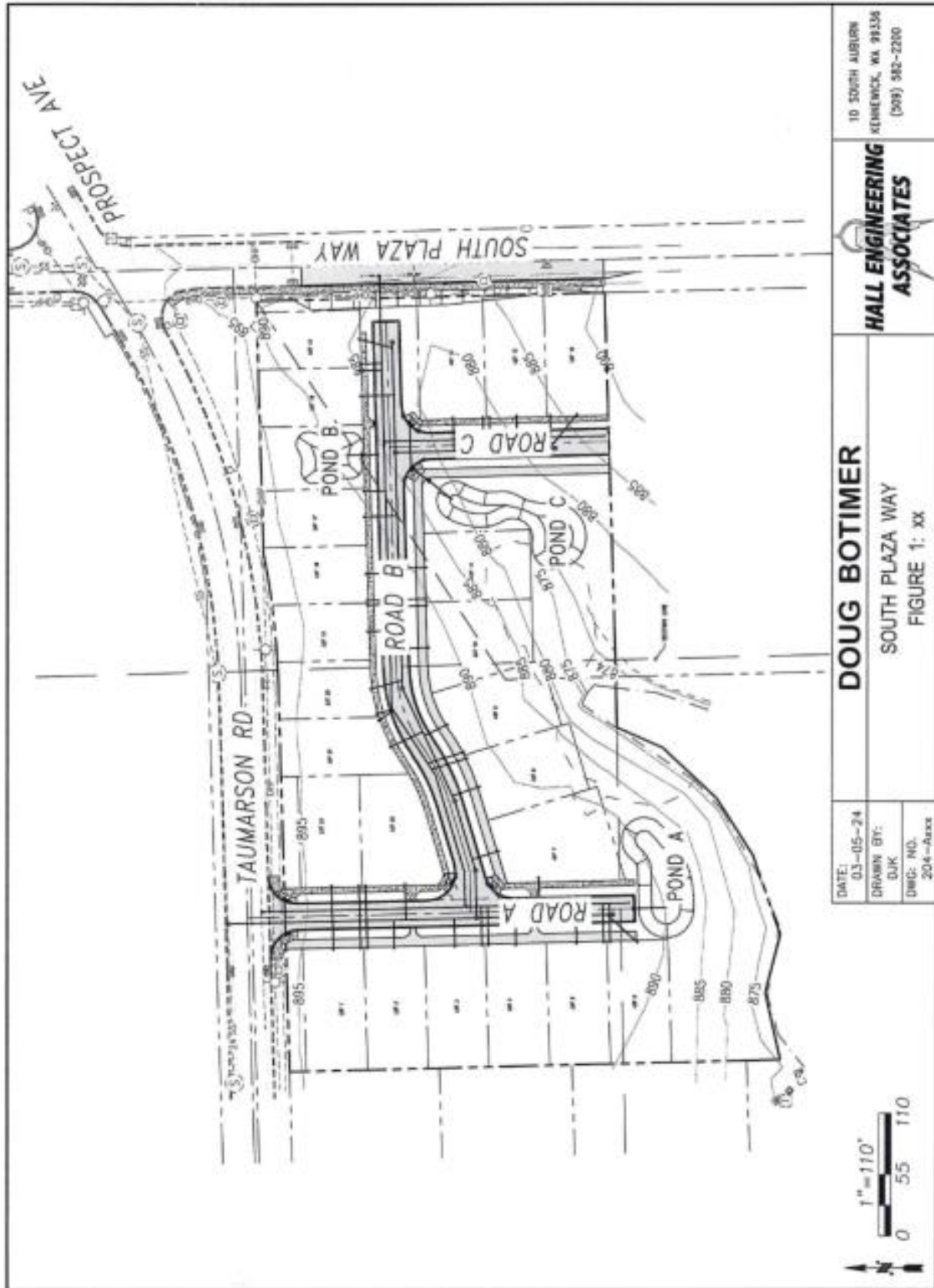
## INTRODUCTION

Doug Botimer is proposing to develop a 23-lot single family home subdivision (herein referred to as The Ponds) to be located in the southwest quadrant of the Taumaron Road/Plaza Way/Prospect Avenue intersection in Walla Walla. A site vicinity map is shown in Figure 1. As shown in Figure 2, access to the subdivision is proposed via a neighborhood street connection to Taumaron Road. The enclosed transportation assessment summarizes the anticipated transportation impacts of the proposed subdivision.

Figure 1 – Site Vicinity Map



Figure 2 – Proposed Site Plan



## TRIP GENERATION AND TRIP DISTRIBUTION

Trip estimates for the proposed subdivision were prepared using trip generation rates from the *Trip Generation Manual*, 11<sup>th</sup> Edition published by the Institute of Transportation Engineers. Table 1 summarizes the trip estimates.

**Table 1 – Trip Generation Estimate**

Land Use	ITE Code	Size	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Single Family Detached Housing	210	23 units	260	20	5	15	25	16	9

Figure 3 illustrates an estimated trip distribution pattern for the proposed subdivision. As shown, most site-generated trips are projected to use the Taumaron Road and Plaza Way corridors for access to regional destinations, schools, and retail centers.

**Figure 3 – Trip Distribution Pattern**



## TAUMARSON ROAD SITE ACCESS ASSESSMENT

As shown in Figure 2, access to the subdivision is proposed via a local street connection to Taumaron Road frontage approximately 550 feet west of the Taumaron Road/Plaza Way/Prospect Avenue intersection. At the request of City staff, the proposed local street intersection was assessed from a sight distance and safety perspective. This review revealed the following.

- Weekday PM peak hour observations revealed that westbound vehicle queues from the Taumaron Road/Plaza Way/Prospect Avenue intersection do not extend back to the proposed local street intersection.
- Intersection sight distance (ISD) was evaluated at the proposed site local street connection to Taumaron Road. For this assessment, preliminary intersection sight distance measurements were evaluated using the guidance provided in *A Policy on Geometric Design of Highways and Streets*. The minimum passenger car intersection sight distance requirement for a 40 mph speed<sup>1</sup> is 445 feet (left-turn from stop) and 385 feet (right-turn from stop).
  - From the approximate location of the proposed local street intersection to Taumaron Road, there is adequate sight distance (>850 feet) looking to the west and adequate sight distance (~500 feet) looking to the right.
  - To maintain adequate intersection sight distance post development, it is recommended that any proposed signage or landscaping be appropriately located such that the minimum intersection sight distance can be maintained.
- The crash history of the Taumaron Road/Plaza Way/Prospect Avenue intersection and Taumaron Road site frontage was obtained from the Washington Department of Transportation (WSDOT). Table 2 summarizes the crash data. Key findings from a review of the data are presented below:
  - There were no reported crashes along the Taumaron Road site frontage.
  - At the Taumaron Road/South Plaza Way/Prospect Avenue intersection, there were seven reported crashes. A detailed review of the crashes found no distinct patterns evident amongst the seven reported crashes. Each occurred at different time periods and were spread across the four approaches. Two of the seven crashes involved drivers under the influence of drugs or alcohol, and another was a distracted driver using a cell phone. The fatality that occurred happened in 2019, and involved a speeding motorcyclist who struck a metal sign post in the intersection.
  - Despite the lack of street lights at the intersection, five of the seven crashes occurred during daylight hours. There was no evidence in the crash data to indicate lack of street lighting was a primary or contributing factor in the two crashes that occurred during nighttime periods.

**Table 2 – Reported Crash History (January 1, 2018 – December 31, 2023)**

Study Intersection/Segment	Crash Type				Severity			Total
	Angle	Rear-End	Side Swipe	Other	Injury	PDO	Fatal	
Taumaron Road/ South Plaza Way/ Prospect Avenue	3	1	1	2	3	3	1	7

PDO = Property Damage Only

<sup>1</sup> The posted speed on Taumaron Road is 35 mph. However, as will be noted later in this report, a recent speed study conducted by the City of Walla Walla determined the 85<sup>th</sup> percentile speed on this section to Taumaron Road was actually 40 mph. Therefore 40 mph was used in the intersection sight distance calculations.

## TAUMARSON ROAD CONSIDERATIONS

The City of Walla Walla recently changed the posted speed limit on Taumaron Road to a consistent 35 mph along the entire roadway corridor. To gauge compliance with the new speed limit, the City placed a speed radar trailer on Taumaron Road approximately 500 feet to the west of the proposed subdivision. At the request of City staff, the speed data was reviewed for relevance to the proposed South Plaza Way residential development. *Appendix B* contains the raw speed and volume counts as provided by the City. A review of the data found the following:

- On the day of the survey (3/26/24), the average measured speed was 35 mph.
- The measured 85<sup>th</sup> percentile speed was 40 mph. According to the *Manual on Uniform Traffic Control Devices (MUTCD)*, posted speed limits should be within 5 miles per hour (mph) plus or minus of the 85<sup>th</sup> percentile speed.
- The placement of the speed radar device was located west of the proposed site on a relatively flat and straight segment of Taumaron Road where conditions could encourage higher speeds.

Based on the speed data at this one location along Taumaron Road, the measured speeds are within the expected range for a 35 mph speed limit and no supplemental speed reductions measures are recommended in conjunction with the proposed Ponds development.

We also reviewed the existing traffic signs along the site frontage of Taumaron Road. From this assessment, it was noted that there is a Stop Ahead (MUTCD W3-1) warning sign located approximately 120 feet west of the Taumaron Road/Plaza Way/Prospect Avenue intersection stop bar. While this location is generally consistent with the 2009 MUTCD guidance for the advanced placement of warning signs (100 feet for a posted or 85<sup>th</sup> percentile speed condition), the more recent 11<sup>th</sup> Edition of the MUTCD provides updated guidance indicating advanced placement for a 35 mph speed posting should be 250 feet. Considering this updated guidance and the fact that there is a horizontal curve that begins on Taumaron Road in advance of the intersection, it is recommended that the Stop Ahead sign be relocated an additional 130 feet further to the west.

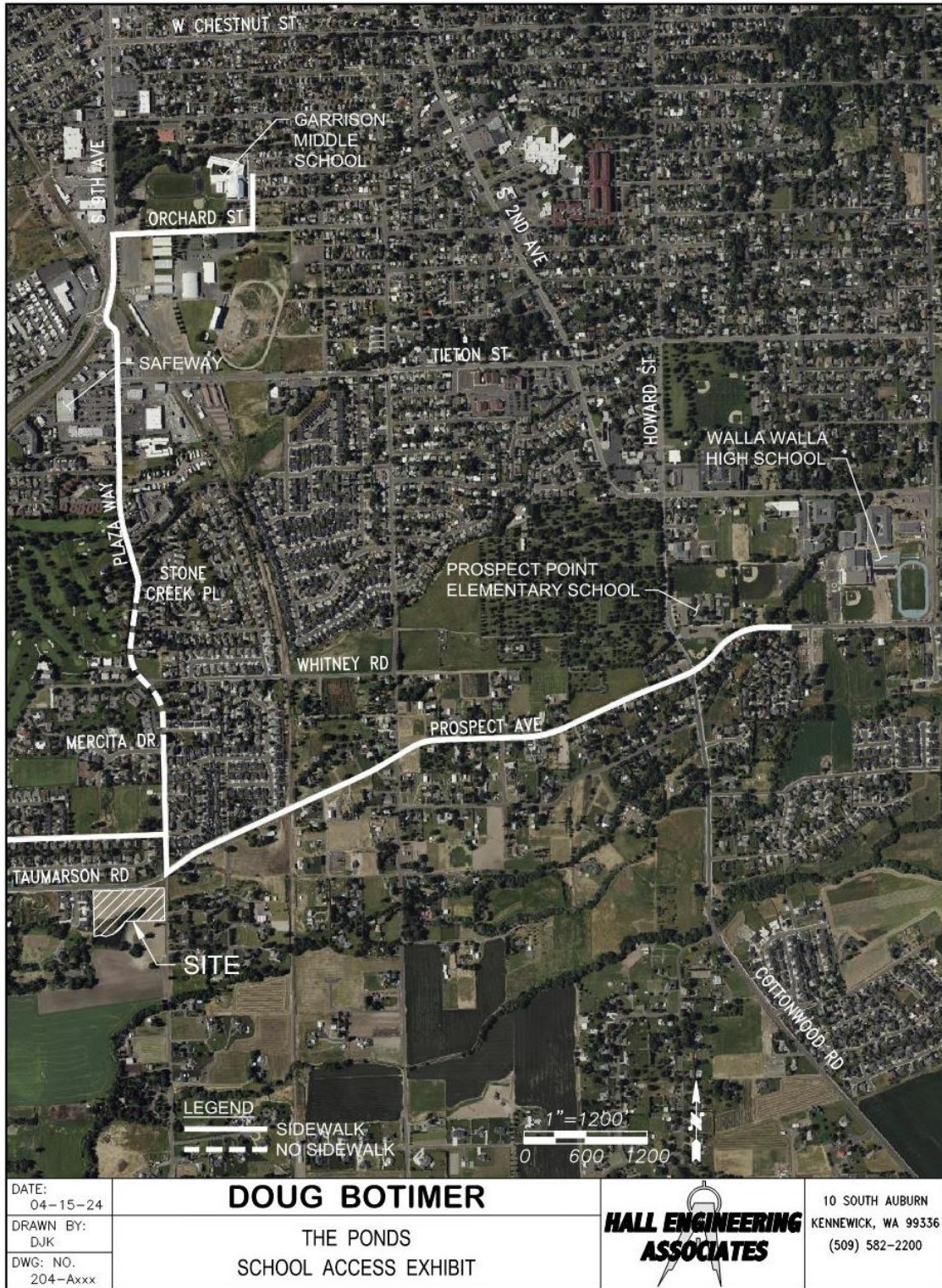
## SAFE PATHWAYS TO SCHOOLS

As shown in Figure 2, the Ponds development project will maintain the existing sidewalk network along the Taumaron Road frontage and construct new sidewalks along the Plaza Way site frontage. These accommodations will help to ensure the development is consistent with, connects to, and enhances overall pedestrian travel in the study area.

As requested by City staff, Hall Engineering Associates prepared a map showing the most direct pathways to the nearby elementary, middle, and high schools. As shown in Figure 3, there is a complete set of sidewalks and bicycle lanes connecting the proposed development to Prospect Elementary School and Walla Walla High School campuses. However, there is an incomplete sidewalk network between the site and Garrison Middle School to the north. As shown, this consists of a three block gap in the sidewalk network on Plaza Way between Mercita Drive and Stone Creek Place. While there are no planned projects to address this gap in the sidewalk network, conversations with the Walla Walla School District found that this portion of the city is currently served by school buses to help facilitate access to Garrison Middle School. For those pedestrians wanting/needing to still travel north along Plaza Way, there are a series of lower-volume local streets to the east that could be navigated to bypass the sidewalk gap.

Please let us know if you need any additional information as part of your review.

Figure 3 – Pathways to Schools (Hall Engineering Associates)



## APPENDIX

- A. Crash Data
- B. Taumarson Road Speed Data

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* THE FOLLOWING INTERSECTION IN THE CITY OF WALLA WALLA  
 TAUMARSON RD / PROSPECT RD @ PLAZA WAY

**04/02/2018 - 04/03/2023**

*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.*

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILEPOST	A / B	SR ONLY HISTORY / SUSPENSE IND
City Street	Walla Walla	Walla Walla	PLAZA WAY	2600	TAUMARSON RD							No
City Street	Walla Walla	Walla Walla	PLAZA WAY	0	TAUMARSON RD							No
City Street	Walla Walla	Walla Walla	PLAZA WAY	2648	W PROSPECT RD							No
City Street	Walla Walla	Walla Walla	PLAZA WAY	2648	W PROSPECT RD							No
City Street	Walla Walla	Walla Walla	TAUMARSON RD	0	PLAZA WAY							No
City Street	Walla Walla	Walla Walla	TAUMARSON RD	0	PLAZA WAY							No
City Street	Walla Walla	Walla Walla	TAUMARSON RD	1100		401	F	W	PLAZA WAY			No



REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJURED	# FATAL	# VEHICLES	# PIKES	VEHICLE 1 TYPE
E820696	07/22/2018	03:48	Possible Injury	1	0	2	0	Pickup,Panel Truck or Vanette under 10,000 lb
E940184	07/09/2019	05:45	Possible Injury	1	0	1	0	Pickup,Panel Truck or Vanette under 10,000 lb
EA95162	12/13/2020	12:41	No Apparent Injury	0	0	2	0	Truck (Flatbad, Van, etc)
EC68910	07/21/2022	18:35	No Apparent Injury	0	0	2	0	Passenger Car
EA42219	06/23/2020	11:16	No Apparent Injury	0	0	2	0	Pickup,Panel Truck or Vanette under 10,000 lb
E933262	06/23/2019	21:51	Died in Hospital	0	1	1	0	Motorcycle
EB30728	05/16/2021	15:09	Suspected Minor Injury	2	0	2	0	Passenger Car

VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights
	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Pickup, Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Snow/Slush	Daylight
Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
	At Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights
Pickup, Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear	Dry	Daylight

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO
Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
Linear Curb	Going Straight Ahead		North	South
Entering at angle	Starting in Traffic Lane	Starting in Traffic Lane	East	West
Entering at angle	Going Straight Ahead	Starting in Traffic Lane	East	West
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West
Metal Sign Post	Going Straight Ahead		West	East
From opposite direction - all others	Going Straight Ahead	Going Straight Ahead	West	East

VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)
East	West	None			Under Influence of Alcohol
		Apparently Asleep or Fatigued			
South	North	Did Not Grant RW to Vehicle			None
North	South	Operating Handheld Cell Phone	Disregard Traffic Sign and Signals		None
Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None
		Exceeding Stated Speed Limit			
East	West	Under Influence of Drugs			None

MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Disregard Stop Sign - Flashing Red		Lane of Primary Trafficway	2187735.15	263764.04
		Outside Shoulder of Primary Trafficway	2187735.11	263765.14
		Lane of Primary Trafficway	2187735.28	263764.72
		Lane of Primary Trafficway	2187735.28	263764.72
		Lane of Primary Trafficway	2187735.11	263765.13
		Past the Outside Shoulder of Primary Trafficway	2187735.28	263702.65
		Lane of Primary Trafficway	2187356.41	263633.8



# STEALTH SURVEY DETAILS

<TAMAURSON>

<>

POSTED SPEED LIMIT: <35>

SURVEY STARTED: <2024/03/26 21:53>

FILENAME: 1B00123.DAT

MIN SPEED ALLOWED <10> MAX SPEED ALLOWED <125>

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23:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0
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01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
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02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	3
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07:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
07:30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
08:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	4
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11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
																		1	0	1





# STEALTH SURVEY DETAILS

<TAMAURSON>

<>

POSTED SPEED LIMIT: <35>

SURVEY STARTED: <2024/03/26 21:53>

FILENAME: 1B00123.DAT

MIN SPEED ALLOWED <10> MAX SPEED ALLOWED <125>

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07:30	2	1	2	4	8	5	7	6	4	3	2	1	2	0	0	1	0	0	0	0
07:45	1	2	3	4	3	3	2	2	4	1	2	2	0	0	1	2	0	0	0	0
08:00	2	2	5	3	4	5	3	1	5	1	0	3	1	0	1	0	0	0	0	0
08:15	0	0	2	4	4	4	5	5	1	1	1	4	4	1	1	0	2	0	0	0
08:30	1	3	4	3	3	1	3	1	1	2	1	0	2	0	0	0	0	0	0	0
08:45	1	2	5	1	2	0	3	2	0	1	1	0	0	1	1	0	0	0	0	0
09:00	0	0	2	0	2	1	2	5	0	0	2	1	0	1	0	1	0	0	0	0
09:15	1	2	1	0	1	2	2	4	2	1	1	1	0	2	0	0	0	0	0	0
09:30	3	1	0	0	2	2	1	0	2	2	1	1	0	0	0	0	0	0	0	0
09:45	1	1	1	1	1	3	0	2	0	2	1	1	0	0	0	0	0	0	0	0
10:00	0	1	0	0	1	2	1	0	0	0	1	0	0	0	1	0	0	0	0	0
10:15	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0



















# STEALTH SURVEY SUMMARY

<TAMAUURSON>

<>

POSTED SPEED LIMIT: <35>

SURVEY STARTED: <2024/03/26 21:53>

FILENAME: 1B00123.DAT

MIN SPEED ALLOWED <10> MAX SPEED ALLOWED <125>

TIME	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	00:00	00:15	00:30	00:45	01:00	01:15	01:30	01:45	02:00	02:15
VEH.	38	41	50	50	58	58	61	65	71	63	57	70	69	74	78	73	55	51
AVG.	33.2	35.1	35.3	34.8	34.8	34.5	35.0	34.7	37.3	35.3	35.6	35.4	34.4	33.8	35.6	35.2	33.8	34.9
TIME	02:30	02:45	03:00	03:15	03:30	03:45	04:00	04:15	04:30	04:45	05:00	05:15	05:30	05:45	06:00	06:15	06:30	06:45
VEH.	82	85	87	84	108	75	75	96	65	100	73	74	92	91	105	70	66	84
AVG.	34.9	35.2	36.4	34.5	35.5	36.6	35.3	35.1	35.0	35.6	34.6	36.3	35.5	36.0	36.7	35.6	37.0	35.5
TIME	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15
VEH.	67	29	53	33	43	43	33	22	19	23	18	14	8	8	10	12	4	3
AVG.	35.4	36.9	35.3	34.4	35.6	35.1	33.5	33.6	36.1	35.3	34.3	33.1	37.8	34.4	25.6	33.5	35.5	31.0
TIME	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45
VEH.	2	0	2	1	3	3	0	0	0	0	1	1	1	0	1	0	0	0
AVG.	37.5	0.0	38.0	40.0	21.7	36.7	0.0	0.0	0.0	0.0	32.0	44.0	35.0	0.0	13.0	0.0	0.0	0.0
TIME	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15
VEH.	0	1	0	4	1	0	0	7	14	8	23	10	28	38	58	88	102	79
AVG.	0.0	38.0	0.0	36.8	32.0	0.0	0.0	34.6	36.7	35.5	35.4	35.7	35.8	35.1	35.3	35.6	35.7	34.4
TIME	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	00:00	00:15	00:30	00:45
VEH.	43	48	57	47	49	49	42	50	35	60	59	67	50	81	70	73	49	71
AVG.	35.6	35.6	35.1	35.0	35.9	35.1	36.1	35.4	36.2	35.6	34.8	35.7	35.0	37.7	36.5	34.8	36.2	35.6
TIME	01:00	01:15	01:30	01:45	02:00	02:15	02:30	02:45	03:00	03:15	03:30	03:45	04:00	04:15	04:30	04:45	05:00	05:15
VEH.	77	74	67	77	76	77	119	79	83	95	82	70	68	74	70	74	82	83
AVG.	34.5	34.3	34.2	35.7	35.4	35.4	35.3	35.2	35.6	34.6	35.3	36.2	35.3	35.7	35.3	35.3	36.6	36.6
TIME	05:30	05:45	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45
VEH.	78	82	64	61	47	53	48	36	49	44	35	26	27	26	28	20	19	17
AVG.	34.8	35.1	36.0	35.3	36.3	36.4	36.0	36.0	34.1	35.7	34.9	36.5	33.3	35.1	34.4	34.5	34.9	35.8
TIME	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15
VEH.	5	12	9	15	8	7	2	1	0	0	0	2	1	0	1	0	1	1
AVG.	36.2	36.4	34.1	34.9	32.3	35.1	46.5	35.0	0.0	0.0	0.0	36.0	32.0	0.0	35.0	0.0	36.0	30.0
TIME	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45
VEH.	1	0	0	2	0	3	0	1	0	5	1	0	1	6	12	6	16	22
AVG.	34.0	0.0	0.0	37.5	0.0	32.0	0.0	43.0	0.0	36.4	35.0	0.0	37.0	33.8	36.0	34.7	34.6	34.7
TIME	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15
VEH.	31	27	68	90	85	58	53	47	54	53	55	49	34	65	62	56	92	70
AVG.	33.7	37.8	36.0	37.8	36.3	36.6	35.8	35.7	35.3	35.0	34.1	34.7	35.8	35.3	34.8	35.6	34.7	34.6
TIME	23:30	23:45	00:00	00:15	00:30	00:45	01:00	01:15	01:30	01:45	02:00	02:15	02:30	02:45	03:00	03:15	03:30	03:45
VEH.	67	69	91	84	94	68	89	68	85	69	83	76	84	73	90	88	95	91
AVG.	36.0	35.2	35.3	35.9	36.1	34.5	35.5	34.0	36.1	34.8	35.2	35.6	36.0	34.5	35.7	34.5	35.3	34.6
TIME	04:00	04:15	04:30	04:45	05:00	05:15	05:30	05:45	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15
VEH.	90	90	82	95	79	88	102	82	76	79	64	39	64	45	42	48	46	24
AVG.	35.4	34.9	35.3	35.3	34.4	35.7	34.5	36.5	35.7	35.9	36.0	34.5	34.8	35.5	34.5	35.6	34.2	36.8

# STEALTH SURVEY INFO

<TAMAUURSON>

<>

POSTED SPEED LIMIT: <35>

SURVEY STARTED: <2024/03/26 21:53>

FILENAME: 1B00123.DAT

MIN SPEED ALLOWED <10> MAX SPEED ALLOWED <125>

TOTAL VEHICLES = 11338

MINIMUM SPEED = 10

MAXIMUM SPEED = 79

AVERAGE SPEED = 35.36

50th PERCENTILE = 35

85th PERCENTILE = 40

TEN MILE PACE = 32 to 41

END OF REPORT