



CITY OF  
BAINBRIDGE ISLAND

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TRAFFIC OPERATIONS COMMITTEE  
THURSDAY, NOVEMBER 7, 2024  
3:00 PM – 4:00 PM  
ZOOM WEBINAR

PLEASE CLICK THE LINK BELOW TO JOIN THE WEBINAR:

<https://bainbridgewa.zoom.us/j/88978755550>

TELEPHONE: 1-253-205-0468

WEBINAR ID:

#### AGENDA

1. SEABOLD TRAFFIC – 15 MINUTES
2. MILLER AND KOURA INTERSECTION SAFETY EVALUATION – 15 MINUTES



## Department of Public Works Memorandum

Date: October 23, 2024

To: City Manager

From: Christopher Wierzbicki, PE, Public Works Director  
Peter Corelis, PE, City Engineer

**Subject: Seabold Neighborhood Traffic Evaluation**

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### **Background**

In mid-September 2024, City staff were made aware of community concerns regarding recent increases in traffic volumes and speeding on Komedal Road NE and Henderson Road NE in the Seabold neighborhood. The issues stem from the recent construction of a roundabout at the Seabold Road and State Route 305 (SR305) intersection. The roundabout has allowed for safe north and southbound access to and from SR305 and Seabold Road, which has encouraged drivers to use the neighborhood streets to avoid morning and afternoon commuter traffic on the highway. In response to the residents, City staff collected data on neighborhood streets with the goal of understanding the conditions and determining if traffic mitigation measures were warranted.

### **Traffic Data Collection and Results**

Data was collected by the City of Bainbridge Island Police Department using an MPH Industries traffic data collection system. For each street, the data collection device was discreetly mounted on a utility pole where its presence would not influence driver behavior. A brief summary of the results is presented below. The full analysis of each street is attached to this document as an Appendix.

*85<sup>th</sup> Percentile Speed* – The 85th percentile speed is the speed at or below which 85% of vehicles travel on a road when there are no adverse conditions like poor weather or slower traffic. It's the most common method for determining a posted speed limit.

*10 mph Pace Speed* - The 10-mph pace is the ten mile-per-hour range of speeds containing the greatest number of observed speeds and is a measure of speed dispersion.

**Henderson Road (9/30 – 10/8/24 - 6 weekdays and 2 weekend days of data collection)**

Northbound (speed limit <b>20 mph</b> )	# of Vehicles:	1,464
	# of Speeders:	544
	% Speeders 10MPH over	2.1%
	85 <sup>th</sup> Percentile Speed:	<b>22 mph</b>
	10 mph Pace Speed:	16 to 25 mph

Southbound (speed limit <b>20 mph</b> )	# of Vehicles:	1,317
	# of Speeders:	240
	% Speeders 10MPH over	1.5%
	85 <sup>th</sup> Percentile Speed:	<b>18 mph</b>
	10 mph Pace Speed:	11 to 20 mph

**Komedal Road (9/16 – 9/20/24 - 4 weekdays of data collection)**

Northbound (speed limit <b>25 mph</b> )	# of Vehicles:	3,409
	# of Speeders:	1,266
	% Speeders over 10MPH	1.8%
	85 <sup>th</sup> Percentile Speed:	<b>28 mph</b>
	10 mph Pace Speed:	21 to 30 mph

Southbound (speed limit <b>25 mph</b> )	# of Vehicles:	2,286
	# of Speeders:	881
	% Speeders over 10MPH	4%
	85 <sup>th</sup> Percentile Speed:	<b>29 mph</b>
	10 mph Pace Speed:	21 to 30 mph

**Manzanita Road (North) (9/23 - 9/30/24 - 5 weekdays and 2 weekend days of data collection)**

Northbound (speed limit <b>30 mph</b> )	# of Vehicles:	5,065
	# of Speeders:	1,773
	% Speeders over 10MPH	1.6%
	85 <sup>th</sup> Percentile Speed:	<b>32 mph</b>
	10 mph Pace Speed:	26 to 35 mph

Southbound (speed limit <b>30 mph</b> )	# of Vehicles:	5,617
	# of Speeders:	2,100
	% Speeders over 10MPH	2%
	85 <sup>th</sup> Percentile Speed:	<b>33 mph</b>
	10 mph Pace Speed:	26 to 35 mph

**Manzanita Road (South)** (10/1 – 10/18/24 - 5 weekdays and 2 weekend days of data collection)

Northbound (speed limit 25 mph)	# of Vehicles:	3,029
	# of Speeders:	378
	% Speeders over 10MPH	<1%
	85 <sup>th</sup> Percentile Speed:	<b>23 mph</b>
	10 mph Pace Speed:	16 to 25 mph
Southbound (speed limit 25 mph)	# of Vehicles:	2,195
	# of Speeders:	71
	% Speeders over 10MPH	0%
	85 <sup>th</sup> Percentile Speed:	<b>20 mph</b>
	10 mph Pace Speed:	16 to 25 mph

**Traffic Data Analysis**

**Henderson Road**

The data collected at Henderson Road indicates an approximate **doubling of traffic volumes**, and a **slight increase in speeds**. The last traffic count for Henderson Road was performed in 2021 and indicated that the average daily traffic was 142 vehicles (compared to 347 currently), the 85<sup>th</sup> percentile speed was 20 mph (compared to 20 mph currently), and the pace speed was 10-19 mph (compared to 14-23 currently). Additionally, the data indicates that the greatest volume of traffic is northbound during the afternoon commute hours of 3-6PM.

Guidance from the Manual on Uniform Traffic Control Devices (MUTCD) states that the speed limit should be set to the nearest 5 mph increment of the 85<sup>th</sup> percentile speed. Therefore, the data collection indicates that the speed limit is properly set at 20 mph, and **traffic calming measures are not warranted**.

**Komedal Road**

The data collected at Komedal Road indicates a **4X increase in traffic volumes**, and a **slight decrease in speeds**. The last traffic count for Komedal Road was performed in 2021 and indicated that the average daily traffic was 325 vehicles (compared to 1,424 currently), the 85<sup>th</sup> percentile speed was 31 mph (compared to 29 mph currently), and the pace speed was 23-32 mph (compared to 21-30 currently). Additionally, the data indicates that the greatest volume of traffic is northbound during the afternoon commute hours of 3-6PM.

Based on guidance from the MUTCD, the data collection indicates that the speed limit could be increase from 25 to 30 mph. The staff recommendation is that the existing 25 mph speed limit be retained. **Traffic calming measures are not warranted**.

**Manzanita Road (North)**

The data collected at Manzanita Road indicates an approximate **doubling of traffic volumes**, and a **slight decrease in speeds**. The last traffic count for Manzanita Road was performed in 2021 and

indicated that the average daily traffic was 647 vehicles (compared to 1,526 currently), the 85<sup>th</sup> percentile speed was 32 mph (compared to 33 mph currently), and the pace speed was 24-33 mph (compared to 26-35 currently). Additionally, the data indicates that the greatest volume of traffic is northbound during the afternoon commute hours of 3-6PM, although the morning commute hours between 7 -9AM experiences a similar but slightly less volume of traffic.

Based on guidance from the MUTCD, the data collection indicates that the speed limit is properly set at 30 mph. **Traffic calming measures are not warranted.**

### **Manzanita Road (South)**

The data collected at Manzanita Road indicates an approximate **30% increase in traffic volumes**, and a **decrease in speeds**. The last traffic count for Manzanita Road was performed in 2021 and indicated that the average daily traffic was 576 vehicles (compared to 746 currently), the 85<sup>th</sup> percentile speed was 31 mph (compared to 22 mph currently), and the pace speed was 22-31 mph (compared to 16-25 currently). Additionally, the data indicates that the greatest volume of traffic is northbound during the afternoon commute hours of 3-6PM, although the morning commute hours between 7 -8AM experiences a smaller spike in volumes.

Based on guidance from the MUTCD, the data collection indicates that the speed limit is properly set at 25 mph. **Traffic calming measures are not warranted.**

### **Intersections**

- **All intersections:** An examination of recently collected vehicle volume data shows the 8-Hour volume warrant is not met for All-Way Stop Control at any of the subject intersections. 8-hour volumes would need to exceed 2,400 ADT on the major road and 1,600 ADT on the minor road to meet this warrant. Additionally, the historical crash experience data indicates low accident potential. No information exists to determine current crash rate potential under the increased traffic volumes.
- **Manzanita/Hidden Cove; Ralston/Komedal & Ralston/Henderson:** The Entering Sight Distance or Decision Sight Distance (ESD or DSD) for vehicles stopping and turning onto Manzanita from Hidden Cove, onto Komedal from Ralston, and onto Henderson from Ralston does not meet the minimum required sight distance to safely make the turn movements. The required ESD is 335' for left turns from a stop and 290' to safely cross the road. The field verified ESDs mostly do not meet the minimums. All-Way Stop Control at these intersections could be warranted based on the poor sight distances observed.

### **Conclusions and Next Steps**

There are several conclusions that can be drawn from the traffic data analysis:

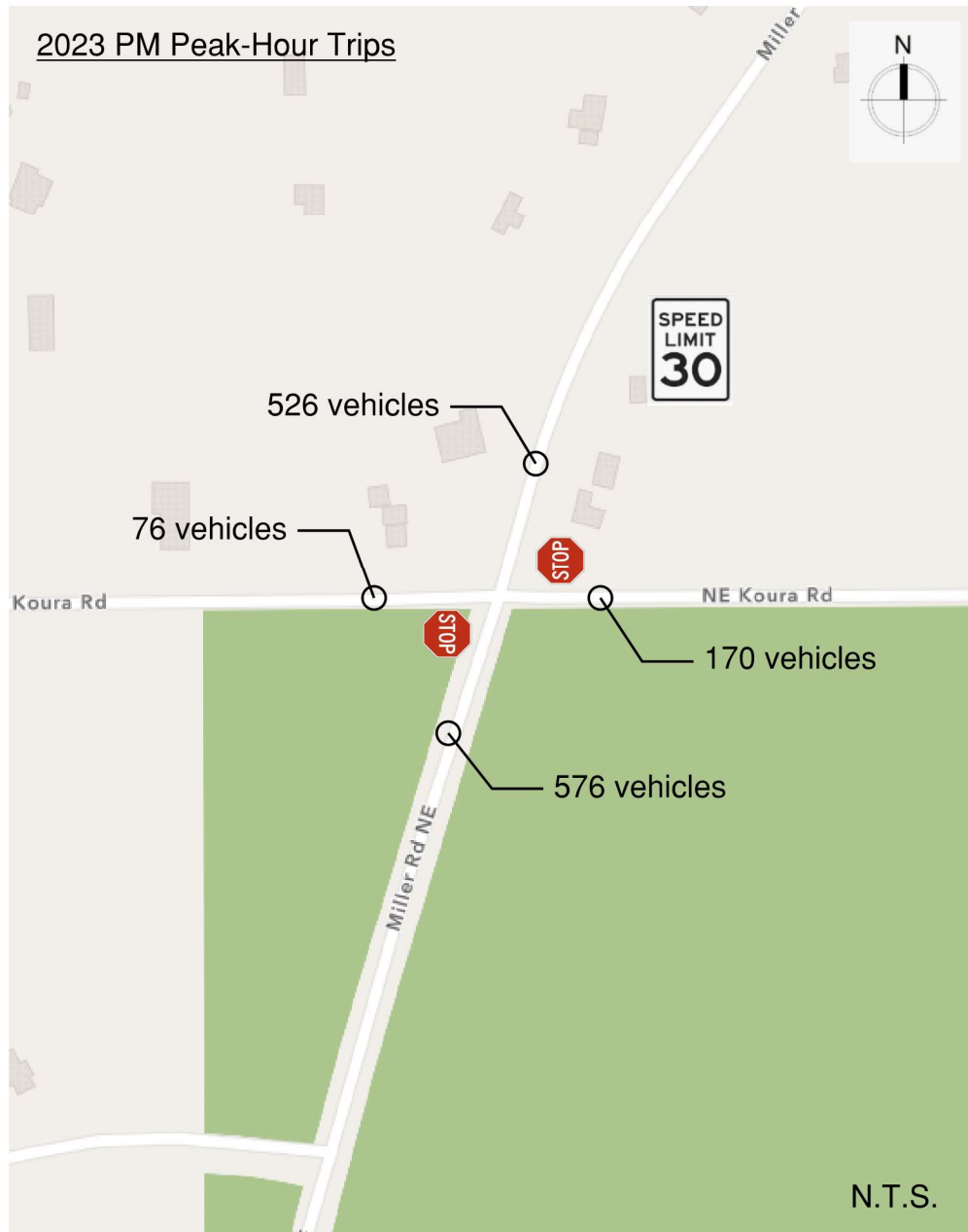
- Overall traffic volumes on all of the subject roads have increased since data was last collected in 2021.

- Traffic volumes on all of the subject roads spike in both the morning and the afternoon, but the latter spike is more pronounced, leading to the conclusion that more drivers are using the subject roads to avoid afternoon/evening commute congestion on SR305.
- Komedal Road is experiencing a majority of the traffic volume increases.
- Overall traffic speeds have not increased, and in some cases have decreased since data was last collected in 2021. Traffic calming measures are not warranted on any of the subject streets.
- Data collected on the southern part of Manzanita Road in mid-October, after a majority of the heavy construction associated with the SR305 roundabouts, indicates that afternoon traffic volumes associated with “cut-thru” traffic may be subsiding.

Based on these conclusions, the following next steps are recommended:

- **Install 4-way stop control at Manzanita/Hidden Cove; Ralston/Komedal & Ralston/Henderson:** Stop signs are specifically prohibited by the MUTCD from being used as a traffic calming or traffic limiting device, however, at both intersections the warrants for a stop sign are met due to the lack of adequate sight-distances.
- **Perform vegetation management** at all of the above-mentioned intersection corners to further increase sight distances.
- **Perform crash and speed/volume data collection** again in the same locations in 6-months to determine trends and potential mitigation options.
- **Consider future one-way couplet on Komedal/Henderson with separated bike/ped lane.** This reconfiguration of the traffic pattern would likely not result in reductions in traffic volumes but could further reduce speeds and provide a safe walking and biking lane for the neighborhood in alignment with the City’s Sustainable Transportation Plan. A project of this scope would likely cost between \$100-150K.

### 2023 PM Peak-Hour Trips



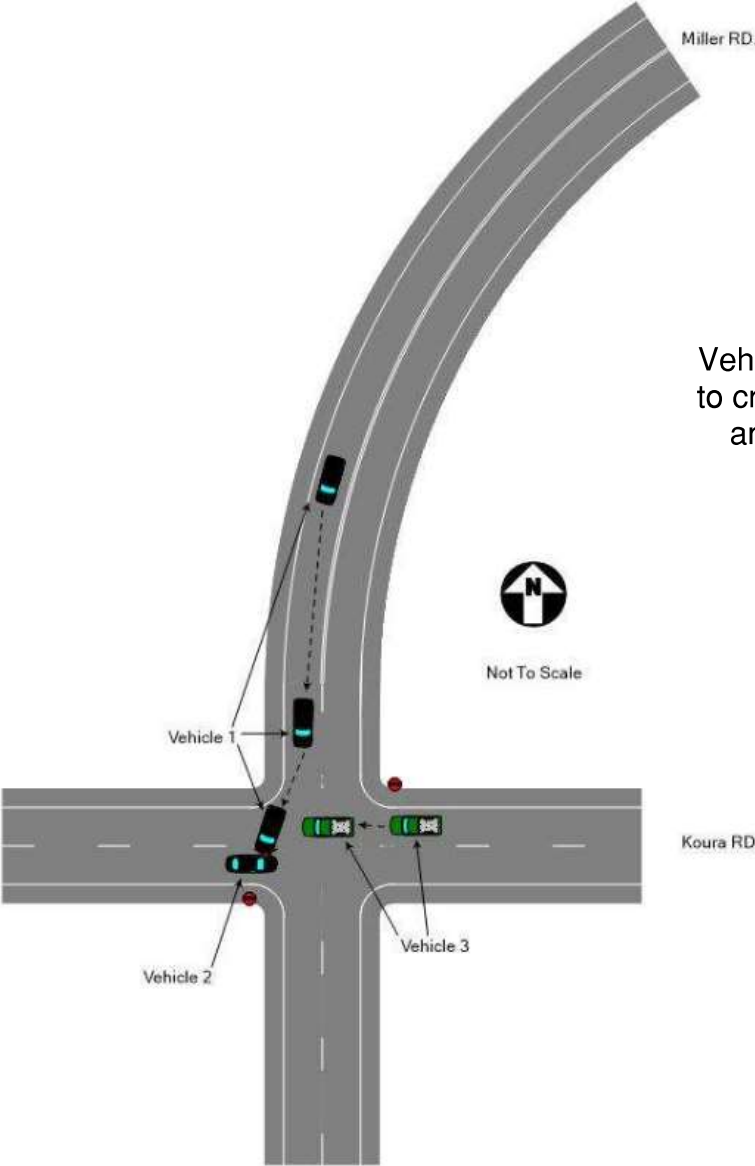
### 2021 Traffic Count Data

- ADT: 5,510 vehicles
- 85th-percentile speed: 38 MPH
- 10 MPH Pace: 31-40 MPH

### 2024 Traffic Data (October)

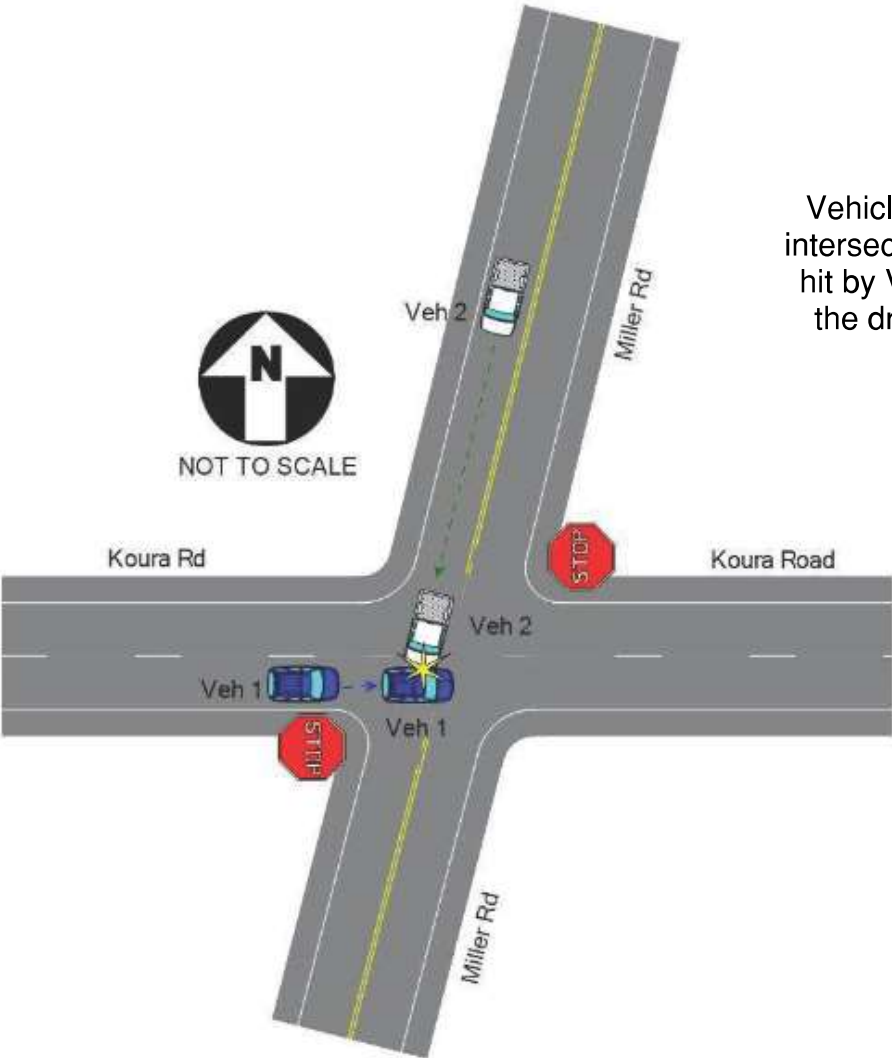
- 12 days of data
- Southbound direction only
- ADT (one-direction): 1,915 vehicles --> 2x = 3,830
- 85th-percentile speed: 36 MPH
- 10 MPH Pace: 27-37 MPH

Accident #1 (2020)

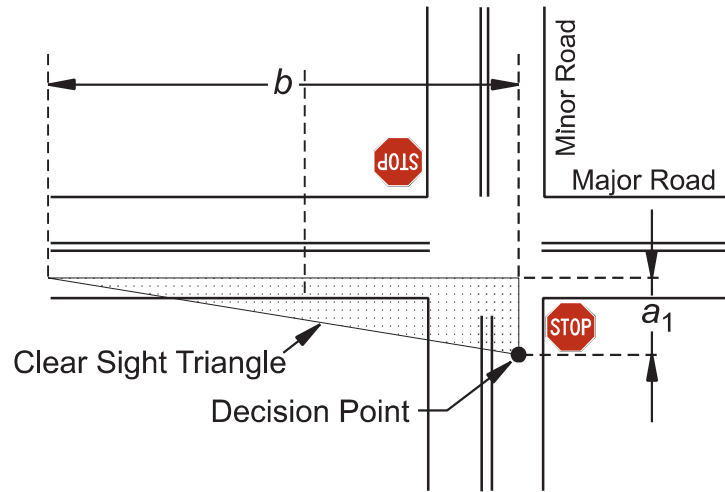


Vehicle 3 attempted to cross intersection and did not see Vehicle 1.

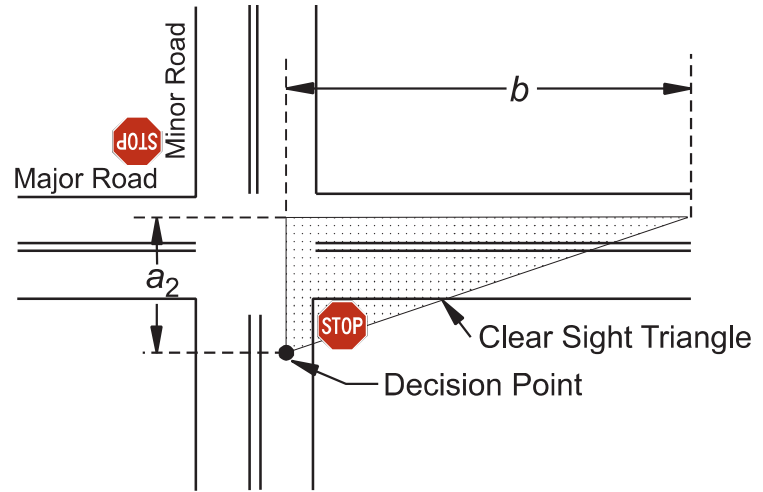
Accident #2 (2023)



Vehicle 1 entered intersection and was hit by Vehicle 2 on the driver's side.



Departure Sight Triangle for Viewing Traffic Approaching the Minor Road from the Left



Departure Sight Triangle for Viewing Traffic Approaching the Minor Road from the Right

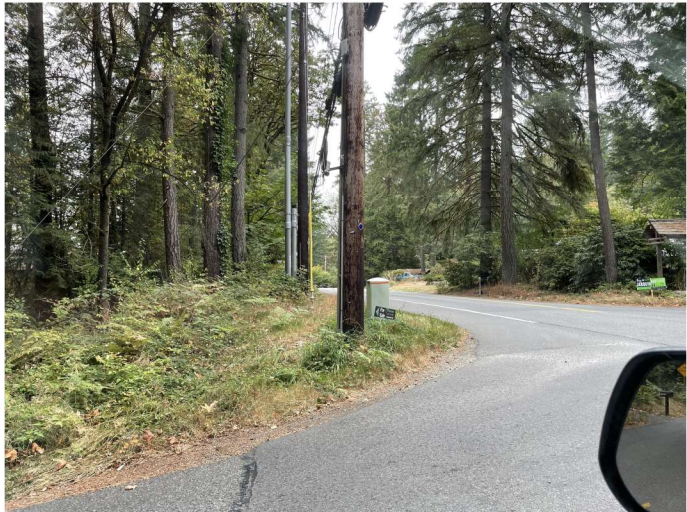
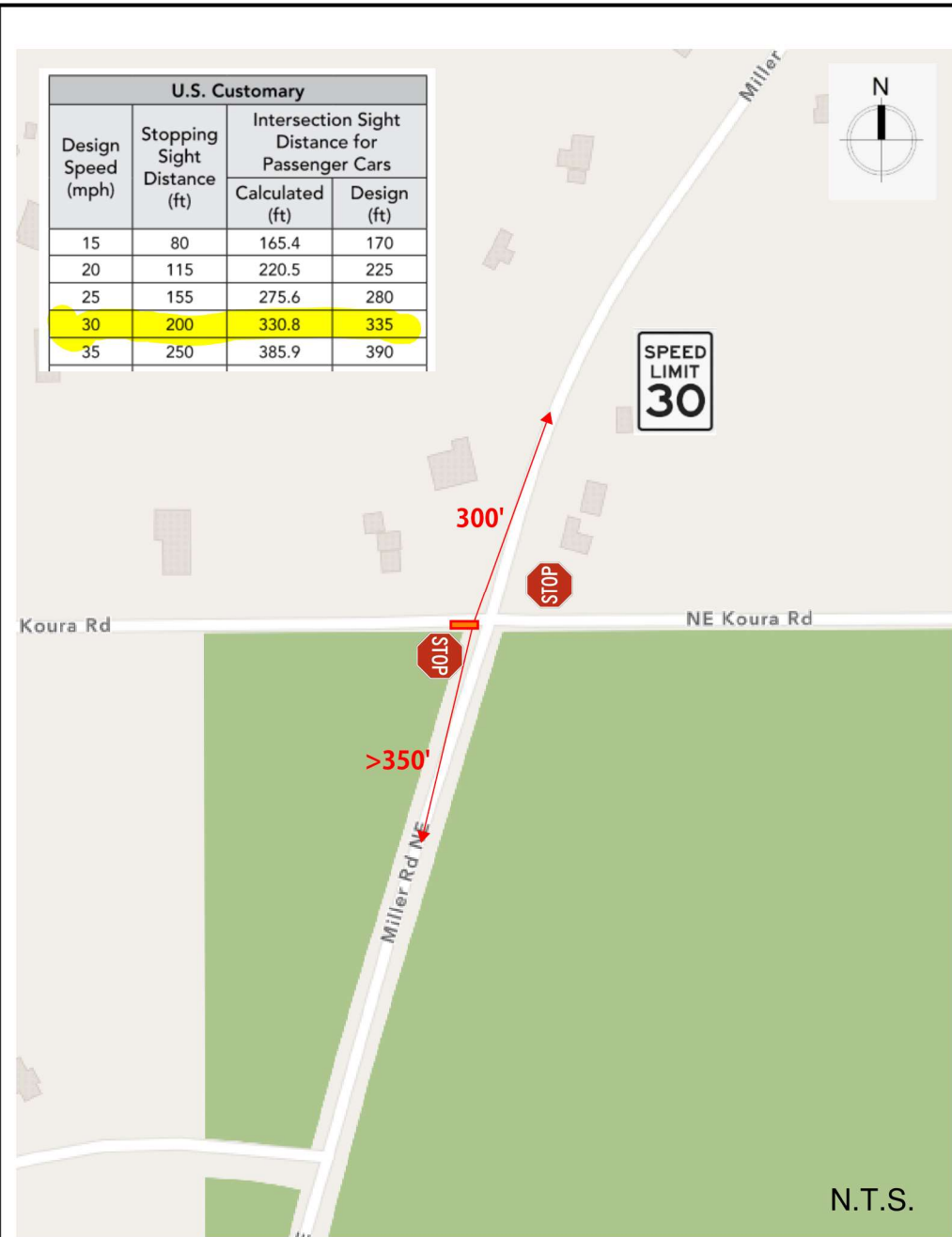
Departure Sight Triangles (Stop-Controlled)



*Koura EB stop position looking north to Miller sightline*



*Koura EB stop position looking south to Miller sightline*



*Koura WB stop position looking north to Miller sightline*



*Koura WB stop position looking south to Miller sightline*