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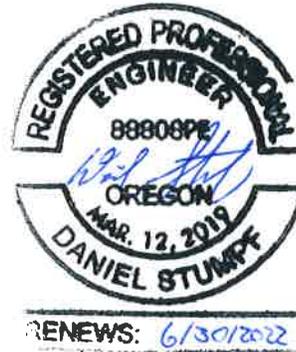
Memorandum

To: Erin Upham
Axis Design Group

From: Nick Mesler, EIT
Daniel Stumpf, PE

Date: January 14, 2021

Subject: Herzog Meier Mazda
Trip Generation Memorandum



Introduction

This memorandum reports the findings of a trip generation study conducted for the proposed modification of the existing Herzog-Meier Mazda Showroom & Service Building. The proposed redevelopment project will replace an existing 4,782 square foot Showroom & Service Building and with a new 11,037 square foot showroom and a new 4,292 square foot service building. An existing 5,972 square foot service building and 240 square foot trash enclosure are to remain with the site redevelopment. This yields a net total increase of 10,547 square feet of building space to the Herzog-Meier Mazda site.

The purpose of this memorandum is to examine the projected trip generation of the proposed increase of 10,547 gross square feet of building space to the dealership for the morning peak hour, evening peak hour, and average weekday trip generation. Trip generation of the site will determine if the project will exceed the 300-vehicle trip threshold, requiring a Traffic Impact Analysis (TIA).

Location Description

The project site is located at 14105 SW Tualatin Valley Highway in Beaverton, Oregon. The site includes a single tax lot (lot #01800, map #1S116BB) which encompasses an approximate total of 1.85 acres. The project site is located north of SW Tualatin Valley Highway (OR-8), west of SW 141st Avenue, and south of SW Carousel Court. The site is currently developed as the Herzog-Meier Mazda auto dealership and service station. The project plans to reconstruct, modernize, and add additional space to the site. The proposed redevelopment project will replace an existing 4,782 square foot Showroom & Service Building and with a new 11,037 square foot showroom and a new 4,292 square foot service building. An existing 5,972 square foot service building and 240 square foot trash enclosure are to remain with the site redevelopment. This yields a net total increase of 10,547 square feet of building space to the Herzog-Meier Mazda site.

SW Tualatin Valley Highway (OR-8) is classified by the City of Beaverton as a Principal Arterial. The roadway has a five-lane cross-section with a center turn lane/striped median and has a posted speed of 45 mph. Partial curbs

and Class II bicycle lanes are provided along both sides of the roadway. Contiguous sidewalks are provided along the north side of the roadway.

SW 141st Avenue is classified by the City of Beaverton as a Collector. The roadway has an undivided, two-lane cross-section with a posted speed limit of 20 mph. Curbs and contiguous sidewalks are provided along both sides of the roadway. No bicycle facilities exist along this roadway segment.

SW Carousel Court is a non-classified local roadway. This roadway is a two-lane undivided roadway with no posted speed. Curbs and contiguous sidewalks are provided on both sides of the roadway. No bicycle facilities are provided along this roadway segment.

Figure 1 below presents an aerial image of the nearby vicinity with the project site outlined in yellow.

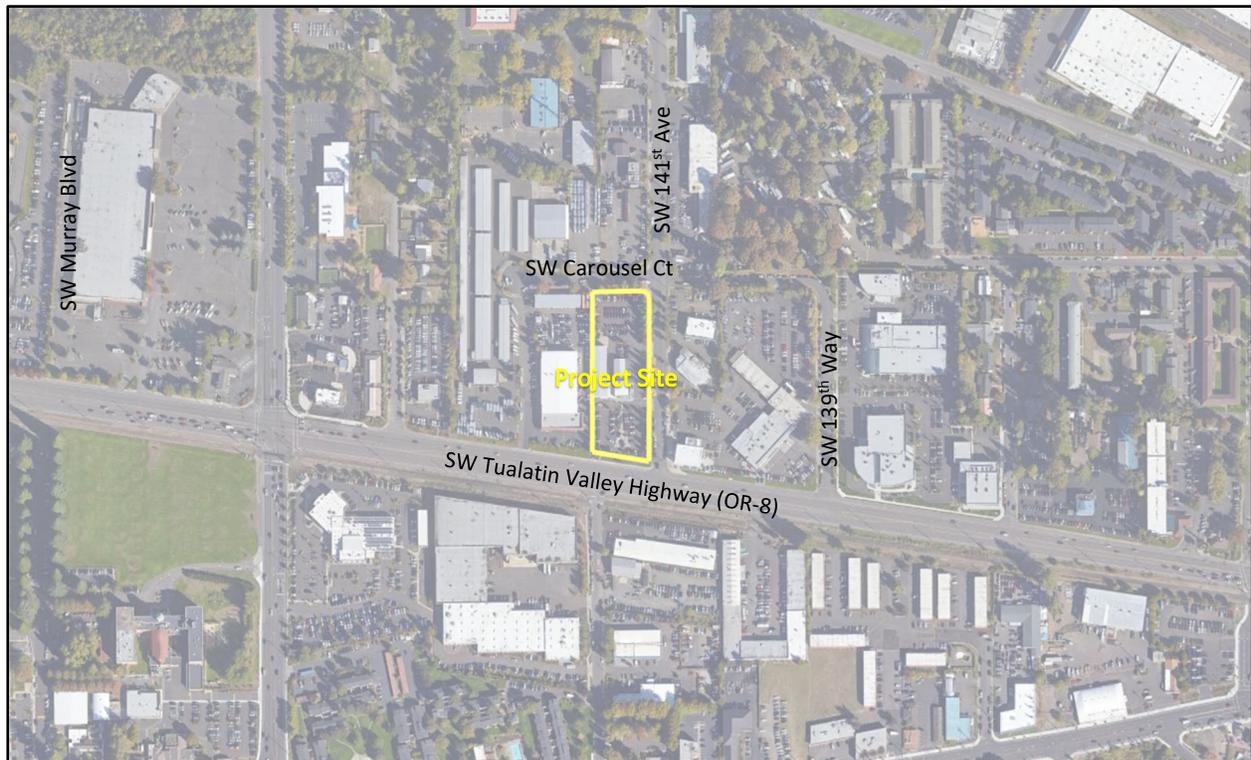


Figure 1: Aerial Photo of Site Vicinity (Image from Google Earth)

Trip Generation

The proposed redevelopment project will increase the total sales and service building square footage from 11,919 square feet to 22,466 square feet, for a net gain of 10,547 square feet.

To estimate the number of trips generated by the proposed project, trip rates from the *Trip Generation Manual*¹ were used. Data from land use codes 840, *Automobile Sales (New)* were used to estimate and compare the proposed development's trip generation between the existing and modified building based on the increase in the square footage of the gross floor area. *Automobile Sales (New)* is described as follows:

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.

A new automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or leasing of new cars is the primary business at these facilities; however, automobile services, parts sales, and used car sales may also be available. Some dealerships also include leasing options, truck sales, and servicing.

The trip generation estimates are summarized in Table 1 below. Detailed trip generation calculations are included as an attachment to this document.

Table 1 – Trip Generation Summary

Use	ITE Code	Intensity	Morning Peak Hour			Evening Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Existing Showroom and Service Building	840	4,782 SF	(7)	(2)	(9)	(5)	(7)	(12)	(134)
Proposed Showroom	840	11,037 SF	15	6	21	11	16	27	308
Proposed Service Building	840	4,292 SF	6	2	8	4	6	10	120
Net Additional Site Trips		10,547 SF	15	5	20	10	16	26	294

Note: Net Additional Site Trips may not equal the component pieces due to rounding.

The trip generation calculations show that the proposed modification to the existing vehicle service station building is projected to generate a net increase of 20 site trips during the weekday morning peak hour, 26 site trips during the weekday evening peak hour, and 294 site trips during a typical weekday.

Per the City of Beaverton Development Code 60.55.20.2, dated May 2017, "A *Traffic Impact Analysis* is required when the proposed land use change or development will generate 300 vehicles or more per day (vpd) in average weekday trips as determined by the City Engineer." Since the proposed modification is projected to generate less than 300 average weekday trips, the above threshold for requiring a TIA is not met.

Conclusions

The construction of the proposed Herzog-Meier Mazda showroom and service building expansion is projected to generate a net increase of 20 morning peak hour trips, 26 evening peak hour trips, and 294 average weekday site trips. The proposed site modification is not projected to trigger the City of Beaverton's 300 average weekday trip generation threshold for requiring a full Traffic Impact Analysis.

If you have any questions or concerns regarding this analysis or need further assistance, please don't hesitate to contact us.





TRIP GENERATION CALCULATIONS

Land Use: Automobile Sales (New)
Land Use Code: 840
Setting/Location: General Urban/Suburban
Variable: 1,000 Sq. Ft. GFA
Variable Value: 10.547

AM PEAK HOUR

Trip Rate: 1.87

	Enter	Exit	Total
Directional Distribution	73%	27%	
Trip Ends	15	5	20

PM PEAK HOUR

Trip Rate: 2.43

	Enter	Exit	Total
Directional Distribution	40%	60%	
Trip Ends	10	16	26

WEEKDAY

Trip Rate: 27.84

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	147	147	294