



Whipple Consulting Engineers, Inc.

December 20, 2021  
W.O. No. 21-2963

City of Spokane  
Department of Engineering Services  
801 W. Spokane Falls Boulevard  
Spokane, WA 99201

Attn: Inga Note, P.E.

Re: **The Greens at Meadow Lane 2, a Residential Development**  
**5808 S. Meadow Lane Road**  
**Trip Generation and Distribution Letter.**

Dear Inga,

The purpose of this document is to provide a Trip Generation and Distribution letter (TGDL) for the proposed Greens at Meadow Lane 2 development located at 5808 South Meadow Lane Road, as shown on Figure 1, Vicinity Map and Figure 2, Preliminary Site Plan. This letter will follow the standards for doing Trip Distribution Letters as required by the City of Spokane and the Institute of Transportation Engineers (ITE).

### **PROJECT DESCRIPTION**

The project proposes the development of 7.03 acres  $\pm$  into 25 Single-Family Residential lots. The property is currently developed with a residential home and outbuildings, and all structures will remain during the construction. The site is also covered with field grass, trees, and weeds. The project proposes to build one (1) north-south (Bernard Street) and one (1) east-west (Pheasant Bluff Avenue) public roads. The project site is proposed to be accessed via Meadow Lane Road through the proposed Greens at Meadow Lane development. Please see Figure 2 preliminary site plan.

### **VICINITY / SITE PLAN**

The project site is listed as Residential Single Family on the Comprehensive Plan and zoned as RSF. The site lies on the SE 1/4 of Section 6, T. 24N., R. 43 E., W.M. within the City of Spokane, Washington. The parcel number for the site is 34064.0047. A vicinity map is included as Figure 1, along with a preliminary site plan as Figure 2.

## **TRIP GENERATION AND DISTRIBUTION**

### **Trip Types**

The proposed land use is single family residential; ITE has developed data regarding various trip types that all developments experience. These are found in several places, however, for this analysis the *Trip Generation Manual 10<sup>th</sup> Edition* as well as the Institute of transportation Engineers (ITE) *Trip Generation Handbook* were used to develop the criteria for this analysis.

Generally, all existing and proposed developments will be made up of one or more of the following four trip types: new (destination) trips, pass-by trips, diverted trips, and shared (internal trips). In order to better understand the trip types available for land access a description of each specific trip type follows.

**New (Destination) Trips** - These types of trips occur only to access a specific land use such as a new retail development or a new residential subdivision. These types of trips will travel to and from the new site and a single other destination such as home or work. This is the only trip type that will result in a net increase in the total amount of traffic within the study area. The reason primarily is that these trips represent planned trips to a specific destination that never took trips to that part of the City prior to the development being constructed and occupied. This project will develop new trips.

**Pass-by Trips** - These trips represent vehicles which currently use adjacent roadways providing primary access to new land uses or projects and are trips of convenience. These trips, however, have an ultimate destination other than the project in question. They should be viewed as customers who stop in on their way home from work. An example would be on payday, where an individual generally drives by their bank every day without stopping, except on payday. On that day, this driver would drive into the bank, perform the prerequisite banking and then continue on home. In this example, the trip started from work with a destination of home, however on the way, the driver stopped at the grocery store/latte stand and/or bank directly adjacent to their path. Pass-by trips are most always associated with commercial/retail types of development along major roadways. Therefore, for this project pass-by trips will not be considered.

**Diverted (Linked) Trips** - These trips occur when a vehicle takes a different route than normal to access a specific facility. Diverted trips are similar to pass-by trips, but diverted trips occur from roadways, which do not provide direct access to the site. Instead, one or more streets must be utilized to get to and from the site. For this project, no diverted trips are anticipated.

**Shared / Internal / Trips** - These are trips which occur on the site where a vehicle/ consumer/ tenant will stop at more than one place on the site. For example, someone destined for a certain shop at a commercial site may stop at a bank just before or after they visit the shop that they went to the site to visit. This trip type reduces the number of new trips generated on the public road system and is most commonly used for commercial developments. For this project, no internal trips are anticipated

## Trip Generation Characteristics for the Existing and Proposed land uses

As noted earlier, trip generation rates for the AM and PM peak hours are determined by the use of the *Trip Generation Manual, 10<sup>th</sup> Edition* published by the Institute of Transportation Engineers (ITE). The purpose of the *Trip Generation Manual* is to compile and quantify empirical data into trip generation rates for specific land uses within the US, UK and Canada.

### Proposed Land Use

For the proposed 24 units (1 unit deduction by an existing single family residential home) of single family residential development, Land Use Code (LUC) #210, Single Family Detached Housing was used to establish the number of potential trips generated by the proposed land use. The fitted curve equation and the anticipated number of AM and PM peak hour trips for the single family residential land use are shown on Table 1.

**Table 1-Trip Generation Rates for LUC # 210 – Single Family Detached Housing (Figure 3&4)**

Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips		
	Vol. @ Fitted Curve Equation / Unit	Directional Distribution		Vol. @ Fitted Curve Equation / Unit	Directional Distribution	
		25% In	75% Out		63% In	37% Out
24*	22	6	16	26	16	10
Average Daily Trip Ends (ADT)				Fitted Curve Equation AM - $T = 0.71(x) + 4.80$ PM - $\ln(T) = 0.96 \ln(x) + 0.20$ ADT - $\ln(T) = 0.92 \ln(x) + 2.71$ T = Trips/units, x = Dwelling Units		
Units	Fitted Curve Equation		ADT			
24*	-		280			

\* 1 unit deduction by an existing single family residential home

As shown in Table 1, the proposed development is anticipated to generate 22 trips in the AM peak hour with 6 trips entering the site and 16 trips exiting the site. In the PM peak hour, the proposed development is anticipated to generate a total of 26 trips, with 16 trips entering the site and 10 trips exiting the site. The proposed land use is anticipated to generate 280 average daily trips to/from the project. Please see Figure 3 & 4 for Trip Distribution.

### TRIP DISTRIBUTION

As shown on the preliminary site plan, the site will be accessed via Meadow Lane Road (Please see Figure 2 Site Plan). Descriptions of the anticipated roadways used by the development are provided here.

**Meadow Lane Road** is generally a north-south, two-way, 2-lane Collector and local access road that crosses Highway 195 as a collector and while climbing the hillside intersects with Eagle Ridge Boulevard. Meadow Lane Road continues as a local access road and proceeds south while climbing the hill and serving residential land uses. The Speed limit of Meadow Lane Road is 30 MPH within the study area.

**Eagle Ridge Boulevard** is an east-west, two-way, 2-lane collector road that extends east from Cedar Road through Parkridge Boulevard, Shelby Ridge Street, and Browne Street before terminating at Meadow Lane Road. Eagle Ridge Boulevard primarily serves residential land uses. The speed limit on Eagle Ridge Boulevard is 30 MPH.

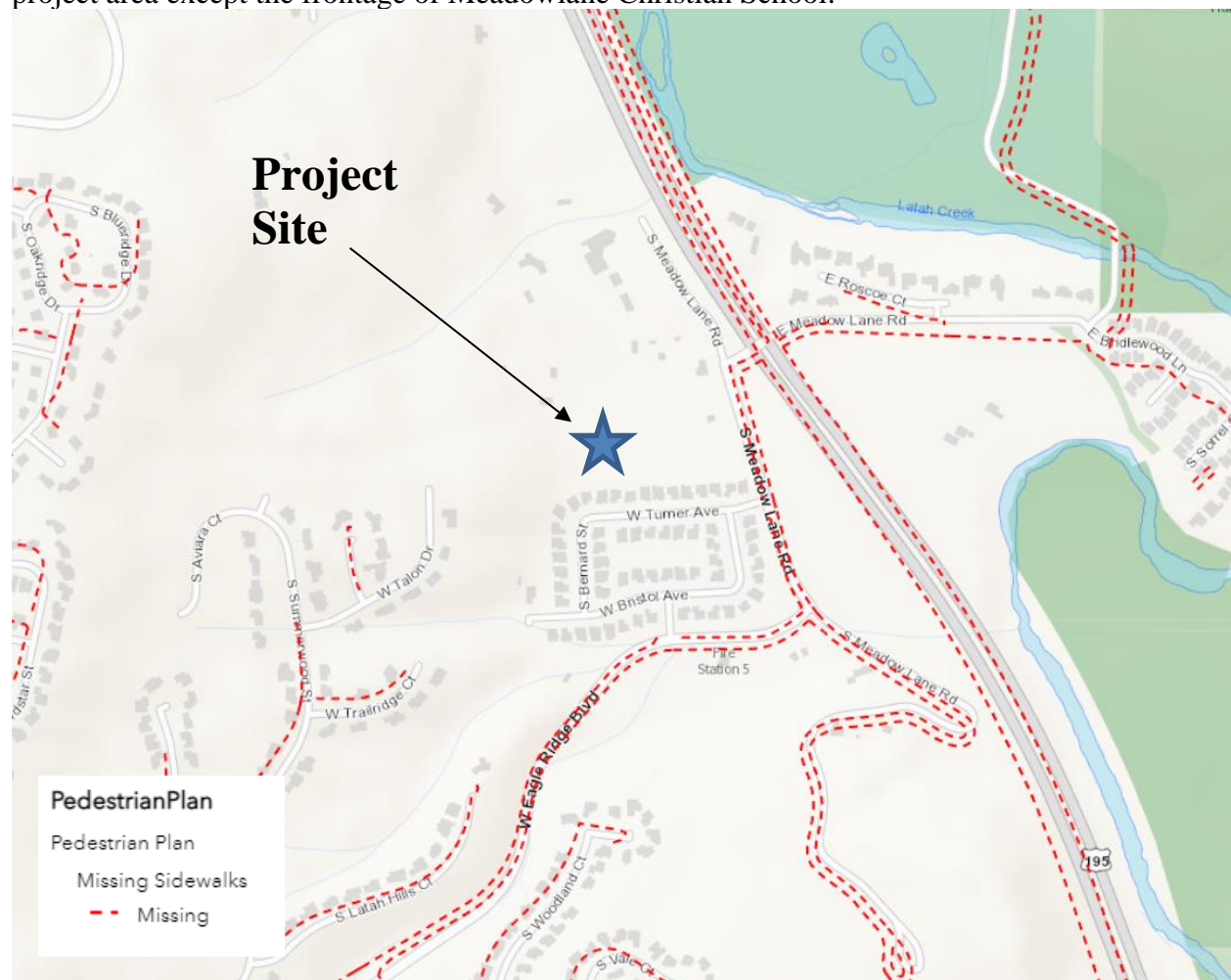
**State Route 195** is a north/south, two-way, 4-lane highway that extends south from Interstate 90 at Exit 279 and goes through 16th Avenue, Thorpe Road and Cities of Spangle, Freedom, Plaza, Rosalia, Thornton, Cashup, Steptoe, Colfax, Pullman, Johnson, Colton, and Uniontown before merging with State Route 95. The speed limit on State Route 195 is 55 MPH within the study area.

### Existing Transit System

There is no bus route to be accessible by pedestrians from the project site within the project area.

### Existing Pedestrian Networks

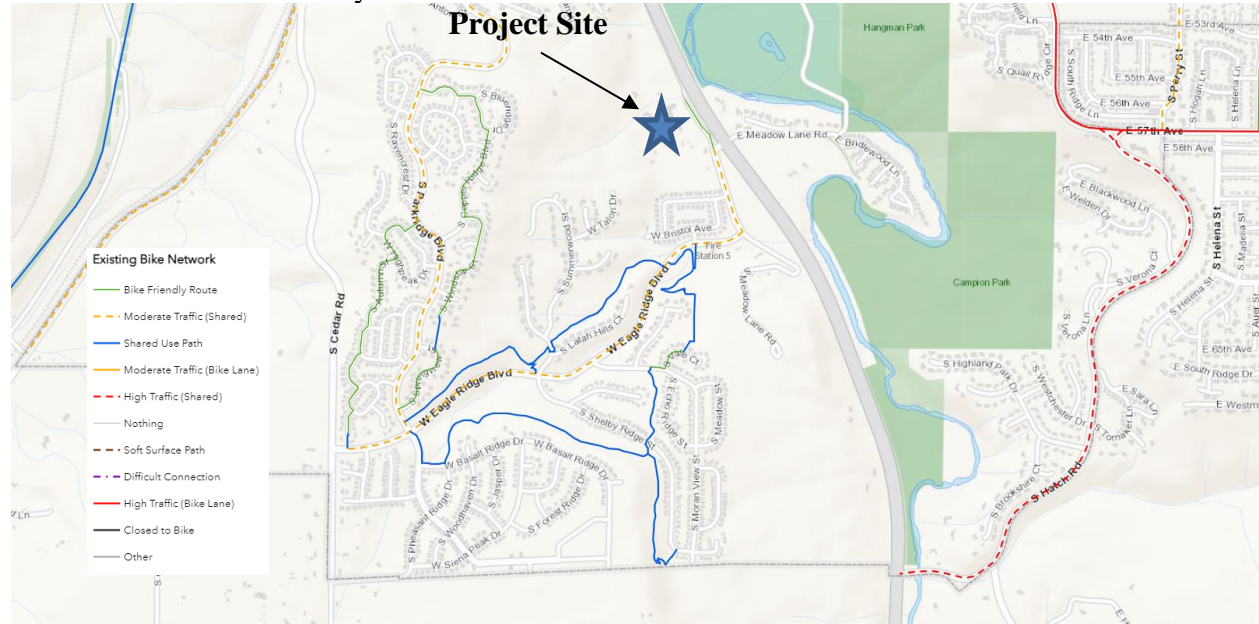
There is no existing sidewalk on Eagle Ridge Boulevard and Meadow Lane Road within the project area except the frontage of Meadowlane Christian School.



Source: City of Spokane Pedestrian Networks

## Existing Bike Routes

Within the study area, Meadow Lane Road and Eagle Ridge Boulevard are assigned as a Shared Bike Route within the study area.



**Source: City of Spokane Bike Routes Map**

Considering many factors such as the surrounding transportation facilities, typical commuting patterns, existing development in the area, and Average Daily Traffic counts, traffic for the proposed development is anticipated as follows: It is anticipated that 20% of the trips will go to/from the south via State Route 195, 5% of the trips will go to/from the southwest via Cheney Spokane Road, and 75% of the trips will go to/from the north via State Route 195 with 10% of those trips being distributed to/from the commercial area on Cheney Spokane Road, 10% of the trips being distributed to/from the west via Thorpe Road, 5% of the trips being distributed to/from the north via Thorpe Road and Inland Empire Way, 10% of the trips being distributed to/from the north via 16<sup>th</sup> Avenue, 15% of the trips being distributed to/from the west via Interstate 90, and 25% of the trips being distributed to/from the east via Interstate 90. Please see Figures 3 & 4 for a visual representation of the project trip distribution.



### **Traffic Impact Fee**

The City of Spokane municipal code has established transportation impact fees under Spokane Municipal Code Title 17 Chapter 17D.030. The proposed project is within the South Service Area and as such is subject to the current Impact Fee Schedule. Table 2 calculates the anticipated impact fee for the proposed project.

**Table 2 – Proposed Land Use Impact Fee**

Land Use	LUC	Quantity	Unit of Measure	Fee per unit	Fee
LUC # 210 Single Family Detached Housing	210	24	Dwelling Units	\$1,183.39	\$28,401.36

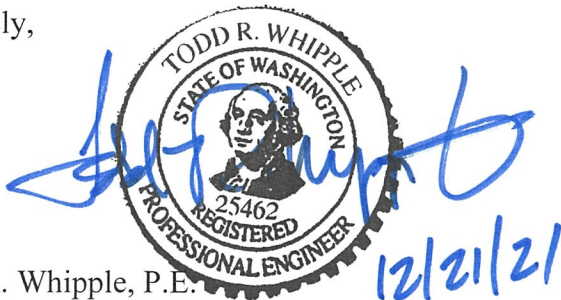
As shown in Table 2, the proposed project under the current fee schedule is anticipated to generate an additional impact fee of \$28,401.36.

### **CONCLUSIONS AND RECOMMENDATIONS**

It is anticipated that the proposed project will generate 22 trips in the AM peak hour and 26 trips in the PM peak hour. Based upon the number of anticipated trips, and the distribution of those trips on city collectors, we believe that while the proposed project will generate trips on the transportation system, that those trips will have a minimal impact on the transportation system. Therefore, we recommend that the project pay the City of Spokane Traffic Impact Fee as allowed by the current code at the time of building permit, and that the project should be allowed to move forward without further traffic analysis.

Should you have any questions related to this document please do not hesitate to contact us at (509) 893-2617.

Sincerely,



Todd R. Whipple, P.E.

TRW/kmk

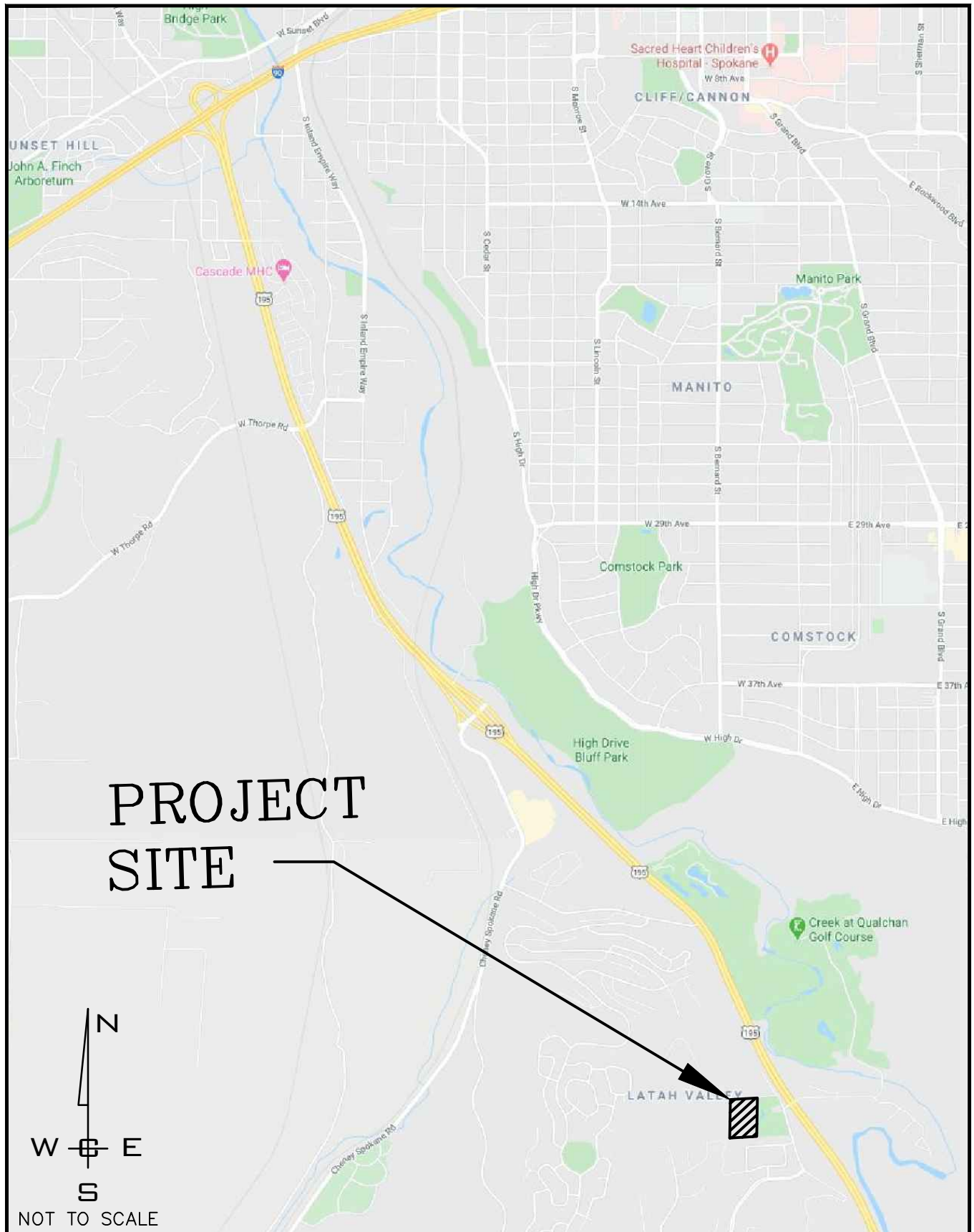
encl. Appendix (Vicinity Map, Site Plan, Trip Dist %, Photos)

cc:

Sponsor  
File

# **APPENDIX**

1. Vicinity Map
2. Site Plan
3. AM Trip Distribution by Percent
4. PM Trip Distribution by Percent



PROJ #: 21-2963  
 DATE: 12/20/21  
 DRAWN: KMK  
 APPROVED: TRW

**TRIP GENERATION AND DISTRIBUTION**  
**THE GREENS AT MEADOW LANE 2**  
 5808 SOUTH MEADOW LANE ROAD  
 SPOKANE, WASHINGTON

**FIGURE 1**

**VICINITY MAP**

**WCE**  
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 CIVIL AND TRANSPORTATION ENGINEERING  
 21 SOUTH PINES ROAD  
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 PH: 509-893-2617 FAX: 509-926-0227





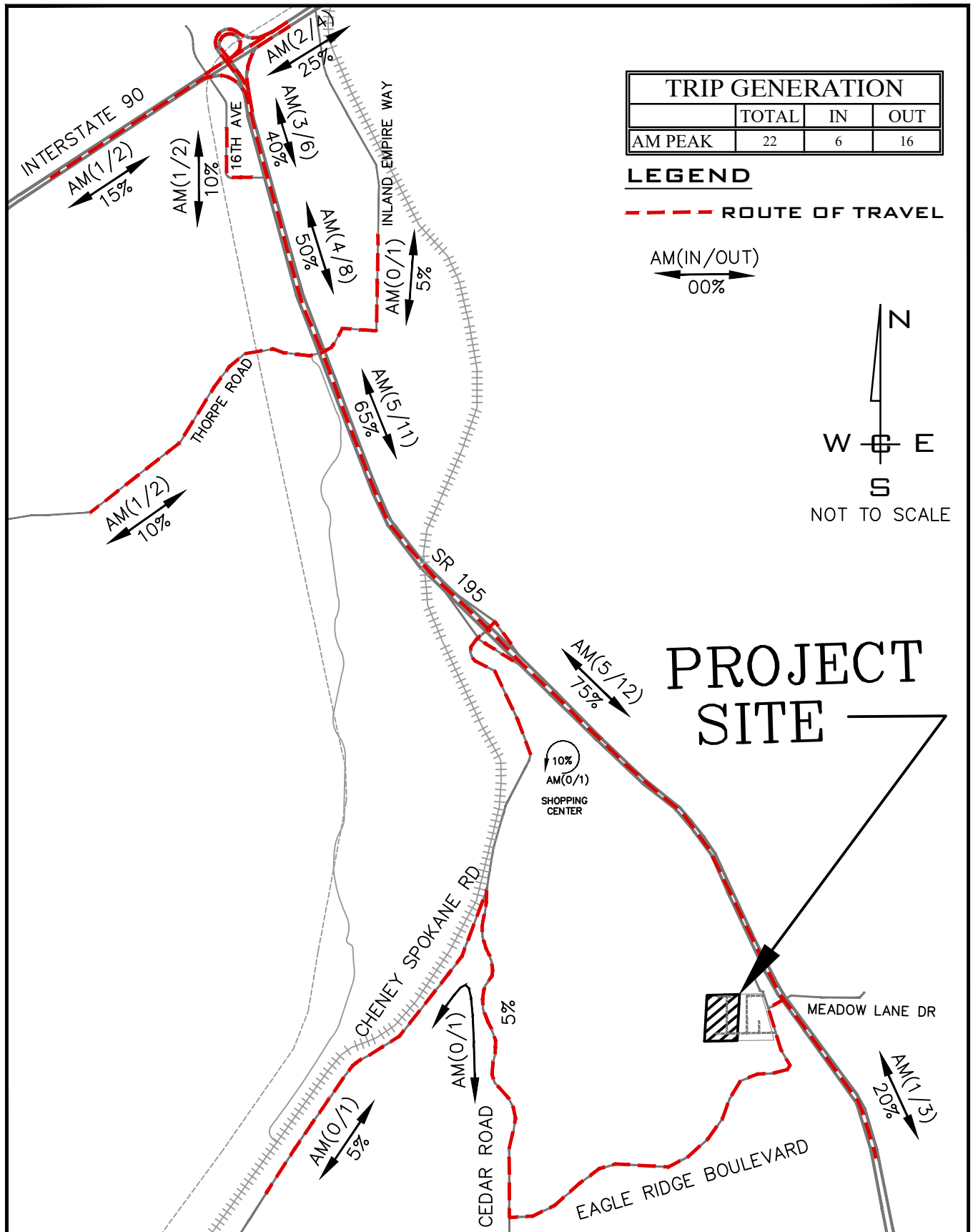
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**FIGURE 2**

**PRELIMINARY SITE PLAN**



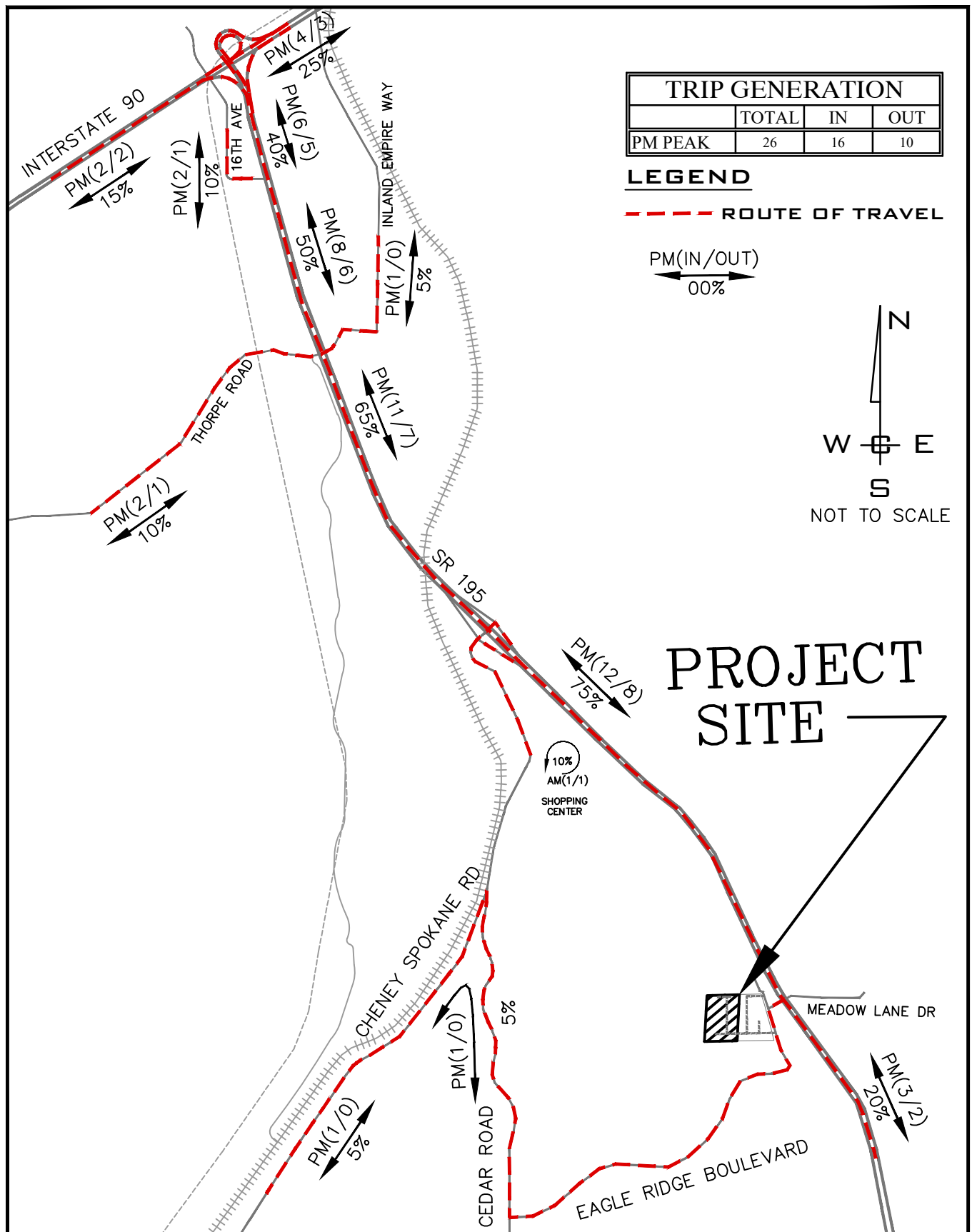
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**FIGURE 3**

**AM PROJECT TRIP DISTRIBUTION**

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**FIGURE 4**

**PM PROJECT TRIP DISTRIBUTION**

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