

**TRIP GENERATION ANALYSIS  
PORT OF WHITMAN AGRICULTURE  
ADVANCEMENT CAMPUS**

**March 2, 2023**



## Project Description

The project consist of the development of an approximate 84.5 acre site located near the intersection of State Road 195 and Wawawai Road, and is currently an open field of dryland farming within the southwest portion of the City of Pullman. The analysis is composed of several land uses including Light Industrial and Neighborhood Commercial. The site is broken down to the following areas:

- Light Industrial 79 acres
- Neighbor Commercial 5.5 acres

Access to the site is via one approach fronting Wawawai Road and one internal roadway running north to south and transection the site approximately near the midpoint of the parcel (See the Appendix, Figure 1). The internal roadway will provide access to all 84.5 acres. A secondary road is shown that will be for emergency traffic only.

The City of Pullman is requiring the Traffic Generation Analysis (TGA) and this report will follow the Zoning Codes uses as described above.

The Neighborhood Commercial and Light Industrial sites will be evaluated using the Institute of Transportation Engineer's Manual (ITE), 10<sup>TH</sup> Edition. At the time of this analysis there has not been a decision as to what type of usage the site will contain and for that reason a Land Use Code of 110, General Light Industrial, will be used taking into consideration that Neighborhood Commercial is intended for pedestrian traffic and does not support normal traffic volume and is restrictive to drive thru or high traffic volume type use.

## Site Usage Characteristic

### Neighborhood Commercial District

The City of Pullman City Code C1 Neighborhood Commercial District is designed to accommodate small retail and personal services for the immediate neighborhood. It is characterized by small buildings, low vehicle traffic generation and considerable walk-in trade. It does not promote drive thru businesses. The Land Use Code 820, Shopping Center (Retail) will be used for this area but in all likely hood will have lower vehicle traffic due to the restriction under the city Code C1.

### General Light Industrial District

A General Light Industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, materials testing, and assembly of data processing equipment.

### Trip Generation Analysis

As noted above no specific store uses has been identified for this project so to determine the approximate square footage that could be developed for building space and analysis was completed using the following calculations: taking the number of stalls required under the City Building Code per 1,000 square feet of building and estimating 30% of the area for landscaping, drainage facilities, and slope setbacks:

Parking Stall: 8.5' by 18', plus 12' half driving lane = 255 square feet

The city codes states that for every 1,000 square feet of building the site must contain 5 parking stalls or 1,250 square feet. Therefore 30% of the site is in landscaping and drainage, 39% in parking and 31% in buildings.

Neighborhood Commercial District: 5.5 acres x 31% = 1.70 acres (74,270 sq. ft.)

General Light Industrial District: 79 acres x 31% = 24.5 acres (1,066,784 sq. ft.)

Typical hours of operation for the Neighbor Commercial traffic occurs in the 11:30 AM to 12:00 PM period weekdays and 3:30 PM to 5:30 PM weekdays.

For Land Use Code General Light Industrial, Land Use Code 110, hours of operation for the peak weekly traffic are 7:00 AM to 9:00.

Neighborhood Commercial, ITE Code 110

AM Peak: = 156 trips

PM Peak: = 139 trips

General Light Industrial, ITE Code 110

AM Peak: = 984 trips

PM Peak: = 878 trips

### Summary:

For the 100% build out of the project the total number of trips for the entire 70-acre development would be:

AM Peak = 1,140 trips

PM Peak = 1,017 trips

## APPENDIX

## **Land Use: 110**

### **General Light Industrial**

#### **Description**

A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment. Industrial park (Land Use 130) and manufacturing (Land Use 140) are related uses.

#### **Additional Data**

Time-of-day distribution data for this land use are presented in Appendix A. For the 30 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 1980s, the 2000s, and the 2010s in Colorado, Connecticut, Indiana, New Jersey, New York, Oregon, Pennsylvania, and Texas.

#### **Source Numbers**

106, 157, 174, 177, 179, 184, 191, 251, 253, 286, 300, 611, 874, 875, 912

# General Light Industrial (110)

Vehicle Trip Ends vs: Employees  
On a: Weekday,  
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban  
Number of Studies: 44  
Avg. Num. of Employees: 84  
Directional Distribution: 85% entering, 15% exiting

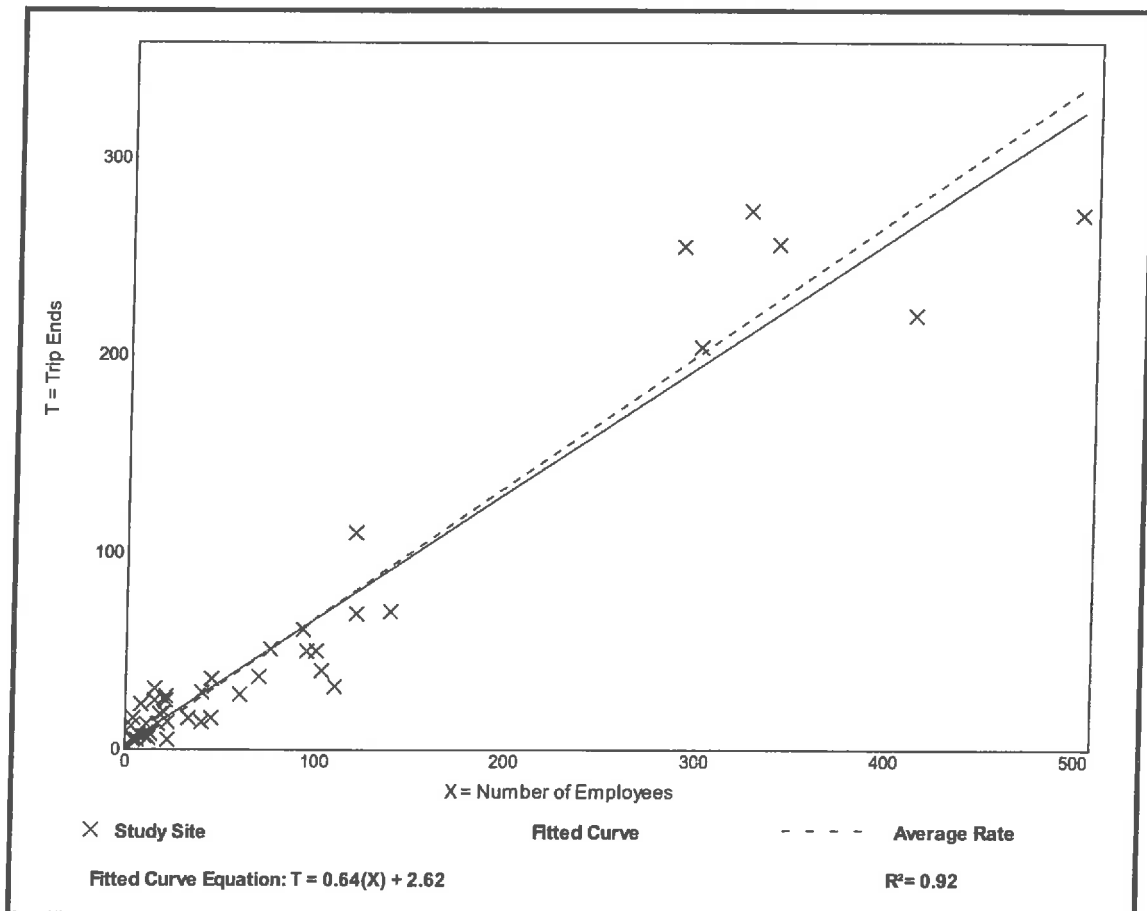
## Vehicle Trip Generation per Employee

Average Rate  
0.67

Range of Rates  
0.23 - 4.00

Standard Deviation  
0.28

## Data Plot and Equation



# General Light Industrial (110)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday,  
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban  
Number of Studies: 44  
1000 Sq. Ft. GFA: 64  
Directional Distribution: 18% entering, 82% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate  
0.83

Range of Rates  
0.09 - 8.77

Standard Deviation  
0.70

## Data Plot and Equation

