



WALLER ROAD ELEMENTARY SCHOOL
TRIP GENERATION MEMO

Tacoma, WA



06/06/2022

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Date: June 6, 2022

To: Christine Phillips, AICP, RA
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From: Aaron Van Aken, PE, PTOE

Subject: Waller Road Elementary School –Trip Generation Memo

The intent of this assessment is to provide Pierce County with a trip generation memo and site characteristics for the proposed project herein referred to as Waller Road Elementary. A project description is provided below.

Project Summary

- Waller Road Elementary School proposes the addition of an 864 square foot portable classroom to the existing campus at 6312 Waller Rd E.
- Consistent with other portables and historic classroom sizes, the proposed portable addition is expected to accommodate around 25 students.

Figure 1 below illustrates the school's property with frontage along both Waller Road E (east) and 64th Street E (south). See Figure 2 for site plan illustrating the proposed portable location.

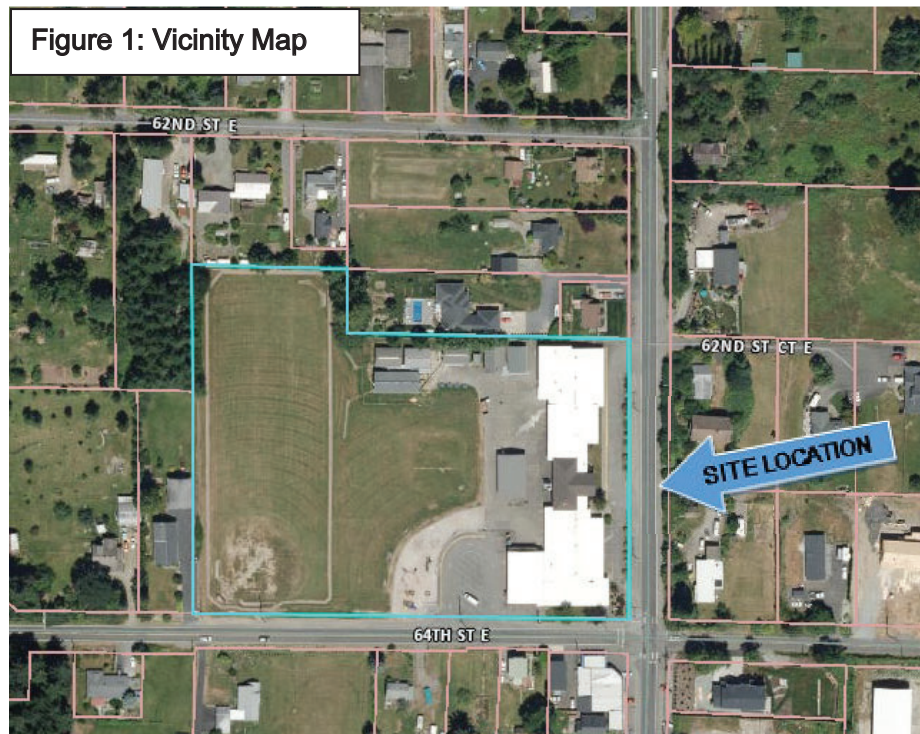
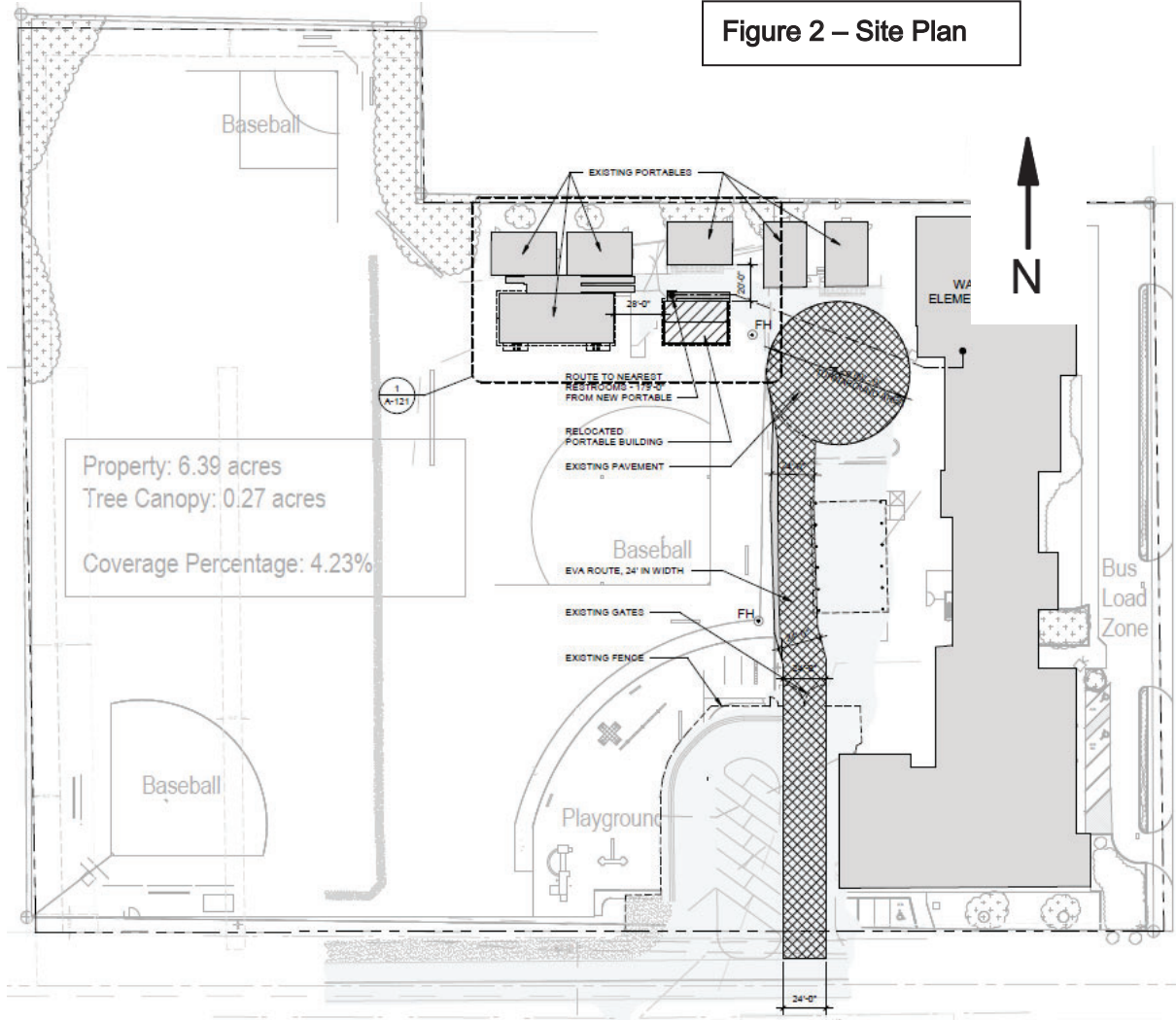


Figure 2 – Site Plan



Trip Generation

The magnitude of the anticipated vehicle trip generation for the proposed project was derived from the Institute of Transportation Engineers (ITE) publication, *Trip Generation Manual*, 11th Edition. The utilized Land Use Code (LUC) most representative of the project was determined to be ITE's *LUC 520 – Elementary School*. Number of students was applied as the input variable and average rates were used in determining trip ends that could be expected from the addition of a portable classroom.

Table 1: Project Trip Generation

Land Use	Unit	Variable	AWDT	AM Peak-Hour Trips			PM Peak-Hour Trips		
				In	Out	Total	In	Out	Total
LUC - 520 Elementary School	One New Portable	25 students	57	10	9	19	5	6	11

Based on ITE data, the proposed new portable is estimated to generate approximately 57 daily weekday trips with 19 trips (10 inbound / 9 outbound) occurring in the AM peak and 11 trips (5 inbound / 6 outbound) In the PM peak.

Conclusion

In review of the provided site plan and development proposal, a trip generation analysis was conducted for the proposed single portable addition to Waller Road Elementary School. A single classroom portable could be expected to accommodate 25 students. Using ITE data for the estimated 25 student capacity increase yields an estimated additional 19 trips in the school AM peak hour, 11 trips in the school PM peak hour and an average weekly daily trip total of 57 trips.

Please call if you require additional information.

Aaron Van Aken, PE, PTOE

Elementary School (520)

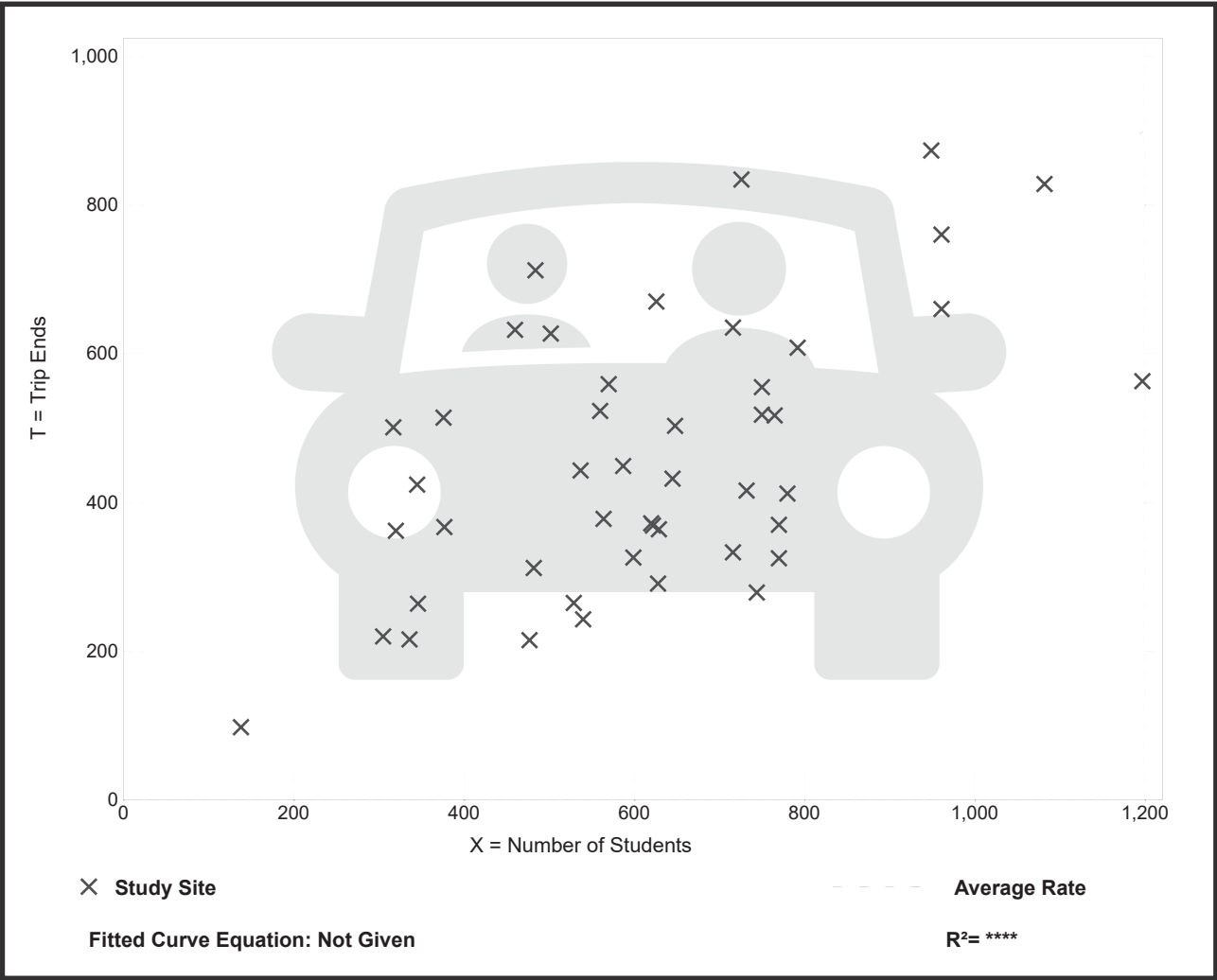
Vehicle Trip Ends vs: Students
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 46
Avg. Num. of Students: 616
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.75	0.38 - 1.58	0.27

Data Plot and Equation



Elementary School (520)

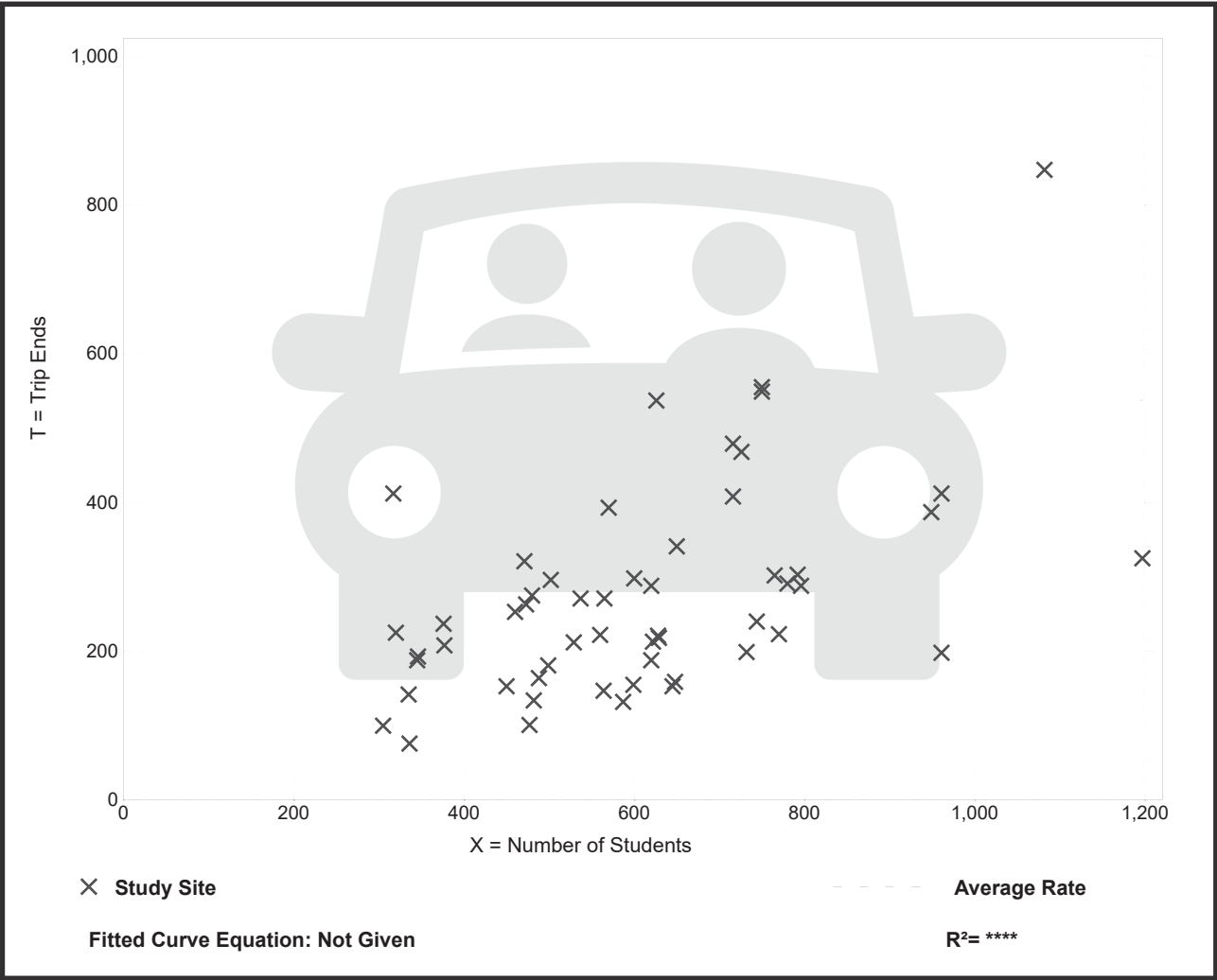
Vehicle Trip Ends vs: Students
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 54
Avg. Num. of Students: 608
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.45	0.21 - 1.30	0.19

Data Plot and Equation



Elementary School

(520)

Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 16
Avg. Num. of Students: 651
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.27	1.51 - 5.89	0.93

Data Plot and Equation

