



WALKER HIGH SCHOOL
TRIP GENERATION MEMO

Puyallup, WA



06/10/2022

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Date: June 10, 2022

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

Subject: Walker High 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 Walker High School. A project description is provided below.

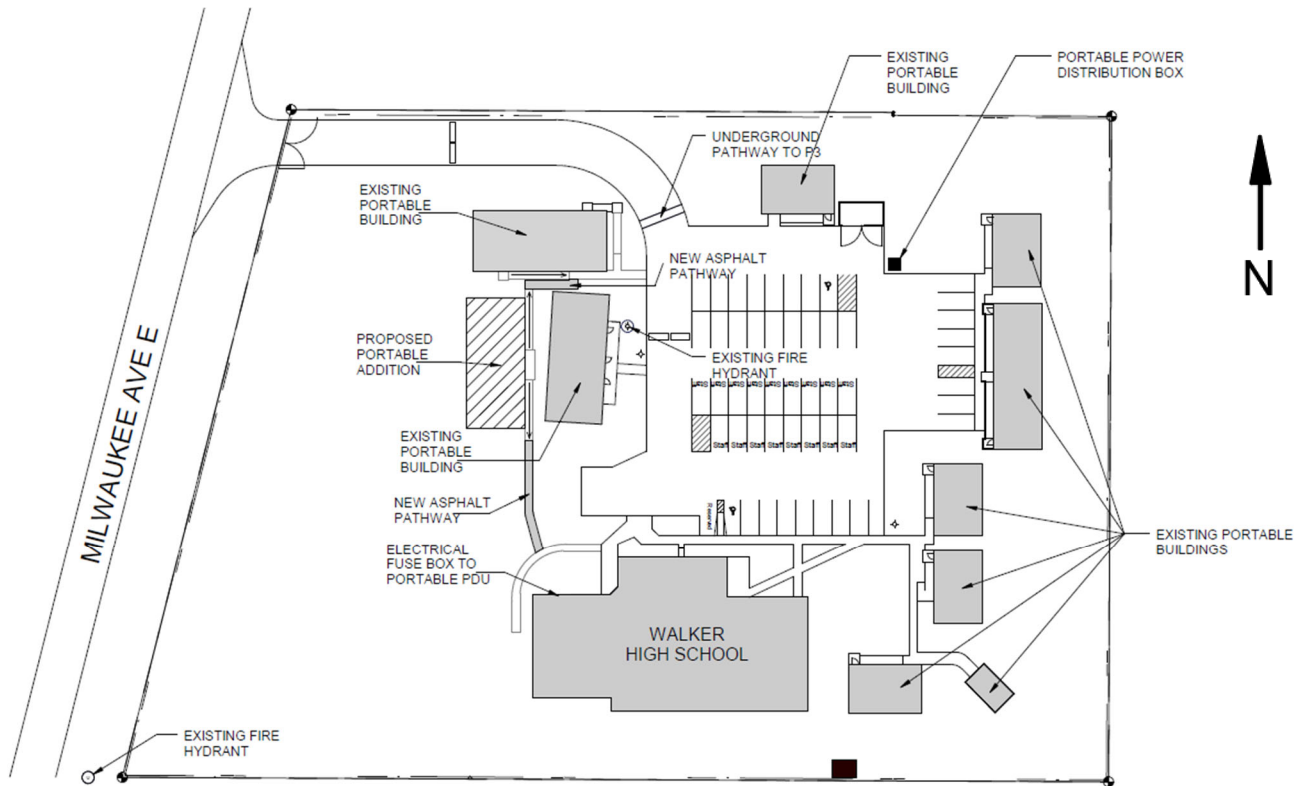
Project Summary

- Walker High School proposes the addition of a 1,728 square foot double-portable classroom to the existing campus at 5715 Milwaukee Ave E.
- Walker High School is an alternative school with comparatively smaller classroom sizes to traditional high schools.
- Based on the school's capacity calculations used, the portable is expected to serve up to 20 students per classroom—or 40 students for the double-portable.

Figure 1 below illustrates the school's property with frontage and access along Milwaukee Ave E. 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 525 – High 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 - 525 High School	One Double-portable	40 students	78	13	7	20	4	9	13

Based on ITE data, the proposed double-portable is estimated to generate approximately 78 daily weekday trips with 20 trips (13 inbound / 7 outbound) occurring in the AM peak hour and 13 trips (4 inbound / 9 outbound) In the PM peak hour.

Conclusion

Puyallup School District is proposing to locate a double-portable classroom to Walker High School. Shown in Figure 2 is the proposed portable location. With classroom sizing typically serving up to 20 students, the double portable may result in an increase in student capacity of 40 students. Based on ITE data, the increase in capacity may yield 78 weekday daily trips with 20 trips occurring in the school AM peak hour and 13 trips in the school PM peak hour.

Please call if you require additional information.

Aaron Van Aken, PE, PTOE

High School (525)

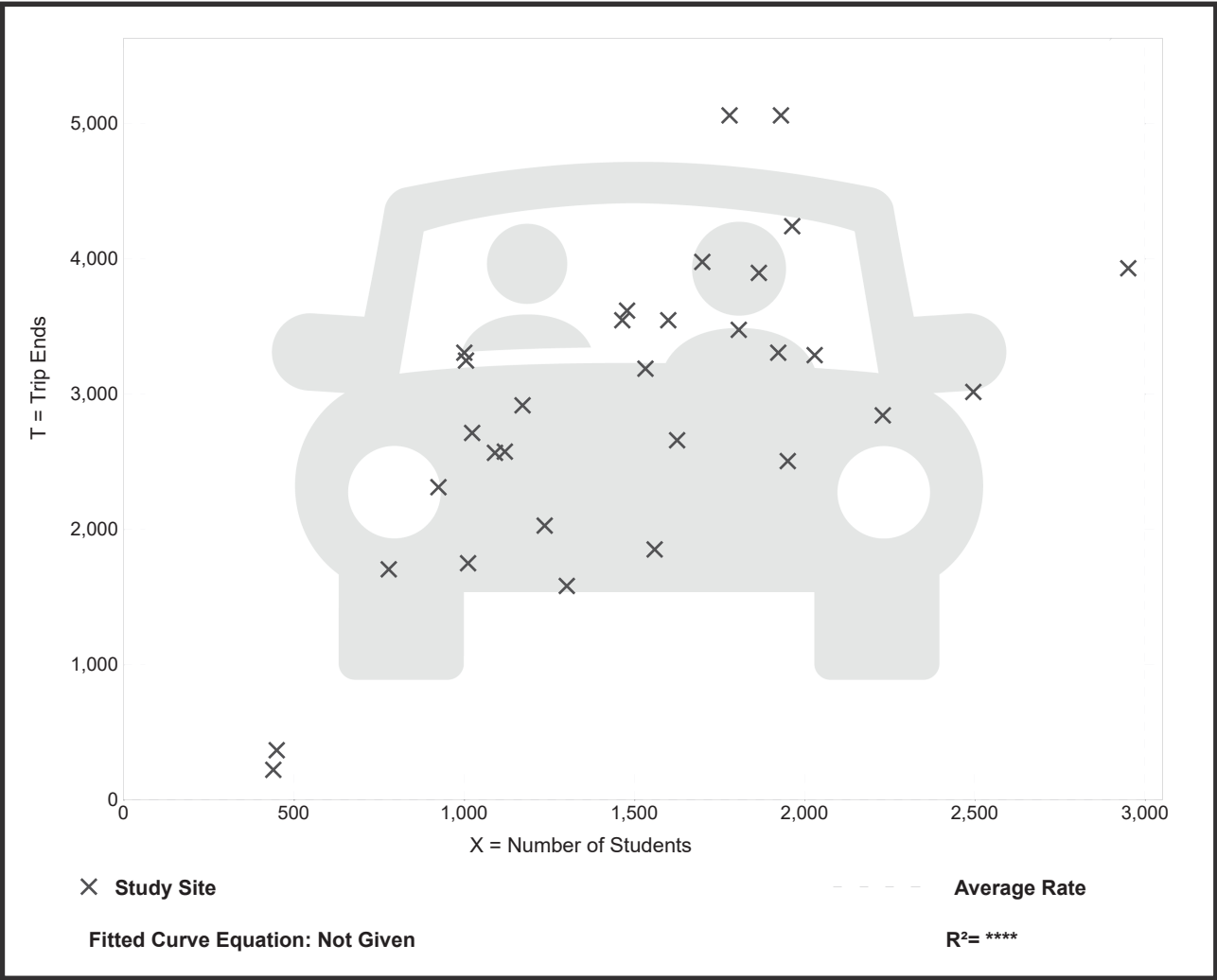
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Students: 1498
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
1.94	0.51 - 3.30	0.61

Data Plot and Equation



High School (525)

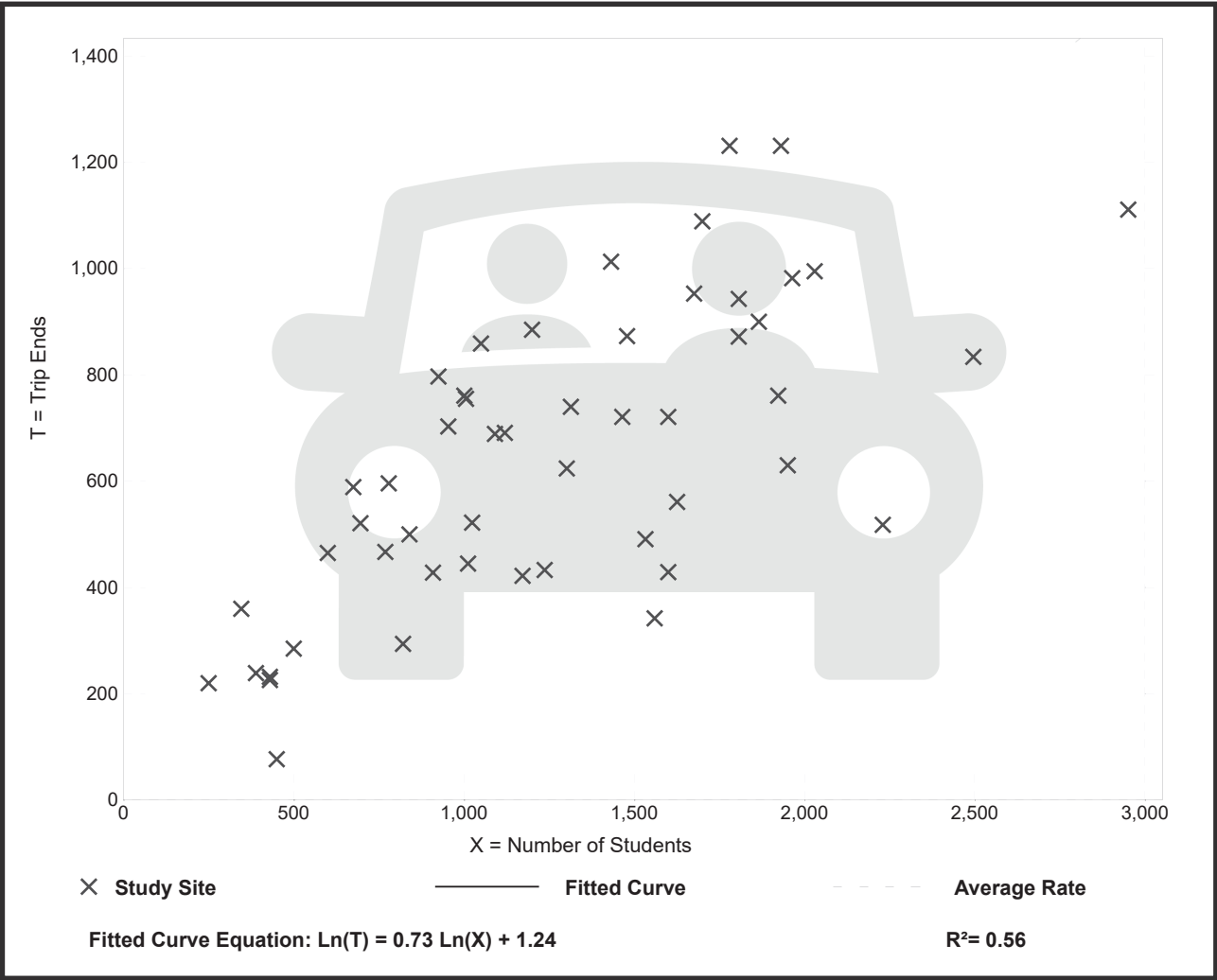
Vehicle Trip Ends vs: Students
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. Num. of Students: 1269
Directional Distribution: 68% entering, 32% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.51	0.17 - 1.04	0.17

Data Plot and Equation



High School (525)

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

Setting/Location: General Urban/Suburban
Number of Studies: 65
Avg. Num. of Students: 1206
Directional Distribution: 32% entering, 68% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.32	0.14 - 0.74	0.11

Data Plot and Equation

