

Memorandum

To: Kelly Tayara, Senior Planner, Planning and Community Development
Peter Corelis, PE, Development Engineer, Public Works
City of Bainbridge Island

From: John Davies, Senior Transportation Planner, KPG P.S.

Date: 1/25/2021

Re: Revised Trip Generation Analysis for Grow Community Phase 3

The third phase of the Grow Community project will build out the site and complete the development. The previous two phases of the project were implemented under the City of Bainbridge Island's Housing Design Demonstration Project (HDDP) Ordinance and under the guidance of the One Planet Living framework, which promotes the development of sustainable and low-carbon buildings and communities. While the HDDP has now expired, this project carries forward the goals and objectives of the previous development phases, including reducing the reliance on privately-owned automobiles, and embracing walking, bicycling, carsharing and transit use to meet the transportation needs of this planned community. Phase 3 represents the completion of the southern portion of the site that was not constructed during the Phase 2 development.

Transportation reports and analysis related to this development project include:

- *Transportation Impact Analysis for Grow Community*, RTC, July 2011.
- *Grow Community Traffic Report – Addendum*, RTC, January 2012.
- *Transportation Impact Analysis for Grow Community Phase 2 Addendum*, RTC, October 2013.
- *Transportation Impact Analysis for Grow Community Phase 2 Addendum Update*, RTC, March 2014.
- *Grow Community – Revised Trip Generation for Updated Phase 2 Land Uses*, Technical Memorandum, KPG, December 2015.

Each revision evaluated the impacts of the expected changes to the site's land use program such as the unit count and land use mix. The area of the site represented by Phase 3 was previously evaluated for a range of alternative uses, including a childcare facility (March 2014 TIA), which has since been removed from the proposed program. In all instances, the previous traffic analyses have found acceptable operations at all study intersections and no transportation mitigation measures have been necessary.

This analysis focuses on the change in the number of trips between the previous permitted and proposed land use programs to determine if additional transportation analysis is required as per City requirements.

Comparison of Land Use Programs

Under the 2017 permit, the southern portion of the Grow Development (South Site) had been permitted as 4 single-family homes and 18 apartment units. The revised proposal (Phase 3) replaces these land uses with 14 higher-density single-family homes. **Table 1** compares the previous land use program for the south parcels on the site with the revised land use program.

Table 1. Land Use Program Comparison – South Site Area Unit Totals

Housing Type Mix	2017 Permit for South Site	Proposed Phase 3 for South Site
Single-Family Homes	4	14
Apartments (Low-Rise)	18	0
Total Units	22	14

Trip Generation

Table 2 summarizes the ITE *Trip Generation Manual (10th edition with 2020 supplement)* rates. These rates are based on data collected for individual land use categories and are summarized either as average rates or as fitted curve equations. When the fitted curve equation for the trip generation rate has an r^2 -value equal to or greater than 0.75, the fitted curve equation is used to calculate the number of trips generated. Because of the small number of units in this evaluation, we provided the trip generation for both the average rates and the fitted curve. The trip generation rates were not adjusted to reflect the site's location within Winslow Town Center and its proximity to the Ferry Terminal, or to reflect the objectives of the One Planet Living program.

Table 2. Trip Generation – ITE 10th Edition

ITE Land Use	Weekday	AM Peak Hour	PM Peak Hour
210 Single Family Homes – Average Rate	9.44	0.74	0.99
220 Multifamily (Low-Rise) – Average Rate	7.32	0.46	0.56
210 Single Family Homes – Fitted Curve	$\ln(T) = 0.92 \ln(X) + 2.71$	$T = 0.71(X) + 4.80$	$\ln(T) = 0.96 \ln(X) + 0.20$
220 Multifamily (Low-Rise) – Fitted Curve	$T = 7.56(X) - 40.86$	$\ln(T) = 0.95 \ln(X) - 0.51$	$\ln(T) = 0.89 \ln(X) - 0.02$

ITE Trip Generation Manual – 10th Edition

Tables 3 and 4 provide the number of trips estimated using the average rate and fitted curve equation for the previously permitted land use program and the revised land use program for the South Site area to be developed under Phase 3. The average rates show fewer weekday trips and fewer or the same number of trips during the AM peak hour and the PM peak hour. For the fitted curve equation, the results show an increase of 21 daily trips, and fewer trips generated during both the AM peak hour and the PM peak hour.

Table 3. ITE Trip Generation Comparison for Phase 3– Average Rate

ITE Land Use	Units	Weekday	AM Peak Hour	PM Peak Hour
Previously Permitted under Phase 2				
210 Single Family Homes	4	38	3	4
220 Multifamily (Low-Rise)	18	132	8	10
Total	22	170	11	14
Phase 3 Proposed				
210 Single Family Homes	14	132	10	14
220 Multifamily (Low-Rise)	0	0	0	0
Total	14	132	10	14
Net Change	-8	-37	-1	0

Table 4. ITE Trip Generation Comparison for Phase 3– Fitted Curve

Land Use	Units	Weekday	AM Peak Hour	PM Peak Hour
Previously Permitted under Phase 2				
210 Single Family Homes	4	54	8	5
220 Multifamily (Low-Rise)	18	95	9	13
Total	22	149	17	18
Phase 3 Proposed				
210 Single Family Homes	14	170	15	15
220 Multifamily (Low-Rise)	0	0	0	0
Total	14	170	15	15
Net Change	-8	+21	-2	-3

As identified in the October 2, 2019 memorandum from Peter Corelis of Public Works to Kelly Tayara of Planning and Community Development, the City's requires a new traffic analysis when the proposal generates additional trip generation exceeding the threshold of 50 average daily trips (ADT), or 5 or more AM or PM peak-hour trips when compared to the current permitted subdivision. As shown in this analysis, the net change in trip generation falls below the daily threshold and peak hour thresholds and therefore does not require additional traffic analysis.

Findings

The analysis finds that the proposed change in land use will not significantly increase the trip generation and that the traffic impacts will be similar to the impacts for the permitted development. Therefore, an additional concurrency test or the completion of a revised traffic impact analysis is not required.