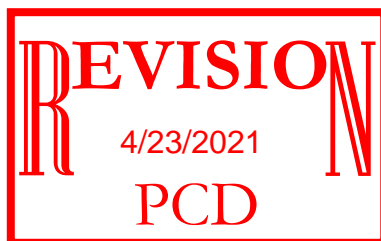


## MEMORANDUM

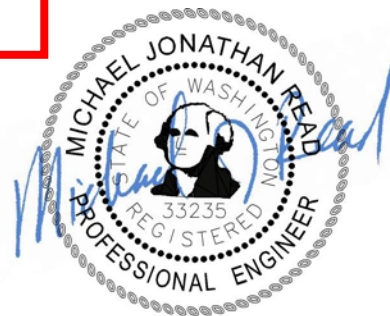


**DATE:** March 25, 2021

**TO:** Mariah Gill, Land Project Manager  
Pulte Group

**FROM:** Michael J. Read, PE, Principal  
TENW

**SUBJECT:** Shoreline 5 Degrees Townhomes  
Transportation Consistency/Traffic Impact Analysis  
TENW Project 2020-100



EXPIRES 2 / 28 / 2023

This memorandum documents both a transportation consistency analysis of specific transportation evaluations and land use assumptions documented in the 145<sup>th</sup> Street Station Area Subarea Plan and Planned Action EIS as well as a traffic impact analysis to ensure compliance with the City's Concurrency requirements related to the proposed *Shoreline 5 Degrees Townhome* project by the Pulte Group. As one of the first several redevelopment projects within the 145<sup>th</sup> Street Station Area, this consistency and traffic impact analysis considers transportation-related items included in the review:

- Preparation of a vehicle trip generation analysis of the townhome project that would remove 11 existing single-family homes and construct 70 new townhomes within the development, using trip generation rates published by ITE in the *Trip Generation Manual*, 10<sup>th</sup> Edition, 2017.
- A comparative land use analysis of land use forecasts contemplated by the 145<sup>th</sup> Street Station Area Subarea Plan and the proposed *Shoreline 5 Degrees Townhome* project.
- Intersection level of service analysis of intersections that would be impacted by more than 20 new vehicle trips during the p.m. peak hour per City Ordinance 615. Given revised unit count and update trip generation rates, no off-site traffic impact analysis is required.
- Review of transportation mitigation requirements to ensure compliance with City adopted level of service standards.

## Project Trip Generation

Using the latest edition of the *Trip Generation Manual*, 10<sup>th</sup> Edition, 2017, TENW prepared an estimated of the net change in vehicle trip generation as a result of the *Shoreline 5 Degree Townhome* project within the Parkwood neighborhood. A conceptual site plan and vicinity map within the context of the 145<sup>th</sup> Street Station Subarea Plan are provided in **Attachment A**. As noted above, 11 existing single-family homes would be removed as part of the project within properties between N 147<sup>th</sup> Street and N 148<sup>th</sup> Street fronting Meridian Avenue N and primarily along N 147<sup>th</sup> Street between Meridian Avenue N and Corliss Avenue N.

As shown in **Table 1**, a net total of approximately 277 daily, 17 new a.m. peak hour (5 entering and 12 exiting), and 20 new p.m. peak hour vehicular trips (12 entering and 8 exiting) would be generated at full buildout conditions of the 70 new residential townhome units. Detailed trip generation tables are provided in **Attachment B**.

**Table 1: Shoreline 5 Degrees Townhomes  
Net Trip Generation Summary**

Time Period	In	Out	Total
<i>Standard ITE Rates</i>			
Weekday AM Peak Hour	5	12	17
Weekday PM Peak Hour	12	8	20
Weekday Daily	138	139	277

Source: Trip Generation Manual, 10<sup>th</sup> Edition, ITE, 2017.

## Existing Transportation Facilities

Arterial roadways serving the immediate site vicinity include Meridian Avenue N, 1<sup>st</sup> Avenue N, and N 145<sup>th</sup> Street. With a posted speed limit of 35 mph, Meridian Avenue N is a 2-lane arterial with parking and sidewalks along both sides of the street in a 40-foot curb-to-curb width. 1<sup>st</sup> Avenue N is also a 2-lane roadway without any existing continuous sidewalk system, has no parking on either side, and is posted at 30 mph. N 145<sup>th</sup> Street (SR 523) is a principal arterial with a 4-lane channelized section and a posted speed limit of 35 mph.

Fixed route transit service in the immediate site vicinity is provided via Route 346 within less than several hundred feet of the site at the N 148<sup>th</sup> and Meridian Avenue N intersection. On weekdays, bi-directional headways of 30 minutes between the Aurora Village Transit Center and Northgate Transit center are provided. Additional transit service is provided along N 145<sup>th</sup> Street via Route 304 with peak directional service from Richmond Beach to downtown Seattle.

The 2019 Shoreline Annual Transportation Report was review for historical collisions along the primary Meridian Avenue N corridor (immediately adjacent to the site). Collision experience was 2 collisions per year or less over a 3- year period from 2017 to 2019 at N 147<sup>th</sup> Street, N 148<sup>th</sup> Street, and N 150<sup>th</sup> Street intersections along Meridian Avenue N. Given that the average annual collision rate was below 1.0 per year, based upon the low collision experience no further review was warranted.

## Comparative Land Use Analysis

The 145<sup>th</sup> Street Station Subarea EIS modeled four zoning scenarios, with Alternative 4 being the closest to adopted zoning within the final Subarea Plan. Specific growth assumptions within the land use element of the EIS relevant to the Shoreline Townhome site include:

- Growth was projected based on each zoning scenario and an annual rate of 1.5-2.5 percent;
- Projections included break-down of anticipated population, housing units, and employees, at a 20 year mark and at build-out; and
- Projections assumed that 25 percent of developments in MUR-70' zoning would utilize development agreements to reach maximum height of 140 feet. It should be noted, that the TAZ zone immediately east of the site (between 1<sup>st</sup> Avenue NE and Interstate 5) qualifies for this density.

As part of the City's Planned Action Determination and subsequent adopted 145<sup>th</sup> Street Station Subarea Plan, a total of 2,214 housing units were allocated throughout the station area. As the proposed *Shoreline 5 Degrees Townhomes* project would remove 11 single-family homes and construct 70 low-rise multifamily units, a net increase of 59 housing units would result (assuming a 1:1 equivalency). As such, the proposed *Shoreline 5 Degrees Townhomes* development is consistent with the 145<sup>th</sup> Street Station Area Subarea Plan and EIS, as the combined known redevelopments along the 1<sup>st</sup> Avenue N and Meridian Avenue corridors result in a net increase of 405 housing units (280 as part of the *Shoreline 147<sup>th</sup> Apartments*, 66 units as part of the *Shoreline Townhomes* project, and 59 housing units of the proposed project) representing approximately 18 percent of housing growth planned within the 145<sup>th</sup> Street Station Subarea Plan (see **Attachment A**).

## Traffic Impact Analysis

To ensure compliance with the City's Transportation Concurrency standards, intersection level of service (LOS) analyses were conducted at study intersections that would be impacted by more than 20 new weekday PM peak hour vehicle trips. Given the relative trip distribution onto the immediate Meridian Avenue and 1<sup>st</sup> Avenue N and north/south destinations, not one arterial intersection would warrant level of service analysis based on the City's threshold criteria.

In addition to review of off-site traffic operational impacts, TENW performed field work along the Meridian Avenue N, N 148<sup>th</sup> Street, and N 147<sup>th</sup> Street project frontages. Both roadways where vehicle site access is proposed have low sloping horizontal curves, and therefore, adequate entering sight distance from proposed driveways onto these local roadways can be accommodated within the overall site design with appropriate building setbacks and other line of sight obstructions removed from the existing property frontages. Prior to building occupancy, sight lines should be verified, documented, and stamped by a registered Civil Engineer in the State of Washington.

## Transportation Mitigation Review

In review of the 145<sup>th</sup> Street Station Area Subarea Plan and EIS and subsequent 145<sup>th</sup> Street Corridor Study, specific improvements are noted along Meridian Avenue N that would include conversion of the street section into 3 lanes (center two-way left turning lane) with bicycle lanes. In addition, new turning lanes are recommended at the signalized intersection of N 145<sup>th</sup> Street and

Meridian Avenue N. As these improvements are also on the City's Transportation Management Plan, payment of impact fees will mitigate the project's contribution towards these future upgrades. Frontage improvements along public streets will be required.

The City of Shoreline does require traffic impact fees to be paid at time of building permit issuance to mitigate traffic impacts on planned transportation system improvements. When considering removal of the existing 11 single-family homes, the estimated traffic impact fee for the Shoreline Townhome project is \$415,692.76 based on rates effective in January 2020 (calculation provided in **Attachment C**). The actual traffic impact fees would be calculated by the City at time of building permit issuance.

## Conclusions

As described above, a transportation consistency analyses was prepared for the proposed *Shoreline 5 Degree Townhome* project with the 145<sup>th</sup> Street Station Area Subarea Plan and EIS with these determinations:

- A net increase of approximately 277 daily, 17 new a.m. peak hour and 20 new p.m. peak hour vehicular trips would be generated by the 70 new residential townhome units and removal of existing single-family homes.
- As part of the City's Planned Action Determination and subsequent adopted 145<sup>th</sup> Street Station Subarea Plan, a total of 2,214 housing units were allocated throughout the station area. As the proposed *Shoreline 5 Degrees Townhomes* project would remove 11 single-family homes and construct 72 low-rise multifamily units, a net increase of 59 housing units would result (assuming a 1:1 equivalency). As such, the proposed *Shoreline 5 Degrees Townhomes* development is consistent with the 145<sup>th</sup> Street Station Area Subarea Plan and EIS, as the combined known redevelopments along the 1<sup>st</sup> Avenue N and Meridian Avenue corridors result in a net increase of 405 housing units (280 as part of the *Shoreline 147<sup>th</sup> Apartments*, 66 units as part of the *Shoreline Townhomes* project, and 59 housing units of the proposed project) representing approximately 18 percent of housing growth planned within the 145<sup>th</sup> Street Station Subarea Plan
- To mitigate impacts on systemwide planned transportation improvements, the *Shoreline 5 Degree Townhome* project would be required to pay a traffic impact fee of approximately \$415,692.76 based on current rates effective January 1, 2020.

Based on the above, it was determined that no further analysis of the *Shoreline 5 Degree Townhome* project is warranted. If you have any questions, comments, or concerns, please do not hesitate to contact me at (206) 361-7333 ext. 101.

## ATTACHMENT A

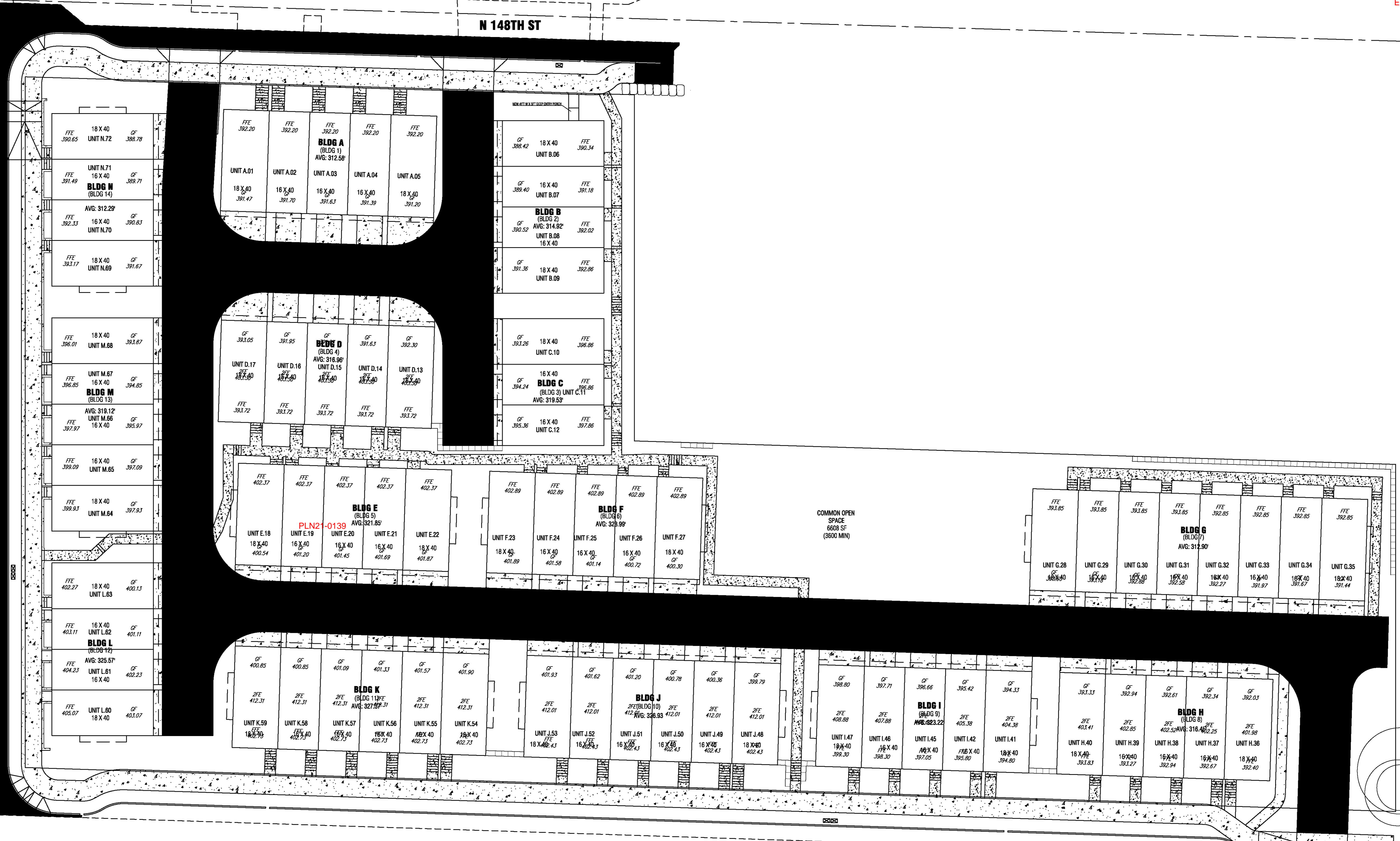
### Conceptual Site Plan

### Site Vicinity Map in Context of 145<sup>th</sup> Street Subarea Plan

N 148TH ST

MERIDIAN AVE N

N 147TH ST





<b>Development Information</b>	<b>Residential (Dwelling Units):</b>				
	<b>Existing Dwellings</b>		<b>Proposed Dwellings</b>		<b>Proposed Density (dwellings per acre)</b>
	# Single Family:		# Single Family:		# Single Family:
	# Multifamily:		# Multifamily:		# Multifamily:
	<b>Office / Employment (Square Feet):</b>				
	Existing Office / Employment:		Proposed Office / Employment:		
	<b>Retail &amp; Services (Square Feet):</b>				
	Existing Retail & Services:		Proposed Retail & Services:		
	<b>PM Peak Hour Weekday vehicle Trips:</b>				
	Existing Estimated Trips:		Future Estimated Trips:	Net New Trips:	Total Trips:
<b>Source of Trip Rate:</b>			<b>Transportation Impacts Consistent with Chapter 20.60.140:</b>		
IIE Manual <input type="checkbox"/>		Other	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<b>Signature (Applicant)</b>					
<b>Date:</b>					

<b>Part Two: Review Criteria (City to Complete)</b>			
The City's SEPA Responsible Official may designate conforming projects as "planned actions," pursuant to RCW 43.21C.030, that meet the following conditions (Ordinance 707-185 <sup>th</sup> SSSP & Ordinance 752 - 145 <sup>th</sup> SSSP)			
<b>Criteria (SMC)</b>		<b>Complies (if not explain on separate sheet and attach):</b>	
The proposal is located within a planned action area as identified on the official zoning map.		Yes <input type="checkbox"/>	No <input type="checkbox"/>
The proposal is consistent with the City of Shoreline Comprehensive Plan and the applicable subarea plan.		Yes <input type="checkbox"/>	No <input type="checkbox"/>
The proposed uses & activities are consistent with those described in the planned action EIS & zoning requirements of Title 20.		Yes <input type="checkbox"/>	No <input type="checkbox"/>
The proposal is consistent with the cumulative planned action thresholds identified in Ordinances 609 (Town Center), 705 (Shoreline Place), 707 (185 <sup>th</sup> SSSP) & 752 (145 <sup>th</sup> SSSP).		Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>Dwelling Threshold:</b> (2,214 units in 145 <sup>th</sup> ) (2,190 units in 185 <sup>th</sup> ) (1,000 units in Shoreline Place) (1,200 units in Town Center)		<b>Dwellings Remaining:</b>	



## ATTACHMENT B

### Detailed Trip Generation Estimates

**ITE Trip Generation, 10th Edition, 2017**  
**Pulte 5 Degrees Townhomes**

Proposed	X	LU Code	AM Peak			PM Peak			Daily Trips	Daily Rate	AM Rate	PM Rate
			Enter	Exit	Trips	Enter	Exit	Trips				
Mid-Rise Multifamily	70	221	7	18	25	19	12	31	381	5.44	0.36	0.44
Single-Family Homes	-11	210	-2	-6	-8	-7	-4	-11	-104	9.44	0.75	0.99
	59											
Net Change in Trip Generation with Project			<b>5</b>	<b>12</b>	<b>17</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>277</b>			

Note: Trip generation rates during the peak hours of adjacent street traffic applied for residential uses. No statistical difference between average and fitted curve equations for size of development.

## ATTACHMENT C

### Traffic Impact Fee Estimates

**TENW Estimate of Traffic Impact Fees (Pulte 5 Degrees)**

<b>Proposed Uses</b>	<b>Size</b>	<b>Fee Per Unit</b>	<b>Impact Fee Estimate</b>
Multi-family	70	\$ 7,045.64	\$ 493,194.80
			<b>\$ 493,194.80</b>
<b>Current Site Uses</b>	<b>Size</b>	<b>Fee Per Unit</b>	<b>Impact Fee Credit</b>
Single Family Homes	-11	\$ 7,045.64	\$ (77,502.04)
			\$ (77,502.04)
			<b>\$ 415,692.76</b>
<b>Net Impact Fee Estimate</b>			<b>\$ 415,692.76</b>

(City of Shoreline Rates Effective as of January 2020)