



Tacoma Dome Link Extension

Draft Environmental Impact Statement

NOISE AND VIBRATION TECHNICAL REPORT

Appendix J3

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Acronyms and Abbreviations

ANSI	American National Standards Institute
Belmor	Belmor Mobile Home Park
CSA	Cross-Spectrum Acoustics
dB	decibel
dBA	A-weighted decibel
EDNA	Environmental Designation for Noise Abatement
FDL	force density level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FWLE	Federal Way Link Extension
Hz	Hertz
I-5	Interstate 5
in/sec	inches per second
L _{dn}	day night sound level
Leq	equivalent sound level
L _{max}	maximum noise level
L _n	sound level exceeded n-percent of the time
LRT	light rail transit
LRV	light rail vehicle
LSTM	line source transfer mobility
L _v	vibration level
M.O.S.	minimum operable segment
mph	miles per hour
NB	northbound
NEPA	National Environmental Policy Act
NIST	National Institute of Standards and Technology
OMF South	Operations and Maintenance Facility South
PPV	peak particle velocity
PSTM	point source transfer mobility
RCNM	Roadway Construction Noise Model
RMS	root mean square
SB	southbound
SF	South Federal Way

Sound Transit	Central Puget Sound Regional Transit Authority
TDLE	Tacoma Dome Link Extension
TM	transfer mobility
TPSS	traction power substation
U.F.	usage factor
VdB	vibration decibel
WAC	Washington Administrative Code

1 INTRODUCTION

This technical report contains the noise and vibration impact assessment for the Central Puget Sound Regional Transit Authority (Sound Transit) Tacoma Dome Link Extension (TDLE). The report includes the direct and indirect effects, from both operations and construction, along with a discussion of the cumulative noise and vibration impacts. The report follows Federal Transit Administration (FTA) and Sound Transit policies and guidance in evaluating impacts and potential mitigation measures (Sound Transit 2019). The FTA noise and vibration guidance has been adopted by Sound Transit in their environmental methodology to assess impacts from transit projects, regardless of the funding source. This technical report is intended to be a supplement to the noise and vibration section in the Draft Environmental Impact Statement (EIS).

The report includes a description of the existing noise and vibration conditions near the project alternatives, the noise and vibration assessment for sensitive receptors near the build alternatives, and mitigation options for impacts identified in the assessment.

The results of the noise and vibration impact assessment indicate that there would be noise impacts for all alternatives and vibration impacts for all alternatives Fife segments from operation of the project. Mitigation measures have been recommended at locations where impacts are projected to occur.

1.1 Project Description

TDLE would expand the regional light rail system south from the Federal Way Downtown Station, which is the terminus of the Federal Way Link Extension (FWLE) opening in 2026, to the Tacoma Dome area near the existing Tacoma Dome Station. The alternatives under consideration for TDLE are shown in Figure 1-1 and discussed in detail in Chapter 2, Alternatives Considered, of the Draft EIS.

Project elements include:

- Approximately 10 miles of new dedicated guideway. Most of the guideway would be elevated, and there would be no at-grade vehicle or pedestrian crossings. The guideway extends across ancestral and reservation lands of the Puyallup Tribe of the Puyallup Reservation (Puyallup Tribe of Indians), as well as the cities of Federal Way, Milton, Fife, and Tacoma, and unincorporated Pierce County.
- New stations in South Federal Way and Fife and two in Tacoma (one near E Portland Avenue and one near the Tacoma Dome area).
- A new rail-only fixed-span bridge crossing the Puyallup River.
- New parking facilities with approximately 500 stalls each at the stations in South Federal Way and Fife, in either surface or garage park-and-ride configurations.

The project would also include construction of multiple TPSS, emergency access spaces, stormwater management features, and various infrastructure realignments and upgrades.



FIGURE 1-1
Alternatives Evaluated in the
Draft Environmental Impact Statement
Tacoma Dome Link Extension

2 NOISE AND VIBRATION BASICS

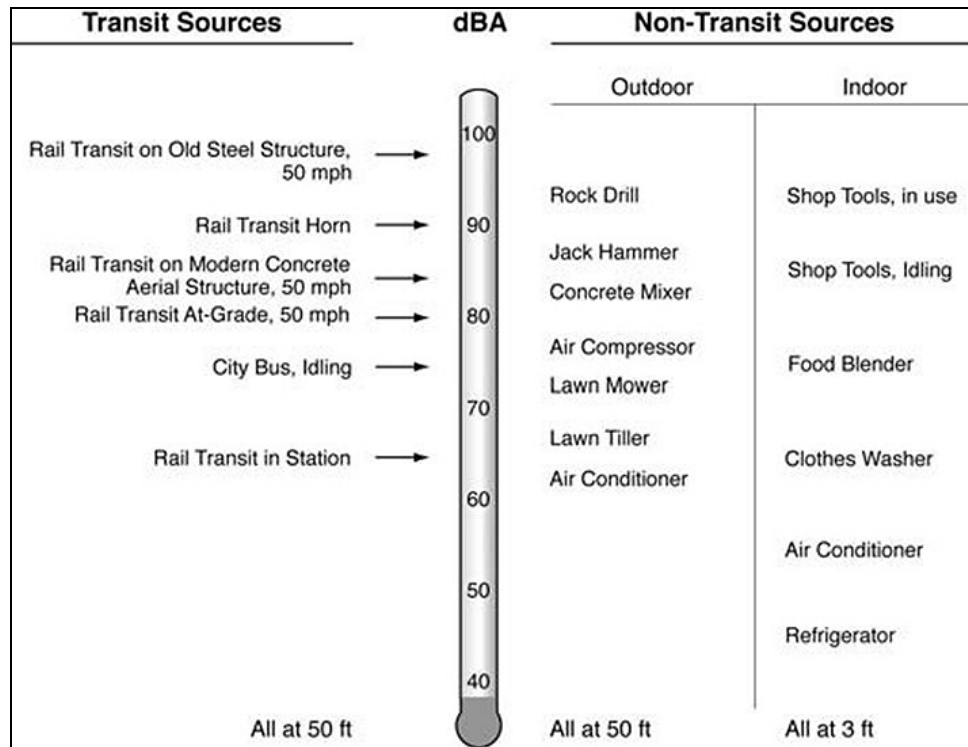
2.1 Noise Basics

Sound is defined as small changes in air pressure above and below the standard atmospheric pressure, and noise is usually considered to be unwanted sound. The three parameters that define noise include:

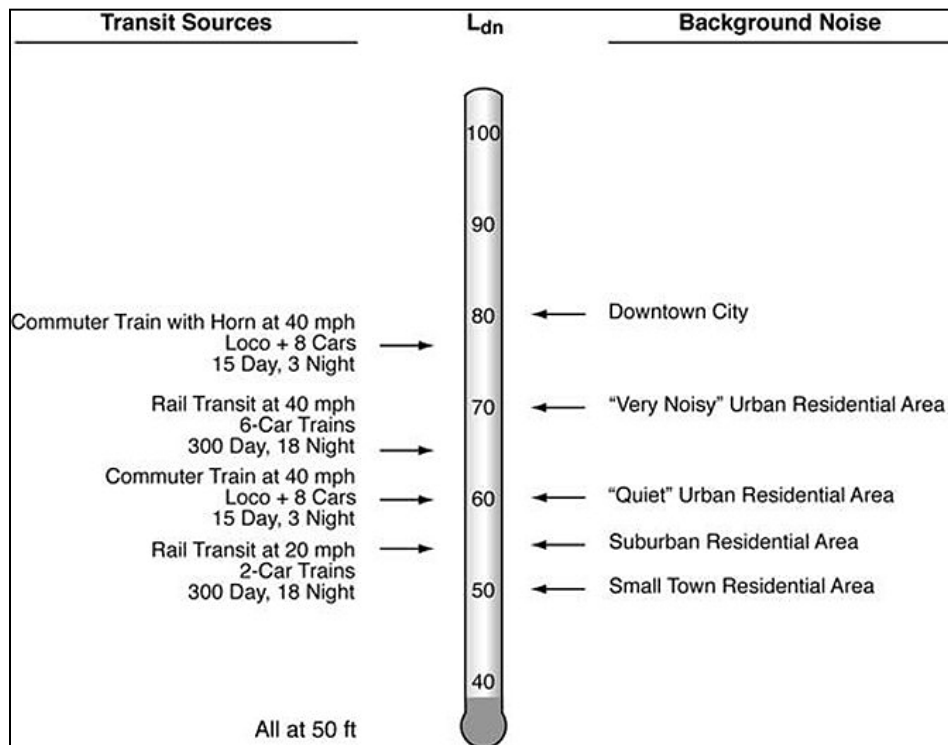
- **Level:** The level of sound is the magnitude of air pressure change above and below atmospheric pressure and is expressed in decibels (dB). Typical sounds fall within a range between 0 dB (the approximate lower limit of human hearing) and 120 dB (the highest sound level generally experienced in the environment). A 3-dB change in sound level is perceived as a barely noticeable change outdoors, and a 10-dB change in sound level is perceived as a doubling (or halving) of loudness.
- **Frequency:** The frequency (pitch or tone) of sound is the rate of air pressure change and is expressed in cycles per second, or Hertz (Hz). Human ears can detect a wide range of frequencies from around 20 Hz to 20,000 Hz; however, human hearing is not as sensitive at high and low frequencies, and the A-weighting system, which measures what humans hear in a more meaningful way by reducing the sound levels of higher and lower frequency sounds, is used to provide a measure (dBA) that correlates with human response to noise. Figure 2-1 shows typical maximum A-weighted sound levels for transit and non-transit sources. The A-weighted sound level has been widely adopted by acousticians as the most appropriate descriptor for environmental noise.
- **Time Pattern:** Because environmental noise is constantly changing, it is common to condense all of this information into a single number, called the “equivalent” sound level (Leq). The Leq represents the changing sound level over a period of time, typically 1 hour or 24 hours in transit noise assessments. For assessing the noise impact of rail projects at residential land uses, the day-night sound level (Ldn) is the noise descriptor commonly used, and it has been adopted by many agencies as the best way to describe how people respond to noise in their environment. Ldn is a 24-hour cumulative A-weighted noise level that includes all noises that occur during a day, with a 10-dB penalty for nighttime noise (10 p.m. to 7 a.m.). This nighttime penalty means that any noise events at night are equivalent to 10 similar events during the day.

Typical Ldn values for various transit operations and environments are shown on Figure 2-2.

In addition to the Leq and Ldn, there are other metrics used to describe noise. The loudest 1 second of noise over a measurement period, or maximum A-weighted sound level (Lmax), is used in many local and state ordinances for noise emitted from private land uses and for construction noise impact evaluations. Environmental noise can also be viewed on a statistical basis using percentile sound levels (Ln), which refer to the sound level exceeded n-percent of the time.



Source: FTA 2018

Figure 2-1 Typical A-Weighted Sound Levels

Source: FTA 2018

Figure 2-2 Typical L_{dn} Noise Exposure Levels

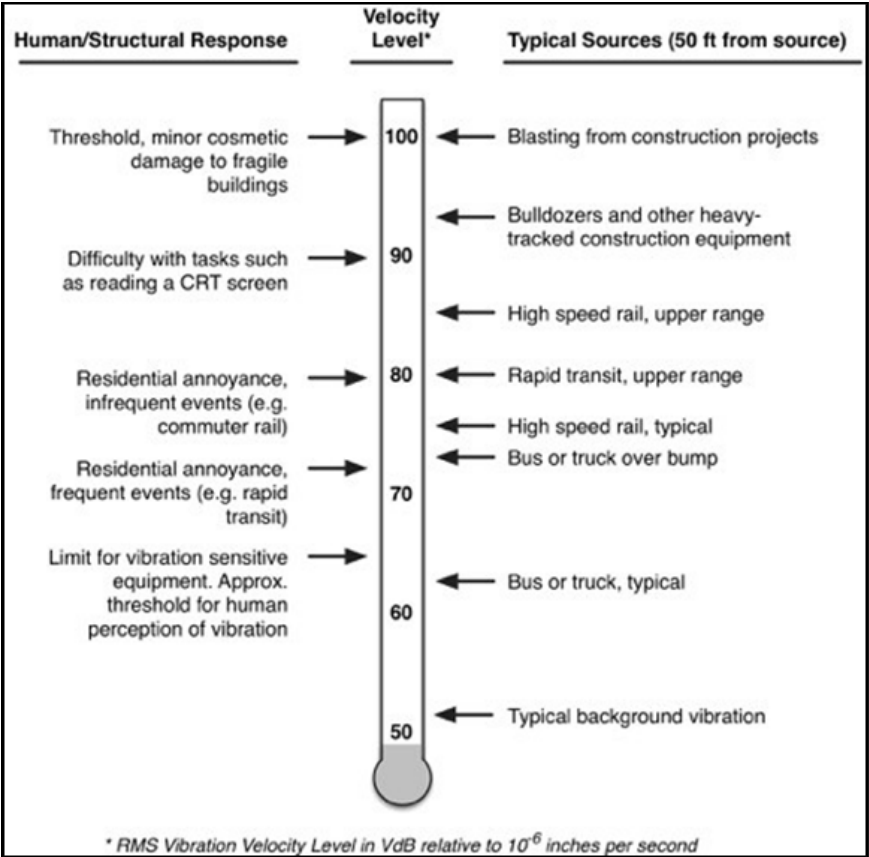
2.2 Vibration Basics

Ground-borne vibration from trains refers to the fluctuating or oscillatory motion experienced by persons on the ground and in buildings near railroad tracks. Vibration can be described in terms of displacement, velocity, or acceleration. Displacement is the simplest descriptor to perceive. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. Velocity represents the instantaneous speed of the floor movement, and acceleration is the rate of change of the speed. Although displacement may be simpler to perceive, the response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration.

Two methods are used for quantifying vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal. PPV often is used in monitoring of blasting vibration, since it is related to the stresses experienced by buildings. Although PPV is appropriate for evaluating the potential for building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibration impulses. In a sense, the human body responds to an average of the vibration amplitude. Because the net average of a vibration signal is zero, the root mean square (RMS) amplitude is used to describe the "smoothed" vibration amplitude.

PPV and RMS velocities are normally described in inches per second. Decibel notation is in common use for vibration and has been adopted by the FTA in their guidance. Decibel notation compresses the range of numbers required to describe vibration. Vibration levels in this report are referenced to 1×10^{-6} inches per second (in/sec). The abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels. Common vibration sources and human and structural response to ground-borne vibration are illustrated in Figure 2-3. Typical vibration levels can range from below 50 VdB to 100 VdB (0.000316 in/sec to 0.1 in/sec). The human threshold of perception is approximately 65 VdB.

Ground-borne vibration can lead to ground-borne noise, which is a low-volume, low-frequency rumble inside buildings that occurs when ground vibration causes the flexible walls of the buildings to resonate and generate noise. Ground-borne noise is normally not a consideration when trains are elevated or at grade. In these situations, the airborne noise usually overwhelms ground-borne noise, so the airborne noise level is the major consideration. However, ground-borne noise becomes an important consideration where there are sections of the alignment in a tunnel or where sensitive interior spaces are well isolated from the airborne noise. In these situations, the airborne noise path is impeded, and ground-borne noise dominates inside buildings. In rare situations, ground-borne noise may also need to be considered where the airborne noise from a project is substantially mitigated by a sound wall.



Source: FTA 2018

Figure 2-3 Typical Levels of Ground-Borne Vibration

3 IMPACT ASSESSMENT METHODOLOGY

Noise and vibration from light rail transit (LRT) operations were modeled using the methods described in the FTA guidance manual (FTA 2018). Noise-generating activities from LRT operations on the TDLE guideway include rail noise and wheel squeal, bells and activities around stations, parking facilities, and traction power substations (TPSS). The only activity that would generate substantial vibration would be LRT operations on the TDLE guideway.

3.1 Operational Noise Assessment Methodology

3.1.1 LRT Noise Assessment Methodology

The projection of wayside noise levels from LRT operations at sensitive receptors was determined using the model specified in the FTA guidance manual along with current design data for the proposed project, with the following assumptions:

- The noise assessment used the FTA guidance manual screening distance of 350 feet from the project centerline for LRT projects.
- LRT train speeds range from 20 miles per hour (mph) to 55 mph for revenue operations. LRT train speeds are based on modeled speeds that reflect train operating characteristics, track geometry, and passenger station locations.
- The LRT trains consist of four LRT railcars during all hours of operation.
- The weekday operating hours and headways in 2042 (the forecast year) for the Ballard-Tacoma line:
 - Early-morning operations (5 to 6 a.m.): 12-minute headways.
 - Morning peak operations (6 to 9 a.m.): 5-minute headways.
 - Midday operations (9 a.m. to 2:30 p.m.): 10-minute headways.
 - Afternoon peak operations (2:30 to 6:30 p.m.): 5-minute headways.
 - Evening operations (6:30 to 10 p.m.): 10-minute headways.
 - Evening to late-night operations (10 p.m. to 1 a.m.): 15-minute headways.
- The sound exposure level at 50 feet for a four-car LRT train operating on ballast and tie track at 50 mph is assumed to be 88 dBA.
- The sound exposure level at 50 feet for a four-car LRT train operating on direct fixation tracks on a concrete structure is increased by 4 dB relative to ballast and tie tracks.
- Locations of elevated structures, crossovers, and embedded track were identified based on plan and profile maps provided by the engineering team.
- Wheel squeal is possible on curves with a radius of less than 600 to 1,000 feet, depending on the speed and type of trackway. Wheel squeal is not included in the noise model because Sound Transit has committed to reducing any potential wheel squeal by installing wayside lubricators on all curves in noise-sensitive areas with a radius of less than 600 feet and by preparing all curves for wayside lubricators that have a radius of between 600 and 1,000 feet. There are no curves with a radius of less than 600 feet. Curves with a radius between 600 and 1,000 feet are discussed in Section 6.

- Wheel impacts at track crossovers and turnouts are assumed to cause localized noise increases of 5 dB up to a distance of 300 feet and no increase beyond 300 feet.
- There are no noise-sensitive receptors located within the FTA guidance manual screening distance of 200 feet for stations, so no assessment of station noise, including warning bells on LRT vehicles, was conducted.
- There are no noise-sensitive receptors located within the FTA guidance manual screening distance of 200 feet for parking facilities, so no FTA assessment of parking facility noise was conducted. The Washington Administrative Code (WAC) noise criteria were used to assess the park-and-ride facilities as well.
- Because all of the TPSS equipment would be fully contained within structures, no noise assessment was conducted for TPSS facilities.

3.1.2 Traffic Noise Assessment Methodology

FTA provides guidance for evaluating noise for rail transit projects that involve changes to existing highway noise barriers. In the Belmor Mobile Home Park (Belmor) community, the project will result in the removal of a noise barrier and modification of a berm. In this location, a highway noise analysis following WSDOT procedures is applied based on the FTA Guidance Manual. WSDOT follows the Federal Highway Administration (FHWA) procedures outlined in the Code of Federal Regulations. Details regarding the methodology can be found in Attachment G.

3.1.3 Noise Measurement Procedures and Equipment Methodology

The noise measurement program was conducted in November 2019 and March 2020 and consisted of long-term (24-hour) and short-term (1-hour) monitoring of the A-weighted sound level. All the measurement sites were located in or near noise-sensitive areas and were selected to represent a range of existing noise conditions near the TDLE build alternatives. Long-term noise measurements were conducted at 13 locations, and a short-term measurement was conducted at one location near the build alternatives. The noise measurement locations are shown in Section 5 (Figures 5-1 through 5-3), and photographs of the measurement sites are included in Attachment A. Detailed noise measurement data are presented in Attachment B. Summary information regarding the noise measurements for the alternatives is presented below in Sections 5.2.1 through 5.2.3.

At each of the measurement sites, the A-weighted sound levels were continuously monitored during the measurement periods. The noise measurements were performed with NTi Audio Model XL2 noise monitors that conform to American National Standards Institute (ANSI) Standard S1.4 for Type 1 (Precision) sound level meters. Calibrations, traceable to the U.S. National Institute of Standards and Technology (NIST), were carried out in the field before and after each set of measurements using an acoustical calibrator.

In all cases, the measurement microphone was protected by a windscreen and supported on a tripod at a height of 4 to 6 feet above the ground and was positioned to characterize the exposure of the site to the dominant noise sources in the area. For example, microphones were located at the approximate setback lines of the receptors from adjacent roads and were positioned to avoid acoustic shielding by landscaping, fences, or other obstructions.

3.2 Operational Vibration Assessment Methodology

3.2.1 LRT Vibration Assessment Methodology

The projection of ground-borne vibration from train operations was carried out using the model specified in the FTA guidance manual, supplemented by LRT vibration measurement data provided by Sound Transit, with the following assumptions:

- The vibration assessment used the FTA guidance manual noise screening distance of 350 feet from the project centerline for LRT projects for consistency with the noise assessment.
- LRT train speeds range from 20 mph to 55 mph for revenue operations. LRT train speeds are based on modeled speeds that reflect train operating characteristics, track geometry, and passenger station locations.
- The LRT trains consist of four LRT railcars during all hours of operation.
- The operating hours and headways in 2042:
 - Early-morning operations (5 to 6 a.m.): 12-minute headways.
 - Morning peak operations (6 to 9 a.m.): 5-minute headways.
 - Midday operations (9 a.m. to 2:30 p.m.): 10-minute headways.
 - Afternoon peak operations (2:30 to 6:30 p.m.): 5-minute headways.
 - Evening operations (6:30 to 10 p.m.): 10-minute headways.
 - Evening to late-night operations (10 p.m. to 1 a.m.): 15-minute headways.
- Locations of elevated structures, crossovers, and embedded track were identified based on plan and profile maps provided by the engineering team.
- Wheel impacts at track crossovers and turnouts are assumed to cause localized vibration increases of up to 10 VdB for nearby sensitive receptors due to the gaps in the track rails at these locations.
- Elevated structures reduce the ground-borne vibration levels by 10 VdB, except at 10 and 12.5 Hz (which have a reduction of 0 VdB), at nearby sensitive receptors compared with at-grade track. In Fife, direct measurements of elevated structure vibration were used in the assessment and no correction to the vibration levels was included.
- Vibration source (force density) levels were based on test data provided in the Sound Transit reference noise and vibration level report for both ballast and tie tracks and direct fixation tracks. Because of unusual soil conditions in Fife, the standard elevated structure assessment methodology, using the at-grade force density with the correction described above, was yielding atypical results. An additional elevated structure vibration source was included in Fife, which used a point source propagation method to account for vibration attenuation with distance near elevated structures. This method does not incorporate the 10 VdB adjustment described above. The vehicle force density includes a 3 VdB safety factor.
- Vibration propagation tests were conducted at representative sites along the corridor near sensitive receptors, as described in Section 5.3. The results of these tests were combined with the LRT vehicle vibration source level measurement data to provide projections of vibration levels from the project.

The assumed vehicle vibration characteristics are represented by the force density levels (FDL) spectra at 25 mph in Figure 3-1 for ballast and tie tracks, direct fixation tracks and the elevated

structure force density. The force density is the vehicle input force, by frequency, which is measured for vehicles operating on different track structures. The results were combined with the ground vibration propagation test results (represented by transfer mobility spectra shown in Attachment C) to project vibration levels as a function of distance. The formula for calculating the future vibration levels is as follows:

$$Lv = FDL + LSTM \text{ (or PSTM for elevated structures in Fife)}$$

Where:

Lv = projected train vibration level,
 FDL = vehicle force density, and
 LSTM = line source transfer mobility at a given site,
 PSTM = point source transfer mobility at a given site.

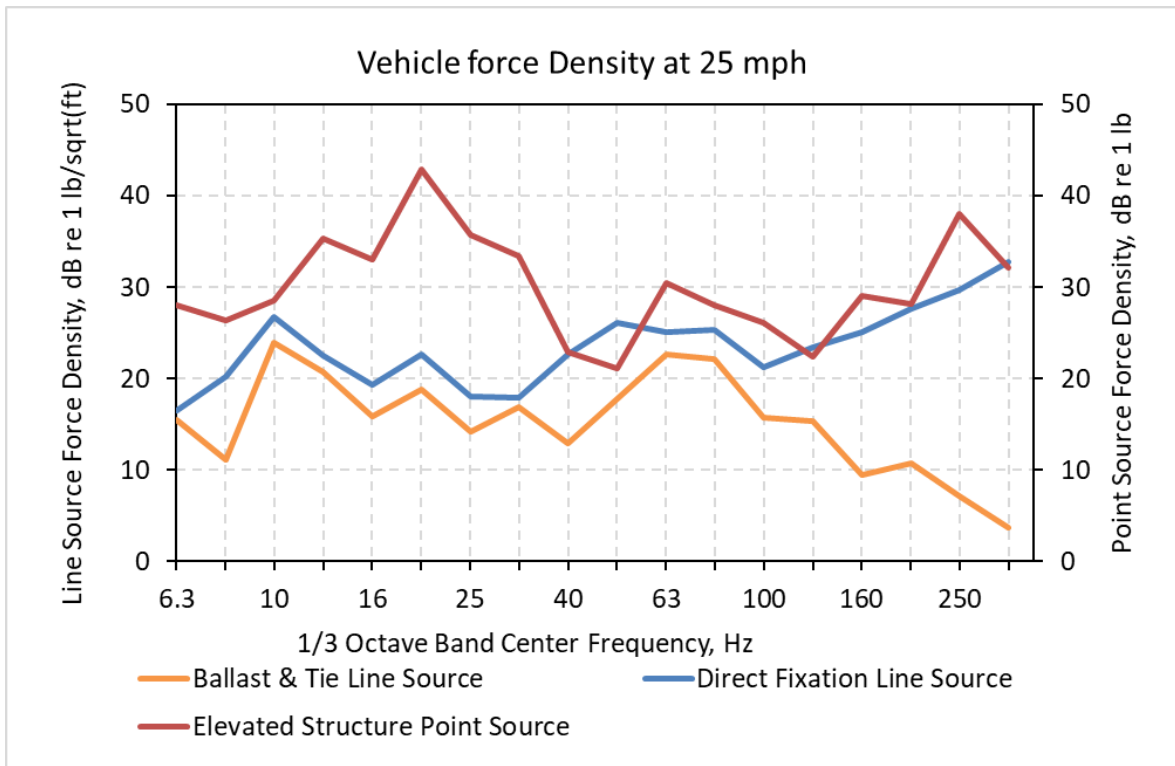


Figure 3-1 Vehicle Force Density Levels at 25 mph

3.2.2 Vibration Measurement Procedures Methodology

Vibration propagation measurements were conducted during November 2019 and March 2020 to determine the vibration response characteristics of the ground near vibration-sensitive locations located near the proposed mainline track options. Details regarding the vibration propagation test procedures and data assessment methods can be found in Section 6.5 of the FTA noise and vibration guidance manual. A custom-built instrumented hammer was used to impart an impulsive force to the ground to determine the ground response. The magnitude of the force was calculated based on the acceleration and mass of the falling hammer. The resulting vibration signals were measured using high-sensitivity accelerometers (PCB Models 393C and 393B05) mounted in a vertical direction on pavement or on steel spikes driven into the ground. The signals from the hammer and accelerometers were recorded using Data Translation DT9837A digital acquisition hardware. Data Translation's QuickDAQ software, running on a laptop computer, was used to review the measurement data.

The vibration propagation test procedure is shown schematically in Figure 3-2. The instrumented hammer was used to generate impulses at specific locations spaced 15 feet apart along a line on or parallel to the proposed alignment. A line of accelerometers was placed perpendicular to the line of impacts as shown in the figure. The relationship between the input force and the resulting vibration measured by the accelerometers, called the transfer mobility (TM), was calculated using proprietary software in the Cross-Spectrum Acoustics (CSA) laboratory. The transfer mobility represents the vibration propagation characteristics of the ground at the measurement site and along the mainline track options.

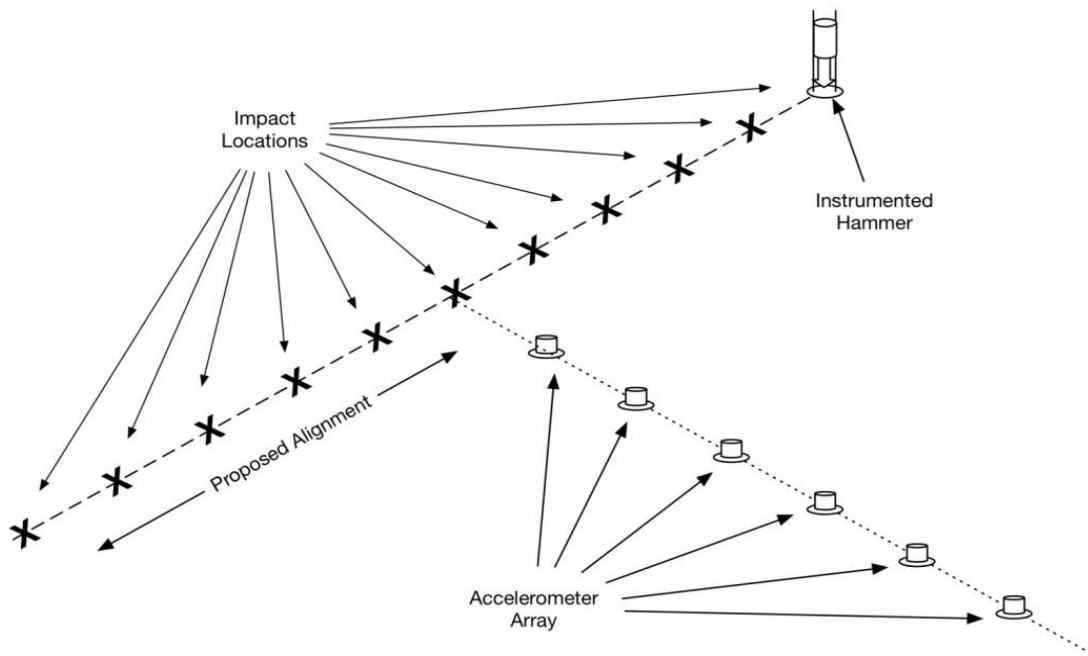


Figure 3-2 Vibration Propagation Measurement Schematic

3.3 Construction Noise Assessment Methodology

Construction noise and impacts are assessed using a combination of the methods and construction source data contained in the FTA guidance manual and the FHWA Roadway Construction Noise Model (RCNM) from the FHWA Construction Noise Handbook (FHWA 2006). Typical noise levels generated by representative pieces of equipment are listed in Table 3-1. The noise exposure at a receiver location may be calculated using decibel addition of all operating construction equipment using the following equation:

$$Leq(n) = L_{max} + 10 \times \log(U.F.) - 20 \times \log(D/50) - A_{shielding}$$

where:

$Leq(n)$ = noise exposure at a receiver resulting from the operation of a single piece of equipment over n hours,
 L_{max} = noise emission level of the particular piece of equipment at the reference distance of 50 feet (taken from Table 3-1),
 $A_{shielding}$ = shielding provided by barriers, building, or terrain,
 D = distance from the receiver to the piece of equipment in feet, and
 $U.F.$ = usage factor that accounts for the fraction of time that the equipment is in use over the specified time period. For $Leq(1)$ assume a $U.F.$ equal to 100%, and for 8 hours or more use the values in Table 3-1.

The combination of noise from several pieces of equipment operating during the same time period is obtained from decibel addition of the Leq of each single piece of equipment calculated using the above equations.

Table 3-1 Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 Feet	Usage Factor (U.F.) %
Air compressor	80	40
Backhoe	80	40
Ballast equalizer	82	50
Ballast tamper	83	50
Compactor	82	20
Concrete mixer	85	40
Concrete pump	82	20
Crane, derrick	88	16
Crane, mobile	83	16
Dozer	85	16
Generator	82	50
Grader	85	40
Impact wrench	85	50
Jackhammer	88	20
Loader	80	40
Paver	85	50
Pile driver (impact)	101	20
Pile driver (vibratory)	95	20
Pneumatic tool	85	50
Pump	77	50
Rail saw	90	20
Rock drill	85	20
Roller	85	20
Saw	76	20
Scarifier	83	20
Scraper	85	40
Shovel	82	40
Spike driver	77	20
Tie cutter	84	20
Tie handler	80	20
Tie inserter	85	20
Truck	84	40

Sources: FTA 2018; FHWA 2006

3.4 Construction Vibration Assessment Methodology

Construction vibration is assessed for areas where there is potential for impact from construction activities. Such activities include blasting, pile driving, demolition, and drilling or excavation in close proximity to sensitive structures. Typical vibration levels generated by representative pieces of equipment are listed in Table 3-2. For damage assessment, the following equation is used:

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times [(25/D)]^{1.5}$$

where:

PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for distance,

PPV_{ref} = the reference vibration level in in/sec at 25 feet from Table 3-2, and

D = the distance from the equipment to the receiver in feet.

For annoyance assessment, the following equation is used:

$$Lv(D) = Lv(25 \text{ ft}) - 30 \times \log(D/25)$$

where:

$Lv(D)$ = RMS vibration level at distance D,

$Lv(25 \text{ ft})$ = RMS vibration level at 25 feet from Table 3-2, and

D = the distance from the equipment to the receiver in feet.

Table 3-2 Construction Equipment Vibration Source Levels

Equipment		PPV at 25 Feet (in/sec)	Approximate Level ¹ at 25 Feet (VdB)
Pile driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile driver (vibratory)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: FTA 2018

Note:

(1) RMS velocity in decibels (VdB) referenced to 1 micro-inch/second.

4 CRITERIA

4.1 FTA Operational Noise Impact Criteria

The FTA operational noise impact criteria are based on well-documented research on community response to noise and are based on both the existing level of noise and the change in noise exposure due to a project. The FTA noise criteria compare the project noise with the existing noise (not the no-build noise). This is because comparison of a noise projection with an existing noise condition is more accurate than comparison of a projection with another noise projection. Because background noise may increase by the time the project is operational, this approach of using existing noise conditions is conservative.

The FTA noise criteria are based on the land use category of the sensitive receptor. The descriptors and criteria for assessing noise impacts vary according to land use categories adjacent to the track. For Category 2, land uses where people live and sleep (e.g., residential neighborhoods, hospitals, and hotels), the Ldn is the assessment parameter. For other land use types (Category 1 or 3) where there are noise-sensitive uses (e.g., outdoor concert areas, schools, and libraries), the Leq for the loudest hour of train activity during hours of noise sensitivity is the assessment parameter. Table 4-1 summarizes the three land use categories.

Table 4-1 Land Use Categories and Metrics for Transit Noise Impact Criteria

Land Use Category	Land Use Type	Noise Metric (dBA)	Description of Land Use Category
1	High Sensitivity	Outdoor Leq(h) ¹	Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and National Historic Landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
2	Residential	Outdoor Ldn	This category is applicable to all residential land use and buildings where people normally sleep, such as hotels and hospitals.
3	Institutional	Outdoor Leq(h) ¹	This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

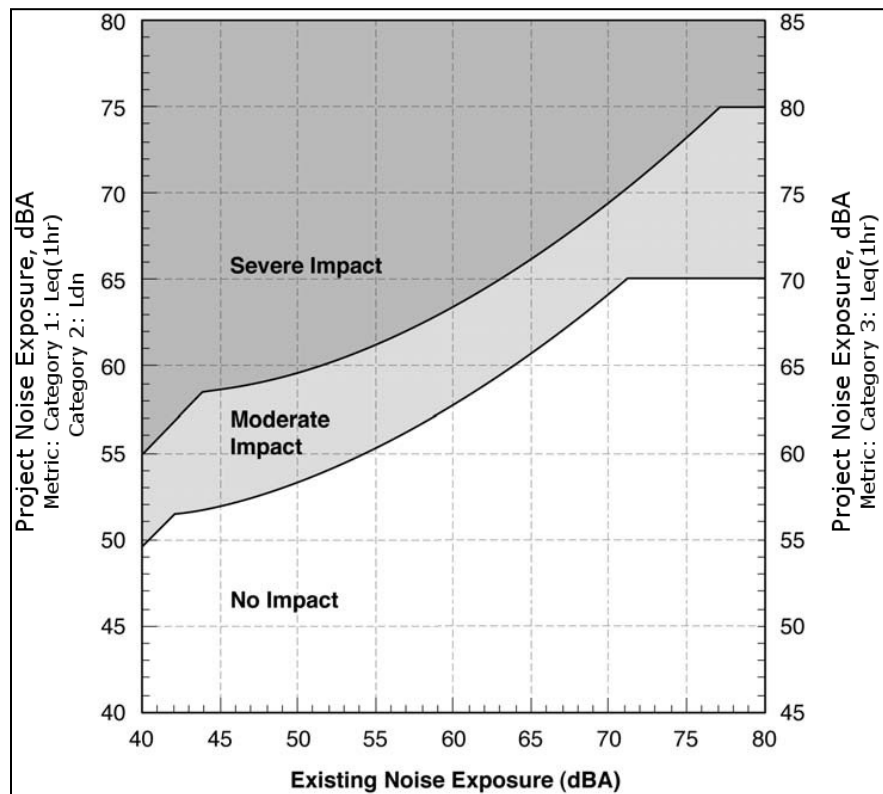
Source: FTA 2018

Note:

(1) Leq (1hr) for the loudest hour of project-related activity during hours of noise sensitivity.

The noise impact criteria are defined by the two curves in Figure 4-1, which allow increasing project noise as existing noise levels increase, up to a point at which impact is determined based on project noise alone. The FTA noise impact criteria include three levels of impact, as shown on Figure 4-1. The three levels of impact include:

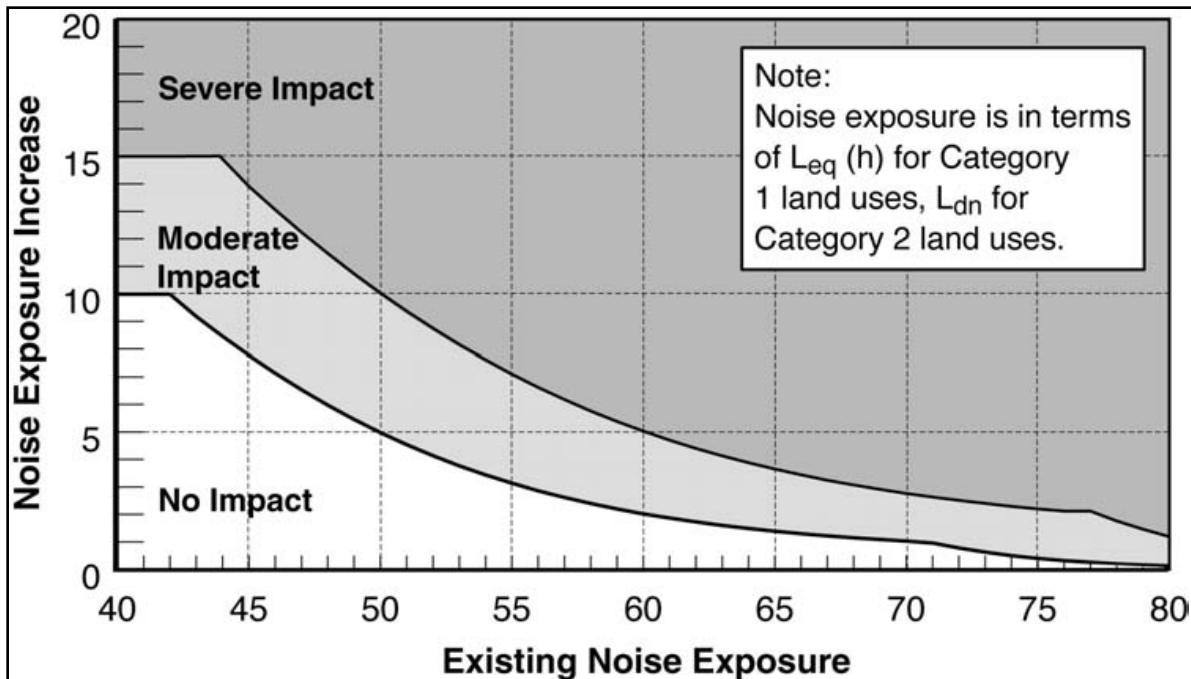
- **No Impact:** Project-generated noise is not likely to cause community annoyance. Noise projections in this range are considered acceptable by FTA and mitigation is not required.
- **Moderate Impact:** Project-generated noise in this range is considered to cause impact at the threshold of measurable annoyance. Moderate impacts serve as an alert to project planners for potential adverse impacts and complaints from the community. Mitigation should be considered at this level of impact based on project specifics and details concerning the affected properties.
- **Severe Impact:** Project-generated noise in this range is likely to cause a high level of community annoyance. If it is not practical to avoid severe impacts by changing the location of the project, mitigation measures must be considered.



Source: FTA 2018

Figure 4-1 FTA Noise Impact Criteria

Although the curves in Figure 4-1 are defined in terms of the project noise exposure and the existing noise exposure, the increase in the cumulative noise — when project-generated noise is added to existing noise levels — is the basis for the criteria. To illustrate this point, Figure 4-2 shows the noise impact criteria for Category 1 and Category 2 land uses in terms of the allowable increase in the cumulative noise exposure. Because Ldn and Leq are measures of total acoustic energy, any new noise source in a community would cause an increase, even if the new source level is lower than the existing level. In Figure 4-2, the criterion for a moderate impact allows a noise exposure increase of 10 dB if the existing noise exposure is 42 dBA or less, but only a 1 dB increase when the existing noise exposure is 70 dBA.



Source: FTA 2018

Figure 4-2 FTA Cumulative Noise Impact Criteria

As the existing level of ambient noise increases, the allowable level of transit noise increases, but the total amount that community noise exposure is allowed to increase is reduced. This accounts for the unexpected result that a project noise exposure that is lower than the existing noise exposure can still cause an effect.

4.2 FTA Operational Vibration Impact Criteria

The operational vibration impact criteria used for the project are based on the information contained in Section 6 of the FTA noise and vibration guidance manual. The criteria for a general vibration assessment are based on land use and train frequency, as shown in Table 4-2. Some buildings, such as concert halls, recording studios, and theaters, can have a higher sensitivity to vibration (or ground-borne noise) but do not fit into the three vibration categories listed below in Table 4-2. Because of the sensitivity of these buildings, special attention is paid to these buildings during the environmental assessment of a project. Table 4-3 shows the FTA criteria for acceptable levels of vibration for several types of special buildings.

Table 4-2 and Table 4-3 also include additional criteria for ground-borne noise, which is a low-frequency noise that is radiated from the motion of room surfaces, such as walls and ceilings in buildings due to ground-borne vibration. Ground-borne noise is defined in terms of dBA, which emphasizes middle and high frequencies, which are more audible to human ears. The criteria for ground-borne noise are much lower than for airborne noise to account for the low-frequency character of ground-borne noise; however, because airborne noise typically masks ground-borne noise for above ground (at-grade or elevated) transit systems, ground-borne noise is assessed only for operations in tunnels, where airborne noise is not a factor, or at locations such as recording studios, which are well insulated from airborne noise.

Table 4-2 Ground-Borne Vibration and Noise Impact Criteria for General Assessment

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec) for Frequent Events ¹	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec) for Occasional Events ²	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec) for Infrequent Events ³	Ground-Borne Noise Impact Levels (dBA re 20 micro Pascals) for Frequent Events ¹	Ground-Borne Noise Impact Levels (dBA re 20 micro Pascals) for Occasional Events ²	Ground-Borne Noise Impact Levels (dBA re 20 micro Pascals) for Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations	65 ⁴	65 ⁴	65 ⁴	N/A ⁵	N/A ⁵	N/A ⁵
Category 2: Residences and buildings where people normally sleep	72	75	80	35	38	43
Category 3: Institutional land uses with primarily daytime use	75	78	83	40	43	48

Source: FTA 2018

Notes:

- (1) "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects, such as LRT, fall into this category.
- (2) "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this level of operations.
- (3) "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
- (4) This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
- (5) Vibration-sensitive equipment is generally not sensitive to ground-borne noise.

Table 4-3 Ground-Borne Vibration and Noise Impact Criteria for Special Buildings

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec) for Frequent Events ¹	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec) for Occasional or Infrequent Events ²	Ground-Borne Noise Impact Levels (dBA re 20 micro Pascals) for Frequent Events ¹	Ground-Borne Noise Impact Levels (dBA re 20 micro Pascals) for Occasional or Infrequent Events ²
Concert halls	65	65	25	25
TV studios	65	65	25	25
Recording studios	65	65	25	25
Auditoriums	72	80	30	38
Theaters	72	80	35	43

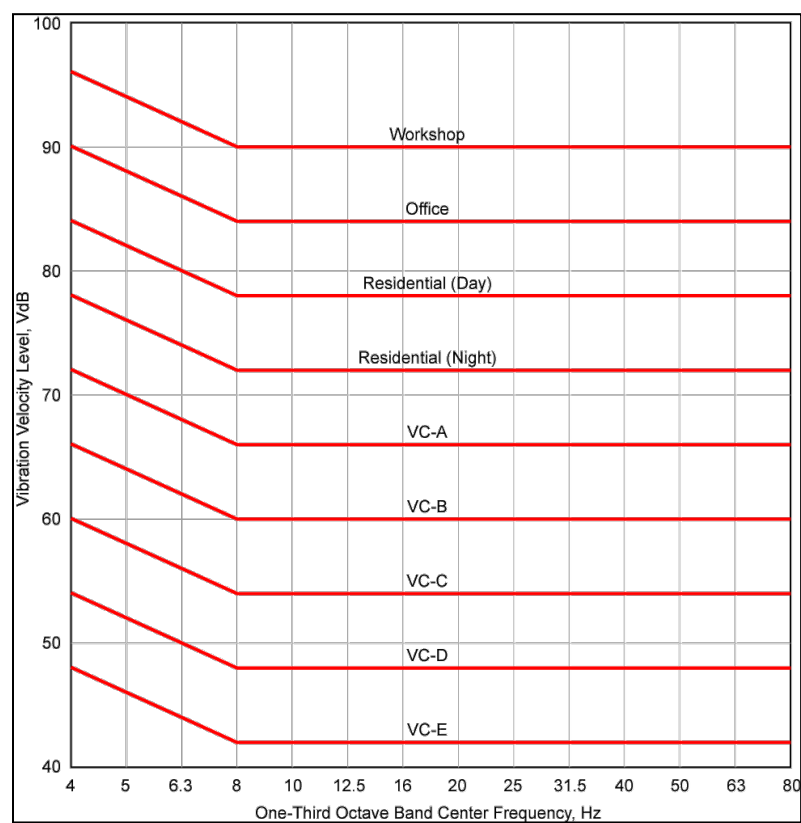
Source: FTA 2018

Notes:

- (1) "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects, such as LRT, fall into this category.
- (2) "Occasional or Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.
If the building would rarely be occupied when the trains are operating, there is no need to consider impact. As an example, if a commuter rail line were located next to a concert hall and no commuter trains operate after 7 p.m., it should be rare that the trains interfere with the use of the hall.

The criteria for a detailed vibration assessment are shown in Figure 4-3, and descriptions of the curves are shown in Table 4-4. The curves in Figure 4-3 are applied to the projected vibration spectrum for the project. If the vibration level at any one frequency exceeds the criteria, there is an impact. Conversely, if the entire proposed vibration spectrum of the project is below the curve, there would be no impact.

For the project, the detailed vibration assessment criteria are used to assess operational ground-borne vibration, except at special buildings where the general vibration assessment criteria are used.



Source: FTA 2018

Figure 4-3 FTA Detailed Vibration Criteria

Table 4-4 Interpretation of Vibration Criteria for Detailed Analysis

Criterion Curve (See Figure 3-3)	Max. Level (VdB) ¹	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and other areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20X).
Residential Night, Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power optical microscopes (100X) and other equipment of low sensitivity.
VC-A	66	Adequate for medium- to high-power optical microscopes (400X), microbalances, optical balances, and similar specialized equipment.
VC-B	60	Adequate for high-power optical microscopes (1000X) and inspection and lithography equipment to 3-micron line widths.
VC-C	54	Appropriate for most lithography and inspection equipment to 1-micron detail size.
VC-D	48	Suitable in most instances for the most demanding equipment, including electron microscopes operating to the limits of their capabilities.
VC-E	42	The most demanding criterion for extremely vibration-sensitive equipment.

Source: FTA 2018

Note:

(1) As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 Hz.

4.3 FTA Construction Noise Impact Criteria

FTA has developed methods for evaluating construction noise levels. These methods do not include standardized criteria, but they include noise impact guidelines for sensitive land uses that describe levels that may result in an adverse community reaction. Table 4-5 shows the FTA noise assessment criteria for construction. The last column applies to construction activities that extend over 30 days near any given receiver. The Ldn is used to assess impacts in residential areas, and 24-hour Leq is used in commercial and industrial areas. The 8-hour Leq and the 30-day average Ldn noise exposure from construction noise calculations use the noise emission levels of the construction equipment, their location, and operating hours. The construction noise limits are normally assessed at the noise-sensitive receiver property line.

Table 4-5 FTA Construction Noise Criteria

Land Use	8-Hour Leq, dBA Day	8-Hour Leq, dBA Night	Noise Exposure, dBA 30-Day Average
Residential	80	70	75
Commercial	85	85	80
Industrial	90	90	85

Source: FTA 2018

4.4 FTA Construction Vibration Impact Criteria

In addition to the vibration criteria for human annoyance and interference with equipment and spaces described above, there are also vibration criteria for damage from construction activities. Typical transit operations do not have the potential for damage, so only certain construction activities are assessed for generating vibration with the potential for building damage.

The thresholds for damage to structures are typically several orders of magnitude above the thresholds for human response to vibration. Table 4-6 shows the FTA criteria for vibration damage to structures. This is based on the structure and construction type (and not a designation as historic). Table 4-6 includes criteria in both VdB and PPV.

Table 4-6 FTA Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate Level ¹ (VdB)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

Note:

(1) RMS velocity in VdB re 1 micro-inch/second.

4.5 Traffic Noise Criteria

FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2018, Section 4.1) provides performance standards or thresholds for project elements, including light rail operations and associated ancillary and support elements, such as park-and-ride lots and operations and maintenance facilities. The FTA criteria should be used to consider highway elements of a transit project if:

1. FTA is the lead agency.
2. The main purpose of the project is transit-related and not highway-related, and alternatives considered do not include reconstructing or widening an existing highway or altering existing noise barriers along a highway.
3. No federal-aid highway funds are used for the project.

Where existing noise barriers or berms will be removed or modified, FHWA standards and regulations will be used. See Attachment G for details regarding the traffic noise criteria. At all other locations, all three of the FTA transit-only project criteria listed above were met by the TDLE project, and FTA methods were used to assess traffic noise impacts, including traffic noise within and adjacent to park-and-rides.

4.6 Local Ordinances

The Washington Administrative Code (WAC) noise regulations (which has been adopted by the City of Federal Way) are taken from Chapter 173-60, WAC, Maximum Environmental Noise Levels (WAC 2000). Milton, Fife, Tacoma, and Pierce County do not adopt the WAC by reference but have adopted similar noise ordinances; the only difference is the definitions of

daytime and nighttime. The noise control ordinance provides three different Environmental Designations for Noise Abatement (EDNAs) based on zoning, which are defined as residential, commercial, and industrial. The ordinance defines the maximum allowable noise level from one EDNA to another. For example, the noise caused by an industrial zone or use, like the project, must be less than 60 dBA at the closest residential property line, 65 dBA at the closest commercial use, and 70 dBA at the closest industrial use. The WAC exempts mobile noise sources, including freight rail, aircraft in flight, and vehicles traveling in public right-of-way (including LRT), as well as safety warning devices (e.g., bells). The WAC does regulate stationary land uses (such as park-and-rides) with noises originating from outside public roadways and rights-of-way. The WAC noise standards are therefore not applied to LRT operations but are applicable to park-and-ride facilities. Table 4-7 provides the property line noise standards provided in the WAC.

Table 4-7 Washington State Noise Control Regulation

Source of Noise	Maximum Allowable Sound Level (dBA) ¹ Residential Receiver	Maximum Allowable Sound Level (dBA) ¹ Commercial Receiver	Maximum Allowable Sound Level (dBA) ¹ Industrial Receiver
Residential	55	57	60
Commercial	57	60	65
Industrial	60	65	70

Source: Washington Administrative Code 2000

Note:

(1) Between 10 p.m. and 7 a.m., the levels given above are reduced by 10 dBA for residential receiving property.

In addition to the property-line noise standards listed in Table 4-7, there are exemptions for short-term noise exceedance, including those outlined in Table 4-8, that are based on the minutes per hour that the noise limit is exceeded.

Table 4-8 Washington State Exemptions for Short-Term Noise Exceedances

Minutes per Hour	Ln Value	Adjustment to Maximum Sound Level
15	L ₂₅	+5 dBA
5	L _{8.3}	+10 dBA
1.5	L _{1.5}	+15 dBA

Construction noise is exempt from the WAC noise limits, except at residential land uses during nighttime hours (10 p.m. to 7 a.m.). For local jurisdictions, there are differences in the definition of daytime and nighttime. If construction is performed during nighttime hours, the contractor must still meet the WAC noise level requirements presented in Table 4-7 or obtain a noise variance from the governing jurisdiction.

Maximum permissible sound levels for haul trucks on public roadways are limited to 86 dBA for speeds of 35 mph or less and 90 dBA for speeds over 35 mph when measured at 50 feet (Chapter 173-62, WAC).

Sounds created by backup alarms are exempt, except between 10 p.m. and 7 a.m. when “beep-beep” backup alarms are essentially prohibited by the WAC in urban areas. During these hours, smart backup alarms (which automatically adjust the alarm level based on the background level) would be used, or the alarms would be switched off and replaced with spotters. This condition is included because, just as noise from construction activities, noise from backup beepers would exceed the WAC nighttime criteria, even with the allowable exceedance, at large distances from the construction site.

5 AFFECTED ENVIRONMENT

The affected noise and vibration environment in the vicinity of the TDLE build alternatives was investigated based on a review of current project and land use information, GIS data, a windshield survey, and measurements conducted during November 2019 and March 2020. Land use in the TDLE study area includes a combination of residential, institutional, commercial, and industrial zones. Noise-sensitive and vibration-sensitive land uses (as defined in Sections 4.1 and 4.2) in the study area were identified based on alignment drawings, aerial photographs, visual surveys, and land use information. Sensitive receptors located near the proposed alternatives include single-family and multi-family residences, hotels, and places of worship.

A summary of noise- and vibration-sensitive land uses adjacent to the TDLE build alternatives is provided below, followed by descriptions of the existing noise and vibration conditions in the study area. There is one special building, the Puyallup Tribe Integrative Medicine facility that includes the Salish Cancer Center, in Fife.

5.1 Noise and Vibration Sensitive Land Use

5.1.1 Federal Way Segment

The land use adjacent to the Preferred FW Enchanted Parkway Alternative (with or without the FW Design Option) is a mixture of commercial and residential properties. The noise- and vibration-sensitive land use is a mix of single- and multi-family homes. There are no institutional or highly sensitive noise- or vibration-sensitive land uses adjacent to this alternative.

5.1.2 South Federal Way Segment

The land use adjacent to the SF Enchanted Parkway Alternative is a mixture of commercial and residential properties. The noise- and vibration-sensitive land use includes the future King County emergency shelter, Telecare Pierce County Evaluation & Treatment Center, and a mix of single- and multi-family homes. There are no institutional or highly sensitive noise- or vibration-sensitive land uses adjacent to this alternative.

The land use adjacent to the SF I-5 Alternative is a mixture of commercial and residential properties. The noise- and vibration-sensitive land use includes the Telecare Pierce County Evaluation & Treatment Center and a mix of single- and multi-family homes. There are no institutional or highly sensitive noise- or vibration-sensitive land uses adjacent to this alternative.

The land use adjacent to the SF 99-West and SF 99-East alternatives (with or without the Porter Way Design Option) is a mixture of industrial, commercial, and residential properties. The noise- and vibration-sensitive land uses include the future King County emergency shelter (former Red Lion Inn & Suites), Montessori Academy at Spring Valley, Giac Vien Pagoda, Gethsemane Cemetery, Daffodil Motel, Telecare Pierce County Evaluation & Treatment Center, and a mix of single- and multi-family homes.

5.1.3 Fife Segment

The land use adjacent to the Fife Pacific Highway Alternative is a mixture of industrial, commercial, and residential properties. The noise- and vibration-sensitive land use includes St. Paul Chong Hasang Korean Catholic Community Church, New Horizon Christian Center, Puyallup Tribe Integrative Medicine, Kings Motor Inn, Fife Motel, Glacier Motel, Pinnacle Apartments, Travelodge by Wyndham Port of Tacoma WA, Sunshine Motel, Roadway Inn and Suites (currently closed), Extended Stay America Tacoma – Fife, and a mix of single- and multi-family homes.

The land use adjacent to the Fife Median Alternative is a mixture of industrial, commercial, and residential properties. The noise- and vibration-sensitive land use includes St. Paul Chong Hasang Korean Catholic Community Church, New Horizon Christian Center, Puyallup Tribe Integrative Medicine, Kings Motor Inn, Fife Motel, Glacier Motel, Pinnacle Apartments, Travelodge by Wyndham Port of Tacoma WA, Sunshine Motel, Roadway Inn and Suites (currently closed), Extended Stay America Tacoma – Fife, and a mix of single- and multi-family homes.

The land use adjacent to the Fife I-5 Alternative is a mixture of industrial, commercial, and residential properties. The noise- and vibration-sensitive land use includes St. Paul Chong Hasang Korean Catholic Community Church, New Horizon Christian Center, Puyallup Tribe Integrative Medicine, Kings Motor Inn, Roadway Inn and Suites (currently closed), Extended Stay America Tacoma – Fife, and a mix of single- and multi-family homes.

All of these land uses would remain the same for the respective alternative with the 54th Avenue Design Option or 54th Span Design Option. These design options include a different station location and slight variation to the guideway alignment to reach the station location.

5.1.4 Tacoma Segment

The land use adjacent to the Preferred Tacoma 25th Street-West Alternative is mainly a mixture of industrial and commercial land use with few residential properties. The noise- and vibration-sensitive land use includes La Quinta Inn and Suites by Wyndham Tacoma – Seattle, Motel Tacoma Center, and single-family homes. There is one institutional land use (Cedar Wellness Center), but no highly sensitive noise- or vibration-sensitive land uses are adjacent to this alternative.

The land use adjacent to the Tacoma 25th Street-East Alternative is mainly a mixture of industrial and commercial land use with few residential properties. The noise- and vibration-sensitive land use includes La Quinta Inn and Suites by Wyndham Tacoma – Seattle, Motel Tacoma Center, and single-family homes. There is one institutional land use (Cedar Wellness Center), but no highly sensitive noise- or vibration-sensitive land uses are adjacent to this alternative.

The land use adjacent to the Tacoma Close to Sounder Alternative is mainly a mixture of industrial and commercial land use with few residential properties. The noise- and vibration-sensitive land use includes La Quinta Inn and Suites by Wyndham Tacoma – Seattle, Motel Tacoma Center, and single-family homes. There is one institutional land use (Cedar Wellness Center), but no highly sensitive noise- or vibration-sensitive land uses are adjacent to this alternative.

The land use adjacent to the Tacoma 26th Street Alternative is mainly a mixture of industrial and commercial land use with few residential properties. The noise- and vibration-sensitive land use includes La Quinta Inn and Suites by Wyndham Tacoma – Seattle, Motel Tacoma Center, Best Western Plus Tacoma Dome Hotel, and single-family homes. There is one institutional

land use (Cedar Wellness Center), but no highly sensitive noise- or vibration-sensitive land uses are adjacent to this alternative.

5.2 Existing Noise Conditions

Existing noise sources in the project area include traffic on I-5 and other major roadways, local roadway traffic, aircraft overflights, and local community activities. The existing ambient sound levels vary by location, depending on the proximity to I-5, the locations of existing noise barriers and berms, and are generally typical of a suburban environment near a busy interstate. Existing ambient noise levels were characterized through direct measurements, as described in Section 3.1.2, at selected sites in the area near the TDLE build alternatives during November 2019, March 2020, and June 2023.

5.2.1 Federal Way Segment Noise Measurement Results

Table 5-1 summarizes the results of the existing noise measurement program for the Federal Way Segment, and Figure 5-1 shows the locations of the three noise measurements for the Federal Way Segment. The results of the existing noise measurements were used to characterize the existing noise levels at all noise-sensitive locations in the Federal Way Segment.

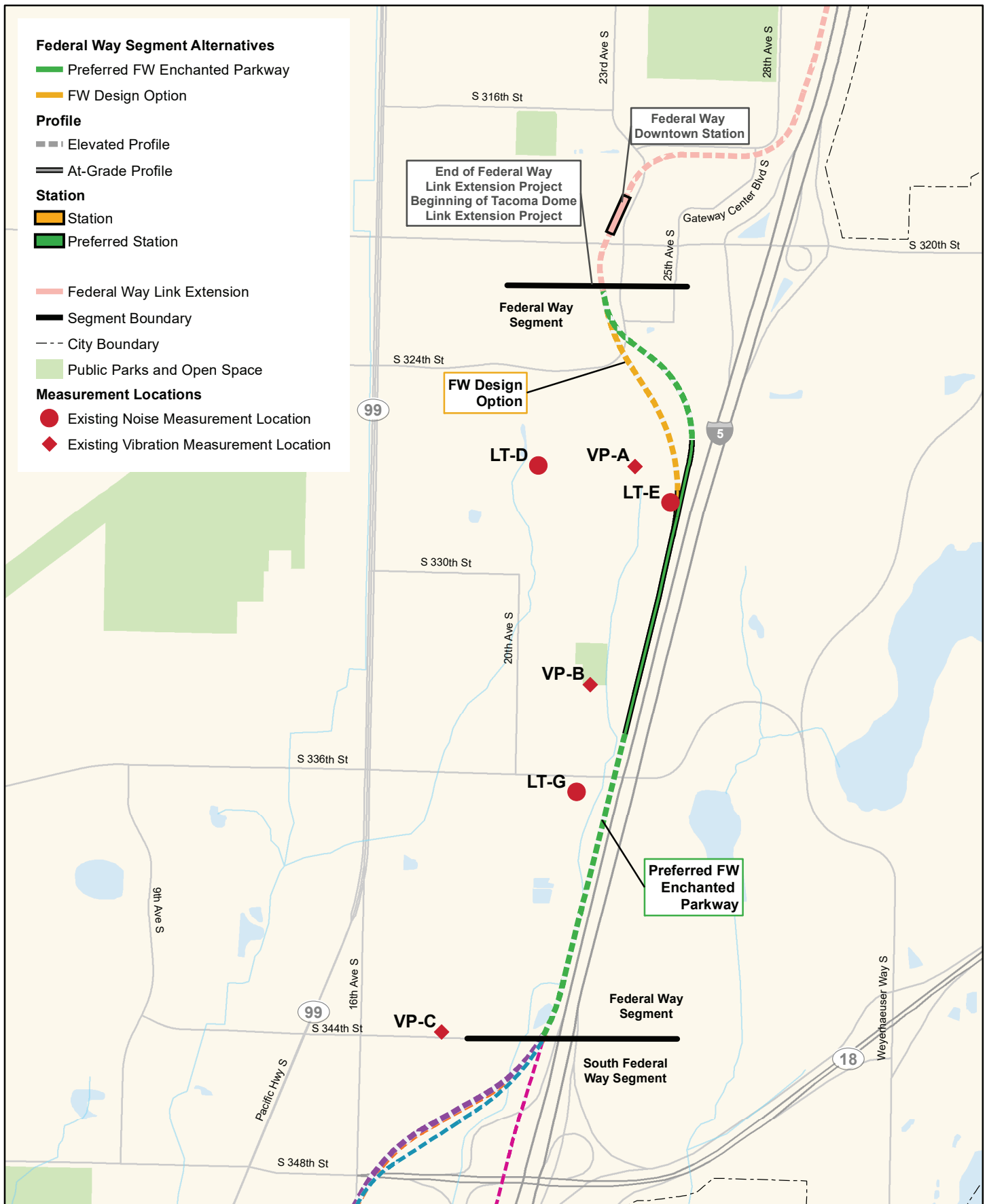
Site LT-D: 11 The Dunes Court. The Ldn measured at this location was 65 dBA, and the measured peak hour Leq was 59 dBA. This location is representative of the single-family homes in Belmor, west of Oakland Hills Boulevard. The ambient noise levels were dominated by local traffic.

Site LT-E: 326 Oakland Hill Boulevard. The Ldn measured at this location was 70 dBA, and the measured peak hour Leq was 65 dBA. This location is representative of the single-family homes in Belmor and along 24th Avenue S close to I-5. The ambient noise levels were dominated by traffic on I-5.

Site LT-G: Christian Faith Center East. The Ldn measured at this location was 72 dBA, and the measured peak hour Leq was 66 dBA. This location is representative of the single-family homes between S 333rd Street and S 336th Street. The ambient noise levels were dominated by traffic on I-5.

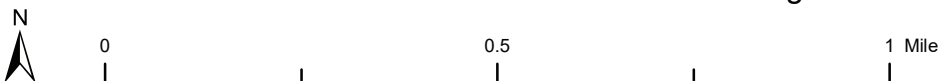
Table 5-1 Summary of Existing Ambient Noise Measurements Results for the Federal Way Segment

Site No.	Measurement Location Description	Start Date	Start Time	Meas. Duration (hours)	Noise Exposure (dBA) Ldn	Noise Exposure (dBA) 1 Hour Leq
LT-D	11 The Dunes Court, Federal Way	11/19/2019	12:00	24	65	59
LT-E	326 Oakland Hills Boulevard, Federal Way	11/19/2019	12:00	24	70	65
LT-G	Christian Faith Center East, Federal Way	11/19/2019	14:00	24	72	66



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE 5-1
Existing Noise and Vibration Measurement Locations
Federal Way Segment
Tacoma Dome Link Extension



5.2.2 South Federal Way Segment Noise Measurement Results

Table 5-2 summarizes the results of the existing noise measurement program for the South Federal Way Segment, and Figure 5-2 shows the locations of the four noise measurements for the South Federal Way Segment. The results of the existing noise measurements were used to characterize the existing noise levels at all noise-sensitive locations in the South Federal Way Segment.

Site LT-I: 35810 16th Avenue S. The Ldn measured at this location was 73 dBA, and the measured peak hour Leq was 69 dBA. This location is representative of the single- and multi-family homes between Highway 161 and Porter Way. The ambient noise levels were dominated by local traffic and traffic on I-5.

Site LT-J: Abandoned Weigh Station, I-5 (MM 141). The Ldn measured at this location was 81 dBA, and the measured peak hour Leq was 77 dBA. The ambient noise levels were dominated by traffic on I-5.

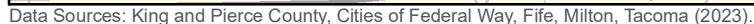
Site LT-K: 1413 69th Avenue E. The Ldn measured at this location was 73 dBA, and the measured peak hour Leq was 69 dBA. This location is representative of the Telecare Pierce County Evaluation & Treatment Center and the single-family homes between Porter Way and 68th Avenue E. The ambient noise levels were dominated by traffic on Pacific Highway and I-5.

Site LT-S: Brooklake Church. The Ldn measured at this location was 59 dBA, and the measured peak hour Leq was 54 dBA. The ambient noise levels were dominated by traffic on Pacific Highway.

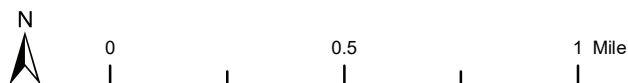
Site LT-T: 7808 Pacific Highway E. The Ldn measured at this location was 68 dBA, and the measured peak hour Leq was 65 dBA. This location is representative of the Montessori Academy at Spring Valley, Giac Vien Pagoda, Gethsemane Cemetery, Daffodil Motel, and single- and multi-family homes along Pacific Highway between S 356th Street and 10th Street E. The ambient noise levels were dominated by traffic on Pacific Highway.

Table 5-2 Summary of Existing Ambient Noise Measurements Results for the South Federal Way Segment

Site No.	Measurement Location Description	Start Date	Start Time	Meas. Duration (hours)	Noise Exposure (dBA) Ldn	Noise Exposure (dBA) 1 Hour Leq
LT-I	35810 16th Avenue S, Federal Way	3/16/2020	11:00	24	73	69
LT-J	Abandoned Weigh Station, I-5 (MM 141), Federal Way	3/17/2020	19:00	24	81	77
LT-K	1413 69th Avenue E, Fife	3/17/2020	16:00	24	73	69
LT-S	Brooklake Church, Federal Way	6/12/2023	16:00	24	59	54
LT-T	7808 Pacific Highway E, Milton	6/12/2023	15:00	24	68	65



Tacoma Dome Link Extension



5.2.3 Fife Segment Noise Measurement Results

Table 5-3 summarizes the results of the existing noise measurement program for the Fife Segment, and Figure 5-3 shows the locations of the six long-term and one short-term noise measurements for the Fife Segment. The results of the existing noise measurements were used to characterize the existing noise levels at all noise-sensitive locations in the Fife Segment.

Site LT-L: Restaurant Depot, 6130 12th Street E. The Ldn measured at this location was 64 dBA, and the measured peak hour Leq was 56 dBA. This location is representative of the single-family homes between 68th Avenue E (the segment boundary) and 54th Avenue E. The ambient noise levels were dominated by local traffic.

Site LT-M: Chateau Rainier Apartments North, 4600 16th Street E. The Ldn measured at this location was 65 dBA, and the measured peak hour Leq was 61 dBA. This location is representative of the Fife Motel and single- and multi-family homes between 54th Avenue E and Alexander Avenue E. The ambient noise levels were dominated by traffic on Pacific Highway E.

Site LT-N: Chateau Rainier Apartments South, 4600 16th Street E. The Ldn measured at this location was 77 dBA, and the measured peak hour Leq was 67 dBA. This location is representative of the multi-family homes on the south side of the Chateau Rainier Apartments close to I-5. The ambient noise levels were dominated by traffic on I-5.

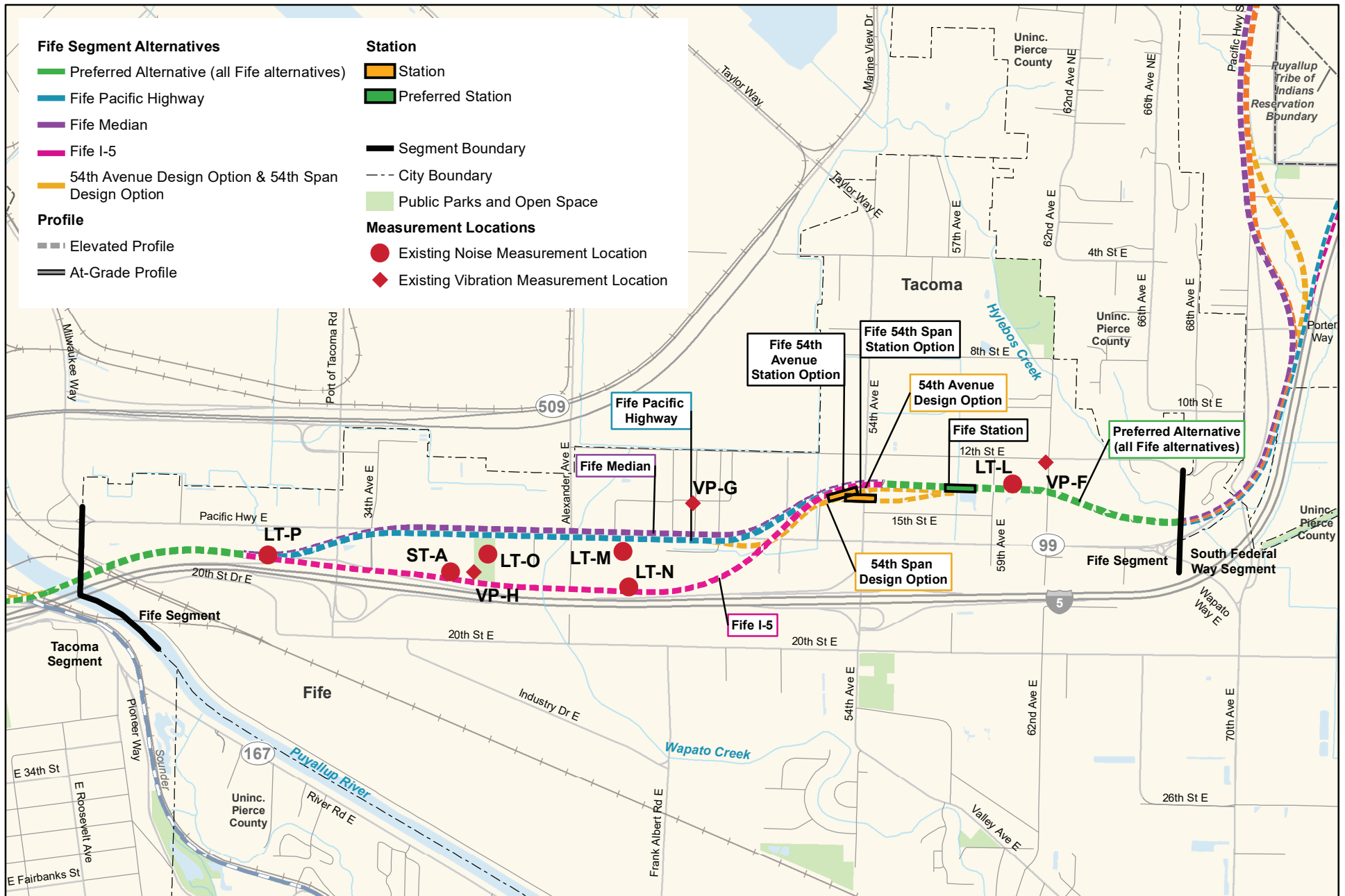
Site LT-O: 3812 Pacific Highway E. The Ldn measured at this location was 69 dBA, and the measured peak hour Leq was 65 dBA. This location is representative of hotels and single-family homes between Alexander Avenue and 34th Avenue E. The ambient noise levels were dominated by traffic on Pacific Highway E and I-5.

Site LT-P: Poulsbo RV, 2950 Pacific Highway E. The Ldn measured at this location was 76 dBA, and the measured peak hour Leq was 72 dBA. This location is representative of hotels between 34th Avenue E and the Puyallup River. The ambient noise levels were dominated by traffic on I-5.

Site ST-A: 3700 Pacific Highway E. The peak hour Leq measured at this location was 64 dBA. This location is representative of the ambient noise at the Puyallup Tribe Integrative Medicine facility. The ambient noise levels were dominated by traffic on I-5.

Table 5-3 Summary of Existing Ambient Noise Measurements Results for the Fife Segment

Site No.	Measurement Location Description	Start Date	Start Time	Meas. Duration (hours)	Noise Exposure (dBA) Ldn	Noise Exposure (dBA) 1 Hour Leq
LT-L	Restaurant Depot, 6130 12th Street E, Fife	3/16/2020	11:00	24	64	56
LT-M	Chateau Rainier Apartments North, 4600 16th Street E, Fife	3/16/2020	12:00	24	65	61
LT-N	Chateau Rainier Apartments South, 4600 16th Street E, Fife	3/16/2020	12:00	24	77	67
LT-O	3812 Pacific Highway E, Fife	3/16/2020	13:00	24	69	65
LT-P	Poulsbo RV, 2950 Pacific Highway E, Fife	3/17/2020	15:00	24	76	72
ST-A	3700 Pacific Highway E, Fife	3/17/2020	17:12	1	–	64



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

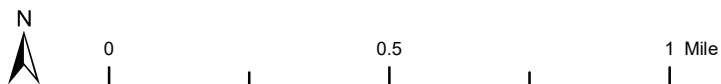


FIGURE 5-3
Existing Noise and Vibration Measurement Locations
Fife Segment
Tacoma Dome Link Extension

5.2.4 Tacoma Segment Noise Measurement Results

Table 5-4 summarizes the results of the existing noise measurement program for the Tacoma Segment, and Figure 5-4 shows the locations of the two noise measurements for the Tacoma Segment. The results of the existing noise measurements were used to characterize the existing noise levels at all noise-sensitive locations in the Tacoma Segment.

Site LT-Q: 1121 26th Street E. The Ldn measured at this location was 64 dBA, and the measured peak hour Leq was 61 dBA. This location is representative of hotels and single-family homes between the Puyallup River and East G Street. The ambient noise levels were dominated by traffic on local roads.

Site LT-R: 2611 East E Street. The Ldn measured at this location was 67 dBA, and the measured peak hour Leq was 63 dBA. This location is representative of the noise levels at the Best Western Plus close to the Tacoma Dome. The ambient noise levels were dominated by traffic on local roads and I-5.

Table 5-4 Summary of Existing Ambient Noise Measurements Results for the Tacoma Segment

Site No.	Measurement Location Description	Start Date	Start Time	Meas. Duration (hours)	Noise Exposure (dBA) Ldn	Noise Exposure (dBA) 1 Hour Leq
LT-Q	1121 26th Street E, Tacoma	3/17/2020	15:00	24	64	61
LT-R	2611 East E Street, Tacoma	3/17/2020	15:00	24	67	63



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

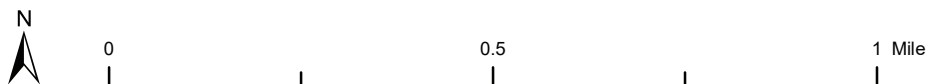


FIGURE 5-4
Existing Noise and Vibration Measurement Locations
Tacoma Segment
Tacoma Dome Link Extension

5.3 Existing Vibration Conditions

Vibration-sensitive land use for the project alternatives is the same as the noise-sensitive land use described above. Existing vibration sources along the project alignments include auto, bus, and truck traffic on local streets. However, vibrations from street traffic are not generally perceptible at receivers in the study area unless streets have substantial bumps, potholes, or other uneven surfaces. Furthermore, the FTA vibration impact criteria are not ambient based; that is, future project vibrations are not compared with existing vibrations to assess impact. Therefore, the vibration measurements for the project, as described in Section 3.2.2, focused on characterizing the soil conditions along the mainline track rather than on characterizing the existing vibration levels as described below.

5.3.1 Federal Way Segment Vibration Measurement Results

Three vibration propagation test sites were selected for the 2019 and 2020 measurements for the Federal Way Segment. The test sites were all located near vibration sensitive receptors within the segment to characterize the ground response at these locations. The locations of the sites are shown on Figure 5-1, site photographs are included in Attachment C, and detailed propagation information is included in Attachment D. Figure 5-5 shows the results of the vibration propagation tests at 100 feet for each of the test sites in the Federal Way Segment.

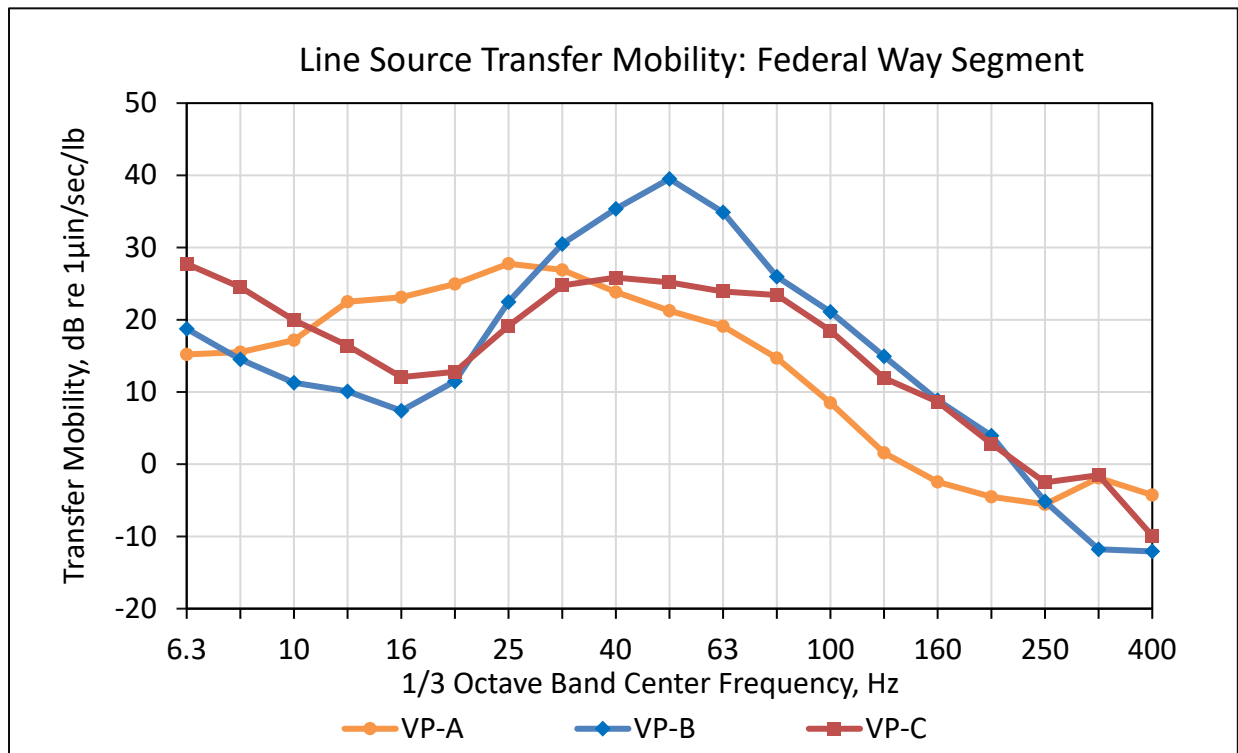


Figure 5-5 Federal Way Segment Vibration Measurement Results

Site VP-A: Belmor Mobile Home Park. The vibration propagation measurement at this location was conducted in Belmor. This site is used to represent the vibration at the mobile homes in this community.

Site VP-B: Cedar Grove Park. The vibration propagation measurement at this location was conducted in the Cedar Grove Park off S 333rd Street. This site is used to represent the vibration from S 330th Street to S 336th Street.

Site VP-C: S 344th Street and 18th Place S. The vibration propagation measurement at this location was conducted at the corner of S 344th Street and 18th Place S. This site is used to represent the vibration from S 336th Street to S 344th Street.

5.3.2 South Federal Way Segment Vibration Measurement Results

Two vibration propagation test sites were selected for the 2019, 2020, and 2023 measurements for the South Federal Way Segment. The test sites were all located near vibration sensitive receptors within the segment to characterize the ground response at these locations. The locations of the sites are shown on Figure 5-2, site photographs are included in Attachment C, and detailed propagation information is included in Attachment D. Figure 5-6 shows the results of the vibration propagation tests at 100 feet for each of the test sites in the South Federal Way Segment.

Site VP-D: 16th Avenue S and S 359th Street. The vibration propagation measurement at this location was conducted on the corner of 16th Avenue S and S 359th Street. This site is used to represent the vibration from S 356th Street to S 376th Street.

Site VP-E: 5th Street Court E and 70th Avenue E. The vibration propagation measurement at this location was conducted on the corner of 5th Street Court E and 70th Avenue E in Milton. This site is used to represent the vibration from the King County line to 68th Avenue E (near the segment boundary).

Site VP-J: 1st Avenue SW and SW 374th Street. The vibration propagation measurement at this location was conducted on the corner of 1st Avenue SW and SW 374th Street. This site is used to represent the vibration along Pacific Highway between S 356th Street and Birch Street.

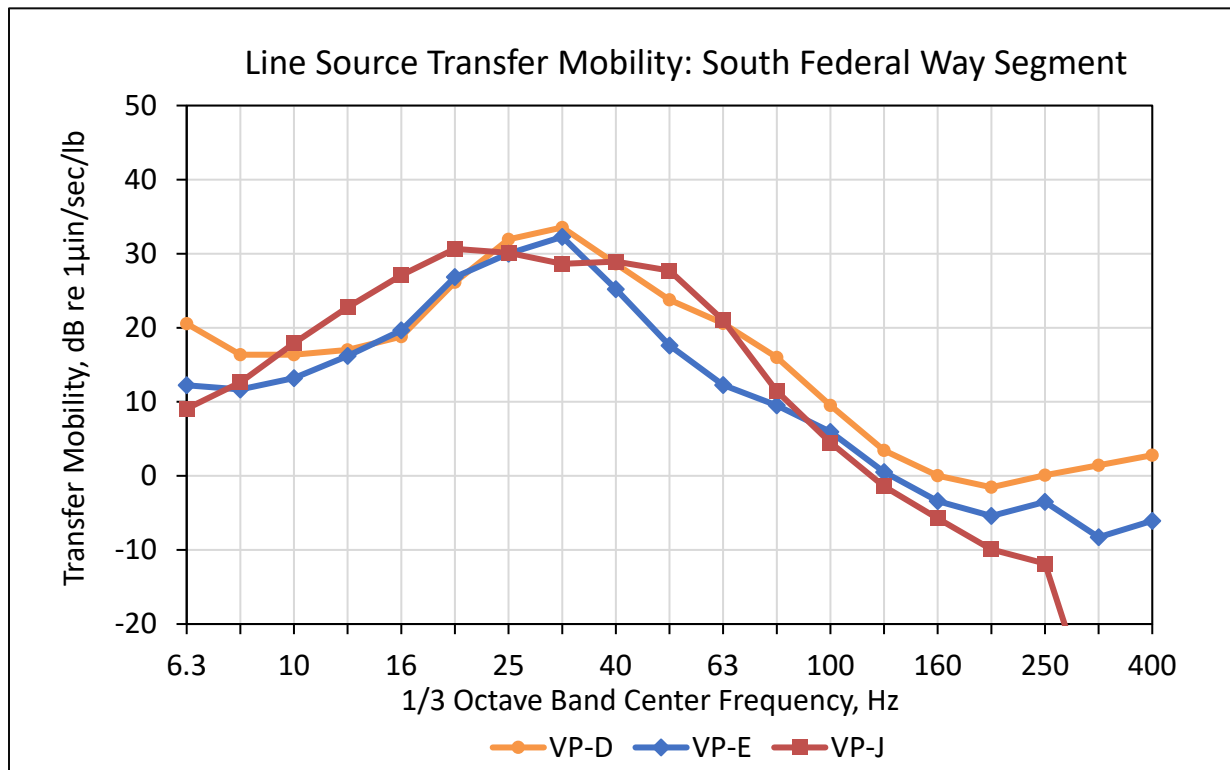


Figure 5-6 South Federal Way Segment Vibration Measurement Results

5.3.3 Fife Segment Vibration Measurement Results

Three vibration propagation test sites were selected for the 2020 measurements for the Fife Segment. The test sites were all located near vibration sensitive receptors within the segment to characterize the ground response at these locations. The locations of the sites are shown on Figure 5-3, site photographs are included in Attachment C, and detailed propagation information is included in Attachment D. Attachment D contains both LSTM and PSTM data for Fife. Only the PSTM data were included in the assessment of vibration in Fife, but the LSTM data are presented as reference. Figure 5-7 shows the results of the vibration propagation tests at 100 feet for each of the test sites in the Fife Segment. The transfer mobility results for Fife are point source transfer mobilities (PSTM), which should only be used with the elevated structure force density described in Section 3.2.1.

Site VP-F: 62nd Avenue E and 12th Street E. The vibration propagation measurement at this location was conducted on the corner of 62nd Avenue E and 12th Street E. This site is used to represent the vibration from 68th Avenue E (the segment boundary) to 54th Avenue E.

Site VP-G: 15th Street E and 47th Avenue E. The vibration propagation measurement at this location was conducted on the corner of 15th Street E and 47th Avenue E. This site is used to represent the vibration from 54th Avenue E to Alexander Avenue E.

Site VP-H: Puyallup Tribe Integrative Medicine. The vibration propagation measurement at this location was conducted in the south parking lot of the Puyallup Tribe Integrative Medicine facility. This site is used to represent the vibration from Alexander Avenue E to the Puyallup River and at the medical facility that includes the Salish Cancer Center.

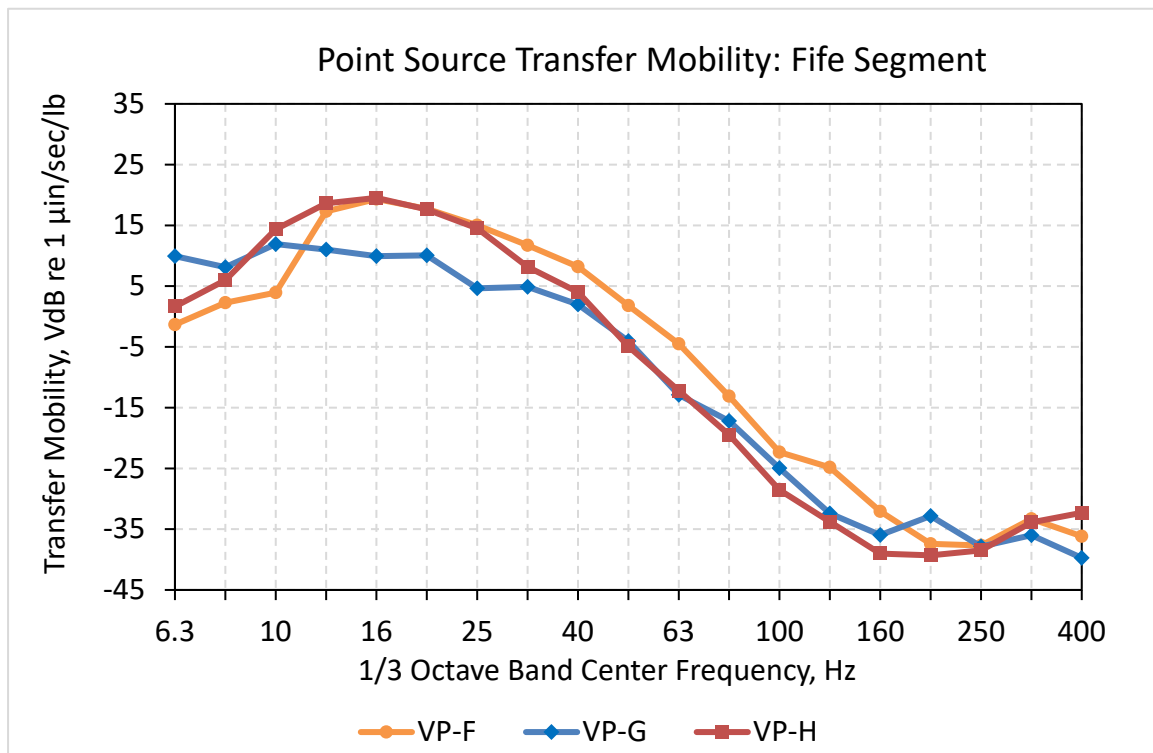


Figure 5-7 Fife Segment Vibration Measurement Results

5.3.4 Tacoma Segment Vibration Measurement Results

One vibration propagation test site was selected for the 2020 measurements for the Tacoma Segment. The test site was located near vibration sensitive receptors within the segment to characterize the ground response at these locations. The location of the site is shown on Figure 5-4, a site photograph is included in Attachment C, and detailed propagation information is included in Attachment D. Figure 5-8 shows the results of the vibration propagation test at 100 feet for the test site in the Tacoma Segment.

Site VP-I: East N Street and E 26th Street. The vibration propagation measurement at this location was conducted on the corner of East N Street and E 26th Street. This site is used to represent the vibration west of the Puyallup River.

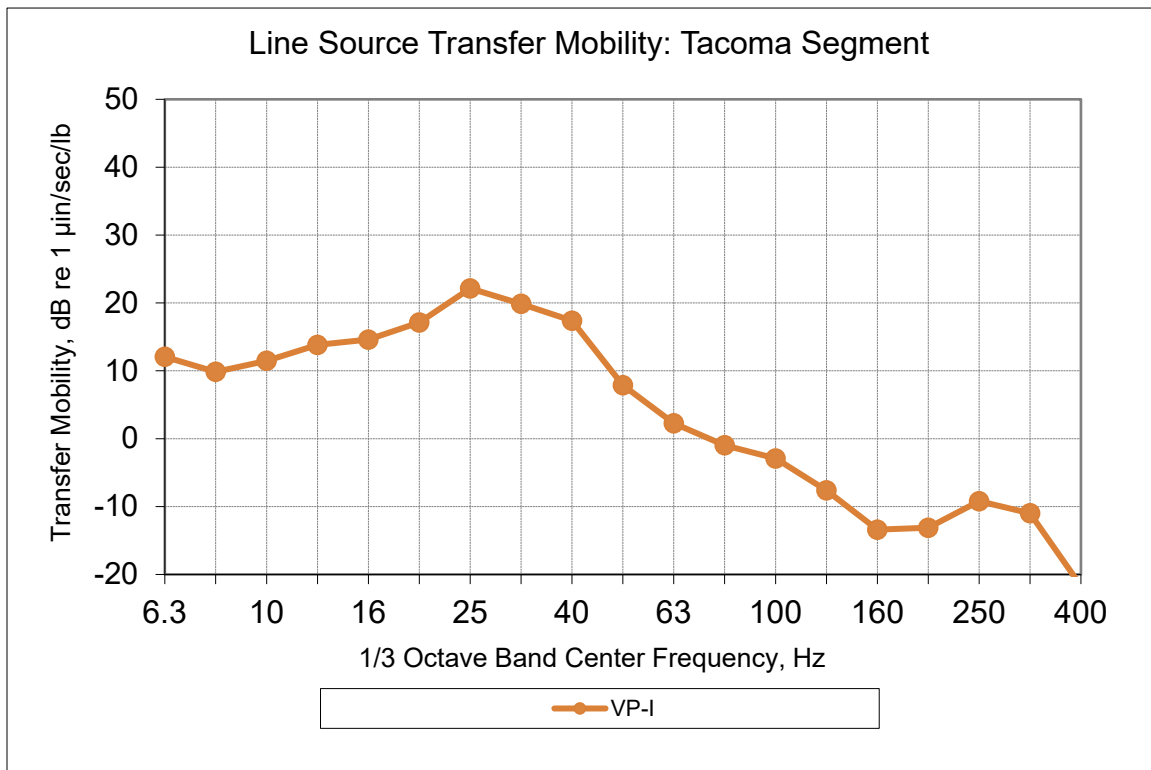


Figure 5-8 Tacoma Segment Vibration Measurement Results

6 IMPACT ASSESSMENT

Detailed noise and vibration impact assessments were performed based on the criteria discussed in Section 4 and the prediction methodology described in Section 3. The assessment results are presented in this section. The FTA guidance manual is the primary source for the noise methodology. The noise and vibration impact assessment included the following steps:

- Noise- and vibration-sensitive land uses were identified using aerial photography, GIS data, and field surveys. See Section 5.1.
- Existing noise levels along the corridor were measured at sensitive receptors. See Section 5.2.
- Vibration-propagation characteristics of the soil along the corridor were measured near representative sensitive receptors. See Section 5.3.
- Project noise and vibration levels from transit operations were predicted using project drawings and information on speeds, headways, track type, and vehicle type.
- The noise impact from transit operations was assessed by comparing the project noise with the existing noise (not the No-Build Alternative noise) using the FTA noise impact criteria. See Figure 4-1.
- For the two park-and-ride facilities, the noise levels were compared to the WAC criteria to determine the potential for any noise impacts.
- The vibration impact from transit operations was assessed by comparing the project vibration levels with the FTA vibration impact criteria in Figure 4-3.
- Mitigation was recommended at locations where project noise or vibration levels exceed the impact criteria.
- Wheel squeal for tight radius curves is not included in the noise model because Sound Transit has committed to reducing any potential wheel squeal by installing wayside lubricators on all curves in noise-sensitive areas with a radius of less than 600 feet and by preparing all curves for wayside lubricators that have a radius of between 600 and 1,000 feet, including those in the Operations and Maintenance Facility South (OMF South). There are no curves with a radius of less than 600 feet. Curves with a radius between 600 and 1,000 feet are discussed below.

6.1 No-Build Alternative

The No-Build Alternative would not result in any noise or vibration impacts. There would likely be increases in highway and local roadway noise due to increased traffic volumes. FWLE, located directly to the north of TDLE, and OMF South are assumed to be constructed under the No-Build Alternative. There are no sensitive receptors in the TDLE corridor that would be affected by FWLE. The planned OMF South project, currently under evaluation in a separate EIS, would increase noise levels at a few receivers near the S 336th Street (preferred) and S 344th Street alternatives if either of those sites is selected. There would also be a few noise impacts in the Belmor community due to the OMF South mainline track. Those impacts, which are a subset of the noise impacts identified for TDLE build alternatives, occur along the guideway south of the Federal Way Downtown Station, where either of the two Federal Way sites would connect to OMF South.

6.2 Build Alternatives Noise Impact Assessment

A summary of the noise measurement results by segment is included below, detailed information by parcel is included in Attachment E, Detailed Noise Assessment Results.

6.2.1 Federal Way Segment

Comparisons of the existing and project noise levels are presented for the Preferred FW Enchanted Parkway Alternative and the FW Design Option in Tables 6-1 and 6-2, respectively. Both tables include the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Preferred FW Enchanted Parkway Alternative. There are no FTA Category 1 (high sensitivity) or 3 (institutional) receptors for the Preferred FW Enchanted Parkway Alternative or the FW Design Option. The curves north of S 324th Street, from S 324th Street to Oakland Hills Boulevard and across S 348th Street, would have a radius of 900 to 1,800 feet and would be prepared for wayside lubricators. In addition to the distances to the nearest track, Tables 6-1 and 6-2 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Preferred FW Enchanted Parkway Alternative and the FW Design Option. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-1 Summary of FTA Category 2 Noise Impacts for the Preferred FW Enchanted Parkway Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 324th Street to Merion Way ²	SB	80	70	65	64	69	4	0
Merion Way to S 328th Place ²	SB	104	70	63	64	69	0	0
S 328th Place to S 330th Street ²	SB	123	70	59	64	69	0	0
S 330th Street to S 333rd Street	SB	81	72	61	65	71	0	0
S 333rd Street to S 336th Street	SB	197	72	67	65	71	21	0
Total							25	0

Note:

NB – northbound SB – southbound

(1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

(2) Includes impacts to the Belmor community between S 324th Street and S 330th Street.

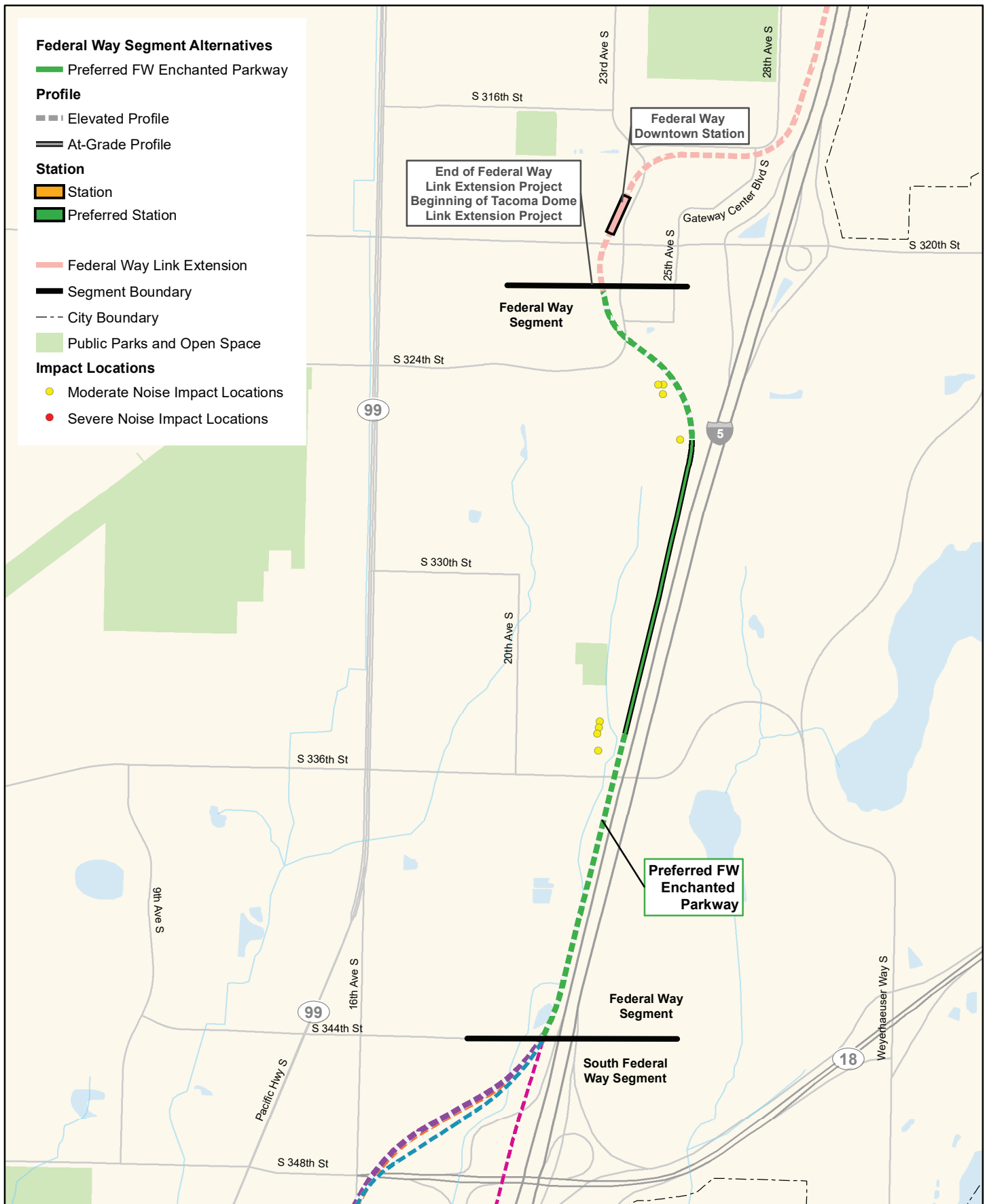
Table 6-2 Summary of FTA Category 2 Noise Impacts for the FW Design Option

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 324th Street to Merion Way ²	SB	69	65	67	61	66	16	2
Merion Way to S 328th Place ²	SB	57	70	68	64	69	3	0
S 328th Place to S 330th Street ²	SB	134	70	58	64	69	0	0
S 330th Street to S 333rd Street	SB	81	72	61	65	71	0	0
S 333rd Street to S 336th Street	SB	197	72	67	65	71	21	0
Total Design Option							40	2

Notes:

- (1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.
- (2) Includes impacts to the Belmor community between S 324th Street and S 330th Street.

The noise impacts along the Federal Way Segment are projected to occur at single- and multi-family residences and are due to the proximity to the proposed tracks and nearby crossovers. The noise impact locations are shown in Figure 6-1 for the Preferred FW Enchanted Parkway Alternative and Figure 6-2 for the FW Design Option. Four moderate noise impacts occur at residences in Belmor. Impacts at this location would increase to 19 moderate and two severe noise impacts at residences with the FW Design Option. These impacts are due to the proximity of the proposed tracks and the elevated structure. Both alternatives have the same number of impacts between S 330th Street and S 344th Street with 21 moderate impacts at multi-family residences. The impacts at this location are due to the crossover associated with the pocket track and the proximity of the alignment to the multi-family residences.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

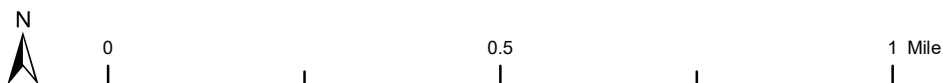
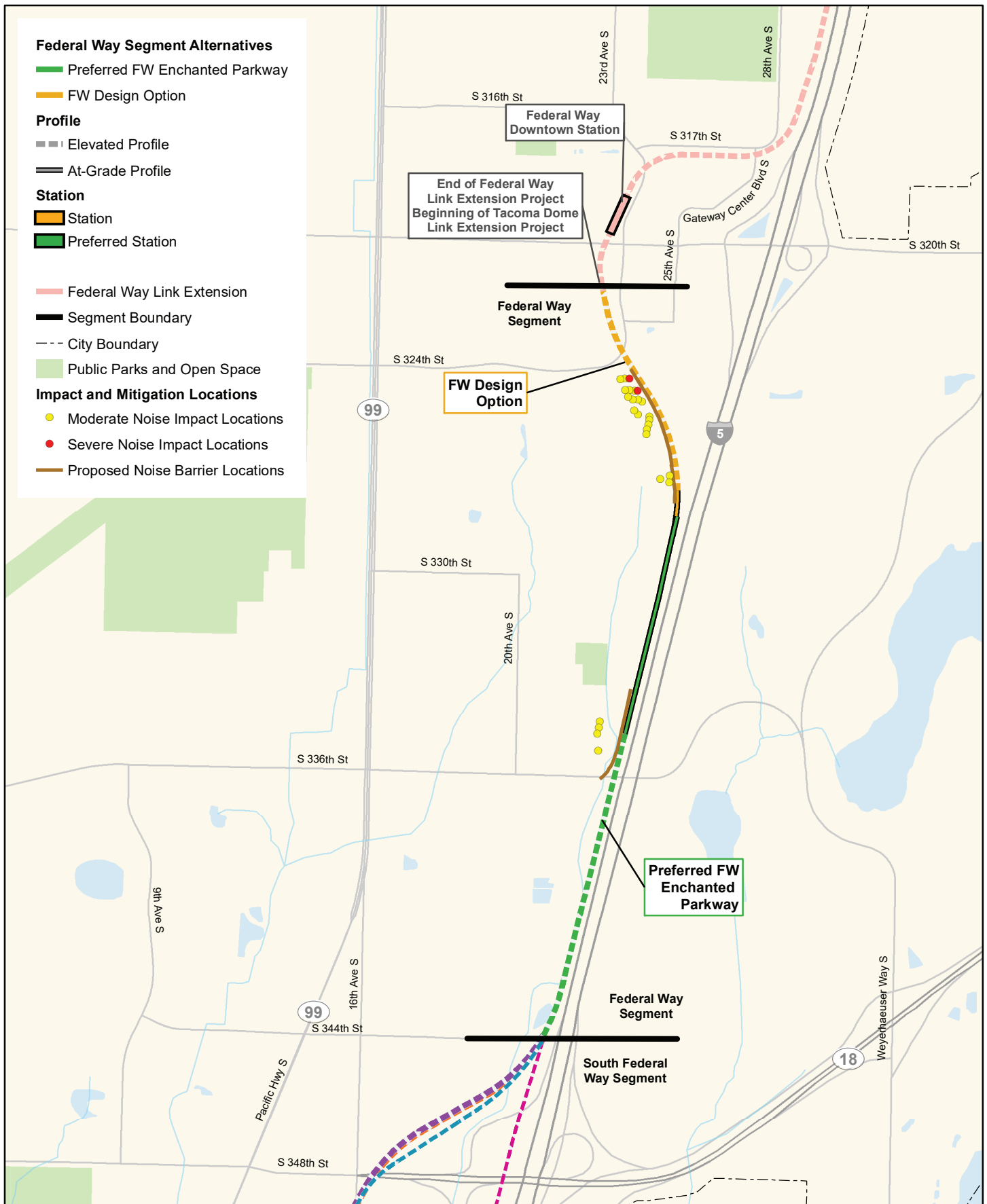


FIGURE 6-1
Noise Impact Locations
Preferred Alternative
Federal Way Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

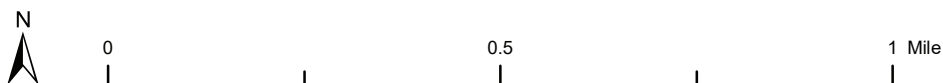


FIGURE 6-2
Noise Impact Locations
FW Design Option
Federal Way Segment

Tacoma Dome Link Extension

6.2.2 South Federal Way Segment

Comparisons of the existing and project noise levels are presented for the SF Enchanted Parkway Alternative in Table 6-3. Table 6-3 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the SF Enchanted Parkway Alternative. There are no FTA Category 1 (high sensitivity) or 3 (institutional) receptors for the SF Enchanted Parkway Alternative. In addition to the distances to the nearest track, Table 6-3 includes the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the SF Enchanted Parkway Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-3 Summary of FTA Category 2 Noise Impacts for the SF Enchanted Parkway Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 356th Street to S 359th Street ²	SB	48	73	78	65	71	64	76
S 359th Street to S 364th Way	SB	84	73	69	65	71	1	0
11th Place S to S 372nd Way	SB	146	73	65	65	71	1	0
S 372nd Way to S 376th Street	SB	121	73	67	65	71	1	0
King-Pierce County Line to Comet Street (near Birch Street)	NB	323	73	61	65	71	0	0
Comet Street to Porter Way	NB	282	73	61	65	71	0	0
Porter Way to 10th Street E	SB	82	73	69	65	71	1	0
10th Street to 68th Avenue E (segment boundary)	SB	69	73	68	65	71	6	0
Total							74	76

Notes:

- (1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.
- (2) Includes impact at the CrossPointe Apartments.

The noise impacts along the SF Enchanted Parkway Alternative are projected to occur at the Telecare Pierce County Evaluation & Treatment Center and single- and multi-family residences and are due to the proximity to the proposed tracks. There are 74 moderate and 76 severe noise impacts projected to occur along the SF Enchanted Parkway Alternative. The majority of the impacts would occur at the CrossPointe Apartments. The noise impact locations are shown in Figure 6-3.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE 6-3
 Noise Impact Locations
 SF Enchanted Parkway Alternative
 South Federal Way Segment
Tacoma Dome Link Extension

Comparisons of the existing and project noise levels are presented in Table 6-4 for the SF I-5 Alternative. Table 6-4 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the SF I-5 Alternative. There are no FTA Category 1 (high sensitivity) or 3 (institutional) receptors for this alternative.

In addition to the distances to the nearest track, Table 6-4 includes the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the SF I-5 Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

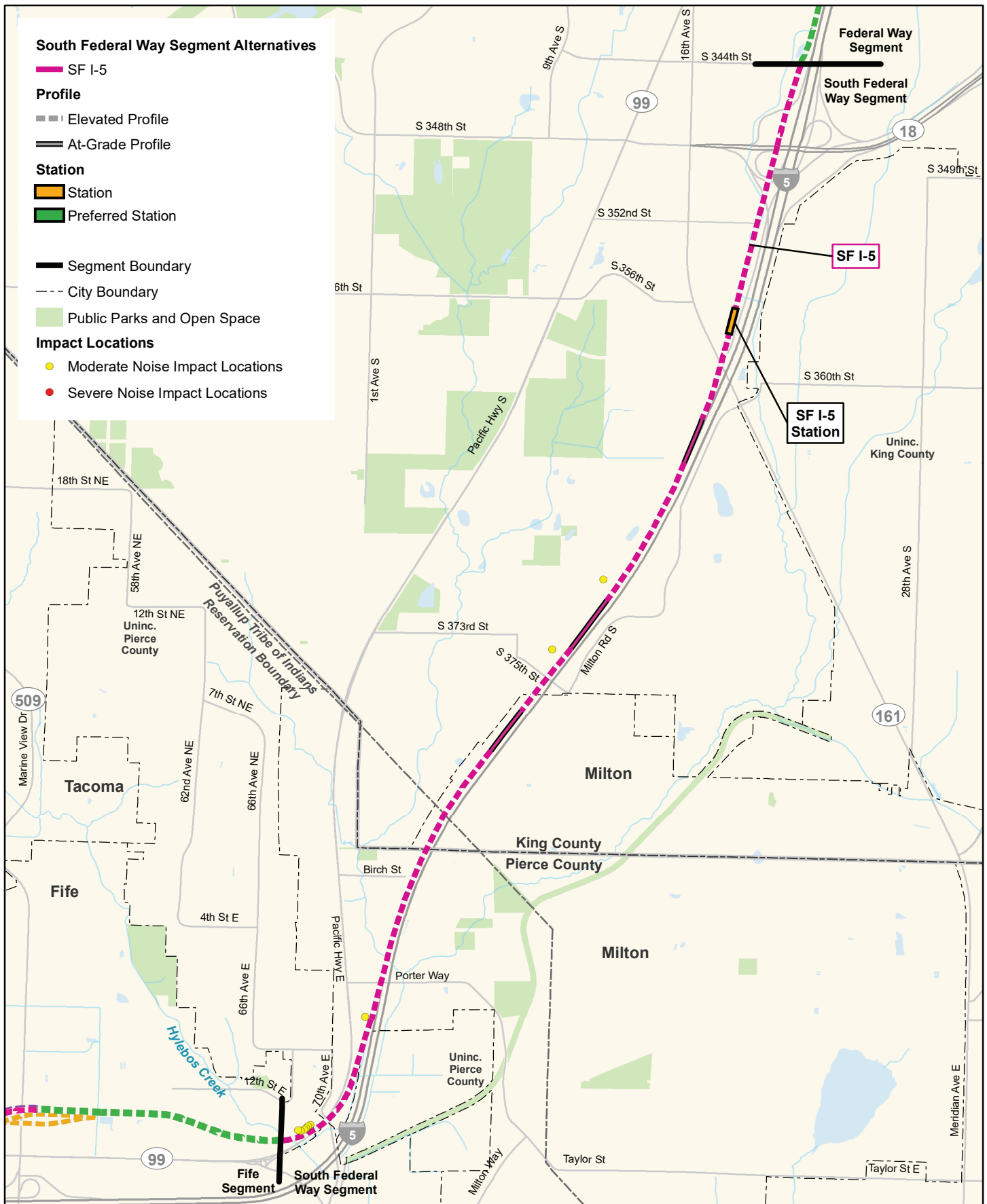
Table 6-4 Summary of FTA Category 2 Noise Impacts for the SF I-5 Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 356th Street to S 359th Street	SB	298	73	61	65	71	0	0
S 359th Street to S 364th Way	SB	227	73	63	65	71	0	0
11th Place S to S 372nd Way	SB	146	73	65	65	71	1	0
S 372nd Way to S 376th Street	SB	121	73	67	65	71	1	0
King-Pierce County Line to Comet Street (near Birch Street)	NB	323	73	61	65	71	0	0
Comet Street to Porter Way	NB	282	73	61	65	71	0	0
Porter Way to 10th Street E	SB	82	73	69	65	71	1	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	73	68	65	71	6	0
Total							9	0

Notes:

- (1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

The noise impacts for the SF I-5 Alternative are projected to occur at the Telecare Pierce County Evaluation & Treatment Center and single-family residences and are due to the proximity to the proposed tracks. The noise impact locations are shown in Figure 6-4 for the SF I-5 Alternative. Nine moderate noise impacts are predicted.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

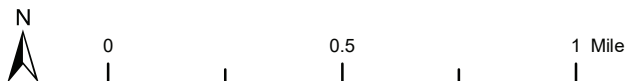


FIGURE 6-4
 Noise Impact Locations
 SF I-5 Alternative
 South Federal Way Segment
 Tacoma Dome Link Extension

Comparisons of the existing and project noise levels are presented in Tables 6-5 and 6-6 for the SF 99-West Alternative and SF 99-West Alternative with Porter Way Design Option. Table 6-5 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise. Table 6-6 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors along the SF 99-West Alternative.

In addition to the distances to the nearest track, Tables 6-5 and 6-6 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the SF 99-West Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-5 Summary of FTA Category 2 Noise Impacts for the SF 99-West Alternative and SF 99-West Alternative with the Porter Way Design Option

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 344th Street to S 346th Street	NB	64	73	66	65	71	1	0
S 359th Street to S 364th Way	SB	124	68	66	63	68	1	0
S 364th Street to S 373rd Street	NB	181	68	64	63	68	3	0
S 364th Street to S 373rd Street	SB	196	68	64	63	68	1	0
S 373rd Street to Johnson Road	NB	129	68	66	63	68	2	0
S 373rd Street to Johnson Road	SB	64	68	70	63	68	3	3
Johnson Road to Porter Way	NB	197	68	59	63	68	0	0
Johnson Road to Porter Way	SB	58	68	71	63	68	3	1
Johnson Road to Porter Way (Design Option)	SB	165	68	65	63	68	1	0
Porter Way to 10th Street E	SB	96	73	68	65	71	1	0
Porter Way to 10th Street E (Design Option)	SB	90	73	68	65	71	1	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	73	68	65	71	6	0
Total SF 99-West							21	4
Total SF 99-West with Porter Way Design Option							19	3

Notes:

- (1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

Table 6-6 Summary of FTA Category 3 Noise Impacts for the SF 99-West Alternative¹

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Montessori Academy at Spring Valley	SB	107	65	66	66	71	1	0
Giac Vien Pagoda	SB	117	65	65	66	71	0	0
Gethsemane Cemetery	NB	135	65	64	66	71	0	0
Total							1	0

Notes:

(1) There are no differences in Category 3 noise impacts with the Porter Way Design Option.

The noise impacts for the SF 99-West Alternative are projected to occur at the future King County emergency shelter, Daffodil Motel, Montessori Academy at Spring Valley, Telecare Pierce County Evaluation & Treatment Center, and single- and multi-family residences and are due to the proximity to the proposed tracks, track elevation, and train speed. The noise impact locations are shown in Figure 6-5 for the SF 99-West Alternative and in Figure 6-6 for the SF 99-West Alternative with Porter Way Design Option. The SF 99-West Alternative is predicted to have 22 moderate noise impacts and four severe noise impacts (including Montessori Academy at Spring Valley). The SF 99-West with the Porter Way Design Option is predicted to have 20 moderate noise impacts and three severe noise impacts (including Montessori Academy at Spring Valley). The difference in noise impacts is between Johnson Road and Porter Way, where the Porter Way Design Option curves further east toward I-5.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

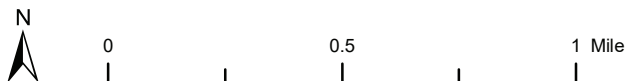
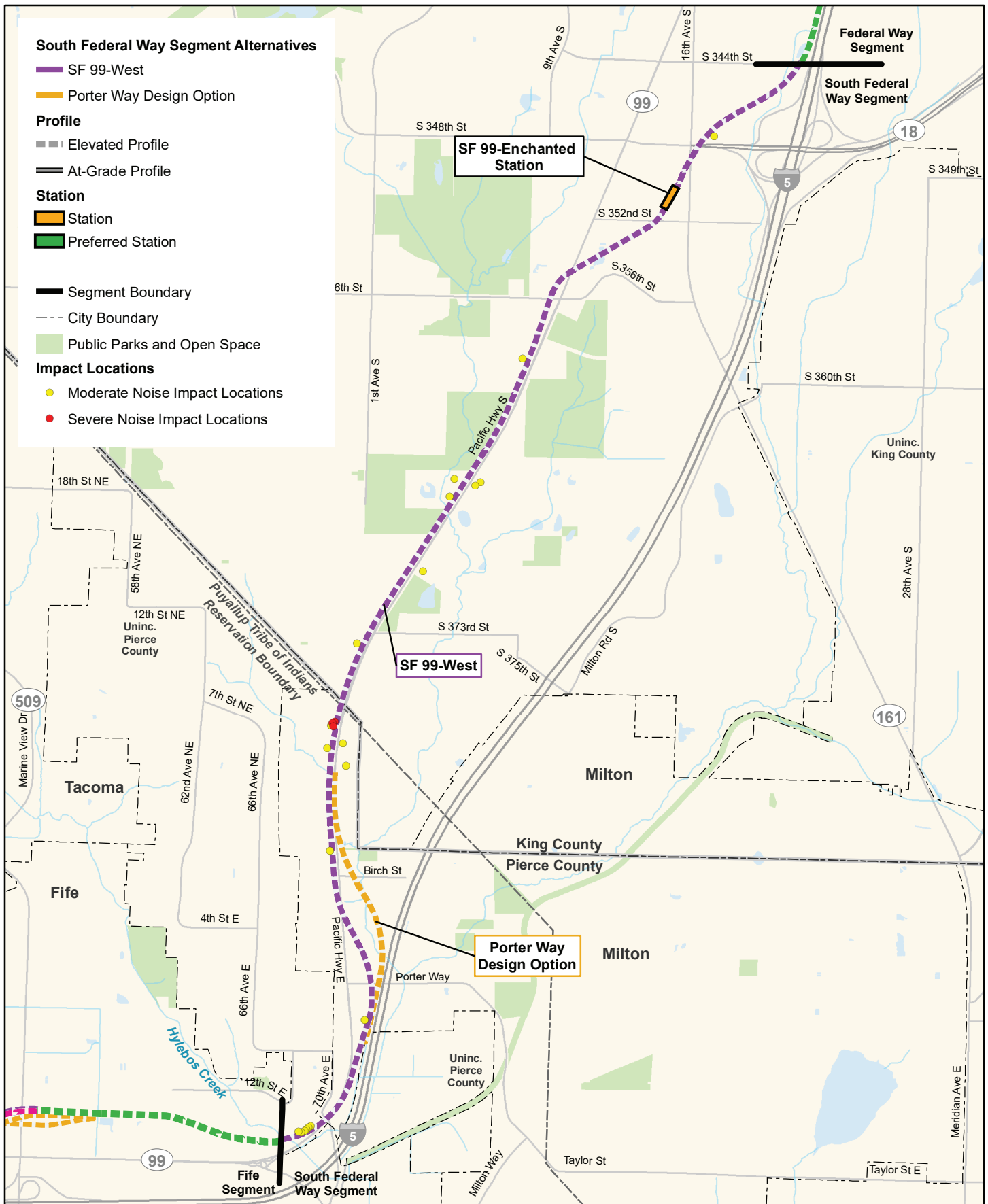


FIGURE 6-5
 Noise Impact Locations
 SF 99-West Alternative
 South Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

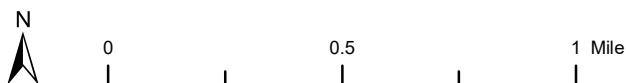


FIGURE 6-6
Noise Impact Locations
SF 99-West Alternative with Porter Way Design Option
South Federal Way Segment

Tacoma Dome Link Extension

Comparisons of the existing and project noise levels are presented in Tables 6-7 and 6-8 for the SF 99-East Alternative and SF 99-East Alternative with Porter Way Design Option. Table 6-7 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise. Table 6-8 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors along the SF 99-East Alternative.

In addition to the distances to the nearest track, Tables 6-7 and 6-8 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the SF 99-East Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-7 Summary of FTA Category 2 Noise Impacts for the SF 99-East Alternative and SF 99-East Alternative with the Porter Way Design Option

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts ¹	# of Severe Impacts ¹
S 344th Street to S 346th Street	NB	62	73	66	65	71	1	0
S 359th Street to S 364th Way	SB	243	68	62	63	68	0	0
S 364th Street to S 373rd Street	NB	67	68	70	63	68	0	2
S 364th Street to S 373rd Street	SB	164	68	65	63	68	1	0
S 373rd Street to Johnson Road	NB	72	68	70	63	68	1	1
S 373rd Street to Johnson Road	SB	115	68	67	63	68	8	0
Johnson Road to Porter Way	NB	150	68	61	63	68	0	0
Johnson Road to Porter Way	SB	114	68	67	63	68	4	0
Johnson Road to Porter Way (Design Option)	SB	190	68	64	63	68	1	0
Porter Way to 10th Street E	SB	96	73	68	65	71	1	0
Porter Way to 10th Street E (Design Option)	SB	90	73	68	65	71	1	0
10th Street E to 68th Avenue East (segment boundary)	SB	69	73	68	65	71	6	0
Total SF 99-East							22	3
Total SF 99-East with Porter Way Design Option							19	3

Notes:

- (1) The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

Table 6-8 Summary of FTA Category 3 Noise Impacts for the SF 99-East Alternative¹

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Montessori Academy at Spring Valley	SB	221	65	61	66	71	0	0
Giac Vien Pagoda	SB	231	65	61	66	71	0	0
Gethsemane Cemetery	NB	79	65	67	66	71	1	0
Total							1	0

Notes:

(1) There are no differences in Category 3 noise impacts with the Porter Way Design Option.

The noise impacts for the SF 99-East Alternative are projected to occur at the future King County emergency shelter (former Red Lion Inn & Suites), Daffodil Motel, Gethsemane Cemetery, Telecare Pierce County Evaluation & Treatment Center, and single- and multi-family residences and are due to the proximity to the proposed tracks, track elevation, and train speed. The noise impact locations are shown in Figure 6-7 for the SF 99-East Alternative and in Figure 6-8 for the SF 99-East Alternative with Porter Way Design Option. The SF 99-East Alternative is predicted to have 23 moderate noise impacts and three severe noise impacts (including Gethsemane Cemetery). The SF 99-East with the Porter Way Design Option is predicted to have 20 moderate noise impacts and three severe noise impacts (including Gethsemane Cemetery). The difference in noise impacts is between Johnson Road and Porter Way, where the Porter Way Design Option curves further east toward I-5.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

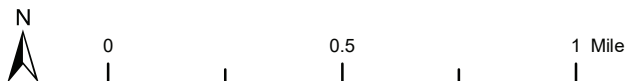
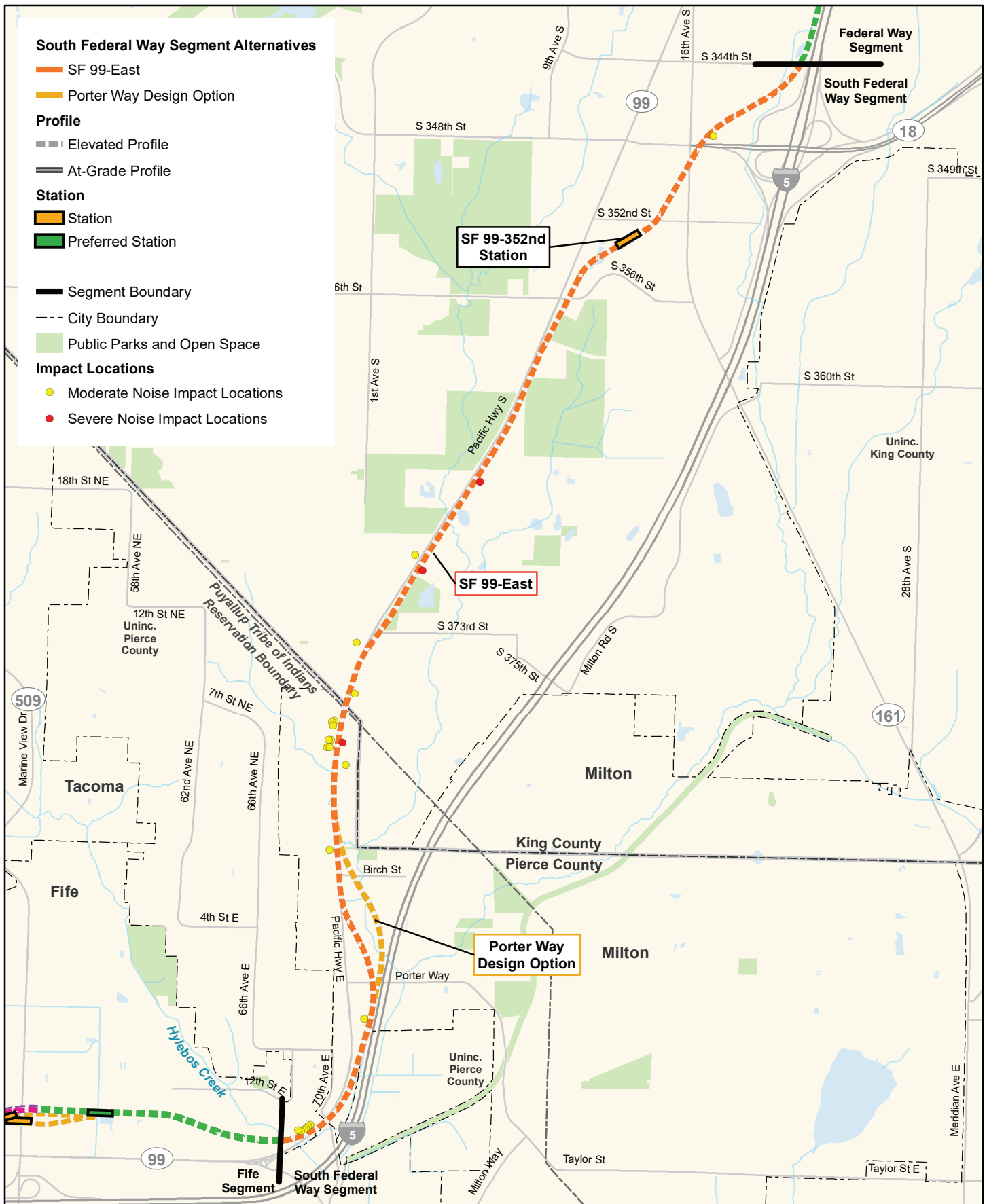


FIGURE 6-7
 Noise Impact Locations
 SF 99-East Alternative
 South Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

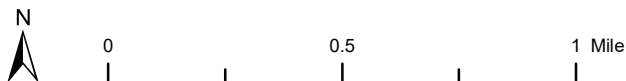


FIGURE 6-8
Noise Impact Locations
SF 99-East Alternative with Porter Way Design Option
South Federal Way Segment

Tacoma Dome Link Extension

6.2.3 Fife Segment

Comparisons of the existing and project noise levels are presented in Tables 6-9 and 6-10 for the Fife Pacific Highway Alternative. Table 6-9 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Fife Pacific Highway Alternative, and Table 6-10 includes the results for FTA Category 3 (institutional) receptors for the Fife Pacific Highway Alternative. There are no FTA Category 1 (high sensitivity) receptors in the Fife Pacific Highway Alternative. The curve from Kings Motor Inn to Pacific Highway would have a radius between 600 and 1,000 feet on the Fife Pacific Highway Alternative and would be prepared for wayside lubricators.

In addition to the distances to the nearest track, Tables 6-9 and 6-10 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Fife Pacific Highway Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-9 Summary of FTA Category 2 Noise Impacts for the Fife Pacific Highway Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	64	67	60	66	0	1
62nd Avenue E to 58th Avenue E (preferred Fife Station)	NB	113	64	65	60	66	4	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	117	64	67	60	66	4	1
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	102	64	68	60	66	4	1
58th Avenue E to 54th Avenue E (preferred Fife Station)	NB	271	64	62	60	66	3	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	272	64	57	60	66	0	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	202	64	64	60	66	7	0
Willow Road E to Alexander Avenue E	NB	167	65	65	61	66	68	0
Willow Road E to Alexander Avenue E	SB	129	65	66	61	66	1	0
Alexander Avenue E to 34th Avenue E	NB	44	69	72	64	69	2	1
Alexander Avenue E to 34th Avenue E	SB	137	69	66	64	69	98	0

Table 6-9 Summary of FTA Category 2 Noise Impacts for the Fife Pacific Highway Alternative – All Design Options (continued)

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
34th Avenue E to Puyallup River	SB	132	76	66	65	74	2	0
Total Fife Pacific Highway Alternative with preferred Fife Station							178	2
Total Fife Pacific Highway with 54th Avenue Design Option							175	3
Total Fife Pacific Highway with 54th Span Design Option							182	3

Note: The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

Table 6-10 Summary of FTA Category 3 Noise Impacts for the Fife Pacific Highway Alternative – All Design Options

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	56	72	61	67	0	1
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	110	56	66	61	67	1	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	84	56	67	61	67	0	1
New Horizon Christian Center (preferred Fife Station)	NB	246	56	59	61	67	0	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	56	53	61	67	0	0
Puyallup Tribe Integrative Medicine	NB	443	64	57	60	66	0	0
Total Fife Pacific Highway Alternative with preferred Fife Station							0	1
Total Fife Pacific Highway 54th Avenue Design Option							1	0
Total Fife Pacific Highway 54th Span Design Option							0	1

The noise impacts for the Fife Pacific Highway Alternative are projected to occur at single- and multi-family residences, the Roadway Inn and Suites (currently closed), the Glacier Motel, the Pinnacle Apartments, the Travelodge by Wyndham Hotel, the Sunshine Motel, the Fife Motel, the Extended Stay America Hotel, and the St. Paul Chong Hasang Korean Catholic Community Church and are due to the proximity to the proposed tracks and to the location of a crossover near the church. The majority of the noise and vibration impacts would be at the Chateau Rainier Apartments. The noise impact locations are shown in Figure 6-9 for the Fife Pacific Highway Alternative with preferred Fife Station, Figure 6-10 for the 54th Avenue Design Option, and Figure 6-11 for the 54th Span Design Option.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

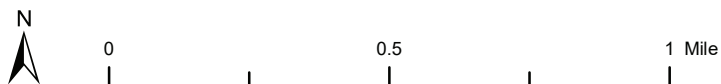
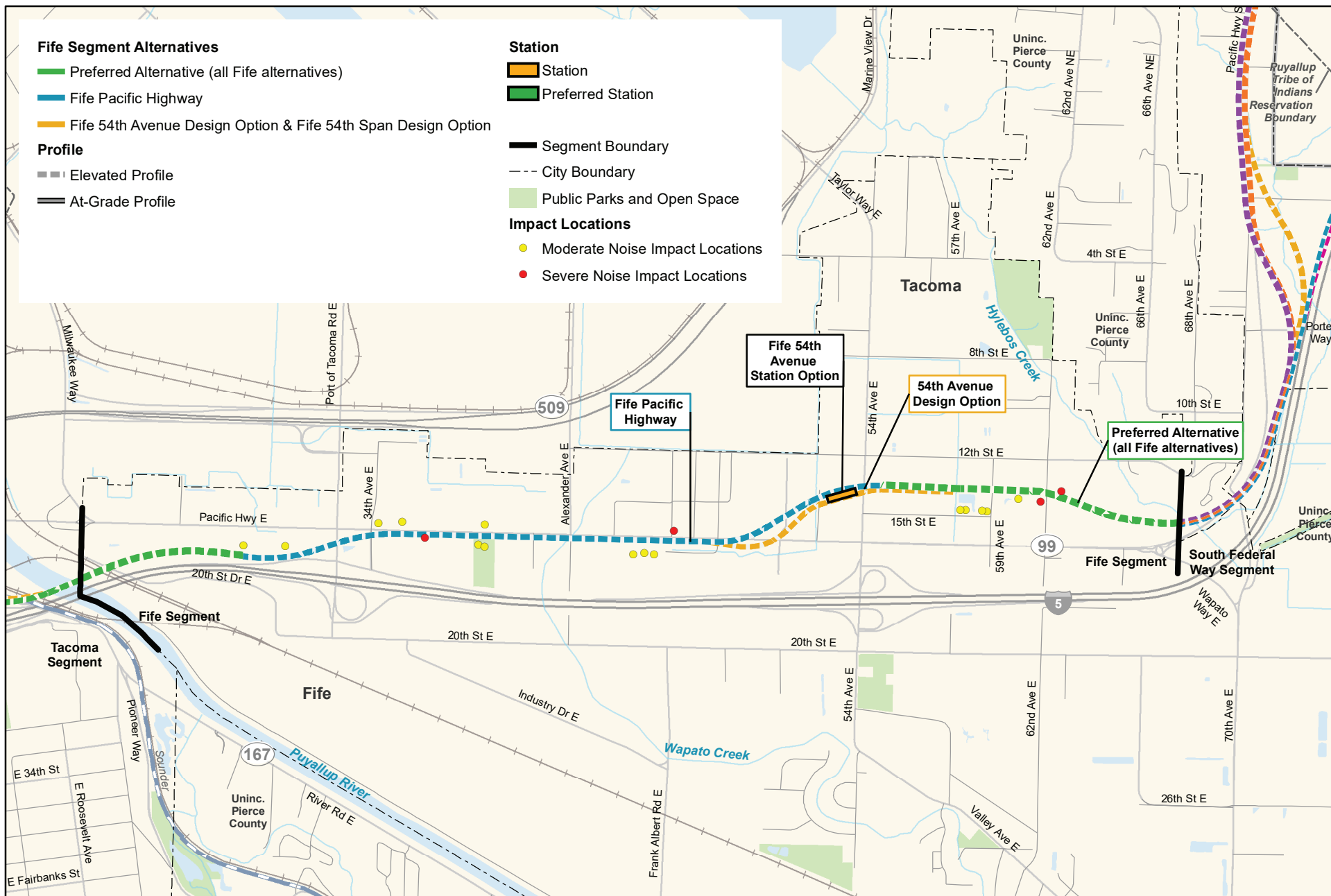


FIGURE 6-9
Noise Impact Locations
Fife Pacific Highway Alternative
Fife Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

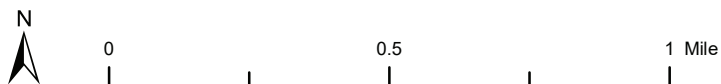
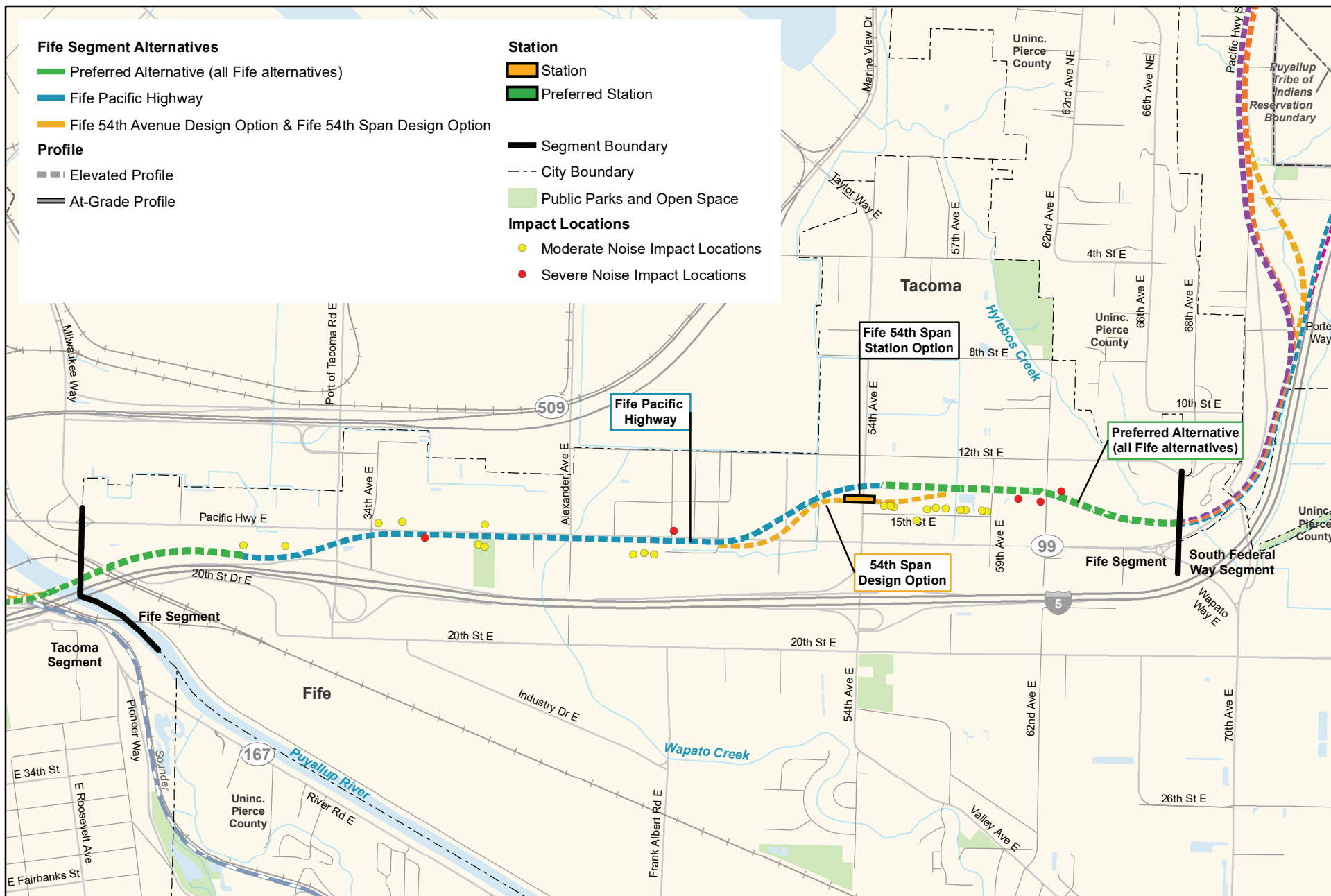


FIGURE 6-10
Noise Impact Locations
Fife Pacific Highway with 54th Avenue Design Option
Fife Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

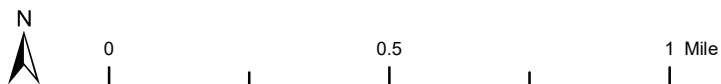


FIGURE 6-11
Noise Impact Locations
Fife Pacific Highway with Fife 54th Span Design Option
Fife Segment

There are some differences between the Fife Pacific Highway Alternative with preferred Fife Station, with the 54th Avenue Design Option, and with the 54th Span Design Option. Most notably, the St. Paul Chang Hasang Korean Catholic Community Church is predicted to be a moderate noise impact with the 54th Avenue Design Option and is predicted to be a severe noise impact with the preferred Fife Station or the 54th Span Design Option. For the preferred Fife Station, the location of the crossover would increase the impact to the severe level, and for the 54th Span Design Option, the tracks would be 20 feet closer to the church, which would increase the impact to the severe level. This difference is found in all three Fife alternatives. For Category 2 receptors, the preferred alternative is predicted to have 178 moderate and two severe noise impacts; the 54th Avenue Design Option is predicted to have 175 moderate and three severe noise impacts; and the 54th Span Design Option is predicted to have 182 moderate and three severe noise impacts.

Comparisons of the existing and project noise levels are presented in Tables 6-11 and 6-12 for the Fife Median Alternative. Table 6-11 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Fife Median Alternative, and Table 6-12 includes the results for FTA Category 3 (institutional) receptors for the Fife Median Alternative. There are no FTA Category 1 (high sensitivity) receptors in the Fife Median Alternative.

In addition to the distances to the nearest track, Tables 6-11 and 6-12 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Fife Median Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

Table 6-11 Summary of FTA Category 2 Noise Impacts for the Fife Median Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	64	67	60	66	0	1
62nd Avenue E to 58th Avenue E (preferred Fife Station)	NB	113	64	65	60	66	4	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	117	64	67	60	66	4	1
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	102	64	68	60	66	4	1
58th Avenue E to 54th Avenue E (preferred Fife Station)	NB	267	64	62	60	66	3	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	272	64	57	60	66	0	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	202	64	64	60	66	7	0

Table 6-11 Summary of FTA Category 2 Noise Impacts for the Fife Median Alternative – All Design Options (continued)

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Willow Road E to Alexander Avenue E	NB	222	65	63	61	66	68	0
Willow Road E to Alexander Avenue E	SB	74	65	69	61	66	1	1
Alexander Avenue E to 34th Avenue E	NB	98	69	68	64	69	2	0
Alexander Avenue E to 34th Avenue E	SB	89	69	68	64	69	98	0
34th Avenue E to Puyallup River	SB	132	76	66	65	74	2	0
Total Fife Median Alternative with preferred Fife Station							178	2
Total Fife Median 54th Avenue Design Option							175	3
Total Fife Median 54th Span Design Option							182	3

Note: The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

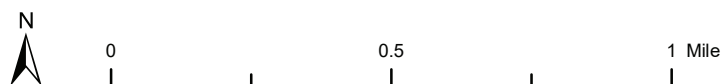
Table 6-12 Summary of FTA Category 3 Noise Impacts for the Fife Median Alternative – All Design Options

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq, dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	56	72	61	67	0	1
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	110	56	66	61	67	1	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	84	56	67	61	67	0	1
New Horizon Christian Center (preferred Fife Station)	NB	246	56	59	61	67	0	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	56	53	61	67	0	0
Puyallup Tribe Integrative Medicine	NB	443	64	57	60	66	0	0
Total Fife Median Alternative with preferred Fife Station							0	1
Total Fife Median 54th Avenue Design Option							1	0
Total Fife Median 54th Span Design Option							0	1

The noise impacts for the Fife Median Alternative are projected to occur at single- and multi-family residences, the Roadway Inn and Suites (currently closed), the Glacier Motel, the Pinnacle Apartments, the Travelodge by Wyndham Hotel, the Sunshine Motel, the Fife Motel, the Extended Stay America Hotel, and the St. Paul Chong Hasang Korean Catholic Community Church and are due to the proximity to the proposed tracks. The majority of the noise and vibration impacts would be at the Chateau Rainier Apartments. The noise impact locations are shown in Figure 6-12 for the Fife Median Alternative with the preferred Fife Station, Figure 6-13 for the 54th Avenue Design Option, and Figure 6-14 for the 54th Span Design Option.



Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

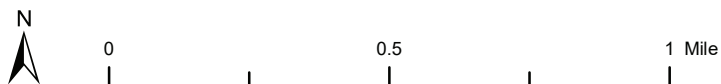


FIGURE 6-13
Noise Impact Locations
Fife Median with 54th Avenue Design Option
Fife Segment

Tacoma Dome Link Extension



Tacoma Dome Link Extension

The number of impacts, and differences between the design options, are the same for the Fife Median Alternative and the Fife Pacific Highway Alternative, although the location of the impacts are different.

Comparisons of the existing and project noise levels are presented in Tables 6-13 and 6-14 for the Fife I-5 Alternative. Table 6-13 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Fife I-5 Alternative, and Table 6-13 includes the results for FTA Category 3 (institutional) receptors for the Fife I-5 Alternative. There are no FTA Category 1 (high sensitivity) receptors in the Fife I-5 Alternative.

In addition to the distances to the nearest track, Table 6-13 and Table 6-14 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Fife I-5 Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

**Table 6-13 Summary of FTA Category 2 Noise Impacts for the Fife I-5 Alternative
– All Design Options**

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	64	67	60	66	0	1
62nd Avenue E to 58th Avenue E (preferred Fife Station)	NB	113	64	65	60	66	4	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	118	64	67	60	66	4	1
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	103	64	68	60	66	4	1
58th Avenue E to 54th Avenue E (preferred Fife Station)	NB	267	64	62	60	66	3	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	273	64	57	60	66	0	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	203	64	63	60	66	7	0
54th Avenue E to Willow Road E (54th Avenue Design Option)	SB	51	65	62	61	66	1	0
54th Avenue E to Willow Road E (54th Span Design Option)	SB	51	65	62	61	66	1	0
Willow Road E to Alexander Avenue E	SB	75	77	69	65	74	80	0
Alexander Avenue E to 34th Avenue E	SB	498	69	58	64	69	0	0

**Table 6-13 Summary of FTA Category 2 Noise Impacts for the Fife I-5 Alternative
– All Design Options (continued)**

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
34th Avenue E to Puyallup River	SB	132	76	66	65	74	1	0
Total Fife I-5 Alternative with preferred Fife Station							88	1
Total Fife I-5 54th Avenue Design Option							86	2
Total Fife I-5 54th Span Design Option							93	2

Note: The number of impacts counts the individual residential units with projected noise impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

**Table 6-14 Summary of FTA Category 3 Noise Impacts for the Fife I-5 Alternative
– All Design Options**

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq, dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	56	72	61	67	0	1
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	110	56	66	61	67	1	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	84	56	67	61	67	0	1
New Horizon Christian Center (preferred Fife Station)	NB	246	56	59	61	67	0	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	56	53	61	67	0	0
Puyallup Tribe Integrative Medicine	SB	159	64	63	60	66	1	0
Total Fife I-5 Alternative with preferred Fife Station							1	1
Total Fife I-5 54th Avenue Design Option							2	0
Total Fife I-5 54th Span Design Option							1	1

The noise impacts for the Fife I-5 Alternative are projected to occur at single- and multi-family residences, the Extended Stay America Hotel, the Puyallup Tribe Integrative Medicine facility, and the St. Paul Chong Hasang Korean Catholic Community Church and are due to the proximity to the proposed tracks. The majority of the noise and vibration impacts would be at the Chateau Rainier Apartments. The noise impact locations are shown in Figure 6-15 for the Fife I-5 Alternative with the preferred Fife Station, Figure 6-16 for the 54th Avenue Design Option, and Figure 6-17 for the 54th Span Design Option.

There are some differences between the preferred Fife Station alternative, the 54th Avenue Design Option, and the 54th Span Design Option. The difference in the results for the St. Paul Chong Hasang Korean Catholic Community Church is the same as for the other two alternatives. For Category 2 receptors, the preferred option is predicted to have 88 moderate and one severe noise impacts; the 54th Avenue Design Option is predicted to have 86 moderate and two severe noise impacts; and the 54th Span Design Option is predicted to have 93 moderate and two severe noise impacts. The Puyallup Tribe Integrative Medicine facility is predicted to have a severe noise impact in all design options for the Fife I-5 Alternative.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

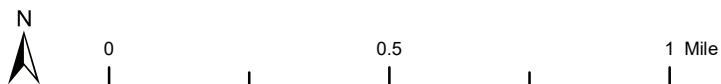
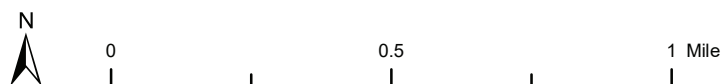


FIGURE 6-15
Noise Impact Locations
Fife I-5 Alternative
Fife Segment

Tacoma Dome Link Extension



Tacoma Dome Link Extension





Tacoma Dome Link Extension

6.2.4 Tacoma Segment

Comparisons of the existing and project noise levels are presented in Tables 6-15 and 6-16 for the Preferred Tacoma 25th Street-West Alternative. Table 6-15 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Preferred Tacoma 25th Street-West Alternative. Table 6-16 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors for the Preferred Tacoma 25th Street-West Alternative.

In addition to the distances to the nearest track, Tables 6-15 and 6-16 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Preferred Tacoma 25th Street-West Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

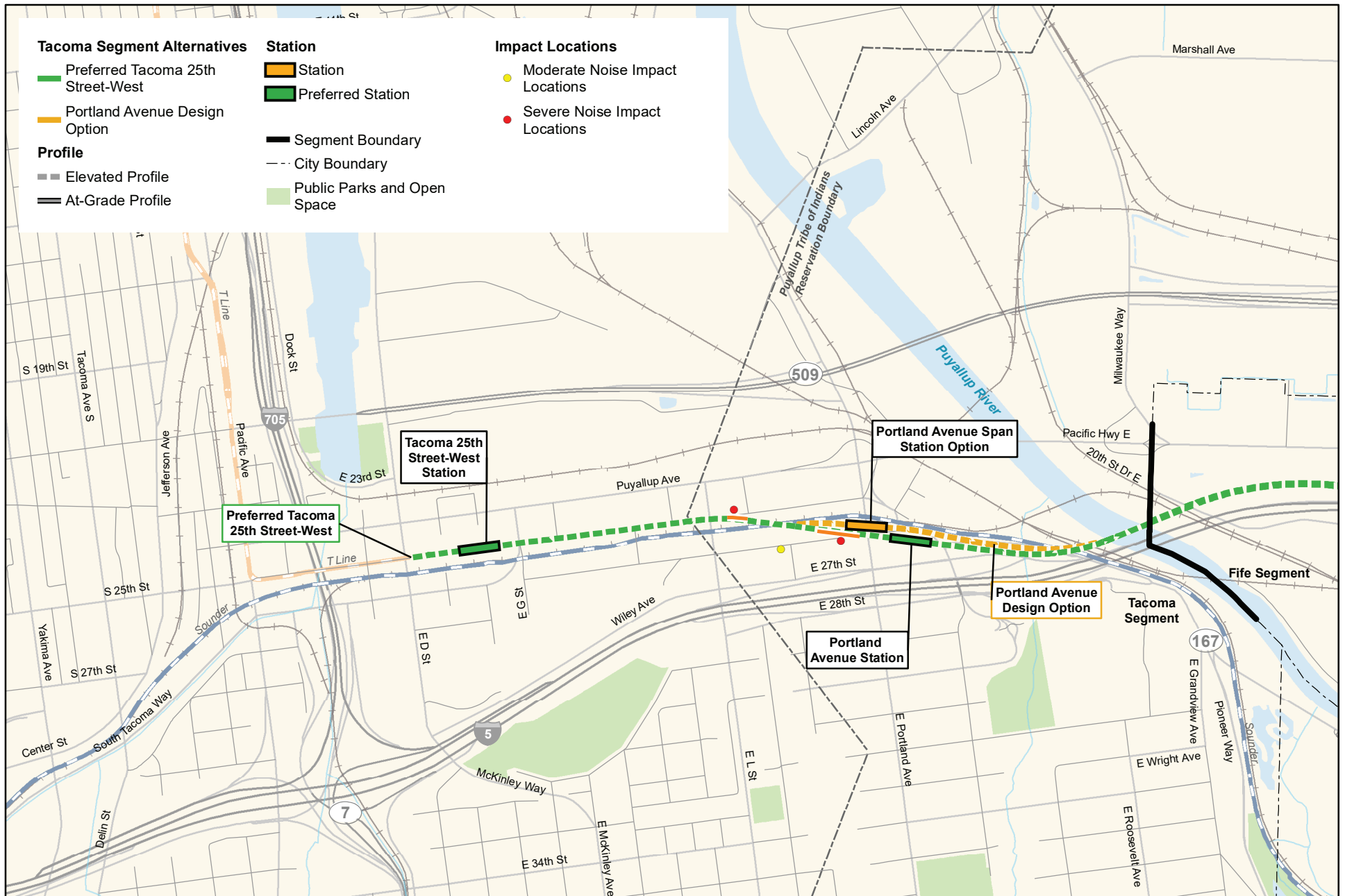
The noise impacts for the Preferred Tacoma 25th Street-West Alternative are projected to occur at the La Quinta Inn and Suites and the Motel Tacoma Center and are due to the proximity to the proposed tracks. Noise impacts are not anticipated along the tail track west of the station. The noise impact locations are shown in Figure 6-18 for the Preferred Tacoma 25th Street-West Alternative.

Table 6-15 Summary of FTA Category 2 Noise Impacts for the Preferred Tacoma 25th Street-West Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Portland Avenue E to East L Street	NB	78	64	69	60	66	1	1
Portland Avenue E to East L Street	SB	83	64	69	60	66	0	1
East L Street to East G Street	NB	409	64	59	60	66	0	0
East G Street to East D Street	NB	415	67	59	62	67	0	0
East G Street to East D Street	SB	49	67	59	62	67	0	0
Total							1	2

Table 6-16 Summary of FTA Category 3 Noise Impacts for the Preferred Tacoma 25th Street-West Alternative

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq, dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Cedar Wellness Center	NB	292	63	60	65	70	0	0
Total							0	0



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE 6-18
Noise Impact Locations
Preferred Tacoma 25th Street-West Alternative
Tacoma Segment

Tacoma Dome Link Extension

Comparisons of the existing and project noise levels are presented in Tables 6-17 and 6-18 for the Tacoma 25th Street-East Alternative. Table 6-17 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Tacoma 25th Street-East Alternative. Table 6-18 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors for the Tacoma 25th-Street East Alternative.

In addition to the distances to the nearest track, Tables 6-17 and 6-18 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Tacoma 25th Street-East Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

The noise impacts for the Tacoma 25th Street-East Alternative are projected to occur at the La Quinta Inn and Suites and the Motel Tacoma Center and are due to the proximity to the proposed tracks. The noise impact locations are shown in Figure 6-19 for the Tacoma 25th Street-East Alternative. The curve by the Tacoma Soccer Center would have a radius between 600 and 1,000 feet on the Tacoma 25th Street-East Alternative and would be prepared for wayside lubricators.

Table 6-17 Summary of FTA Category 2 Noise Impacts for the Tacoma 25th Street-East Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Portland Avenue E to East L Street	NB	81	64	69	60	66	1	1
Portland Avenue E to East L Street	SB	85	64	69	60	66	0	1
East L Street to East G Street	NB	405	64	59	60	66	0	0
East G Street to East D Street	NB	458	67	59	62	67	0	0
East G Street to East D Street	SB	392	67	46	62	67	0	0
Total							1	2

Table 6-18 Summary of FTA Category 3 Noise Impacts for the Tacoma 25th Street-East Alternative

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Cedar Wellness Center	NB	365	63	58	65	70	0	0
Total							0	0

Comparisons of the existing and project noise levels are presented in Tables 6-19 and 6-20 for the Tacoma Close to Sounder Alternative. Table 6-19 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Tacoma Close to Sounder Alternative. Table 6-20 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors for the Tacoma Close to Sounder Alternative.

In addition to the distances to the nearest track, Tables 6-19 and 6-20 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Tacoma Close to Sounder Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

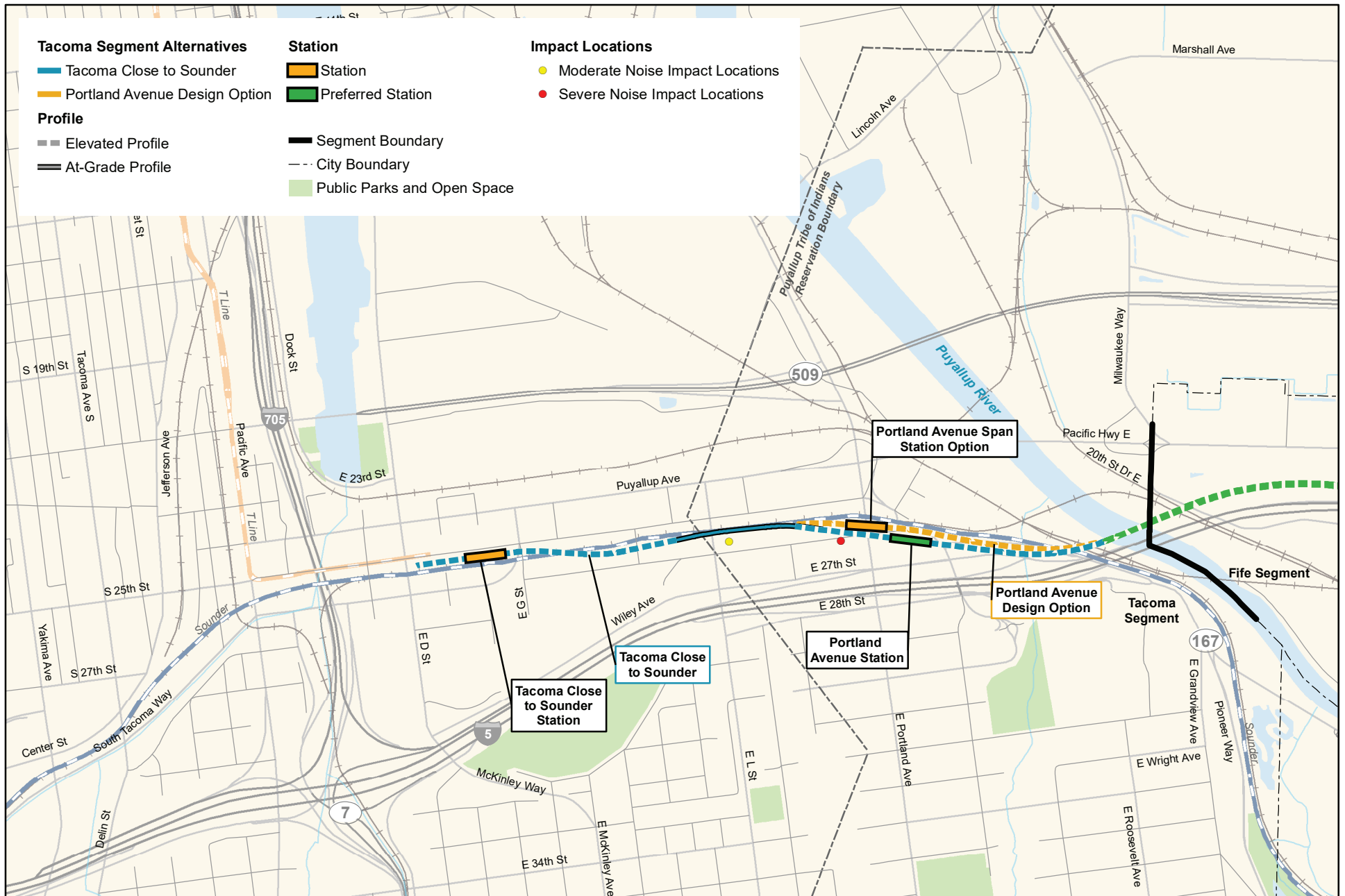
The noise impacts for the Tacoma Close to Sounder Alternative are projected to occur at a single-family residence and the La Quinta Inn and Suites and are due to the proximity to the proposed tracks and the presence of a crossover. The noise impact locations are shown in Figure 6-20 for the Tacoma Close to Sounder Alternative. The curve east of East G Street would have a radius between 600 and 1,000 feet on the Tacoma Close to Sounder Alternative and would be prepared for wayside lubricators.

Table 6-19 Summary of FTA Category 2 Noise Impacts for the Tacoma Close to Sounder Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Portland Avenue E to East L Street	NB	83	64	75	60	66	1	1
Portland Avenue E to East L Street	SB	193	64	56	60	66	0	0
East L Street to East G Street	NB	248	64	57	60	66	0	0
East G Street to East D Street	NB	331	67	61	62	67	0	0
East G Street to East D Street	SB	134	67	53	62	67	0	0
Total							1	1

Table 6-20 Summary of FTA Category 3 Noise Impacts for the Tacoma Close to Sounder Alternative

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq, dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Cedar Wellness Center	NB	208	63	62	65	70	0	0
Total							0	0



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE 6-20
Noise Impact Locations
Tacoma Close to Sounder Alternative
Tacoma Segment

Tacoma Dome Link Extension

Comparisons of the existing and project noise levels are presented in Tables 6-21 and 6-22 for the Tacoma 26th Street Alternative. Table 6-21 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to noise for the Tacoma 26th Street Alternative. Table 6-22 includes the results for FTA Category 3 (institutional) receptors for this alternative. There are no FTA Category 1 (high sensitivity) receptors for the Tacoma 26th Street Alternative.

In addition to the distances to the nearest track, Tables 6-21 and 6-22 include the existing noise levels, the projected noise levels from LRT operations, and the FTA noise impact criteria for the Tacoma 26th Street Alternative. Based on a comparison of the predicted project noise levels with the impact criteria, the table also includes an inventory of the moderate and severe noise impacts for the alternative.

The noise impacts for the Tacoma 26th Street Alternative are projected to occur at a single-family residence, the Best Western Plus Tacoma Dome Hotel, and the Cedar Wellness Center and are due to their proximity to the proposed tracks and the presence of crossovers. The noise impact locations are shown in Figure 6-21 for the Tacoma 26th Street Alternative. The curve across East G Street would have a radius between 600 and 1,000 feet on the Tacoma 26th Street Alternative and would be prepared for wayside lubricators.

Table 6-21 Summary of FTA Category 2 Noise Impacts for the Tacoma 26th Street Alternative

Location	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Ldn, dBA)	Project Noise Level (Ldn, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Portland Avenue E to East L Street	NB	93	64	63	60	66	1	0
Portland Avenue E to East L Street	SB	201	64	56	60	66	0	0
East L Street to East G Street	NB	240	64	57	60	66	0	0
East G Street to East D Street	NB	41	67	79	62	67	0	1
East G Street to East D Street	SB	424	67	46	62	67	0	0
Total							1	1

Table 6-22 Summary of FTA Category 3 Noise Impacts for the Tacoma 26th Street Alternative

Name	Side of Track	Distance to Near Track (feet)	Existing Noise Level (Leq, dBA)	Project Noise Level (Leq, dBA)	Moderate Noise Criteria	Severe Noise Criteria	# of Moderate Impacts	# of Severe Impacts
Cedar Wellness Center	SB	68	63	74	65	70	0	1
Total							0	1



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

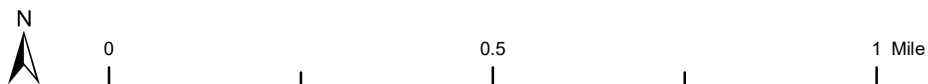


FIGURE 6-21
Noise Impact Locations
Tacoma 26th Street Alternative
Tacoma Segment

Tacoma Dome Link Extension

6.3 Build Alternatives Vibration Assessment

A summary of the vibration measurement results by segment is included below, detailed information by parcel is included in Attachment F, Detailed Vibration Assessment Results.

6.3.1 Federal Way Segment

For the Preferred FW Enchanted Parkway Alternative and the FW Design Option, the vibration impacts for the LRT operations are presented in Tables 6-23 and 6-24, respectively. Tables 6-23 and 6-24 include the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration. There are no FTA Category 1 (special) or 3 (institutional) receptors for the Preferred FW Enchanted Parkway Alternative or the FW Design Option. The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

There are no vibration impacts associated with the Preferred FW Enchanted Parkway Alternative or the FW Design Option.

Table 6-23 Summary of FTA Category 2 Vibration Impacts for the Preferred Federal Way Enchanted Parkway Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 324th Street to Merion Way	SB	80	53	10	72	0
Merion Way to S 328th Place	SB	29	56	12.5	72	0
S 328th Place to S 330th Street	SB	45	56	12.5	72	0
S 330th Street to S 333rd Street	SB	91	57	12.5	72	0
S 333rd Street to S 336th Street	SB	66	56	12.5	72	0
Total						0

Notes:

(1) Note: Includes impacts to the Belmor community between S 324th Street and S 330th Street.

Table 6-24 Summary of FTA Category 2 Vibration Impacts for the Federal Way Design Option

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 324th Street to Merion Way	SB	69	57	12.5	72	0
Merion Way to S 328th Place	SB	57	58	12.5	72	0
S 328th Place to S 330th Street	SB	134	53	12.5	72	0
S 330th Street to S 333rd Street	SB	81	54	12.5	72	0
S 333rd Street to S 336th Street	SB	197	53	12.5	72	0
Total						0

Notes:

(1) Includes impacts to the Belmor community between S 324th Street and S 330th Street.

6.3.2 South Federal Way Segment

For the SF Enchanted Parkway Alternative, the vibration impacts for the LRT operations are presented in Table 6-25. Table 6-25 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration. There are no FTA Category 1 (special) or 3 (institutional) receptors for the SF Enchanted Parkway Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

There are no vibration impacts predicted with the SF Enchanted Parkway Alternative.

Table 6-25 Summary of FTA Category 2 Vibration Impacts for the SF Enchanted Parkway Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 356th Street to S 359th Street	SB	48	71	50	72	0
S 359th Street to S 364th Way	SB	84	58	40	72	0
11th Place S to S 372nd Way	SB	132	56	31.5	72	0
S 372nd Way to S 376th Street	SB	150	54	31.5	72	0
King-Pierce County Line to Comet Street (near Birch Street)	NB	323	42	10	72	0
Comet Street to Porter Way	NB	282	43	10	72	0
Porter Way to 10th Street E	SB	82	57	40	72	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	60	40	72	0
Total						0

Note:

(1) Includes impacts to the Belmor community between S 324th Street and S 330th Street.

For the SF I-5 Alternative, the vibration impacts for the LRT operations are presented in Table 6-26. Table 6-26 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration. There are no FTA Category 1 (Special) or 3 (institutional) receptors for the SF I-5 Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

There are no vibration impacts predicted with the SF I-5 Alternative.

Table 6-26 Summary of FTA Category 2 Vibration Impacts for the SF I-5 Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 356th Street to S 359th Street	SB	240	53	10	72	0
S 359th Street to S 364th Way	SB	140	59	10	72	0
11th Place S to S 372nd Way	SB	132	56	31.5	72	0
S 372nd Way to S 376th Street	SB	150	54	31.5	72	0
King-Pierce County Line to Comet Street (near Birch Street)	NB	323	42	10	72	0
Comet Street to Porter Way	NB	282	43	10	72	0
Porter Way to 10th Street E	SB	82	57	40	72	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	60	40	72	0
Total						0

For the SF 99-East Alternative, the vibration impacts for the LRT operations are presented in Tables 6-27 and 6-28. Table 6-27 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration. Table 6-28 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (Special) receptors for the SF 99-East Alternative. The table also includes the results for the Porter Way Design Option.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

There are no vibration impacts predicted with the SF 99-East Alternative.

Table 6-27 Summary of FTA Category 2 Vibration Impacts for the SF 99-East Alternative and SF 99-East Alternative with Porter Way Design Option

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 344th Street to S 346th Street	NB	62	61	50	72	0
S 359th Street to S 364th Street	SB	243	47	12.5	72	0
S 364th Street to S 373rd Street	NB	67	63	50	72	0
S 364th Street to S 373rd Street	SB	164	51	12.5	72	0
S 373rd Street to Johnson Road	NB	72	62	50	72	0
S 373rd Street to Johnson Road	SB	115	55	12.5	72	0
Johnson Road to Porter Way	NB	150	47	10	72	0
Johnson Road to Porter Way	SB	114	54	12.5	72	0

Table 6-27 Summary of FTA Category 2 Vibration Impacts for the SF 99-East Alternative and SF 99-East Alternative with Porter Way Design Option (continued)

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Johnson Road to Porter Way (Porter Way Design Option)	SB	190	51	12.5	72	0
Porter Way to 10th Street E	SB	96	53	40	72	0
Porter Way to 10th Street E (Porter Way Design Option)	SB	90	54	40	72	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	60	40	72	0
Total SF 99-East						0
Total SF 99-East with Porter Way Design Option						0

Table 6-28 Summary of FTA Category 3 Vibration Impacts for the SF 99-East Alternative¹

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Montessori Academy at Spring Valley	SB	221	48	12.5	75	0
Giac Vien Pagoda	SB	231	48	12.5	75	0
Gethsemane Cemetery	NB	79	60	50	75	0
Total						0

Note:

(1) There are no differences in the Category 3 receivers between SF 99-East and SF 99-East with Porter Way Design Option.

For the SF 99-West Alternative, the vibration impacts for the LRT operations are presented in Tables 6-29 and 6-30. Table 6-29 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration. Table 6-30 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (Special) receptors for the SF 99-West Alternative. The table also includes the results for the Porter Way Design Option.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

There are no vibration impacts predicted with the SF 99-West Alternative.

Table 6-29 Summary of FTA Category 2 Vibration Impacts for the SF 99-West Alternative and SF 99-West Alternative with Porter Way Design Option

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
S 344th Street to S 346th Street	NB	64	60	50	72	0
S 359th Street to S 364th Street	SB	124	53	12.5	72	0
S 364th Street to S 373rd Street	NB	142	53	12.5	72	0
S 364th Street to S 373rd Street	SB	50	68	50	72	0
S 373rd Street to Johnson Road	NB	129	54	12.5	72	0
S 373rd Street to Johnson Road	SB	64	64	50	72	0
Johnson Road to Porter Way	NB	197	45	10	72	0
Johnson Road to Porter Way	SB	58	67	50	72	0
Johnson Road to Porter Way (Porter Way Design Option)	SB	165	52	12.5	72	0
Porter Way to 10th Street E	SB	96	53	40	72	0
Porter Way to 10th Street E (Porter Way Design Option)	SB	90	54	40	72	0
10th Street E to 68th Avenue E (segment boundary)	SB	69	60	40	72	0
Total SF 99-West						0
Total SF 99-West with Porter Way Design Option						0

Table 6-30 Summary of FTA Category 3 Vibration Impacts for the SF 99-West Alternative¹

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Montessori Academy at Spring Valley	SB	107	55	12.5	75	0
Giac Vien Pagoda	SB	117	54	12.5	75	0
Gethsemane Cemetery	NB	135	53	12.5	75	0
Total						0

Note:

(1) There are no differences in the Category 3 receivers between SF 99-West and SF 99-West with Porter Way Design Option.

6.3.3 Fife Segment

For the Fife Pacific Highway Alternative, the vibration impacts for the LRT operations are presented in Tables 6-31 and 6-32. Table 6-31 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Fife Pacific Highway Alternative, and Table 6-32 includes the results for FTA Category 1 (special) and 3 (institutional) receptors for the Fife Pacific Highway Alternative. The tables include the 54th Avenue Station and 54th Span Station alternatives.

Table 6-31 Summary of FTA Category 2 Vibration Impacts for the Fife Pacific Highway Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	73	20	72	1
62nd Avenue E to 58th Avenue E (preferred Five Station)	NB	113	70	20	72	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	117	70	20	72	0
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	102	71	20	72	0
58th Avenue E to 54th Avenue E (preferred Five Station)	NB	263	62	12.5	72	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	272	62	12.5	72	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	95	67	20	72	0
Willow Road E to Alexander Avenue E	NB	167	56	12.5	72	0
Willow Road E to Alexander Avenue E	SB	129	59	12.5	72	0
Alexander Avenue E to 34th Avenue E	NB	44	80	20	72	1
Alexander Avenue E to 34th Avenue E	SB	137	69	12.5	72	0
34th Avenue E to Puyallup River	SB	140	69	12.5	72	0
Total Fife Pacific Highway Alternative with preferred Fife Station						2
Total Fife Pacific Highway with 54th Avenue Design Option						2
Total Fife Pacific Highway with 54th Span Design Option						2

Table 6-32 Summary of FTA Category 1 and 3 Vibration Impacts for the Fife Pacific Highway Alternative – All Design Options

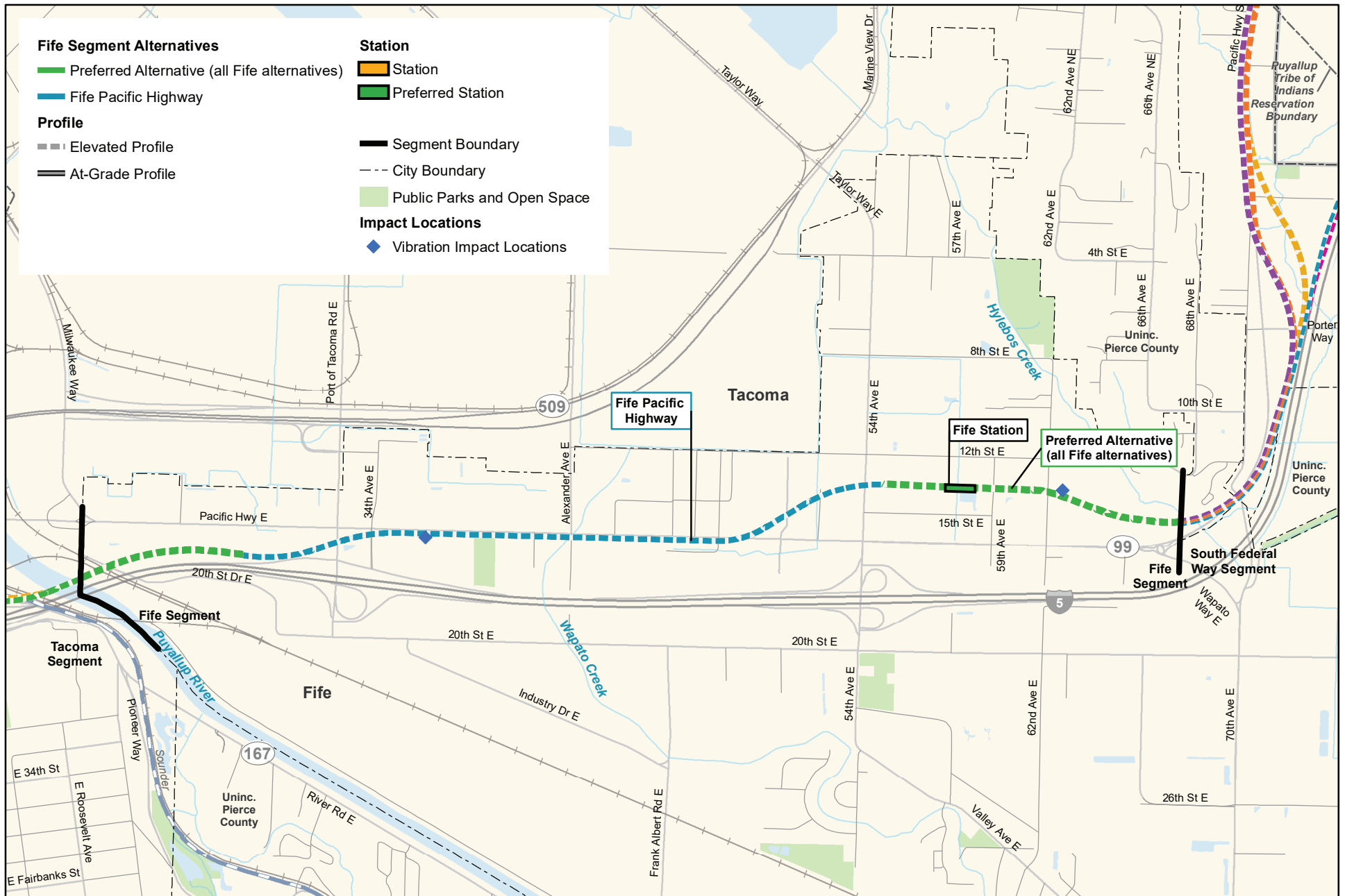
Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	75	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	110	69	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	84	71	20	75	0
New Horizon Christian Center (preferred Fife Station)	NB	246	61	20	75	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	63	20	75	0
Puyallup Tribe Integrative Medicine ¹	NB	443	59	12.5	66	0
Total Fife Pacific Highway Alternative with preferred Fife Station						0
Total Fife Pacific Highway 54th Avenue Design Option						0
Total Fife Pacific Highway 54th Span Design Option						0

Note:

(1) The Puyallup Tribe Integrative Medicine building is a Category 1 receptor.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

The vibration impacts are projected to occur at a single-family residence and the Travelodge by Wyndham Hotel and are due to the proximity to the proposed tracks. The vibration impact locations are shown in Figure 6-22 for the Fife Pacific Highway Alternative with the preferred Fife Station, Figure 6-23 for the 54th Avenue Design Option, and Figure 6-24 for the 54th Span Design Option. There is no difference in vibration impacts for the station options.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

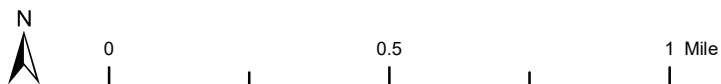


FIGURE 6-22
Vibration Impact Locations
Fife Pacific Highway Alternative
Fife Segment

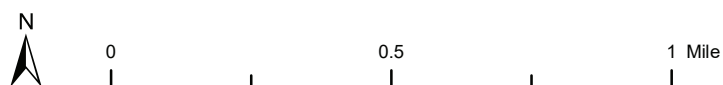
Tacoma Dome Link Extension



Tacoma Dome Link Extension



Tacoma Dome Link Extension



For the Fife Median Alternative, the vibration impacts for the LRT operations are presented in Tables 6-33 and 6-34. Table 6-33 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Fife Median Alternative, and Table 6-34 includes the results for FTA Category 1 (special) and 3 (institutional) receptors for the Fife Median Alternative.

Table 6-33 Summary of FTA Category 2 Vibration Impacts for the Fife Median Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	73	20	72	1
62nd Avenue E to 58th Avenue E (preferred Fife Station)	NB	113	70	20	72	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	117	70	20	72	0
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	102	71	20	72	0
58th Avenue E to 54th Avenue E (preferred Fife Station)	NB	263	62	12.5	72	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	272	62	12.5	72	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	95	67	20	72	0
Willow Road E to Alexander Avenue E	NB	222	53	20	72	0
Willow Road E to Alexander Avenue E	SB	74	65	12.5	72	0
Alexander Avenue E to 34th Avenue E	NB	98	71	12.5	72	0
Alexander Avenue E to 34th Avenue E	SB	89	71	12.5	72	0
34th Avenue E to Puyallup River	SB	140	69	12.5	72	0
Total Fife Median Alternative with preferred Fife Station						1
Total Fife Median 54th Avenue Design Option						1
Total Fife Median 54th Span Design Option						1

Table 6-34 Summary of FTA Category 1 and 3 Vibration Impacts for the Fife Median Alternative – All Design Options

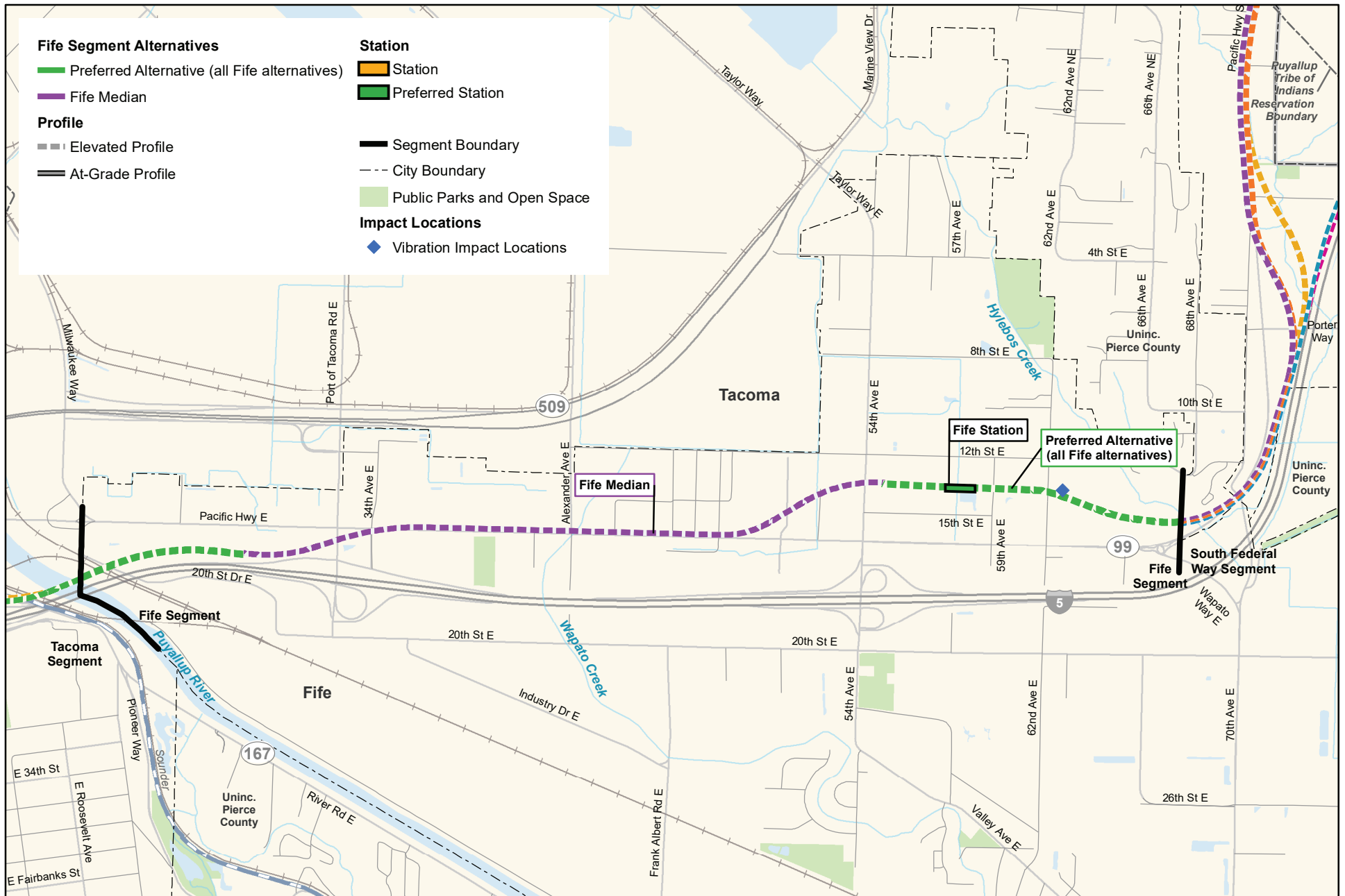
Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	75	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	110	69	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	84	71	20	75	0
New Horizon Christian Center (preferred Fife Station)	NB	246	64	12.5	75	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	63	20	75	0
Puyallup Tribe Integrative Medicine ¹	NB	497	58	12.5	66	0
Total Fife Median Alternative with preferred Fife Station						0
Total Fife Median with 54th Avenue Design Option						0
Total Fife Median with 54th Span Design Option						0

Note:

(1) The Puyallup Tribe Integrative Medicine facility is a Category 1 receptor.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

The vibration impact is projected to occur at one single-family home and is due to the proximity to the proposed tracks. The vibration impact locations are shown in Figure 6-25 for the Fife Median Alternative with the preferred Fife Station, Figure 6-26 for the 54th Avenue Design Option, and Figure 6-27 for the 54th Span Design Option. There is no difference in vibration impacts for the station options.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

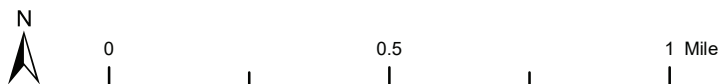


FIGURE 6-25
Vibration Impact Locations
Fife Median Alternative
Fife Segment

Tacoma Dome Link Extension



Tacoma Dome Link Extension



Tacoma Dome Link Extension

For the Fife I-5 Alternative, the vibration impacts for the LRT operations are presented in Tables 6-35 and 6-36. Table 6-35 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Fife I-5 Alternative, and Table 6-36 includes the results for FTA Category 1 (special) and 3 (institutional) receptors for the Fife I-5 Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location.

The vibration impact is projected to occur at a single-family house and is due to the proximity of the proposed. The vibration impact locations are shown in Figure 6-28 for the Fife I-5 Alternative with the preferred Fife Station, Figure 6-29 for the 54th Avenue Design Option, and Figure 6-30 for the 54th Span Design Option. There is no difference in vibration impacts for the station options.

Table 6-35 Summary of FTA Category 2 Vibration Impacts for the Fife I-5 Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts ¹
68th Avenue E (segment boundary) to 62nd Avenue E	SB	81	73	20	72	1
62nd Avenue E to 58th Avenue E (preferred Fife Station)	NB	113	70	20	72	0
62nd Avenue E to 58th Avenue E (54th Avenue Design Option)	NB	118	60	20	72	0
62nd Avenue E to 58th Avenue E (54th Span Design Option)	NB	103	71	20	72	0
58th Avenue E to 54th Avenue E (preferred Fife Station)	NB	270	63	20	72	0
58th Avenue E to 54th Avenue E (54th Avenue Design Option)	NB	273	62	12.5	72	0
58th Avenue E to 54th Avenue E (54th Span Design Option)	NB	96	67	20	72	0
54th Avenue E to Willow Road E (54th Avenue Design Option)	SB	51	66	20	72	0
54th Avenue E to Willow Road E (54th Span Design Option)	SB	51	63	20	72	0
Willow Road E to Alexander Avenue E	SB	75	65	12.5	72	0
Alexander Avenue E to 34th Avenue E	SB	507	58	12.5	72	0
34th Avenue E to Puyallup River	SB	132	68	12.5	72	0
Total Fife I-5 Alternative with preferred Fife Station						1
Total Fife I-5 with 54th Avenue Design Option						1
Total Fife I-5 with 54th Span Design Option						1

Note:

- (1) The number of impacts counts the individual residential units with projected vibration impacts. Uses such as multi-family residential have multiple individual residential units on a parcel.

Table 6-36 Summary of FTA Category 1 and 3 Vibration Impacts for the Fife I-5 Alternative – All Design Options

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
St. Paul Chong Hasang Korean Catholic Community Church (preferred Fife Station)	NB	96	75	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Avenue Design Option)	NB	111	68	20	75	0
St. Paul Chong Hasang Korean Catholic Community Church (54th Span Design Option)	NB	85	63	20	75	0
New Horizon Christian Center (preferred Fife Station)	NB	249	64	10	75	0
New Horizon Christian Center (54th Avenue Design Option)	NB	225	63	20	75	0
Puyallup Tribe Integrative Medicine ¹	NB	166	66	12.5	66	0
Total Fife I-5 Alternative with preferred Fife Station						0
Total Fife I-5 with 54th Avenue Design Option						0
Total Fife I-5 with 54th Span Design Option						0

Note:

(1) The Puyallup Tribe Integrative Medicine facility is a Category 1 receptor.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

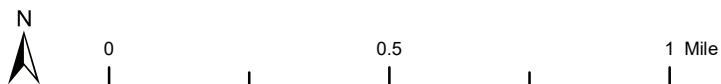


FIGURE 6-28
Vibration Impact Locations
Fife I-5 Alternative
Fife Segment

Tacoma Dome Link Extension



Tacoma Dome Link Extension



Tacoma Dome Link Extension

6.3.4 Tacoma Segment

For the Preferred Tacoma 25th Street-West Alternative, the vibration impacts for the LRT operations are presented in Tables 6-37 and 6-38. Table 6-37 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Preferred Tacoma 25th Street-West Alternative. Table 6-38 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (special) receptors for the Preferred Tacoma 25th Street-West Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location. There are no vibration impacts projected for the Preferred Tacoma 25th Street-West Alternative.

Table 6-37 Summary of FTA Category 2 Vibration Impacts for the Preferred Tacoma 25th Street-West Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Portland Avenue E to East L Street	NB	220	53	10	72	0
Portland Avenue E to East L Street	SB	83	53	10	72	0
East L Street to East G Street	NB	245	51	10	72	0
East G Street to East D Street	NB	416	51	10	72	0
East G Street to East D Street	SB	49	37	40	72	0
Total						0

Table 6-38 Summary of FTA Category 3 Vibration Impacts for the Preferred Tacoma 25th Street-West Alternative

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Cedar Wellness Center	NB	292	41	10	75	0
Total						0

For the Tacoma 25th Street-East Alternative, the vibration impacts for the LRT operations are presented in Tables 6-39 and 6-40. Table 6-39 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Tacoma 25th Street-East Alternative. Table 6-40 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (special) receptors for the Tacoma 25th Street-East Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location. There are no vibration impacts projected for the Tacoma 25th Street-East Alternative.

Table 6-39 Summary of FTA Category 2 Vibration Impacts for the Tacoma 25th Street-East Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Portland Avenue E to East L Street	NB	218	53	10	72	0
Portland Avenue E to East L Street	SB	85	53	10	72	0
East L Street to East G Street	NB	240	51	10	72	0
East G Street to East D Street	NB	458	51	10	72	0
East G Street to East D Street	SB	392	24	10	72	0
Total						0

Table 6-40 Summary of FTA Category 3 Vibration Impacts for the Tacoma 25th Street-East Alternative

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Cedar Wellness Center	NB	365	51	10	75	0
Total						0

For the Tacoma Close to Sounder Alternative, the vibration impacts for the LRT operations are presented in Tables 6-41 and 6-42. Table 6-41 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Tacoma Close to Sounder Alternative. Table 6-42 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (special) receptors for the Tacoma Close to Sounder Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location. There are no vibration impacts projected for the Tacoma Close to Sounder Alternative.

Table 6-41 Summary of FTA Category 2 Vibration Impacts for the Tacoma Close to Sounder Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Portland Avenue E to East L Street	NB	101	58	10	72	0
Portland Avenue E to East L Street	SB	193	53	10	72	0
East L Street to East G Street	NB	88	51	25	72	0
East G Street to East D Street	NB	331	51	10	72	0
East G Street to East D Street	SB	134	24	10	72	0
Total						0

Table 6-42 Summary of FTA Category 3 Vibration Impacts for the Tacoma Close to Sounder Alternative

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Cedar Wellness Center	NB	208	51	10	75	0
Total						0

For the Tacoma 26th Street Alternative, the vibration impacts for the LRT operations are presented in Tables 6-43 and 6-44. Table 6-43 includes the results for FTA Category 2 (residential) receptors with both daytime and nighttime sensitivity to vibration for the Tacoma 26th Street Alternative. Table 6-44 includes the results for FTA Category 3 (institutional) receptors with primarily daytime use. There are no FTA Category 1 (special) receptors for the Tacoma 26th Street Alternative.

The results include a tabulation of location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and the total number of vibration impacts for each location. There are no vibration impacts projected for the Tacoma 26th Street Alternative.

Table 6-43 Summary of FTA Category 2 Vibration Impacts for the Tacoma 26th Street Alternative

Location	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Portland Avenue E to East L Street	NB	93	58	10	72	0
Portland Avenue E to East L Street	SB	201	53	10	72	0
East L Street to East G Street	NB	80	53	25	72	0
East G Street to East D Street	NB	41	64	40	72	0
East G Street to East D Street	SB	424	24	10	72	0
Total						0

Table 6-44 Summary of FTA Category 3 Vibration Impacts for the Tacoma 26th Street Alternative

Name	Side of Track	Distance to Near Track (feet)	Project 1/3 Octave Band Maximum Vibration Level (VdB)	Project Vibration 1/3 Octave Band Frequency (Hz)	FTA Criterion (VdB)	# of Impacts
Cedar Wellness Center	SB	68	56	10	75	0
Total						0

6.4 Minimum Operable Segment

If TDLE is constructed in phases, the minimum operable segment (M.O.S.) to the station in South Federal Way and, to a lesser degree, the M.O.S. to the station in Fife would have the same type of noise and vibration impacts, but in a smaller geographic area. For example, the M.O.S. to the station in South Federal Way would avoid or delay all of the potential noise or vibration impacts identified in the Fife and Tacoma Segments as well as the impacts identified south of the proposed station location. Similarly, the M.O.S. to the station in Fife would avoid or delay all of the potential noise or vibration impacts for Tacoma and many of the potential impacts in the Fife Segment. At each of the M.O.S. stations, functions associated with being the terminus station, such as differences in parking and feeder bus operations, could have a minor increase in noise near those stations until the rest of TDLE was constructed.

6.5 Park-and-Ride Noise

The project noise levels for the four park-and-ride locations (and options) are presented in Table 6-45. This table includes the results for closest residential receptors for each of the facilities. In addition to the distances to the nearest entrance to the park-and-ride, Table 6-45 includes the project noise levels and the WAC noise criterion. There are no WAC exceedances for any of the park-and-ride facilities.

Table 6-45 Summary of WAC Noise Assessment for Park-and-Ride Facilities

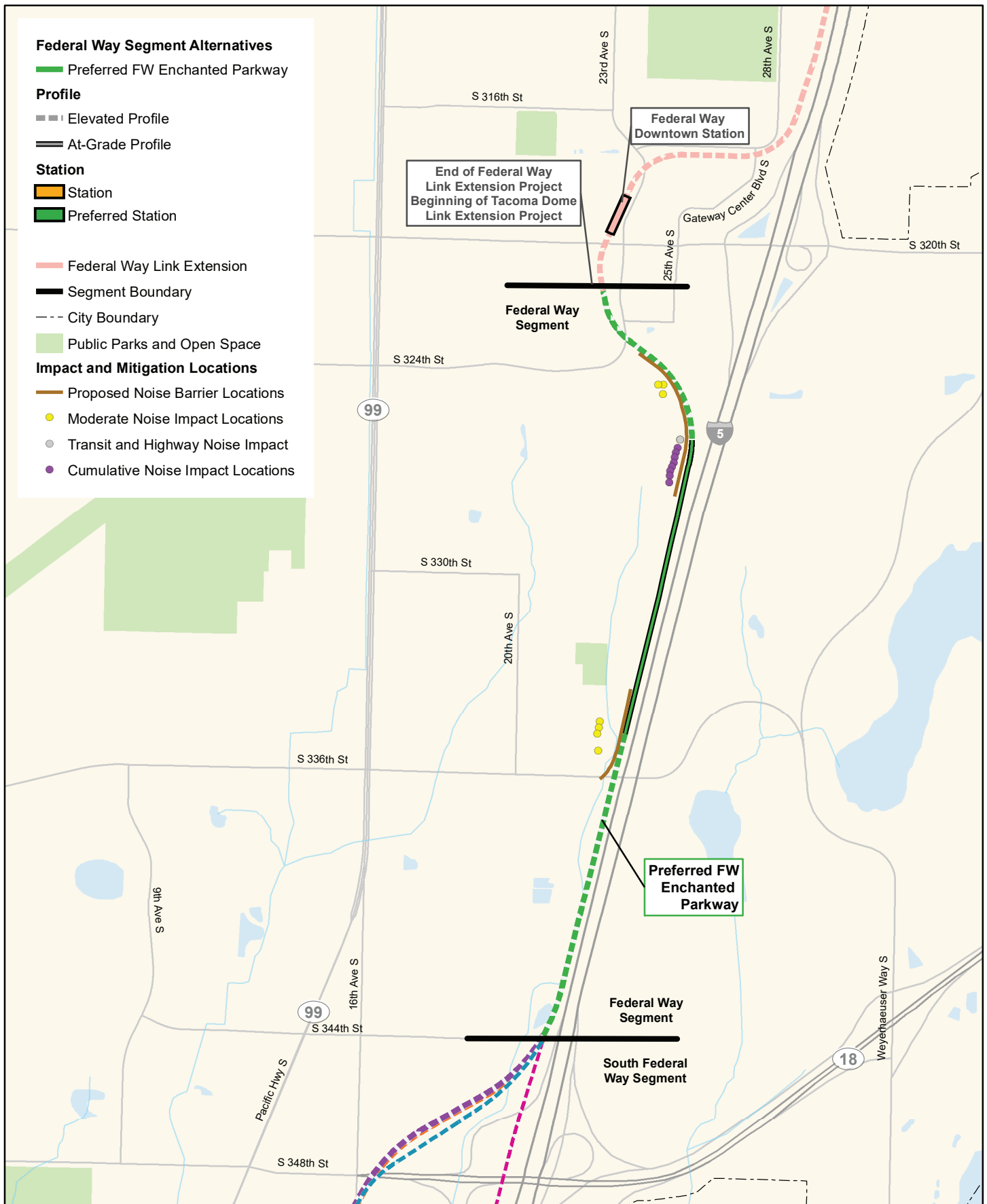
Location	Distance to Closest Residence (feet)	Project Noise Level (dBA)	WAC Criterion (dBA)	Exceedance?
South Federal Way I-5 Station ¹	173	45	60	No
South Federal Way I-5 Station – Surface Parking Option	170	43	60	No
Fife Station (preferred alternative)	490	41	60	No
Fife Station (preferred alternative)– Surface Parking Option	290	41	60	No
Fife 54th Avenue Design Option	540	42	60	No
Fife 54th Avenue Design Option– Surface Parking Option	468	40	60	No
Fife 54th Span Design Option	270	41	60	No
Fife 54th Span Design Option– Surface Parking Option	270	41	60	No

Note:

(1) There are no noise sensitive receivers near the park-and-ride at the SF Enchanted Parkway, SF 352nd Span, or SF 99-Enchanted station locations in the South Federal Way Segment.

6.6 Traffic Noise

The results of the traffic noise study near the Belmor community, located south of S 324th Street in the Federal Way Segment, are detailed in Attachment G. One traffic noise impact was identified due to the changes to the barriers and berm that parallel I-5. An additional eight noise impacts were identified due to the combination of the highway noise and light rail noise exceeding the WSDOT threshold for impact. The locations of the impacts are shown in Figure 6-31. Additional details regarding the traffic noise assessment are contained in Attachment G.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

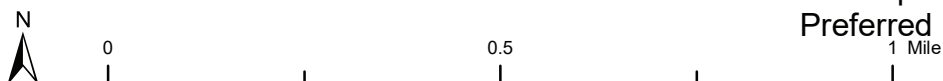


FIGURE 6-31
Traffic Noise Impact Locations South of S 324th Street
Preferred FW Enchanted Parkway Alternative
Federal Way Segment

6.7 Construction Noise

Elevated noise levels from construction activities are, to a degree, unavoidable for this type of project. For most construction equipment, diesel engines are typically the dominant noise source. For other activities, such as impact pile driving and jackhammering, noise generated by the actual process dominates. Short-term noise during construction of the project can be intrusive to residents near the construction sites. Most of the construction would consist of site preparation, constructing the LRT guideway, and laying new tracks and would occur primarily during daytime hours. At some locations, more extensive work would occur, such as pile driving for elevated structures and retaining walls. Nighttime work may be required in some location or for specific activities. City noise ordinance procedures would be followed, and waivers or noise variance would be obtained as required.

Table 3-1 shows noise levels of typical construction equipment from the FTA guidance manual in terms of the maximum levels at 50 feet. Construction noise predictions at noise-sensitive locations depend on the amount of noise during each construction phase, the duration of the noise, and the distance from the construction activities to the sensitive receptor. Table 6-46 provides an example of a construction noise projection for typical at-grade track construction. Construction noise projections for other project features, such as station or parking facilities, would have similar results. Specific construction scenarios would be developed during the preparation of the construction noise and vibration plan, when more information on methods, equipment, and durations is available. Using these assumptions, an 8-hour Leq of 88 dBA would be projected at a distance of 50 feet from the construction site.

Table 6-46 Typical Construction Scenario, At-Grade Track

Equipment Type	Typical Noise Level at 50 feet (dBA)	Equipment Utilization Factor (%)	Leq (dBA)
Grader	85	50	82
Backhoe	80	40	76
Compactor	82	20	75
Loader	85	20	78
Roller	74	20	67
Truck	88	40	84
Crane, mobile	83	20	76
Total 8-hour workday Leq at 50 feet:			88

Using the criteria in Section 4.3 and the example for at-grade construction in Table 6-46, screening distances for at-grade track construction noise impact can be determined. For residential land use, the potential for short-term at-grade track construction noise impact could extend to approximately 120 feet from the corridor; however, if nighttime construction is conducted, the potential for short-term noise impact from at-grade construction could extend to approximately 380 feet from the corridor. For elevated structure construction, the distance for noise impacts during the daytime could be up to 250 feet for impact pile driving, assuming a usage factor of 20 percent during the day. If alternative methods of piling, such as vibratory, are used the distance to impact could be less. When a specific piling method is determined, a screening distance will be calculated.

Based on the distances above, there would be approximately 500 receivers within the daytime screening distance and approximately 1,500 receivers within the nighttime screening distance for all alternatives.

6.8 Construction Vibration

Unlike typical LRT operations, there is the potential for damage to nearby structures at close distances due to construction vibration from activities, such as pile driving, hoe rams, vibratory compaction, and loaded trucks. Most limits on construction vibration are based on reducing the potential for damage to nearby structures. Although construction vibrations are only temporary, the potential for human annoyance and damage is assessed.

As a conservative approach, the non-engineered timber and masonry construction category (Category 3) has been used to assess the potential for construction vibration impacts, as described in Section 4.4. A vibration criterion of 94 VdB has been used to assess potential damage impact, and 72 VdB has been used to assess potential vibration annoyance from construction activities. Vibration source levels at 25 feet and the distances to potential residential annoyance and potential damage are shown in Table 6-47. With the exception of impact pile driving, the potential for damage is limited to within 25 feet of construction activities. For impact pile driving, the distance for the potential for damage is up to 55 feet. There are sensitive receptors within 25 feet of the project alternatives in the Federal Way Segment in Belmor, and there are several others within 55 feet at other locations as well. However, any potential for impacts would depend on the piling method chosen.

Because the exact location of construction equipment is important in projecting vibration levels, a more detailed assessment of potential vibration damage would be performed during final design when more accurate equipment locations are known.

Table 6-47 Summary of Potential Construction Vibration Impacts

Equipment Type	Typical Vibration Level at 25 feet (VdB)	Distance for Potential Damage (feet)	Distance for Potential Annoyance (feet)
Impact pile driving	104	55	290
Push piling	84	25	125
Hoe ram	87	15	80
Caisson drilling	87	15	80
Loaded trucks	86	15	75
Clam shovel	94	25	135
Vibratory roller	94	25	135

7 CUMULATIVE IMPACTS

Cumulative impacts for TDLE would be associated with the planned OMF South project. If either the Preferred South 336th Street Alternative or the South 344th Street Alternative is constructed for OMF South, there would be additional noise for residences adjacent to both projects, primarily just to the north of S 336th Street. However, there would be no additional FTA or WAC noise or FTA vibration impacts associated with the cumulative effects of the two projects. All noise impacts associated with the OMF South project on the mainline track are a subset of the noise impacts identified for TDLE.

Some cumulative noise impacts for a small number of receptors south of S 324th Street are possible with the plan to extend S 324th Street across I-5 to the east as part of the Federal Way City Center Access Project. The changes along I-5 are captured in the traffic noise assessment as described in Attachment G.

8 MITIGATION

8.1 Operational Noise

The Link Light Rail Noise and Vibration Policy (Resolution No. R2023-15) sets source mitigation as the preferred method of mitigation, followed by path mitigation, such as noise barriers, and then receiver mitigation, which would include sound insulation of properties. There are several methods of noise mitigation available, including:

- **Noise Barriers:** Installation of noise barriers beside the tracks is commonly used to reduce noise from surface transportation sources. Depending on the height and location relative to the tracks, noise barriers can achieve between 5 and 15 dB of noise reduction. The primary requirements for an effective noise barrier are that (1) the barrier must be high enough and long enough to break the line of sight between the sound source and the receiver, (2) the barrier must be of an impervious material with a minimum surface density of 4 pounds per square foot, and (3) the barrier must not have any gaps or holes between the panels or at the bottom. Because many materials meet these requirements, the selection of materials for noise barriers is usually dictated by aesthetics, durability, cost, and maintenance considerations. Noise barriers for transit projects typically range in height from 8 to 12 feet for at-grade track and 4 to 6 feet in height on elevated structures.
- **Building Sound Insulation:** Although sound insulation of buildings has no effect on noise in exterior areas, it may be the best choice for sites where noise barriers are not feasible or desirable and for buildings where indoor sensitivity is of most concern. Substantial improvements in building sound insulation (on the order of 5 to 10 dBA) can often be achieved by adding an extra layer of glazing to the windows, by sealing holes in exterior surfaces that act as sound leaks, and by providing forced ventilation and air-conditioning so that windows do not need to be opened.

The most effective type of mitigation at most locations would be noise barriers. For locations with impacts to single isolated residences, the most effective mitigation measure could be building sound insulation. The approximate locations and lengths of the proposed noise barriers are shown in Table 8-1 and Figures 8-1 and 8-2 for the Federal Way Segment; Tables 8-2 and 8-3 and Figures 8-3 through 8-6 for South Federal Way; Table 8-4 and Figures 8-7 through 8-15 for the Fife Segment; and Table 8-5 and Figures 8-16 through 8-18 for the Tacoma Segment. For locations in the figures where barriers are not identified, where impacts cannot be fully

mitigated with barriers alone, or where mitigation/relocation of crossovers is not identified, sound insulation would be the most effective mitigation measure.

The following crossovers would need additional mitigation:

- The crossover associated with the pocket track on the SF Enchanted Parkway Alternative.
- The crossover near the St. Paul Chong Hasang Korean Catholic Church in Fife for all Fife alternatives that include the preferred Fife Station.
- The crossover on the Tacoma Close to Sounder Alternative.
- The crossover on the Tacoma 26th Street Alternative.

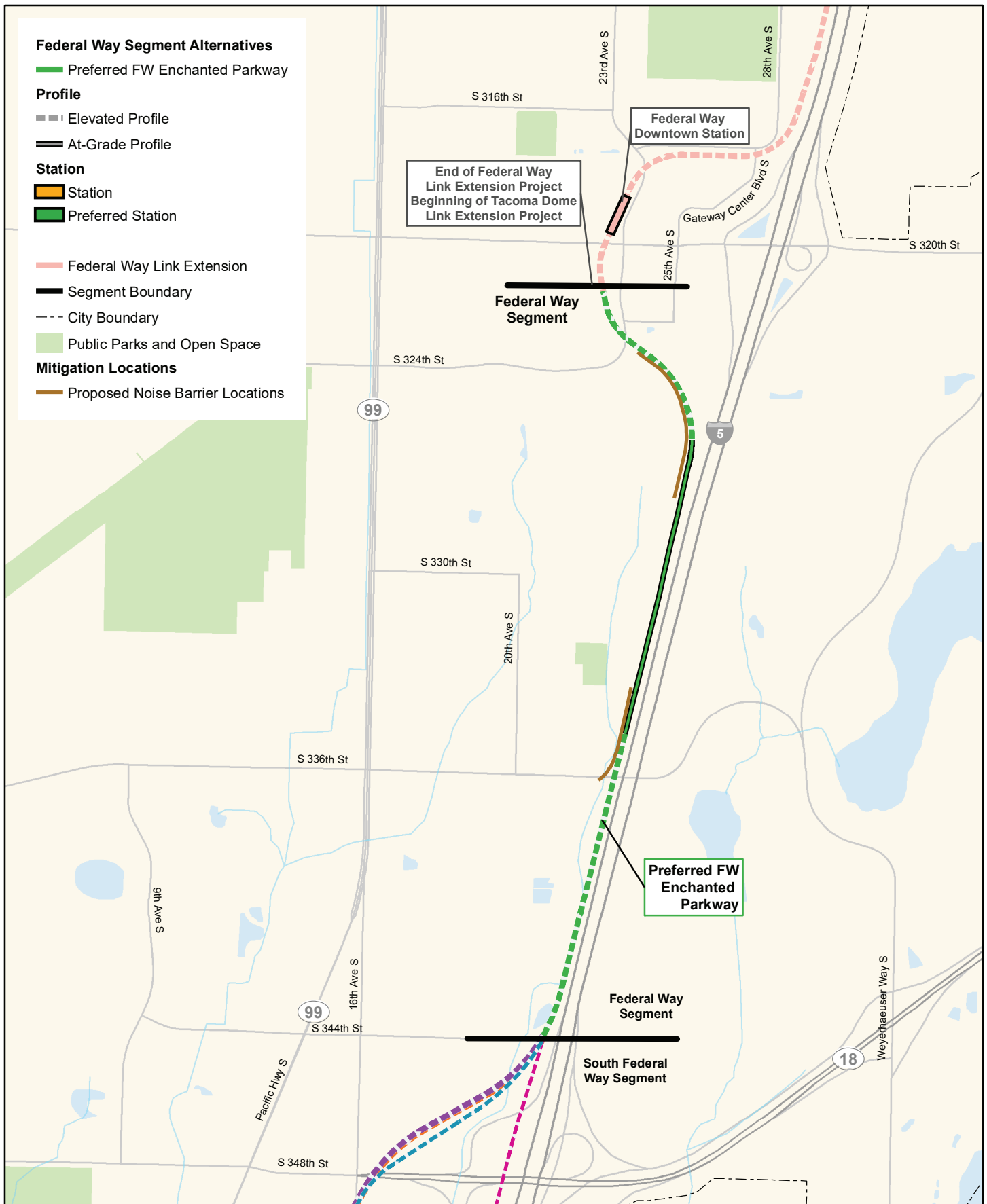
With the recommended noise mitigation, including potential additional sound insulation at barrier locations, there would be no residual impacts at noise barrier locations and all noise impacts would be at a level below the FTA threshold for moderate noise impacts. During final design, all impacts will be verified, and mitigation detail designed. Mitigation may be eliminated or modified if the final design analysis finds no impacts or more cost-effective mitigation.

Table 8-1 Summary of Potential Noise Barrier Locations for the Federal Way Segment

Project Alternative	Location	Side of Track	Civil Station	Noise Barrier Length (feet) ¹	Noise Barrier Height (feet)
Preferred FW Enchanted Parkway Alternative	S 324th Street to S 330th Street	SB	1508+00 to 1524+50	1,650	4
FW Enchanted Parkway Alternative with Design Option	S 333rd Street to S 336th Street	SB	1543+50 to 1553+00	950	4
FW Enchanted Parkway Alternative with Design Option	S 324th Street to S 330th Street	SB	1509+00 to 1523+50	1,450	4

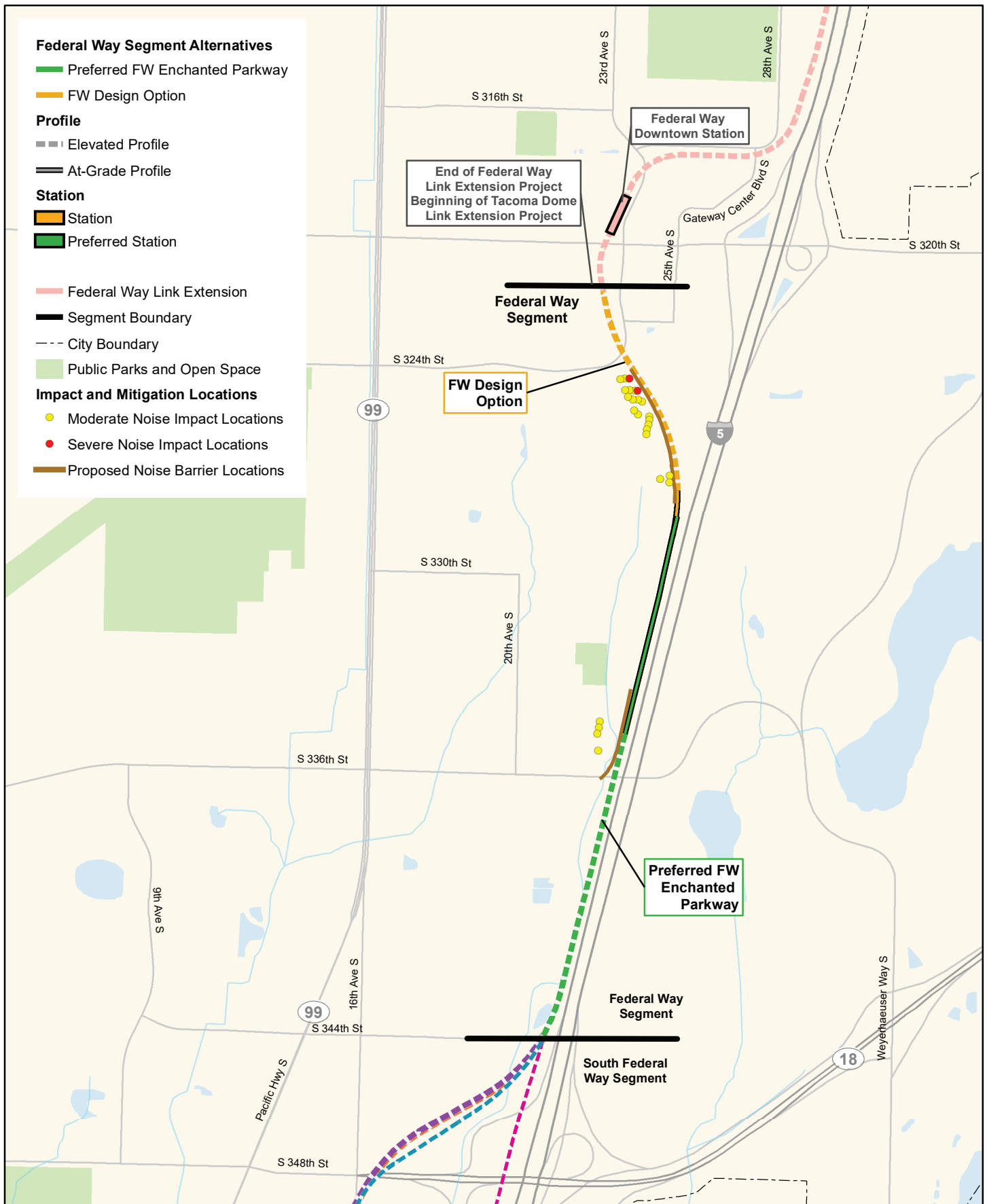
Note:

(1) All 4-foot-high barriers would be on elevated structures or retained-fill sections above the ground elevation of receivers and should be placed at the edge of the structure.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE 8-1
 Potential Noise Barrier Locations
 Preferred FW Enchanted Parkway Alternative
 Federal Way Segment



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

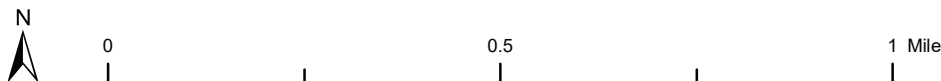


FIGURE 8-2
Potential Noise Barrier Locations
FW Design Option
Federal Way Segment

Tacoma Dome Link Extension

Table 8-2 Summary of Potential Noise Barrier Locations for the South Federal Way Segment

Project Alternative	Location	Side of Track	Civil Station	Noise Barrier Length (feet) ¹	Noise Barrier Height (feet)
SF Enchanted Parkway	S 356th Street to S 364th Way	SB	1630+00 to 1641+00	1,100 ²	4
SF 99-East and SF 99-West	S 344th Street to S 348th Street	NB	1602+50 to 1594+50	800	4
SF 99-East and SF 99-West	S 364th Street to S 373rd Street	NB	1669+00 to 1673+00	400	4
SF 99-West	S 364th Street to S 373rd Street	SB	1670+00 to 1677+00	700	4
SF 99-East	S 364th Street to S 373rd Street	NB	1686+00 to 1690+00	400	4
SF 99-East	S 373rd Street to Johnson Road NE	NB	1707+00 to 1715+00	800	4
SF 99-East and SF 99-West	S 373rd Street to Johnson Road NE	SB	1715+50 to 1722+50	700	4
SF 99-East	S 373rd Street to Johnson Road NE	NB	1719+00 to 1723+50	450	4
SF 99-East and SF 99-West ³	Johnson Road NE to Porter Way	SB	1736+50 to 1740+50	400	4
SF 99-East and SF 99-West	Johnson Road NE to Porter Way	SB	1745+50 to 1750+00	400	4
All Alternatives	Porter Way to 10th Street E	SB	1765+50 to 1770+00	450	4
All Alternatives	10th Street E to 68th Avenue E (segment boundary)	SB	1787+50 to 1792+50	500	4

Notes:

(1) All 4-foot-high barriers would be on elevated structures at the edge of the structure.

(2) The crossover associated with the pocket track at this location would also need to have mitigation applied.

(3) Barriers at this location apply to SF 99-West or SF 99-East alternatives with or without the Porter Way Design Option.

Table 8-3 Summary of Potential Sound Insulation Locations for the South Federal Way Segment

Alternative	Location	Side of Track	Civil Station	Parcel Number
SF Enchanted Parkway and SF I-5	11th Place S to S 372nd Way	SB	1826+00	36890
SF Enchanted Parkway and SF I-5	S 372nd Way to S 376th Street	SB	1840+00	41804
SF 99-East	S 364th Street to S 373rd Street	SB	1686+00	41267
SF 99-East and SF 99-West	S 373rd Street to Johnson Road NE	SB	1703+00	41794
SF 99-East and SF 99-West	S 373rd Street to Johnson Road NE	NB	1724+00	42244
SF 99-West	S 359th Street to S 364th Way	SB	1649+00	32857
SF 99-West	S 364th Street to S 373rd Street	NB	1688+00	38099
SF 99-West	S 373rd Street to Johnson Road NE	NB	1720+00	42166

Note:

No locations were identified along the Porter Way Design Option for the SF 99-West or SF 99-East alternatives.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

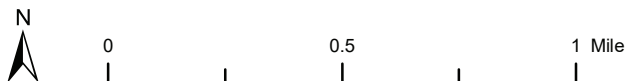
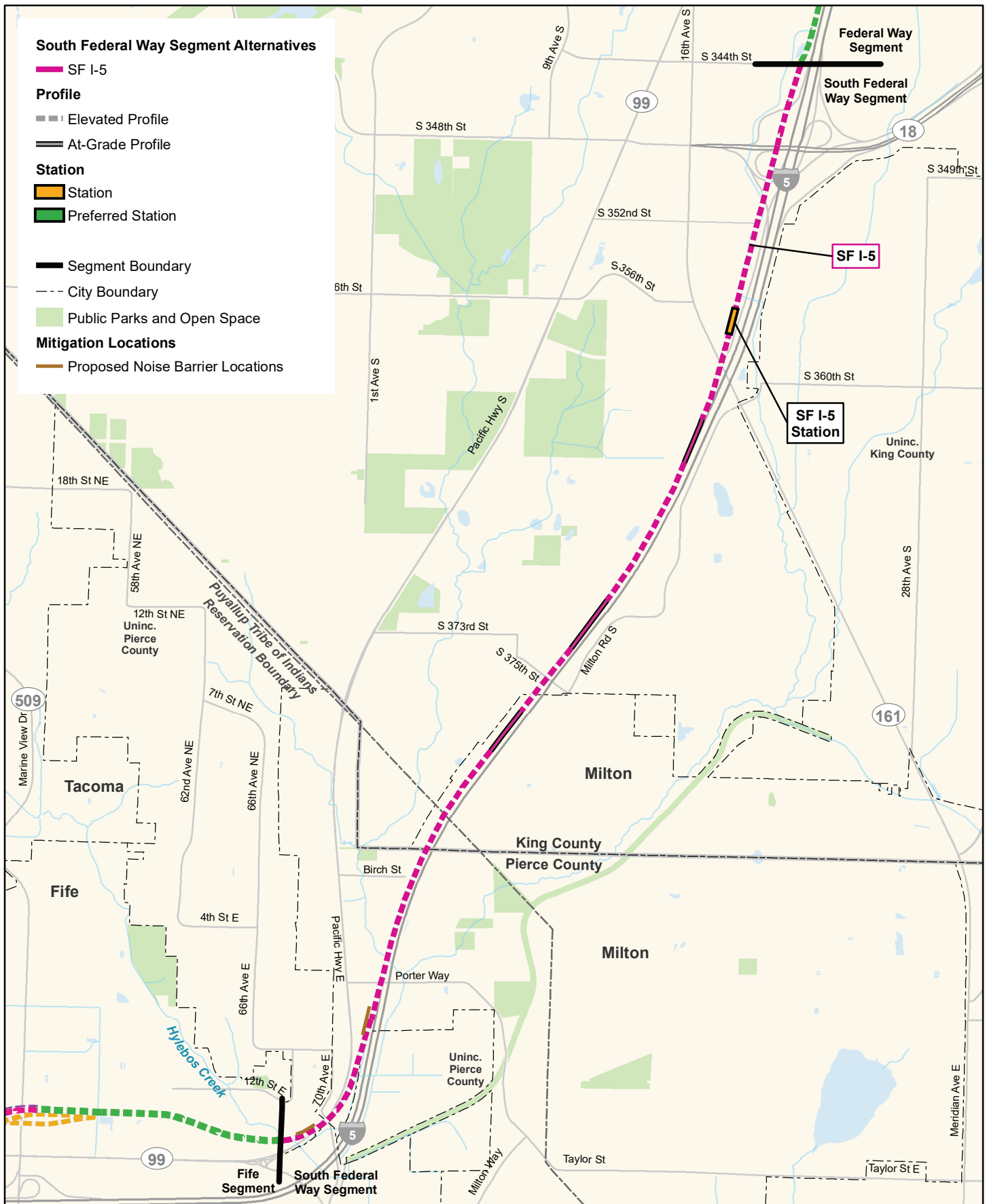


FIGURE 8-3
Potential Noise Barrier Locations
SF Enchanted Parkway Alternative
South Federal Way Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

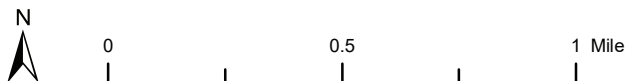
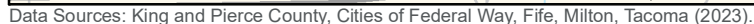


FIGURE 8-4
 Potential Noise Barrier Locations
 SF I-5 Alternative
 South Federal Way Segment
 Tacoma Dome Link Extension



Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE 8-6
Potential Noise Barrier Locations
SF 99-East Alternative with Porter Way Design Option
South Federal Way Segment

Tacoma Dome Link Extension

Table 8-4 Summary of Potential Noise Barrier Locations for the Fife Segment

Project Alternative	Location	Side of Track	Civil Station	Noise Barrier Length (feet) ¹	Noise Barrier Height (feet)
All Alternatives (all station options)	68th Avenue E (segment boundary) to 62nd Avenue E	SB	1952+00 to 1956+00	400	4
All Alternatives (preferred Fife Station)	62nd Avenue E to 54th Avenue E	NB	1954+50 to 2010+50	2,550	4
All Alternatives (54th Avenue Design Option)	62nd Avenue E to 58th Avenue E	NB	1953+50 to 1968+50	1,500	4
All Alternatives (54th Span Design Option)	62nd Avenue E to 54th Avenue E	NB	1953+50 to 1978+50	2,500	4
Fife I-5 (54th Avenue Design Option and 54th Span Design Option)	54th Avenue E to Willow Road E	SB	1987+50 to 1992+50	500	4
Fife Pacific Highway	Willow Road E to Alexander Avenue E	SB	2036+50 to 2038+50	200	4
Fife Median	Willow Road E to Alexander Avenue E	SB	2035+00 to 2038+50	350	4
Fife Pacific Highway and Fife Median	Willow Road E to Alexander Avenue E	NB	2039+50 to 2145+00	550	4
Fife I-5	Willow Road E to Alexander Avenue E	SB	2041+50 to 2048+00	650	4
Fife Pacific Highway and Fife Median	Alexander Avenue E to 34th Avenue E	NB	2062+50 to 2065+00	250	4
Fife Pacific Highway and Fife Median	Alexander Avenue E to 34th Avenue E	SB	2063+00 to 2065+50	250	4
Fife Pacific Highway and Fife Median	Alexander Avenue E to 34th Avenue E	NB	2068+50 to 2072+00	350	4
Fife I-5	Alexander Avenue E to 34th Avenue E	SB	2068+00 to 2072+00	400	4
Fife Pacific Highway and Fife Median	Alexander Avenue E to 34th Avenue E	SB	2073+50 to 2078+50	500	4
Fife Pacific Highway and Fife Median	34th Avenue E to Puyallup River	SB	2087+00 to 2092+00	500	4
Fife Pacific Highway and Fife Median	34th Avenue E to Puyallup River	SB	2095+00 to 2099+00	400	4
Preferred Alternative (all Fife alternatives)	Willow Road E to Alexander Avenue E	SB	2097+50 to 2200+50	2,450	4

Note:

(1) All 4-foot high barriers would be on elevated structures at the edge of the structure.



Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

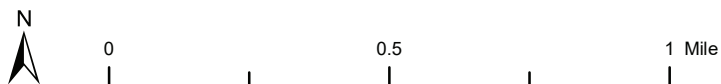


FIGURE 8-8
Potential Noise Barrier Locations
Fife Pacific Highway with 54th Avenue Design Option
Fife Segment



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

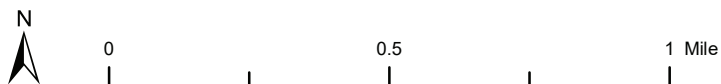
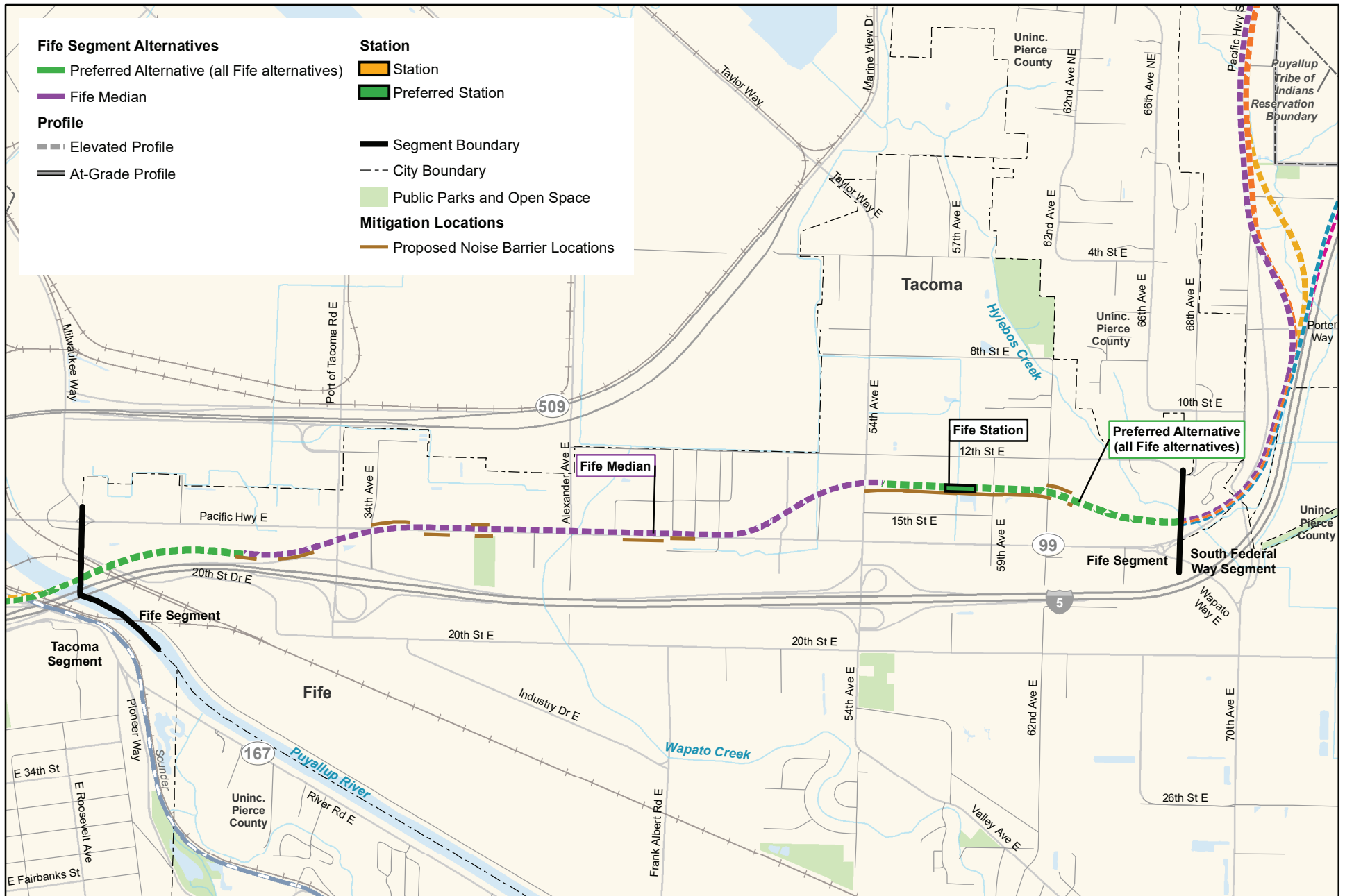


FIGURE 8-9
Potential Noise Barrier Locations
Fife Pacific Highway with 54th Span Design Option
Fife Segment



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

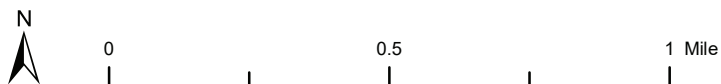


FIGURE 8-10
Potential Noise Barrier Locations
Fife Median Alternative
Fife Segment

Tacoma Dome Link Extension



Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

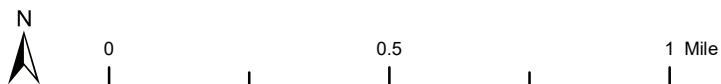


FIGURE 8-12
Potential Noise Barrier Locations
Fife Median with 54th Span Design Option
Fife Segment



Tacoma Dome Link Extension



Tacoma Dome Link Extension



Tacoma Dome Link Extension

Table 8-5 Summary of Potential Noise Barrier Locations for the Tacoma Segment

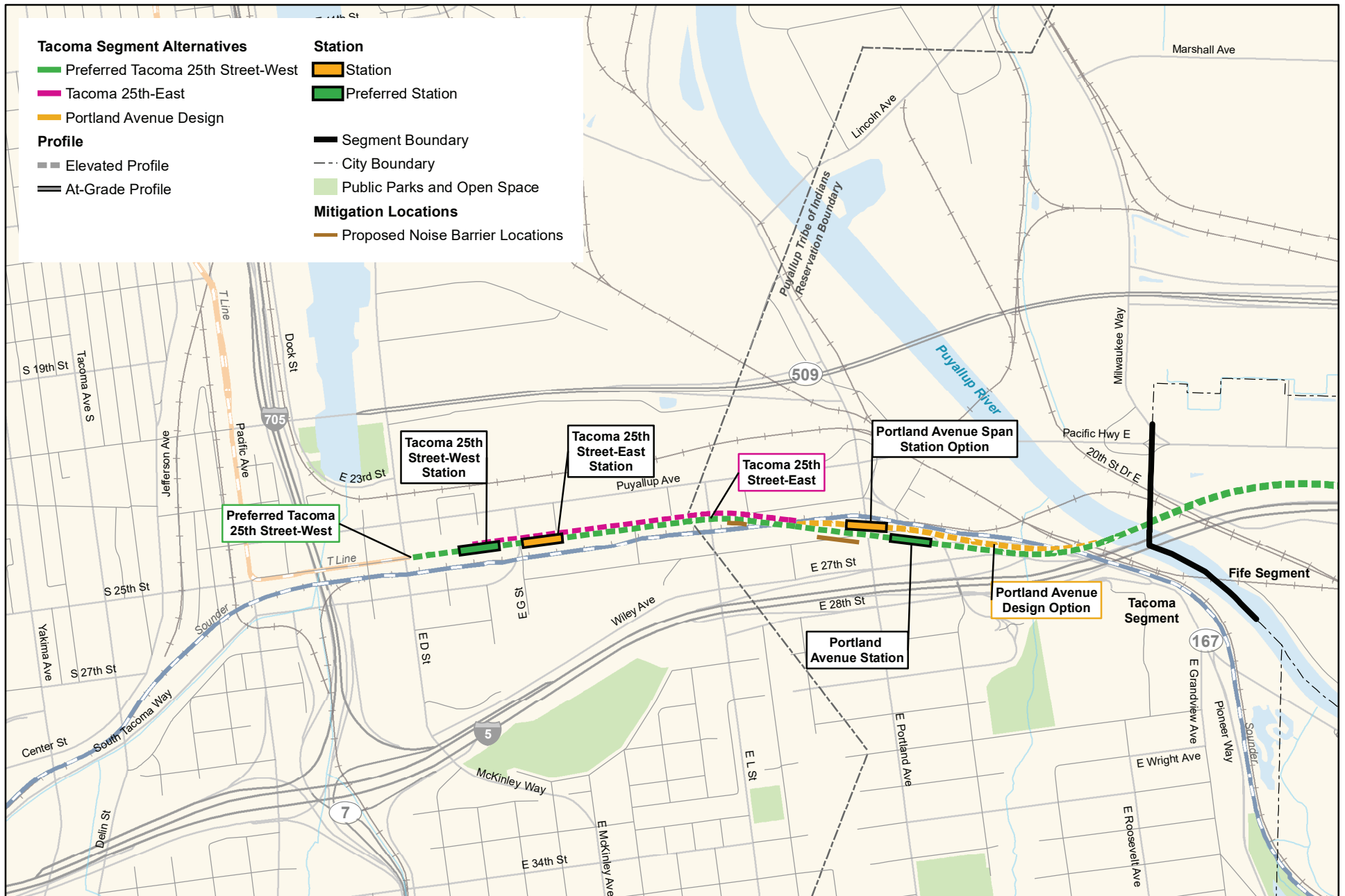
Project Alternative	Location	Side of Track	Civil Station	Noise Barrier Length (feet) ¹	Noise Barrier Height (feet)
Preferred Tacoma 25th Street-West and Tacoma 25th Street-East	Portland Avenue E to East L Street	NB	2251+00 to 2255+50	450	4
Tacoma Close to Sounder	Portland Avenue E to East L Street	NB	2252+00 to 2256+50	450	8
Preferred Tacoma 25th Street-West and Tacoma 25th Street-East	Portland Avenue E to East L Street	SB	2262+50 to 2264+50	200	4
Tacoma 26th Street	East G Street to East D Street	NB	2291+00 to 2294+00	300	4
Tacoma 26th Street	East G Street to East D Street	SB	2291+50 to 2295+50	400	4

Note:

- (1) All 4-foot-high barriers would be on elevated structures at the edge of the structure. The 8-foot at-grade barrier would be located at approximately the edge of the right-of-way.

Table 8-6 Summary of Potential Sound Insulation Locations for the Tacoma Segment

Alternative	Location	Side of Track	Civil Station	Parcel Number
Preferred Tacoma 25th Street-West and Tacoma 25th Street-East	Portland Avenue E to E L Street	NB	2259+00	2376
Close to Sounder/ Tacoma 26th Street	Portland Avenue E to E L Street	NB	2265+00	2072



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

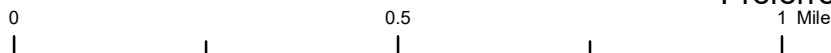
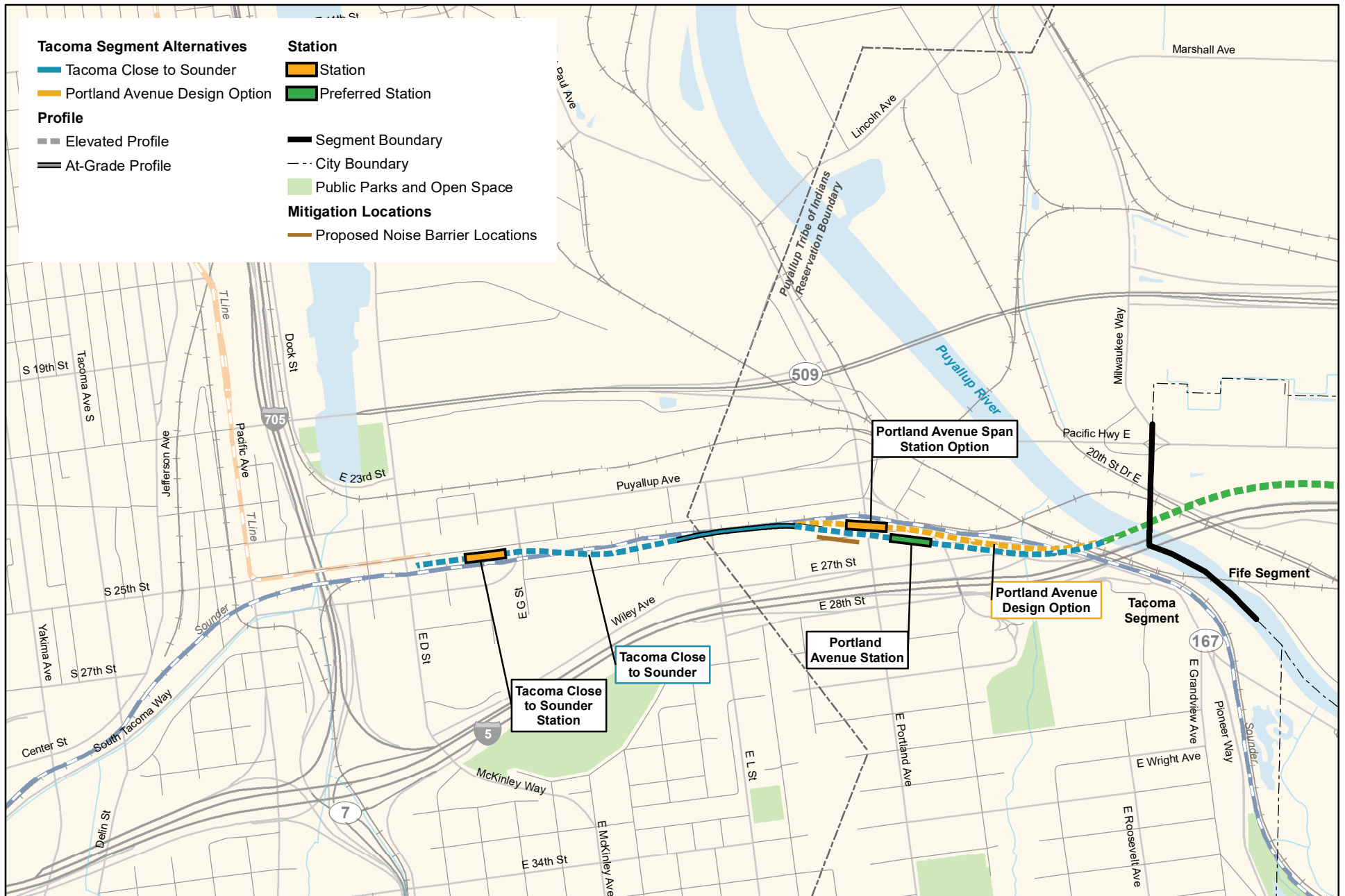


FIGURE 8-16
Potential Noise Mitigation Locations
Preferred Tacoma 25th Street-West and Tacoma 25th Street-East Alternatives
Tacoma Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE 8-17
Potential Noise Barrier Locations
Tacoma Close to Sounder Alternative
Tacoma Segment

Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

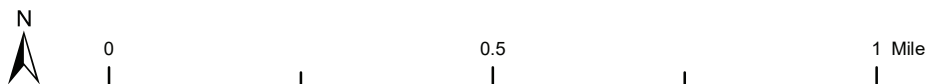


FIGURE 8-18
Potential Noise Barrier Locations
Tacoma 26th Street Alternative
Tacoma Segment

Tacoma Dome Link Extension

8.2 Operational Vibration

A number of different approaches have been used by rail transit systems to reduce ground-borne vibration. The most common vibration mitigation measures used on light rail systems consist of placing a resilient layer between the track and the soil. Some standard approaches for vibration mitigation are:

- **Ballast Mats:** A ballast mat is a pad made of rubber or other material placed underneath the ballast and mounted on top of an asphalt or concrete base. Ballast mats provide a modest reduction in vibration levels at frequencies above 40 Hz.
- **Resilient Fasteners:** Direct-fixation track fasteners are used to attach the rail to the concrete track slab in a tunnel or on an elevated structure. Resilient fasteners include a soft, resilient element to provide greater vibration isolation than standard rail fasteners in the vertical direction.
- **Floating Slabs:** Floating slab consists of a concrete slab supported by elastomer springs on a concrete foundation. The frequency range at which a floating slab is effective depends on the thickness of the slab and the stiffness of the springs. Floating slabs are very effective at reducing vibration levels, particularly at low frequencies. However, they are also very expensive.
- **Low-Impact Special Trackwork:** The impacts of vehicle wheels over rail gaps at special trackwork locations, such as turnouts and switches, can increase vibration levels by up to 10 decibels. If special trackwork cannot be located away from vibration-sensitive receivers, another approach is to use low-impact frogs. Spring-rail and movable point frogs allow the flangeway gap to remain closed in the main traffic direction for revenue service trains and can almost completely reduce the vibration increase caused by special trackwork. Monoblock frogs are milled out of a single block of steel, and their tolerances can be tighter than a traditional frog, which reduces the vibration increase. Flange-bearing frogs include a ramp to support the flange of the wheel to minimize banging. Well-designed mono-block and flange-bearing frogs can reduce the vibration level increase by about half compared with a standard frog.
- **Alternative Approaches:** There are alternative vibration mitigation approaches that may be applied under specific circumstances. Examples include increasing the thickness of the concrete under the track, specifying straighter rails, and building the track on top of pile foundation systems when the track would traverse very soft sections of soil.

Vibration predictions will be refined during final design before mitigation measures are finalized. Mitigation locations have been identified for the Fife Segments. There are no vibration impacts in the Federal Way, South Federal Way, or Tacoma Segments, and no mitigation is recommended. The approximate locations and lengths of the proposed vibration mitigation are shown in Table 8-7 and Figures 8-19 to 8-24 for the Fife Segments.

Table 8-7 Summary of Potential Vibration Mitigation Locations for the Fife Segment

Alternative(s)	Location	Civil Station	Length (feet)	Potential Mitigation
All Alternatives (all station options)	68th Avenue E (segment boundary) to 62nd Avenue E	1953+00 to 1955+00	200	Site Specific Vibration Testing Plus Receiver Mitigation
Fife Pacific Highway	Alexander Avenue E to 34th Avenue E	2069+00 to 2072+00	300	Site Specific Vibration Testing Plus Receiver Mitigation

Note:

(1) Crossover mitigation could also be considered at this location.

The vibration impacts identified for the alternatives in the Fife Segment would require additional testing and modeling to refine the projections and to determine the extent of the impacts and potential mitigation measures available. Additional testing inside affected structures would help to refine the vibration levels by determining the response of the foundations.

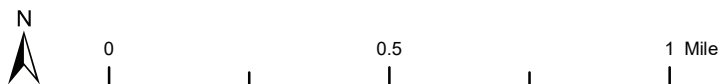


Tacoma Dome Link Extension



Potential Vibration Mitigation Locations
Fife Pacific Highway with 54th Avenue or 54th Span Design Options
Fife Segment

Tacoma Dome Link Extension

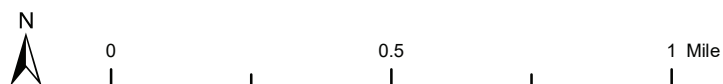




Tacoma Dome Link Extension



Tacoma Dome Link Extension

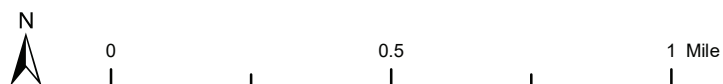




Tacoma Dome Link Extension



Tacoma Dome Link Extension



8.3 Construction

Construction activities would be carried out in compliance with Sound Transit specifications and all applicable local noise regulations. Construction noise is exempt from the WAC noise limits, except at residential land uses during nighttime hours (10 p.m. to 7 a.m.). If construction is performed during nighttime hours, the contractor must meet the WAC noise level requirements or obtain a noise variance from the governing jurisdiction. Specific construction noise and vibration avoidance, minimization, and mitigation measures will be refined during the design phase of the project when more detailed construction information is available. The following measures would be applied as needed to minimize temporary construction noise and vibration impacts:

- Avoiding nighttime construction in residential neighborhoods.
- Locating stationary construction equipment as far as possible from noise-sensitive sites.
- Constructing noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.
- Routing construction-related truck traffic to roadways that would cause the least disturbance to residents.
- Using alternative construction methods to minimize the use of impact and vibratory equipment (e.g., pile drivers and compactors). If use of this equipment is necessary, limit the time of day the activity can occur.

In addition to the measures above, it is common to require a detailed Noise Control Plan from the contractor as a part of construction. A noise control engineer or acoustician would work with the contractor to prepare a Noise Control Plan in conjunction with the contractor's specific equipment and methods of construction. Key elements of a Noise Control Plan include:

- Contractor's specific equipment types.
- Schedule (dates and times of day) and methods of construction.
- Maximum noise limits for each piece of equipment with certification testing.
- Prohibitions on certain types of equipment and processes during the night or daytime hours per local agency coordination and approved variances.
- Identification of specific sensitive sites near construction sites.
- Methods for projecting construction noise levels.
- Implementation of noise and vibration control measures where appropriate.
- Methods for responding to community complaints in compliance with Sound Transit Outreach requirements.

With implementation of the above measures or other similar measures, no additional mitigation would be anticipated.

9 REFERENCES

FHWA (Federal Highway Administration). 2006. FHWA Construction Noise Handbook. Final Report FHWA-HEP-06-015.

FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Federal Transit Administration, John A. Volpe National Transportation System Center and Cross-Spectrum Acoustics Inc.

Sound Transit (Central Puget Sound Regional Transit Authority). 2019. 2019 Reference Noise and Vibration Levels for Link Light Rail Projects.

Sound Transit. 2023. Sound Transit Board Motion M2023-15. Link Light Rail Noise and Vibration Policy. Adopted July 27, 2023.



ATTACHMENT A

Noise Measurement Site Photographs



**Figure A-1 Long-Term Noise Measurement – Site D: 11 The Dunes Court,
Federal Way**



Figure A-2 Long-Term Noise Measurement – Site E: 326 Oakland Hills Boulevard, Federal Way



**Figure A-3 Long-Term Noise Measurement – Site G: Christian Faith Center East,
Federal Way**



**Figure A-4 Long-Term Noise Measurement – Site I: 35810 16th Avenue S,
Federal Way**



Figure A-5 Long-Term Noise Measurement – Site J: Abandoned Weigh Station (MM 141), Federal Way



Figure A-6 Long-Term Noise Measurement – Site K: 1413 69th Avenue E, Fife



**Figure A-7 Long-Term Noise Measurement – Site L: Restaurant Depot,
6130 12th Street E, Fife**



Figure A-8 Long-Term Noise Measurement – Site M: Chateau Rainier Apartments North, 4600 16th Street E, Fife



Figure A-9 Long-Term Noise Measurement – Site N: Chateau Rainier Apartments South, 4600 16th Street E, Fife



Figure A-10 Long-Term Noise Measurement – Site O: 3812 Pacific Highway E, Fife



**Figure A-11 Long-Term Noise Measurement – Site P: Poulsbo RV,
2950 Pacific Highway E, Fife**



**Figure A-12 Short-Term Noise Measurement – Site ST-A: Puyallup Tribe
Integrative Medicine, Fife**



Figure A-13 Long-Term Noise Measurement – Site Q: 1121 26th Street E, Tacoma



Figure A-14 Long-Term Noise Measurement – Site R: 2611 East E Street, Tacoma



Figure A-15 Long-Term Noise Measurement – Site S: 35919 Pacific Highway S, Federal Way



Figure A-16 Long-Term Noise Measurement – Site T: 7808 Pacific Highway E, Milton



ATTACHMENT B

Noise Measurement Data

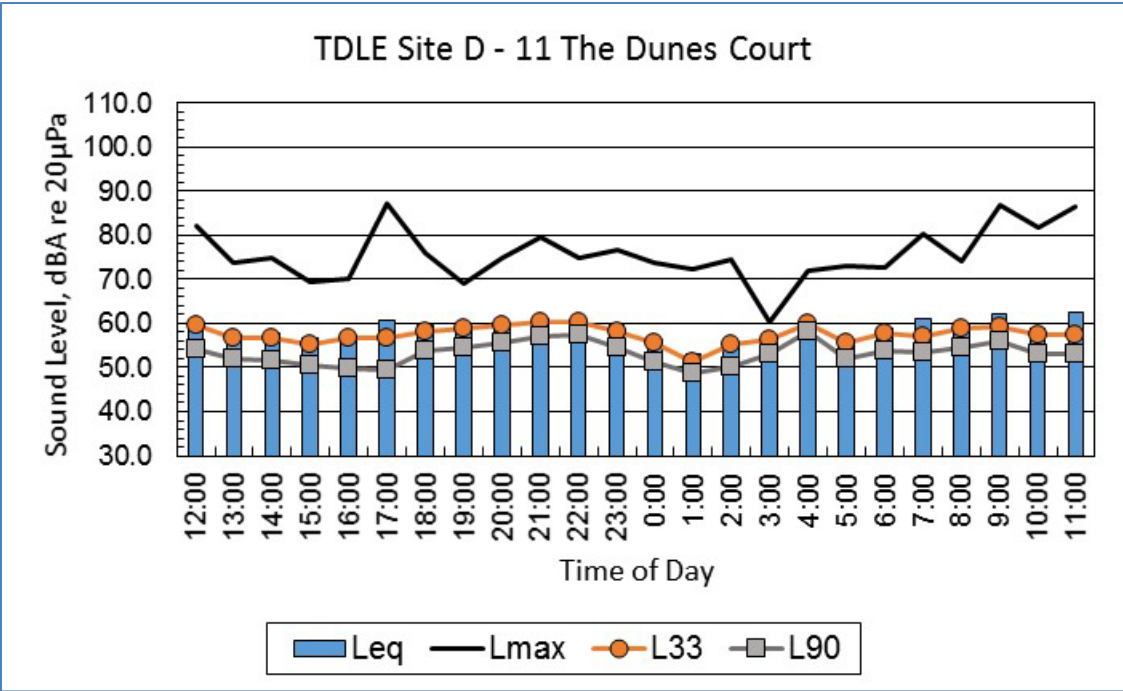


Figure B-1 Long-Term Noise Measurement Data – Site D: 11 The Dunes Court, Federal Way

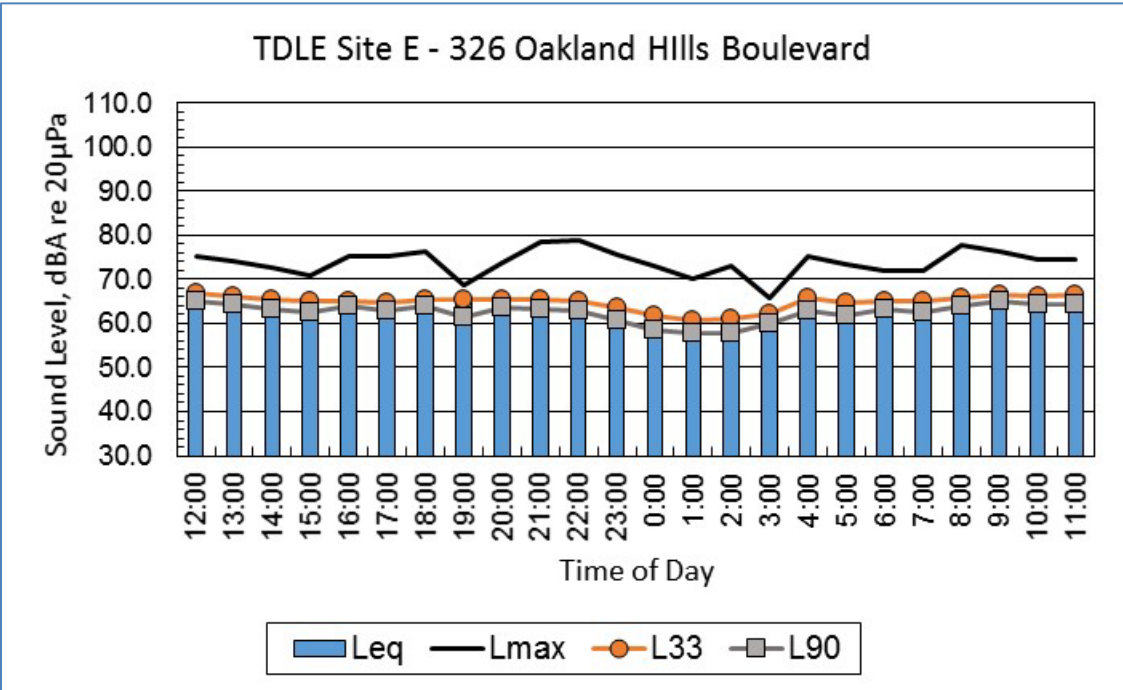


Figure B-2 Long-Term Noise Measurement Data – Site E: 326 Oakland Hills Boulevard, Federal Way

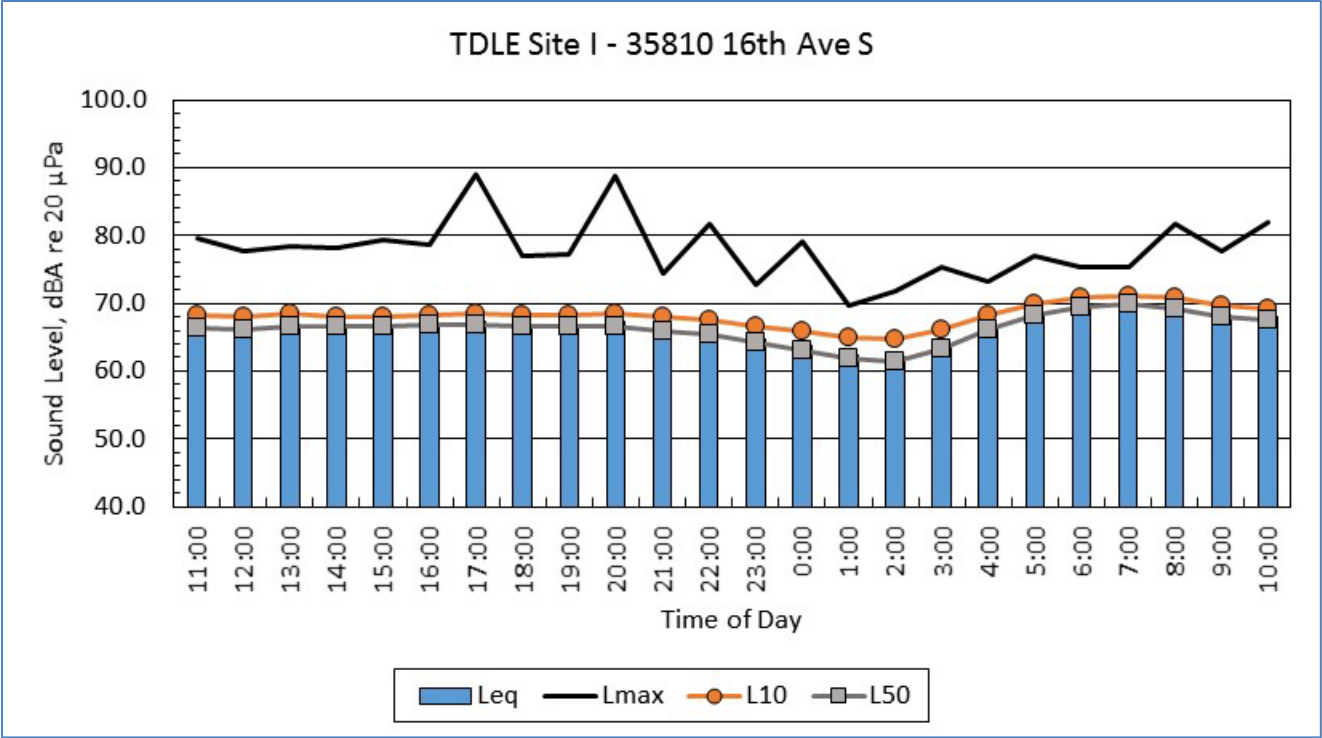


Figure B-3 Long-Term Noise Measurement Data – Site I: 35810 16th Avenue S, Federal Way

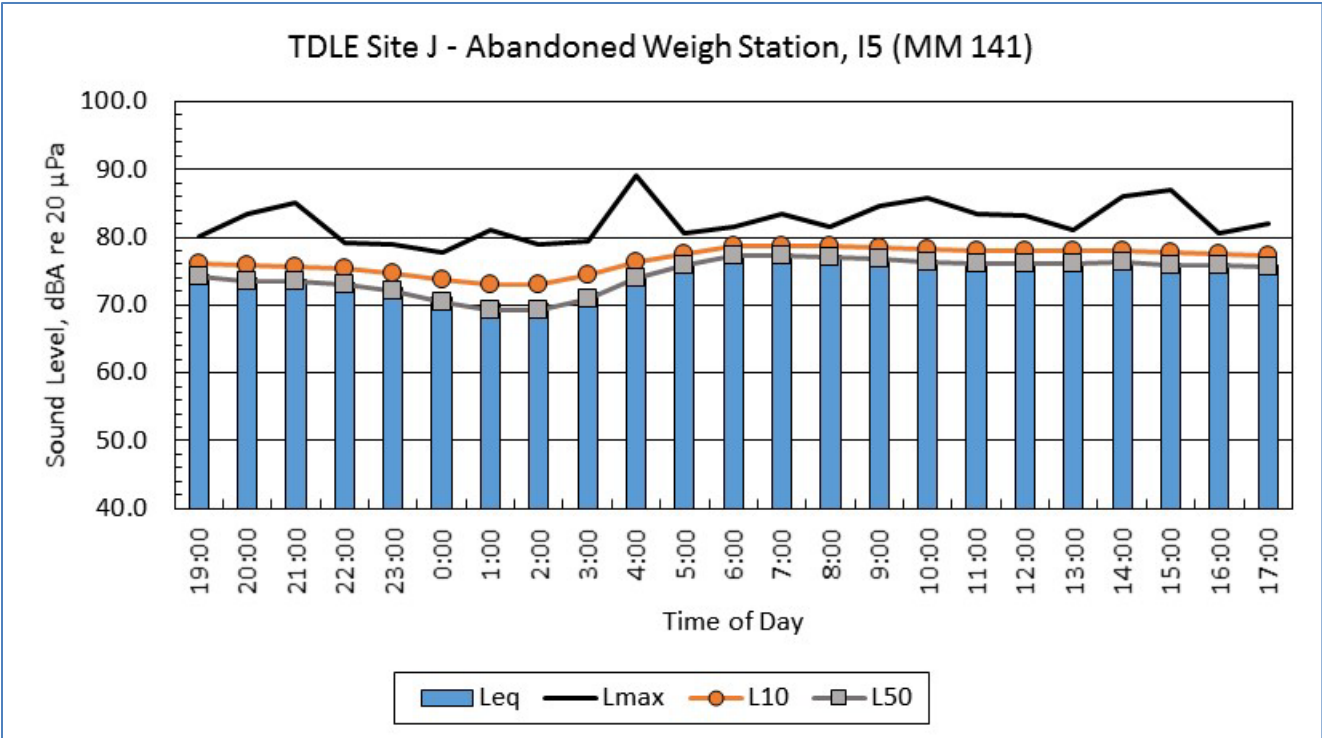


Figure B-4 Long-Term Noise Measurement Data – Site J: Abandoned Weigh Station (MM 141), Federal Way

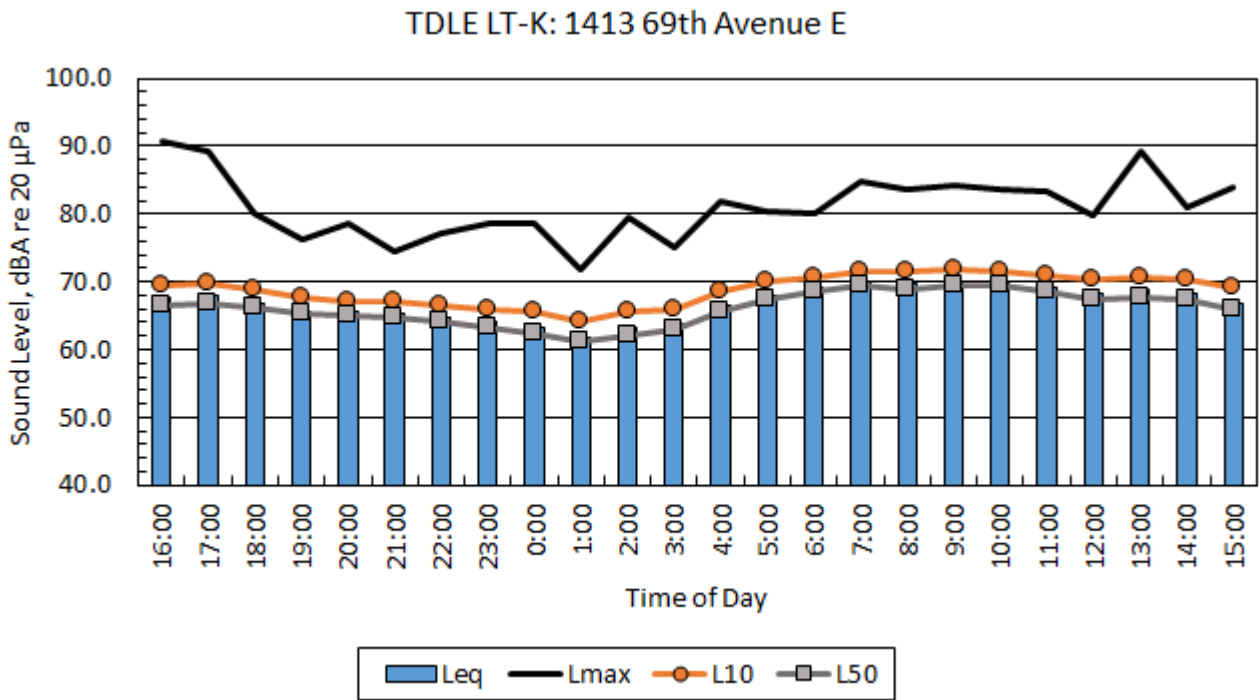


Figure B-5 Long-Term Noise Measurement Data – Site K: 1413 69th Avenue E, Fife

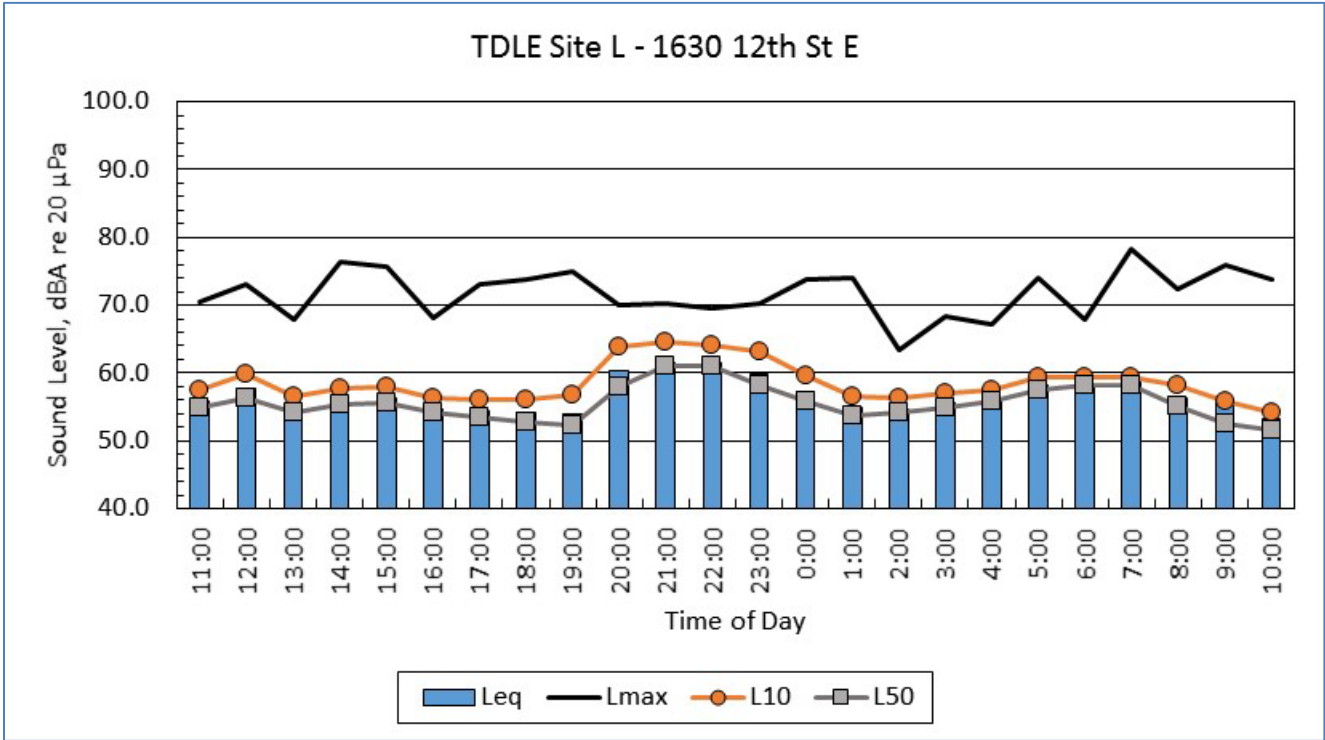


Figure B-6 Long-Term Noise Measurement Data – Site L: Restaurant Depot, 6130 12th Street E, Fife

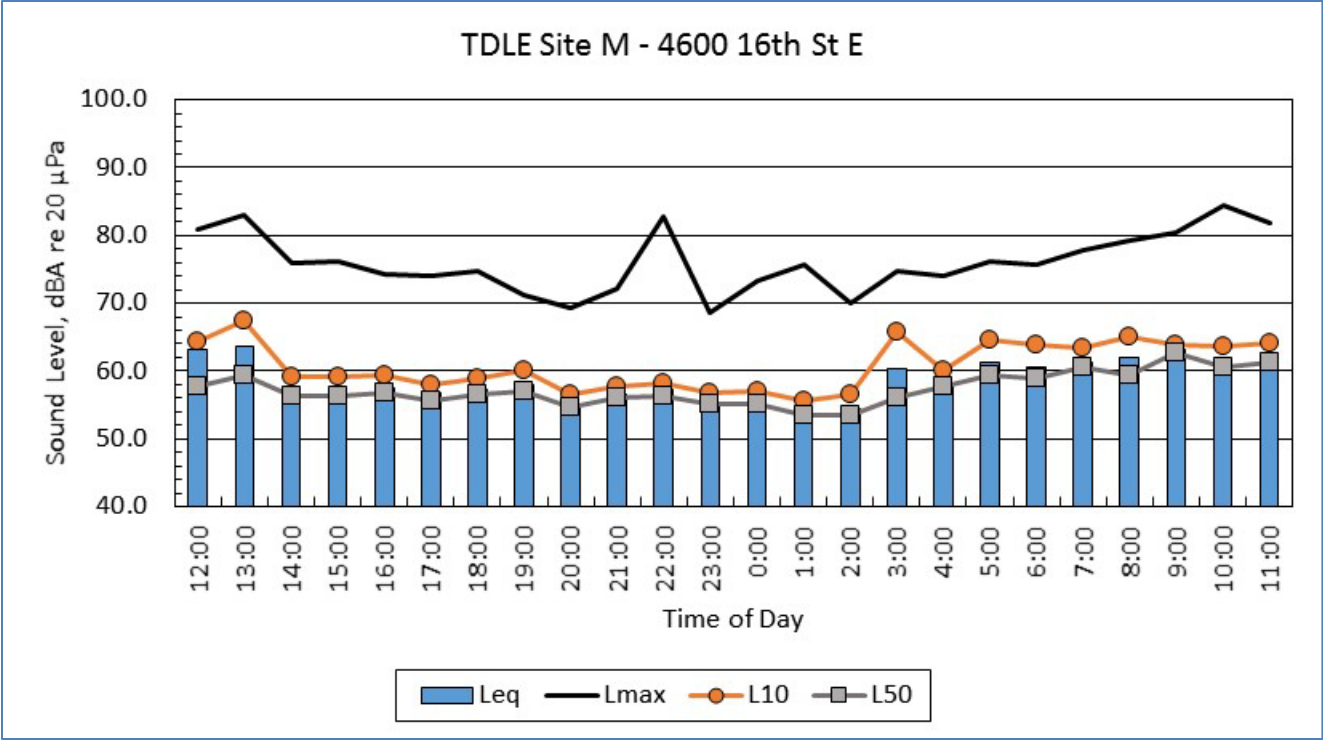


Figure B-7 Long-Term Noise Measurement Data – Site M: Chateau Rainier Apartments North, 4600 16th Street E, Fife

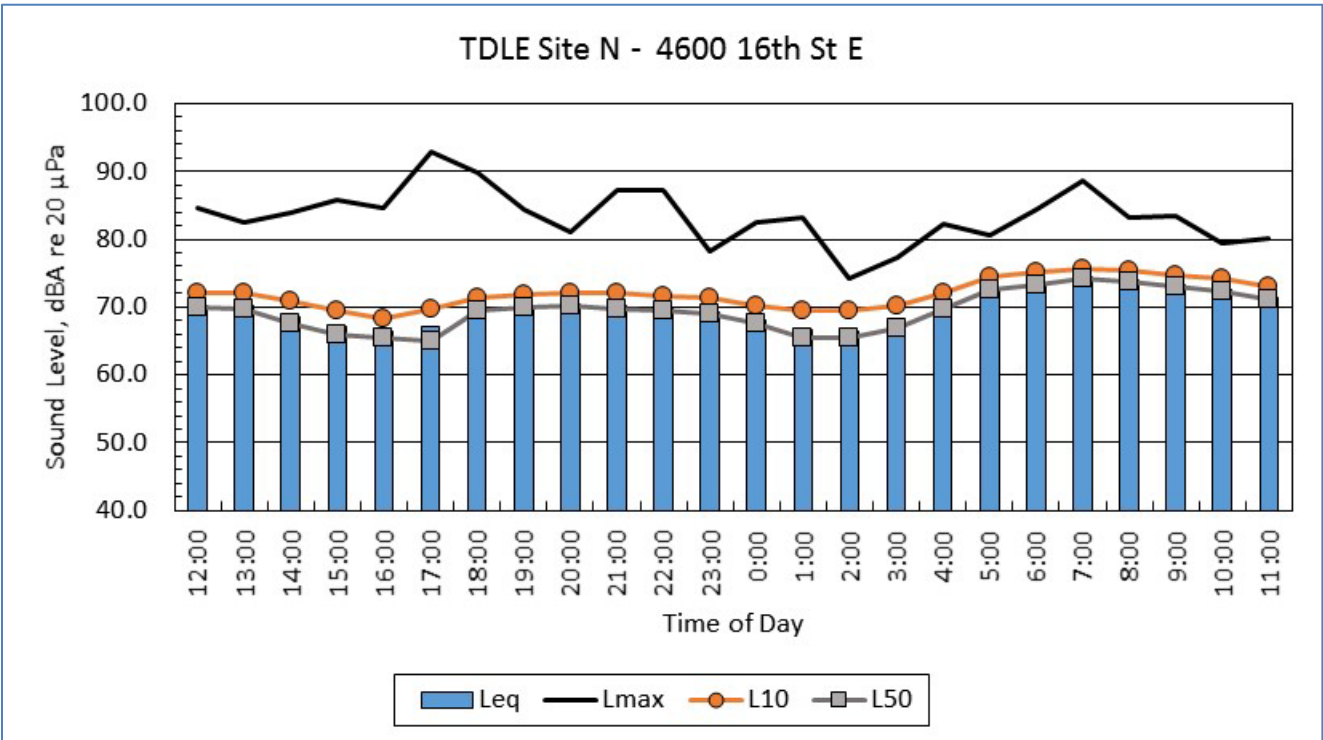
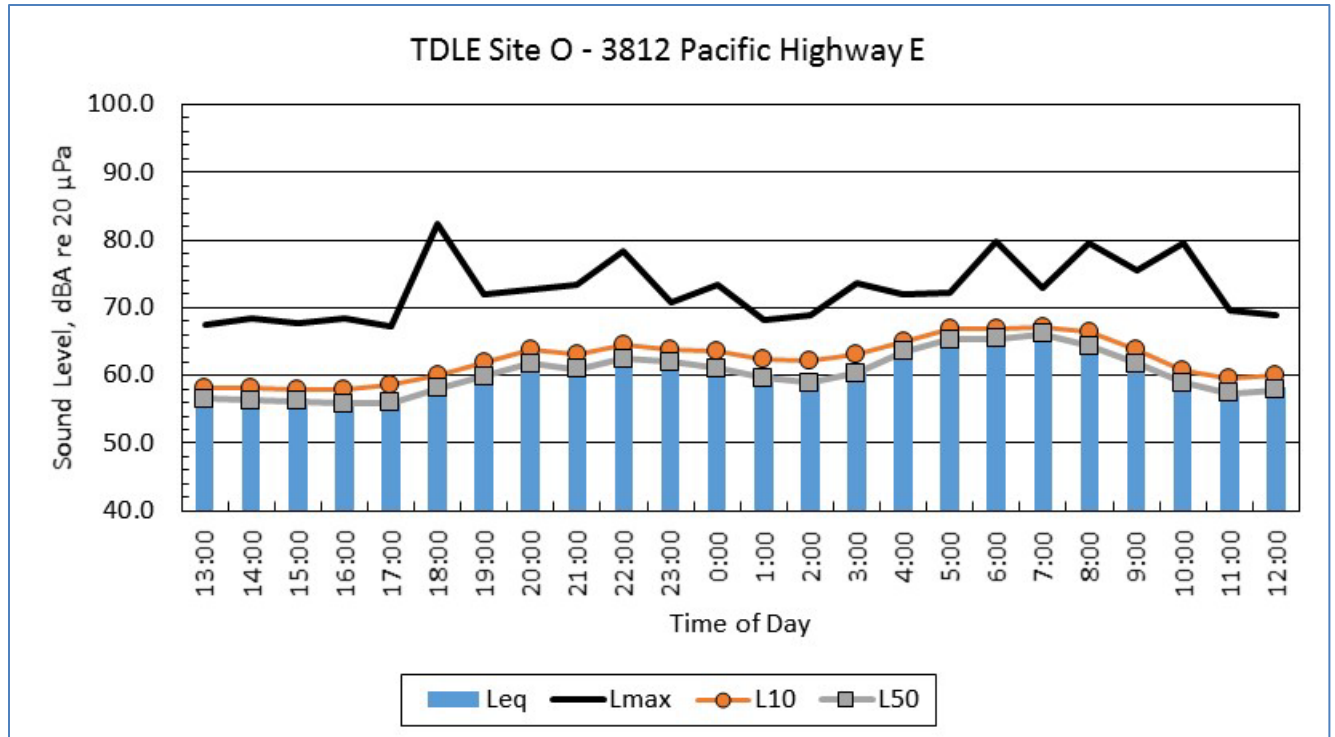
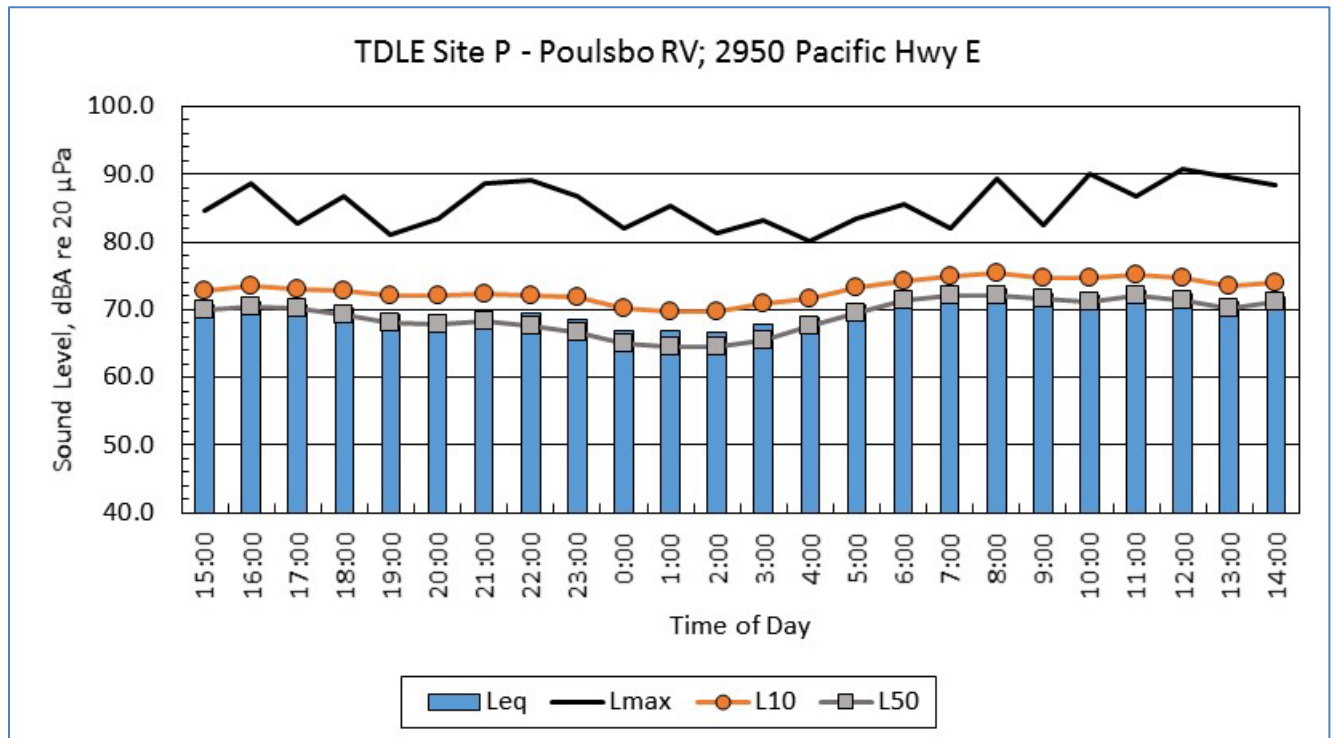


Figure B-8 Long-Term Noise Measurement Data – Site N: Chateau Rainier Apartments South, 4600 16th Street E, Fife



**Figure B-9 Long-Term Noise Measurement Data – Site O:
3812 Pacific Highway E, Fife**



**Figure B-10 Long-Term Noise Measurement Data – Site P: Poulsbo RV,
2950 Pacific Highway E, Fife**

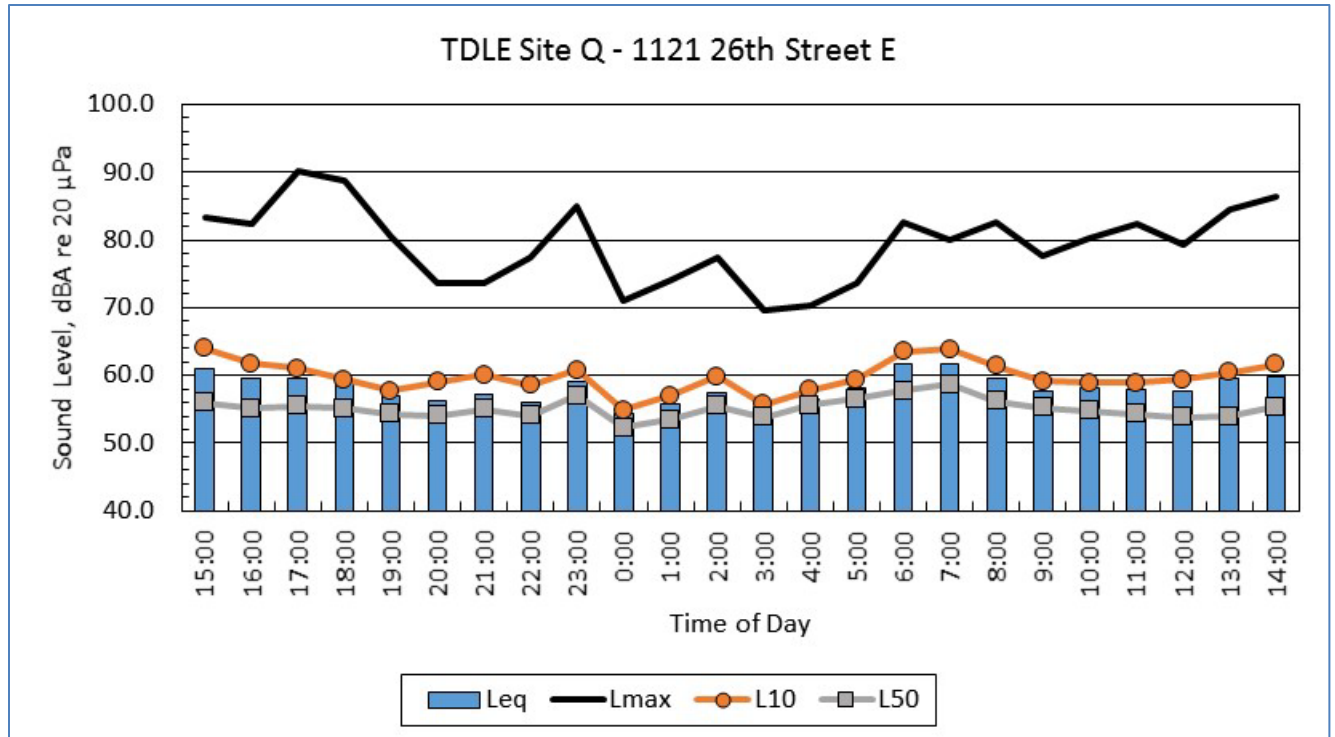


Figure B-11 Long-Term Noise Measurement Data – Site Q: 1121 26th Street E, Tacoma

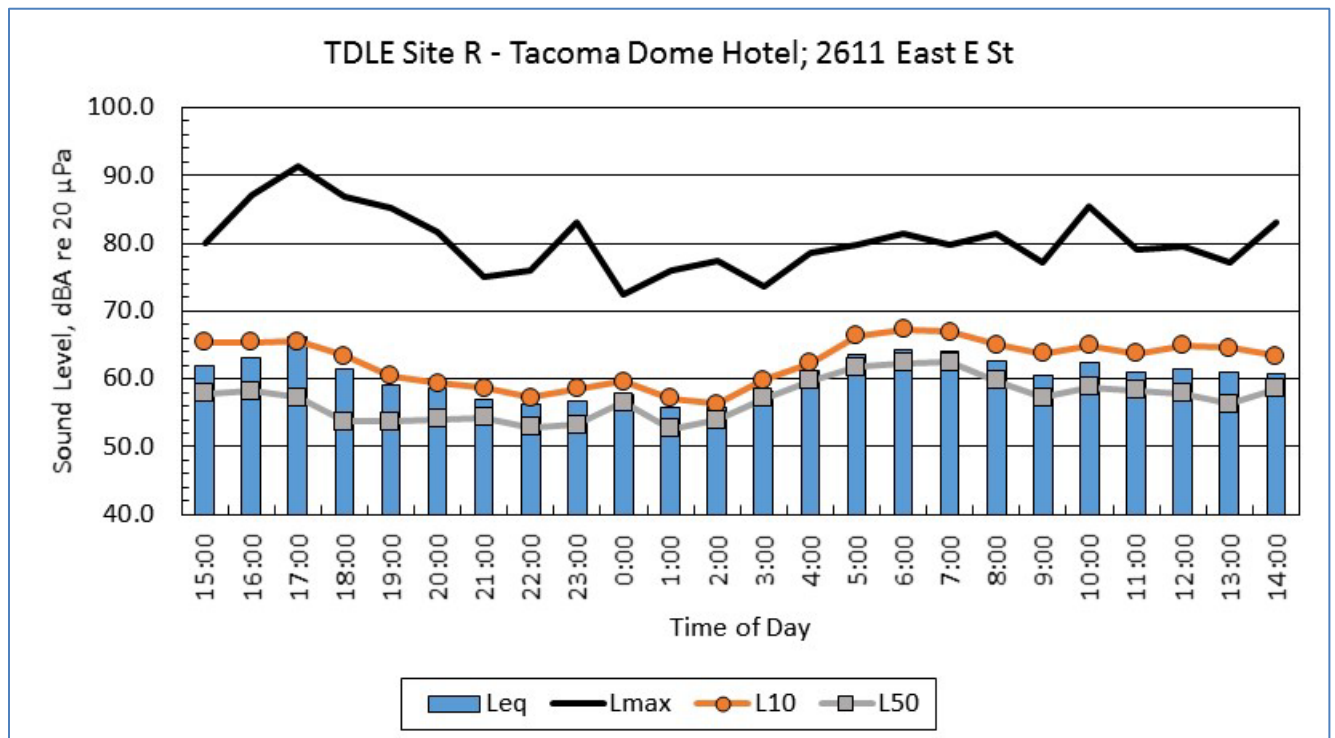


Figure B-12 Long-Term Noise Measurement Data – Site R: 2611 East E Street, Tacoma

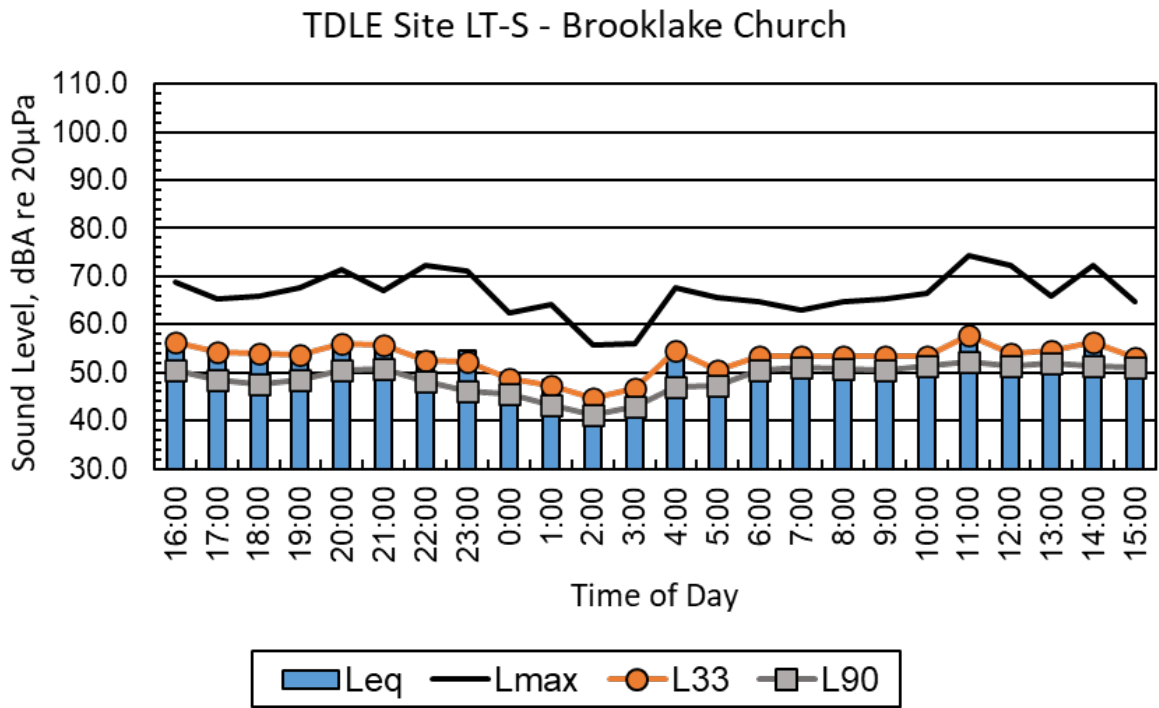


Figure B-13 Long-Term Noise Measurement Data – Site S: Brooklake Church, Federal Way

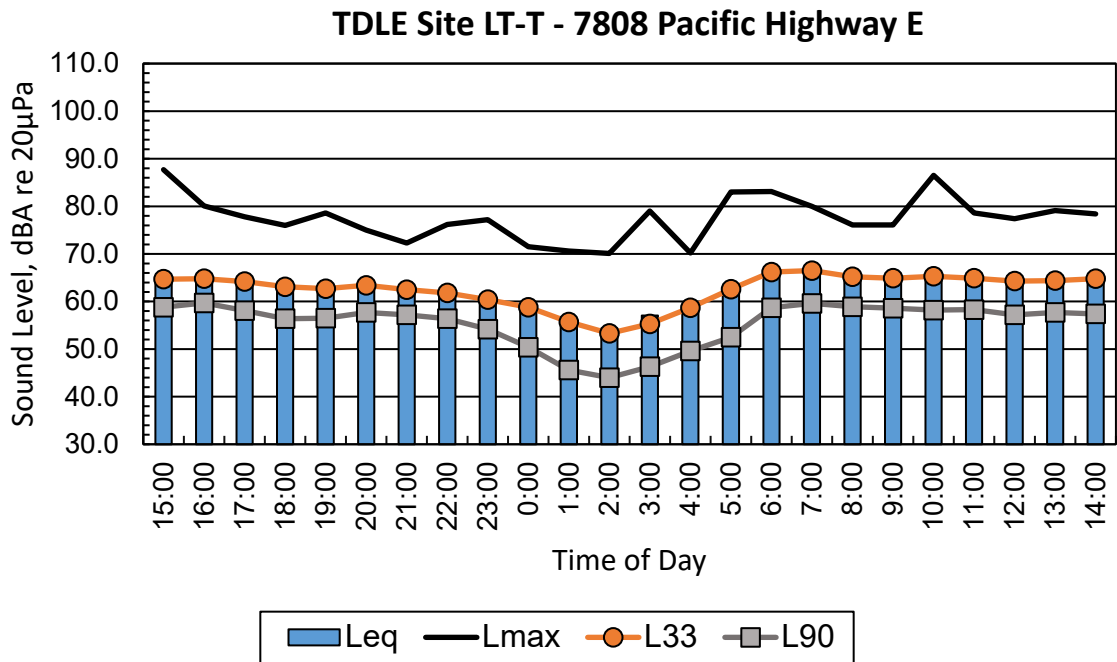


Figure B-14 Long-Term Noise Measurement Data – Site T: 7808 Pacific Highway E, Milton



ATTACHMENT C

Vibration Measurement Site Photographs



Figure C-1. Vibration Propagation Measurement Site VP-A – Belmor Mobile Home Park, Olympic Way, and Burning Tree Boulevard, Federal Way



Figure C-2. Vibration Propagation Measurement Site VP-B – Cedar Grove Park, Federal Way



Figure C-3. Vibration Propagation Measurement Site VP-C – 344th Street and 18th Place S, Federal Way



Figure C-4. Vibration Propagation Measurement Site VP-D – 16th Avenue S and S 359th Street, Federal Way



Figure C-5. Vibration Propagation Measurement Site VP-E – 5th Street Court E and 70th Avenue E, Milton



Figure C-6. Vibration Propagation Measurement Site VP-F – 62nd Avenue E and 12th Street E, Fife



Figure C-7. Vibration Propagation Measurement Site VP-G – 15th Street E and 47th Avenue E, Fife



Figure C-8. Vibration Propagation Measurement Site VP-H – Puyallup Tribe Integrative Medicine, Fife



Figure C-9. Vibration Propagation Measurement Site VP-I – East N Street and E 26th Street, Tacoma



Figure C-10. Vibration Propagation Measurement Site VP-J – 1st Avenue SW and SW 374th Street, Federal Way



ATTACHMENT D

Vibration Measurement Data

Table D-1. Site VP-A Belmor Mobile Home Park 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	24.0	30.8	28.2	32.2	42.6	54.2	59.2	71.7	83.0	100.5	101.8	110.5	126.9	151.2	-91.1	-164.6
B	-5.9	-9.1	-7.0	-6.3	-11.3	-16.1	-17.2	-23.9	-31.1	-41.1	-42.8	-49.4	-60.7	-76.3	195.9	282.0
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-76.4	-101.6

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

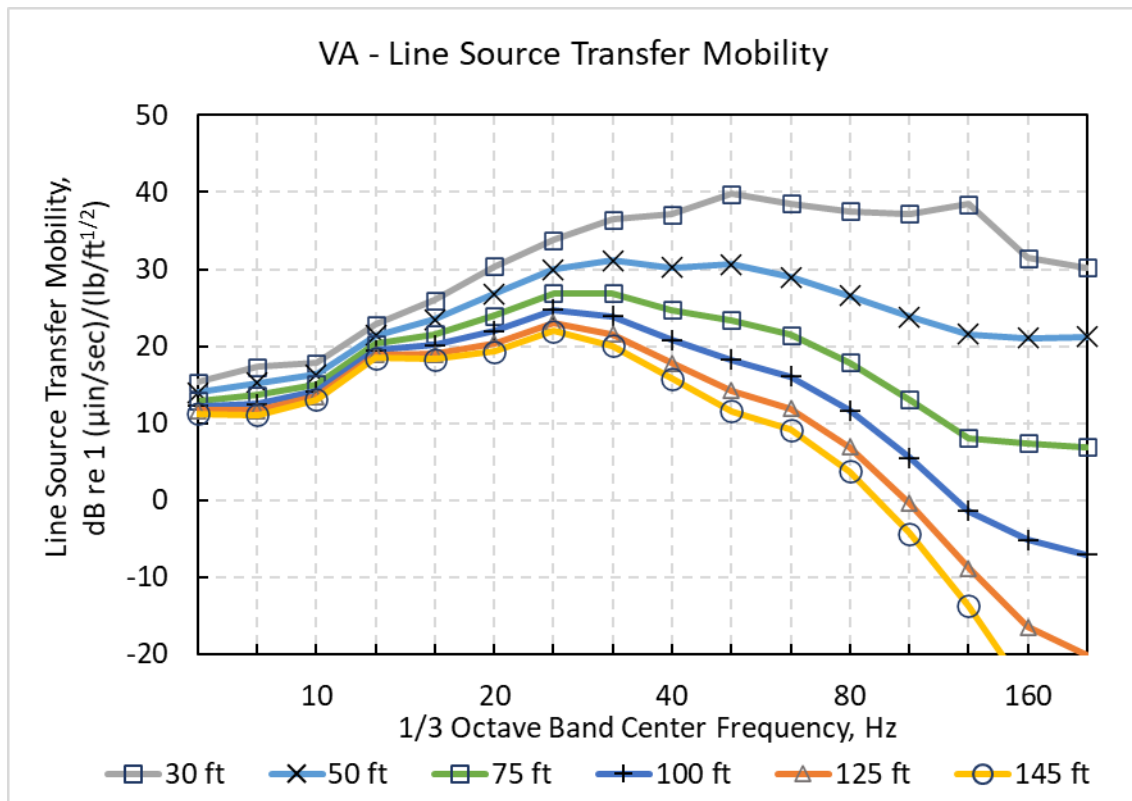
**Figure D-1. Line Source Transfer Mobility Site VP-A Belmor Mobile Home Park**

Table D-2. Site VP-B Cedar Grove Park 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	24.7	17.2	9.2	14.7	21.7	35.0	45.7	61.4	82.4	95.1	90.0	69.2	55.2	54.7	55.7	46.4
B	-4.5	-2.8	-0.5	-3.8	-8.6	-13.3	-13.1	-17.0	-25.0	-29.3	-29.1	-23.1	-18.6	-21.4	-24.9	-22.7
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

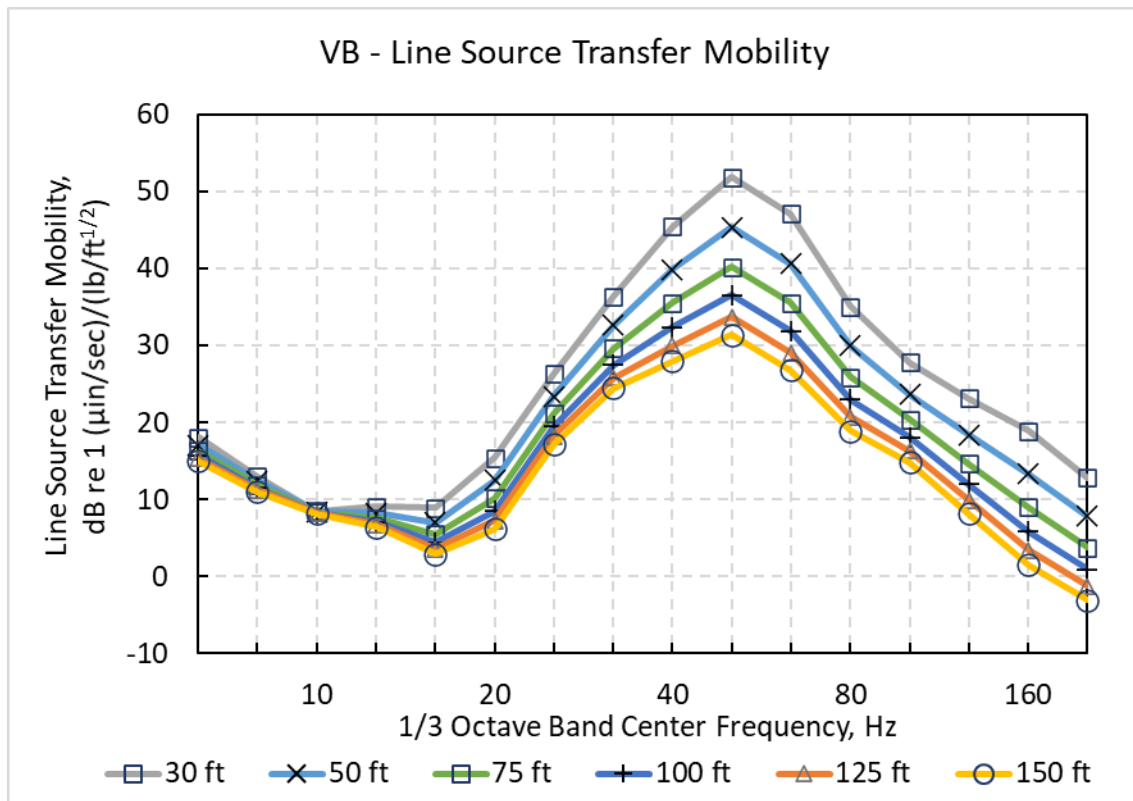
**Figure D-2. Line Source Transfer Mobility Site VP-B Cedar Grove Park**

Table D-3. Site VP-C 344th Street and 18th Place S 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	25.7	22.9	17.9	13.8	15.6	32.0	46.1	68.8	75.9	75.8	63.2	64.4	65.4	78.9	81.2	98.5
B	-0.5	-0.7	-0.5	-0.2	-3.2	-11.1	-15.0	-23.5	-26.5	-26.8	-21.1	-22.0	-25.0	-35.0	-37.8	-49.3
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

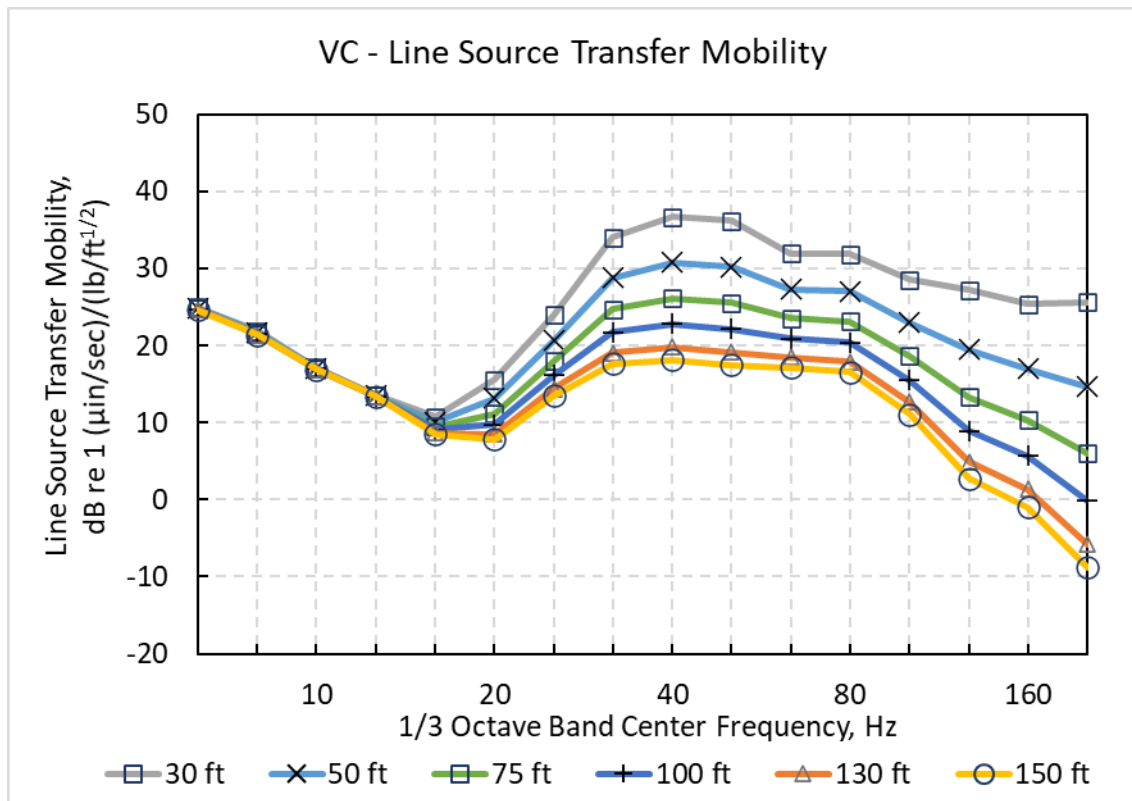


Figure D-3. Line Source Transfer Mobility Site VP-C S 344th Street and 18th Place S

Table D-4. Site VP-D 16th Avenue and S 359th Street 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	27.4	25.6	19.8	21.6	34.3	42.3	67.9	79.5	92.8	99.0	97.6	101.9	57.8	49.7	48.0	34.6
B	-4.9	-6.1	-3.2	-3.8	-9.3	-9.6	-19.5	-24.5	-33.6	-39.1	-40.0	-44.4	-25.6	-24.6	-25.5	-19.6
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

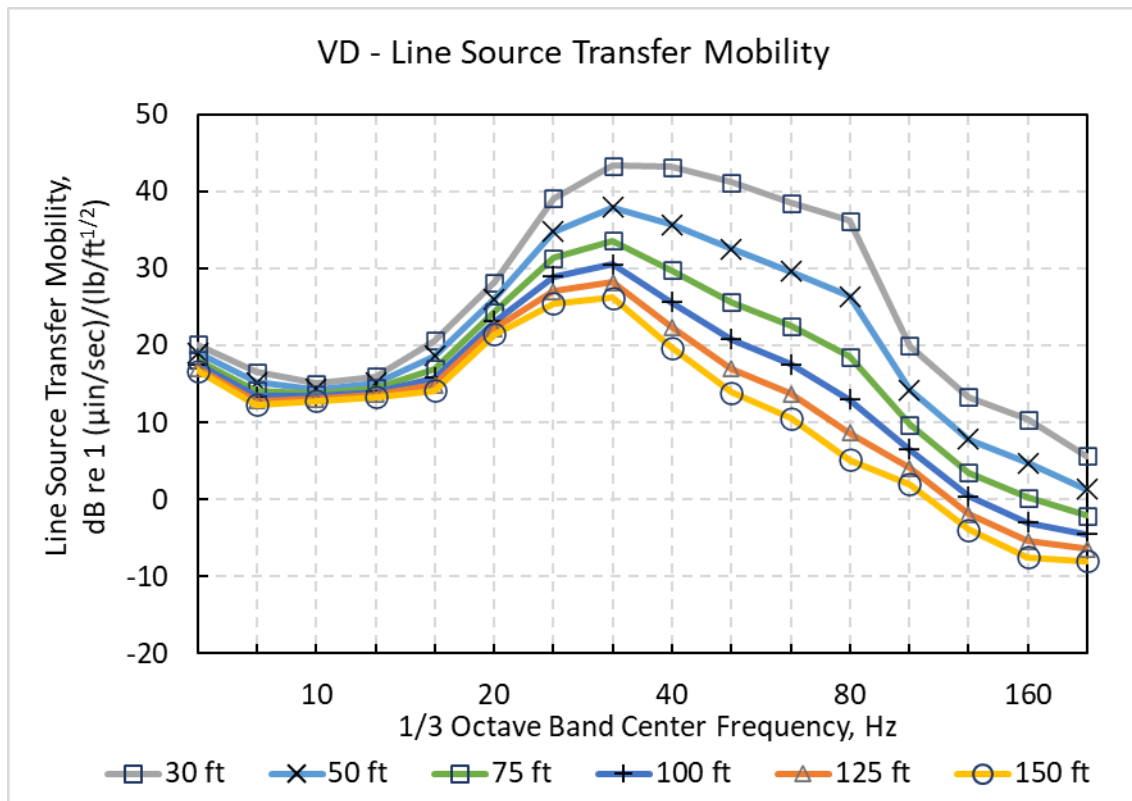
**Figure D-4. Line Source Transfer Mobility Site VP-D 16th Avenue S and S 359th Street**

Table D-5. Site VP-E 5th Street Court E and 70th Avenue E 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	35.8	33.7	42.1	54.2	57.6	-45.5	-34.3	-208.3	208.6	108.1	2.7	-49.8	-236.0	-277.1	-296.7	-425.7
B	-13.3	-12.5	-15.9	-20.5	-20.5	98.1	96.0	300.3	307.9	198.1	70.1	122.2	310.1	363.0	386.7	524.8
C	0.0	0.0	0.0	0.0	0.0	-31.7	-32.7	-90.8	-96.3	-68.4	-33.4	-47.0	-95.3	-112.8	-120.8	-158.1

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

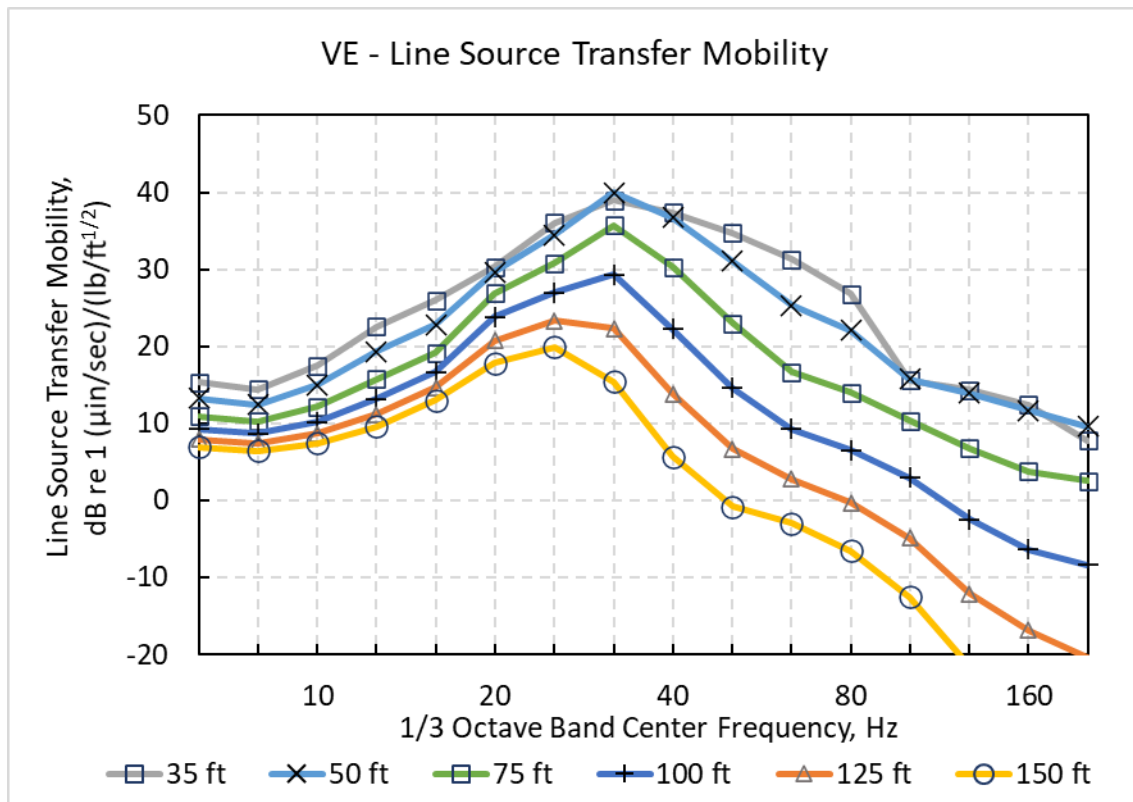


Figure D-5. Line Source Transfer Mobility Site VP-E 5th Street Court E and 70th Avenue E

Table D-6. Site VP-F 62nd Avenue E and 12th Street E 1/3-Octave Band Line Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	40.7	58.0	47.4	54.1	56.2	56.8	64.4	48.8	50.7	57.4	68.9	64.5	78.8	58.0	49.3	41.9
B	-10.2	-16.9	-8.9	-9.4	-8.9	-8.5	-13.7	-9.3	-12.3	-18.2	-27.8	-28.7	-40.1	-32.5	-29.6	-27.9
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

Table D-7. Site VP-F 62nd Avenue E and 12th Street E 1/3-Octave Band Point Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	17.7	71.3	71.9	43.3	43.9	56.4	64.1	41.9	25.1	47.3	68.1	74.3	81.4	49.9	54.5	58.0
B	-11.0	-36.0	-35.5	-14.5	-13.8	-20.8	-26.0	-16.6	-10.0	-24.2	-37.8	-45.2	-53.3	-38.9	-44.8	-49.2
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$PSTM = A + B * \log(dist) + C * \log(dist)^2$$

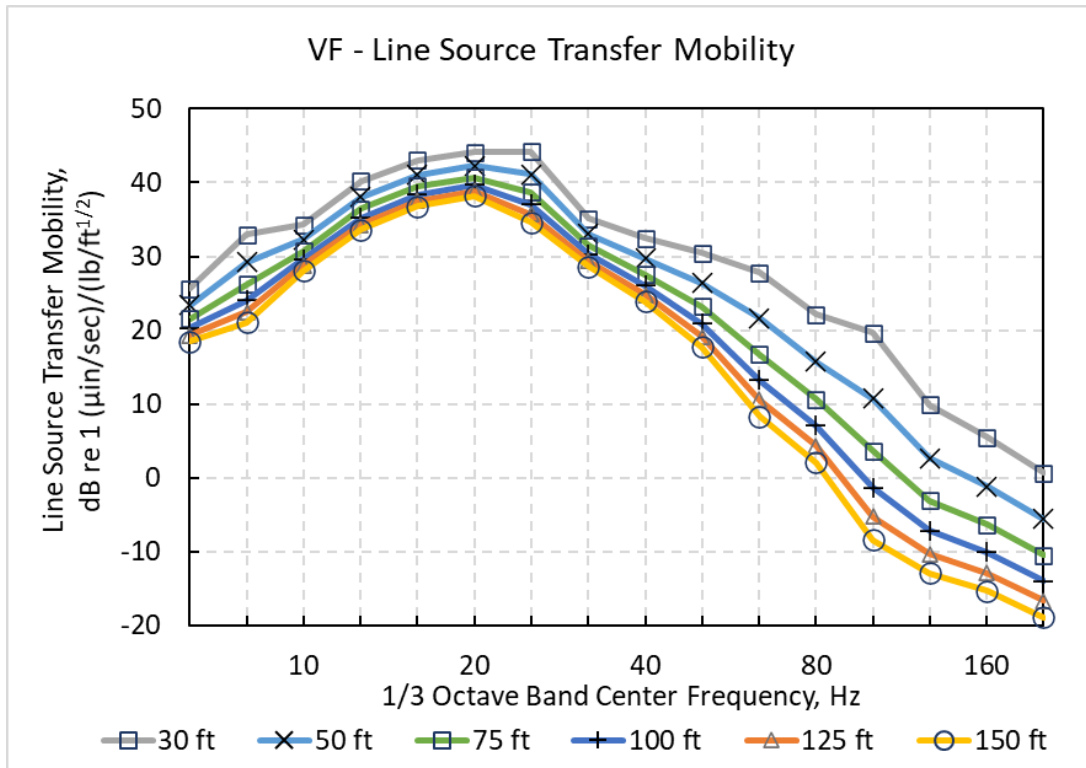


Figure D-6. Line Source Transfer Mobility Site VP-F 62nd Avenue E and 12th Street E

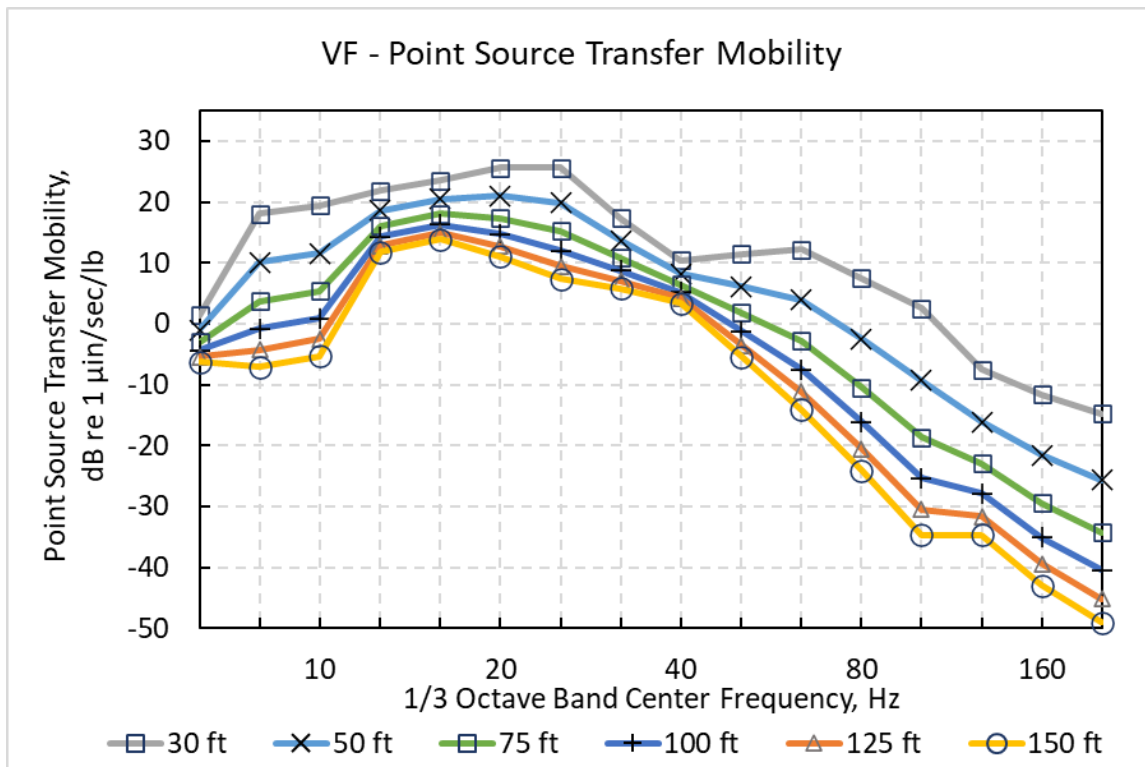


Figure D-7. Point Source Transfer Mobility Site VP-F 62nd Avenue E and 12th Street E

Table D-8. Site VP-G 15th Street E and 47th Avenue E 1/3-Octave Band Line Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	31.6	38.6	47.7	-8.3	-5.7	-93.2	-48.6	8.5	-71.2	-7.5	-88.3	-24.5	-117.9	39.1	50.1	34.0
B	-1.5	-4.4	-7.2	69.0	72.7	173.9	123.2	49.2	136.1	64.8	150.1	73.7	172.3	-10.1	-30.6	-20.8
C	0.0	0.0	0.0	-22.9	-25.8	-54.9	-41.8	-20.4	-45.2	-27.0	-50.6	-30.1	-57.4	-6.9	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

Table D-9. Site VP-G 15th Street E and 47th Avenue E 1/3-Octave Band Point Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	26.5	39.1	34.8	58.6	59.4	54.7	61.6	62.6	66.2	70.0	87.2	78.5	63.2	68.3	63.3	28.6
B	-9.8	-17.0	-12.9	-25.3	-26.2	-23.8	-30.0	-30.4	-33.6	-38.5	-51.5	-49.3	-45.6	-51.8	-51.1	-32.2
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$PSTM = A + B * \log(dist) + C * \log(dist)^2$$

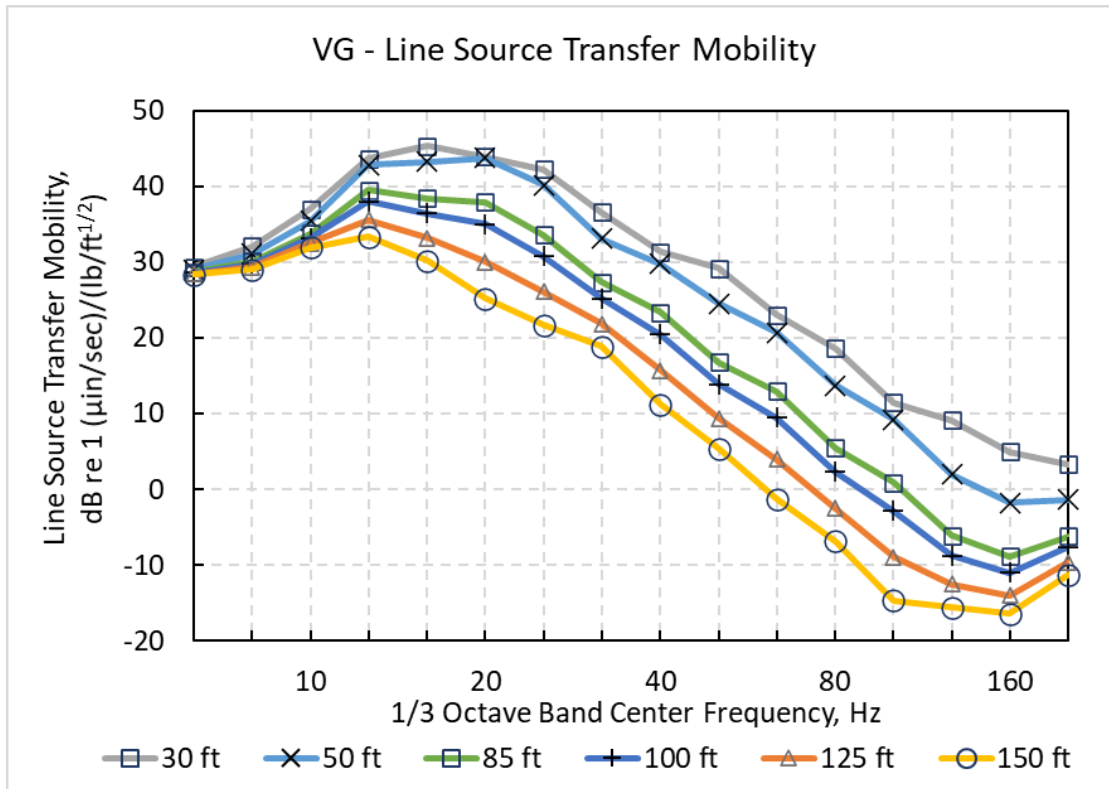


Figure D-8. Line Source Transfer Mobility Site VP-G 15th Street E and 47th Avenue E

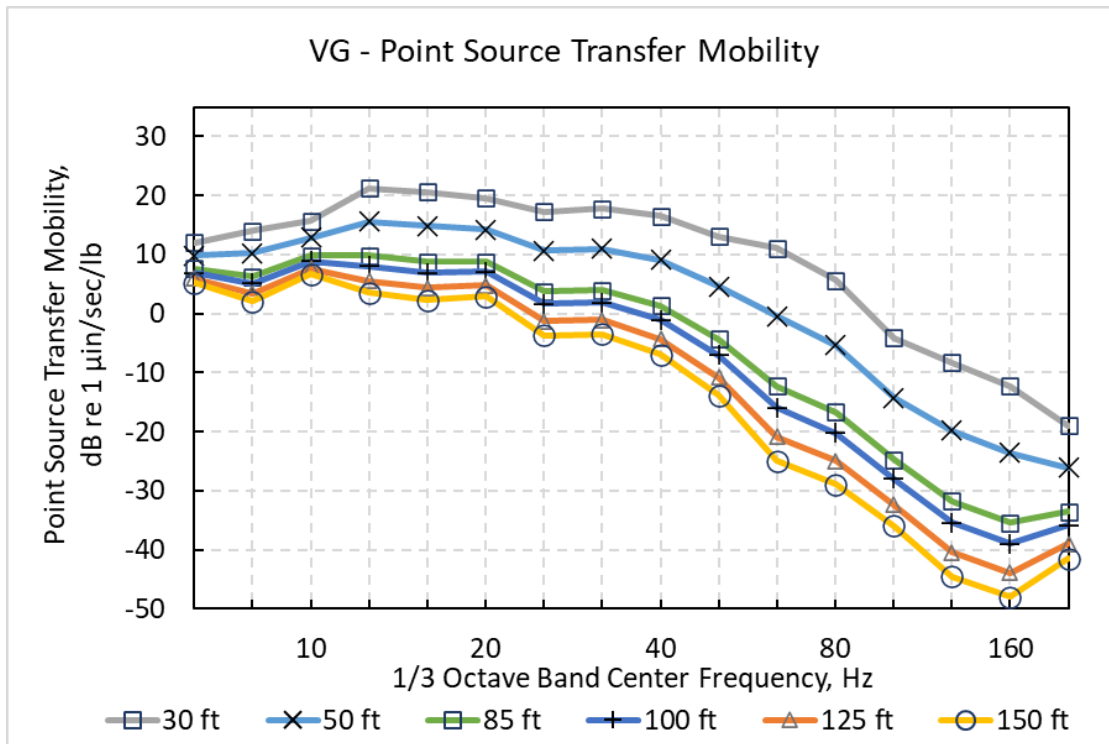


Figure D-9. Point Source Transfer Mobility Site VP-G 15th Street E and 47th Avenue E

Table D-10. Site VP-H Puyallup Tribe Integrative Medicine 1/3-Octave Band Line Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	37.2	50.9	53.6	64.6	74.1	91.1	92.9	93.6	121.7	117.4	79.0	63.6	44.8	41.3	10.5	7.4
B	-4.7	-9.7	-9.6	-14.0	-18.3	-27.5	-29.4	-32.4	-49.0	-50.8	-35.7	-30.8	-24.6	-26.3	-13.4	-12.0
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

Table D-11. Site VP-H Puyallup Tribe Integrative Medicine 1/3-Octave Band Point Source Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	44.0	68.0	47.1	49.6	60.0	78.1	85.1	77.2	98.7	95.0	54.5	56.2	60.1	47.5	8.9	-11.2
B	-22.7	-32.5	-17.9	-17.0	-21.7	-31.7	-36.8	-36.0	-48.9	-51.5	-34.9	-39.3	-45.8	-42.1	-25.5	-15.5
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$PSTM = A + B * \log(dist) + C * \log(dist)^2$$

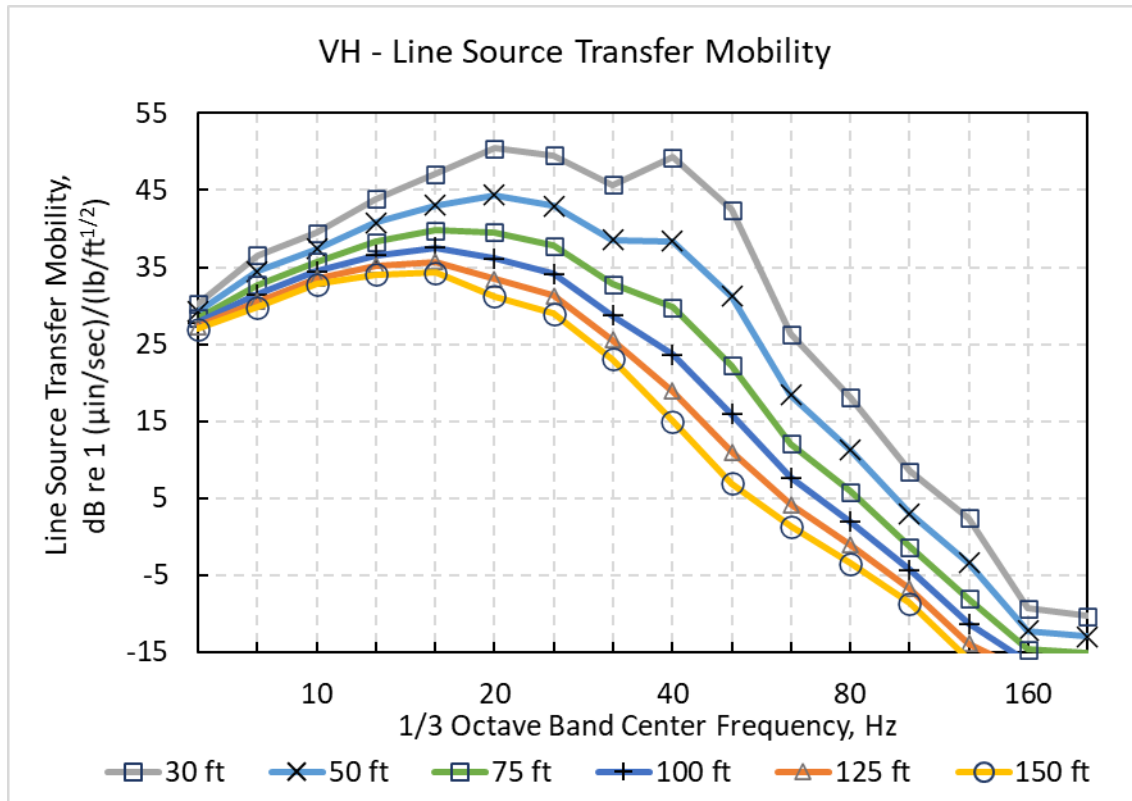


Figure D-10. Line Source Transfer Mobility Site VP-H Puyallup Tribe Integrative Medicine

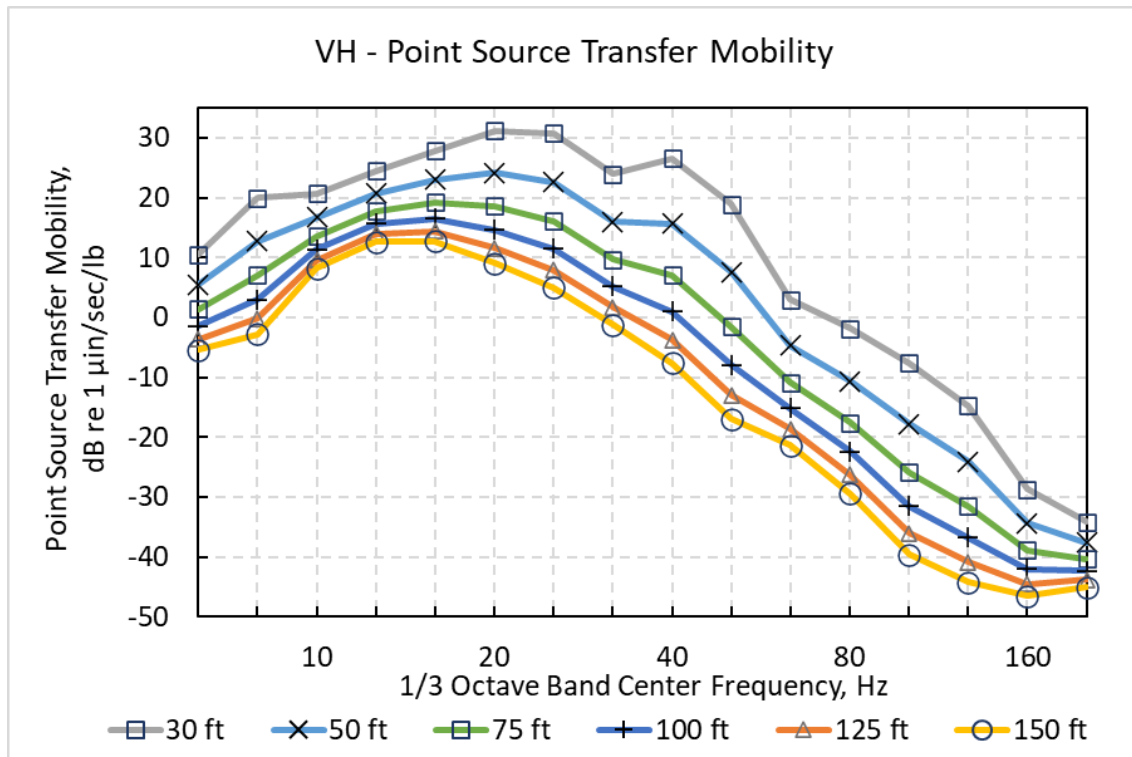


Figure D-11. Point Source Transfer Mobility Site VP-H Puyallup Tribe Integrative Medicine

Table D-12. Site VP-I East N Street and E 26th Street 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	18.0	16.7	13.5	37.3	52.2	56.6	80.3	93.3	86.3	98.5	89.6	84.7	79.6	69.1	50.3	30.8
B	-3.0	-3.4	-1.0	-11.7	-18.8	-19.8	-29.1	-36.7	-34.5	-45.3	-43.7	-42.8	-41.3	-38.3	-31.8	-22.0
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

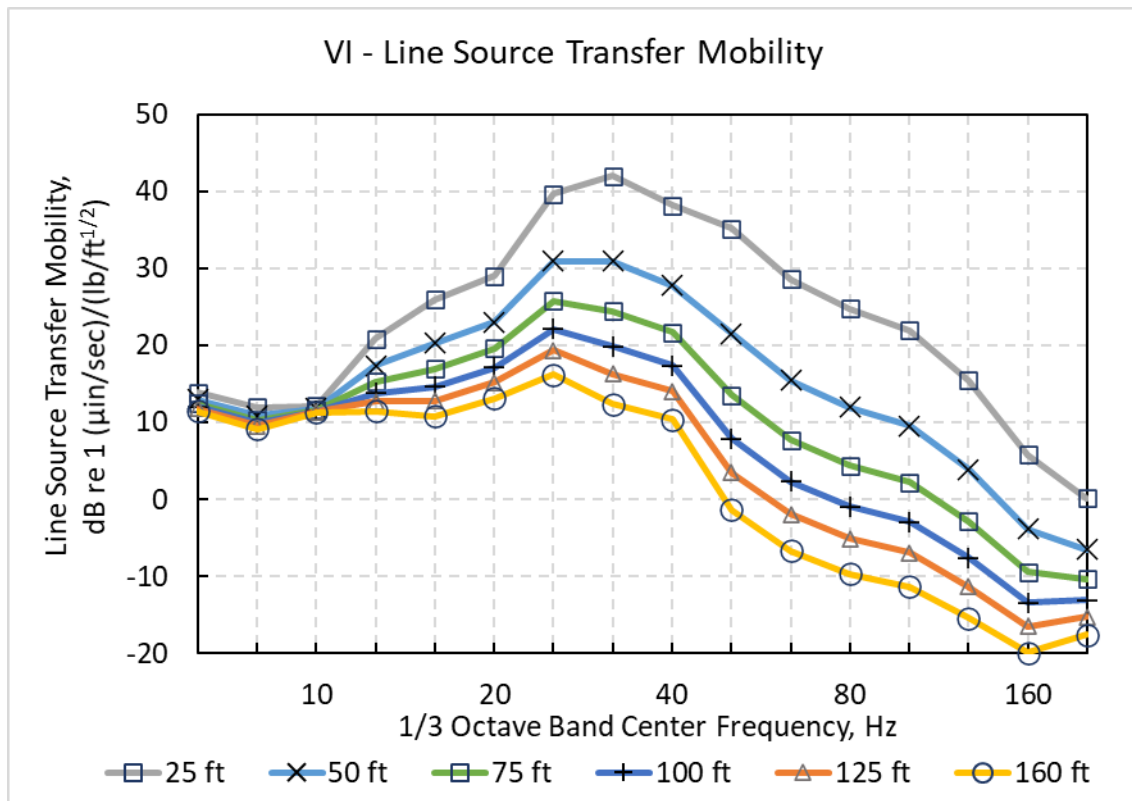
**Figure D-12. Line Source Transfer Mobility Site VP-I East N Street and E 26th Street**

Table D-13. Site VP-J 1st Avenue SW and SW 374th Street 1/3-Octave Band Transfer Mobility Coefficients

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	36.9	50.7	62.3	61.2	47.7	60.1	81.3	98.9	102.3	105.2	103.2	101.2	93.7	105.3	123.6	138.9
B	-15.4	-20.5	-23.7	-20.7	-11.8	-16.2	-27.1	-36.6	-38.2	-40.2	-42.6	-46.4	-46.1	-54.8	-66.2	-75.9
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

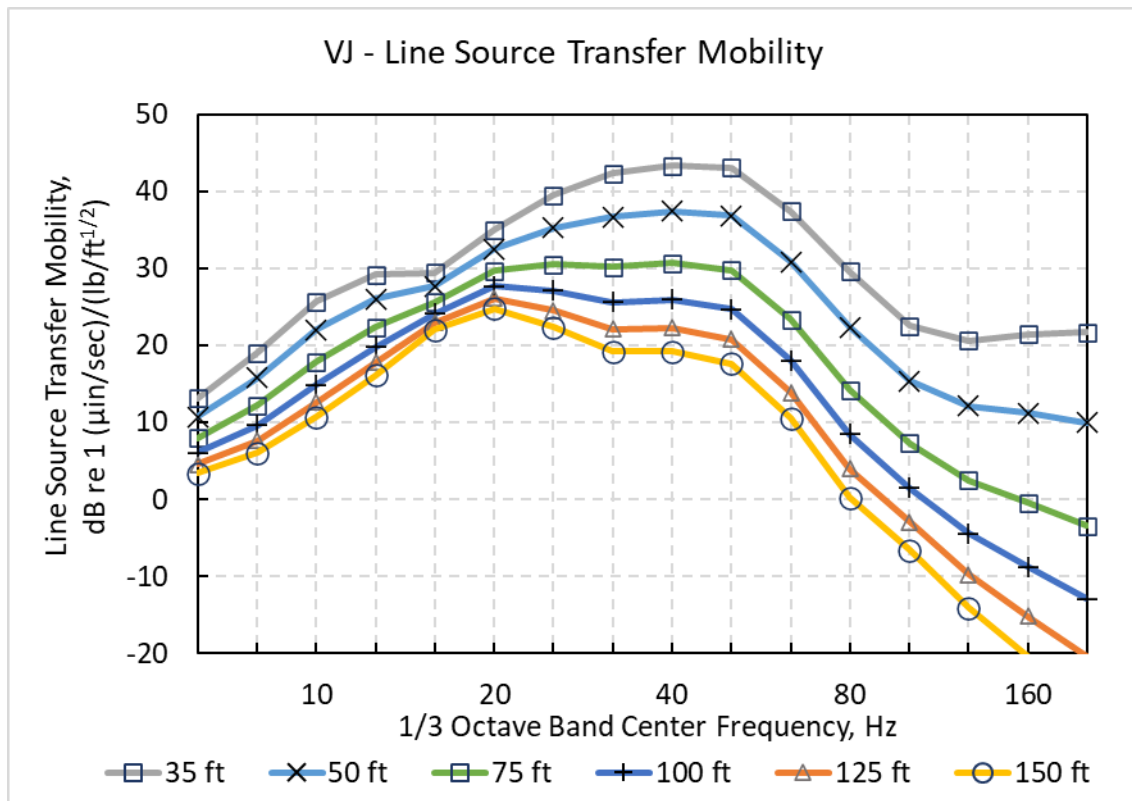


Figure D-13. Line Source Transfer Mobility Site VP-J 1st Avenue SW and SW 374th Street



ATTACHMENT E

Detailed Noise Assessment Results

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Table E-18	Detailed Noise Assessment Results for the Tacoma 26th Street Alternative	E-119

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1519	2101 S 324TH ST	SF	1	70.0	80	65	64	69	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1519	2101 S 324TH ST	SF	1	70.0	132	62	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	70.0	104	64	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	70.0	112	63	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	70.0	117	63	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	70.0	111	63	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	70.0	120	63	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	70.0	127	62	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	70.0	123	63	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	70.0	112	63	64	69	0	0	--	--
S 324th St to Merion Way	162104UNKN	1100	1512	2101 S 324TH ST	SF	1	64.7	101	63	61	66	1	0	Noise Barrier at 4 ft	51
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	64.7	140	62	61	66	1	0	Noise Barrier at 4 ft	50

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	174	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	205	59	61	66	0	0	--	--
S 324th St to Merion Way	162104UNKN	1100	1513	2101 S 324TH ST	SF	1	64.7	153	61	61	66	1	0	Noise Barrier at 4 ft	50
S 324th St to Merion Way	162104UNKN	1100	1513	2101 S 324TH ST	SF	1	64.7	188	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	64.7	240	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	64.7	253	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	64.7	285	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	64.7	304	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	64.7	329	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1515	2101 S 324TH ST	SF	1	64.7	359	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1515	2101 S 324TH ST	SF	1	64.7	370	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1516	2101 S 324TH ST	SF	1	64.7	386	56	61	66	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1517	2101 S 324TH ST	SF	1	64.7	410	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1518	2101 S 324TH ST	SF	1	64.7	418	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1519	2101 S 324TH ST	SF	1	64.7	425	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	64.7	439	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	64.7	437	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	64.7	430	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	64.7	426	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	64.7	390	56	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	64.7	385	56	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	64.7	358	56	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	64.7	322	57	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	64.7	271	58	61	66	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	64.7	209	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	209	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	191	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	238	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	260	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	282	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	304	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	64.7	367	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	64.7	387	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	325	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	64.7	461	55	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	64.7	532	54	61	66	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	64.7	529	54	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	64.7	525	54	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	64.7	514	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	310	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	340	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	346	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	371	56	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	422	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	431	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	64.7	509	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	64.7	550	53	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	64.7	480	54	61	66	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	393	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	463	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	441	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	485	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	64.7	579	53	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1524	2101 S 324TH ST	SF	1	70.0	111	60	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1525	2101 S 324TH ST	SF	1	70.0	119	60	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1525	2101 S 324TH ST	SF	1	70.0	124	59	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1526	2101 S 324TH ST	SF	1	70.0	130	59	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1526	2101 S 324TH ST	SF	1	70.0	127	59	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1527	2101 S 324TH ST	SF	1	70.0	130	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1528	2101 S 324TH ST	SF	1	70.0	139	58	64	69	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Merion Way to S 328th Pl	1621049037	1110	1527	2101 S 324TH ST	SF	1	70.0	136	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1529	2101 S 324TH ST	SF	1	70.0	138	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1530	2101 S 324TH ST	SF	1	70.0	137	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1531	2101 S 324TH ST	SF	1	70.0	129	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1532	2101 S 324TH ST	SF	1	70.0	124	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1532	2101 S 324TH ST	SF	1	70.0	123	59	64	69	0	0	--	--
S 330th St to S 333rd St	1621049037	1110	1535	2101 S 324TH ST	SF	1	70.0	126	59	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	64.7	412	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	64.7	398	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	64.7	454	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	442	55	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	504	54	61	66	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	484	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	64.7	509	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	64.7	511	54	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	64.7	530	53	61	66	0	0	--	--
S 330th St to S 333rd St	7978800682	1174	1534	33003 24TH AVE S	SF	1	70.0	293	49	64	69	0	0	--	--
S 330th St to S 333rd St	7978800679	1215	1538	33035 24TH AVE S	SF	1	70.0	198	52	64	69	0	0	--	--
S 330th St to S 333rd St	7978800681	1225	1540	33049 24TH AVE S	SF	1	70.0	177	52	64	69	0	0	--	--
S 330th St to S 333rd St	7978200164	1232	1540	33111 24TH AVE S	SF	1	70.0	157	58	64	69	0	0	--	--
S 330th St to S 333rd St	7978200165	1242	1541	33211 24TH AVE S	SF	1	70.0	139	59	64	69	0	0	--	--
S 330th St to S 333rd St	7978200167	1250	1542	33217 24TH AVE S	SF	1	70.0	142	58	64	69	0	0	--	--
S 330th St to S 333rd St	7978200160	1271	1543	2244 S 333RD ST	SF	1	70.0	81	62	64	69	0	0	--	--
S 330th St to S 333rd St	7978200166	1269	1544	2238 S 333RD ST	SF	1	70.0	195	52	64	69	0	0	--	--

Table E-1 Detailed Noise Assessment Results for the Preferred Federal Way Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 333rd St to S 336th St	7978200184	1277	1545	2237 S 333RD ST	MF	4	70.0	151	59	64	69	0	0	--	--
S 333rd St to S 336th St	7978200182	1281	1546	2221 S 333RD ST	MF	4	70.0	290	48	64	69	0	0	--	--
S 333rd St to S 336th St	7978200182	1281	1548	2221 S 333RD ST	MF	6	70.0	252	66	64	69	6	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	7978200182	1281	1549	2221 S 333RD ST	MF	5	70.0	248	66	64	69	5	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	2897600000	1311	1549	2210 S 336TH ST	MF	5	70.0	248	66	64	69	5	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	70.0	197	68	64	69	5	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	70.0	280	60	64	69	0	0	--	--
S 333rd St to S 336th St	2897600000	1311	1553	2210 S 336TH ST	MF	5	67.4	367	58	62	68	0	0	--	--
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	67.4	393	58	62	68	0	0	--	--
S 333rd St to S 336th St	2596200000	1286	1551	2100 S 336TH ST	MF	6	67.4	483	56	62	68	0	0	--	--
S 333rd St to S 336th St	2596200000	1286	1553	2100 S 336TH ST	MF	4	67.4	436	57	62	68	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	65	304	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	65	301	61	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1517	2101 S 324TH ST	SF	1	70	195	63	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1517	2101 S 324TH ST	SF	1	70	166	63	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1518	2101 S 324TH ST	SF	1	70	146	63	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1518	2101 S 324TH ST	SF	1	70	123	64	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1519	2101 S 324TH ST	SF	1	70	93	66	64	69	1	0	Noise Barrier at 4 ft	56
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	70	57	68	64	69	1	0	Noise Barrier at 4 ft	57
Merion Way to S 328th Pl	1621049037	1110	1523	2101 S 324TH ST	SF	1	70	62	68	64	69	1	0	Noise Barrier at 4 ft	57
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	65	253	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	65	209	61	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	65	260	60	61	66	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	65	199	61	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	162104UNKN	1100	1512	2101 S 324TH ST	SF	1	65	162	62	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	65	120	64	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	65	81	66	61	66	0	1	Noise Barrier at 4 ft	56
S 324th St to Merion Way	162104UNKN	1100	1513	2101 S 324TH ST	SF	1	65	111	64	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	162104UNKN	1100	1513	2101 S 324TH ST	SF	1	65	76	66	61	66	0	1	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1515	2101 S 324TH ST	SF	1	65	98	65	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1515	2101 S 324TH ST	SF	1	65	115	64	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1516	2101 S 324TH ST	SF	1	65	141	63	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1517	2101 S 324TH ST	SF	1	65	176	62	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1518	2101 S 324TH ST	SF	1	65	199	61	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1519	2101 S 324TH ST	SF	1	65	223	60	61	66	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Merion Way to S 328th PI	1621049037	1110	1520	2101 S 324TH ST	SF	1	65	254	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1520	2101 S 324TH ST	SF	1	65	272	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1521	2101 S 324TH ST	SF	1	65	284	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1521	2101 S 324TH ST	SF	1	65	298	58	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1522	2101 S 324TH ST	SF	1	65	281	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1522	2101 S 324TH ST	SF	1	65	289	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1523	2101 S 324TH ST	SF	1	65	277	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1523	2101 S 324TH ST	SF	1	65	254	59	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1523	2101 S 324TH ST	SF	1	65	211	61	61	66	0	0	--	--
Merion Way to S 328th PI	1621049037	1110	1523	2101 S 324TH ST	SF	1	65	154	62	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	65	72	67	61	66	0	1	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	65	87	66	61	66	1	0	Noise Barrier at 4 ft	56

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	65	112	64	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	65	69	67	61	66	0	1	Noise Barrier at 4 ft	57
S 324th St to Merion Way	1621049037	1110	1514	2101 S 324TH ST	SF	1	65	187	61	61	66	1	0	Noise Barrier at 4 ft	55
Merion Way to S 328th Pl	1621049037	1110	1520	2101 S 324TH ST	SF	1	65	356	57	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	65	375	57	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1521	2101 S 324TH ST	SF	1	65	388	57	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1522	2101 S 324TH ST	SF	1	65	400	57	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	112	64	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	151	62	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	65	96	65	61	66	1	0	Noise Barrier at 4 ft	56
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	65	134	63	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	65	155	62	61	66	1	0	Noise Barrier at 4 ft	55

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	65	180	61	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1512	2101 S 324TH ST	SF	1	65	231	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1511	2101 S 324TH ST	SF	1	65	280	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1513	2101 S 324TH ST	SF	1	65	201	61	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	65	166	62	61	66	1	0	Noise Barrier at 4 ft	55
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	65	217	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	65	215	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	65	250	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1510	2101 S 324TH ST	SF	1	65	320	58	61	66	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1524	2101 S 324TH ST	SF	1	70	85	62	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1525	2101 S 324TH ST	SF	1	70	102	60	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1525	2101 S 324TH ST	SF	1	70	115	60	64	69	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Merion Way to S 328th Pl	1621049037	1110	1526	2101 S 324TH ST	SF	1	70	127	59	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1526	2101 S 324TH ST	SF	1	70	130	59	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1527	2101 S 324TH ST	SF	1	70	138	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1528	2101 S 324TH ST	SF	1	70	152	58	64	69	0	0	--	--
Merion Way to S 328th Pl	1621049037	1110	1527	2101 S 324TH ST	SF	1	70	147	58	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1529	2101 S 324TH ST	SF	1	70	150	58	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1530	2101 S 324TH ST	SF	1	70	149	58	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1531	2101 S 324TH ST	SF	1	70	141	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1532	2101 S 324TH ST	SF	1	70	135	59	64	69	0	0	--	--
S 328th Pl to S 330th St	1621049037	1110	1532	2101 S 324TH ST	SF	1	70	134	59	64	69	0	0	--	--
S 330th St to S 333rd St	1621049037	1110	1535	2101 S 324TH ST	SF	1	70	136	59	64	69	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	65	244	59	61	66	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	65	242	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	65	315	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	240	60	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	295	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	298	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1507	2101 S 324TH ST	SF	1	65	332	58	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1509	2101 S 324TH ST	SF	1	65	285	59	61	66	0	0	--	--
S 324th St to Merion Way	1621049037	1110	1508	2101 S 324TH ST	SF	1	65	316	58	61	66	0	0	--	--
S 330th St to S 333rd St	7978800682	1174	1534	33003 24TH AVE S	SF	1	70	303	49	64	69	0	0	--	--
S 330th St to S 333rd St	7978800679	1215	1538	33035 24TH AVE S	SF	1	70	205	51	64	69	0	0	--	--
S 330th St to S 333rd St	7978800681	1225	1540	33049 24TH AVE S	SF	1	70	181	52	64	69	0	0	--	--
S 330th St to S 333rd St	7978200164	1232	1540	33111 24TH AVE S	SF	1	70	159	58	64	69	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 330th St to S 333rd St	7978200165	1242	1541	33211 24TH AVE S	SF	1	70	139	59	64	69	0	0	--	--
S 330th St to S 333rd St	7978200167	1250	1542	33217 24TH AVE S	SF	1	70	142	58	64	69	0	0	--	--
S 330th St to S 333rd St	7978200160	1271	1543	2244 S 333RD ST	SF	1	70	81	62	64	69	0	0	--	--
S 330th St to S 333rd St	7978200166	1269	1544	2238 S 333RD ST	SF	1	70	195	52	64	69	0	0	--	--
S 333rd St to S 336th St	7978200184	1277	1545	2237 S 333RD ST	MF	4	70	151	59	64	69	0	0	--	--
S 333rd St to S 336th St	7978200182	1281	1546	2221 S 333RD ST	MF	4	70	290	48	64	69	0	0	--	--
S 333rd St to S 336th St	7978200182	1281	1548	2221 S 333RD ST	MF	6	70	252	66	64	69	6	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	7978200182	1281	1549	2221 S 333RD ST	MF	5	70	248	66	64	69	5	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	2897600000	1311	1549	2210 S 336TH ST	MF	5	70	248	66	64	69	5	0	Noise Barrier at 4 ft	54
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	70	197	68	64	69	5	0	Noise Barrier at 4 ft	55
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	70	280	60	64	69	0	0	--	--
S 333rd St to S 336th St	2897600000	1311	1553	2210 S 336TH ST	MF	5	67	367	58	62	68	0	0	--	--

Table E-2 Detailed Noise Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 333rd St to S 336th St	2897600000	1311	1551	2210 S 336TH ST	MF	5	67	393	58	62	68	0	0	--	--
S 333rd St to S 336th St	2596200000	1286	1551	2100 S 336TH ST	MF	6	67	483	56	62	68	0	0	--	--
S 333rd St to S 336th St	2596200000	1286	1553	2100 S 336TH ST	MF	4	67	436	57	62	68	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 356th St to S 359th St	2821049070	1622	1631+00	35810 16TH AVE S	MF	8	65	48	78	65	71	0	8	Noise Barrier at 4 ft	59
S 356th St to S 359th St	2821049070	1622	1633+00	35810 16TH AVE S	MF	32	65	94	74	65	71	0	32	Noise Barrier at 4 ft	56
S 356th St to S 359th St	2821049070	1622	1634+00	35810 16TH AVE S	MF	32	65	91	68	65	71	32	0	Noise Barrier at 4 ft	56
S 356th St to S 359th St	2821049070	1622	1635+00	35810 16TH AVE S	MF	32	65	103	68	65	71	32	0	Noise Barrier at 4 ft	56
S 356th St to S 359th St	2821049070	1622	1636+00	35810 16TH AVE S	MF	24	65	134	61	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1637+00	35810 16TH AVE S	MF	36	65	194	59	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1638+00	35810 16TH AVE S	MF	36	65	52	71	65	71	0	36	Noise Barrier at 4 ft	59
S 359th St to S 364th Way	2821049134	1647	1640+00	1625 S 359TH ST	SF	1	65	84	69	65	71	1	0	Noise Barrier at 4 ft	58
S 359th St to S 364th Way	2821049140	1646	1639+00	1615 S 359TH ST	SF	1	65	173	64	65	71	0	0	--	--
S 359th St to S 364th Way	2821049110	1645	1639+00	35906 16TH AVE S	SF	1	65	320	56	65	71	0	0	--	--
S 359th St to S 364th Way	2821049140	1646	1640+00	1615 S 359TH ST	SF	1	65	193	59	65	71	0	0	--	--
S 359th St to S 364th Way	2821049115	1662	1641+00	35926 16TH AVE S	SF	1	65	242	62	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2821049190	1668	1644+00	36010 16TH AVE S	SF	1	65	178	64	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049077	1723	1824+00	36920 12TH AVE S	SF	1	65	238	63	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049080	1731	1826+00	37006 12TH AVE S	SF	1	65	146	65	65	71	1	0	Sound Insulation	--
11th Pl S to S 372nd Way	3221049007	1746	1832+00	37107 12TH AVE S	SF	1	65	288	55	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049128	1750	1832+00	37125 12TH AVE S	SF	1	65	132	61	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049133	1757	1832+00	1020 S 372ND WAY	SF	1	65	204	58	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049121	1776	1835+00	1021 S 372ND WAY	SF	1	65	150	60	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049121	1776	1837+00	1021 S 372ND WAY	SF	1	65	283	56	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049081	1790	1839+00	831 S 373RD PL	SF	1	65	203	63	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049122	1801	1840+00	819 S 373RD PL	SF	1	65	121	67	65	71	1	0	Sound Insulation	--
King CoLine to Comet St	5990000210	3063	1880+00	404 COMET ST UNIT A B	SF	1	65	719	56	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Comet St to Porter Way	0420052004	3117	1880+00	326 EMERALD ST	SF	1	65	1181	53	65	71	0	0	--	--
Comet St to Porter Way	5990000550	3130	1880+00	323 EMERALD ST	SF	1	65	1452	51	65	71	0	0	--	--
Comet St to Porter Way	5990000550	3130	1880+00	323 EMERALD ST	SF	1	65	1492	51	65	71	0	0	--	--
Comet St to Porter Way	5990000540	3143	1880+00	511 4TH AV	SF	1	65	1612	51	65	71	0	0	--	--
10th St E to 68th Ave E	0420053064	3249	1880+00	7127 PACIFIC HWY E	SF	1	65	3618	46	65	71	0	0	--	--
10th St E to 68th Ave E	0420057012	3250	1880+00	7121 PACIFIC HWY E	SF	1	65	3703	46	65	71	0	0	--	--
10th St E to 68th Ave E	0420053040	3251	1880+00	7119 PACIFIC HWY E	SF	1	65	3759	45	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1880+00	7115 PACIFIC HWY E	SF	1	65	3844	45	65	71	0	0	--	--
Porter Way to 10th St E	0420053058	3252	1880+00	913 70TH AV E	SF	1	65	3503	46	65	71	0	0	--	--
10th St E to 68th Ave E	0420053036	3261	1880+00	7109 PACIFIC HWY E	SF	1	65	3995	45	65	71	0	0	--	--
10th St E to 68th Ave E	0420053037	3262	1880+00	7111 PACIFIC HWY E	SF	1	65	4070	45	65	71	0	0	--	--
10th St E to 68th Ave E	0420053053	3266	1880+00	1119 70TH AV E	SF	1	65	4168	45	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	0420053001	3269	1880+00	1123 70TH AV E	SF	1	65	4263	45	65	71	0	0	--	--
Porter Way to 10th St E	0420053078	3253	1880+00	911 70TH AV E	SF	1	65	3461	41	65	71	0	0	--	--
Porter Way to 10th St E	0420053059	3265	1880+00	915 70TH AV E	SF	1	65	3565	41	65	71	0	0	--	--
10th St E to 68th Ave E	0420053027	3267	1880+00	1015 70TH AV E	SF	1	65	3822	41	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1880+00	7115 PACIFIC HWY E	SF	1	65	3855	41	65	71	0	0	--	--
10th St E to 68th Ave E	0420053034	3260	1880+00	1103 70TH AV E	SF	1	65	3974	41	65	71	0	0	--	--
10th St E to 68th Ave E	0420064139	3274	1880+00	6921 12TH ST E	SF	1	65	4271	40	65	71	0	0	--	--
10th St E to 68th Ave E	0420064138	3273	1880+00	1122 70TH AV E	SF	1	65	4208	40	65	71	0	0	--	--
10th St E to 68th Ave E	0420064151	3305	1880+00	6823 12TH ST E	SF	1	65	4291	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1880+00	1201 69TH AV E	SF	1	65	4414	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220020	3285	1880+00	1207 69TH AV E	SF	1	65	4446	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1880+00	1211 69TH AV E	SF	1	65	4530	44	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220040	3298	1880+00	1217 69TH AV E	SF	1	65	4557	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1880+00	1225 69TH AV E	SF	1	65	4613	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1880+00	1305 69TH AV E	SF	1	65	4652	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220070	3318	1880+00	1309 69TH AV E	SF	1	65	4704	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1880+00	1315 69TH AV E	SF	1	65	4743	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1880+00	1319 69TH AV E	SF	1	65	4779	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1880+00	1323 69TH AV E	SF	1	65	4815	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1880+00	1327 69TH AV E	SF	1	65	4848	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1880+00	1403 69TH AV E	SF	1	65	4892	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1880+00	1407 69TH AV E	SF	1	65	4946	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220140	3326	1880+00	1413 69TH AV E	SF	1	65	4978	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220150	3330	1880+00	1417 69TH AV E	SF	1	65	5014	44	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220160	3334	1880+00	1421 69TH AV E	SF	1	65	5055	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220170	3344	1880+00	1425 69TH AV E	SF	1	65	5090	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220180	3354	1880+00	1429 69TH AV E	SF	1	65	5101	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220190	3362	1880+00	1428 69TH AV E	SF	1	65	5107	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1880+00	1426 69TH AV E	SF	1	65	5061	44	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1880+00	1212 69TH AV E	SF	1	65	4453	40	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1880+00	1420 69TH AV E	SF	1	65	5027	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1880+00	1416 69TH AV E	SF	1	65	4982	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1880+00	1412 69TH AV E	SF	1	65	4933	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1880+00	1404 69TH AV E	SF	1	65	4910	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220250	3347	1880+00	1322 69TH AV E	SF	1	65	4855	39	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1880+00	1318 69TH AV E	SF	1	65	4816	39	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220270	3341	1880+00	1314 69TH AV E	SF	1	65	4777	39	65	71	0	0	--	--
King CoLine to Comet St	5990000210	3063	1886+00	404 COMET ST UNIT A B	SF	1	65	323	61	65	71	0	0	--	--
Comet St to Porter Way	0420052004	3117	1892+00	326 EMERALD ST	SF	1	65	285	61	65	71	0	0	--	--
Comet St to Porter Way	5990000550	3130	1894+00	323 EMERALD ST	SF	1	65	282	61	65	71	0	0	--	--
Comet St to Porter Way	5990000550	3130	1895+00	323 EMERALD ST	SF	1	65	315	61	65	71	0	0	--	--
Comet St to Porter Way	5990000540	3143	1896+00	511 4TH AV	SF	1	65	339	60	65	71	0	0	--	--
10th St E to 68th Ave E	0420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	214	63	65	71	0	0	--	--
10th St E to 68th Ave E	0420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	178	64	65	71	0	0	--	--
10th St E to 68th Ave E	0420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	172	64	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	176	64	65	71	0	0	--	--
Porter Way to 10th St E	0420053058	3252	1915+00	913 70TH AV E	SF	1	65	249	62	65	71	0	0	--	--
10th St E to 68th Ave E	0420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	166	63	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	0420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	165	63	65	71	0	0	--	--
10th St E to 68th Ave E	0420053053	3266	1922+00	1119 70TH AV E	SF	1	65	234	61	65	71	0	0	--	--
10th St E to 68th Ave E	0420053001	3269	1923+00	1123 70TH AV E	SF	1	65	190	62	65	71	0	0	--	--
Porter Way to 10th St E	0420053078	3253	1914+00	911 70TH AV E	SF	1	65	378	55	65	71	0	0	--	--
Porter Way to 10th St E	0420053059	3265	1915+00	915 70TH AV E	SF	1	65	401	55	65	71	0	0	--	--
10th St E to 68th Ave E	0420053027	3267	1918+00	1015 70TH AV E	SF	1	65	349	56	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	259	58	65	71	0	0	--	--
10th St E to 68th Ave E	0420053034	3260	1919+00	1103 70TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	0420064139	3274	1923+00	6921 12TH ST E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	0420064138	3273	1922+00	1122 70TH AV E	SF	1	65	364	53	65	71	0	0	--	--
10th St E to 68th Ave E	0420064151	3305	1924+00	6823 12TH ST E	SF	1	65	458	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	313	59	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	65	314	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	65	322	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	65	334	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	65	339	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	65	331	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	65	306	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	65	266	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	65	243	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	65	190	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	65	147	63	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	65	115	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	65	92	66	65	71	1	0	Noise Barrier at 4 ft	55

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	65	89	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	65	82	67	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	65	69	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	65	78	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	65	101	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	65	138	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	65	188	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	65	449	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	65	228	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	65	264	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	65	276	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	65	285	55	65	71	0	0	--	--

Table E-3 Detailed Noise Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	65	323	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	65	350	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	65	372	53	65	71	0	0	--	--
Porter Way to 10th St E	0420053048	3238	1909+00	7224 PACIFIC HWY E	HOSPITAL	1	65	82	69	65	71	1	0	Noise Barrier at 4 ft	57

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 356th St to S 359th St	2821049070	1622	1623+00	35810 16TH AVE S	MF	8	65	688	56	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1625+00	35810 16TH AVE S	MF	32	65	581	57	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1626+00	35810 16TH AVE S	MF	32	65	513	58	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1627+00	35810 16TH AVE S	MF	32	65	489	58	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1628+00	35810 16TH AVE S	MF	24	65	456	54	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1629+00	35810 16TH AVE S	MF	36	65	450	54	65	71	0	0	--	--
S 356th St to S 359th St	2821049070	1622	1629+00	35810 16TH AVE S	MF	36	65	298	61	65	71	0	0	--	--
S 359th St to S 364th Way	2821049134	1647	1631+00	1625 S 359TH ST	SF	1	65	252	62	65	71	0	0	--	--
S 359th St to S 364th Way	2821049140	1646	1631+00	1615 S 359TH ST	SF	1	65	361	60	65	71	0	0	--	--
S 359th St to S 364th Way	2821049110	1645	1631+00	35906 16TH AVE S	SF	1	65	506	53	65	71	0	0	--	--
S 359th St to S 364th Way	2821049140	1646	1632+00	1615 S 359TH ST	SF	1	65	343	56	65	71	0	0	--	--
S 359th St to S 364th Way	2821049115	1662	1633+00	35926 16TH AVE S	SF	1	65	348	60	65	71	0	0	--	--

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2821049190	1668	1635+00	36010 16TH AVE S	SF	1	65	227	63	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049077	1723	1670+00	36920 12TH AVE S	SF	1	65	238	63	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049080	1731	1672+00	37006 12TH AVE S	SF	1	65	146	65	65	71	1	0	Sound Insulation	--
11th Pl S to S 372nd Way	3221049007	1746	1678+00	37107 12TH AVE S	SF	1	65	288	55	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049128	1750	1678+00	37125 12TH AVE S	SF	1	65	132	61	65	71	0	0	--	--
11th Pl S to S 372nd Way	3221049133	1757	1678+00	1020 S 372ND WAY	SF	1	65	204	58	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049121	1776	1835+00	1021 S 372ND WAY	SF	1	65	150	60	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049121	1776	1837+00	1021 S 372ND WAY	SF	1	65	283	56	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049081	1790	1839+00	831 S 373RD PL	SF	1	65	203	63	65	71	0	0	--	--
S 372nd Way to S 376th St	3221049122	1801	1840+00	819 S 373RD PL	SF	1	65	121	67	65	71	1	0	Sound Insulation	--
King CoLine to Comet St	5990000210	3063	1886+00	404 COMET ST UNIT A B	SF	1	65	323	61	65	71	0	0	--	--
Comet St to Porter Way	0420052004	3117	1892+00	326 EMERALD ST	SF	1	65	285	61	65	71	0	0	--	--

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Comet St to Porter Way	5990000550	3130	1894+00	323 EMERALD ST	SF	1	65	282	61	65	71	0	0	--	--
Comet St to Porter Way	5990000550	3130	1895+00	323 EMERALD ST	SF	1	65	315	61	65	71	0	0	--	--
Comet St to Porter Way	5990000540	3143	1896+00	511 4TH AV	SF	1	65	339	60	65	71	0	0	--	--
10th St E to 68th Ave E	0420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	214	63	65	71	0	0	--	--
10th St E to 68th Ave E	0420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	178	64	65	71	0	0	--	--
10th St E to 68th Ave E	0420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	172	64	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	176	64	65	71	0	0	--	--
Porter Way to 10th St E	0420053058	3252	1915+00	913 70TH AV E	SF	1	65	249	62	65	71	0	0	--	--
10th St E to 68th Ave E	0420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	166	63	65	71	0	0	--	--
10th St E to 68th Ave E	0420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	165	63	65	71	0	0	--	--
10th St E to 68th Ave E	0420053053	3266	1922+00	1119 70TH AV E	SF	1	65	234	61	65	71	0	0	--	--
10th St E to 68th Ave E	0420053001	3269	1923+00	1123 70TH AV E	SF	1	65	190	62	65	71	0	0	--	--
Porter Way to 10th St E	0420053078	3253	1914+00	911 70TH AV E	SF	1	65	378	55	65	71	0	0	--	--
Porter Way to 10th St E	0420053059	3265	1915+00	915 70TH AV E	SF	1	65	401	55	65	71	0	0	--	--

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	0420053027	3267	1918+00	1015 70TH AV E	SF	1	65	349	56	65	71	0	0	--	--
10th St E to 68th Ave E	0420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	259	58	65	71	0	0	--	--
10th St E to 68th Ave E	0420053034	3260	1919+00	1103 70TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	0420064139	3274	1923+00	6921 12TH ST E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	0420064138	3273	1922+00	1122 70TH AV E	SF	1	65	364	53	65	71	0	0	--	--
10th St E to 68th Ave E	0420064151	3305	1924+00	6823 12TH ST E	SF	1	65	458	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	313	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	65	314	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	65	322	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	65	334	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	65	339	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	65	331	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	65	306	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	65	266	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	65	243	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	65	190	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	65	147	63	65	71	0	0	--	--

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	65	115	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	65	92	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	65	89	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	65	82	67	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	65	69	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	65	78	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	65	101	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	65	138	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	65	188	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	65	449	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	65	228	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	65	264	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	65	276	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	65	285	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	65	323	54	65	71	0	0	--	--

Table E-4 Detailed Noise Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	65	350	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	65	372	53	65	71	0	0	--	--
Porter Way to 10th St E	0420053048	3238	1909+00	7224 PACIFIC HWY E	HOSPITAL	1	65	82	69	65	71	1	0	Noise Barrier at 4 ft	57

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	63	138	66	63	68	1	0	Sound Insulation	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	63	210	64	63	68	1	0	Noise Barrier at 4 ft	55
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	66	121	66	66	71	1	0	Noise Barrier at 4 ft	55
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	63	181	64	63	68	1	0	Noise Barrier at 4 ft	57
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	63	459	59	63	68	0	0	--	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	63	395	59	63	68	0	0	--	--
S 364th St to S 373rd St	3221049016	1706	1683+00	36815 PACIFIC HWY S	CH	1	66	131	65	66	71	0	0	--	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	63	184	64	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	63	141	66	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	63	303	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	2188203420	1782	1703+00	37226 1ST AVE SW	SF	1	63	326	56	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	63	260	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	3221049025	1843	1711+00	37600 PACIFIC HWY S	CEM	1	66	135	64	66	71	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	78	70	63	68	0	1	Noise Barrier at 4 ft	59
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	102	68	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	80	70	63	68	0	1	Noise Barrier at 4 ft	59
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	163	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	190	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	120	63	63	68	1	0	Noise Barrier at 4 ft	53
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	141	62	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	162	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	221	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	241	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	263	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	287	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	63	268	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	63	237	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	184	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	204	58	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	229	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	288	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	314	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	337	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	309	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	249	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	280	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	344	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	359	51	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	302	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	321	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	350	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	119	67	63	68	1	0	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	138	62	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	164	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	187	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	192	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	160	61	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	226	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	262	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	281	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	230	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	313	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	335	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	353	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	348	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	313	54	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	378	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	379	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	63	129	66	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	63	222	63	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	63	277	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	63	72	71	63	68	0	1	Noise Barrier at 4 ft	59
Johnson Rd to Porter Way	420052026	3058	1745+00	7802 PACIFIC HWY E	SF	1	63	197	59	63	68	0	0	--	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	63	140	66	63	68	2	0	Noise Barrier at 4 ft	56
Johnson Rd to Porter Way	420061105	3093	1747+00	210 TO 212 70TH AV E	SF	1	63	305	57	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	63	189	64	63	68	1	0	Noise Barrier at 4 ft	56
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	63	511	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	63	659	52	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	63	453	59	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	6	63	550	53	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	12	63	603	51	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260180	3152	1754+00	6919 5TH STCT E	SF	1	63	628	57	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260020	3167	1756+00	6918 5TH STCT E	SF	1	63	640	57	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260010	3169	1757+00	6922 5TH STCT E	SF	1	63	608	57	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	6024260170	3150	1754+00	6911 5TH STREET CT E	SF	1	63	669	52	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260030	3166	1756+00	6914 5TH STCT E	SF	1	63	684	52	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260160	3149	1754+00	6907 5TH STCT E	SF	1	63	712	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260040	3165	1756+00	6910 5TH STCT E	SF	1	63	732	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260050	3164	1755+00	6906 5TH STCT E	SF	1	63	773	48	63	68	0	0	--	--
Johnson Rd to Porter Way	420052015	3142	1755+00	509 70TH AV	SF	1	63	429	59	63	68	0	0	--	--
Johnson Rd to Porter Way	420052011	3183	1760+00	615 70TH AV E	SF	1	63	519	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420052019	3174	1758+00	607 70TH AV E	SF	1	63	504	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061185	3176	1757+00	606 70TH AV E	SF	1	63	659	52	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061022	3187	1759+00	616 70TH AV E	SF	1	63	737	51	63	68	0	0	--	--
Porter Way to 10th St	420061178	3191	1761+00	624 70TH AV E	SF	1	63	756	51	63	68	0	0	--	--
Porter Way to 10th St	420052009	3211	1766+00	7303 PACIFIC HWY E	SF	1	63	493	58	63	68	0	0	--	--
Porter Way to 10th St	420053071	3257	1768+00	805 70TH AV E	SF	1	63	449	59	63	68	0	0	--	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	63	389	60	63	68	0	0	--	--
Porter Way to 10th St	420061179	3202	1764+00	712 70TH AV E	SF	1	63	776	51	63	68	0	0	--	--
Porter Way to 10th St	420061030	3217	1766+00	726 70TH AV E	SF	1	63	737	51	63	68	0	0	--	--
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	63	673	52	63	68	0	0	--	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	65	608	52	65	71	0	0	--	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	65	482	54	65	71	0	0	--	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	65	533	53	65	71	0	0	--	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	63	462	54	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	65	450	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	65	467	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	65	475	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	65	484	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	65	479	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	65	424	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	65	440	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	65	466	52	65	71	0	0	--	--
Johnson Rd to Porter Way	420052004	3117	1755+00	326 EMERALD ST	SF	1	65	921	54	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	740	56	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1757+00	323 EMERALD ST	SF	1	65	744	56	65	71	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	65	696	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	231	63	65	71	0	0	--	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	194	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	188	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	191	64	65	71	0	0	--	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	65	267	62	65	71	0	0	--	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	180	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	179	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	65	248	61	65	71	0	0	--	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	65	204	62	65	71	0	0	--	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	65	397	55	65	71	0	0	--	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	65	419	55	65	71	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	65	364	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	274	57	65	71	0	0	--	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	65	313	55	65	71	0	0	--	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	65	351	54	65	71	0	0	--	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	65	378	53	65	71	0	0	--	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	65	472	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	327	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	65	328	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	65	336	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	65	348	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	65	353	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	65	345	58	65	71	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	65	320	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	65	280	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	65	257	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	65	204	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	65	161	63	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	65	129	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	65	106	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	65	103	66	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	65	96	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	65	83	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	65	92	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	65	115	66	65	71	1	0	Noise Barrier at 4 ft	55

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	65	152	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	65	202	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	65	463	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	65	242	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	65	278	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	65	290	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	65	364	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	65	386	53	65	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	142	66	63	68	1	0	Noise Barrier at 4 ft	57
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	234	58	63	68	0	0	--	--

Table E-5 Detailed Noise Assessment Results for the SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 344th St to S 346th St	2121049078	1480	1596+00	1688 S 348TH ST	HOTEL	1	65	64	66	65	71	1	0	Noise Barrier at 4 ft	53
Porter Way to 10th St	420053048	3238	1768+00	7224 PACIFIC HWY E	HOSPITAL	1	65	110	68	65	71	1	0	Noise Barrier at 4 ft	57

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	63	124	66	63	68	1	0	Noise Barrier at 4 ft	61
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	63	196	64	63	68	1	0	Noise Barrier at 4 ft	58
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	66	107	66	66	71	1	0	Noise Barrier at 4 ft	55
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	63	181	64	63	68	1	0	Noise Barrier at 4 ft	57
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	63	459	59	63	68	0	0	--	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	63	395	59	63	68	0	0	--	--
S 364th St to S 373rd St	3221049016	1706	1683+00	36815 PACIFIC HWY S	CH	1	66	117	65	66	71	0	0	--	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	63	184	64	63	68	1	0	Noise Barrier at 4 ft	59
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	63	127	66	63	68	1	0	Noise Barrier at 4 ft	61
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	63	289	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	2188203420	1782	1703+00	37226 1ST AVE SW	SF	1	63	312	56	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	63	246	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	3221049025	1843	1711+00	37600 PACIFIC HWY S	CEM	1	66	135	64	66	71	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	64	70	63	68	0	1	Noise Barrier at 4 ft	66
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	88	68	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	66	70	63	68	0	1	Noise Barrier at 4 ft	59
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	149	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	176	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	106	63	63	68	1	0	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	127	62	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	148	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	207	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	227	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	249	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	273	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	63	254	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	63	223	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	170	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	190	58	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	215	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	274	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	300	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	323	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	295	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	235	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	266	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	330	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	345	51	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	288	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	307	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	336	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	105	67	63	68	1	0	Noise Barrier at 4 ft	63
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	124	62	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	150	61	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	173	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	178	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	146	61	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	212	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	248	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	267	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	216	57	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	299	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	321	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	339	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	334	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	299	54	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	364	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	365	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	63	129	66	63	68	1	0	Noise Barrier at 4 ft	61
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	63	222	63	63	68	1	0	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	63	277	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420061029	3035	1739+00	7909 PACIFIC HWY E	HOTEL	1	63	165	65	63	68	1	0	Noise Barrier at 4 ft	55
Johnson Rd to Porter Way	420052026	3058	1745+00	7802 PACIFIC HWY E	SF	1	63	134	61	63	68	0	0	--	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	63	530	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061105	3093	1746+00	210 TO 212 70TH AV E	SF	1	63	678	52	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	63	593	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1758+00	6926 5TH ST E	MF	12	63	822	55	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1758+00	6926 5TH ST E	MF	12	63	994	49	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1756+00	6926 5TH ST E	MF	12	63	814	55	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1756+00	6926 5TH ST E	MF	6	63	931	50	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1755+00	6926 5TH ST E	MF	12	63	988	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260180	3152	1760+00	6919 5TH STCT E	SF	1	63	911	54	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260020	3167	1762+00	6918 5TH STCT E	SF	1	63	839	55	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260010	3169	1762+00	6922 5TH STCT E	SF	1	63	797	55	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	6024260170	3150	1760+00	6911 5TH STREET CT E	SF	1	63	956	49	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260030	3166	1762+00	6914 5TH STCT E	SF	1	63	883	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260160	3149	1760+00	6907 5TH STCT E	SF	1	63	1006	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260040	3165	1762+00	6910 5TH STCT E	SF	1	63	935	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260050	3164	1762+00	6906 5TH STCT E	SF	1	63	984	46	63	68	0	0	--	--
Johnson Rd to Porter Way	420052015	3142	1758+00	509 70TH AV	SF	1	63	730	56	63	68	0	0	--	--
Johnson Rd to Porter Way	420052011	3183	1764+00	615 70TH AV E	SF	1	63	610	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420052019	3174	1763+00	607 70TH AV E	SF	1	63	640	56	63	68	0	0	--	--
Johnson Rd to Porter Way	420061185	3176	1763+00	606 70TH AV E	SF	1	63	808	51	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061022	3187	1764+00	616 70TH AV E	SF	1	63	834	50	63	68	0	0	--	--
Porter Way to 10th St	420061178	3191	1765+00	624 70TH AV E	SF	1	63	809	51	63	68	0	0	--	--
Porter Way to 10th St	420052009	3211	1768+00	7303 PACIFIC HWY E	SF	1	63	478	58	63	68	0	0	--	--
Porter Way to 10th St	420053071	3257	1769+00	805 70TH AV E	SF	1	63	428	59	63	68	0	0	--	--
Porter Way to 10th St	420053042	3256	1771+00	817 70TH AV E	SF	1	63	373	60	63	68	0	0	--	--
Porter Way to 10th St	420061179	3202	1767+00	712 70TH AV E	SF	1	63	772	51	63	68	0	0	--	--
Porter Way to 10th St	420061030	3217	1769+00	726 70TH AV E	SF	1	63	717	51	63	68	0	0	--	--
Porter Way to 10th St	420064044	3277	1771+00	816 70TH AV E	SF	1	63	658	52	63	68	0	0	--	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	65	601	52	65	71	0	0	--	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	65	473	54	65	71	0	0	--	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	65	519	53	65	71	0	0	--	--
Porter Way to 10th St	420053042	3256	1772+00	817 70TH AV E	SF	1	63	447	54	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	65	436	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	65	453	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	65	461	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	65	470	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	65	465	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	65	410	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	65	426	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	65	452	52	65	71	0	0	--	--
Johnson Rd to Porter Way	420052004	3117	1754+00	326 EMERALD ST	SF	1	65	547	57	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	419	59	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	435	59	65	71	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	65	418	59	65	71	0	0	--	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	217	63	65	71	0	0	--	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	180	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	174	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	177	64	65	71	0	0	--	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	65	253	62	65	71	0	0	--	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	166	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	165	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	65	234	61	65	71	0	0	--	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	65	190	62	65	71	0	0	--	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	65	383	55	65	71	0	0	--	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	65	405	55	65	71	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	65	350	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	260	57	65	71	0	0	--	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	65	364	53	65	71	0	0	--	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	65	458	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	313	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	65	314	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	65	322	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	65	334	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	65	339	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	65	331	58	65	71	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	65	306	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	65	266	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	65	243	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	65	190	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	65	147	63	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	65	115	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	65	92	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	65	89	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	65	82	67	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	65	69	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	65	78	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	65	101	66	65	71	1	0	Noise Barrier at 4 ft	55

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	65	138	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	65	188	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	65	449	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	65	228	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	65	264	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	65	276	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	65	285	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	65	323	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	65	350	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	65	372	53	65	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	142	66	63	68	1	0	Noise Barrier at 4 ft	57
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	234	58	63	68	0	0	--	--

Table E-6 Detailed Noise Assessment Results for the SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 344th St to S 346th St	2121049078	1480	1596+00	1688 S 348TH ST	HOTEL	1	65	64	66	65	71	1	0	Noise Barrier at 4 ft	53
Porter Way to 10th St	420053048	3238	1769+00	7224 PACIFIC HWY E	HOSPITAL	1	65	90	68	65	71	1	0	Noise Barrier at 4 ft	56

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	63	243	62	63	68	0	0	--	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	63	310	61	63	68	0	0	--	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	66	221	61	66	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	63	67	70	63	68	0	1	Noise Barrier at 4 ft	59
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	63	345	60	63	68	0	0	--	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	63	281	62	63	68	0	0	--	--
S 364th St to S 373rd St	3221049016	1706	1684+00	36815 PACIFIC HWY S	CH	1	66	231	61	66	71	0	0	--	--
S 364th St to S 373rd St	3221049078	1717	1686+00	36903 PACIFIC HWY S	SF	1	63	164	65	63	68	1	0	Sound Insulation	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	63	69	70	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	63	200	64	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	63	358	56	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	2188203420	1782	1704+00	37226 1ST AVE SW	SF	1	63	390	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	63	318	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	3221049025	1843	1712+00	37600 PACIFIC HWY S	CEM	1	66	79	68	66	71	1	0	Noise Barrier at 4 ft	56
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	121	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	145	66	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	123	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	206	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	234	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	163	60	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	184	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	205	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	264	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	284	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	306	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	330	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	311	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	280	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	227	57	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	247	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	272	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	331	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	357	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	380	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	353	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	293	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	323	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	387	51	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	402	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	345	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	364	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	393	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	115	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	151	65	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	162	65	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	122	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	181	60	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	208	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	230	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	235	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	203	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	269	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	305	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	324	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	273	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	356	53	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	378	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	396	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	391	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	356	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	421	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	422	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	63	72	70	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	63	165	65	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	63	219	59	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	63	114	67	63	68	1	0	Noise Barrier at 4 ft	56
Johnson Rd to Porter Way	420052026	3058	1744+00	7802 PACIFIC HWY E	SF	1	63	150	61	63	68	0	0	--	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	63	148	65	63	68	2	0	Noise Barrier at 4 ft	56
Johnson Rd to Porter Way	420061105	3093	1747+00	210 TO 212 70TH AV E	SF	1	63	317	56	63	68	0	0	--	--
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	63	191	64	63	68	1	0	Noise Barrier at 4 ft	55
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	63	497	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	63	645	52	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	63	439	59	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	6	63	536	53	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	12	63	589	51	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260180	3152	1754+00	6919 5TH STCT E	SF	1	63	614	57	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260020	3167	1756+00	6918 5TH STCT E	SF	1	63	626	57	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260010	3169	1756+00	6922 5TH STCT E	SF	1	63	594	57	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260170	3150	1754+00	6911 5TH STREET CT E	SF	1	63	655	52	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260030	3166	1756+00	6914 5TH STCT E	SF	1	63	670	52	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260160	3149	1754+00	6907 5TH STCT E	SF	1	63	698	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260040	3165	1755+00	6910 5TH STCT E	SF	1	63	718	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260050	3164	1755+00	6906 5TH STCT E	SF	1	63	759	48	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420052015	3142	1754+00	509 70TH AV	SF	1	63	415	59	63	68	0	0	--	--
Johnson Rd to Porter Way	420052011	3183	1760+00	615 70TH AV E	SF	1	63	505	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420052019	3174	1758+00	607 70TH AV E	SF	1	63	490	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061185	3176	1757+00	606 70TH AV E	SF	1	63	645	52	63	68	0	0	--	--
Johnson Rd to Porter Way	420061022	3187	1759+00	616 70TH AV E	SF	1	63	723	51	63	68	0	0	--	--
Porter Way to 10th St	420061178	3191	1760+00	624 70TH AV E	SF	1	63	742	51	63	68	0	0	--	--
Porter Way to 10th St	420052009	3211	1765+00	7303 PACIFIC HWY E	SF	1	63	479	58	63	68	0	0	--	--
Porter Way to 10th St	420053071	3257	1767+00	805 70TH AV E	SF	1	63	435	59	63	68	0	0	--	--
Porter Way to 10th St	420053042	3256	1769+00	817 70TH AV E	SF	1	63	375	60	63	68	0	0	--	--
Porter Way to 10th St	420061179	3202	1764+00	712 70TH AV E	SF	1	63	762	51	63	68	0	0	--	--
Porter Way to 10th St	420061030	3217	1766+00	726 70TH AV E	SF	1	63	723	51	63	68	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	63	659	52	63	68	0	0	--	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	65	594	52	65	71	0	0	--	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	65	468	54	65	71	0	0	--	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	65	519	53	65	71	0	0	--	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	63	448	54	63	68	0	0	--	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	65	436	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	65	453	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	65	461	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	65	470	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	65	465	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	65	410	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	65	426	52	65	71	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AVE E	SF	1	65	452	52	65	71	0	0	--	--
Johnson Rd to Porter Way	420052004	3117	1755+00	326 EMERALD ST	SF	1	65	921	54	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	740	56	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	744	56	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	65	696	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	217	63	65	71	0	0	--	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	180	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	174	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	177	64	65	71	0	0	--	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	65	253	62	65	71	0	0	--	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	166	63	65	71	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	165	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	65	234	61	65	71	0	0	--	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	65	190	62	65	71	0	0	--	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	65	383	55	65	71	0	0	--	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	65	405	55	65	71	0	0	--	--
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	65	350	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	260	57	65	71	0	0	--	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	65	364	53	65	71	0	0	--	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	65	458	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	313	59	65	71	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AVE	SF	1	65	314	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AVE	SF	1	65	322	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AVE	SF	1	65	334	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AVE	SF	1	65	339	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AVE	SF	1	65	331	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AVE	SF	1	65	306	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AVE	SF	1	65	266	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AVE	SF	1	65	243	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AVE	SF	1	65	190	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AVE	SF	1	65	147	63	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AVE	SF	1	65	115	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AVE	SF	1	65	92	66	65	71	1	0	Noise Barrier at 4 ft	55

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AVE E	SF	1	65	89	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AVE E	SF	1	65	82	67	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AVE E	SF	1	65	69	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AVE E	SF	1	65	78	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AVE E	SF	1	65	101	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AVE E	SF	1	65	138	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AVE E	SF	1	65	188	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AVE E	SF	1	65	449	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AVE E	SF	1	65	228	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AVE E	SF	1	65	264	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AVE E	SF	1	65	276	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AVE E	SF	1	65	285	55	65	71	0	0	--	--

Table E-7 Detailed Noise Assessment Results for the SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AVE E	SF	1	65	323	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AVE E	SF	1	65	350	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AVE E	SF	1	65	372	53	65	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	120	62	63	68	0	0	--	--
S 344th St to S 346th St	2121049078	1480	1598+00	1688 S 348TH ST	HOTEL	1	65	62	66	65	71	1	0	Noise Barrier at 4 ft	53
Porter Way to 10th St	420053048	3238	1767+00	7224 PACIFIC HWY E	HOSPITAL	1	65	96	68	65	71	1	0	Noise Barrier at 4 ft	56

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	63	243	62	63	68	0	0	--	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	63	310	61	63	68	0	0	--	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	66	221	61	66	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	63	67	70	63	68	0	1	Noise Barrier at 4 ft	59
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	63	345	60	63	68	0	0	--	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	63	281	62	63	68	0	0	--	--
S 364th St to S 373rd St	3221049016	1706	1684+00	36815 PACIFIC HWY S	CH	1	66	231	61	66	71	0	0	--	--
S 364th St to S 373rd St	3221049078	1717	1686+00	36903 PACIFIC HWY S	SF	1	63	164	65	63	68	1	0	Sound Insulation	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	63	69	70	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	63	200	64	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	63	358	56	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	2188203420	1782	1704+00	37226 1ST AVE SW	SF	1	63	390	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	63	318	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	3221049025	1843	1712+00	37600 PACIFIC HWY S	CEM	1	66	79	68	66	71	1	0	Noise Barrier at 4 ft	56
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	121	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	145	66	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	123	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	206	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	234	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	163	60	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	184	60	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	205	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	264	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	284	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	306	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	330	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	311	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	280	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	227	57	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	247	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	272	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	331	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	357	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	380	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	353	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	293	54	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	323	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	387	51	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	63	402	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	345	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	364	51	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	63	393	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	115	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	151	65	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	162	65	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	122	67	63	68	1	0	Noise Barrier at 4 ft	57
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	181	60	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	208	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	230	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	235	58	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	203	59	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	63	269	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	305	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	324	55	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	273	56	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	356	53	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	378	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	396	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	391	52	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	356	53	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	63	421	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	63	422	50	63	68	0	0	--	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	63	72	70	63	68	0	1	Noise Barrier at 4 ft	58
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	63	165	65	63	68	1	0	Sound Insulation	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	63	219	59	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	63	190	64	63	68	1	0	Noise Barrier at 4 ft	59
Johnson Rd to Porter Way	420052026	3058	1744+00	7802 PACIFIC HWY E	SF	1	63	134	61	63	68	0	0	--	--
Johnson Rd to Porter Way	420061054	3094	1746+00	222 TO 224 70TH AV E	MF	2	63	530	58	63	68	0	0	--	--
Johnson Rd to Porter Way	420061105	3093	1745+00	210 TO 212 70TH AV E	SF	1	63	678	52	63	68	0	0	--	--
Johnson Rd to Porter Way	420061075	3107	1746+00	304 70TH AV E	SF	1	63	593	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1757+00	6926 5TH ST E	MF	12	63	822	55	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1757+00	6926 5TH ST E	MF	12	63	994	49	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1755+00	6926 5TH ST E	MF	12	63	814	55	63	68	0	0	--	--
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	6	63	931	50	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	63	988	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260180	3152	1759+00	6919 5TH STCT E	SF	1	63	911	54	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260020	3167	1761+00	6918 5TH STCT E	SF	1	63	839	55	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260010	3169	1761+00	6922 5TH STCT E	SF	1	63	797	55	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260170	3150	1759+00	6911 5TH STREET CT E	SF	1	63	956	49	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260030	3166	1761+00	6914 5TH STCT E	SF	1	63	883	50	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260160	3149	1759+00	6907 5TH STCT E	SF	1	63	1006	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260040	3165	1761+00	6910 5TH STCT E	SF	1	63	935	48	63	68	0	0	--	--
Johnson Rd to Porter Way	6024260050	3164	1761+00	6906 5TH STCT E	SF	1	63	984	46	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Johnson Rd to Porter Way	420052015	3142	1757+00	509 70TH AV	SF	1	63	730	56	63	68	0	0	--	--
Johnson Rd to Porter Way	420052011	3183	1762+00	615 70TH AV E	SF	1	63	610	57	63	68	0	0	--	--
Johnson Rd to Porter Way	420052019	3174	1762+00	607 70TH AV E	SF	1	63	640	56	63	68	0	0	--	--
Johnson Rd to Porter Way	420061185	3176	1762+00	606 70TH AV E	SF	1	63	808	51	63	68	0	0	--	--
Johnson Rd to Porter Way	420061022	3187	1763+00	616 70TH AV E	SF	1	63	834	50	63	68	0	0	--	--
Porter Way to 10th St	420061178	3191	1764+00	624 70TH AV E	SF	1	63	809	51	63	68	0	0	--	--
Porter Way to 10th St	420052009	3211	1767+00	7303 PACIFIC HWY E	SF	1	63	478	58	63	68	0	0	--	--
Porter Way to 10th St	420053071	3257	1768+00	805 70TH AV E	SF	1	63	428	59	63	68	0	0	--	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	63	373	60	63	68	0	0	--	--
Porter Way to 10th St	420061179	3202	1766+00	712 70TH AV E	SF	1	63	772	51	63	68	0	0	--	--
Porter Way to 10th St	420061030	3217	1767+00	726 70TH AV E	SF	1	63	717	51	63	68	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	63	658	52	63	68	0	0	--	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	65	601	52	65	71	0	0	--	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	65	473	54	65	71	0	0	--	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	65	519	53	65	71	0	0	--	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	63	447	54	63	68	0	0	--	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	65	436	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	65	453	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	65	461	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	65	470	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	65	465	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	65	410	53	65	71	0	0	--	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	65	426	52	65	71	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AVE E	SF	1	65	452	52	65	71	0	0	--	--
Johnson Rd to Porter Way	420052004	3117	1755+00	326 EMERALD ST	SF	1	65	921	54	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	740	56	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	65	744	56	65	71	0	0	--	--
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	65	696	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	65	217	63	65	71	0	0	--	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	65	180	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	65	174	64	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	177	64	65	71	0	0	--	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	65	253	62	65	71	0	0	--	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	65	166	63	65	71	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	65	165	63	65	71	0	0	--	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	65	234	61	65	71	0	0	--	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	65	190	62	65	71	0	0	--	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	65	383	55	65	71	0	0	--	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	65	405	55	65	71	0	0	--	--
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	65	350	56	65	71	0	0	--	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	65	260	57	65	71	0	0	--	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	65	299	55	65	71	0	0	--	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	65	337	54	65	71	0	0	--	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	65	364	53	65	71	0	0	--	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	65	458	50	65	71	0	0	--	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	65	313	59	65	71	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AVE E	SF	1	65	314	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AVE E	SF	1	65	322	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AVE E	SF	1	65	334	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AVE E	SF	1	65	339	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AVE E	SF	1	65	331	58	65	71	0	0	--	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AVE E	SF	1	65	306	59	65	71	0	0	--	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AVE E	SF	1	65	266	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AVE E	SF	1	65	243	60	65	71	0	0	--	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AVE E	SF	1	65	190	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AVE E	SF	1	65	147	63	65	71	0	0	--	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AVE E	SF	1	65	115	65	65	71	0	0	--	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AVE E	SF	1	65	92	66	65	71	1	0	Noise Barrier at 4 ft	55

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AVE E	SF	1	65	89	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AVE E	SF	1	65	82	67	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AVE E	SF	1	65	69	68	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AVE E	SF	1	65	78	67	65	71	1	0	Noise Barrier at 4 ft	56
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AVE E	SF	1	65	101	66	65	71	1	0	Noise Barrier at 4 ft	55
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AVE E	SF	1	65	138	64	65	71	0	0	--	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AVE E	SF	1	65	188	62	65	71	0	0	--	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AVE E	SF	1	65	449	52	65	71	0	0	--	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AVE E	SF	1	65	228	56	65	71	0	0	--	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AVE E	SF	1	65	264	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AVE E	SF	1	65	276	55	65	71	0	0	--	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AVE E	SF	1	65	285	55	65	71	0	0	--	--

Table E-8 Detailed Noise Assessment Results for the SF 99-East Alternative With Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AVE E	SF	1	65	323	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AVE E	SF	1	65	350	54	65	71	0	0	--	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AVE E	SF	1	65	372	53	65	71	0	0	--	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	63	120	62	63	68	0	0	--	--
S 344th St to S 346th St	2121049078	1480	1598+00	1688 S 348TH ST	HOTEL	1	65	62	66	65	71	1	0	Noise Barrier at 4 ft	53
Porter Way to 10th St	420053048	3238	1767+00	7224 PACIFIC HWY E	HOSPITAL	1	65	96	68	65	71	1	0	Noise Barrier at 4 ft	56

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-9 Detailed Noise Assessment Results for the Preferred Fife Station

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	60	162	58	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	60	236	56	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	60	81	67	60	66	0	1	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	60	113	65	60	66	1	0	Noise Barrier at 4 ft	54
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	61	96	72	61	67	0	1	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	60	373	53	60	66	0	0	--	--
62nd Ave E to 58th Ave E	0420063060	3616	1963+00	1322 59TH AV E	SF	1	60	180	64	60	66	1	0	Noise Barrier at 4 ft	56
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	60	282	57	60	66	0	0	--	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	60	279	57	60	66	0	0	--	--

Table E-9 Detailed Noise Assessment Results for the Preferred Fife Station (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	60	272	62	60	66	1	0	Noise Barrier at 4 ft	56
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	60	270	62	60	66	1	0	Noise Barrier at 4 ft	56
Fife Split to 54th Ave E	9315000033	3652	2002+00	5615 15TH ST E	SF	1	60	286	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000020	3648	2000+00	5701 15TH ST E	SF	1	60	263	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	60	270	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000120	3658	2003+00	5405 15TH ST E	HOTEL	1	60	443	59	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000130	3665	2005+00	5518 15TH ST E	SF	1	60	420	59	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000140	3671	2006+00	5510 E 15TH ST	SF	1	60	425	59	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000040	3670	2006+00	5509 15TH ST E	SF	1	60	281	62	60	66	1	0	Noise Barrier at 4 ft	56
Fife Split to 54th Ave E	9315000050	3674	2007+00	5503 15TH ST E	SF	1	60	271	62	60	66	1	0	Noise Barrier at 4 ft	56
Fife Split to 54th Ave E	9315000060	3679	2008+00	5417 15TH ST E	SF	1	60	271	62	60	66	1	0	Noise Barrier at 4 ft	56
Fife Split to 54th Ave E	9315000070	3689	2010+00	1409 54TH AV E	CH	1	61	246	59	61	67	0	0	--	--

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-10 Detailed Noise Assessment Results for the Fife 54th Avenue Station Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	60	162	60	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	60	236	58	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	60	81	69	60	66	0	1	Noise Barrier at 4 ft	57
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	60	118	67	60	66	0	1	Noise Barrier at 4 ft	56
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	61	111	66	61	67	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	60	379	55	60	66	0	0	--	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	60	297	61	60	66	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	60	294	61	60	66	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	60	287	61	60	66	1	0	Noise Barrier at 4 ft	55

Table E-10 Detailed Noise Assessment Results for the Fife 54th Avenue Station Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	60	285	61	60	66	1	0	Noise Barrier at 4 ft	55
Fife Split to 54th Ave E	9315000033	3652	1971+00	5615 15TH ST E	SF	1	60	298	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	60	276	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	60	285	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	60	451	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	60	423	55	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	60	427	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	60	283	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	60	273	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	60	274	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000070	3689	1980+00	1409 54TH AV E	CH	1	61	225	53	61	67	0	0	--	--
54th Ave E to Willow Rd E	0320018016**	3756	1991+00	5115 PACIFIC HWY E	HOTEL	1	61	51	62	61	66	1	0	Noise Barrier at 4 ft	49

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

**Parcel #0320018016 (King's Motor Inn) is an acquisition in the Pacific Highway and Pacific Highway Median Alternative.

Table E-11 Detailed Noise Assessment Results for the Fife 54th Span Station Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	60	162	60	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	60	236	58	60	66	0	0	--	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	60	81	69	60	66	0	1	Noise Barrier at 4 ft	57
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	60	118	67	60	66	0	1	Noise Barrier at 4 ft	56
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	61	111	66	61	67	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	60	379	55	60	66	0	0	--	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	60	297	61	60	66	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	60	294	61	60	66	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	60	287	61	60	66	1	0	Noise Barrier at 4 ft	55
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	60	285	61	60	66	1	0	Noise Barrier at 4 ft	55
Fife Split to 54th Ave E	9315000033	3652	1971+00	5615 15TH ST E	SF	1	60	298	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	60	276	57	60	66	0	0	--	--

Table E-11 Detailed Noise Assessment Results for the Fife 54th Span Station Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	60	285	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	60	451	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	60	423	55	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	60	427	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	60	283	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	60	273	57	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	60	274	54	60	66	0	0	--	--
Fife Split to 54th Ave E	9315000070	3689	1980+00	1409 54TH AV E	CH	1	61	225	53	61	67	0	0	--	--
54th Ave E to Willow Rd E	0320018016	3756	1991+00	5115 PACIFIC HWY E	HOTEL	1	61	51	62	61	66	1	0	Noise Barrier at 4 ft	49

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

**Parcel #0320018016 (King's Motor Inn) is an acquisition in the Pacific Highway and Pacific Highway Median Alternative.

Table E-12 Detailed Noise Assessment Results for the Fife Pacific Highway Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	65	615	57	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	65	520	53	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	65	612	57	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	65	612	57	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	65	626	57	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	65	553	53	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	65	558	53	65	74	0	0	--	--
Alexander Ave E to 34th Avenue E	0320111068	4020	2067+00	3700 PACIFIC HWY E	SCHOOL	1	65	443	57	65	71	0	0	--	--
34th Avenue E to Puyallup River	0320111003	4107	2091+00	3100 PACIFIC HWY E	HOTEL	1	65	140	66	65	74	1	0	Noise Barrier at 4 ft	55
Alexander Ave E to 34th Avenue E	0320024032	4064	2078+00	3401 PACIFIC HWY E	HOTEL	1	64	137	66	64	69	1	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320024019	4042	2075+00	3501 PACIFIC HWY E	MF	96	64	152	65	64	69	96	0	Noise Barrier at 4 ft	57

Table E-12 Detailed Noise Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Alexander Ave E to 34th Avenue E	0320024106	4032	2072+00	3518 PACIFIC HWY E	HOTEL	1	64	44	72	64	69	0	1	Noise Barrier at 4 ft	60
Alexander Ave E to 34th Avenue E	0320013089	4011	2064+00	3801 PACIFIC HWY E	HOTEL	1	64	145	66	64	69	1	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	64	117	67	64	69	1	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320122071	4005	2064+00	3812 PACIFIC HWY E	SF	1	64	144	66	64	69	1	0	Noise Barrier at 4 ft	57
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	61	275	57	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	61	278	57	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	61	180	64	61	66	20	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	61	187	64	61	66	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	167	65	61	66	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	61	311	56	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	247	58	61	66	0	0	--	--

Table E-12 Detailed Noise Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	249	58	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	61	129	66	61	66	1	0	Noise Barrier at 4 ft	57
Willow Rd E to Alexander Ave E	8905000243	3885	2036+00	1428 47TH AV E	SF	1	61	182	60	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000242	3884	2036+00	1420 47TH AV E	SF	1	61	238	58	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000380	3862	2035+00	1417 47TH AV E	SF	1	61	273	57	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000241	3883	2036+00	1412 47TH AV E	SF	1	61	303	55	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	61	303	53	61	66	0	0	--	--
34th Avenue E to Puyallup River	0320112045	4121	2097+00	2820 PACIFIC HWY E	HOTEL	1	65	132	66	65	74	1	0	Noise Barrier at 4 ft	55

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-13 Detailed Noise Assessment Results for the Fife Median Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Levels (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	65	669	56	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	65	574	53	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	65	666	56	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	65	666	56	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	65	680	56	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	65	608	52	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	65	612	52	65	74	0	0	--	--
Alexander Ave E to 34th Avenue E	0320111068	4020	2067+00	3700 PACIFIC HWY E	SCHOOL	1	65	497	56	65	71	0	0	--	--
34th Avenue E to Puyallup River	0320111003	4107	2091+00	3100 PACIFIC HWY E	HOTEL	1	65	140	66	65	74	1	0	Noise Barrier at 4 ft	55

Table E-13 Detailed Noise Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Levels (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Alexander Ave E to 34th Avenue E	0320024032	4064	2078+00	3401 PACIFIC HWY E	HOTEL	1	64	124	66	64	69	1	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320024019	4042	2075+00	3501 PACIFIC HWY E	MF	96	64	110	67	64	69	96	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320024106	4032	2072+00	3518 PACIFIC HWY E	HOTEL	1	64	98	68	64	69	1	0	Noise Barrier at 4 ft	58
Alexander Ave E to 34th Avenue E	0320013089	4011	2064+00	3801 PACIFIC HWY E	HOTEL	1	64	89	68	64	69	1	0	Noise Barrier at 4 ft	58
Alexander Ave E to 34th Avenue E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	64	172	64	64	69	1	0	Noise Barrier at 4 ft	57
Alexander Ave E to 34th Avenue E	0320122071	4005	2064+00	3812 PACIFIC HWY E	SF	1	64	199	64	64	69	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	61	329	56	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	61	333	56	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	61	234	63	61	66	20	0	Noise Barrier at 4 ft	56

Table E-13 Detailed Noise Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Levels (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	61	242	62	61	66	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	222	63	61	66	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	61	366	55	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	301	57	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	61	303	57	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	61	74	69	61	66	0	1	Noise Barrier at 4 ft	58
Willow Rd E to Alexander Ave E	8905000243	3885	2036+00	1428 47TH AV E	SF	1	61	127	62	61	66	1	0	Noise Barrier at 4 ft	52
Willow Rd E to Alexander Ave E	8905000242	3884	2036+00	1420 47TH AV E	SF	1	61	183	60	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000380	3862	2035+00	1417 47TH AV E	SF	1	61	218	59	61	66	0	0	--	--

Table E-13 Detailed Noise Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Levels (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	8905000241	3883	2036+00	1412 47TH AV E	SF	1	61	248	56	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	61	248	58	61	66	0	0	--	--
34th Avenue E to Puyallup River	0320112045	4121	2097+00	2820 PACIFIC HWY E	HOTEL	1	65	132	66	65	74	1	0	Noise Barrier at 4 ft	55

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-14 Detailed Noise Assessment Results for the Fife I-5 Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	65	88	68	65	74	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	65	178	60	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	65	90	68	65	74	24	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	20	65	91	68	65	74	20	0	Noise Barrier at 4 ft	56
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	65	75	69	65	74	12	0	Noise Barrier at 4 ft	57
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	65	148	61	65	74	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	65	142	61	65	74	0	0	--	--
Alexander Ave E to 34th Avenue E	0320111068	4020	2071+00	3700 PACIFIC HWY E	SCHOOL	1	65	159	63	65	71	0	0	--	--
34th Avenue E to Puyallup River	0320111003	4107	2094+00	3100 PACIFIC HWY E	HOTEL	1	65	199	64	65	74	0	0	--	--
Alexander Ave E to 34th Avenue E	0320024032	4064	2082+00	3401 PACIFIC HWY E	HOTEL	1	64	647	56	64	69	0	0	--	--
Alexander Ave E to 34th Avenue E	0320024019	4042	2078+00	3501 PACIFIC HWY E	MF	96	64	691	56	64	69	0	0	--	--

Table E-14 Detailed Noise Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Alexander Ave E to 34th Avenue E	0320024106	4032	2075+00	3518 PACIFIC HWY E	HOTEL	1	64	507	58	64	69	0	0	--	--
Alexander Ave E to 34th Avenue E	0320013089	4011	2068+00	3801 PACIFIC HWY E	HOTEL	1	64	799	55	64	69	0	0	--	--
Alexander Ave E to 34th Avenue E	0320122058	4012	2068+00	3812 PACIFIC HWY E	SF	1	64	516	58	64	69	0	0	--	--
Alexander Ave E to 34th Avenue E	0320122071	4005	2067+00	3812 PACIFIC HWY E	SF	1	64	498	58	64	69	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	61	425	54	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	61	423	55	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	20	61	522	58	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	24	61	513	58	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	61	535	58	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	61	391	55	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	61	456	54	61	66	0	0	--	--

Table E-14 Detailed Noise Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	61	453	54	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	61	806	55	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000243	3885	2034+00	1428 47TH AV E	SF	1	61	790	51	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000242	3884	2034+00	1420 47TH AV E	SF	1	61	841	50	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000380	3862	2033+00	1417 47TH AV E	SF	1	61	814	50	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000241	3883	2034+00	1412 47TH AV E	SF	1	61	901	48	61	66	0	0	--	--
Willow Rd E to Alexander Ave E	8905000510	3848	2031+00	1416 WILLOW RD E	SF	1	61	733	51	61	66	0	0	--	--
34th Avenue E to Puyallup River	0320112045	4121	2200+00	2820 PACIFIC HWY E	HOTEL	1	65	132	66	65	74	1	0	Noise Barrier at 4 ft	55

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-15 Detailed Noise Assessment Results for the Preferred Tacoma 25th Street-West Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
E Portland Ave to East L St	4715011101	4280	2253+00	1425 E 27TH ST	HOTEL	1	60	78	69	60	66	0	1	Noise Barrier at 4 ft + Crossover Mitigation	58
East L St to East G St	2076360040	4364	2268+00	1112 E 26TH ST	SF	1	60	416	59	60	66	0	0	--	--
East L St to East G St	2076360020	4376	2269+00	1106 E 26TH ST	SF	1	60	409	59	60	66	0	0	--	--
E Portland Ave to East L St	2076370030	4345	2264+00	1211 E 26TH ST	SF	1	60	220	59	60	66	0	0	--	--
E Portland Ave to East L St	4715010600	4342	2264+00	1220 PUYALLUP AV	HOTEL	1	60	83	69	60	66	0	1	Noise Barrier at 4 ft	56
East G St to East D St	2076240011	4471	2292+00	2611 EAST E ST	HOTEL	1	62	415	59	62	67	0	0	--	--
E Portland Ave to East L St	4715010850	4310	2259+00	1320 E 26TH ST	SF	1	60	238	63	60	66	1	0	Sound Insulation	--
East G St to East D St	2075210034	4493	2289+00	3520 214TH PL SE	MF	115	62	49	59	62	67	0	0	--	--

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-16 Detailed Noise Assessment Results for the Tacoma 25th Street-East Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
E Portland Ave to East L St	4715011101	4280	2253+00	1425 E 27TH ST	HOTEL	1	60	81	69	60	66	0	1	Noise Barrier at 4 ft + Crossover Mitigation	57
East L St to East G St	2076360040	4364	2268+00	1112 E 26TH ST	SF	1	60	411	59	60	66	0	0	--	--
East L St to East G St	2076360020	4376	2269+00	1106 E 26TH ST	SF	1	60	405	59	60	66	0	0	--	--
E Portland Ave to East L St	2076370030	4345	2264+00	1211 E 26TH ST	SF	1	60	218	59	60	66	0	0	--	--
E Portland Ave to East L St	4715010600	4342	2263+00	1220 PUYALLUP AV	HOTEL	1	60	85	69	60	66	0	1	Noise Barrier at 4 ft	56
East G St to East D St	2076240011	4471	2289+00	2611 EAST E ST	HOTEL	1	62	458	59	62	67	0	0	--	--
E Portland Ave to East L St	4715010850	4310	2258+00	1320 E 26TH ST	SF	1	60	237	63	60	66	1	0	Sound Insulation	--
East G St to East D St	2075210034	4493	2289+00	3520 214TH PL SE	MF	115	62	392	46	62	67	0	0	--	--

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-17 Detailed Noise Assessment Results for the Tacoma Close to Sounder Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
E Portland Ave to East L St	4715011101	4280	2254+00	1425 E 27TH ST	HOTEL	1	60	83	75	60	66	0	1	Noise Barrier at 4 ft + Crossover Mitigation	59
East L St to East G St	2076360040	4364	2269+00	1112 E 26TH ST	SF	1	60	260	56	60	66	0	0	--	--
East L St to East G St	2076360020	4376	2270+00	1106 E 26TH ST	SF	1	60	248	57	60	66	0	0	--	--
E Portland Ave to East L St	2076370030	4345	2265+00	1211 E 26TH ST	SF	1	60	101	62	60	66	1	0	Sound Insulation	--
E Portland Ave to East L St	4715010600	4342	2265+00	1220 PUYALLUP AV	HOTEL	1	60	193	56	60	66	0	0	--	--
East G St to East D St	2076240011	4471	2293+00	2611 EAST E ST	HOTEL	1	62	331	61	62	67	0	0	--	--
E Portland Ave to East L St	4715010850	4310	2260+00	1320 E 26TH ST	SF	1	60	227	57	60	66	0	0	--	--
East G St to East D Street	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	62	134	53	62	67	0	0	--	--

*Residential noise levels are in Ldn and institutional noise levels are in Leq.

Table E-18 Detailed Noise Assessment Results for the Tacoma 26th Street Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Existing Noise Level* (dBA)	Distance to Building (ft)	Project Noise Level (dBA)	FTA Moderate Impact Criteria (dBA)	FTA Severe Impact Criteria (dBA)	# of Moderate Impacts	# of Severe Impacts	Mitigation Type	Mitigated Project Noise Level (dBA)
E Portland Ave to East L St	4715011101	4280	2254+00	1425 E 27TH ST	HOTEL	1	58	157	58	60	66	0	0	--	--
East L St to East G St	2076360040	4364	2269+00	1112 E 26TH ST	SF	1	60	252	56	60	66	0	0	--	--
East L St to East G St	2076360020	4376	2270+00	1106 E 26TH ST	SF	1	60	240	57	60	66	0	0	--	--
E Portland Ave to East L St	2076370030	4345	2265+00	1211 E 26TH ST	SF	1	60	93	63	60	66	1	0	Sound Insulation	--
E Portland Ave to East L St	4715010600	4342	2265+00	1220 PUYALLUP AV	HOTEL	1	60	201	56	60	66	0	0	--	--
East G St to East D St	2076240011	4471	2293+00	2611 EAST E ST	HOTEL	1	62	41	79	62	67	0	1	Noise Barrier at 4 ft + Crossover Mitigation	59
E Portland Ave to East L St	4715010850	4310	2260+00	1320 E 26TH ST	SF	1	60	223	57	60	66	0	0	--	--
East G St to East D St	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	62	424	46	62	67	0	0	--	--

*Residential noise levels are in Ldn and institutional noise levels are in Leq.



ATTACHMENT F

Detailed Vibration Assessment Results

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Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1519+00	2101 S 324TH ST	SF	1	80	53	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1519+00	2101 S 324TH ST	SF	1	132	51	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1520+00	2101 S 324TH ST	SF	1	104	52	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1520+00	2101 S 324TH ST	SF	1	112	52	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	117	52	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	111	52	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1522+00	2101 S 324TH ST	SF	1	120	51	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1522+00	2101 S 324TH ST	SF	1	127	51	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	123	51	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	112	52	10	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	1512+00	2101 S 324TH ST	SF	1	101	52	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1512+00	2101 S 324TH ST	SF	1	140	51	10	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	174	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	205	50	10	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	1513+00	2101 S 324TH ST	SF	1	153	51	10	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	1513+00	2101 S 324TH ST	SF	1	188	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1512+00	2101 S 324TH ST	SF	1	240	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1513+00	2101 S 324TH ST	SF	1	253	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1513+00	2101 S 324TH ST	SF	1	285	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1514+00	2101 S 324TH ST	SF	1	304	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1514+00	2101 S 324TH ST	SF	1	329	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1515+00	2101 S 324TH ST	SF	1	359	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1515+00	2101 S 324TH ST	SF	1	370	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1516+00	2101 S 324TH ST	SF	1	386	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1517+00	2101 S 324TH ST	SF	1	410	48	10	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1518+00	2101 S 324TH ST	SF	1	418	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1519+00	2101 S 324TH ST	SF	1	425	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1520+00	2101 S 324TH ST	SF	1	439	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1520+00	2101 S 324TH ST	SF	1	437	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	430	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	426	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1522+00	2101 S 324TH ST	SF	1	390	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1522+00	2101 S 324TH ST	SF	1	385	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	358	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	322	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	271	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1523+00	2101 S 324TH ST	SF	1	209	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	209	50	10	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	191	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	238	50	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	260	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	282	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	304	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1512+00	2101 S 324TH ST	SF	1	367	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1512+00	2101 S 324TH ST	SF	1	387	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	325	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1514+00	2101 S 324TH ST	SF	1	461	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1520+00	2101 S 324TH ST	SF	1	532	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	529	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1521+00	2101 S 324TH ST	SF	1	525	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1522+00	2101 S 324TH ST	SF	1	514	47	10	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	310	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	340	49	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	346	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	371	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	422	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	431	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1512+00	2101 S 324TH ST	SF	1	509	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1511+00	2101 S 324TH ST	SF	1	550	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1513+00	2101 S 324TH ST	SF	1	480	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	393	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	463	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	441	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	485	47	10	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	1510+00	2101 S 324TH ST	SF	1	579	47	10	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1524+00	2101 S 324TH ST	SF	1	111	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1525+00	2101 S 324TH ST	SF	1	119	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1525+00	2101 S 324TH ST	SF	1	124	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1526+00	2101 S 324TH ST	SF	1	130	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1526+00	2101 S 324TH ST	SF	1	127	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1527+00	2101 S 324TH ST	SF	1	130	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1528+00	2101 S 324TH ST	SF	1	139	55	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1527+00	2101 S 324TH ST	SF	1	136	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1529+00	2101 S 324TH ST	SF	1	138	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1530+00	2101 S 324TH ST	SF	1	137	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1531+00	2101 S 324TH ST	SF	1	129	56	13	72	--
Burning Tree Blvd to 330th St	1621049037	1110	1532+00	2101 S 324TH ST	SF	1	124	56	13	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Burning Tree Blvd to 330th St	1621049037	1110	1532+00	2101 S 324TH ST	SF	1	123	56	13	72	--
330th St to 333rd St	1621049037	1110	1535+00	2101 S 324TH ST	SF	1	126	56	13	72	--
324th St to Burning Tree Blvd	1621049037	1110	1507+00	2101 S 324TH ST	SF	1	412	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1507+00	2101 S 324TH ST	SF	1	398	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1507+00	2101 S 324TH ST	SF	1	454	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	442	48	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	504	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	484	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1507+00	2101 S 324TH ST	SF	1	509	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1509+00	2101 S 324TH ST	SF	1	511	47	10	72	--
324th St to Burning Tree Blvd	1621049037	1110	1508+00	2101 S 324TH ST	SF	1	530	47	10	72	--
330th St to 333rd St	7978800682	1174	1534+00	33003 24TH AVE S	SF	1	293	54	13	72	--
330th St to 333rd St	7978800679	1215	1538+00	33035 24TH AVE S	SF	1	198	55	13	72	--
330th St to 333rd St	7978800681	1225	1540+00	33049 24TH AVE S	SF	1	177	55	13	72	--

Table F-1 Detailed Vibration Assessment Results for the Preferred Federal Way Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
330th St to 333rd St	7978200164	1232	1540+00	33111 24TH AVE S	SF	1	157	55	13	72	--
330th St to 333rd St	7978200165	1242	1541+00	33211 24TH AVE S	SF	1	139	56	13	72	--
330th St to 333rd St	7978200167	1250	1542+00	33217 24TH AVE S	SF	1	142	55	13	72	--
330th St to 333rd St	7978200160	1271	1543+00	2244 S 333RD ST	SF	1	81	57	13	72	--
330th St to 333rd St	7978200166	1269	1544+00	2238 S 333RD ST	SF	1	195	55	13	72	--
333rd St to 336th St	7978200184	1277	1545+00	2237 S 333RD ST	MF	4	151	55	13	72	--
333rd St to 336th St	7978200182	1281	1546+00	2221 S 333RD ST	MF	4	290	54	13	72	--
333rd St to 336th St	7978200182	1281	1548+00	2221 S 333RD ST	MF	6	252	55	13	72	--
333rd St to 336th St	7978200182	1281	1549+00	2221 S 333RD ST	MF	5	248	55	13	72	--
333rd St to 336th St	2897600000	1311	1549+00	2210 S 336TH ST	MF	5	248	55	13	72	--
333rd St to 336th St	2897600000	1311	1551+00	2210 S 336TH ST	MF	5	197	56	13	72	--
333rd St to 336th St	2897600000	1311	1551+00	2210 S 336TH ST	MF	5	280	55	13	72	--
333rd St to 336th St	2897600000	1311	1553+00	2210 S 336TH ST	MF	5	367	54	13	72	--
333rd St to 336th St	2897600000	1311	1551+00	2210 S 336TH ST	MF	5	393	54	13	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3889.21997070312+00	2101 S 324TH ST	SF	1	304	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3783.97998046875+00	2101 S 324TH ST	SF	1	301	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3510.76000976562+00	2101 S 324TH ST	SF	1	195	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3475.09008789062+00	2101 S 324TH ST	SF	1	166	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3423.1298828125+00	2101 S 324TH ST	SF	1	146	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3380.59008789062+00	2101 S 324TH ST	SF	1	123	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3328.30004882812+00	2101 S 324TH ST	SF	1	93	57	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2954.78002929687+00	2101 S 324TH ST	SF	1	57	58	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2892.43994140625+00	2101 S 324TH ST	SF	1	62	58	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3780.59008789062+00	2101 S 324TH ST	SF	1	253	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3778.75+00	2101 S 324TH ST	SF	1	209	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3856.11010742187+00	2101 S 324TH ST	SF	1	260	54	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3836.35009765625+00	2101 S 324TH ST	SF	1	199	55	55	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	3836.88989257812+00	2101 S 324TH ST	SF	1	162	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3835.419921875+00	2101 S 324TH ST	SF	1	120	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3830.93994140625+00	2101 S 324TH ST	SF	1	81	57	55	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	3745.8798828125+00	2101 S 324TH ST	SF	1	111	57	55	72	--
324th St to Burning Tree Blvd	162104UNKN	1100	3739.25+00	2101 S 324TH ST	SF	1	76	58	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3511.86010742187+00	2101 S 324TH ST	SF	1	98	57	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3474.919921875+00	2101 S 324TH ST	SF	1	115	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3433.080078125+00	2101 S 324TH ST	SF	1	141	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3384.01000976562+00	2101 S 324TH ST	SF	1	176	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3331.75+00	2101 S 324TH ST	SF	1	199	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3277.13989257812+00	2101 S 324TH ST	SF	1	223	55	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3228.1298828125+00	2101 S 324TH ST	SF	1	254	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3184.34008789062+00	2101 S 324TH ST	SF	1	272	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3143.07006835937+00	2101 S 324TH ST	SF	1	284	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3103.7900390625+00	2101 S 324TH ST	SF	1	298	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3058.39990234375+00	2101 S 324TH ST	SF	1	281	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3023.6201171875+00	2101 S 324TH ST	SF	1	289	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2982.01000976562+00	2101 S 324TH ST	SF	1	277	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2946.02001953125+00	2101 S 324TH ST	SF	1	254	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2918.93994140625+00	2101 S 324TH ST	SF	1	211	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	2905.28002929687+00	2101 S 324TH ST	SF	1	154	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3874.85009765625+00	2101 S 324TH ST	SF	1	72	57	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3655.40991210937+00	2101 S 324TH ST	SF	1	87	57	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3672.419921875+00	2101 S 324TH ST	SF	1	112	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3758.8701171875+00	2101 S 324TH ST	SF	1	69	57	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3525.080078125+00	2101 S 324TH ST	SF	1	187	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3197.82006835937+00	2101 S 324TH ST	SF	1	356	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3154.14990234375+00	2101 S 324TH ST	SF	1	375	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3114.92993164062+00	2101 S 324TH ST	SF	1	388	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3065.07006835937+00	2101 S 324TH ST	SF	1	400	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3873.71997070312+00	2101 S 324TH ST	SF	1	112	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3866.69995117187+00	2101 S 324TH ST	SF	1	151	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3755.23999023437+00	2101 S 324TH ST	SF	1	96	57	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3764.14990234375+00	2101 S 324TH ST	SF	1	134	56	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3672.1201171875+00	2101 S 324TH ST	SF	1	155	55	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3692.32006835937+00	2101 S 324TH ST	SF	1	180	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3573.47998046875+00	2101 S 324TH ST	SF	1	231	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3576.30004882812+00	2101 S 324TH ST	SF	1	280	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3560.03002929687+00	2101 S 324TH ST	SF	1	201	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3765.35009765625+00	2101 S 324TH ST	SF	1	166	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3682.73999023437+00	2101 S 324TH ST	SF	1	217	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3734.39990234375+00	2101 S 324TH ST	SF	1	215	55	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3688.72998046875+00	2101 S 324TH ST	SF	1	250	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3575.830078125+00	2101 S 324TH ST	SF	1	320	54	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2788.21997070312+00	2101 S 324TH ST	SF	1	85	55	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2746.72998046875+00	2101 S 324TH ST	SF	1	102	55	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2697.09008789062+00	2101 S 324TH ST	SF	1	115	55	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Burning Tree Blvd to 330th St	1621049037	1110	2658.15991210937+00	2101 S 324TH ST	SF	1	127	55	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2601.080078125+00	2101 S 324TH ST	SF	1	130	54	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2556.1201171875+00	2101 S 324TH ST	SF	1	138	54	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2410.26000976562+00	2101 S 324TH ST	SF	1	152	52	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2512.9599609375+00	2101 S 324TH ST	SF	1	147	52	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2332.86010742187+00	2101 S 324TH ST	SF	1	150	52	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2170.97998046875+00	2101 S 324TH ST	SF	1	149	52	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2076.77001953125+00	2101 S 324TH ST	SF	1	141	52	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2033.2099609375+00	2101 S 324TH ST	SF	1	135	53	55	72	--
Burning Tree Blvd to 330th St	1621049037	1110	2000.05004882812+00	2101 S 324TH ST	SF	1	134	53	55	72	--
330th St to 333rd St	1621049037	1110	1764.51000976562+00	2101 S 324TH ST	SF	1	136	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3854.78002929687+00	2101 S 324TH ST	SF	1	244	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3885.5400390625+00	2101 S 324TH ST	SF	1	242	54	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
324th St to Burning Tree Blvd	1621049037	1110	3879.6298828125+00	2101 S 324TH ST	SF	1	315	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3773.78002929687+00	2101 S 324TH ST	SF	1	240	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3722.02001953125+00	2101 S 324TH ST	SF	1	295	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3774.7900390625+00	2101 S 324TH ST	SF	1	298	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3773.75+00	2101 S 324TH ST	SF	1	332	53	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3686.96997070312+00	2101 S 324TH ST	SF	1	285	54	55	72	--
324th St to Burning Tree Blvd	1621049037	1110	3693.90991210937+00	2101 S 324TH ST	SF	1	316	54	55	72	--
330th St to 333rd St	7978800682	1174	1794.76000976562+00	33003 24TH AVE S	SF	1	303	51	55	72	--
330th St to 333rd St	7978800679	1215	1412.09997558593+00	33035 24TH AVE S	SF	1	205	52	55	72	--
330th St to 333rd St	7978800681	1225	1275.07995605468+00	33049 24TH AVE S	SF	1	181	52	55	72	--
330th St to 333rd St	7978200164	1232	1207.98999023437+00	33111 24TH AVE S	SF	1	159	52	55	72	--
330th St to 333rd St	7978200165	1242	1120.9599609375+00	33211 24TH AVE S	SF	1	139	52	55	72	--

Table F-2 Detailed Vibration Assessment Results for the Federal Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
330th St to 333rd St	7978200167	1250	1069.06005859375+00	33217 24TH AVE S	SF	1	142	52	55	72	--
330th St to 333rd St	7978200160	1271	895.932983398437+00	2244 S 333RD ST	SF	1	81	54	55	72	--
330th St to 333rd St	7978200166	1269	887.590026855468+00	2238 S 333RD ST	SF	1	195	52	55	72	--
333rd St to 336th St	7978200184	1277	689.815979003906+00	2237 S 333RD ST	MF	4	151	52	55	72	--
333rd St to 336th St	7978200182	1281	716.846984863281+00	2221 S 333RD ST	MF	4	290	51	55	72	--
333rd St to 336th St	7978200182	1281	507.988006591796+00	2221 S 333RD ST	MF	6	252	52	55	72	--
333rd St to 336th St	7978200182	1281	455.350006103515+00	2221 S 333RD ST	MF	5	248	52	55	72	--
333rd St to 336th St	2897600000	1311	407.96499633789+00	2210 S 336TH ST	MF	5	248	52	55	72	--
333rd St to 336th St	2897600000	1311	267.829986572265+00	2210 S 336TH ST	MF	5	197	53	55	72	--
333rd St to 336th St	2897600000	1311	324.582000732421+00	2210 S 336TH ST	MF	5	280	52	55	72	--
333rd St to 336th St	2897600000	1311	407.769989013671+00	2210 S 336TH ST	MF	5	367	51	55	72	--
333rd St to 336th St	2897600000	1311	432.509002685546+00	2210 S 336TH ST	MF	5	393	51	55	72	--

Table F-3 Detailed Vibration Assessment Results for the SF Enchanted Parkway Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 356th St to S 359th St	2821049070	1622	1631+00	35810 16TH AVE S	MF	8	48	71	50	72	--
S 356th St to S 359th St	2821049070	1622	1633+00	35810 16TH AVE S	MF	32	94	61	40	72	--
S 356th St to S 359th St	2821049070	1622	1634+00	35810 16TH AVE S	MF	32	91	56	40	72	--
S 356th St to S 359th St	2821049070	1622	1635+00	35810 16TH AVE S	MF	32	103	55	10	72	--
S 356th St to S 359th St	2821049070	1622	1636+00	35810 16TH AVE S	MF	24	134	55	10	72	--
S 356th St to S 359th St	2821049070	1622	1637+00	35810 16TH AVE S	MF	36	194	54	10	72	--
S 356th St to S 359th St	2821049070	1622	1638+00	35810 16TH AVE S	MF	36	52	65	50	72	--
S 359th St to S 364th Way	2821049134	1647	1640+00	1625 S 359TH ST	SF	1	84	58	40	72	--
S 359th St to S 364th Way	2821049140	1646	1639+00	1615 S 359TH ST	SF	1	173	54	10	72	--
S 359th St to S 364th Way	2821049110	1645	1639+00	35906 16TH AVE S	SF	1	320	53	10	72	--
S 359th St to S 364th Way	2821049140	1646	1640+00	1615 S 359TH ST	SF	1	193	54	10	72	--
S 359th St to S 364th Way	2821049115	1662	1641+00	35926 16TH AVE S	SF	1	242	54	10	72	--
S 359th St to S 364th Way	2821049190	1668	1644+00	36010 16TH AVE S	SF	1	178	54	10	72	--
11th Pl S to S 372nd Way	3221049077	1723	1824+00	36920 12TH AVE S	SF	1	238	52	10	72	--
11th Pl S to S 372nd Way	3221049080	1731	1826+00	37006 12TH AVE S	SF	1	146	53	10	72	--
11th Pl S to S 372nd Way	3221049007	1746	1832+00	37107 12TH AVE S	SF	1	288	48	31.5	72	--

Table F-3 Detailed Vibration Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
11th Pl S to S 372nd Way	3221049128	1750	1832+00	37125 12TH AVE S	SF	1	132	56	31.5	72	--
11th Pl S to S 372nd Way	3221049133	1757	1832+00	1020 S 372ND WAY	SF	1	204	51	31.5	72	--
S 372nd Way to S 376th St	3221049121	1776	1835+00	1021 S 372ND WAY	SF	1	150	54	31.5	72	--
S 372nd Way to S 376th St	3221049121	1776	1837+00	1021 S 372ND WAY	SF	1	283	48	31.5	72	--
S 372nd Way to S 376th St	3221049081	1790	1839+00	831 S 373RD PL	SF	1	203	52	10	72	--
S 372nd Way to S 376th St	3221049122	1801	1840+00	819 S 373RD PL	SF	1	121	53	10	72	--
King CoLine to Comet St	3063	Federal Way I-5	1886+00	1917.632	SF	1	323	42	10	72	--
Comet St to Porter Way	3117	Federal Way I-5	1892+00	1423.671	SF	1	285	43	10	72	--
Comet St to Porter Way	3130	Federal Way I-5	1894+00	1156.515	SF	1	282	43	10	72	--
Comet St to Porter Way	3130	Federal Way I-5	1895+00	1130.463	SF	1	315	42	10	72	--
Comet St to Porter Way	3143	Federal Way I-5	1896+00	1027.89	SF	1	339	42	10	72	--
10th St E to 68th Ave E	3249	Federal Way I-5	1916+00	1043.014	SF	1	214	45	10	72	--
10th St E to 68th Ave E	3250	Federal Way I-5	1917+00	1126.238	SF	1	178	46	10	72	--
10th St E to 68th Ave E	3251	Federal Way I-5	1917+00	1181.949	SF	1	172	46	10	72	--
10th St E to 68th Ave E	3258	Federal Way I-5	1918+00	1266.492	SF	1	176	46	10	72	--

Table F-3 Detailed Vibration Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Porter Way to 10th St E	3252	Federal Way I-5	1915+00	930.7352	SF	1	249	44	10	72	--
10th St E to 68th Ave E	3261	Federal Way I-5	1920+00	1418.201	SF	1	166	52	10	72	--
10th St E to 68th Ave E	3262	Federal Way I-5	1921+00	1492.277	SF	1	165	52	10	72	--
10th St E to 68th Ave E	3266	Federal Way I-5	1922+00	1592.483	SF	1	234	50	10	72	--
10th St E to 68th Ave E	3269	Federal Way I-5	1923+00	1686.454	SF	1	190	51	10	72	--
Porter Way to 10th St E	3253	Federal Way I-5	1914+00	909.2375	SF	1	378	41	10	72	--
Porter Way to 10th St E	3265	Federal Way I-5	1915+00	1013.631	SF	1	401	40	10	72	--
10th St E to 68th Ave E	3267	Federal Way I-5	1918+00	1255.634	SF	1	349	41	10	72	--
10th St E to 68th Ave E	3258	Federal Way I-5	1918+00	1280.827	SF	1	259	43	10	72	--
10th St E to 68th Ave E	3260	Federal Way I-5	1919+00	1401.877	SF	1	299	48	10	72	--
10th St E to 68th Ave E	3274	Federal Way I-5	1923+00	1700.409	SF	1	337	47	10	72	--
10th St E to 68th Ave E	3273	Federal Way I-5	1922+00	1639.548	SF	1	364	47	10	72	--
10th St E to 68th Ave E	3305	Federal Way I-5	1924+00	1732.717	SF	1	458	45	10	72	--
10th St E to 68th Ave E	3281	Federal Way I-5	1925+00	1844.089	SF	1	313	48	10	72	--
10th St E to 68th Ave E	3285	Federal Way I-5	1925+00	1876.523	SF	1	314	48	10	72	--
10th St E to 68th Ave E	3292	Federal Way I-5	1927+00	1963.509	SF	1	322	47	10	72	--

Table F-3 Detailed Vibration Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	3298	Federal Way I-5	1927+00	1992.259	SF	1	334	47	10	72	--
10th St E to 68th Ave E	3310	Federal Way I-5	1928+00	2050.001	SF	1	339	47	10	72	--
10th St E to 68th Ave E	3314	Federal Way I-5	1928+00	2089.913	SF	1	331	47	10	72	--
10th St E to 68th Ave E	3318	Federal Way I-5	1929+00	2141.931	SF	1	306	48	10	72	--
10th St E to 68th Ave E	3316	Federal Way I-5	1929+00	2179.267	SF	1	266	49	10	72	--
10th St E to 68th Ave E	3319	Federal Way I-5	1930+00	2214.368	SF	1	243	49	10	72	--
10th St E to 68th Ave E	3315	Federal Way I-5	1930+00	2247.019	SF	1	190	51	10	72	--
10th St E to 68th Ave E	3311	Federal Way I-5	1930+00	2278.865	SF	1	147	53	10	72	--
10th St E to 68th Ave E	3312	Federal Way I-5	1930+00	2322.164	SF	1	115	55	10	72	--
10th St E to 68th Ave E	3320	Federal Way I-5	1931+00	2376.629	SF	1	92	56	10	72	--
10th St E to 68th Ave E	3326	Federal Way I-5	1931+00	2410.091	SF	1	89	56	10	72	--
10th St E to 68th Ave E	3330	Federal Way I-5	1932+00	2446.967	SF	1	82	57	10	72	--
10th St E to 68th Ave E	3334	Federal Way I-5	1932+00	2489.211	SF	1	69	60	40	72	--
10th St E to 68th Ave E	3344	Federal Way I-5	1933+00	2527.248	SF	1	78	57	40	72	--
10th St E to 68th Ave E	3354	Federal Way I-5	1933+00	2541.927	SF	1	101	55	10	72	--
10th St E to 68th Ave E	3362	Federal Way I-5	1934+00	2553.663	SF	1	138	53	10	72	--

Table F-3 Detailed Vibration Assessment Results for the SF Enchanted Parkway Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	3364	Federal Way I-5	1934+00	2509.73	SF	1	188	51	10	72	--
10th St E to 68th Ave E	3302	Federal Way I-5	1926+00	1896.925	SF	1	449	45	10	72	--
10th St E to 68th Ave E	3365	Federal Way I-5	1933+00	2478.871	SF	1	228	50	10	72	--
10th St E to 68th Ave E	3363	Federal Way I-5	1933+00	2434.678	SF	1	264	49	10	72	--
10th St E to 68th Ave E	3361	Federal Way I-5	1932+00	2383.229	SF	1	276	48	10	72	--
10th St E to 68th Ave E	3353	Federal Way I-5	1932+00	2358.549	SF	1	285	48	10	72	--
10th St E to 68th Ave E	3347	Federal Way I-5	1932+00	2305.026	SF	1	323	47	10	72	--
10th St E to 68th Ave E	3342	Federal Way I-5	1931+00	2265.785	SF	1	350	47	10	72	--
10th St E to 68th Ave E	3341	Federal Way I-5	1931+00	2226.815	SF	1	372	46	10	72	--

Table F-4 Detailed Vibration Assessment Results for the SF I-5 Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 356th St to S 359th St	2821049070	1622	1623+00	35810 16TH AVE S	MF	8	714	50	10	72	--
S 356th St to S 359th St	2821049070	1622	1623+00	35810 16TH AVE S	MF	8	688	50	10	72	--
S 356th St to S 359th St	2821049070	1622	1625+00	35810 16TH AVE S	MF	32	581	51	10	72	--
S 356th St to S 359th St	2821049070	1622	1626+00	35810 16TH AVE S	MF	32	513	51	10	72	--
S 356th St to S 359th St	2821049070	1622	1627+00	35810 16TH AVE S	MF	32	489	51	10	72	--
S 356th St to S 359th St	2821049070	1622	1628+00	35810 16TH AVE S	MF	24	313	53	10	72	--
S 356th St to S 359th St	2821049070	1622	1628+00	35810 16TH AVE S	MF	24	456	52	10	72	--
S 356th St to S 359th St	2821049070	1622	1629+00	35810 16TH AVE S	MF	24	240	53	10	72	--
S 356th St to S 359th St	2821049070	1622	1629+00	35810 16TH AVE S	MF	36	450	52	10	72	--
S 356th St to S 359th St	2821049070	1622	1629+00	35810 16TH AVE S	MF	36	298	53	10	72	--
S 359th St to S 364th Way	2821049070	1622	1630+00	35810 16TH AVE S	MF	12	140	59	10	72	--
S 359th St to S 364th Way	2821049134	1647	1631+00	1625 S 359TH ST	SF	1	252	53	10	72	--
S 359th St to S 364th Way	2821049135	1651	1631+00	1635 S 359TH ST	SF	1	160	53	10	72	--
S 359th St to S 364th Way	2821049140	1646	1631+00	1615 S 359TH ST	SF	1	361	52	10	72	--
S 359th St to S 364th Way	2821049110	1645	1631+00	35906 16TH AVE S	SF	1	506	52	10	72	--

Table F-4 Detailed Vibration Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 359th St to S 364th Way	2821049140	1646	1632+00	1615 S 359TH ST	SF	1	343	52	10	72	--
S 359th St to S 364th Way	2821049115	1662	1633+00	35926 16TH AVE S	SF	1	348	52	10	72	--
S 359th St to S 364th Way	2821049190	1668	1635+00	36010 16TH AVE S	SF	1	227	53	10	72	--
11th PI S to S 372nd Way	3221049077	1723	1670+00	36920 12TH AVE S	SF	1	238	52	10	72	--
11th PI S to S 372nd Way	3221049080	1731	1672+00	37006 12TH AVE S	SF	1	146	53	10	72	--
11th PI S to S 372nd Way	3221049007	1746	1678+00	37107 12TH AVE S	SF	1	288	48	31.5	72	--
11th PI S to S 372nd Way	3221049128	1750	1678+00	37125 12TH AVE S	SF	1	132	56	31.5	72	--
11th PI S to S 372nd Way	3221049133	1757	1678+00	1020 S 372ND WAY	SF	1	204	51	31.5	72	--
S 372nd Way to S 376th St	3221049121	1776	1835+00	1021 S 372ND WAY	SF	1	150	54	31.5	72	--
S 372nd Way to S 376th St	3221049121	1776	1837+00	1021 S 372ND WAY	SF	1	283	48	31.5	72	--
S 372nd Way to S 376th St	3221049081	1790	1839+00	831 S 373RD PL	SF	1	203	52	10	72	--
S 372nd Way to S 376th St	3221049122	1801	1840+00	819 S 373RD PL	SF	1	121	53	10	72	--
S 359th St to S 364th Way	2821049109	1675	1641+00	36200 16TH AVE S	SF	1	142	55	31.5	72	--
S 344th St to S 346th St	2121049078	1480	1593+00	1688 S 348TH ST	HOTEL	1	843	56	10	72	--
King CoLine to Comet St	3063	Federal Way I-5	1886+00	1917.632	SF	1	323	42	10	72	--
Comet St to Porter Way	3117	Federal Way I-5	1892+00	1423.671	SF	1	285	43	10	72	--

Table F-4 Detailed Vibration Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Comet St to Porter Way	3130	Federal Way I-5	1894+00	1156.515	SF	1	282	43	10	72	--
Comet St to Porter Way	3130	Federal Way I-5	1895+00	1130.463	SF	1	315	42	10	72	--
Comet St to Porter Way	3143	Federal Way I-5	1896+00	1027.89	SF	1	339	42	10	72	--
10th St E to 68th Ave E	3249	Federal Way I-5	1916+00	1043.014	SF	1	214	45	10	72	--
10th St E to 68th Ave E	3250	Federal Way I-5	1917+00	1126.238	SF	1	178	46	10	72	--
10th St E to 68th Ave E	3251	Federal Way I-5	1917+00	1181.949	SF	1	172	46	10	72	--
10th St E to 68th Ave E	3258	Federal Way I-5	1918+00	1266.492	SF	1	176	46	10	72	--
Porter Way to 10th St E	3252	Federal Way I-5	1915+00	930.7352	SF	1	249	44	10	72	--
10th St E to 68th Ave E	3261	Federal Way I-5	1920+00	1418.201	SF	1	166	52	10	72	--
10th St E to 68th Ave E	3262	Federal Way I-5	1921+00	1492.277	SF	1	165	52	10	72	--
10th St E to 68th Ave E	3266	Federal Way I-5	1922+00	1592.483	SF	1	234	50	10	72	--
10th St E to 68th Ave E	3269	Federal Way I-5	1923+00	1686.454	SF	1	190	51	10	72	--
Porter Way to 10th St E	3253	Federal Way I-5	1914+00	909.2375	SF	1	378	41	10	72	--
Porter Way to 10th St E	3265	Federal Way I-5	1915+00	1013.631	SF	1	401	40	10	72	--
10th St E to 68th Ave E	3267	Federal Way I-5	1918+00	1255.634	SF	1	349	41	10	72	--
10th St E to 68th Ave E	3258	Federal Way I-5	1918+00	1280.827	SF	1	259	43	10	72	--

Table F-4 Detailed Vibration Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	3260	Federal Way I-5	1919+00	1401.877	SF	1	299	48	10	72	--
10th St E to 68th Ave E	3274	Federal Way I-5	1923+00	1700.409	SF	1	337	47	10	72	--
10th St E to 68th Ave E	3273	Federal Way I-5	1922+00	1639.548	SF	1	364	47	10	72	--
10th St E to 68th Ave E	3305	Federal Way I-5	1924+00	1732.717	SF	1	458	45	10	72	--
10th St E to 68th Ave E	3281	Federal Way I-5	1925+00	1844.089	SF	1	313	48	10	72	--
10th St E to 68th Ave E	3285	Federal Way I-5	1925+00	1876.523	SF	1	314	48	10	72	--
10th St E to 68th Ave E	3292	Federal Way I-5	1927+00	1963.509	SF	1	322	47	10	72	--
10th St E to 68th Ave E	3298	Federal Way I-5	1927+00	1992.259	SF	1	334	47	10	72	--
10th St E to 68th Ave E	3310	Federal Way I-5	1928+00	2050.001	SF	1	339	47	10	72	--
10th St E to 68th Ave E	3314	Federal Way I-5	1928+00	2089.913	SF	1	331	47	10	72	--
10th St E to 68th Ave E	3318	Federal Way I-5	1929+00	2141.931	SF	1	306	48	10	72	--
10th St E to 68th Ave E	3316	Federal Way I-5	1929+00	2179.267	SF	1	266	49	10	72	--
10th St E to 68th Ave E	3319	Federal Way I-5	1930+00	2214.368	SF	1	243	49	10	72	--
10th St E to 68th Ave E	3315	Federal Way I-5	1930+00	2247.019	SF	1	190	51	10	72	--
10th St E to 68th Ave E	3311	Federal Way I-5	1930+00	2278.865	SF	1	147	53	10	72	--
10th St E to 68th Ave E	3312	Federal Way I-5	1930+00	2322.164	SF	1	115	55	10	72	--

Table F-4 Detailed Vibration Assessment Results for the SF I-5 Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	3320	Federal Way I-5	1931+00	2376.629	SF	1	92	56	10	72	--
10th St E to 68th Ave E	3326	Federal Way I-5	1931+00	2410.091	SF	1	89	56	10	72	--
10th St E to 68th Ave E	3330	Federal Way I-5	1932+00	2446.967	SF	1	82	57	10	72	--
10th St E to 68th Ave E	3334	Federal Way I-5	1932+00	2489.211	SF	1	69	60	40	72	--
10th St E to 68th Ave E	3344	Federal Way I-5	1933+00	2527.248	SF	1	78	57	40	72	--
10th St E to 68th Ave E	3354	Federal Way I-5	1933+00	2541.927	SF	1	101	55	10	72	--
10th St E to 68th Ave E	3362	Federal Way I-5	1934+00	2553.663	SF	1	138	53	10	72	--
10th St E to 68th Ave E	3364	Federal Way I-5	1934+00	2509.73	SF	1	188	51	10	72	--
10th St E to 68th Ave E	3302	Federal Way I-5	1926+00	1896.925	SF	1	449	45	10	72	--
10th St E to 68th Ave E	3365	Federal Way I-5	1933+00	2478.871	SF	1	228	50	10	72	--
10th St E to 68th Ave E	3363	Federal Way I-5	1933+00	2434.678	SF	1	264	49	10	72	--
10th St E to 68th Ave E	3361	Federal Way I-5	1932+00	2383.229	SF	1	276	48	10	72	--
10th St E to 68th Ave E	3353	Federal Way I-5	1932+00	2358.549	SF	1	285	48	10	72	--
10th St E to 68th Ave E	3347	Federal Way I-5	1932+00	2305.026	SF	1	323	47	10	72	--
10th St E to 68th Ave E	3342	Federal Way I-5	1931+00	2265.785	SF	1	350	47	10	72	--
10th St E to 68th Ave E	3341	Federal Way I-5	1931+00	2226.815	SF	1	372	46	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	124	53	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	196	49	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	107	55	12.5	75	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	181	50	12.5	72	--
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	459	42	12.5	72	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	395	43	12.5	72	--
S 364th St to S 373rd St	3221049016	1706	1683+00	36815 PACIFIC HWY S	CH	1	117	54	12.5	75	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	184	50	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	127	55	12.5	72	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	289	48	12.5	72	--
S 373rd St to Johnson Rd	2188203420	1782	1703+00	37226 1ST AVE SW	SF	1	312	47	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	246	49	12.5	72	--
S 373rd St to Johnson Rd	3221049025	1843	1711+00	37600 PACIFIC HWY S	CEM	1	135	53	12.5	75	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	64	64	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	88	58	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	66	64	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	149	52	12.5	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	176	51	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	106	55	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	127	54	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	148	52	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	207	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	227	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	249	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	273	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	254	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	223	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	170	51	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	190	50	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	215	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	274	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	300	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	323	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	295	46	12.5	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	235	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	266	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	330	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	345	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	288	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	307	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	336	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	105	55	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	124	54	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	150	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	173	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	178	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	146	53	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	212	49	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	248	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	267	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	216	49	12.5	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	299	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	321	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	339	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	334	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	299	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	364	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	365	44	12.5	72	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	129	54	12.5	72	--
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	222	49	12.5	72	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	277	47	12.5	72	--
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	58	67	50	72	--
Johnson Rd to Porter Way	420052026	3058	1745+00	7802 PACIFIC HWY E	SF	1	197	45	10	72	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	126	48	10	72	--
Johnson Rd to Porter Way	420061105	3093	1747+00	210 TO 212 70TH AV E	SF	1	291	43	10	72	--
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	175	48	10	72	--
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	497	41	10	72	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	645	39	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	439	42	10	72	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	6	536	40	10	72	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	12	589	40	10	72	--
Johnson Rd to Porter Way	6024260180	3152	1754+00	6919 5TH ST CT E	SF	1	614	39	10	72	--
Johnson Rd to Porter Way	6024260020	3167	1756+00	6918 5TH ST CT E	SF	1	626	39	10	72	--
Johnson Rd to Porter Way	6024260010	3169	1757+00	6922 5TH ST CT E	SF	1	594	40	10	72	--
Johnson Rd to Porter Way	6024260170	3150	1754+00	6911 5TH ST CT E	SF	1	655	39	10	72	--
Johnson Rd to Porter Way	6024260030	3166	1756+00	6914 5TH ST CT E	SF	1	670	39	10	72	--
Johnson Rd to Porter Way	6024260160	3149	1754+00	6907 5TH ST CT E	SF	1	698	38	10	72	--
Johnson Rd to Porter Way	6024260040	3165	1756+00	6910 5TH ST CT E	SF	1	718	38	10	72	--
Johnson Rd to Porter Way	6024260050	3164	1755+00	6906 5TH ST CT E	SF	1	759	38	10	72	--
Johnson Rd to Porter Way	420052015	3142	1755+00	509 70TH AV	SF	1	415	42	10	72	--
Johnson Rd to Porter Way	420052011	3183	1760+00	615 70TH AV E	SF	1	505	41	10	72	--
Johnson Rd to Porter Way	420052019	3174	1758+00	607 70TH AV E	SF	1	490	41	10	72	--
Johnson Rd to Porter Way	420061185	3176	1757+00	606 70TH AV E	SF	1	645	39	10	72	--
Johnson Rd to Porter Way	420061022	3187	1759+00	616 70TH AV E	SF	1	723	38	10	72	--
Porter Way to 10th St	420061178	3191	1761+00	624 70TH AV E	SF	1	742	36	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Porter Way to 10th St	420052009	3211	1766+00	7303 PACIFIC HWY E	SF	1	479	39	10	72	--
Porter Way to 10th St	420053071	3257	1768+00	805 70TH AV E	SF	1	435	40	10	72	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	375	42	10	72	--
Porter Way to 10th St	420061179	3202	1764+00	712 70TH AV E	SF	1	762	36	10	72	--
Porter Way to 10th St	420061030	3217	1766+00	726 70TH AV E	SF	1	723	36	10	72	--
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	659	38	10	72	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	594	38	10	72	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	468	39	10	72	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	519	39	10	72	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	448	40	10	72	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	436	40	10	72	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	453	45	10	72	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	461	45	10	72	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	470	45	10	72	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	465	45	10	72	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	410	46	10	72	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	426	45	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	452	45	10	72	--
Johnson Rd to Porter Way	420052004	3117	1755+00	326 EMERALD ST	SF	1	921	37	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	740	38	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1757+00	323 EMERALD ST	SF	1	744	38	10	72	--
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	696	39	10	72	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	217	45	10	72	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	180	46	10	72	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	174	46	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	177	46	10	72	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	253	44	10	72	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	166	52	10	72	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	165	52	10	72	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	234	50	10	72	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	190	51	10	72	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	383	41	10	72	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	405	40	10	72	--
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	350	41	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	260	43	10	72	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	299	48	10	72	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	337	47	10	72	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	364	47	10	72	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	458	45	10	72	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	313	48	10	72	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	314	48	10	72	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	322	47	10	72	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	334	47	10	72	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	339	47	10	72	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	331	47	10	72	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	306	48	10	72	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	266	49	10	72	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	243	49	10	72	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	190	51	10	72	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	147	53	10	72	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	115	55	10	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	92	56	10	72	--
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	89	56	10	72	--
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	82	57	10	72	--
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	69	60	40	72	--
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	78	57	40	72	--
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	101	55	10	72	--
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	138	53	10	72	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	188	51	10	72	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	449	45	10	72	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	228	50	10	72	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	264	49	10	72	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	276	48	10	72	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	285	48	10	72	--
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	323	47	10	72	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	350	47	10	72	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	372	46	10	72	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	142	52	12.5	72	--

Table F-5 Detailed Vibration Assessment Results for SF 99-West Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	234	48	12.5	72	--
S 344th St to S 346th St	2121049078	1480	1596+00	1688 S 348TH ST	HOTEL	1	64	61	50	72	--
Porter Way to 10th St	420053048	3238	1768+00	7224 PACIFIC HWY E	HOSPITAL	1	96	52	40	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	124	53	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	196	49	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	107	55	12.5	75	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	181	50	12.5	72	--
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	459	42	12.5	72	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	395	43	12.5	72	--
S 364th St to S 373rd St	3221049016	1706	1683+00	36815 PACIFIC HWY S	CH	1	117	54	12.5	75	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	184	50	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	127	54	12.5	72	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	289	46	12.5	72	--
S 373rd St to Johnson Rd	2188203420	1782	1703+00	37226 1ST AVE SW	SF	1	312	46	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1703+00	112 SW 374TH ST	SF	1	246	48	12.5	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	3221049025	1843	1711+00	37600 PACIFIC HWY S	CEM	1	135	53	12.5	75	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	64	64	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	88	58	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	66	64	50	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	149	52	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	176	51	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	106	55	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	127	54	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	148	52	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	207	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	227	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	249	48	12.5	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	273	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	254	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1716+00	8425 PACIFIC HWY E	SF	1	223	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	170	51	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	190	50	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	215	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	274	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	300	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	323	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	295	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	235	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	266	47	12.5	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	330	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	345	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	288	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	307	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	336	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	105	55	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	124	54	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	150	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	173	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	178	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	146	53	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	212	49	12.5	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	248	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	267	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	216	49	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	299	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	321	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	339	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	334	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	299	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	364	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	365	44	12.5	72	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	129	54	12.5	72	--
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	222	49	12.5	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	277	47	12.5	72	--
Johnson Rd to Porter Way	420061029	3035	1739+00	7909 PACIFIC HWY E	HOTEL	1	165	52	12.5	72	--
Johnson Rd to Porter Way	420052026	3058	1745+00	7802 PACIFIC HWY E	SF	1	134	48	10	72	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	530	38	10	72	--
Johnson Rd to Porter Way	420061105	3093	1746+00	210 TO 212 70TH AV E	SF	1	678	37	10	72	--
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	593	40	10	72	--
Johnson Rd to Porter Way	420061166	3134	1758+00	6926 5TH ST E	MF	12	822	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1758+00	6926 5TH ST E	MF	12	994	36	10	72	--
Johnson Rd to Porter Way	420061166	3134	1756+00	6926 5TH ST E	MF	12	814	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1756+00	6926 5TH ST E	MF	6	931	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1755+00	6926 5TH ST E	MF	12	988	36	10	72	--
Johnson Rd to Porter Way	6024260180	3152	1760+00	6919 5TH ST CT E	SF	1	911	37	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	6024260020	3167	1762+00	6918 5TH ST CT E	SF	1	839	35	10	72	--
Johnson Rd to Porter Way	6024260010	3169	1762+00	6922 5TH ST CT E	SF	1	797	36	10	72	--
Johnson Rd to Porter Way	6024260170	3150	1760+00	6911 5TH ST CT E	SF	1	956	36	10	72	--
Johnson Rd to Porter Way	6024260030	3166	1762+00	6914 5TH ST CT E	SF	1	883	35	10	72	--
Johnson Rd to Porter Way	6024260160	3149	1760+00	6907 5TH ST CT E	SF	1	1006	36	10	72	--
Johnson Rd to Porter Way	6024260040	3165	1762+00	6910 5TH ST CT E	SF	1	935	35	10	72	--
Johnson Rd to Porter Way	6024260050	3164	1762+00	6906 5TH ST CT E	SF	1	984	34	10	72	--
Johnson Rd to Porter Way	420052015	3142	1758+00	509 70TH AV	SF	1	730	38	10	72	--
Johnson Rd to Porter Way	420052011	3183	1764+00	615 70TH AV E	SF	1	610	37	10	72	--
Johnson Rd to Porter Way	420052019	3174	1763+00	607 70TH AV E	SF	1	640	37	10	72	--
Johnson Rd to Porter Way	420061185	3176	1763+00	606 70TH AV E	SF	1	808	36	10	72	--
Johnson Rd to Porter Way	420061022	3187	1764+00	616 70TH AV E	SF	1	834	35	10	72	--
Porter Way to 10th St	420061178	3191	1765+00	624 70TH AV E	SF	1	809	36	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Porter Way to 10th St	420052009	3211	1768+00	7303 PACIFIC HWY E	SF	1	478	39	10	72	--
Porter Way to 10th St	420053071	3257	1769+00	805 70TH AV E	SF	1	428	41	10	72	--
Porter Way to 10th St	420053042	3256	1771+00	817 70TH AV E	SF	1	373	42	10	72	--
Porter Way to 10th St	420061179	3202	1767+00	712 70TH AV E	SF	1	772	36	10	72	--
Porter Way to 10th St	420061030	3217	1769+00	726 70TH AV E	SF	1	717	37	10	72	--
Porter Way to 10th St	420064044	3277	1771+00	816 70TH AV E	SF	1	658	38	10	72	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	601	38	10	72	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	473	39	10	72	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	519	39	10	72	--
Porter Way to 10th St	420053042	3256	1772+00	817 70TH AV E	SF	1	447	40	10	72	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	436	40	10	72	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	453	45	10	72	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	461	45	10	72	--
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	470	45	10	72	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	465	45	10	72	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	410	46	10	72	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	426	45	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	452	45	10	72	--
Johnson Rd to Porter Way	420052004	3117	1754+00	326 EMERALD ST	SF	1	547	40	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	419	42	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	435	42	10	72	--
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	418	42	10	72	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	217	45	10	72	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	180	46	10	72	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	174	46	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	177	46	10	72	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	253	44	10	72	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	166	52	10	72	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	165	52	10	72	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	234	50	10	72	--
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	190	51	10	72	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	383	41	10	72	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	405	40	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	350	41	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	260	43	10	72	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	299	48	10	72	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	337	47	10	72	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	364	47	10	72	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	458	45	10	72	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	313	48	10	72	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	314	48	10	72	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	322	47	10	72	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	334	47	10	72	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	339	47	10	72	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	331	47	10	72	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	306	48	10	72	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	266	49	10	72	--
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	243	49	10	72	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	190	51	10	72	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	147	53	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	115	55	10	72	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	92	56	10	72	--
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	89	56	10	72	--
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	82	57	10	72	--
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	69	60	40	72	--
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	78	57	40	72	--
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	101	55	10	72	--
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	138	53	10	72	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	188	51	10	72	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	449	45	10	72	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	228	50	10	72	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	264	49	10	72	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	276	48	10	72	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	285	48	10	72	--
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	323	47	10	72	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	350	47	10	72	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	372	46	10	72	--

Table F-6 Detailed Vibration Assessment Results for SF 99-West Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	142	52	12.5	72	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	234	48	12.5	72	--
S 344th St to S 346th St	2121049078	1480	1596+00	1688 S 348TH ST	HOTEL	1	64	61	50	72	--
Porter Way to 10th St	420053048	3238	1769+00	7224 PACIFIC HWY E	HOSPITAL	1	90	54	40	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	243	47	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	310	45	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	221	48	12.5	75	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	67	63	50	72	--
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	345	44	12.5	72	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	281	46	12.5	72	--
S 364th St to S 373rd St	3221049016	1706	1684+00	36815 PACIFIC HWY S	CH	1	231	48	12.5	75	--
S 364th St to S 373rd St	3221049078	1717	1686+00	36903 PACIFIC HWY S	SF	1	164	51	12.5	72	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	69	62	50	72	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	200	51	12.5	72	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	358	46	12.5	72	--
S 373rd St to Johnson Rd	2188203420	1782	1704+00	37226 1ST AVE SW	SF	1	390	45	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	318	47	12.5	72	--
S 373rd St to Johnson Rd	3221049025	1843	1712+00	37600 PACIFIC HWY S	CEM	1	79	60	50	75	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	121	54	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	145	53	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	123	54	12.5	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	206	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	234	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	163	52	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	184	50	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	205	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	264	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	284	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	306	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	330	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	311	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	280	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	227	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	247	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	272	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	331	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	357	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	380	44	12.5	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	353	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	293	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	323	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	387	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	402	43	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	345	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	364	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	393	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	115	55	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	151	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	162	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	122	54	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	181	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	208	49	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	230	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	235	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	203	50	12.5	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	269	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	305	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	324	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	273	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	356	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	378	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	396	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	391	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	356	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	421	43	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	422	43	12.5	72	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	72	62	50	72	--
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	165	51	12.5	72	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	219	49	12.5	72	--
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	114	54	12.5	72	--
Johnson Rd to Porter Way	420052026	3058	1744+00	7802 PACIFIC HWY E	SF	1	150	47	10	72	--
Johnson Rd to Porter Way	420061054	3094	1747+00	222 TO 224 70TH AV E	MF	2	148	49	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	420061105	3093	1747+00	210 TO 212 70TH AV E	SF	1	317	44	10	72	--
Johnson Rd to Porter Way	420061075	3107	1748+00	304 70TH AV E	SF	1	191	48	10	72	--
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	497	41	10	72	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	645	39	10	72	--
Johnson Rd to Porter Way	420061166	3134	1753+00	6926 5TH ST E	MF	12	439	42	10	72	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	6	536	41	10	72	--
Johnson Rd to Porter Way	420061166	3134	1752+00	6926 5TH ST E	MF	12	589	40	10	72	--
Johnson Rd to Porter Way	6024260180	3152	1754+00	6919 5TH ST CT E	SF	1	614	39	10	72	--
Johnson Rd to Porter Way	6024260020	3167	1756+00	6918 5TH ST CT E	SF	1	626	39	10	72	--
Johnson Rd to Porter Way	6024260010	3169	1756+00	6922 5TH ST CT E	SF	1	594	40	10	72	--
Johnson Rd to Porter Way	6024260170	3150	1754+00	6911 5TH ST CT E	SF	1	655	39	10	72	--
Johnson Rd to Porter Way	6024260030	3166	1756+00	6914 5TH ST CT E	SF	1	670	39	10	72	--
Johnson Rd to Porter Way	6024260160	3149	1754+00	6907 5TH ST CT E	SF	1	698	38	10	72	--
Johnson Rd to Porter Way	6024260040	3165	1755+00	6910 5TH ST CT E	SF	1	718	38	10	72	--
Johnson Rd to Porter Way	6024260050	3164	1755+00	6906 5TH ST CT E	SF	1	759	38	10	72	--
Johnson Rd to Porter Way	420052015	3142	1754+00	509 70TH AV	SF	1	415	42	10	72	--
Johnson Rd to Porter Way	420052011	3183	1760+00	615 70TH AV E	SF	1	505	41	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	420052019	3174	1758+00	607 70TH AV E	SF	1	490	41	10	72	--
Johnson Rd to Porter Way	420061185	3176	1757+00	606 70TH AV E	SF	1	645	39	10	72	--
Johnson Rd to Porter Way	420061022	3187	1759+00	616 70TH AV E	SF	1	723	38	10	72	--
Porter Way to 10th St	420061178	3191	1760+00	624 70TH AV E	SF	1	742	38	10	72	--
Porter Way to 10th St	420052009	3211	1765+00	7303 PACIFIC HWY E	SF	1	479	41	10	72	--
Porter Way to 10th St	420053071	3257	1767+00	805 70TH AV E	SF	1	435	42	10	72	--
Porter Way to 10th St	420053042	3256	1769+00	817 70TH AV E	SF	1	375	43	10	72	--
Porter Way to 10th St	420061179	3202	1764+00	712 70TH AV E	SF	1	762	38	10	72	--
Porter Way to 10th St	420061030	3217	1766+00	726 70TH AV E	SF	1	723	38	10	72	--
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	659	37	10	72	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	594	38	10	72	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	468	39	10	72	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	519	39	10	72	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	448	40	10	72	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	436	40	10	72	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	453	45	10	72	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	461	45	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	470	45	10	72	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	465	45	10	72	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	410	46	10	72	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	426	45	10	72	--
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	452	45	10	72	--
Johnson Rd to Porter Way	420052004	3117	1755+00	326 EMERALD ST	SF	1	921	36	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	740	38	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1756+00	323 EMERALD ST	SF	1	744	38	10	72	--
Johnson Rd to Porter Way	5990000540	3143	1757+00	511 4TH AV	SF	1	696	38	10	72	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	217	45	10	72	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	180	46	10	72	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	174	46	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	177	46	10	72	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	253	44	10	72	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	166	52	10	72	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	165	52	10	72	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	234	50	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	190	51	10	72	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	383	41	10	72	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	405	40	10	72	--
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	350	41	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	260	43	10	72	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	299	48	10	72	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	337	47	10	72	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	364	47	10	72	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	458	45	10	72	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	313	48	10	72	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	314	48	10	72	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	322	47	10	72	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	334	47	10	72	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	339	47	10	72	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	331	47	10	72	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	306	48	10	72	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	266	49	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	243	49	10	72	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	190	51	10	72	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	147	53	10	72	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	115	55	10	72	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	92	56	10	72	--
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	89	56	10	72	--
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	82	57	10	72	--
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	69	60	40	72	--
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	78	57	40	72	--
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	101	55	10	72	--
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	138	53	10	72	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	188	51	10	72	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	449	45	10	72	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	228	50	10	72	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	264	49	10	72	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	276	48	10	72	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	285	48	10	72	--

Table F-7 Detailed Vibration Assessment Results for SF 99-East Alternative (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	323	47	10	72	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	350	47	10	72	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	372	46	10	72	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	120	54	12.5	72	--
S 344th St to S 346th St	2121049078	1480	1598+00	1688 S 348TH ST	HOTEL	1	62	61	50	72	--
Porter Way to 10th St	420053048	3238	1767+00	7224 PACIFIC HWY E	HOSPITAL	1	96	53	40	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 359th St to S 364th Way	2921049020	1638	1649+00	35929 PACIFIC HWY S	SF	1	243	47	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1672+00	36605 PACIFIC HWY S	SF	1	310	45	12.5	72	--
S 364th St to S 373rd St	2921049074	1691	1675+00	36605 PACIFIC HWY S	SCHOOL	1	221	48	12.5	75	--
S 364th St to S 373rd St	2921049024	1687	1670+00	N/A	SF	1	67	63	50	72	--
S 364th St to S 373rd St	2921049161	1697	1671+00	36530 PACIFIC HWY S	SF	1	345	44	12.5	72	--
S 364th St to S 373rd St	2921049044	1702	1674+00	36606 PACIFIC HWY S	SF	1	281	46	12.5	72	--
S 364th St to S 373rd St	3221049016	1706	1684+00	36815 PACIFIC HWY S	CH	1	231	48	12.5	75	--
S 364th St to S 373rd St	3221049078	1717	1686+00	36903 PACIFIC HWY S	SF	1	164	51	12.5	72	--
S 364th St to S 373rd St	3221049094	1724	1688+00	36928 PACIFIC HWY S	SF	1	69	62	50	72	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	200	51	12.5	72	--
S 373rd St to Johnson Rd	2188203395	1795	1704+00	37234 1ST AVE SW	SF	1	358	46	12.5	72	--
S 373rd St to Johnson Rd	2188203420	1782	1704+00	37226 1ST AVE SW	SF	1	390	45	12.5	72	--
S 373rd St to Johnson Rd	2188203365	1794	1704+00	112 SW 374TH ST	SF	1	318	47	12.5	72	--
S 373rd St to Johnson Rd	3221049025	1843	1712+00	37600 PACIFIC HWY S	CEM	1	79	60	50	75	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	121	54	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	145	53	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	123	54	12.5	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	206	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	234	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	163	52	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	184	50	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	205	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	264	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	284	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	306	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	330	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	311	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	280	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	227	49	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	247	48	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	272	47	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	331	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	357	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	380	44	12.5	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	353	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	293	46	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	323	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	387	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1717+00	8425 PACIFIC HWY E	SF	1	402	43	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	345	45	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	364	44	12.5	72	--
S 373rd St to Johnson Rd	421314030	3007	1718+00	8425 PACIFIC HWY E	SF	1	393	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	115	55	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	151	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	162	52	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	122	54	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	181	51	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	208	49	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	230	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	235	48	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	203	50	12.5	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
S 373rd St to Johnson Rd	421314031	3012	1721+00	8323 PACIFIC HWY E	SF	1	269	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	305	46	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	324	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	273	47	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	356	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	378	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	396	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	391	44	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	356	45	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1720+00	8323 PACIFIC HWY E	SF	1	421	43	12.5	72	--
S 373rd St to Johnson Rd	421314031	3012	1722+00	8323 PACIFIC HWY E	SF	1	422	43	12.5	72	--
S 373rd St to Johnson Rd	421314127	3013	1720+00	8324 PACIFIC HWY E	SF	1	72	62	50	72	--
S 373rd St to Johnson Rd	421314039	3019	1724+00	6911 JOHNSON RD NE	SF	1	165	51	12.5	72	--
S 373rd St to Johnson Rd	421314016	3018	1724+00	6919 JOHNSON RD NE	SF	1	219	49	12.5	72	--
Johnson Rd to Porter Way	420061029	3035	1738+00	7909 PACIFIC HWY E	HOTEL	1	190	51	12.5	72	--
Johnson Rd to Porter Way	420052026	3058	1744+00	7802 PACIFIC HWY E	SF	1	134	48	10	72	--
Johnson Rd to Porter Way	420061054	3094	1746+00	222 TO 224 70TH AV E	MF	2	530	38	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	420061105	3093	1745+00	210 TO 212 70TH AV E	SF	1	678	37	10	72	--
Johnson Rd to Porter Way	420061075	3107	1746+00	304 70TH AV E	SF	1	593	38	10	72	--
Johnson Rd to Porter Way	420061166	3134	1757+00	6926 5TH ST E	MF	12	822	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1757+00	6926 5TH ST E	MF	12	994	36	10	72	--
Johnson Rd to Porter Way	420061166	3134	1755+00	6926 5TH ST E	MF	12	814	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	6	931	37	10	72	--
Johnson Rd to Porter Way	420061166	3134	1754+00	6926 5TH ST E	MF	12	988	36	10	72	--
Johnson Rd to Porter Way	6024260180	3152	1759+00	6919 5TH ST CT E	SF	1	911	37	10	72	--
Johnson Rd to Porter Way	6024260020	3167	1761+00	6918 5TH ST CT E	SF	1	839	35	10	72	--
Johnson Rd to Porter Way	6024260010	3169	1761+00	6922 5TH ST CT E	SF	1	797	36	10	72	--
Johnson Rd to Porter Way	6024260170	3150	1759+00	6911 5TH ST CT E	SF	1	956	36	10	72	--
Johnson Rd to Porter Way	6024260030	3166	1761+00	6914 5TH ST CT E	SF	1	883	35	10	72	--
Johnson Rd to Porter Way	6024260160	3149	1759+00	6907 5TH ST CT E	SF	1	1006	36	10	72	--
Johnson Rd to Porter Way	6024260040	3165	1761+00	6910 5TH ST CT E	SF	1	935	35	10	72	--
Johnson Rd to Porter Way	6024260050	3164	1761+00	6906 5TH ST CT E	SF	1	984	34	10	72	--
Johnson Rd to Porter Way	420052015	3142	1757+00	509 70TH AV	SF	1	730	38	10	72	--
Johnson Rd to Porter Way	420052011	3183	1762+00	615 70TH AV E	SF	1	610	37	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Johnson Rd to Porter Way	420052019	3174	1762+00	607 70TH AV E	SF	1	640	37	10	72	--
Johnson Rd to Porter Way	420061185	3176	1762+00	606 70TH AV E	SF	1	808	36	10	72	--
Johnson Rd to Porter Way	420061022	3187	1763+00	616 70TH AV E	SF	1	834	35	10	72	--
Porter Way to 10th St	420061178	3191	1764+00	624 70TH AV E	SF	1	809	36	10	72	--
Porter Way to 10th St	420052009	3211	1767+00	7303 PACIFIC HWY E	SF	1	478	39	10	72	--
Porter Way to 10th St	420053071	3257	1768+00	805 70TH AV E	SF	1	428	41	10	72	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	373	42	10	72	--
Porter Way to 10th St	420061179	3202	1766+00	712 70TH AV E	SF	1	772	36	10	72	--
Porter Way to 10th St	420061030	3217	1767+00	726 70TH AV E	SF	1	717	36	10	72	--
Porter Way to 10th St	420064044	3277	1770+00	816 70TH AV E	SF	1	658	38	10	72	--
Porter Way to 10th St	420064094	3271	1914+00	910 70TH AV E	SF	1	601	38	10	72	--
Porter Way to 10th St	420053077	3268	1913+00	907 70TH AV E	SF	1	473	39	10	72	--
Porter Way to 10th St	420064115	3272	1915+00	920 70TH AV E	SF	1	519	39	10	72	--
Porter Way to 10th St	420053042	3256	1770+00	817 70TH AV E	SF	1	447	40	10	72	--
10th St E to 68th Ave E	420064211	3276	1918+00	1016 70TH AV E	SF	1	436	40	10	72	--
10th St E to 68th Ave E	6025220340	3313	1927+00	1216 69TH AV E	SF	1	453	45	10	72	--
10th St E to 68th Ave E	6025220330	3324	1928+00	1220 69TH AV E	SF	1	461	45	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220320	3328	1928+00	1224 69TH AV E	SF	1	470	45	10	72	--
10th St E to 68th Ave E	6025220310	3332	1929+00	1228 69TH AV E	SF	1	465	45	10	72	--
10th St E to 68th Ave E	6025220280	3340	1930+00	1310 69TH AV E	SF	1	410	46	10	72	--
10th St E to 68th Ave E	6025220290	3338	1930+00	1306 69TH AV E	SF	1	426	45	10	72	--
10th St E to 68th Ave E	6025220300	3335	1929+00	1302 69TH AV E	SF	1	452	45	10	72	--
Johnson Rd to Porter Way	420052004	3117	1753+00	326 EMERALD ST	SF	1	547	40	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1754+00	323 EMERALD ST	SF	1	419	42	10	72	--
Johnson Rd to Porter Way	5990000550	3130	1755+00	323 EMERALD ST	SF	1	435	42	10	72	--
Johnson Rd to Porter Way	5990000540	3143	1756+00	511 4TH AV	SF	1	418	42	10	72	--
10th St E to 68th Ave E	420053064	3249	1916+00	7127 PACIFIC HWY E	SF	1	217	45	10	72	--
10th St E to 68th Ave E	420057012	3250	1917+00	7121 PACIFIC HWY E	SF	1	180	46	10	72	--
10th St E to 68th Ave E	420053040	3251	1917+00	7119 PACIFIC HWY E	SF	1	174	46	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	177	46	10	72	--
Porter Way to 10th St	420053058	3252	1915+00	913 70TH AV E	SF	1	253	44	10	72	--
10th St E to 68th Ave E	420053036	3261	1920+00	7109 PACIFIC HWY E	SF	1	166	52	10	72	--
10th St E to 68th Ave E	420053037	3262	1921+00	7111 PACIFIC HWY E	SF	1	165	52	10	72	--
10th St E to 68th Ave E	420053053	3266	1922+00	1119 70TH AV E	SF	1	234	50	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	420053001	3269	1923+00	1123 70TH AV E	SF	1	190	51	10	72	--
Porter Way to 10th St	420053078	3253	1914+00	911 70TH AV E	SF	1	383	41	10	72	--
Porter Way to 10th St	420053059	3265	1915+00	915 70TH AV E	SF	1	405	40	10	72	--
10th St E to 68th Ave E	420053027	3267	1918+00	1015 70TH AV E	SF	1	350	41	10	72	--
10th St E to 68th Ave E	420053067	3258	1918+00	7115 PACIFIC HWY E	SF	1	260	43	10	72	--
10th St E to 68th Ave E	420053034	3260	1919+00	1103 70TH AV E	SF	1	299	48	10	72	--
10th St E to 68th Ave E	420064139	3274	1923+00	6921 12TH ST E	SF	1	337	47	10	72	--
10th St E to 68th Ave E	420064138	3273	1922+00	1122 70TH AV E	SF	1	364	47	10	72	--
10th St E to 68th Ave E	420064151	3305	1924+00	6823 12TH ST E	SF	1	458	45	10	72	--
10th St E to 68th Ave E	6025220010	3281	1925+00	1201 69TH AV E	SF	1	313	48	10	72	--
10th St E to 68th Ave E	6025220020	3285	1925+00	1207 69TH AV E	SF	1	314	48	10	72	--
10th St E to 68th Ave E	6025220030	3292	1927+00	1211 69TH AV E	SF	1	322	47	10	72	--
10th St E to 68th Ave E	6025220040	3298	1927+00	1217 69TH AV E	SF	1	334	47	10	72	--
10th St E to 68th Ave E	6025220050	3310	1928+00	1225 69TH AV E	SF	1	339	47	10	72	--
10th St E to 68th Ave E	6025220060	3314	1928+00	1305 69TH AV E	SF	1	331	47	10	72	--
10th St E to 68th Ave E	6025220070	3318	1929+00	1309 69TH AV E	SF	1	306	48	10	72	--
10th St E to 68th Ave E	6025220080	3316	1929+00	1315 69TH AV E	SF	1	266	49	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220090	3319	1930+00	1319 69TH AV E	SF	1	243	49	10	72	--
10th St E to 68th Ave E	6025220100	3315	1930+00	1323 69TH AV E	SF	1	190	51	10	72	--
10th St E to 68th Ave E	6025220110	3311	1930+00	1327 69TH AV E	SF	1	147	53	10	72	--
10th St E to 68th Ave E	6025220120	3312	1930+00	1403 69TH AV E	SF	1	115	55	10	72	--
10th St E to 68th Ave E	6025220130	3320	1931+00	1407 69TH AV E	SF	1	92	56	10	72	--
10th St E to 68th Ave E	6025220140	3326	1931+00	1413 69TH AV E	SF	1	89	56	10	72	--
10th St E to 68th Ave E	6025220150	3330	1932+00	1417 69TH AV E	SF	1	82	57	10	72	--
10th St E to 68th Ave E	6025220160	3334	1932+00	1421 69TH AV E	SF	1	69	60	40	72	--
10th St E to 68th Ave E	6025220170	3344	1933+00	1425 69TH AV E	SF	1	78	57	40	72	--
10th St E to 68th Ave E	6025220180	3354	1933+00	1429 69TH AV E	SF	1	101	55	10	72	--
10th St E to 68th Ave E	6025220190	3362	1934+00	1428 69TH AV E	SF	1	138	53	10	72	--
10th St E to 68th Ave E	6025220200	3364	1934+00	1426 69TH AV E	SF	1	188	51	10	72	--
10th St E to 68th Ave E	6025220350	3302	1926+00	1212 69TH AV E	SF	1	449	45	10	72	--
10th St E to 68th Ave E	6025220210	3365	1933+00	1420 69TH AV E	SF	1	228	50	10	72	--
10th St E to 68th Ave E	6025220220	3363	1933+00	1416 69TH AV E	SF	1	264	49	10	72	--
10th St E to 68th Ave E	6025220230	3361	1932+00	1412 69TH AV E	SF	1	276	48	10	72	--
10th St E to 68th Ave E	6025220240	3353	1932+00	1404 69TH AV E	SF	1	285	48	10	72	--

Table F-8 Detailed Vibration Assessment Results for SF 99-East Alternative with Porter Way Design Option (continued)

Receiver Area	King County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
10th St E to 68th Ave E	6025220250	3347	1932+00	1322 69TH AV E	SF	1	323	47	10	72	--
10th St E to 68th Ave E	6025220260	3342	1931+00	1318 69TH AV E	SF	1	350	47	10	72	--
10th St E to 68th Ave E	6025220270	3341	1931+00	1314 69TH AV E	SF	1	372	46	10	72	--
S 364th St to S 373rd St	2921049024	1687	1671+00	N/A	SF	1	120	54	12.5	72	--
S 344th St to S 346th St	2121049078	1480	1598+00	1688 S 348TH ST	HOTEL	1	62	61	50	72	--
Porter Way to 10th St	420053048	3238	1768+00	7224 PACIFIC HWY E	HOSPITAL	1	90	54	40	72	--

Table F-9 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	20	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	63	20	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.1
62nd Ave E to Fife Split	0420063117	3572	1956+00	1316 62ND AV E	SF	1	113	70	20	72	--
62nd Ave E to Fife Split	0420063117	3572	1959+00	1316 62ND AV E	CH	1	96	75	20	75	--
62nd Ave E to Fife Split	0420063115	3575	1956+00	1316 62ND AV E	MF	30	373	59	20	72	--
62nd Ave E to Fife Split	0420063060	3616	1963+00	1322 59TH AV E	SF	1	180	65	12.5	72	--
62nd Ave E to Fife Split	6605000013	3609	1963+00	5913 15TH ST E	SF	1	282	62	12.5	72	--
62nd Ave E to Fife Split	6605000014	3617	1964+00	5905 15TH ST E	SF	1	279	62	12.5	72	--
Fife Split to 54th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	272	62	12.5	72	--
Fife Split to 54th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	270	62	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	2002+00	5615 15TH ST E	SF	1	286	62	12.5	72	--
Fife Split to 54th Ave E	9315000020	3648	2000+00	5701 15TH ST E	SF	1	263	62	12.5	72	--

Table F-9 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	270	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	2003+00	5405 15TH ST E	HOTEL	1	443	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	2005+00	5518 15TH ST E	SF	1	420	59	12.5	72	--
Fife Split to 54th Ave E	9315000140	3671	2006+00	5510 E 15TH ST	SF	1	425	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	2006+00	5509 15TH ST E	SF	1	281	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	2007+00	5503 15TH ST E	SF	1	271	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	2008+00	5417 15TH ST E	SF	1	271	62	12.5	72	--
Fife Split to 54th Ave E	9315000070	3689	2010+00	1409 54TH AV E	CH	1	246	61	20	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	615	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	520	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	612	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	612	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	626	45	10	72	--

Table F-9 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	553	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	558	46	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	443	59	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2091+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2078+00	3401 PACIFIC HWY E	HOTEL	1	137	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2075+00	3501 PACIFIC HWY E	MF	96	152	68	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2072+00	3518 PACIFIC HWY E	HOTEL	1	44	80	20	72	8.5
Alexander Ave E to 34th Ave E	0320013089	4011	2064+00	3801 PACIFIC HWY E	HOTEL	1	145	67	12.5	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	117	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2064+00	3812 PACIFIC HWY E	SF	1	144	67	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	275	51	20	72	--

Table F-9 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	278	51	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	180	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	187	55	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	167	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	311	50	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	247	52	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	249	52	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	129	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2036+00	1428 47TH AV E	SF	1	182	56	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2036+00	1420 47TH AV E	SF	1	238	53	20	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2035+00	1417 47TH AV E	SF	1	273	51	20	72	--

Table F-9 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	8905000241	3883	2036+00	1412 47TH AV E	SF	1	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	303	51	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2097+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-10 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Avenue Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	117	70	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	110	69	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	378	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	297	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	293	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	286	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	284	62	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	1971+00	5615 15TH ST E	SF	1	297	62	12.5	72	--

Table F-10 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	275	62	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	284	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	450	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	423	59	12.5	72	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	426	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	282	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	272	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	273	61	20	72	--
Fife Split to 54th Ave E	9315000070	3689	1980+00	1409 54TH AVE	CH	1	225	63	20	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	615	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	520	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	612	45	10	72	--

Table F-10 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	612	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	626	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	553	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	558	46	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	443	59	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2091+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2078+00	3401 PACIFIC HWY E	HOTEL	1	137	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2075+00	3501 PACIFIC HWY E	MF	96	152	68	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2072+00	3518 PACIFIC HWY E	HOTEL	1	44	80	20	72	8.5
Alexander Ave E to 34th Ave E	0320013089	4011	2064+00	3801 PACIFIC HWY E	HOTEL	1	145	67	12.5	72	--

Table F-10 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	117	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2064+00	3812 PACIFIC HWY E	SF	1	144	67	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	275	51	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	278	51	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	180	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	187	55	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	167	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	311	50	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	247	52	20	72	--

Table F-10 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	249	52	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	129	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2036+00	1428 47TH AV E	SF	1	182	56	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2036+00	1420 47TH AV E	SF	1	238	53	20	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2035+00	1417 47TH AV E	SF	1	273	51	20	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2036+00	1412 47TH AV E	SF	1	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	303	51	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2097+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-11 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Span Station Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	102	71	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	84	71	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	362	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	267	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	262	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	254	64	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	251	65	12.5	72	--

Table F-11 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Span Station Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000033	3652	1972+00	5615 15TH ST E	SF	1	202	64	12.5	72	--
Fife Split to 54th Ave E	9315000020	3648	1971+00	5701 15TH ST E	SF	1	206	64	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	236	65	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	325	61	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	258	58	20	72	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	251	58	20	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	107	66	20	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	95	67	20	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	97	61	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	615	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	520	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	612	45	10	72	--

Table F-11 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Span Station Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	612	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	626	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	553	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	558	46	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	443	59	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2091+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2078+00	3401 PACIFIC HWY E	HOTEL	1	137	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2075+00	3501 PACIFIC HWY E	MF	96	152	68	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2072+00	3518 PACIFIC HWY E	HOTEL	1	44	80	20	72	8.5
Alexander Ave E to 34th Ave E	0320013089	4011	2064+00	3801 PACIFIC HWY E	HOTEL	1	145	67	12.5	72	--

Table F-11 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Span Station Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	117	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2064+00	3812 PACIFIC HWY E	SF	1	144	67	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	275	51	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	278	51	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	180	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	187	55	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	167	56	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	311	50	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	247	52	20	72	--

Table F-11 Detailed Vibration Assessment Results for the Fife Pacific Highway Alternative with 54th Span Station Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	249	52	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	129	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2036+00	1428 47TH AV E	SF	1	182	56	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2036+00	1420 47TH AV E	SF	1	238	53	20	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2035+00	1417 47TH AV E	SF	1	273	51	20	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2036+00	1412 47TH AV E	SF	1	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	303	51	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2097+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-12 Detailed Vibration Assessment Results for the Fife Median Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	20	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	63	20	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.1
62nd Ave E to Fife Split	0420063117	3572	1956+00	1316 62ND AV E	SF	1	113	70	20	72	--
62nd Ave E to Fife Split	0420063117	3572	1959+00	1316 62ND AV E	CH	1	96	75	20	75	--
62nd Ave E to Fife Split	0420063115	3575	1956+00	1316 62ND AV E	MF	30	373	59	20	72	--
62nd Ave E to Fife Split	0420063060	3616	1963+00	1322 59TH AV E	SF	1	180	65	12.5	72	--
62nd Ave E to Fife Split	6605000013	3609	1963+00	5913 15TH ST E	SF	1	282	62	12.5	72	--
62nd Ave E to Fife Split	6605000014	3617	1964+00	5905 15TH ST E	SF	1	279	62	12.5	72	--
Fife Split to 54th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	272	62	12.5	72	--
Fife Split to 54th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	270	62	12.5	72	--

Table F-12 Detailed Vibration Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000033	3652	2002+00	5615 15TH ST E	SF	1	285	62	12.5	72	--
Fife Split to 54th Ave E	9315000020	3648	2001+00	5701 15TH ST E	SF	1	262	62	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1968+00	5719 15TH ST E	SF	1	270	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	2003+00	5405 15TH ST E	HOTEL	1	440	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	2005+00	5518 15TH ST E	SF	1	415	59	12.5	72	--
Fife Split to 54th Ave E	9315000140	3671	2006+00	5510 E 15TH ST	SF	1	420	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	2006+00	5509 15TH ST E	SF	1	276	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	2007+00	5503 15TH ST E	SF	1	267	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	2009+00	5417 15TH ST E	SF	1	271	64	12.5	72	--
Fife Split to 54th Ave E	9315000070	3689	2012+00	1409 54TH AV E	CH	1	246	64	12.5	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	669	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2039+00	4600 16TH ST E	MF	24	574	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	666	45	10	72	--

Table F-12 Detailed Vibration Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	666	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	680	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	12	608	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	612	45	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	497	58	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2090+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2077+00	3401 PACIFIC HWY E	HOTEL	1	124	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2074+00	3501 PACIFIC HWY E	MF	96	110	70	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2071+00	3518 PACIFIC HWY E	HOTEL	1	98	71	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2063+00	3801 PACIFIC HWY E	HOTEL	1	89	71	20	72	--

Table F-12 Detailed Vibration Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	172	66	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2063+00	3812 PACIFIC HWY E	SF	1	199	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	329	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	333	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	20	234	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	242	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	222	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	366	48	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	301	50	20	72	--

Table F-12 Detailed Vibration Assessment Results for the Fife Median Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2037+00	4601 PACIFIC HWY E	HOTEL	1	74	65	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2035+00	1428 47TH AV E	SF	1	127	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2035+00	1420 47TH AV E	SF	1	183	56	12.5	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2034+00	1417 47TH AV E	SF	1	218	54	20	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2035+00	1412 47TH AV E	SF	1	248	52	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	248	52	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2096+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-13 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Avenue Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	117	70	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	110	69	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	378	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	297	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	293	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	286	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	284	62	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	1971+00	5615 15TH ST E	SF	1	297	62	12.5	72	--

**Table F-13 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Avenue Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	275	62	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	284	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	450	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	423	59	12.5	72	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	426	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	282	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	272	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	273	61	20	72	--
Fife Split to 54th Ave E	9315000070	3689	1980+00	1409 54TH AV E	CH	1	225	63	20	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	669	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2039+00	4600 16TH ST E	MF	24	574	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	666	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	666	45	10	72	--

**Table F-13 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Avenue Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	680	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	12	608	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	612	45	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	497	58	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2090+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2077+00	3401 PACIFIC HWY E	HOTEL	1	124	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2074+00	3501 PACIFIC HWY E	MF	96	110	70	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2071+00	3518 PACIFIC HWY E	HOTEL	1	98	71	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2063+00	3801 PACIFIC HWY E	HOTEL	1	89	71	20	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	172	66	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2063+00	3812 PACIFIC HWY E	SF	1	199	65	12.5	72	--

**Table F-13 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Avenue Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	329	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	333	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	20	234	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	242	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	222	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	366	48	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	301	50	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2037+00	4601 PACIFIC HWY E	HOTEL	1	74	65	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2035+00	1428 47TH AV E	SF	1	127	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2035+00	1420 47TH AV E	SF	1	183	56	12.5	72	--

**Table F-13 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Avenue Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	8905000380	3862	2034+00	1417 47TH AV E	SF	1	218	54	20	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2035+00	1412 47TH AV E	SF	1	248	52	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	248	52	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2096+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-14 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Span Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	102	71	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	84	71	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	362	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	267	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	262	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	254	64	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	251	65	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	1972+00	5615 15TH ST E	SF	1	202	64	12.5	72	--

**Table F-14 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Span Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000020	3648	1971+00	5701 15TH ST E	SF	1	206	64	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	236	65	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	325	61	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	258	58	20	72	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	251	58	20	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	107	66	20	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	95	67	20	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	97	61	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	669	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2039+00	4600 16TH ST E	MF	24	574	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	666	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	20	666	45	10	72	--

**Table F-14 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Span Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	680	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	12	608	45	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	12	612	45	10	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2067+00	3700 PACIFIC HWY E	HOSPITAL	1	497	58	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2090+00	3100 PACIFIC HWY E	HOTEL	1	140	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2077+00	3401 PACIFIC HWY E	HOTEL	1	124	69	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2074+00	3501 PACIFIC HWY E	MF	96	110	70	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2071+00	3518 PACIFIC HWY E	HOTEL	1	98	71	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2063+00	3801 PACIFIC HWY E	HOTEL	1	89	71	20	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2064+00	3812 PACIFIC HWY E	SF	1	172	66	12.5	72	--

**Table F-14 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Span Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320122071	4005	2063+00	3812 PACIFIC HWY E	SF	1	199	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	329	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	12	333	49	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	20	234	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	242	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	222	53	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2040+00	4600 16TH ST E	MF	24	366	48	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2041+00	4600 16TH ST E	MF	24	301	50	20	72	--

**Table F-14 Detailed Vibration Assessment Results for the Fife Median Alternative with 54th Span Design Option
(continued)**

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	303	50	20	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2037+00	4601 PACIFIC HWY E	HOTEL	1	74	65	12.5	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2035+00	1428 47TH AV E	SF	1	127	59	12.5	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2035+00	1420 47TH AV E	SF	1	183	56	12.5	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2034+00	1417 47TH AV E	SF	1	218	54	20	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2035+00	1412 47TH AV E	SF	1	248	52	20	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2032+00	1416 WILLOW RD E	SF	1	248	52	20	72	--
34th Ave E to Puyallup River	0320112045	4121	2096+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	20	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	63	20	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.1
62nd Ave E to Fife Split	0420063117	3572	1956+00	1316 62ND AV E	SF	1	113	70	20	72	--
62nd Ave E to Fife Split	0420063117	3572	1959+00	1316 62ND AV E	CH	1	96	75	20	75	--
62nd Ave E to Fife Split	0420063115	3575	1956+00	1316 62ND AV E	MF	30	373	59	20	72	--
62nd Ave E to Fife Split	0420063060	3616	1963+00	1322 59TH AV E	SF	1	180	65	12.5	72	--
62nd Ave E to Fife Split	6605000013	3609	1963+00	5913 15TH ST E	SF	1	282	62	12.5	72	--
62nd Ave E to Fife Split	6605000014	3617	1964+00	5905 15TH ST E	SF	1	279	62	12.5	72	--
Fife Split to 54th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	272	62	12.5	72	--
Fife Split to 54th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	270	62	12.5	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000033	3652	2002+00	5615 15TH ST E	SF	1	285	62	12.5	72	--
Fife Split to 54th Ave E	9315000020	3648	2001+00	5701 15TH ST E	SF	1	262	62	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1968+00	5719 15TH ST E	SF	1	270	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	2004+00	5405 15TH ST E	HOTEL	1	441	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	2006+00	5518 15TH ST E	SF	1	416	59	12.5	72	--
Fife Split to 54th Ave E	9315000140	3671	2007+00	5510 E 15TH ST	SF	1	421	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	2007+00	5509 15TH ST E	SF	1	277	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	2007+00	5503 15TH ST E	SF	1	267	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	2008+00	5417 15TH ST E	SF	1	270	63	20	72	--
Fife Split to 54th Ave E	9315000070	3689	2011+00	1409 54TH AV E	CH	1	249	64	20	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	88	65	12.5	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	178	57	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	90	63	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	20	91	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	75	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	148	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	142	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2071+00	3700 PACIFIC HWY E	HOSPITAL	1	166	66	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2094+00	3100 PACIFIC HWY E	HOTEL	1	199	65	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2082+00	3401 PACIFIC HWY E	HOTEL	1	647	56	12.5	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320024019	4042	2078+00	3501 PACIFIC HWY E	MF	96	691	55	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2075+00	3518 PACIFIC HWY E	HOTEL	1	507	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2068+00	3801 PACIFIC HWY E	HOTEL	1	799	54	12.5	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2068+00	3812 PACIFIC HWY E	SF	1	516	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2067+00	3812 PACIFIC HWY E	SF	1	498	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	425	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	423	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	20	522	48	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	24	513	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	535	47	10	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	391	49	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	456	48	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	453	47	10	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	806	45	10	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2034+00	1428 47TH AV E	SF	1	790	45	10	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2034+00	1420 47TH AV E	SF	1	841	45	10	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2033+00	1417 47TH AV E	SF	1	814	45	10	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2034+00	1412 47TH AV E	SF	1	901	45	10	72	--

Table F-15 Detailed Vibration Assessment Results for the Fife I-5 Alternative (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	8905000510	3848	2031+00	1416 WILLOW RD E	SF	1	733	46	10	72	--
34th Ave E to Puyallup River	0320112045	4121	2200+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-16 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Avenue Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	118	70	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	111	68	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	379	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	297	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	294	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	287	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	285	62	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	1971+00	5615 15TH ST E	SF	1	298	62	12.5	72	--
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	276	62	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	285	62	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	451	59	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	423	59	12.5	72	--

Table F-16 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	427	59	12.5	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	283	62	12.5	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	273	62	12.5	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	274	61	20	72	--
Fife Split to 54th Ave E	9315000070	3689	1980+00	1409 54TH AV E	CH	1	225	63	20	75	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	88	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	178	57	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	90	63	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	20	91	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	75	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	148	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	142	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2071+00	3700 PACIFIC HWY E	HOSPITAL	1	166	66	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2094+00	3100 PACIFIC HWY E	HOTEL	1	199	65	12.5	72	--

Table F-16 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320024032	4064	2082+00	3401 PACIFIC HWY E	HOTEL	1	647	56	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2078+00	3501 PACIFIC HWY E	MF	96	691	55	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2075+00	3518 PACIFIC HWY E	HOTEL	1	507	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2068+00	3801 PACIFIC HWY E	HOTEL	1	799	54	12.5	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2068+00	3812 PACIFIC HWY E	SF	1	516	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320122071	4005	2067+00	3812 PACIFIC HWY E	SF	1	498	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	425	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	423	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	20	522	48	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	24	513	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	535	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	391	49	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	456	48	10	72	--

Table F-16 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Avenue Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	453	47	10	72	--
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	806	45	10	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2034+00	1428 47TH AV E	SF	1	790	45	10	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2034+00	1420 47TH AV E	SF	1	841	45	10	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2033+00	1417 47TH AV E	SF	1	814	45	10	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2034+00	1412 47TH AV E	SF	1	901	45	10	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2031+00	1416 WILLOW RD E	SF	1	733	46	10	72	--
34th Ave E to Puyallup River	0320112045	4121	2200+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-17 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Span Design Option

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
68th Ave E to 62nd Ave E	0420064195	3534	1955+00	1223 62ND AV E	SF	1	162	67	12.5	72	--
68th Ave E to 62nd Ave E	0420064194	3533	1955+00	1219 62ND AV E	SF	1	236	65	12.5	72	--
68th Ave E to 62nd Ave E	0420064023	3535	1953+00	1305 62ND AV E	SF	1	81	73	20	72	1.2
62nd Ave E to 58th Ave E	0420063117	3572	1956+00	1316 62ND AV E	SF	1	103	71	20	72	--
62nd Ave E to 58th Ave E	0420063117	3572	1959+00	1316 62ND AV E	CH	1	85	71	20	75	--
62nd Ave E to 58th Ave E	0420063115	3575	1956+00	1316 62ND AV E	MF	30	363	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000013	3609	1963+00	5913 15TH ST E	SF	1	267	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000014	3617	1964+00	5905 15TH ST E	SF	1	263	62	12.5	72	--
62nd Ave E to 58th Ave E	6605000030	3630	1966+00	5809 15TH ST E	SF	1	254	64	12.5	72	--
62nd Ave E to 58th Ave E	6605000040	3635	1967+00	5801 15TH ST E	SF	1	252	65	12.5	72	--
Fife Split to 54th Ave E	9315000033	3652	1972+00	5615 15TH ST E	SF	1	203	64	12.5	72	--

Table F-17 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Span Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Fife Split to 54th Ave E	9315000020	3648	1970+00	5701 15TH ST E	SF	1	206	66	12.5	72	--
Fife Split to 54th Ave E	9315000010	3640	1969+00	5719 15TH ST E	SF	1	237	65	12.5	72	--
Fife Split to 54th Ave E	9315000120	3658	1973+00	5405 15TH ST E	HOTEL	1	326	61	12.5	72	--
Fife Split to 54th Ave E	9315000130	3665	1975+00	5518 15TH ST E	SF	1	259	58	20	72	--
Fife Split to 54th Ave E	9315000140	3671	1976+00	5510 E 15TH ST	SF	1	252	58	20	72	--
Fife Split to 54th Ave E	9315000040	3670	1976+00	5509 15TH ST E	SF	1	108	66	20	72	--
Fife Split to 54th Ave E	9315000050	3674	1976+00	5503 15TH ST E	SF	1	96	67	20	72	--
Fife Split to 54th Ave E	9315000060	3679	1977+00	5417 15TH ST E	SF	1	98	61	20	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	88	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2042+00	4600 16TH ST E	MF	24	178	57	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	90	63	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	20	91	65	12.5	72	--

Table F-17 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Span Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	75	65	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	148	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	142	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320111068	4020	2071+00	3700 PACIFIC HWY E	HOSPITAL	1	166	66	12.5	66	--
34th Ave E to Puyallup River	0320111003	4107	2094+00	3100 PACIFIC HWY E	HOTEL	1	199	65	12.5	72	--
Alexander Ave E to 34th Ave E	0320024032	4064	2082+00	3401 PACIFIC HWY E	HOTEL	1	647	56	12.5	72	--
Alexander Ave E to 34th Ave E	0320024019	4042	2078+00	3501 PACIFIC HWY E	MF	96	691	55	12.5	72	--
Alexander Ave E to 34th Ave E	0320024106	4032	2075+00	3518 PACIFIC HWY E	HOTEL	1	507	58	12.5	72	--
Alexander Ave E to 34th Ave E	0320013089	4011	2068+00	3801 PACIFIC HWY E	HOTEL	1	799	54	12.5	72	--
Alexander Ave E to 34th Ave E	0320122058	4012	2068+00	3812 PACIFIC HWY E	SF	1	516	58	12.5	72	--

Table F-17 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Span Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Alexander Ave E to 34th Ave E	0320122071	4005	2067+00	3812 PACIFIC HWY E	SF	1	498	58	12.5	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2047+00	4600 16TH ST E	MF	12	425	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	12	423	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	20	522	48	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2046+00	4600 16TH ST E	MF	24	513	46	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	535	47	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2043+00	4600 16TH ST E	MF	24	391	49	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2044+00	4600 16TH ST E	MF	24	456	48	10	72	--
Willow Rd E to Alexander Ave E	0320122028	3919	2045+00	4600 16TH ST E	MF	24	453	47	10	72	--

Table F-17 Detailed Vibration Assessment Results for the Fife I-5 Alternative with 54th Span Design Option (continued)

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
Willow Rd E to Alexander Ave E	8905000091	3899	2038+00	4601 PACIFIC HWY E	HOTEL	1	806	45	10	72	--
Willow Rd E to Alexander Ave E	8905000243	3885	2034+00	1428 47TH AV E	SF	1	790	45	10	72	--
Willow Rd E to Alexander Ave E	8905000242	3884	2034+00	1420 47TH AV E	SF	1	841	45	10	72	--
Willow Rd E to Alexander Ave E	8905000380	3862	2033+00	1417 47TH AV E	SF	1	814	45	10	72	--
Willow Rd E to Alexander Ave E	8905000241	3883	2034+00	1412 47TH AV E	SF	1	901	45	10	72	--
Willow Rd E to Alexander Ave E	8905000510	3848	2031+00	1416 WILLOW RD E	SF	1	733	46	10	72	--
34th Ave E to Puyallup River	0320112045	4121	2200+00	2820 PACIFIC HWY E	HOTEL	1	132	68	12.5	72	--

Table F-18 Detailed Vibration Assessment Results for the Preferred Tacoma 25th Street-West Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
E Portland Ave to East L St	4715011101	4280	2253+00	1425 E 27TH ST	HOTEL	1	78	51	10	72	--
East L St to East G St	2076360040	4364	2268+00	1112 E 26TH ST	SF	1	416	51	10	72	--
East L St to East G St	2076360020	4376	2269+00	1106 E 26TH ST	SF	1	409	51	10	72	--
E Portland Ave to East L St	2076370030	4345	2264+00	1211 E 26TH ST	SF	1	220	53	10	72	--
E Portland Ave to East L St	4715010600	4342	2264+00	1220 PUYALLUP AV	HOTEL	1	83	53	10	72	--
East G St to East D St	2076240011	4471	2292+00	2611 EAST E ST	HOTEL	1	415	51	10	72	--
E Portland Ave to East L St	4715010850	4310	2259+00	1320 E 26TH ST	SF	1	238	51	10	72	--
East G St to East D St	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	49	37	40	72	--

Table F-19 Detailed Vibration Assessment Results for the Tacoma 25th Street-East Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
E Portland Ave to East L St	4715011101	4280	2253+00	1425 E 27TH ST	HOTEL	1	81	51	10	72	--
East L St to East G St	2076360040	4364	2268+00	1112 E 26TH ST	SF	1	411	51	10	72	--
East L St to East G St	2076360020	4376	2269+00	1106 E 26TH ST	SF	1	405	51	10	72	--
E Portland Ave to East L St	2076370030	4345	2264+00	1211 E 26TH ST	SF	1	218	53	10	72	--
E Portland Ave to East L St	4715010600	4342	2263+00	1220 PUYALLUP AV	HOTEL	1	85	53	10	72	--
East G St to East D St	2076240011	4471	2289+00	2611 EAST E ST	HOTEL	1	458	51	10	72	--
E Portland Ave to East L St	4715010850	4310	2258+00	1320 E 26TH ST	SF	1	237	51	10	72	--
East G St to East D St	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	392	24	10	72	--

Table F-20 Detailed Vibration Assessment Results for the Tacoma Close to Sounder Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
E Portland Ave to East L St	4715011101	4280	2254+00	1425 E 27TH ST	HOTEL	1	83	56	10	72	--
East L St to East G St	2076360040	4364	2269+00	1112 E 26TH ST	SF	1	260	46	10	72	--
East L St to East G St	2076360020	4376	2270+00	1106 E 26TH ST	SF	1	248	46	10	72	--
E Portland Ave to East L St	2076370030	4345	2265+00	1211 E 26TH ST	SF	1	101	58	10	72	--
E Portland Ave to East L St	4715010600	4342	2265+00	1220 PUYALLUP AV	HOTEL	1	193	53	10	72	--
East G St to East D St	2076240011	4471	2293+00	2611 EAST E ST	HOTEL	1	331	51	10	72	--
E Portland Ave to East L St	4715010850	4310	2260+00	1320 E 26TH ST	SF	1	227	48	10	72	--
East G St to East D St	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	134	24	10	72	--

Table F-21 Detailed Vibration Assessment Results for the Tacoma 26th Street Alternative

Receiver Area	Pierce County Parcel Number	Sound Transit Right-of-Way ID	Track Station Number	Receiver Street Address	Receiver Land Use Type	# of Units Represented	Distance to Building (ft)	Predicted Vibration Level (VdB)	Max 1/3-Octave Band (Hz)	Vibration Limit (VdB)	Vibration Exceedance Amount (VdB)
E Portland Ave to East L St	4715011101	4280	2254+00	1425 E 27TH ST	HOTEL	1	157	54	10	72	--
East L St to East G St	2076360040	4364	2269+00	1112 E 26TH ST	SF	1	252	46	10	72	--
East L St to East G St	2076360020	4376	2270+00	1106 E 26TH ST	SF	1	240	46	10	72	--
E Portland Ave to East L St	2076370030	4345	2265+00	1211 E 26TH ST	SF	1	93	58	10	72	--
E Portland Ave to East L St	4715010600	4342	2265+00	1220 PUYALLUP AV	HOTEL	1	201	53	10	72	--
East G St to East D St	2076240011	4471	2293+00	2611 EAST E ST	HOTEL	1	41	64	40	72	--
E Portland Ave to East L St	4715010850	4310	2260+00	1320 E 26TH ST	SF	1	223	46	10	72	--
East G St to East D St	2075210034	4493	2293+00	3520 214TH PL SE	MF	115	424	24	10	72	--



ATTACHMENT G

Traffic Noise Assessment (OMFS Phase III Highway Traffic Noise Study)



Cross-Spectrum Acoustics

Cross-Spectrum Acoustics Inc.

Massachusetts

Utah

California

TECHNICAL MEMORANDUM

To: MarySue Abel and Pablo Lopez-Hilfiker, HDR, Inc.

From: Judy Rochat, Roberto Della Neve, and Lance Meister, Cross-Spectrum Acoustics Inc.

Date: September 19, 2024

Project Reference: J2019-1351 – OMFS Phase III Highway Noise

Subject: Highway Traffic Noise Study

This technical memorandum serves as the highway noise study for the Operations and Maintenance Facility South (OMFS) Phase III, specifically the Preferred Alternative (PA). Washington State Department of Transportation (WSDOT) Traffic Noise Policy and Procedures,¹ which applies FHWA methodology with State-specific parameters, explains how WSDOT policies and procedures apply 23CFR772, Federal Regulations that apply to projects receiving federal aid. This noise study follows WSDOT methodologies for a typical highway study and applies special WSDOT-approved criteria for defining noise impacts and abatement design to the rail project.

Highlights:

- *Noise impacts and abatement were considered for two scenarios: 1) for the rail project only; and 2) for the proposed rail project combined with a separate proposed highway project, City Center Access Project (CCAP).*
- *With the rail project (OMFS) only, a new noise wall is designed to ensure traffic noise levels will not increase compared to the future no-build case (new noise wall replaces wall and berm to be removed as part of the rail project).*
- *With the combined rail (OMFS) and highway CCAP projects, the wall designed for the OMFS-only scenario is applied and modifications considered to prevent additional impacts from both projects (impacts in this scenario based on the FHWA/WSDOT absolute highway traffic noise thresholds).*

1. PROJECT DESCRIPTION

The OMFS Project would construct and operate a light rail maintenance facility in the South Corridor of Sound Transit's service district. In June 2024, the Sound Transit Board of Directors selected the Preferred Alternative as the project to be built. The Preferred Alternative would include construction of about 1.4 miles of mainline track adjacent to Interstate 5 (I-5). Between the S 320th Street interchange and S 336th Street, an existing earthen berm (adjacent to the Belmor Park Manufactured Home Community) transitions to a highway noise wall extending both north and south of the berm, all helping to reduce noise in the nearby communities. As part of construction of the mainline for the OMF South project, the berm would be removed. To the south of the berm, a segment of the noise wall would be removed, leaving the portion 400 feet north of S 333rd Street and extending south to S 336th Street. In addition, multiple first-row homes would be removed. Removal of these noise reduction elements (i.e., berm, walls, homes) warrants assessment of highway traffic noise impacts in nearby communities.

Figure 1 shows the project area, with the light rail track centerlines indicated in purple and light green. Highway traffic noise was examined for noise-sensitive land uses within the noise study area (outlined in the figure, area defined by potential changes in noise due to removal of section of highway noise wall), with a more granular examination in the vicinity of the noise wall section proposed to be removed.

1.1. NO-BUILD CONDITION

The No-Build condition does not include construction of the Proposed Project for light rail.

1.2. BUILD CONDITION

The Build condition includes construction of the Preferred Alternative for light rail. Note that rail operational noise is not included in a highway noise analysis. There are two conditions for Build studied as part of the highway noise assessment: 1) OMF South built without the City Center Access Project (CCAP) constructed; and 2) OMF South built with CCAP constructed. These are referred to as Scenario 1 and Scenario 2 throughout this report.

¹ *Traffic Noise Policy and Procedures*, Washington State Department of Transportation, 2020.

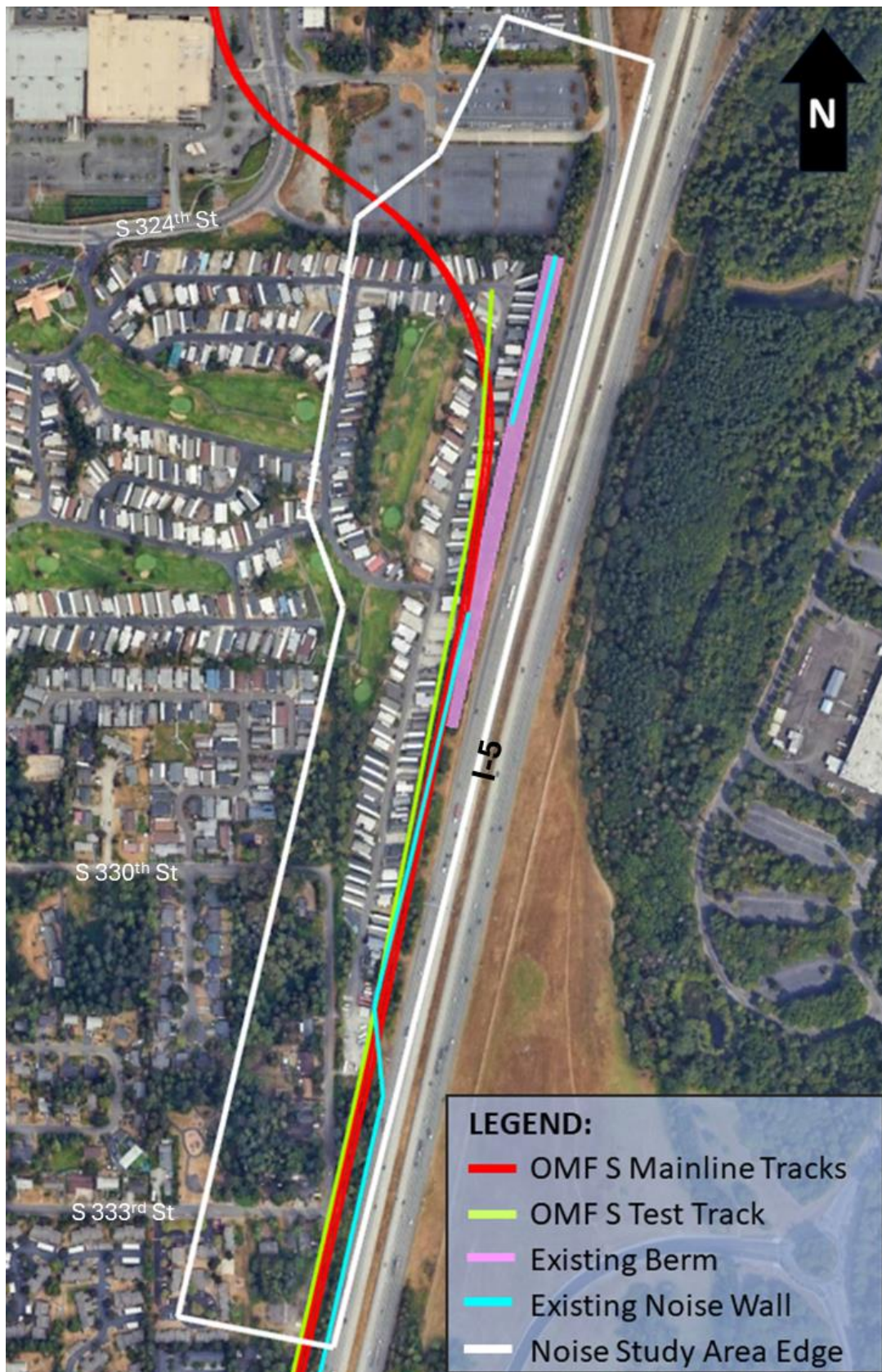


Figure 1. Highway noise study area

1.3. CCAP AS IT RELATES TO PROPOSED PROJECT

CCAP proposes a new interchange with roundabouts and a new bridge over I-5 at S 324th Street. Other elements include new and improved access for vehicles on S 324th Street and S 320th Street to and from I-5, bike lanes, and improved pedestrian access. Due to highway modifications, existing noise walls and berms would be removed and potentially replaced by noise walls adjacent to the highway for the section of interest to the OMFS Proposed Project. The CCAP noise study (Michael Minor & Associates, November 2021) found that, due to required highway widening and removal of the berm and noise walls, there were multiple impacts in the noise study area. The noise study discussed three options for noise abatement: 1) new noise wall along I-5; 2) mostly new noise wall along I-5, incorporating 300 feet of existing wall near 336th Street; and 3) accounting for the OMFS on-fill track and rail project noise walls in combination with a new noise wall near 336th Street, where there are planned aerial tracks. This report investigates a fourth option using the Preliminary Engineering design from OMFS to model the highway noise abatement considering the rail project structures, terrain modifications, and removal of existing homes (receivers). The noise abatement considered for Scenario 2 is that designed for the OMFS-only analysis (this report's Scenario 1), with modifications considered based on FHWA/WSDOT criteria.

Note that CCAP requires removal of the existing noise wall on the north end of the OMFS noise study area and extending much farther south than the removal of the southern existing noise wall for the proposed rail project. This analysis does not consider replacement of walls that are not affected by the OMFS South project construction.

2. METHODOLOGY

The Federal Transit Administration (FTA) provides guidance for evaluating noise for rail transit projects that involve changes to existing highway noise barriers. The Proposed Project is such a case, and a highway noise analysis following WSDOT procedures is applied based on the FTA Guidance Manual.² WSDOT follows the Federal Highway Administration (FHWA) procedures outlined in the Code of Federal Regulations. A traffic noise analysis will allow Sound Transit to understand the impact of modifying the existing highway noise abatement and the removal of homes to accommodate the rail line.

This section describes the impact criteria, analysis and modeling procedures applied to the highway noise analysis for the Proposed Project, and the noise study area.

2.1. REGULATORY SETTING AND IMPACT CRITERIA

There are two sets of criteria that are applied to Scenario 1 and Scenario 2.

Scenario 1: Rail project only

The impact criteria applicable to Scenario 1 is defined as any future noise level exceeding the No Build condition. In other words, with the rail project constructed, the highway traffic noise levels should be no greater than the future highway traffic noise levels without the rail project constructed. As such, the future highway traffic noise levels without the rail project define the impact criteria for noise sensitive land uses. These criteria were agreed to in a joint South Transit and WSDOT meeting in March 20, 2024.

Scenario 2: Rail project in combination with CCAP

Scenario 2 follows typical highway project criteria. The FHWA criterion applicable for residences is an exterior hourly equivalent sound level (L_{eq}) that approaches or exceeds 67 dBA. The residential criterion, along with the Noise Abatement Criteria (NAC) for other land uses are shown in Table 1. WSDOT considers a predicted sound level of 1 dBA below the NAC as sufficient to satisfy the condition of

² U.S. Department of Transportation (USDOT), Federal Transit Administration (FTA), Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment Guidance Manual*, FTA Report No. 0123. September 2018.

“approach,” or approaching the NAC, required by FHWA for all land use categories. For example, where the NAC is 67 dBA for outdoor use at a residence, a noise level of 66 dBA is considered an impact. Receivers are also considered impacted when the worst hourly traffic noise is predicted to increase 10 dBA (“substantial increase”) or more between the Existing and Build Conditions.

The FHWA land use categories applicable to this analysis are Category B, for single and multi-family units, and Category C for a park. Under FHWA policy, the noise impact criteria is applicable to frequently used exterior areas, for example, a back-yard deck or patio at a residence or a path or viewing area at a park.

Table 1. Activity Categories and Noise Abatement Criteria (23 CFR 772)

Activity Category	NAC $L_{eq}[h]^1$ FHWA	NAC $L_{eq}[h]^1$ WSDOT	Evaluation Location	Description of Activities
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ²	67	66	Exterior	Residential (single and multi-family units).
C ²	67	66	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F				Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G				Undeveloped lands that are not permitted.

¹ The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

² Includes undeveloped lands permitted for this activity category.

2.2. ANALYSIS AND MODELING PROCEDURES

For the noise analysis, there are four major steps listed below and with details for each following the list:

1. Establish existing noise
2. Predict future noise for the No-Build and Build cases

3. Determine highway traffic noise impacts
4. Conduct traffic noise abatement analysis

2.2.1. Establish Existing Noise

Existing noise in the noise study area is established based on the existing noise FHWA Traffic Noise Model (TNM) version 2.5 case used for the CCAP noise analysis. The TNM case is modified to include homes in the analysis farther from the highway, which were not included for CCAP due to line-of-sight blockage from other rows of homes that will be removed by OMFS. In addition, receivers were divided into individual units closer to the highway to provide more granular results. Each noise-sensitive land use/receptor or group of receptors is represented by a TNM receiver, provided it is in an area of frequent human use. Traffic data and all other modeling elements (e.g., roadways, terrain, etc.) for the CCAP existing noise case is valid for the OMFS analysis.

Note that the CCAP existing noise case was validated with CCAP noise measurements taken in the Proposed Project area. Once an existing case was built in TNM, predicted sound levels were compared to those measured, applying traffic data input as collected during noise measurements. The CCAP study found that the modeled and measured results agreed within +/- 2 dBA (a WSDOT requirement) at all five locations in the CCAP noise study area.

2.2.2. Predict Future Noise for No-Build and Build Cases

No-Build future noise is based on the CCAP predicted future noise (for 2045) using TNM for the No-Build case (no constructed highway changes). Sound levels from this case are used to establish future No-Build noise for the OMFS. At this time, CCAP is a proposed project in the environmental documenting and permitting review phase (not yet approved for construction).³ Traffic data and all other modeling elements (e.g., roadways, terrain, etc.) for the CCAP case is valid for the OMFS No-Build analysis. The predicted No-Build future noise is applied to both Scenario 1 and Scenario 2.

There are two cases for the OMFS Build condition:

- Scenario 1: the OMFS design is added to the CCAP future No-Build case (OMFS Build, CCAP No-Build). Traffic data and all other modeling elements (e.g., roadways, terrain, etc.) for the CCAP cases are valid for the OMFS analysis, except as modified by OMFS track structures.
- Scenario 2: OMFS and CCAP are both constructed. The OMFS design is added to the CCAP future case to predict future noise (this case allows for prediction of sound levels with both OMFS and CCAP built). This scenario accounts for changes in the sound propagation path from the highway to the nearby community based on the completion of both projects. This case also assumes the following: 1) the northern existing noise wall as seen in Figure 1 is removed due to the CCAP project; and 2) a noise wall is assumed to be constructed by CCAP, equivalent to the southern existing noise wall (existing wall as seen in Figure 1 would be removed due to CCAP). The equivalent wall is included in the Scenario 2 TNM case and has the same parameters as the existing wall from the Scenario 1 case (shifted slightly west at the northern end to accommodate the CCAP highway shoulder/lanes). The assumption of including a CCAP noise wall to replace the southern existing noise wall is necessary to not erroneously assign impacts to OMFS+CCAP that are purely CCAP-related.

2.2.3. Determine Highway Traffic Noise Impacts

Scenario 1 is compared to future No-Build levels.

For the purpose of determining how the Scenario 1 noise wall would need to change with CCAP included, the Scenario 2 predicted noise levels are compared to the WSDOT noise abatement criteria

³ <https://www.cityoffederalway.com/page/city-center-access-project>

(NAC). Comparing to the NAC, an impact is identified if the noise equals or exceeds 66 dBA for residential land uses and for a park.

2.2.4. Conduct Traffic Noise Abatement Analysis

If and where potential impacts are identified for Scenario 1, TNM is used to design a noise wall to reduce levels to the future No-Build levels.

If and where potential noise impacts are identified for Scenario 2, TNM is used to modify the Scenario 1 noise wall (heights) to eliminate impacts.

Walls for both Scenarios are then compared to determine recommended changes, if any, with the construction of CCAP.

2.3. NOISE STUDY AREA

The noise study area (as identified with white outline in Figure 1) is large enough to account for and include all potential noise sensitive properties within the Proposed Project area.

Along I-5 between S 320th Street and S 336th Street, two communities are potentially affected by removal of the berm, portions of the walls (south of berm), and first-row homes currently providing highway traffic noise reduction. The highway noise study area (NSA) encompasses land uses out to approximately 500 feet west of I-5, which includes the Belmor Park Manufactured Home Community and the community nearby. Bounding to the south, the NSA extends approximately 500 feet south of S 333rd Street, which includes single family homes, apartments, and a park (highway noise unaffected farther south). Distances past 500 ft are considered in the Belmor Park area due to proposed acquisitions of mobile homes as part of the OMFS, which could allow direct line-of-sight from homes to the highway at farther distances than existing conditions. With direct line-of-sight, distances beyond 500 ft should be considered in the NSA.

Modeling receivers are shown in Figure 2 and listed in the traffic noise level summary tables in Section 3. The receivers included in the analysis are those that are potentially affected by the OMFS, this includes consideration of acquisitions due to the project. The receiver identifications are those used for CCAP (SW-xx), with four new receivers added (SW-x-2023) and dividing several of the receivers into individual units (e.g., SW-xxa, SW-xxb, etc.). The 55 receivers included in this analysis represent 120 single and multi-family residences and one park. The tables in Section 3 show the number of units (receptors) represented by each modeling receiver. Note that for the Cedar Grove Park (SW-45), the number of units is represented by a residential equivalence of 3.1 units, as calculated for the CCAP study.⁴

⁴ *City Center Access Project Noise Impact Analysis*, Prepared for City of Federal Way by Michael Minor & Associates, November 2021.



Figure 2. Modeling Receivers

3. NOISE LEVELS SUMMARY

This section lists sound levels for Existing, future No-Build, and future Build cases for Scenario 1 and Scenario 2.

3.1. NOISE IMPACT SUMMARY- SCENARIO 1

Considering a build condition with only OMFS (no CCAP) constructed, noise impacts based on exceedance of future No-Build sound levels are identified at multiple locations in the rail project area. This is expected due to the removal of the noise wall and berm adjacent to the Belmor Mobile Home Park and removal of first-row homes. In some cases, the noise is reduced with OMFS constructed, since the track structure interferences with highway traffic noise propagation, lowering the sound level. Sound levels with a new noise wall that eliminates the impacts are also shown in the table, with the noise wall design discussed in Section 4.1.

3.2. NOISE IMPACT SUMMARY – SCENARIO 2

Considering a build condition with both OMFS and CCAP constructed, noise impacts are identified at multiple receivers (recall that with Scenario 2, impacts are defined at 66 dBA or greater, which follows the same criteria applied to CCAP). The noise impacts are residences at Belmor Mobile Home Park, where existing shielding from highway noise walls and berms and first-row homes will be removed under the OMFS Build conditions. The impacts are at sound levels ranging from 66 to 71 dBA, meeting/exceeding the noise abatement criterion of 66 dBA. There are no impacts qualifying as a substantial increase (10+ dB higher than existing noise). Sound levels with the Scenario 1-designed noise wall eliminate all impacts, so the wall requires no modifications for Scenario 2 (noise wall design is discussed in Sections 4.1 and 4.2).

Table 2. Traffic Noise Levels – Scenario 1 (OMFS only)

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c / Criteria ^d	Build Alternative (2045) L _{eq} (dBA) ^c	Build Alternative vs No-Build / Criteria (dBA) ^e	Build Alternative with barrier (2045) L _{eq} (dBA) ^c	Build Alternative with barrier vs No-Build / Criteria (dBA) ^e
SW-3	B	3	56	61	61	0	61	0
SW-4	B	3	58	62	63	1	62	0
SW-5	B	4	58	62	62	0	62	0
SW-6	B	4	56	59	59	0	59	0
SW-7a	B	1	58	59	59	0	59	0
SW-7b	B	1	57	58	58	0	58	0
SW-7c	B	1	56	57	58	1	57	0
SW-7d	B	1	55	57	57	0	57	0
SW-8	B	4	57	59	59	0	59	0
SW-9	B	4	58	59	59	0	59	0
SW-21	B	1	63	64	67	3	63	-1
SW-22	B	1	61	62	66	4	62	0
SW-23	B	1	62	62	66	4	62	0
SW-24	B	1	63	64	67	3	64	0
SW-25	B	1	61	62	64	2	62	0
SW-26	B	1	61	62	62	0	61	-1
SW-32	B	4	55	57	57	0	57	0
SW-33	B	6	56	58	59	1	58	0
SW-34	B	7	58	59	59	0	59	0
SW-35	B	4	56	57	57	0	57	0
SW-36	B	3	56	57	58	1	57	0
SW-38b	B	1	61	62	66	4	62	0
SW-39a	B	1	59	60	63	3	60	0
SW-39b	B	1	60	61	64	3	60	-1
SW-39c	B	1	60	61	64	3	61	0

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c / Criteria ^d	Build Alternative (2045) L _{eq} (dBA) ^c	Build Alternative vs No-Build / Criteria (dBA) ^e	Build Alternative with barrier (2045) L _{eq} (dBA) ^c	Build Alternative with barrier vs No-Build / Criteria (dBA) ^e
SW-39d	B	1	60	61	65	4	61	0
SW-39e	B	1	60	61	64	3	61	0
SW-39f	B	1	60	61	64	3	61	0
SW-39g	B	1	60	61	63	2	60	-1
SW-39h	B	1	61	62	63	1	60	-2
SW-40a	B	1	62	63	62	-1	60	-3
SW-40b	B	1	62	62	62	0	60	-2
SW-40c	B	1	64	64	64	0	61	-3
SW-40d	B	1	64	65	64	-1	61	-4
SW-40e	B	1	63	64	64	0	61	-3
SW-40f	B	1	65	65	66	1	62	-3
SW-40g	B	1	64	65	65	0	62	-3
SW-40h	B	1	63	64	65	1	61	-3
SW-41	B	9	64	64	65	1	62	-2
SW-42	B	7	62	62	68	6	62	0
SW-43	B	1	61	61	66	5	61	0
SW-44	B	1	62	63	64	1	62	-1
SW-45	C	3.1	61	62	62	0	61	-1
SW-46	B	6	62	62	61	-1	61	-1
SW-47	B	9	62	63	62	-1	61	-2
SW-1-2023	B	4	55	56	56	0	55	-1
SW-2-2023	B	7	55	56	56	0	55	-1
SW-3-2023a	B	1	57	58	59	1	57	-1
SW-3-2023b	B	1	55	56	57	1	55	-1
SW-3-2023c	B	1	56	57	58	1	56	-1
SW-3-2023d	B	1	57	58	58	0	57	-1

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c / Criteria ^d	Build Alternative (2045) L _{eq} (dBA) ^c	Build Alternative vs No-Build / Criteria (dBA) ^e	Build Alternative with barrier (2045) L _{eq} (dBA) ^c	Build Alternative with barrier vs No-Build / Criteria (dBA) ^e
SW-3-2023e	B	1	57	58	59	1	57	-1
SW-3-2023f	B	1	58	59	59	0	57	-2
SW-3-2023g	B	1	58	58	58	0	57	-1
SW-4-2023	B	2	62	63	70	7	63	0

^aFHWA land use: see Table 1.

^bNumber of dwelling represented by each receiver.

^cL_{eq} peak hour noise levels (dBA) for condition stated.

^dWSDOT and Sound Transit applicable criteria, not to exceed future No-Build traffic noise levels.

^eChange in noise: Build (OMFS only) compared to No-Build. **Red** font used to indicate noise level impacts (Build exceeding future No Build). Note there is no increase above future No-Build levels with the designed barrier in place.

Table 3. Traffic Noise Levels – Scenario 2 (OMFS+CCAP)

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c	Criteria L _{eq} (dBA) ^d	Build Alternative (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts	Build Alternative with barrier (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts with Barrier
SW-3	B	3	56	61	66	62	0	61	0
SW-4	B	3	58	62	66	63	0	63	0
SW-5	B	4	58	62	66	62	0	62	0
SW-6	B	4	56	59	66	63	0	62	0
SW-7a	B	1	58	59	66	62	0	62	0
SW-7b	B	1	57	58	66	61	0	61	0
SW-7c	B	1	56	57	66	61	0	61	0
SW-7d	B	1	55	57	66	61	0	61	0
SW-8	B	4	57	59	66	61	0	61	0
SW-9	B	4	58	59	66	60	0	60	0
SW-21	B	1	63	64	66	68	1	63	0

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c	Criteria L _{eq} (dBA) ^d	Build Alternative (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts	Build Alternative with barrier (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts with Barrier
SW-22	B	1	61	62	66	66	1	62	0
SW-23	B	1	62	62	66	66	1	63	0
SW-24	B	1	63	64	66	67	1	64	0
SW-25	B	1	61	62	66	64	0	62	0
SW-26	B	1	61	62	66	62	0	61	0
SW-32	B	4	55	57	66	58	0	57	0
SW-33	B	6	56	58	66	59	0	58	0
SW-34	B	7	58	59	66	60	0	59	0
SW-35	B	4	56	57	66	59	0	58	0
SW-36	B	3	56	57	66	60	0	59	0
SW-38b	B	1	61	62	66	71	1	65	0
SW-39a	B	1	59	60	66	68	5	60	0
SW-39b	B	1	60	61	66	70	1	61	0
SW-39c	B	1	60	61	66	71	1	62	0
SW-39d	B	1	60	61	66	71	1	63	0
SW-39e	B	1	60	61	66	71	1	65	0
SW-39f	B	1	60	61	66	70	1	61	0
SW-39g	B	1	60	61	66	70	1	61	0
SW-39h	B	1	61	62	66	68	1	61	0
SW-40a	B	1	62	63	66	64	0	60	0
SW-40b	B	1	62	62	66	64	0	60	0
SW-40c	B	1	64	64	66	65	0	61	0
SW-40d	B	1	64	65	66	66	1	62	0
SW-40e	B	1	63	64	66	65	0	61	0
SW-40f	B	1	65	65	66	67	1	62	0
SW-40g	B	1	64	65	66	66	1	62	0
SW-40h	B	1	63	64	66	66	1	62	0

Receiver	Land Use ^a	Units ^b	Existing (2017) L _{eq} (dBA) ^c	No-Build Alternative (2045) L _{eq} (dBA) ^c	Criteria L _{eq} (dBA) ^d	Build Alternative (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts	Build Alternative with barrier (2045) L _{eq} (dBA) ^{c,e}	Number of Impacts with Barrier
SW-41	B	9	64	64	66	67	9	62	0
SW-42	B	7	62	62	66	68	7	63	0
SW-43	B	1	61	61	66	66	1	61	0
SW-44	B	1	62	63	66	64	0	62	0
SW-45	C	3.1	61	62	66	62	0	61	0
SW-46	B	6	62	62	66	62	0	61	0
SW-47	B	9	62	63	66	62	0	61	0
SW-1-2023	B	4	55	56	66	58	0	57	0
SW-2-2023	B	7	55	56	66	58	0	56	0
SW-3-2023a	B	1	57	58	66	60	0	57	0
SW-3-2023b	B	1	55	56	66	58	0	56	0
SW-3-2023c	B	1	56	57	66	59	0	57	0
SW-3-2023d	B	1	57	58	66	59	0	57	0
SW-3-2023e	B	1	57	58	66	60	0	57	0
SW-3-2023f	B	1	58	59	66	61	0	58	0
SW-3-2023g	B	1	58	58	66	60	0	58	0
SW-4-2023	B	2	62	63	66	70	1	63	0

^aFHWA land use: see Table 1.

^bNumber of dwelling represented by each receiver.

^c L_{eq} peak hour noise levels (dBA) for condition stated.

^dWSDOT and Sound Transit applicable criteria, not to exceed absolute highway noise thresholds (66 dBA for all receivers in this noise study area).

^e**Bold red** font used to indicate noise level impacts (Build exceeding criteria). Note there are no impacts with the designed barrier in place.

4. NOISE ABATEMENT ANALYSIS

In accordance with the current 2020 WSDOT Policy, when traffic noise impacts are identified, noise abatement measures must be considered. This includes identifying noise abatement measures that are feasible and reasonable and that are likely to be incorporated into the Proposed Project. In addition, the noise analysis must also identify noise impacts for which no apparent solution is available and an explanation of why noise abatement is not recommended.

Whenever noise impacts are expected, noise abatement measures, including noise walls and earthen berms, are evaluated. Construction of noise barriers between the roadways and the affected receivers would reduce noise levels by physically blocking the transmission of traffic-generated noise. Noise barriers should be high enough to break line-of-sight between the noise source and the receiver. They must be long enough to prevent significant flanking of noise around the ends of the barriers. Due to limited right-of-way within the study area, only noise walls (not berms) are considered for noise abatement.

For Scenario 1, a wall was designed to reduce noise to future No-Build levels or below (with OMFS constructed). For Scenario 2, the Scenario 1-designed wall reduces noise to levels below the noise abatement criteria of 66 dBA (with both OMFS and CCAP constructed).

4.1. NOISE ABATEMENT MEASURES - SCENARIO 1

With construction of OMFS only, impacts are identified at multiple locations in the project area (see red font exceedances of future No-Build sound levels in Table 2). A highway noise wall is considered to address the impacts. The new noise wall is defined in Table 4. The top of barrier elevations are the minimum necessary to eliminate the predicted impacts; final design may modify these heights to help reduce or smooth changes in height from one segment to the next. The wall extends to overlap the northernmost end of the remaining southern existing wall and to overlap the southernmost end of the remaining northern wall/berm combination (see Figure 3).

Note that in this OMFS only case, two existing barriers remain as depicted in Figure 3. The existing barriers are not considered to be abatement noise barriers for this project. These existing barriers will not be removed unless CCAP is constructed.

Table 4. Barrier Design – Scenario 1

Station	Northing	Easting	Bottom of Wall Elevation (ft) ^a	Recommended Wall Height (ft) ^b	Top of barrier elevation (ft)
99+25.00	316,555.0860'	1,476,398.0697'	443	18	461
100+00.00	316,481.0352'	1,476,386.1755'	440	23	463
101+00.00	316,382.3008'	1,476,370.3164'	438	23	461
102+00.00	316,283.5663'	1,476,354.4574'	436	23	459
103+00.00	316,184.8319'	1,476,338.5984'	436	20	456
104+00.00	316,086.1047'	1,476,322.7020'	436	13	449
105+00.00	315,988.6073'	1,476,300.4700'	435	12	447
106+00.00	315,891.1099'	1,476,278.2381'	434	11	445
107+00.00	315,793.6125'	1,476,256.0062'	433	10	443
108+00.00	315,696.1151'	1,476,233.7742'	432	10	442
109+00.00	315,598.6177'	1,476,211.5423'	430	10	440
110+00.00	315,501.1203'	1,476,189.3104'	426	11	437
111+00.00	315,403.6229'	1,476,167.0784'	422	12	434
112+00.00	315,306.1256'	1,476,144.8465'	418	14	432
113+00.00	315,208.6282'	1,476,122.6146'	414	15	429
114+00.00	315,111.1308'	1,476,100.3826'	411	18	429
115+00.00	315,013.6334'	1,476,078.1507'	409	18	427
116+00.00	314,916.1360'	1,476,055.9188'	408	18	426
117+00.00	314,818.6386'	1,476,033.6868'	407	17	424
118+00.00	314,721.1412'	1,476,011.4549'	406	15	421
119+00.00	314,623.6438'	1,475,989.2229'	402	17	419
120+00.00	314,526.1464'	1,475,966.9910'	400	17	417
121+00.00	314,429.1340'	1,475,942.7302'	394	16	410
122+00.00	314,332.1223'	1,475,918.4664'	391	12	403
122+56.37	314,277.4368'	1,475,904.7890'	389	18	389

^aGround elevation applied in TNM analysis; update as appropriate based on ground elevation in final design.

^bMinimum design height, based on applied ground elevation; update as appropriate based on ground elevation in final design and top of barrier elevation.



Figure 3. Designed wall to reduce noise levels below criteria

4.2. NOISE ABATEMENT MEASURES - SCENARIO 2

With construction of both OMFS and CCAP, impacts are identified at first-row residences in the Belmor Mobile Home Park. The Scenario 1 noise wall was inserted to address the impacts. Modifications to the Scenario 1-designed highway noise wall were not necessary, since all potential impacts for Scenario 2 were eliminated with the Scenario 1 wall in place. Recall that it is assumed that CCAP will replace the southern existing noise wall as seen in Figure 1 with an equivalent noise wall.