



April 8, 2022

Jeff Thomas  
Interim CPD Director  
City of Mercer Island  
9611 S.E. 36th Street  
Mercer Island, WA 98040-3732

RE: **Temporary Noise Variance Request- XL6214**  
I-90 Homer Hadley East Approach Bridge Modular Expansion Joint Project  
I-90 Milepost (MP) 5.80 to 5.98

Dear Mr. Thomas:

The purpose of this letter is to request a 20 non-consecutive night's temporary noise exception Type 1 to complete the I-90 Homer Hadley East Approach Bridge Modular Expansion Joint Project within the jurisdiction of the City of Mercer Island. Washington State Department of Transportation (WSDOT) Acoustics group is requesting relief from the requirements of the Mercer Island City Code, MICC 8.24.020(Q) and the Washington State Administration Code (WAC) Chapter 173-60, allowing WSDOT representatives to work at night. Attached with this submittal are an application form, detour plans, and maps as listed on the exception submittal process.

### **Project Description**

This project will replace the east approach modular expansion joint of the I-90 Homer Hadley East Approach (Bridge Number 90/25.5N). Additional work includes temporary and permanent striping to accommodate lane shifts.

### **Construction Activities and Equipment**

The Ad date for this project is June 14, 2021 and construction is expected to commence on June 10, 2022 with a completion estimated for June 27, 2022. This time frame could change depending on the procurement time for certain materials needed for the project. We would like the permit expiration date to be August 30, 2022.

The joint replacement will consist of saw cutting the concrete header, removing the existing joint, and installing a new modular expansion joint. Equipment used for joint replacement work will include concrete sawcut machine, jack hammer, crane, cement mixer, concrete vibrator, pavement grinders, striping machine, gas operated generators, diesel operated night plants, air compressor, flatbed trucks, pickup trucks, and sweepers. The table below shows equipment noise levels at 50 feet and at 300 feet (the nearest receptor).

<b>Equipment</b>	<b>dBA at 50 feet</b>	<b>dBA at 300 feet</b>
air compressor	60	52
cement mixer	75	60
concrete sawcut machine	79	64
concrete vibrator	72	57
crane	68	53
diesel operated night plants	55	39
flatbed trucks	71	63
gas operated generators	61	55
jack hammer	85	69
pavement grinders	62	46
pickup trucks	71	63
striping machine	67	59
sweepers	78	71

Work stages include sawcutting the concrete header at the existing expansion joint (this will be done during nightly closures, prior to the full closure of the road), removing the existing joint, placing the new expansion joint, connecting the joint splice, setting up rebar and dowels, pouring concrete for the new header, testing concrete until it reaches recommended strength, and opening the road to traffic.

### **Road Closures and Detours**

The joint replacement will require the following ramp and lane closures:

- Full closure of WB I-90– 11 am Friday through 5 am Monday
- Full closure of W. Mercer Way On-Ramp and bike trail – 11 am Friday through 5 am Monday
- Nightly closures of two lanes at one time (either mainline or the on-ramp) – hours to be determined
- One nightly closure for ultrasound testing of the welded splice (if applicable) – midnight through 4 am.

See attachment for detour plans.

### **Justification for Nighttime Work**

The majority of the work is planned during nighttime closures to minimize congestion and traffic back-up along I-90 and avoid the diversion to other local arterials affecting school bus routes, neighborhoods and local business. Night work on I-90 must be performed during nighttime closures addressing highway users and workers' safety.

### **Proposed Nighttime Noise Mitigation**

WSDOT is committed to reducing the inconvenience felt by those living near this project and will make reasonable efforts to minimize sound levels caused by nighttime work. To that end, WSDOT will require the contractor to adhere to the following noise reduction measures:

1. All trucks performing export haul shall have well maintained bed liners as inspected and approved by the Engineer.
2. Truck tailgate banging is prohibited. All truck tailgates shall be secured to prevent excessive noise from banging.
3. A copy of noise exemption shall be kept on the project site at all times.
4. WSDOT to provide a 24 hour complaint number.
5. Mail notices to residents within 500 feet at least 5 days before construction commences.
6. The I-90 work zone location provides a natural shielding from the majority of the residents at both sides of the freeway except upper floors of adjacent homes.
7. Ear plugs and white noise machines will be offered upon request.
8. Hotel accommodations during the noisiest work (sawcutting and chipping) will be offered upon request.
9. Noise level measurements will be collected as appropriate by the WSDOT Noise Group in response to citizen complaints.
10. Temporary noise shields for generators, compressors, light plants will be used during all nighttime work.

The construction Project Engineer in charge of administering the contract is:

**Shawn Wendt P.E.**  
wendts@wsdot.wa.gov  
Phone: 425-225-8726

Should construction activities associated with this project cause noise impacts, we request your help resolving any complaint we may receive by notifying the Project Engineer within 24 hours of occurrence.

Your attention to this matter is greatly appreciated. If you should have any questions, please call me at (206) 440-4549.

Sincerely,



Lindsay Taylor  
Air Quality Acoustic and Energy Specialist  
Tayloli@wsdot.wa.gov

Attachments: Vicinity Map, Buffer Map, Detour Plans, Application Form