

## Frequently asked questions: Major Public Project Construction Noise Variance

*(Updated 11/13/19)*

WSDOT plans to begin construction of the [SR 520/I-5 Express Lanes Connection Project](#) (SR 520/I-5 Project) in 2020. Because some of the project work will occur at night, WSDOT applied for a Major Public Project Construction Noise Variance (MPPCNV) from the city of Seattle in June 2019.

On Nov. 12, 2019, the Seattle Department of Construction and Inspections (SDCI) conditionally granted WSDOT an MPPCNV for the SR 520/I-5 Project. Written appeals may be submitted to the city of Seattle's hearing examiner during the appeal period, ending at 5 p.m. Nov. 22, 2019. Visit the [Seattle Services Portal](#), project number 6733975-NV, for information on the noise variance and appeal process, and to view WSDOT's application.

The questions and answers below provide the latest information regarding WSDOT's MPPCNV application.

### 1. Question: What is an "MPPCNV"?

#### Answer:

- A Major Public Project Construction Noise Variance (MPPCNV) is granted by the city of Seattle to define the allowable nighttime noise limits for a construction project.
- The variance is tailored specifically for major public construction projects, such as the SR 520/I-5 Project. The Seattle Department of Construction and Inspections (SDCI) administers the variance.
- The SR 520/I-5 Project variance would define the noise limits and regulations that WSDOT's contractor must adhere to during the entire construction of the project.

### 2. Question: Why is WSDOT applying for an MPPCNV?

#### Answer:

- WSDOT applied for this variance because construction crews will need to work at night during the SR 520/I-5 Project.
- SR 520/I-5 Project construction during nighttime hours is necessary in order to:
  - Provide a safe work environment for the contractor and traveling public.
  - Avoid adding to existing congestion on SR 520 and I-5.
  - Minimize the impacts to the surrounding communities and the cost to taxpayers that would be caused by extended project duration and significant daytime traffic impacts.
- WSDOT complies with the city of Seattle noise code for major public projects. The city defines a "major public project" as a project for a public facility that has a substantial impact on public safety, health and welfare and the provision of public services, including transportation services.

### 3. Question: When would the nighttime construction noise variance be in effect?

#### Answer:

- WSDOT applied for a three-year nighttime noise variance to allow necessary construction work to occur between 10 p.m. and 7 a.m. on weekdays and between 10 p.m. and 9 a.m. on weekends and legal holidays. The three-year duration covers the time necessary to complete substantial construction activities, along with some additional schedule flexibility, if needed. Only nighttime construction activities related to SR 520/I-5 Project would be covered by this variance. Construction is not expected to occur on all nights for consecutive weeks; breaks between nighttime activities are likely throughout construction.

#### 4. Question: What is the difference between a temporary noise variance and an MPPCNV?

**Answer:**

- For previous construction projects, WSDOT and SR 520 contractors applied for temporary noise variances (TNVs) from the city of Seattle for nighttime construction work. For the SR 520/I-5 Project, WSDOT applied for an MPPCNV to comply with the Seattle noise code. This is the same type of variance WSDOT received for the Montlake Project, and contains conditions and noise limits specific to the SR 520/I-5 Project.
- TNVs are short-term variances, applicable for up to 14 days, which allow the contractor to perform certain construction activities, such as paving, at night. TNVs typically do not set specific nighttime noise-level limits. However, TNVs do come with conditions that a contractor must comply with while conducting a variance's allowed activities.
- The MPPCNV differs from the temporary, short-term noise variances in that the MPPCNV sets nighttime construction noise-level limits and specific conditions for the project's construction.
- The goal of obtaining an MPPCNV is to provide a clear, longer-term set of limits and mitigation requirements for nighttime work and noise levels throughout construction. A key benefit of the MPPCNV is that the limits and conditions are consistent regardless of the type of work activity.

#### 5. Question: What is included in WSDOT's MPPCNV application?

**Answer:** The noise variance application includes the following information:

- **Project description and proposed construction activities**, including a description of how WSDOT anticipates a contractor may construct the SR 520/I-5 Project.
- **WSDOT's baseline noise measurements and proposed nighttime noise limits** based on existing nighttime noise conditions measured in the vicinity of the project.
  - Existing nighttime noise conditions and WSDOT's proposed nighttime sound limits for six select sites. Data on current nighttime sound levels was collected from midnight to 5 a.m. during periods when no significant nearby nighttime construction activities were underway.
  - Two types of noise levels:
    1. Nighttime hourly average noise limit for each site: These limits are based on the baseline of existing averages measured in the project vicinity. WSDOT proposed six decibels higher at each site. Noise levels are calculated by averaging out all the noise levels measured over a full hour.
    2. Nighttime maximum noise level indicators for each site: These are the loudest spikes of noise measured each hour, rather than averaging out the noise level over a full hour. An example of a single spike in noise levels could be a load of debris being placed onto a flatbed truck. WSDOT's proposed maximum indicators are within the existing sound ranges that were measured between midnight and 5 a.m. when nearby noise construction activities were not underway at each site. This type of noise level indicator is included as a way to minimize the level and quantity of noise spikes during nighttime hours and to stop exceedances of the nighttime hourly average noise limit before they occur.
- **Noise Management and Mitigation Plan**, as required by city code, which identifies construction practices the contractor would be required to follow to keep noise levels below the variance's approved limits, including the measures needed to meet the conditions set in the variance. Once hired, the contractor may work with WSDOT and SDCI to submit updates to the plan, if needed.
- **Public outreach and process to resolve noise complaints**, including how WSDOT and the contractor will maintain communication with the public during construction, and the process for addressing any noise complaints that are received.

#### 6. Question: How will nighttime noise limits for the SR 520/I-5 Project be monitored and enforced?

**Answer:**

- The variance requires nighttime noise monitoring throughout the entirety of construction. Noise monitoring devices will be used to verify that nighttime noise activities remain within the approved limits set in the variance. These devices will also detect if any exceedances occurs. Weekly and

annual noise-monitoring reports will be provided to the city to demonstrate compliance; these reports will be made available to the public as well.

- An independent noise inspector will be funded by WSDOT to oversee noise monitoring and report on contractor compliance directly to the SDCI.
  - The independent noise inspector will be on site during all nighttime work and will be notified of any noise complaints received from residents.
  - If the inspector receives a complaint during nighttime work hours, the inspector will notify the contractor, perform a site inspection and conduct additional noise measurements.
  - In the event a noise exceedance occurs, the inspector has the authority to modify or stop project work. Additionally, SDCI retains the authority to suspend or cancel the noise variance if the requirements of the variance are not met.

## 7. Question: What measures will WSDOT implement to reduce construction noise?

**Answer:** The following requirements are written into WSDOT's noise variance application, and if approved by the city, will be in place for all SR 520/I-5 Project construction activities occurring between 10 p.m. and 7 a.m. Monday through Friday, or between 10 p.m. and 9 a.m. Saturday through Sunday and legal holidays:

- The contractor will meet the noise level limits established in the noise variance.
- The contractor will use broadband or strobe backup warning devices, or use backup observers in lieu of backup warning devices for all equipment, in compliance with Washington Administration Code, Sections 296-155-610 and 296-155-615. For dump trucks, if the surrounding noise level is so loud that broadband or strobe backup warning devices are not effective, then an observer must be used (WAC 296-155-610). This condition will apply to activity conducted between 10 p.m. and 7 a.m., Monday through Friday, and between 10 p.m. and 9 a.m. on Saturday, Sunday, and legal holidays. No pure-tone backup warning devices will be used after 10 p.m. and before 7 a.m. weekdays or 9 a.m. weekends and legal holidays.
- Except as described below, there will be no impact work, such as auger shaking, jack hammering and impact pile driving, during nighttime hours from 10 p.m. to 7 a.m. on weekdays and 10 p.m. to 9 a.m. on weekends and legal holidays. Nighttime impact work will be conducted within the noise level limits established in the variance.
  - There will be impact work for the creation of access and workspace. These activities are expected to occur on up to 25 nonconsecutive nights at the 10th Avenue East north abutment, 5 nonconsecutive nights at the Mercer Street ramp and 15 nonconsecutive nights in the I-5 express lanes.
  - There will be impact work for the demolition of the existing retaining wall at the westbound SR 520 / northbound I-5 on ramps. This work is expected to occur on 72 nonconsecutive nights.
  - Additional notifications will be sent to residences within 300 feet of any nighttime impact work. Notices will be sent with a minimum of 3 days prior to the start of nighttime impact work.
- The contractor will securely fasten truck tailgates.
- The contractor will use sand, rubber or plastic lined truck beds for all haul trucks to reduce noise, unless WSDOT approves an exception.
- The contractor will not use compression brakes.
- The contractor will not leave equipment to idle for longer than five minutes.
- The contractor will use temporary noise mitigation shields, enclose, or use low-noise-generating stationary equipment, such as light plants, generators, pumps, and air compressors near residences where practical.

### Additional noise-control measures

Once hired, the contractor for the SR 520/I-5 Project may choose to implement additional measures, such as temporary mobile noise barriers and noise-shielding equipment, and/or hotel accommodation for residents near the work area. SDCI and WSDOT would review the contractor's selected noise-mitigation measures to verify compliance with the limits set in a variance, if granted.

**8. Question: Will WSDOT apply for a nighttime noise variance for the SR 520 Portage Bay Bridge and Roanoke Lid Project? If so, how is nighttime construction noise anticipated to affect residents in the vicinity of both the Portage Bay Bridge and SR 520/I-5 projects?**

**Answer:** Construction of the Portage Bay Bridge Project is estimated to start in 2023 and WSDOT anticipates applying for a nighttime construction noise variance for that project in the future. WSDOT will conduct outreach and provide additional project information in advance of the SR 520 Portage Bay Bridge Project. For both projects, construction is not anticipated to occur continuously on all nights for consecutive weeks, and breaks are likely between activities. Additionally, for both projects, construction activities will occur in varying locations within the project area. There likely will be breaks in noise as work moves to different locations. Finally, it is important to note that neither project will involve impact pile driving work at night.

**9. New - Question: How will WSDOT property underneath I-5 in the Eastlake area be used during nighttime hours?**

**Answer:** The WSDOT-owned parking lot in the Eastlake area, located underneath I-5 near the Ship Canal Bridge, comprises two areas. Since May 2019, the first area is being used by the SR 520 Montlake Project contractor for crew parking and shuttling of workers back and forth to the construction site near the SR 520/Montlake Boulevard interchange. This portion of the parking area is not covered by the Montlake Project's nighttime noise variance, but is subject to city of Seattle noise regulations.

A separate area of the WSDOT-owned parking lot in Eastlake will be available to the SR 520/I-5 Project contractor. WSDOT anticipates that the contractor will use this area for employee parking and staging the project's materials and equipment.

Seattle's noise code sets nighttime noise limits that are substantially lower than existing sound levels measured in the project area. Any nighttime construction-related work at the staging area that exceeds the noise level limits, including moving and unloading equipment or materials, requires a nighttime noise variance to comply with the city's code. A variance is required even if the noise from construction activities is quieter than the area's existing, ambient noise levels. All commitments included in the variance, such as noise monitoring requirements, the prohibition of pure-tone backup alarms, and the prohibition of banging of tail gates, will apply in the staging area as well. Including the staging area in the noise variance gives the city of Seattle the ability to monitor and enforce noise levels in the area.

**10. Question: How are regulations regarding the use of compression brakes enforced on WSDOT facilities, such as SR 520?**

**Answer:** Washington state law (RCW 46.37.395) allows the use of compression brakes on state highways as long as the vehicle is equipped "with an operational muffler and exhaust system to prevent excess noise." Enforcement of equipment requirements for trucks (whether mufflers, headlights, or brakes) is best addressed at the time of licensing and during periodic vehicle inspections. On state highways, the Washington State Patrol has the authority to issue citations for a truck noise violation produced by a noncompliant muffler. It can be difficult, however, to measure and enforce this kind of infraction while on a highway in active traffic.

**11. Question: What are the key milestones in the SR 520/I-5 Project MPPCNV application process?**

**Answer:** Key milestones in the application process include:

- **May 29:** An informational WSDOT public meeting to provide information on the SR 520/I-5 Project and the noise variance application
- **July 5 – Aug. 2:** SDCI public comment period on WSDOT's application
- **Aug. 1:** SDCI public meeting to receive public comments on WSDOT's application
- **Nov. 12, 2019:** SDCI publishes decision on SR 520 / I-5 Project MPPCNV application
  - 10-day appeal period begins from date decision published
- **2020:** If needed, project contractor submits updates to the Noise Management and Mitigation Plan in advance of construction