



WHY IS ADOT CONTINUING TO MEASURE NOISE LEVELS ON THE SOUTH MOUNTAIN FREEWAY?

ADOT is conducting noise measurements in compliance with the Final Environmental Impact Statement (FEIS) for the South Mountain Freeway. Further, ADOT will evaluate the common noise environment within the project area after the freeway is “fully operational.”

WHAT DOES IT MEAN THAT THE FREEWAY IS “FULLY OPERATIONAL?”

“Fully operational” means that the monitoring systems and overall conditions on the freeway are conducive to continuous, uninterrupted, and free-flow traffic operations, and that the traffic volumes are aligned with the levels predicted by the Maricopa Association of Governments (MAG) Travel Demand Model for the year 2020.

WHEN IS ADOT GOING TO CONDUCT ADDITIONAL NOISE MEASUREMENTS?

ADOT conducted the most recent round of noise testing in October 2020 and currently does not have plans to conduct additional testing.

More details about noise testing on the Loop 202 South Mountain freeway can be found [here](#).

WHERE WILL ADOT CONDUCT NOISE MEASUREMENTS?

Measurements will be taken at representative locations along the South Mountain Freeway; that is, residential

neighborhoods, parks, schools and similar locations.

Measurements are typically restricted to exterior areas of frequent human use. Interior measurements are taken only when there are no outside activities, such as at churches, hospitals and libraries. Measurements are typically taken in one of three exterior locations: (1) at or near the highway right-of-way line; (2) at or near buildings in residential areas; and (3) at an area between the right-of-way line and the building where frequent human activity occurs, such as a patio or the yard of a home. ADOT will cover all noise-sensitive areas throughout the 22-mile corridor, within the project limits, at areas within approximately 1,000 feet from the freeway. A map with the location, date and time of the field noise measurements will be posted on the project website at SouthMountainFreeway.com when it is confirmed.

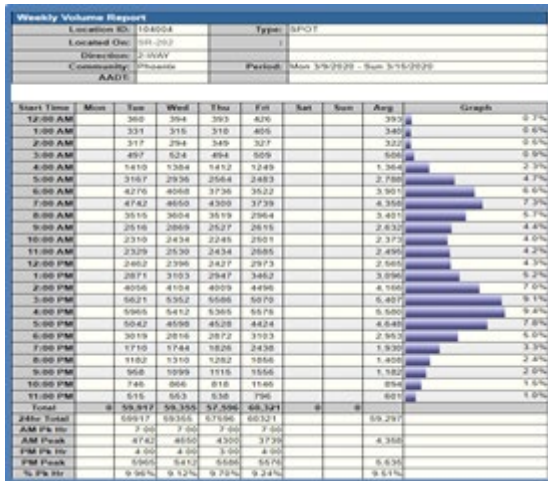
HOW DOES ADOT DETERMINE THE TIME OF DAY TO CONDUCT NOISE MEASUREMENTS?

ADOT utilizes data collected from the permanent Automatic Traffic Recorders, an integral part of ADOT’s Traffic Data Management System.

That data will provide hourly/daily traffic patterns which, in turn, will provide the periods that the freeway operates at or close to “Level of Service C” – the highest level of traffic noise based on traffic volume and travel speeds.

ADOT will continue to evaluate data and determine 2.5-hour windows of time - in the morning and afternoon – with similar traffic volumes when testing would occur. As previously noted, this will occur when average daily traffic counts return to more typical conditions.

This is an **example** of an image from the existing Traffic Data Management System:



WHEN IS THE TRAFFIC LOUDEST?

While there are many factors that may have a potential to influence traffic noise, traffic volume is the predominant factor. With that said, traffic is at its loudest when the traffic operates at Level of Service C. This is the condition of a stable flow of vehicles, at or near free flow in a lane, but lane changing and maneuverability may be challenging. During Level of Service C at 70 mph, there are approximately 1,500 vehicles per hour and per lane. When traffic volumes increase beyond Level of Service C, vehicle speeds decrease and lower the noise levels.

The correlation between traffic volumes and noise levels is a helpful tool for ADOT to determine the future noise levels based on current conditions. Generally, doubling the traffic may increase noise levels by 3 decibels (dBA), and an increase of 20-25 percent in traffic volume may increase noise levels by 1 dBA.

CAN I REQUEST THAT MY RESIDENCE IS INCLUDED IN THE NOISE MEASUREMENT SCHEDULE?

At this time, ADOT is not scheduling noise measurements at specific homes or locations upon request. In alignment with the Final EIS, ADOT will conduct noise measurements in noise-sensitive areas along the entire corridor and share the results of decibel readings in correlation with each location.

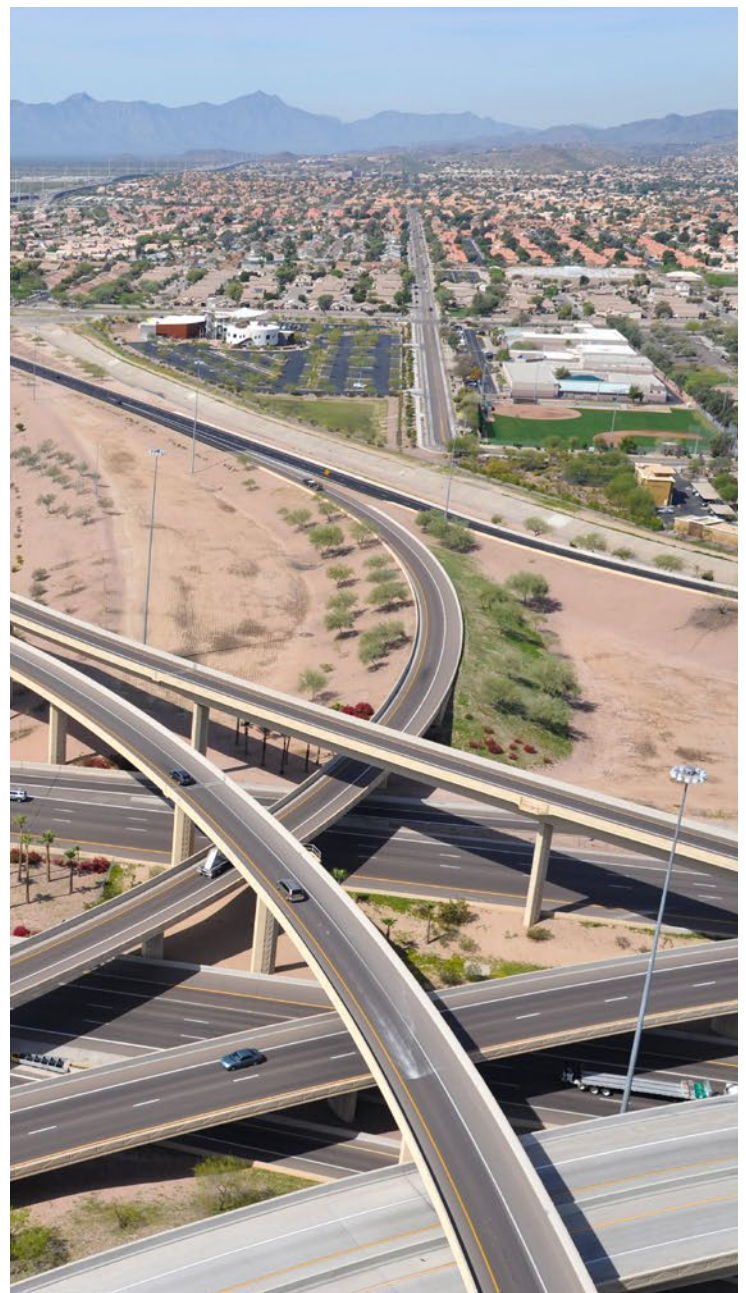
HOW LONG WILL THE NOISE MEASUREMENT PROCESS LAST?

Given the length of the corridor, number of residential areas and limited number of hours in the morning and afternoon for measurements, ADOT anticipates that each round of noise measurements will take approximately three to four weeks to complete. ADOT will make every effort to complete the

measurements as quickly as possible, but also must account for unforeseen events that might require repeating of noise measurements.

WHERE AND WHEN CAN I REVIEW THE RESULTS OF NOISE MEASUREMENTS?

Allow one to two weeks following testing for the team to analyze data and compile the technical memorandum. Once completed, ADOT will post information on the project website at SouthMountainFreeway.com. Schedules are subject to change because of the pandemic and other unforeseen situations.





WHAT ACTION WILL ADOT TAKE AFTER EVALUATING THE RESULTS OF NOISE MEASUREMENTS?

ADOT will share the results of field noise measurements with its project partners, including members of the public and key stakeholders. ADOT will make every reasonable effort to address concerns and be innovative and flexible within the federal and state regulatory framework for noise mitigation. Keep in mind that if the noise levels (expressed in LeqA1h) are at or above 64 dBA, it does not guarantee a noise wall will be constructed, as other factors must also be considered. ADOT will explore other possible innovative methods to reduce noise levels. Learn more about ADOT's Noise Mitigation Policy at azdot.gov/business/environmental-planning/noise. Chapter 6 of this policy provides information about the three reasonableness factors, or "tests," that must collectively be achieved for a noise abatement measure to be deemed reasonable.

WHERE CAN I LEARN MORE ABOUT HIGHWAY NOISE MITIGATION?

Highway traffic as a noise source creates complexities when it comes to analysis and mitigation, and ADOT understands that you may have additional questions. There are many factors, all of which are relevant, such as traffic volumes and speed, traffic mix, pavement and atmospheric conditions that can impact noise levels. That is why the Federal Highway Administration has provided regulation and guidance on how to analyze and mitigate highway-related noise. The following resources provide information you might find useful:

FHWA - Highway Traffic and Construction Noise - Regulation and Guidance:

https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/

FHWA - Noise Policy FAQs - Frequently Asked Questions:

https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/faq_nois.cfm

ADOT – Environmental Planning – Noise:

<https://azdot.gov/business/environmental-planning/noise>

US DOT - National Transportation Library:

<https://rosap.ntl.bts.gov/welcome>

STAY CONNECTED

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