

Critique of the VAT DEIS: Noise and Acoustics-Related Problems

The DEIS Executive Summary Table S-1 breaks down the various aspects of the VAT project and their impacts on existing noise levels. For noise during construction, the DEIS admits that construction activities will exceed FTA's criteria for the south side of Va Avenue from 3rd street through 5th street, i.e. Capital Quarter homes and Capper Senior Apartments. This means that the noise from construction will exceed the current noise environment. The DEIS assessments of the other blocks along Va Ave either have been designated as non-residential or beyond the thresholds of impact. This means that those areas are expected to not be affected due to the nature of their usage (non-residential areas are not subject to the same threshold as residential) or because the distance to structures on said blocks is further away from construction noise sources. However, the DEIS states that one specific construction technique predicted to be utilized in Alt 4, Sheet Piling, will exceed FTA's criteria at all measurement points. This means that if construction utilizes Sheet Piling, all assessed points will have a significant increase in noise above their current levels. The Executive Summary indicates that post construction none of the build alternatives are predicted to exceed the FTA thresholds for moderate noise impacts. This would mean that DEIS predicts less than a 2 dB increase in noise over current levels; however, as outlined below, this is only partially true for the assessed areas, for which post construction train traffic would exist in the tunnel. Areas in which post construction train traffic would be above ground were not clearly assessed in the DEIS.

The noise assessment document, Appendix F to the DEIS, defined the VAT project as occurring from 2nd St to 11th St along Va Ave. The noise assessment involved the evaluation of the existing noise environment at five locations in May and June of 2013. The assessment was performed on three non-consecutive days with testing occurring for 24 hours each measurement period. Microphones were placed at the 300 block, 400 block, 500 block, and 700 block, and at the Virginia Avenue Gardens. The DEIS determined that the result of the assessment was an Ldn, or "level day night," of 70 dBA (the range of the five tested sites was determined to be 68 - 73 dBA), which is defined as a "very noisy urban residential area." The DEIS attributes the existing noise level to the proximity of the highway and to the proximity of some locations to public transportation stops. Ldn measurements refer to the fact that a given area may have a different noise level during the daytime and during the night-time. Ldn measurements apply a 10 dB penalty, or adjustment, for certain areas of sensitivity, generally areas where people sleep. The location of the VAT project is an area of sensitivity because it is a residential area. This means that the actual measured range of the environmental noise was 78 - 83 dBA, but because the VAT project occurs in an area of sensitivity, the DEIS can treat the existing environmental noise as only 68 - 73 dBA. However, because the penalty, or adjustment, is designed to reflect differences in daytime and night-time noise, this means that 70 dBA will be used to gauge the impact of noise only during the night-time while the actually measured 80 dBA will be used to assess the impact of noise during the daytime. By way of comparison, OSHA standards limit exposures to 90 dB for 8 hrs.

In addition to the existing noise measurements at the five locations described above, the DEIS evaluated noise levels at 10 rail analysis sites along the 200 block, 300 block, 400 block, 500 block, 700 block (x2), 800 block, and 900 block of Va Avenue, and along Potomac Ave, and at the intersection of 10th & L Streets. The DEIS predicts, for all builds considered, that there will be no more than a 2 dB increase due

to normal theoretical growth of highway traffic. The DEIS also conservatively estimated an increase of 25% in train traffic volume after the VAT project is completed, but it is unclear whether this increase refers only to single-stacked trains going either eastbound or westbound or also refers to multiple double-stacked trains going both eastbound and westbound simultaneously. This is significant because the noise levels from an increase in single train traffic are different from the increased noise levels due to simultaneously east- and westbound train traffic. Moreover, even though two of the ten sites evaluated were close to the tunnel portals, and therefore account for trains running on above-ground tracks, the DEIS assumes that the newly built tunnel will absorb and shield the surrounding area from the noise of the train traffic. The impact of two, double-stacked trains at ground level does not appear to be represented by any of the DEIS assumptions.

The 10 rail analysis sites also were used to gauge the impact of the construction work on existing noise levels. The DEIS made educated guesses as to the types of construction methods that would be utilized in each build under consideration. The FHWA has noise modelling methods that quantify the noise levels of standard construction methods with Leq dBA levels at a 50 ft stand-off. Leq, or level equivalent, dBA levels are a standard measurement used in such an assessment. Given that some of the build alternatives will have construction within 33ft of existing structures, levels from construction would be perceived at a higher level than the reference levels provided by the FHWA. It is unclear that the assessment accounts for these increases. This notwithstanding, the DEIS predicts that the majority of the construction methods being considered will exceed the environmental daytime level of 80 dBA at all 10 rail analysis sites. The DEIS provides a list of mitigation methods in section 3.4.3 of Appendix E to reduce the impact of the construction noise exceeding 80 dBA. These mitigation methods include restricting the noisiest construction operation to between 8:30 am and 4:30 pm, not allowing early morning or weekend work, using solid construction barriers as more effective noise barriers, and where feasible, opting for construction methods that do not produce abrupt, loud, or intermittent sources. However, all of the mitigation techniques are suggested, and it is unclear whether CSX will be required to implement them or even forced to consider their implementation.

In addition, although the DEIS states that construction vehicle noise was taken into consideration, the extent of the haul routes beyond the 10 analysis sites was not. Those routes currently are set to criss-cross through the neighborhood (west to east) from South Capitol Street to the 11th street bridge access point and (north to south) from E Street to M Street (see DEIS page 3-46 for a visual). This means that the DEIS did not account for any truck idling or noise that may arise from CSX trucks being backed up into the streets running north and south of the VAT access points.

Finally, it is noteworthy that the LOD, or limit of disturbance, for the VAT project is defined as starting at South Capitol Street and following the tunnel/tracks until approximately 15th St & M St. This means that the noise level environment outside of the stretch between 2nd Street and the intersection of 11th & L streets was not evaluated for noise impact either during or post construction of the VAT. The potential for noise level impact from the VAT project in these areas is strong.

Beyond the East Portal:

* Residents and businesses on K and L street beyond 11th street not only will endure the 11th Street bridge project and the Southeast Boulevard Project, but also will now endure the VAT build and the subsequent increase of train noise post construction. This area will be one of the locations with the most potential for increased noise disturbances post-construction when the worst case noise scenario will consist of two, double-stacked trains accessing the East Portal at the same time.

* M St traffic to the community boating slips and trails will be impacted by the haul routes.

Beyond the West Portal:

* Garfield Park will have noise impacts during construction and will experience a post-construction increase of train traffic, but the impact on this playground, which is a major aspect of the neighborhood, is not specifically addressed.

* Residents of the Axiom at Capitol Yards will have new CSX neighbors to the north in the form of a "Laydown Area." The term "Laydown Area" appears only in the legend of the LOD maps, and it is not clear how CSX intends to use this space or how its use will affect noise levels.

* The new Park Chelsea (880 NJ Ave) being built currently and the future 800 NJ Ave (Whole Foods) were not assessed for existing sound levels (though they were assessed in the 200 block rail analysis site). 800 NJ Ave will be one of the locations with the most potential for increased noise disturbances post-construction when the worst case noise scenario will be two, double-stacked trains accessing the West Portal at the same time.

* The 225 Va/200 I DC Government building was not assessed for existing sound levels (though it was assessed in the 300 block rail analysis site).