

Appendix 4

Traffic Noise Model



[Environmental Review Main \(/programs/environmental-review/\)](/programs/environmental-review/)

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the Day/Night Noise Level Calculator Electronic Assessment Tool Overview (<https://onecpd.info/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/>).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID

Record Date

User's Name

Road # 1 Name:

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input type="checkbox"/>	Heavy Trucks <input type="checkbox"/>
Effective Distance	<input type="text" value="30"/>	<input type="text"/>	<input type="text"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="25"/>	<input type="text"/>	<input type="text"/>
Average Daily Trips (ADT)	<input type="text" value="1182"/>	<input type="text"/>	<input type="text"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text"/>	<input type="text"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>

Vehicle DNL

Calculate Road #1 DNL

Reset

Add Road Source

Add Rail Source

Airport Noise Level

Loud Impulse Sounds?

Yes No

Combined DNL for all
Road and Rail sources

Combined DNL including Airport

Site DNL with Loud Impulse Sound

Calculate

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - Contact your Field or Regional Environmental Officer (<https://www.onecpd.info/programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (<https://www.onecpd.info/resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the Barrier Performance Module (<https://onecpd.info/programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (<https://www.onecpd.info/resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

Day/Night Noise Level Assessment Tool Flowcharts (<https://www.onecpd.info/resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

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Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="25"/>	<input type="text"/>	<input type="text"/>
Average Daily Trips (ADT)	<input type="text" value="1075"/>	<input type="text"/>	<input type="text"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text"/>	<input type="text"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>

Vehicle DNL

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