

720 Noise Barriers

720.1 General

The function of a noise barrier is to reduce traffic noise levels in adjacent areas. The two basic types of noise barriers are the earth berm and the soundwall. An earth berm can be constructed to the full height required for noise abatement or to partial height in conjunction with a soundwall to reach the required height.

Soundwall design requires an interdisciplinary approach. The NMDOT Environmental Section usually conducts noise studies and determines the need for noise abatement during the project definition and scoping phase, either as part of the Phase IA/IB study or during project scoping. [NMDOT Standard Drawing 667](#) includes details for reinforced concrete post and panel-type soundwalls. The NMDOT Geotechnical Section provides foundation recommendations and the Bridge Design Bureau is responsible for the structural design of wall components. The design of foundations may be iterative, and the bridge design and foundation engineers should communicate actively throughout the design process. Additional resources related to noise barriers and soundwalls are listed below.

720.2 References

The following documents provide information on NMDOT's design practices related to noise barriers:

- American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications, current edition - NMDOT uses the

current edition of the AASHTO LRFD Bridge Design Specifications and the current interim editions as the primary standards for the design of bridges and soundwalls in New Mexico.

- [IDD-2011-02, Procedures for Abatement of Highway Traffic Noise and Construction Noise](#), April 25, 2011 - This Infrastructure Design Directive (IDD) provides procedures for noise studies and noise abatement measures.
- NMDOT [Bridge Procedures and Design Guide](#), April 2013 - NMDOT developed this guide to supplement the AASHTO LRFD Bridge Design Specifications. It provides guidance as well as an interpretation of the AASHTO LRFD Bridge Design Specifications specific to New Mexico bridge design practice.
- NMDOT [Standard Drawings](#) provide typical details used by the NMDOT for highway design.