



Clark County Department of Building & Fire Prevention

4701 West Russell Road, Las Vegas, NV 89118 ~ (702) 455-3000

25 Decibel Noise Level Reduction Standard Building Permit Guide

Jerome A. Stueve, P.E., Director
Samuel D. Palmer P.E., Assistant Director • Girard Page, Fire Marshal

Part I. Clark County Code Section 22.22.030

Compliance with the following standards may be accomplished by one of three methods:

- A. Design requirements for the total building system by a recognized **acoustical designer**.
- B. Compliance with the **performance standard** for the particular building component (i.e. exterior wall at least an STC of 30).
- C. Compliance with the **prescriptive standard** for the particular building component (i.e. glass of double glazed windows shall be at least 3/16" thick).

Proof of compliance submitted to show that the proposed structure meets one of these standards shall be deemed as meeting the minimum noise level reduction (NLR) of 25 decibels.

Part II. General

All structures subject to the noise level reduction requirements must conform to this section unless it can be shown by documented tests or other appropriate information acceptable to the Building Official, that equivalent performance can be accomplished by other means or methods.

1. Brick veneer, masonry blocks or stucco exterior walls shall be constructed airtight.
2. At the penetration of exterior walls by pipes, ducts or conduits, the space between the wall and pipes, ducts or conduits shall be caulked or filled with mortar.
3. Window and/or through-the-wall ventilation units shall not be used.
4. Fireplaces shall comply with the Clark County Building Code.
5. All sleeping spaces shall be provided with a carpeted floor.
6. Through-the-wall or door mailboxes shall not be used.

Part III. Exterior Walls

1. **Performance Standard**
 - a. Exterior walls shall have a laboratory sound transmission class (STC) rating of at least 30.
2. **Prescriptive Standard**
 - a. Masonry walls having weight of at least 25 pounds per square foot do not require a furred (stud) interior wall. At least one surface of concrete block walls shall be of ½" gypsum board or plaster at least ½" thick, installed on the studs.
 - b. Stud walls shall be at least 4" in nominal depth and shall be of gypsum board or plaster at least ½" thick, installed on the studs.
 - 1) The interior surface of the exterior walls shall be of gypsum board or plaster at least ½" thick, installed on the studs.
 - 2) In addition to exterior wall covering, continuous composition board, plywood or gypsum board sheathing at least ½" thick shall cover the exterior side of the wall stud.
 - 3) Sheathing panels shall be covered on the exterior with overlapping building paper.

-
- 4) Insulation material of at least R-11 shall be installed throughout the cavity space behind the exterior sheathing and between all studs.

Part IV. Windows

1. Performance Standard

- a. Windows shall have a laboratory sound transmission class (STC) rating of at least 28.

2. Prescriptive Standard

- a. Glass shall be at least 3/16" thick.
- b. All operable windows shall be weather-stripped.
- c. The glass of fixed sash windows shall be sealed with a non-hardening sealant or a soft elastomer gasket or glazing tape.
- d. The perimeter of window frames shall be sealed to the exterior wall construction with a weather-resistant sealant.

Part V. Doors

1. Performance Standard

- a. Doors shall have a laboratory sound transmission class (STC) rating of at least 26.

2. Prescriptive Standard

- a. All exterior side-hinged doors shall be solid-core wood or insulated hollow metal at least 1 3/4" thick and be weather-stripped.
- b. Exterior sliding doors shall be weather-stripped. Glass installed in doors shall be at least 3/16" total thickness.
- c. Glass in doors shall be sealed in an airtight, non-hardening sealant or in a soft elastomer gasket or glazing tape.
- d. The perimeter of door frames shall be sealed to the exterior wall construction with a weather-resistant sealant.

Part VI. Roofs

1. Performance Standard

- a. Combined roof and ceiling construction, other than described in this section and the following section (Ceilings), shall have a laboratory sound transmission class (STC) rating of at least 39.
- b. Skylights shall conform to an STC rating of at least 28

2. Prescriptive Standard

- a. With an attic or rafter space at least 6" deep and with a ceiling below, the roof shall consist of 1/2" composition board, plywood or gypsum board sheathing topped by roofing, as required.
- b. Open beam roof construction shall follow the energy insulation standard method for batt insulation.

Part VII. Ceilings

1. Performance Standard

- a. Gypsum board or plaster ceilings at least 1/2" thick shall be provided.
- b. Insulation at least R-19 shall be provided above the ceiling between joists.

Part VIII. Floors

1. Performance and Prescriptive Standards

- a. Openings to any crawl spaces below the floor of the lowest occupied rooms shall not exceed 2% of the floor area of the occupied rooms.

Part IX. Ventilation

1. Performance and Prescriptive Standards

- a. A mechanical ventilation system shall be installed that will provide the minimum air circulation and fresh air supply requirements for various uses in occupied rooms, without the need to open any windows, doors or other openings to the exterior. The supply and return ducts serving all conditioned air equipment shall have the first 5 feet from the exterior of 20 gauge steel duct, including one 90 degree bend, and shall be lined with 1" thick coated fiber glass insulation. (This includes attic-mounted equipment.)
- b. Gravity vent openings in attics shall not exceed code minimums in size and number.
- c. All vent ducts (except kitchen exhaust ducts), including bathroom and dryer exhaust ducts connecting the interior space to the outdoors, shall contain a minimum of 20 gauge steel duct in the last 5 foot length to the exterior. Each duct shall be provided with a 90 degree bend in the duct, such that there is no direct line of sight through the duct.
- d. Listed factory-made duct, specifically designed to meet the 25 decibel noise/sound attenuation requirement may be substituted for 20 gauge steel duct.
- e. Domestic range exhaust ducts connecting the interior space to the outdoors shall contain a back draft damper.

Department Of Building & Fire Prevention Locations & Services

MAIN OFFICE 4701 W. Russell Road Las Vegas, NV 89118 (702)455-3000	On-Site Plan Submittals All "Walk-Through" Plan Review / Permitting Functions Residential Tract Submittal / Permitting All Sub-Trade (Electrical, Plumbing & Mechanical) Permitting Building Inspection Scheduling Functions Fire Prevention Inspection Services Records	Temporary Certificate of Occupancy Submittals Building Inspections Building Inspector Inquiries Amusement / Transportation Systems Operation Certificates Approved Fabricators Quality Assurance Agency Listing
LAUGHLIN OFFICE Regional Government Center 101 Civic Way Laughlin, NV 89029 (702)298-2436	Building Inspection Services Fire Prevention Inspection Services	
OVERTON OFFICE 320 North Moapa Valley Blvd. Overton, NV 89040 (702)397-8089	Building Inspection Services Fire Prevention Inspection Services	

Automated Phone System (702) 455-3000

- Option 1:** For all Inspection services or to report a building code violation.
- Option 2:** For information regarding on-site permits or new plan submittals.
- Option 3:** For the Building Plans Examination division or QAA information.
- Option 4:** For the Zoning Plans Examination division.
- Option 5:** For information or copies regarding land development, construction documents, plans or permits.
- Option 6:** To speak with Management staff.
- Option #:** For hours of operation, Office location and website information.

Other Clark County Departments/Divisions/Districts

Air Quality & Environmental Management	500 S. Grand Central Parkway, Las Vegas NV	(702) 455-5942
Public Works, Development Review Services	500 S. Grand Central Parkway, Las Vegas NV	(702) 455-6000
Comprehensive Planning	500 S. Grand Central Parkway, Las Vegas NV	(702) 455-4314
Fire Department	575 E. Flamingo Road, Las Vegas NV	(702) 455-7316
Las Vegas Valley Water District	1001 S. Valley View Boulevard, Las Vegas NV	(702) 870-2011
Southern Nevada Health District	625 Shadow Lane, Las Vegas NV	(702) 759-1000
Water Reclamation District	5857 E. Flamingo Road, Las Vegas NV	(702) 668-8888

State of Nevada

Division of Water Resources	400 Shadow Lane, Suite 201, Las Vegas NV	(702) 486-2770
Nevada State Contractors Board	2310 Corporate Circle, Suite 200, Henderson NV	(702) 486-1100

Utilities

Nevada Power	6226 W. Sahara Avenue, Las Vegas NV	(702) 402-5555
Southwest Gas	5241 Spring Mountain Road, Las Vegas NV	(877) 860-6020

www.clarkcountynv.gov/building