

## Residential ELEVATOR SHAFT Checklist & Guide for Interior Installation

(2015 IRC requirements as amended by St. Louis County Ordinances for 1- & 2-Family Dwellings and Townhouses)



This **Elevator Shaft construction checklist** is based on St. Louis County's (SLCO) policies, construction codes amended and adopted by ordinance. See list below. It is not a substitute for those codes and ordinances, but serves as a guide to reading them. More information and explanation is provided in commentaries and interpretations published by St. Louis County and acknowledged code organizations.



### List of Applicable Codes and Ordinances:

**2015 International Residential Code (IRC)** & Ordinance #27,654-Ch.1116 ("R" "G", "N", and "M" references and Appendix K - Sound Transmission).

**2015 International Building Code (IBC)** & Ordinance #27,654-Ch.1116\5 ("B" references).

**2014 National Electrical Code (NEC)** aka NFPA 70 & Ordinance #27,430-Ch.1102 ("E" refs).

**2015 International Mechanical Code (IMC)** & Ordinance #27,619-Ch.1108 ("IMC" refs).

**For inquiries regarding the information provided in this guide, please contact:**

St. Louis County Permit Processing \_\_\_\_\_ (314) 615-5184

St. Louis County Zoning Review \_\_\_\_\_ (314) 615-3763

St. Louis County Building Plan Review \_\_\_\_\_ (314) 615-5485

**Right-of-Way Owner**

State \_\_\_\_\_ (888) 275-6636

County \_\_\_\_\_ (314) 615-8517

Municipality \_\_\_\_\_ Call the project site's Municipality

St. Louis County's Municipal Contracts Matrix shows those municipalities that currently contract for its Code Enforcement services. The Matrix is on our web site at <https://stlouiscountymo.gov/st-louis-county-departments/transportation-and-public-works/residential-building/>

For the electronic plan review, scan QR code or visit us online at <https://stlouiscountymo.gov/st-louis-county-departments/transportation-and-public-works/electronic-plan-review/>



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## NOTICES Regarding Permits

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- The applicant (property owner or the Contractor) is responsible for contacting those agencies that may be affected by the new work, or that may have legal oversight of the new work along with but separate from St. Louis County. Where requirements among the agencies conflict, the most restrictive shall govern the new work. Contact these agencies before beginning work approved under a permit issued by St. Louis County. Such agencies may include:
  1. The project site's Municipality;
  2. The Local Fire Protection District;
  3. The Transportation Department;
  4. The Sewer District; and
  5. Subdivision Trustees.
- Permit issuance for the project does not automatically authorize construction access to that project site. If a project site's driveway entrance is unavailable for construction access or none exists, the property owner or authorized Contractor must apply for a permit with the Owner of the Right-of-Way (may be the County's Highway Dept. or the Municipality) to construct a temporary entrance.
- Project-specific site plans submitted with the permit application should include the following:
  1. Draw an arrow over the property's existing driveway, and point it into the lot. Label the arrow as "Construction Entrance";  
OR
  2. Draw an arrow over a proposed alternate access location, and point it into the lot. Label the arrow as "Construction Entrance". Note on the site plan: *"A separate special use permit for a construction entrance will be obtained from the street right-of-way owner before the start of construction access to the project site"*.
- **The Plan Reviewer** may determine the proposed work, construction, or conditions require additional drawings and information be submitted to Code Enforcement-Plan Review for review, beyond the minimum submittal requirements noted in this Checklist.

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## Submittal Requirements

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Submit the following for a permit to construct the shaft and machine room for an elevator in a single-family residence in St. Louis County's jurisdiction. Items provided in *parentheses italicized (.)* are referenced codes and ordinances.

- **For Properties in Unincorporated St. Louis County:**
  1. A building permit is required to provide an elevator shaft or enclosure and its machine room\*.  
\*The requirement of a machine room is based on the type of elevator proposed.
  2. A separate **electronic** mechanical permit is required for the installation of the elevator system equipment.
  3. Submit an **electronic** set of site plans with the building permit application. Show the proposed location of the generator, and note its distances from property lines and buildings on the lot (*B107.2.1*).
  4. The application and drawings may be submitted for "While-You-Wait" review.
  5. The building, electrical, and mechanical or plumbing permit applications may each be submitted for a While-You-Wait plan review, where Zoning has been approved.

6. The Zoning Official may sign-off on the Electrical Permit Application before it is issued. This is the same procedure followed for outside above-ground tanks processed under a mechanical permit.
- **For Properties in a Municipality** contracting with St. Louis County for its Code Enforcement Services:
    1. Obtain an electrical permit to connect the new work generator to the house electrical system.
    2. Obtain a mechanical or plumbing permit where:
      - a. The new work generator requires gas piping be provided to it;
      - b. Exhaust/ventilation ductwork is part of the generator installation.
    3. Permit applications may be submitted and permits issued over-the-counter by Permits Processing.
    4. **Notice:** The installer is responsible for:
      - a. Complying with the Municipal Zoning requirements of the project property and;
      - b. Obtaining any other approvals required by the Municipality before work commences.

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## Design & Installation Requirements & Considerations

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The items below are St. Louis County requirements for generator permanent installation on a residential property. See the drawings at the end of this checklist for additional reference.

### Zoning (for Un-incorporated areas)

- Zoning may have additional submittal comments and requirements where the new work elevator shaft and/or machine room are provided as additions that change the building's footprint (exterior outline).

### Construction:

This checklist deals with the minimum requirements of the building structure and the shaft and machine room construction assemblies only. The elevator system itself is required to be submitted under a separate permit. The following are minimum requirements of the referenced standards ASME A17.1

- For Machine Room (typical with hydraulic systems) provide:
  1. 20-minute door.
  2. 20-minute minimum rating for the shaft and machine room. Can be provided with walls and ceiling finished on the shaft side of stud framing with minimum 1/2" gypsum board that is taped and covered with approved compound.

### Electrical

- Must comply with the requirements of the 2014 NEC.
- Provide a GFCI for service; it may be located in the machine room (or hoistway if no machine room is provided-typical for electric elevators) or on a wall outside within 25'-0" of the area to be serviced from within the machine room or hoistway.
- **Notice:** under separate mechanical/electrical permit, the elevator system equipment will be provided with a direct connection, not with a gfci.
- Provide in machine room or in hoistway service area a light controlled by wall switch.
- Telephone line will be required?
- Notice: Disconnect switch will be required under the mech/elec permit.

### Mechanical

- The elevator manufacturer's installation manual and other published data may be required for submittal to verify shaft dimensions, clearances and supporting structural components required.

### Noise

- There are no specific code requirements regarding generator noise levels. However, there is a general code requirement that new work provides for the general welfare. Please consider the proximity of your neighbor's residence and the locations of their operable windows when selecting a generator location on your property. Keep in mind sound-blocking fences or walls taller than 6'-0" on properties in Unincorporated St. Louis County require a permit application be submitted to obtain County Zoning review and approval. County Zoning may have setback requirements for the fence.

**Notice:** The preceding requirements apply to most simple projects regarding **the construction of an Elevator Shaft and machine room for a residential elevator**. However, the Plan Reviewer may determine the actual new work proposed requires additional information be submitted to verify its compliance with codes. The above requirements are based on the construction codes in effect at the time this checklist was last updated. Please be aware St. Louis County Code Enforcement updates its construction codes every few years.