



**CITY OF ST. PAUL**  
DEPARTMENT OF SAFETY AND INSPECTIONS  
375 JACKSON STREET, SUITE 220  
ST. PAUL, MINNESOTA 55101-1806  
Phone: 651-266-8989 Fax: 651-266-9124  
Visit our Web Site at [www.stpaul.gov/dsi](http://www.stpaul.gov/dsi)

**Residential Dwelling Unit**  
**2020 NEC Checklist**  
(Furnace/Air Conditioner/Boiler/Fixed Electric  
Space-Heating Equipment – New/Replacement)

*This checklist is a helpful guideline of common code requirements, but does not include all the requirements of the 2020 NEC.  
2020 NEC revisions to this document in red.*

- \_\_\_ MN Stat. 326B.33 – An Electrical Contractor that purchases an Electrical Permit for the installation of a Mini-split condensing unit is responsible for the wiring between the condensing unit and the remote fan coil units, unless a separate permit is purchased for that wiring.
- \_\_\_ NEC 422.12 – A furnace shall be supplied by an individual branch circuit. Auxiliary equipment directly associated with the furnace shall be permitted on this circuit.
- \_\_\_ NEC 408.4(A) – Every new circuit and circuit modification shall be clearly identified at the panelboard circuit directory.
- \_\_\_ NEC 422.31(C) – The furnace disconnecting means shall be within sight of the equipment.
- \_\_\_ NEC 210.8(A)(5) – Receptacle outlets for the associated equipment of a furnace installed in an unfinished portion of the basement shall be GFCI protected, and if installed on the furnace circuit shall have no other outlets.
- \_\_\_ NEC 110.3(B) – CSST gas piping systems shall be bonded to the grounding electrode conductor per the installation instructions. The connection to the gas piping system shall be between the gas meter and the CSST piping system.
- \_\_\_ NEC 440.14 – The disconnecting means shall be installed within sight of the air conditioning equipment.
- \_\_\_ **NEC 210.8(F) – GFCI protection is required on dwelling unit outdoor outlets supplied by a single-phase branch circuit rated 150 volts or less to ground, and 50 amps or less. This would include most outdoor air conditioning units.**
- \_\_\_ NEC 110.12(A) - Unused openings in junction boxes, panelboards, and equipment shall be closed with knockout seals, and/or junction box covers.
- \_\_\_ NEC 110.26(A) – The working space in front of the air conditioner disconnect and AC unit control wiring access panel shall be at least 3 feet. The width of the working space shall be 30” or greater.
- \_\_\_ NEC 440.6(A) – The rated-load current and maximum overcurrent protection on the air conditioner nameplate, shall be used to determine the size of the disconnecting means, branch-circuit conductors, and the branch-circuit short-circuit and ground-fault protection.
- \_\_\_ NEC 210.63(A) – A 125v, single phase, 15- or 20-amp receptacle shall be installed within 25 ft. of the heating and/or air-conditioning equipment. The receptacle shall be accessible and on the same level as the equipment.
- \_\_\_ NEC 210.8(A)(3), 406.9(B)(1) – Outdoor receptacles must be GFCI protected and of the weather-resistant type. If the receptacle is installed in a wet location it must be provided with an “in-use” “extra duty” cover.
- \_\_\_ NEC 334.12(B)(4) – NM Cable shall not be used in wet or damp locations. The interior of a raceway is considered a wet location when installed in a wet location. This includes Liquidtight Flexible Metallic/Nonmetallic conduit, as well as other raceway systems.
- \_\_\_ NEC 334.15(C) - Where NM Cable enters a conduit system for physical protection, a connector or bushing shall be installed to protect wire from abrasion.

\_\_\_ NEC 334.30, 300.4(B)(1) - Where NM Cable enters the back of the A/C disconnect, there shall be a connector or bushing to properly support, secure, and protect the wire from abrasion.

\_\_\_ NEC 348.12 – Flexible Metal Conduit shall not be used in a wet location.

\_\_\_ NEC 350.30(A), 356.30 - Securely fasten Liquidtight Flexible Metallic/Nonmetallic conduit within 12” of air conditioner disconnect

\_\_\_ NEC 300.4, 334.12(B) & 400.8 – Raceways and cables to heating/air-conditioning equipment shall be protected from physical damage. Cables (TC-ER/UF) from HVAC equipment to the building structure shall be protected by a raceway system, and properly strapped. NM cable is not permitted to be used in a raceway outside. Cord wiring is not permitted to be used between a mini-split and fan coil unit.

\_\_\_ NEC 336.10(9) – Type TC-ER-JP cable with power and control conductors is permitted for interior wiring in one and two-family dwellings when installed according to Part II of Article 334.

\_\_\_ NEC 210.70(A)(3) – At least one lighting outlet shall be installed at the furnace equipment.

\_\_\_ NEC 250.122 – The minimum size wire type equipment grounding conductor shall be sized to Table 250.122 of the NEC.

\_\_\_ NEC 424.19 – A disconnecting means shall be installed for fixed electric space-heating equipment (no motor rated over 1/8 HP) either within sight of the heater, or at the breaker where provisions for locking are in accordance with 110.25. A unit switch with a marked “off” switch may be used for the disconnecting means as long as all ungrounded conductors are disconnected.

\_\_\_ NEC 110.3(B) – Most all fixed electric space-heating equipment does not allow a receptacle outlet above the heating equipment per the listed installation instructions. Relocate receptacle(s) above baseboard heaters or supply instructions stating the receptacles are allowed above the equipment.

\_\_\_ NEC 220.40 – If a substantial amount of fixed electric space heating equipment is added to an existing electrical service/panelboard, a load calculation shall be supplied to ensure the service/panelboard sufficiently sized. If electric heat is the sole source of heating the structure a heat loss calculation will also be required.

\_\_\_ NEC Chapter 3 – All raceways shall be securely fastened and supported per the wiring method used.

\_\_\_ NEC Chapter 3 – All fittings and connectors must be listed for the wiring method used.