



## MINIMUM COVER FOR UNDERGROUND CONDUITS

What are the cover requirements for installing PVC conduit underground?

Per NEC 300.5 (A)

**Minimum cover Requirements.** Direct-buried cable or conduit or other raceways shall be installed to meet the minimum cover requirements of Table 300.5.

Table 300.5 Minimum Cover Requirements, 0 to 600 Volts, Nominal, Burial in Millimeters (Inches)

Location of Wiring Method or Circuit	Type of Wiring Method or Circuit									
	Column 1 Direct Burial Cables or Conductors		Column 2 Rigid Metal Conduit or Intermediate Metal Conduit		Column 3 Nonmetallic Raceways Listed for Direct Burial Without Concrete Encasement or Other Approved Raceways		Column 4 Residential Branch Circuits Rated 120 Volts or Less with GFCI Protection and Maximum Overcurrent Protection of 20 Ampere		Column 5 Circuits for Control of Irrigation and Landscape Lighting Limited to Not More Than 30 Volts and Installed with Type UF or in Other Identified Cable or Raceway	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
All locations not specified below	600	24	150	6	450	18	300	12	150	6
In trench below 50-mm (2-in.) thick concrete or equivalent	450	18	150	6	300	12	50	6	50	6
Under a building	0 (in raceway only)	0	0	0	0	0	0 (in raceway only)	0	0 (in raceway only)	0
Under minimum of 100-mm (4-in.) thick concrete exterior slab with no vehicular traffic and the slab extending not less than 152 mm (6 in.) beyond the underground installation	450	18	100	4	100	4	150 (direct burial) 100 (in raceway)	6  4	150	6
Under streets, highways, roads, alleys, driveways, and parking lots	600	24	600	24	600	24	600	24	600	24
One- and two-family dwelling driveways and outdoor parking areas, and used only for dwelling-related purposes	450	18	450	18	450	18	300	12	450	18
In or under airport runways, including adjacent areas where trespassing prohibited	450	18	450	18	450	18	450	18	450	18

**Note:**

- Cover is defined as the shortest distance in millimeters (inches) measured between a point on the top surface of any direct-buried conductor, cable, conduit, or other raceway and the top surface of finished grade, concrete, or similar cover.
- Raceways approved for burial only where concrete encased shall require concrete envelope not less than 50 mm (2 in.) thick.
- Lesser depths shall be permitted where cables and conductors rise for terminations or splices or where access is otherwise required.

- Where one of the wiring method types listed in Columns 1-3 is used for one of the circuit types in Columns 4 and 5, the shallowest depth of burial shall be permitted.
- Where solid rock prevents compliance with the cover depths specified in this table, the wiring shall be installed in metal or nonmetallic raceway permitted for direct burial. The raceways shall be covered by a minimum of 50 mm (2 in.) of concrete extending down to rock.

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Per Column 3, The shallowest PVC conduit can be buried is 4" with 4" of non-traffic bearing concrete cover extending 6" beyond the pipe.

An alternate is 12" deep in a trench with 2" of concrete cover.

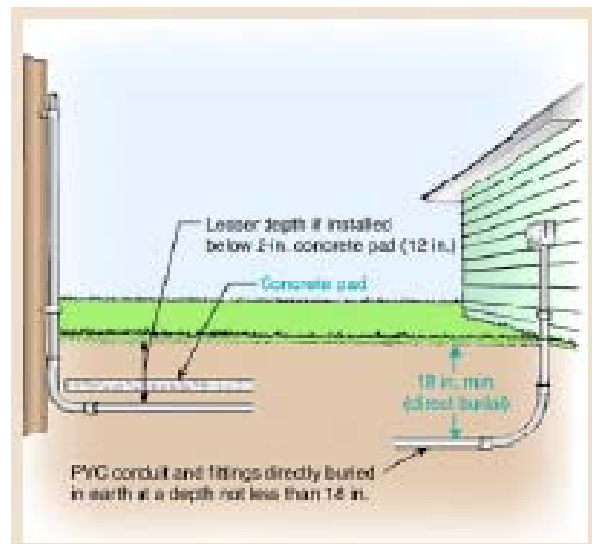
The 3<sup>rd</sup> option is 18" deep (to the top of the conduit) with no concrete cover.

Cover is defined as the shortest distance between the top of the raceway and the final grade.

PVC conduits installed under a building have no minimum burial requirements.

Per NEC352.12 (C)

PVC conduit is NOT permitted to be installed "where subject to physical damage".



All code references are from NFPA 70 National Electrical Code 2008 Edition

The interpretations expressed are those of the author and are intended to be a guideline only. They are based on the references listed. It is the responsibility of the reader to be sure this complies with the codes, standards, and specifications applicable to any given situation. Compliance with codes, standards, and specifications is the responsibility of the installer. Final interpretation is up to the local authority having jurisdiction.

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