State of Oregon
Building Codes Division

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Statewide Alternate Method No. OESC 08-03

(Ref.: ORS 455.060)

July 24, 2008

NMB cable in outdoor conduit sleeves
Oregon Electrical Specialty Code, ref. NEC 300.9, 334.12(B)(4)

Statewide Alternate Methods *are approved by the Division administrator in consultation with the appropriate advisory board. The advisory board's review includes technical and scientific merits of the proposal. In addition:*

- *building officials shall approve the use of any material, design or method of construction addressed in a statewide alternate method,*
- *the decision to use a statewide alternate method is at the discretion of the designer,*
- *statewide alternate methods do not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter*

Requested by: Electrical Contractors

Purpose:

To continue to allow the installation of short sections of conduit sleeves as physical protection for NMB cables emerging from crawl spaces or attics, and routed to surface mounted outdoor electrical enclosures.

Background:

This typical wiring method for additions and remodel projects has been used for many years with no documented incidents of cable corrosion or failure due to exposure to moisture.

A new article 300.9 in the 2008 National Electrical Code defines the interior of **raceways** installed in outdoor locations above ground, as a wet location, requiring conductors and cables listed for use in wet locations. 334.12(B)(4) indicates that NMB is prohibited from installation in wet or damp locations.

This alternate method ruling provides an alternative to requiring the installation of UF cable, or junction boxes in attics and crawl spaces for transition from NMB to waterproof wiring methods.

Applicable Code Citation:

2008 Oregon Electrical Specialty Code, reference NEC 300.9, 334. 12(B)(4)

Scientific and Technical Findings:

- The use of conduit sleeves in outdoor locations for physical protection of non-metallic cable assemblies in limited lengths has been a standard and acceptable practice for decades.
- Limiting installations to short vertical runs will insure that moisture cannot accumulate within the conduit sleeve.
- The identification of this method as a conduit sleeve does not alter the prohibition for the installation of NMB cables in outdoor raceways.

Statewide Alternate Method:

Vertical runs of weatherproof flexible conduit up to 3' in length that don't terminate in an enclosure on one end, and conduit up to 8' in length terminated in a conduit body with weatherproof fittings to provide physical protection, may be considered a 'sleeve' rather than a raceway. The intent of this ruling is to allow the use of NMB in these limited applications.

Note that article 300.15(C) requires a fitting on the end(s) of conduit or tubing to protect the cable from abrasion.

Conductors and cables installed in any 'sleeve' longer than 24 inches must comply with the ampacity de-rating requirements of table 310.15(B)(2)(a).

The recommendation and findings of the Elevator and Electrical Board are accepted and are adopted:

July 25, 2008

Mark Long, Administrator
Building Codes Division

Date