

Australian/New Zealand Standard™

**Telecommunications installations—
Telecommunications pathways and
spaces for commercial buildings**



AS/NZS 3084:2017

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CT-001, Communications Cabling for Commercial Buildings. It was approved on behalf of the Council of Standards Australia on 11 January 2017 and by the New Zealand Standards Approval Board on 13 December 2016. This Standard was published on 15 February 2017.

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Australian/New Zealand Standard™

Telecommunications installations— Telecommunications pathways and spaces for commercial buildings

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling for Commercial Buildings, to supersede AS/NZS 3084:2003, *Telecommunications installations—Telecommunications pathways and spaces for commercial buildings (ISO/IEC 18010:2002, MOD)*. It is a complementary document to AS/NZS ISO/IEC 14763.2:2014 which replaced the content reproduced from ISO/IEC 18010:2002 and ISO/IEC 18010:2002 Amendment 1:2005 that was included in AS/NZS 3084:2003 (incorporating Amendment 1: 2007).

The objective of this Standard is to provide specific guidance to architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning and installation of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for communications; to the extent that this is not adequately covered for Australian and New Zealand purposes in AS/NZS ISO/IEC 14763.2:2014.

In New Zealand, all references to any and all Australian documents need to be considered informative only where no equivalent New Zealand Standard is noted.

In conjunction with AS/NZS ISO/IEC 14763.2:2014, this Standard provides design procedures and construction practices which can be referenced in project specific construction contract documents created by (or for) Australian and New Zealand users of this document. The information has been significantly expanded and updated from AS/NZS 3084:2003.

The first version, AS 3084—1993, was developed from EIA/TIA-569-A, Commercial Building Standard for Telecommunications Pathways and Spaces. This USA Standard was developed with the support of the American Institute of Architects and the Construction Specifications Institute, since it influences both the design and construction of commercial buildings, where various building components are to be structured into facilities which are responsive to telecommunications needs.

Appendix A provides guidelines and practical examples for some of the topics covered in the body of this Standard. The material in Appendix A has been updated from Appendix ZC in AS/NZS 3084:2003.

It should be noted that this Standard has a special relationship to AS/NZS 3080, *Telecommunications installations—Integrated communications cabling systems for commercial premises*. It recognizes that both building cabling and architectural provisions of the building into which such cabling systems are installed need to be standardized.

In Australia a complementary document to this Standard is AS/CA S009, which details mandatory installation requirements for customer cabling in Australia where installations are to be connected to telecommunications carrier networks. Although compliance with AS/CA S009 is not a regulatory requirement in New Zealand, it is indicative of good practice, and compliance with AS/CA S009 may be mandatory if it is referenced in contracts for customer cabling works.

AS/NZS 3000, Electrical installations (known as the Australian/New Zealand wiring rules) contains further general requirements for cabling pathways within buildings. In Australia only, AS/CA S008, Requirements for authorised cabling products, and AS/CA S009 Installation requirements for customer cabling (Wiring rules) provide mandatory requirements for telecommunications cabling products, including telecommunications conduit and pits and aerial cabling.

Some of the figures in this Standard are reproduced by courtesy of the following organizations:

Endeavour Energy (previously Prospect Electricity): Figure 7.1

Telstra Corporation: Figures 9.5, 9.6, 9.7, 9.8

The term 'informative' has been used in this Standard to define the application of the appendices to which it applies. An 'informative' appendix is only for information and guidance.

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FOREWORD

The telecommunications infrastructure is an integral part of building design. It may include voice, data, environmental control, security, audio, television, sensing, alarms, paging, extra-low voltage signal systems and other low voltage and power-limited signal systems. These systems are subject to frequent changes. Design of the pathways and spaces should accommodate this dynamic behaviour. This Standard may significantly influence the design of other building services, such as electrical power and heating, ventilation and air conditioning (HVAC) by virtue of sharing building spaces with those services, and also by requiring power and HVAC to service telecommunications and equipment rooms.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Telecommunications installations—Telecommunications pathways and spaces for commercial buildings**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides specific guidance to architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning and installation of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for communications; to the extent that this is not adequately covered for Australian and New Zealand purposes in AS/NZS ISO/IEC 14763.2:2014.

1.2 APPLICATION**1.2.1 General**

This Standard applies to all types of commercial, government and public buildings located within a property boundary. It should also be applied to buildings and campus pathways on industrial, mining and transport sites and multi-dwelling residential and hospitality premises. It is intended to assist architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for telecommunications networks and related information, security, life safety, radio frequency, audio visual, control and building management systems.

Although it may provide a useful reference, this Standard does NOT explicitly apply to pathways and spaces—

- (a) outside property boundaries and in public streets or public land, whether installed or operated by private network owners, developers or carriers; and
- (b) within and around industrial process and utility plant and structures.

Adherence to this Standard will facilitate, by standardizing the approach, the provisioning and maintenance of the comprehensive communications facilities and networks which are in ever-increasing demand, particularly by occupiers of commercial premises.

1.2.2 Choice of design options

This Standard and AS/NZS ISO/IEC 14763.2 do not make specific recommendations among the design options available for telecommunications pathways. For example, the choice between an access floor versus ceiling distribution solution is not delineated. It is up to the telecommunications designer to properly select among the options based upon the applications at hand and the constraints imposed by the building or site design, developer or owner, and tenant.