



نيوم NEOM

TECHNICAL SCHEDULES
LIST OF TECHNICAL CODES & STANDARDS

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Preface

This technical schedule presents the local and international codes to regulate the design and construction process for NEOM facilities. The schedule is arranged by engineering discipline and facility type. Saudi local codes are listed followed by applicable international code for each discipline and facility. The list of code and standards are selected to provide minimum requirements for designing project elements and structures in addition to providing guidance for design requirements. This technical schedule (Schedule 005) is considered a complete package to guide the engineering and construction necessary to fulfil the minimum requirements expected from NEOM projects. Finally, it is planned to make this document a live document where it will be updated frequently to reflect the most up to date information.

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1 General

1.1 Introduction

NEOM is determined to implement the best engineering practices and references possible to achieve its vision. Thus, this document provides a list of codes and standards, related technical documents, and regulations arranged in different disciplines, functions, and facilities to ensure the highest quality in order to achieve the functional and performance requirements for all NEOM projects and developments.

1.2 Approach

NEOM has benchmarked international and local codes and standards to determine the best and most appropriate codes and standards for the design and construction of its assets.

The criteria used for selection of the best applicable codes and standards are as follows:

- 1- Shall satisfy the base economy requirements as a minimum and allow modification and enhancement to provide higher quality in a consistent and compatible manner
- 2- Shall properly address the objectives and relevant design criteria (strength, safety, sustainability, ...etc.)
- 3- Shall be active, reviewed and updated regularly and reflecting latest advancement in knowledge and materials.
- 4- Shall be integrated with the quality infrastructure of laboratories, accreditation, and quality marks

1.3 Organization

The selected codes and standards are presented with respect to eighteen variations of disciplines, functions, facility type and profession to cover the most encountered cases in a convenient way, as shown below:

- 1- General
- 2- Building codes & standards
- 3- Architectural applications
- 4- Sustainability
- 5- Structural applications
- 6- Geotechnical
- 7- Mechanical engineering applications
- 8- Fire protection
- 9- Telecoms & data
- 10- Extra-low voltage systems
- 11- Security
- 12- Electrical applications
- 13- Renewable energy
- 14- Quality management
- 15- Sports facilities
- 16- Waterfront facilities (coastal & marine)
- 17- Transportation facilities
- 18- Healthcare facilities
- 19- Water works
- 20- Environmental protection and waste management



1.4 Consultant's/ Contractor's Responsibilities

Design and construction of all NEOM assets shall be in full compliance with relevant and applicable local and international codes and standards and local relevant regulations including but not limited to (SBC, MEWA, SWCC, MOT, SEC, etc..). Any deviation from SBC and any local regulations and relevant international standards shall be highlighted for review and approval before implementing them in the design. It is the designer's responsibility to meet and fulfil all local regulations and requirements.

Relevant International standards are listed within Sections 2 through 21 and Appendix A of this document.

1.4.1 Implementation

For every NEOM project, the engaged Consultant/Contractor shall submit the project particular list of codes and standards prior to the commencement of the concept design phase to NEOM for approval. Based on the Project specifics, it will be the Project Consultant's/Contractor's responsibility to ensure the following:

- 1- That no conflict exists between the various codes and standards, whether due to geographical, extent or technical considerations
- 2- International codes and standards should not be taken blindly; instead, they need to be adjusted to accommodate local hazards, climate conditions, local content, SI units and the NEOM visions
- 3- As assumed in many codes, the designer/ Consultant/Contractor bear the responsibility to verify the applicability of the codes and standards

In case of conflicts among the codes or standards or between these coded and standards and the applicable local Saudi codes or regulations of governmental authorities, the Consultant/Contractor shall explicitly raise the conflict and proposed mitigation measures to NEOM for review and approval.

The latest versions of listed codes and standards, available on the cut-off date specified for each project, shall be adopted.

1.5 Deviations

In case a deviation from the list of codes and standards is envisaged for any project-specific reason, a request for a standard, code, or a part thereof, to be waived, deviated from, or completely cancelled shall be submitted in writing to NEOM for approval following the stipulations of NEOM-NEN-PRC-014 "Management and Application of NEOM standards & Codes".

1.6 Disclaimer

Consultants and Contractors employed to develop and deliver NEOM's assets are required to follow the national and international codes, standards and guidelines listed in this document. However, following these codes, standards and guidelines does not, in any way, relieve the Consultants and Contractors from their contractual and professional duties and obligations in terms of discharging and executing their responsibilities as determined and defined in their respective contractual obligation with NEOM. This Disclaimer is consistent and comparable with the Disclaimers provided by international code and standard organizations.



2 BUILDING CODES AND STANDARDS

The Saudi Building Code is composed of 17 (seventeen) volumes that cover a wide range of topics. A list of these codes and the corresponding international model code is shown the Table below. These codes have been developed by the National committee of the Saudi building code and updated in 2018 (SBC-2018). These codes have been enacted by the royal decree M/43-1438 for their enforcement.

Building codes such as those produced by “Saudi Building Code National Committee”, or the “International Code Council” are the most comprehensive sets of requirements that cover a wide range of performance criteria. These codes encompass many other codes and standards by cross-referencing because it is not practical to incorporate the content of all referenced codes and standards in one volume; moreover, these referenced codes and standards are developed and maintained by other organizations.

Saudi Building Code		International Code	
DESG.	TITLE	DESG.	TITLE
SBC201-CC	The General Building Code	ICC-IBC	International Code Council - The International Building Code
SBC301-CC	Structural – Loading and Forces	ASCE-7	ASCE-7: Structural Engineering Institute - Minimum Design Loads and Associated Criteria for Buildings and Other Structures
SBC302-CR	Structural – Construction		
SBC303-CC	Structural – Soil and Foundations		
SBC304-CC	Structural – Concrete Structures	ACI 318;	ACI-318: American Concrete Institute - Building Code Requirements for Structural Concrete
SBC305-CC	Structural – Masonry Structures	ACI 530/530.1	ACI 530: Building Code Requirements for Masonry Structures; ACI 530.1 Specifications for Masonry Structures
SBC306-CC	Structural – Steel Structures	AISC 360/341	Specification for Structural Steel Buildings; AISC 341 Seismic Provisions for Structural Steel Buildings
SBC401-CR	Electrical Code	IEC	
SBC501-CC	Mechanical Code	ICC-IMC	International Code Council - The International Mechanical Code
SBC601-CC	Energy Conservation-Non residential	ASHRAE 90.1	American Society of Heating, Refrigerating and Air-conditioning Engineers -
SBC602-CC	Energy Conservation-Residential	ASHRAE 90.2	American Society of Heating, Refrigerating and Air-conditioning Engineers -
SBC701-CC	Plumbing Code	ICC-IPC	International Code Council - The International Plumbing Code



SBC702-CR	Private sewage Code	ICC-IPSC	International Code Council - Private sewage Code
SBC801-CC	Fire Code	ICC-IFC	International Code Council - The International Fire Code
SBC901-CC	Existing Buildings Code	ICC-IEBC	International Code Council - The International Existing Building Code
SBC1001-CC	Green Construction Code	ICC-IGCC	International Code Council - The International green construction Code
SBC1101-CC	Residential Building Code-V1 Arch. Planning and Structural Requirements.	ICC-IRC	International Code Council - The International Residential Code
SBC1102-CC	Residential Building Code-V2 MEP, Gas and Energy Requirements	ICC-IRC	International Code Council - The International Residential Code

2.1 Scope of the Code

The purpose of the code is to establish the minimum requirements to provide a reasonable level of safety, public health, and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

2.2 Referenced codes.

The codes and standards referenced in any SBC code shall be considered part of the requirements of that code to the prescribed extent of each such reference

2.3 Non-building facilities, infrastructure, and special structures

Non-building facilities, infrastructure and special structures have their applicable design and material standards, and sometimes codes and at the same time they share common standards with the building codes. For example, designing bridge structures does not follow specifically the building codes (IBC or SBC) but rather follow codes/standards developed by AASHTO; however, the designer will find out that there are a number of common cross-referenced standards such as those developed by ACI, PCI, AISC, ASTM. Similarly, hospitals have certain functional requirements that are not covered by the main building codes; yet, many mechanical, plumbing, electrical and structural requirements can be achieved using the building codes and the associated cross-referenced codes and standards. Furthermore, consider the sports facilities which have special functional requirements regarding dimensions, lights, HVAC, etc.; yet, structural design follow similar principles and criteria as other structures and will use common structural codes and standards.



3 ARCHITECTURAL APPLICATIONS

3.1 General

3.1.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General code
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Kingdom of Saudi Arabia persons with disabilities guidelines 2000
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for transportation hubs & facilities
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for urban planning 1436
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - summary guide for criteria of public services planning 1436
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for signage and urban advertisement
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for site scaping
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for recycling of agricultural disposals
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide of plantations for soft scape in KSA
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for greenhouses
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for execution & maintenance of softscape
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for occupational facilities
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for commercial buildings
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - warehousing & workshops regulations
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for entertainment facilities
MOMRA	MOMRA Regulations	ministry of municipal and rural affairs - regulations for event facilities & resorts
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for automobile service stations
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for restaurants & food catering
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - regulations for residential buildings
KSCDR	UDG 2010 Regulations	King Salman Center for Disability Research - Universal accessibility destinations & places of accommodation guidelines for the Kingdom of Saudi Arabia
KSCDR	UDG 2010 Regulations	King Salman Center for Disability Research - universal accessibility land transportation guidelines for the Kingdom of Saudi Arabia.
KSCDR	UDG 2010 Regulations	King Salman Centre for disability research - Universal accessibility-built environment guidelines for the Kingdom of Saudi Arabia.
MODON	MODON Guides	Saudi authority for industrial cities and technology zones - MODON- Guides for industrial buildings
MOE	MOE Regulations	Minimum requirements for school buildings



MOH MOH Regulations Ministry of Health regulations for health care facilities

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

3.1.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

3.2 Accessibility

ORG.	DESG.	TITLE
ICC	ICC - A117.1	International Code Council - Accessible and usable buildings and facilities

3.3 Planning & Urban Design

ORG.	DESG.	TITLE
USGBC	USGBC Standards	US Green Building Council - LEED - Leadership in energy and environmental design - rating system - neighborhood design
APA	APA Standards	American Planning Association - Planning & urban design standards
MCGRAW-HILL	MCGRAW-HILL ISBN13: 9780071376754	The smart growth manual - publisher: McGraw-Hill - authors: Andres Duany, Jeff Speck & Mike Lydon - ISBN13: 9780071376754
UN HABITAT	UN HABITAT DESIGN GUIDE	UN Human settlements (un-habitat); world cities report 2016 - urbanization and development, emerging futures - 2017
WORLD BANK	WORLD BANK DESIGN GUIDE	World Bank - International Development Association (IDA) - Urban regeneration decision tool

3.4 Landscaping

ORG.	DESG.	TITLE
WBDG	UFC 3-201-02	Landscape Architecture
ANSI	ANSI 189.1	Standard for the Design of High-Performance Green Buildings - Except low-rise residential buildings
ICC	ICC - IZC	International Code Council - The international zoning code
ASABE	ANSI/ASABE S629 JUN2016	Framework to Evaluate the Sustainability of Agricultural Production Systems
ICC	ICC - IWUIC	International Code Council - The International Wildland-Urban Interface Code



3.5 Façade

ORG.	DESG.	TITLE
AAMA	AAMA CW-10	Care and handling of architectural aluminum from shop to site
AAMA	AAMA 501.1	Standard test method for exterior windows, curtain walls and doors for water penetration using dynamic pressure
AAMA	AAMA 501.2	Field check of metal storefronts, curtain walls and sloped glazing systems for water leakage
AAMA	AAMA 501.4	Recommended static test method for evaluating curtain wall and storefront system subjected to seismic and wind induced interstory drifts
AAMA	AAMA 611	Voluntary specification for anodized architectural aluminum
AAMA	AAMA 612	Voluntary specification, performance requirements and test procedures for combined coatings of anodic oxide and transparent organic coatings on architectural aluminum
AAMA	AAMA 1503	Voluntary test method for thermal transmittance and condensation resistance of windows, doors and glazed wall sections
AAMA	AAMA 1801	Voluntary specification for the acoustical rating of exterior windows, doors, skylights and glazed wall sections
AAMA	AAMA 2603	Voluntary specification, performance requirements and test procedures for pigmented organic coatings on aluminum extrusions and panels
AAMA	AAMA 2604	Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminum extrusions and panels
AAMA	AAMA 2605	Voluntary specification, performance requirements and test procedures for superior performance organic coatings on aluminum extrusions and panels
ASCE	ASCE 7	Minimum design loads for buildings and other structures
ASTM	ASTM C794	Standard test method for adhesion-in-peel of elastomeric joint sealants
AS	AS 1288	Glass in buildings – selection and installation
ASTM	ASTM C1036	Standard specification for flat glass
ASTM	ASTM C1048	Standard specification for Heat-treated flat glass
ASTM	ASTM C1172	Standard specification for laminated architectural flat glass
ASTM	ASTM C1184	Standard specification for structural silicone sealants
ASTM	ASTM C1130	Standard specification for cylindrical sealant backing for use with cold liquid-applied sealants
ASTM	ASTM C1376	Standard specification for pyrolytic and vacuum deposition coatings on glass
ASTM	ASTM E84	Surface burning characteristics of building materials
ASTM	ASTM E119	Standard test method for fire tests of building construction and materials
ASTM	ASTM E283	Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen



ASTM	ASTM E331	Standard test method for water penetration of exterior windows, skylights, doors and curtain walls by uniform static air pressure differential
ASTM	ASTM E413	Classification for rating sound insulation
ASTM	ASTM E488	Standard test methods for strength of anchors in concrete elements
ASTM	ASTM E547	Standard test method for water penetration of exterior windows, skylights, doors and curtain walls by cyclic static air pressure differential
ASTM	ASTM E1105	Standard test method for field determination of field determination of water penetration of installed exterior windows, skylights, doors and curtain walls, by uniform or cyclic static air pressure difference
ASTM	ASTM C615	Standard specification for Granite Dimension stone
ASTM	ASTM C568	Standard specification for Limestone Dimension stone
ASTM	ASTM C119	Standard terminology relating to Dimension stone
ASTM	ASTM C1528	Standard guide for selection of Dimension stone
ASTM	ASTM C1242	Standard guide for selection, design and installation of Dimension stone anchoring systems
ASTM	ASTM C1354	Standard test method for strength of individual stone anchorages in Dimension stone
NFPA	NFPA 285	Standard fire test method for evaluation of fire propagation characteristics of exterior non-loading-bearing wall assemblies containing combustible components.
NFPA	NFPA 5000	Building construction and safety code
SCI	SCI P291	Structural design of stainless steel
BS	BS 1279	Glass in building – Insulating glass unit
BS	BS 356	Glass in buildings – Security Glazing - testing and classification of resistance against manual attack
BS	BS 6180	Code of practice for barriers in and about buildings
BS	BS 6262	All parts - Code of practice for glazing for buildings
BS	BS 7985	Code of practice for the use of rope access methods for industrial purposes
BS	BS 8414	Fire performance of external cladding systems
CWCT	CWCT	Technical Notes (various documents)
CWCT	CWCT	“Standard for systemized envelope”
EN	EN 795	Personal fall protection equipment – anchor devices
EN	EN 1808	Safety requirements for suspended access equipment – Design calculations, stability criteria, construction – examinations and tests
EN	EN 1990	(Eurocode 0) – Basis of structural design
EN	EN 1991	(Eurocode 1) – Actions on structures (all parts)
EN	EN 1993	(Eurocode 3) – Design of steel structures
EN	EN 1999	(Eurocode 9) – Design of aluminium structures
ETAG	ETAG	ETAG Guidelines
Qualicoat	Qualicoat	Qualicoat Process and Guidelines for finishes
Qualinod	Qualinod	Qualinod Process and Guidelines for anodised finishes
SBC	SBC 201	Saudi Building Code - General
SBC	SBC 301	Saudi Building Code - Loading
SBC	SBC 306	Saudi Building Code - Steel
SBC	SBC 601	Saudi Building Code - Energy



SBC SBC 801 Saudi Building Code – Fire Protection

4 SUSTAINABILITY AND ENERGY CONSERVATION

4.1 Main Design Standards.

To achieve performance criteria and relevant functional requirements.

4.1.1 Saudi Regulations.

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC601-CC	Energy Conservation - Non-residential
SBC	SBC602-CC	Energy Conservation - Residential
SBC	SBC1001-CC	Saudi Green Code
MOI	GDCD – MOI Regulations	General Directorate of Civil Defense, KSA Regulations
Ministry of Housing (MOH)	Mostadam Rating System	Mostadam Rating System for Residential Buildings D+C

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

4.1.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ICC	IGCC	International Green Construction Code (IGCC), International Code Council
ICC	ICC - IECC	International Energy Conservation Code
ASTM	ASTM E2432	Standard Guide for the General Principles of Sustainability Relative to Building
ASHRAE	ASHRAE 189.1	Standard for the Design of Green Buildings, except Low-Rise Residential Buildings
ASHRAE	ASHRAE 90.1	Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE	ASHRAE 90.2	Energy-Efficient Design of Low-Rise Residential Buildings
WBDG	UFC-1-200-02	High Performance and Sustainable Building Requirements

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.



5 STRUCTURAL APPLICATIONS

5.1 Scope and Definitions

Structural engineering standards and codes are a branch of civil engineering, and their applications are diverse. Structural engineering codes and standards shall guide the design and construction of structures such as buildings, bridges, tunnels, etc. In terms of construction materials, they cover the principal materials of concrete, masonry, and steel.

5.2 Buildings Structures

5.2.1 Local Regulations

To achieve performance criteria and relevant functional requirements.

ORG.	DESG.	TITLE
SBC	SBC201_CC	Saudi Building Code – General Code
SBC	SBC301_CC	Saudi Loading Code
SBC	SBC304_CC	Saudi Concrete Structures Code
SBC	SBC305_CC	Saudi Masonry Code
SBC	SBC306_CC	Saudi Steel Structures Code

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.2.2 Referenced International Codes and Standards.

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures
ACI	ACI 318	American Concrete Institute - Building Code Requirements for Structural Concrete
ACI	ACI 530	American Concrete Institute - Building Code Requirements for Masonry Structures
ACI	ACI 530.1	American Concrete Institute - Specifications for Masonry Structures
AISC	AISC 360	American Institute of Steel Construction - Specification for Structural Steel Buildings
AISC	AISC 303	American institute of steel construction - code of standard practice for steel buildings and Bridges
AISC	AISC 325	American Institute of Steel Construction - Manual of Steel Construction (15th Edition)
AISC	AISC 341	American Institute of Steel Construction - Seismic Provisions for Structural Steel Buildings
AISI	AISI S100	American Iron and Steel Institute - North American specification for the design of cold-formed steel structural members
AISI	AISI S240-15	North American Standard for Cold-Formed Steel Structural Framing



CRSI	CRSI	CRSI Design Guide for Vibrations of Reinforced Concrete Floor Systems, Concrete Reinforcing Steel Institute
CRSI	CRSI	CRSI Design Handbook, Concrete Reinforcing Steel Institute
CRSI	CRSI	Design Guide on the ACI 318 Building Code Requirement for Structural Concrete

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.3 Bridges

5.3.1 Saudi Regulations

ORG.	DESG.	TITLE
MOT	CIRCULAR NO. 57026/01	Ministry of Transportation - Updated Vehicular Live Load on Highway Structures (August 2015)
MOT	MOT REGULATION S	Ministry of Transportation - Highway Design Manual - Volume 3 - Structural Specifications (May 1992)
MOT	MOT REGULATION S	Ministry of Transportation, General Specifications for Road and Bridge Construction - 1998
MOMRA	MA 100-C-V1/1	MOMRA Bridges, Tunnels, Culverts and Pedestrian Bridges Specifications in Urban Areas Construction Specifications
SBC	SBC301-CC	Saudi Loading Code
SBC	SBC304-CC	Saudi Concrete Structures Code

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.3.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
AASHTO	LRFDBDS-9	LRFD Bridge Design Specifications, 9th Edition
AASHTO	HB-17	Standard Specifications for Highway Bridges, 17th Edition
ACI	ACI 318	American Concrete Institute - Building Code Requirements for Structural Concrete

5.3.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated



5.4 Water Tanks

5.4.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC301_CC	Saudi Loading Code
SBC	SBC304_CC	Saudi Concrete Structures Code
SBC	SBC701_CC	Plumbing

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.4.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
AWWA	AWWA D100	Welded Steel Tanks for Water Storage
AWWA	AWWA D103	Factory-Coated Bolted Steel Tanks for Water Storage
AWWA	AWWA D110	Wire- and Strand-Wound Circular Prestressed Concrete Water Tanks
AWWA	AWWA D115	Tendon-Prestressed Concrete Water Tanks
ACI	ACI 350	Code Requirements for Environmental Engineering Concrete Structures
NFPA	NFPA22	Standards for Water Tanks for Private Fire Protection

5.4.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated

5.5 Industrial Structures

Chimneys; Silos and Stacking Tubes for Storing Granular Materials; Liquid-Containing Concrete Structures; Communication structures; Oil Storage Tanks.

5.5.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC301_CC	Saudi Loading Code
SBC	SBC304_CC	Saudi Concrete Structures Code

5.5.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
American Concrete Institute (ACI)	ACI 307	Code Requirements for Reinforced Concrete Chimneys and Commentary
	ACI 313	Standard Practice for the Design and Construction of Concrete Silos and Stacking Tubes for Storing Granular Materials



	ACI 350.3	ACI 350.3 - Standard Practice for the Seismic Design of Liquid-Containing Concrete Structures
Rack Manufacturers Institute (RMI)	ANSI/MH 16.1	Specification for the Design, Testing, and Utilization of Industrial Steel Storage Racks
The Telecommunications Industry Association (TIA)	TR-14	Structural standards for Communication and Small Wind Turbine Support Structures
	TIA-222-G	Structural Standard for Antenna Supporting Structures and Antennas
	TIA-1019-A	Installation, Alteration, and Maintenance of Antenna Supporting Structures and Antennas
	TIA-322	Loading, Analysis, and Design Criteria Related to the Installation, Alteration and Maintenance of Communication Structures
	TIA/ASSE COMM TOWER SET	Loading, Analysis, Design Criteria, and Safety Practices for the Construction, Demolition, Alteration and Maintenance of Communication Structures
American Society of Civil Engineers (ASCE)	TIA-5053	Mounting System Classification
	ASCE 10	Design of Latticed Steel Transmission Structures
American Petroleum Institute (API)	API 12B	Specification for Bolted Tanks for Storage of Production Liquids, 12B, 15th edition
	API 620	Design and Construction of Large, Welded, Low Pressure Storage Tanks, 11th edition, Addendum 2
	API 650	Welded Steel Tanks for Oil Storage, 11th edition, Addendum 3,
	API 653	Tank Inspection, Repair, Alteration, and Reconstruction, 4th edition, Addendum 1

5.5.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated

5.6 Parking Structures

5.6.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC301_CC	Saudi Loading Code
SBC	SBC304_CC	Saudi Concrete Structures Code
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Guidelines for Design of Parking

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.6.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ASCE/SEI	ASCE/SEI 7	Structural Engineering Institute - Minimum design loads and associated Criteria for buildings and other structures
AISC	AISC Design Guide No. 18	Steel-Framed Open-Deck Parking Structures
NFPA	NFPA 88A	Standard for Parking Structures
PCI	PCI 10	Precast/Prestressed Concrete Institute - Design Handbook



ACI	ACI 362.1R-12	Guide for the Design and Construction of Durable Concrete Parking Structures
ACI	ACI 362.2R-00	Guide for Structural Maintenance of Parking Structures

5.6.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated

5.7 Membrane Structures

5.7.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201_CC	Saudi Building Code – General Code

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

5.7.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 55	Tensile Membrane Structures

5.7.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated



6 GEOTECHNICAL

6.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – The General Code
SBC	SBC303-CC	Saudi Building Code – Soils and Foundations Code
SBC	SBC301-CC	Saudi Building Code – Loading and Forces
SBC	SBC304-CC	Saudi Building Code – Concrete Structures
MOT	CIRCULAR NO. 11998	Ministry of Transportation - requirements for multiple stress creep recovery test (AASHTO TP70) and specification requirements (AASHTO MP19) in the contract specification relevant to road/infrastructure project in KSA
MOT	CIRCULAR NO. 13335/01	Ministry of Transportation - Superpave hot asphalt mix design system
MOT	CIRCULAR NO. 21683	ministry of transportation - requirements of roughness (IRI) values for pavement structures.

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

6.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ACI	ACI 351.3R	Foundations for Dynamic Equipment
ASTM	Book of Standards Section 4 - Construction	Volume 04.08 Soil and Rock (I): D420-D5876/D5876M
ASTM	Book of Standards Section 4 - Construction	Volume 04.09 Soil and Rock (II): D5878
ASTM	Book of Standards Section 4 - Construction	Volume 04.13 Geosynthetics
AASHTO	HB-17	Standard Specifications for Highway Bridges, 17th Edition
AASHTO	LRFD BDS-9	LRFD Bridge Design Specifications, 9th Edition



FHWA	Federal Highway Administration	Federal Highway Administration (FHWA) U.S. department of transportation-Geotechnical Engineering Circulars
FHWA	FHWA-SA-95-037	Geotechnical Engineering Circular No. 1 - Dynamic Compaction
FHWA	FHWA-NHI-18-024	Geotechnical Engineering Circular No. 10 - Drilled Shafts: Construction Procedures and LRFD Design Methods
FHWA	FHWA-NHI-10-024	Geotechnical Engineering Circular No. 11 - Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Vol. I
FHWA	FHWA-NHI-10-025	GEC No. 11 - Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Vol II
FHWA	FHWA-NHI-16-009	Geotechnical Engineering Circular No. 12 - Design and Construction of Driven Pile Foundations - Volume I
FHWA	FHWA-NHI-16-010	Geotechnical Engineering Circular No. 12 - Design and Construction of Driven Pile Foundations - Volume II
FHWA	FHWA-NHI-16-064	Design and Construction of Driven Pile Foundations- Comprehensive Design Examples
FHWA	FHWA-NHI-16-027	Geotechnical Engineering Circular No. 13 Ground Modification Methods Reference Manual - Volume I
FHWA	FHWA-NHI-16-028	Geotechnical Engineering Circular No. 13 Ground Modification Methods Reference Manual - Volume II
FHWA	FHWA-HIF-17-016	Geotechnical Engineering Circular No. 14 - Assuring Quality in Geotechnical Reporting Documents
FHWA	FHWA-SA-96-038	Geotechnical Engineering Circular No. 2 - Earth Retaining Systems
FHWA	FHWA-SA-97-076	Geotechnical Engineering Circular No. 3 - Earthquake Engineering for Highways, Design Principles, Volume 1
FHWA	FHWA-SA-97-077	Geotechnical Engineering Circular No. 3 - Earthquake Engineering for Highways, Design Principles, Volume 2
FHWA	FHWA-NHI-11-032	Geotechnical Engineering Circular No. 3 - LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations Reference Manual
FHWA	FHWA-IF-99-015	Geotechnical Engineering Circular No. 4 - Ground Anchors and Anchored Systems
FHWA	FHWA-IF-02-034	Geotechnical Engineering Circular No. 5 - Evaluation of Soil and Rock Properties
FHWA	FHWA-NHI-16-072	Geotechnical Engineering Circular No. 5 - Geotechnical Site Characterization
FHWA	FHWA-IF-02-054	Geotechnical Engineering Circular No. 6 - Shallow Foundations
FHWA	FHWA-NHI-14-007	Geotechnical Engineering Circular No. 7 - Soil Nail Walls
FHWA	FHWA-HIF-07-039	Geotechnical Engineering Circular No. 8 - Design and Construction of Continuous Flight Auger Piles
FHWA	FHWA-NHI-18-031	Geotechnical Engineering Circular No. 9 - Design and Analysis of Laterally Loaded Deep Foundations

6.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated



6.4 Additional Supplementary Information

The following supplemental information can be referenced as a method for design. This is considered added information for the design of the buildings and process. In no way is this considered as a replacement. Nor does this relieve the design from compliance with Saudi Building Codes or requirements. This also does not constitute a change to the contract. The designer must follow the NEOM process for any change implemented.

ORG.	DESG.	TITLE
WBDG	UFC 3-220-01	Geotechnical Engineering
WBDG	EM 1110-2-1902	Slope Stability
WBDG	UFC 3-220-05	Dewatering and Groundwater Control
WBDG	UFC 3-220-08FA	Engineering Use of Geotextiles
WBDG	UFC 3-260-01	Airfield and Heliport Planning and Design
WBDG	UFC 3-301-01	Structural Engineering
WBDG	UFC 3-310-04	Seismic Design for Buildings
WBDG	UFC 3-130-04	Foundation for Structures: Arctic and Subarctic Construction
WBDG	UFC 3-220-04FA	Backfill for Subsurface Structures
WBDG	UFC 3-220-05	Dewatering and Groundwater Control
WBDG	UFC 3-220-08FA	Engineering Use of Geotextiles
WBDG	UFC 3-220-06	Grouting Methods and Equipment
WBDG	UFC 3-250-11	Soil Stabilization for Pavements
WBDG	USACE EM 1110-1-1904	Engineering and Design: Settlement Analysis
WBDG	USACE EM 1110-1-1905	Engineering and Design: Bearing Capacity of Soils
WBDG	USACE EM 1110-1-2907	Engineering and Design: Rock Reinforcement
WBDG	USACE EM 1110-1-2908	Engineering and Design: Rock Foundations
WBDG	USACE EM 1110-2-1421	Engineering and Design – Ground Water Hydrology
WBDG	USACE EM 1110-2-1901	Engineering and Design: Seepage Analysis and Control for Dams CH 1
WBDG	USACE EM 1110-2-1902	Engineering and Design: Slope Stability



WBDG	USACE EM 1110-2-2502	Engineering and Design: Retaining and Flood Walls
WBDG	USACE EM 1110-2-2503	Engineering and Design: Design of Sheet Pile Cellular Structures Cofferdams & Retaining Structures
WBDG	USACE EM 1110-2-2504	Engineering and Design: Design of Sheet Pile Walls
WBDG	USACE EM 1110-1-3500	Engineering and Design: Chemical Grouting
WBDG	USACE EM 1110-1-1802	Engineering and Design: Geophysical Exploration for Engineering and Environmental Investigations
WBDG	USACE EM 1110-1-1804	Engineering and Design: Geotechnical Investigations, ENG 1836, ENG 1836A
WBDG	USACE EM 1110-1-2909	Engineering and Design: Geospatial Data and Systems
WBDG	USACE EM 1110-2-1908	Engineering and Design: Instrumentation for Embankment Dams and Levees
WBDG	USACE EM 1110-2-1909	Engineering and Design: Calibration of Laboratory Soils Testing Equipment
WBDG	USACE EM 1110-2-1911	Engineering and Design: Construction Control for Earth and Rock- Fill Dams
WBDG	USACE ETL 1110-2-352	Engineering and Design: Stability of Gravity Walls, Vertical Shear
WBDG	USACE ETL 1110-2-544	Engineering and Design: Geotechnical Analysis by The Finite Element Method
WBDG	USACE ETL 1110-2-547	Engineering and Design: Introduction to Probability and Reliability Methods for Use in Geotechnical Engineering
WBDG	USACE EM 1110-2-2300	Engineering and Design: General Design and Construction Considerations for Earth and Rock-Fill Dams
WBDG	USACE EM 1110-3-136	Engineering and Design: Drainage and Erosion Control -Mobilization Construction
WBDG	USACE EM 1110-3-137	Engineering and Design: Soil Stabilization for Pavements -Mobilization Construction
WBDG	USACE ER 1110-1-261	Engineering and Design: Quality Assurance of Laboratory Testing Procedures
WBDG	USACE ETL 1110-1-138	Engineering and Design: Standard Penetration Test
WBDG	USACE ETL 1110-1-185	Engineering and Design: Guidelines on Ground Improvement for Structures
WBDG	USACE ETL 1110-2-282	Engineering and Design: Rock Mass Classification Data Requirement for Rippability
BS EN	BS EN 1536	Execution of special geotechnical works. Bored piles
BS EN	BS EN 1537	Execution of special geotechnical works. Ground anchors
BS EN	BS EN 1538	Execution of special geotechnical works. Diaphragm walls
BS EN	BS EN 12063	Execution of special geotechnical work. Sheet pile walls
BS EN	BS EN 12699	Execution of special geotechnical work. Displacement piles



BS EN	BS EN 12715	Execution of special geotechnical work. Grouting
BS EN	BS EN 12716	Execution of special geotechnical works. Jet grouting
BS EN	BS EN 14199	Execution of special geotechnical works. Micropiles
BS EN	BS EN 14475	Execution of special geotechnical works. Reinforced fill
BS EN	BS EN 14679	Execution of special geotechnical works. Deep mixing
BS EN	BS EN 14731	Execution of special geotechnical works. Group treatment by deep vibration
BS EN	BS EN 15237	Execution of special geotechnical works. Vertical drainage
PIP	PIP CVS02100	Site Preparation, Excavation, and Backfill Specification (Process Industry Practices PIP)
PIP	PIP CVS02700	Underground Gravity Sewers Specification (Process Industry Practices PIP)



7 MECHANICAL ENGINEERING APPLICATIONS

7.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC501-CC	Saudi Building Code – Mechanical Code
SASO	SASO Standard	Saudi Arabian Standard Organization – Full set

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

7.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ICC	ICC - IMC	International Code Council - The International Mechanical Code
ASHRAE	ASHRAE–2013	ASHRAE Fundamentals Handbook
ASHRAE	ASHRAE 34–2013	Design. and Safety Classification of Refrigerants
ASHRAE	ASHRAE 15–2013	Safety Standard for Refrigeration Systems
ASHRAE	ASHRAE 62.1–2013	Ventilation for Acceptable Indoor Air Quality
ASHRAE	ASHRAE 170–2008	Ventilation of Health Care Facilities
ASHRAE	ASHRAE 180–2012	Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems
ASME	BPVC	ASME Boiler & Pressure Vessel Code

7.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated

7.4 Additional Supplementary Information

The following supplemental information can be referenced as a method for design. This is considered added information for the design of the buildings and process. In no way this is considered as a replacement. Nor does this relieve the design from compliance with Saudi Building Codes or requirements. This also does not constitute a change to the contract. The designer must follow the NEOM process for any change implemented.

7.4.1 General

ORG.	DESG.	TITLE
UFC	UFC 1-200-01	DoD Building Code
	UFC 3-401-01	Mechanical Engineering
	UFGS 22 00	Plumbing for Healthcare Facilities
	70	



	UFGS 22 60 70	Gas and Vacuum Systems for Healthcare Facilities
	UFC 1-200-01	General Building Requirements
	UFC 1-200-02	High Performance and Sustainable Building Requirements
	UFC 3-400-02	Design: Engineering Weather Data
	UFC 3-450-01	Noise and Vibration Control
	UFC 3-420-01	Plumbing Systems
	UFC 3-440-01	Facility-Scale Renewable Energy Systems
	UFC 3-470-01	Utility Monitoring and Control System (UMCS)
	UFC 3-460-01	Design: Petroleum Fuel Facilities
	UFC 3-460-03	O&M: Maintenance of Petroleum Systems
	UFC 3-520-05	Stationary Battery Areas
	UFC 3-430-09	Exterior Mechanical Utility Distribution
	UFC 4-510-01	Design: Medical Military Facilities

7.4.2 Refrigeration

ORG.	DESG.	TITLE
UFC	UFC 4-826-10	Design: Refrigeration Systems for Cold Storage

7.4.3 HVAC

ORG.	DESG.	TITLE
UFC	UFC 3-410-01	Heating, Ventilating, and Air Conditioning Systems
UFC	UFC 3-410-02	Direct Digital Control for HVAC and Other Local Building Systems
UFC	UFC 3-410-04	Industrial Ventilation
UFC	UFC 3-430-01FA	Heating and Cooling Distribution Systems
UFC	UFC 3-430-08N	Central Heating Plants

7.4.4 Boilers

ORG.	DESG.	TITLE
UFC	UFC 3-430-07	Inspection and Certification of Boilers and Unfired Pressure Vessels
UFC	UFC 3-430-11	Boiler Control Systems
UFC	UFC 3-430-02FA	Central Steam Boiler Plants



8 FIRE PROTECTION

8.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC801-CC	Saudi Building Code – Fire Code

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

8.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ICC	ICC - IFC	International Code Council - The International Fire Code

8.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated



9 TELECOMS & DATA

9.1 Saudi Regulations

ORG.	DESG.	TITLE
COMMUNICATIONS AND INFORMATION TECHNOLOGY COMMISSION	CITC	Technical Standard for Outside Plant (OSP) Installations
	CITC	Regulatory Framework on Information and Communications Technology Infrastructure Deployment in New Developments
	CITC	Rules on Information and Communications Technology Infrastructure Deployment in New Developments
	CITC	Technical Standard for In-Building Physical Infrastructure (IPI) For Multi Dwelling Units

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

9.2 Equipment and Installations

ORG.	DESG.	TITLE
The Telecommunications Industry Association (TIA)	TR-8	Mobile and Personal Private Radio Standards
	TR-14	Structural standards for Communication and Small Wind Turbine Support Structures
	TR-34	Satellite Equipment & Systems
	TR-41	Performance and Accessibility for Communications Products
	TR-42	Telecommunications Cabling Systems
	TR-45	Mobile and Point-to-Point Communications standards
	TR-48	Vehicular Telematics
	TR-50	M2M - Smart Device Communications
	TR-51	Smart Utility Networks

9.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated

9.3.1 Information and Communications Technology (ICT)

ORG.	DESG.	TITLE
ISO	ISO 14813-1	Intelligent transport systems – Reference Model Architecture(s) for the ITS Sector – ITS Service Domains, Service Groups and Services
ISO	ISO 15118-1	Road Vehicles – Vehicle to Grid Communication Interface – Part 1: General information and use-case definition
ISO	ISO 15784-1	Intelligent Transport Systems (ITS) - Data Exchange Involving Roadside Modules Communication - Part 1: General Principles and Documentation Framework of Application Profiles (ISO 15784-1:2008, IDT)
ISO	ISO 16354	Guidelines for Knowledge Libraries and Object Libraries



ISO	ISO 19650-1	Org. And digitization of information about buildings and civil engineering works, including building information modelling (BIM) - information management using building information modelling - part 1: concepts and principles
ISO	ISO 19650-2	Org. And digitization of information about buildings and civil engineering works, including building information modelling (BIM) - information management using building information modelling - part 2: delivery phase of the assets
NFPA	NFPA 75	Standard for the protection of information technology equipment
BICSI	ANSI/NECA/BICSI 568	Standard for installing commercial building telecommunications cabling
BICSI	ANSI/NECA/BICSI 607	Standard for telecommunications bonding and grounding planning and installation methods for commercial buildings
BICSI	BICSI - G1	ICT outside plant construction and installation: general practices
BICSI	BICSI - N1	Installation practices for telecommunications and ICT cabling and related cabling infrastructure
BICSI	BICSI - N2	Practices for the installation of telecommunications and ICT cabling intended to support remote power applications
BICSI	BICSI - TDMM	Telecommunications distribution methods manual (13th edition/latest version)
BICSI	BICSI 001	Information and communication technology systems design and implementation best practices for educational institutions and facilities
BICSI	BICSI 002	Data center design and implementation best practices
BICSI	BICSI 003	Building information modeling (BIM) practices for information technology systems
BICSI	BICSI 007	Information communication technology design and implementation practices for intelligent buildings and premises
BICSI	BICSI 008	Wireless local area network (WLAN) systems design and implementation best practices
BICSI	BICSI 009	Data center operations and maintenance best practices
EIA	EIA 310	Electronic industries association - cabinets, racks, panels, and associated equipment
IEEE	IEEE 1100	Powering and grounding of electronic equipment.
IEEE	IEEE 142	Recommended practice for grounding of industrial and commercial power systems.
ITU	ITU-T G.989	40-Gigabit-capable passive optical networks (NG-PON2): definitions, abbreviations and acronyms
ANSI/TIA	ANSI/TIA-1005	Telecommunications user premises equipment surge resistibility of smart grid equipment connected to either DC or 120/240 V single phase ac and metallic communication lines
ANSI/TIA	ANSI/TIA-1152	Requirements for field test instruments and measurements for balanced twisted-pair cabling.
ANSI/TIA	ANSI/TIA-1194	Telecommunications infrastructure for industrial premises
ANSI/TIA	ANSI/TIA-568	Generic telecommunications cabling standard



ANSI/TIA	ANSI/TIA-569	Telecommunications pathways and spaces
ANSI/TIA	ANSI/TIA-570	Residential telecommunication infrastructure standard
ANSI/TIA	ANSI/TIA-606	Administration standard for telecommunications infrastructure
ANSI/TIA	ANSI/TIA-607	Commercial building grounding (earthing) and bonding requirements for telecommunications
ANSI/TIA	ANSI/TIA-758	Customer owned outside plant telecommunications standard
ANSI/TIA	ANSI/TIA-862	Building automation systems cabling standard
ANSI/TIA	ANSI/TIA-942	Telecommunications infrastructure std. For data centers
TIA	TIA/EIA TSB-67	Transmission performance specifications for field testing of unshielded twisted pair cabling systems
TIA	TIA/EIA TSB-72	Centralized optical fiber cabling guidelines
TIA	TIA-162-A	Telecommunication cabling guidelines for wireless access points
TIA	TIA-862	Structured cabling infrastructure – standard for intelligent building systems
ISO	ISO/IEC 11801	Latest edition regarding information technology and generic cabling for customer premise.
ISO	ISO/IEC 11801	Generic cabling for customer premises
ISO	ISO/IEC 15067-3	Information technology – home electronic system (HES) application model – part 3: model of an energy management system for HES
ISO	ISO/IEC 17998	Information technology – SOA governance framework
ISO	ISO/IEC 18012-2	Information technology – home electronic system – guidelines for product interoperability – part 2: taxonomy and application interoperability model
ISO	ISO/IEC 27005	Information technology – security techniques – information security risk management
ISO	ISO/IEC 27009	Information technology. Security techniques. Sector-specific application of ISO/IEC 27001
ISO	ISO/IEC 27011	Information technology. Security techniques. Code of practice for information security management
ISO	ISO/IEC 27031	Information technology. Security techniques. Guidelines for information and communication technology readiness for business continuity
ISO	ISO/IEC TR 29138-1	Information technology – accessibility considerations for people with disabilities – part 1: user needs summary
ISO	ISO/PAS 22720	Association for standardization of automation and measuring systems open data services 5.0
ISO	ISO/TR 12859	Intelligent transport systems – system architecture – privacy aspects in its std. And systems
ISO	ISO/TS 24533	Intelligent transport systems – electronic information exchange to facilitate the movement of freight and its intermodal transfer – road transport information exchange methodology



9.3.2 Information Technology Security

ORG.	DESG.	TITLE
NIST	NIST SP 800-30	Guide for conducting risk assessments
NIST	NIST SP 800-53	Special publication - security and privacy controls for federal information systems and Organizations
ISO	ISO 27001	Information security management systems
ISO	ISO 27031	Information technology - security techniques - guidelines for information and communication technology readiness for business continuity
ISACA	ISACA standards	Information systems audit and control association - performing a security risk assessment
ISO	ISO/IEC 27001	Information security management
ISO	ISO/IEC 27003	Security techniques — information security management system implementation guidance
AT & T	AT & T DESIGN GUIDE	Exploring IOT security - volume 2
BICSI	BICSI 005	Electronic safety and security (ESS) system design and implementation best practices
BITAG	BITAG DESIGN GUIDE	Broadband internet technical advisory group - internet of things (IT) security and privacy
FCC-PSHSB	FTC - INTERNET OF THINGS	Public safety and homeland security bureau - internet of things: privacy & security in a connected world

9.3.3 Smart Cities/ Internet of Things (IOT)

ORG.	DESG.	TITLE
AIOTI	AIOTI DESIGN GUIDE	Alliance for internet of things innovation - digitalization of industry policy recommendations
ANSI/ASQ	ANSI/ASQ E4	Specifications and guidelines for quality systems for environmental data collection and environmental technology programs
CEA/CEDIA	CEA/CEDIA/CE B 29	Recommended practice for the installation of smart grid devices
EIA	EIA TSB 4940	smart device communications – security aspects
IETF	IETF RFC 7452	Architectural considerations in smart object networking
NEMA	ANSI/NEMA SG-IC 1	Smart grid interoperable & conformant (SG-IC) testing and certification scheme operator guidelines
NEMA	NEMA SG-AMI 1	Requirements for smart meter upgradeability
NIST	NIST FRAMEWORK	Improving critical infrastructure cybersecurity
NIST	NIST INTERNAL REPORT 8228	Considerations for managing internet of things cybersecurity and privacy risks
SYMANTEC	SYMANTEC-ISTR	Internet security threat report
TIA	TIA TR-51	Smart utility networks
UL	UL 2560	Emergency call systems for assisted living and independent living facilities
GSMA	GSMA - IOT standards	Internet of things - security guidelines
IEC	IEC 100/2189/PAS*	The universal framework for user interaction in multimedia ambient assisted living (AAL) spaces



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IEC	IEC 62056-1-0	Electricity metering data exchange. The DLMS/COSEM suite. Part 1-0. Smart metering standardization framework
IEC	IEC 62290-1	Railway applications – urban guided transport management and command/control systems part 1: system principles and fundamental concepts
IIC	IIC PUB G4 V1.0 - PB:20160926	Volume G4: security framework
ISO	ISO 17800	Facility smart grid information model
ISO	ISO 24534-3	Intelligent transport systems – automatic vehicle and equipment identification – electronic registration identification (ERI) for vehicles – part 3: vehicle data
ISO	ISO 37100	Sustainable cities and communities. Vocabulary.
ISO	ISO 37106	Sustainable cities and community's guidance on establishing smart city operating models for sustainable communities
ISO	ISO 37122	Sustainable cities and communities - indicators for smart cities
ISO	ISO 37150	Smart community infrastructures – review of existing activities relevant to metrics
ISO	ISO 37154	Smart community infrastructures - maturity model for assessment and improvement
ISO	ISO/IEC 16326	Systems and software engineering – life cycle processes – project management
ISO	ISO/IEC 30182	Smart city concept model - guidance for establishing a model for data interoperability.
ISO	ISO/TR 37152	Smart community infrastructures - common framework for development and operation
ISO	ISO/TR 37153	Smart community infrastructures - maturity model for assessment and improvement
ISO	ISO/TS 37151	Smart community infrastructures - principles and requirements for performance metrics.
ITU	ITU-T F.747.1	Capabilities of ubiquitous sensor networks for supporting the requirements of smart metering services
ITU	ITU-T L.1410	Methodology for the assessment of the environmental impact of information and communication technology goods, networks and services
ITU	ITU-T X.207	Information technology – open systems interconnection – application layer structure
ONEM2M	ONEM2M DESIGN GUIDE	Standard for M2M and the internet of things
OTA	OTA DESIGN GUIDE	IOT trust framework and trust framework resource guide
TCG	TCG REFERENCE	Trusted computing group - guidance for securing IOT using TCG technology reference document



10 EXTRA-LOW VOLTAGE SYSTEMS

10.1 Saudi Regulations

ORG.	DESG.	TITLE
MOI	MOI Regulations	Ministry of Interior - General Technical Specification for CCTV System
MOI	MOI Regulations	Ministry of Interior - Security Requirements and Conditions for The Installation of CCTV System for Market, Commercial Complexes, Hotel, Recreation Places and Other Commercial Activities

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

10.2 General

ORG.	DESG.	TITLE
ANSI	ANSI C137.3	Minimum requirements for installation of energy efficient power over ethernet (POE) lighting systems
NFPA	NFPA 1221	Standard for the installation, maintenance, and use of emergency services communications systems 2002 edition
BSI	BS 8418	Installation and remote monitoring of detector-activated CCTV

10.3 Radio Communications

ORG.	DESG.	TITLE
BICSI	BICSI 006	Distributed Antenna System (DAS) Design and Implementation Best Practices



11 SECURITY

11.1 Saudi Regulations

ORG.	DESG.	TITLE
MOI	MOI - HCIS	Ministry of Interior - High Commission for Industrial - Security Directives (SEC) for Industrial Facilities
MOI	MOI - HCIS	Ministry of Interior - High Commission for Industrial Security - Safety Directives (SAF) for Industrial Facilities

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

11.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ASIS	ASIS CSO	Chief security officer - an organizational model
ASIS	ASIS PSO	Private security officer selection and training guideline
ASIS	ASIS FPSM	Facilities physical security measures guideline
ASIS	ASIS GDL BC 01	Business continuity guideline: a practical approach for emergency preparedness, crisis management, and disaster recovery
ASIS	ASIS GSRA	General security risk assessment guideline
ASIS	ASIS IAP	Information asset protection guideline
ASIS	ASIS ORM.1	Security and resilience in organizations and their supply chains - requirements with guidance
ASIS	ASIS PAP	Security management standard: physical asset protection
ASIS	ASIS PBS	Pre-employment background screening guideline
ASIS	ASIS PBSS	Trusted information provider annex: a supplement to the ASIS pre-employment background screening guideline
ASIS	ASIS PSC.1	Management system for quality of private security company operations-requirements with guidance revised
ASIS	ASIS PSC.2	Conformity assessment and auditing management systems for quality of private security company operations
ASIS	ASIS PSC.3	Maturity model for the phased implementation of a quality assurance management system for private security service providers
ASIS	ASIS SCRM	Supply chain risk management: a compilation of best practices
ASIS	ASIS SPC.1 & BCM	Org.al resilience: security, preparedness and continuity management systems - requirements with guidance for use (SPC.1) and business continuity management standard (BCM)
ASIS	ASIS standards	Active assailant: prevention, intervention, and response - supplement to ANSI/ASIS/SHRM workplace violence prevention and intervention standard
ASIS	ASIS standards	Security awareness (joint ASIS/(ISC)2/ISACA standard)
ASIS	ASIS WVP	Workplace violence prevention and response guideline
ASIS	ASIS WVPI.1	Workplace violence prevention and intervention standard
FEMA	FEMA 430	Federal emergency management agency - risk management series. Site and urban design for security: guidance against potential terrorist attacks
NSTAC	NSTAC Reference	National security telecommunications advisory committee - report to the president on the internet of things



SAFECODE	SAFECODE DESIGN GUIDE	SAFECODE - call it the internet of connected things: the IOT security conundrum
BSI	BS 7958	British standard setting out recommendations on the management and operation of CCTV systems.
BSI	BS 8418	Installation and remote monitoring of detector-activated CCTV
BSI	BS EN 60839	Alarm and electronic security systems.
BSI	BS EN 60839-11-1	System and components requirements
BSI	BS EN 60839-11-2	Application guidelines
BSI	BS EN 60839-11-31	Alarm and electronic security systems. Electronic access control systems. IP interoperability implementation based on web services
BSI	BS EN 60839-11-32	Access control specification
BSI	BS EN 62676	Video surveillance systems for use in security applications
RIBA	RIBA DESIGN GUIDE	Royal Institute of British Architects - RIBA guidance on designing for counterterrorism
CPNI	2ND EDITION	Centre for the protection of national infrastructure, UK. Integrated security: A public realm design guide for hostile vehicle mitigation, 2nd edition
EC	EC - DIRECTIVE 95/46/EC	EU Council - Data protection directive 95/46/EC
EC	EC - OPINION 8/2014	EU Council - Recent developments on the internet of things - Article 29 data protection working party
EUROSMART	EUROSMART DESIGN GUIDE	EUROSMART - Internet of trust security and privacy in the connected world
CSA	CSA standards	Cloud security alliance - Future-proofing the connected world: 13 steps to developing secure IOT products
CSA	CSA standards	Cloud security alliance - New security guidance for early adopters of the IOT
IEC	IEC DESIGN GUIDE	IEC white paper on "IOT 2020: smart and secure IOT platform"
IEC	IEC 14443-4	Cards and security devices for personal identification -- Contactless proximity objects -- part 4: transmission protocol
INFINEON	INFINEON Standards	Infineon Standards - Hardware security for smart grid end point devices
IRTF	IRTF Standards	Internet research task force - State-of-the-art and challenges for the internet of things security
ISO	ISO 22300	Security and resilience
ISO	ISO 28000 (FULL SET)	Security management systems for the supply chain (full set)
ISO	ISO 31000	Risk Management Set - Principles and guidelines
ISO	ISO/DIS 22431	Security and resilience — Protective security — Guidelines for crime prevention through environmental design
ITU	ITU standards	International telecommunication union - Unleashing the potential of the internet of things
NACTSO	NACTSO DESIGN GUIDE	National counter terrorism security office, UK. Counter terrorism protective security advice for cinemas and theatres
OWASP	OWASP standards	Open web application security project - i5. Internet of things top ten



12 ELECTRICAL APPLICATIONS

12.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – The general code
SBC	SBC401	Saudi Electrical Code
GACA	GACAR PART 139	General Authority of Civil Aviation STD - Certification and operations - aerodromes
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Guide for telecommunication towers
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Guide for street lighting
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Guide for elevators & escalators
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Guide for electrical vehicle charging facilities
SASO	SASO STD - (FULL SET)	Saudi Arabian STD Org. - (full set of STD)
SEC	SEC Regulations (All Regulations)	Saudi Electricity Company regulations - (All regulations)
SEC	SEC SDCS (All STD)	Saudi Electricity Company - SEC distribution construction STD - (all ATD)
SEC	SEC SDMS (ALL Specifications)	Saudi Electricity Company - SEC distribution material specifications - (all specifications)
SEC	SEC SDPS (ALL STD)	Saudi Electricity Company - SEC distribution planning STD - (all STD)

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

12.2 Referenced International Codes and Standards

12.2.1 General

ORG.	DESG.	TITLE
ASHRAE	ASHRAE 201	Facility smart grid information model (NEMA co-sponsored)
ASHRAE	ASHRAE 202	Commissioning process for buildings and systems
ASTM	ASTM B800	Standard specification for 8000 series aluminum alloy wire for electrical purposes - annealed and intermediate tempers.
ASTM	ASTM A123	Standard specification for Zinc (hot-dip galvanized) coatings on iron and steel products
ASTM	ASTM A475	Standard specification for zinc-coated steel wire strand
ASTM	ASTM A653	Standard specification for steel sheet, zinc-coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot-dip process
ASTM	ASTM B1	American society of testing and materials - standard specification for hard-drawn copper wire
ASTM	ASTM B231	Standard specification for concentric-lay-stranded aluminum 1350 conductors
ASTM	ASTM B232	Standard specification for concentric-lay-stranded aluminum conductors, coated-steel reinforced (ACSR)
ASTM	ASTM B3	Standard specification for soft or annealed copper wire
ASTM	ASTM B33	Standard specification for tin-coated soft or annealed copper wire for electrical purposes.



ASTM	ASTM B399	Standard specification for concentric-lay-stranded aluminum-alloy 6201-T81 conductors
ASTM	ASTM B549	Standard specification for concentric-lay-stranded aluminum conductors, aluminum-clad steel reinforced for use in overhead electrical conductors
ASTM	ASTM B787	Standard specification for 19 wire combination unilay-stranded copper conductors for subsequent insulation.
ASTM	ASTM B8	Standard specification for concentric-lay-stranded copper conductors, hard, medium-hard, or soft.
ASTM	ASTM B801	Standard specification for concentric-lay-stranded conductors of 8000 series aluminum alloy wire for subsequent covering of insulation.
ASTM	ASTM D1248	Standard specification for polyethylene plastics extrusion materials for wire and cable
ASTM	ASTM D3005	Standard specification for low-temperature resistant vinyl chloride plastic pressure-sensitive electrical insulating tape.
ASTM	ASTM D4388	Standard specification for nonmetallic semi-conducting and electrically insulating rubber tapes.
IEEE	IEEE 1100	Powering and grounding of electronic equipment.
IEEE	IEEE 1115	Recommended practice for sizing nickel-cadmium batteries for stationary applications
IEEE	IEEE 141	The red book - power distribution
IEEE	IEEE 142	Recommended practice for grounding of industrial and commercial power systems.
IEEE	IEEE 18	Standard for shunt power capacitors
IEEE	IEEE 386	Standard test procedures and requirements for alternating-current cable terminations 2.5 kV through 765 kV.
IEEE	IEEE 446	The orange book - emergency and standby power
IEEE	IEEE 48	Recommended practice for grounding of industrial and commercial power systems
IEEE	IEEE 493	The gold book - reliable design
IEEE	IEEE 551	The violet book - short-circuit currents
IEEE	IEEE 739	The bronze book - energy management
IEEE	IEEE 81	Guide for measuring earth resistivity, ground impedance, and earth surface potentials of a ground system
IEEE	IEEE C12.1	American national standard code for electricity metering.
IEEE	IEEE C2	National electrical safety code
IEEE	IEEE C37.23	Standard for metal-enclosed bus
IEEE	IEEE C62.41	Surge protective categories defined by ANSI/IEEE C62.41
NEMA	NEMA 12	National electrical manufacturers association - enclosures
NEMA	NEMA C84.1	National electrical manufacturers association - American national standard for electric power systems and equipment—voltage ratings (60 HZ)
NEMA	NEMA CP 1	National electrical manufacturers association - shunt capacitors
NEMA	NEMA FB 1	National electrical manufacturers association - fittings, cast metal boxes, and conduit bodies for conduit, electrical metallic tubing, and cable.
NEMA	NEMA ICS 1	National electrical manufacturers association - industrial control and systems: general requirements
NEMA	NEMA ICS 6	National electrical manufacturers association - industrial control and systems: enclosures
NEMA	NEMA MG 1	National electrical manufacturers association - motors and generators
NEMA	NEMA SG 5	National electrical manufacturers association - power switchgear assemblies
NEMA	NEMA VE 1	National electrical manufacturers association - metal cable tray systems
NEMA	NEMA C29.5	National electrical manufacturers association - American national standard for wet-process porcelain insulators—low and medium voltage types
NEMA	NEMA FU 1	National electrical manufacturers association - fuse
NEMA	NEMA LA 1	National electrical manufacturers association - surge arresters



NFPA	NFPA 101	Life safety code
NFPA	NFPA 110	Standard for emergency and standby power systems
NFPA	NFPA 111	Standard on stored electrical energy emergency and standby power systems.
NFPA	NFPA 20	Standard for the installation of stationary pumps for fire protection.
NFPA	NFPA 3	Standard for commissioning of fire protection and life safety systems
NFPA	NFPA 70	National electrical code
NFPA	NFPA 70A	National electrical code requirements for one- and two-family dwellings
NFPA	NFPA 70B	Recommended practice for electrical equipment maintenance
NFPA	NFPA 70E	Standard for electrical safety in the workplace
NFPA	NFPA 72	National fire alarm and signaling code
NFPA	NFPA 73	Standard for electrical inspections for existing dwellings
NFPA	NFPA 75	Standard for the protection of information technology equipment
NFPA	NFPA 77	Recommended practice on static electricity
NFPA	NFPA 78	Guide on electrical inspection
NFPA	NFPA 79	Electrical standard for industrial machinery
NFPA	NFPA 855	Standard for the installation of stationary energy storage systems
UL	UL 1	Underwriters laboratories - standard for flexible metal conduit
UL	UL 1242	Underwriters laboratories - standard for electrical intermediate metal conduit - steel
UL	UL 1283	Underwriters laboratories - standard for electromagnetic interference filters
UL	UL 1449	Underwriters laboratories - standard for surge protective devices
UL	UL 360	Underwriters laboratories - standard for liquid-tight flexible metal conduit
UL	UL 5	Underwriters laboratories - standard for surface metal raceways and fittings
UL	UL 514B	Underwriters laboratories - conduit, tubing, and cable fittings
UL	UL 6	Underwriters laboratories - electrical rigid metal conduit - steel
UL	UL 797	Underwriters laboratories - electrical metallic tubing - steel
UL	UL 857	Underwriters laboratories - busways
UL	UL 96	Underwriters laboratories - lightning protection components.
UL	UL 2024	Underwriters laboratories - standard for cable routing assemblies and communications raceways
UL	UL 467	Underwriters laboratories - grounding and bonding equipment
UL	UL 486A	Underwriters laboratories - wire connections and soldering lugs for use with copper conductors
UL	UL 510	Underwriters laboratories - standard for polyvinyl chloride, polyethylene and rubber insulating tape
UL	UL 98	Underwriters laboratories - enclosed and dead-front switches
BSI	BS 7430	Code of practice for protective earthing of electrical installations
BSI	BS 215-1	Specification for Aluminium conductors and Aluminium conductors, steel-reinforced for overhead power transmission. Aluminium stranded conductors
BSI	BS 215-2	Specification for Aluminium conductors and Aluminium conductors, steel-reinforced for overhead power transmission. Aluminium conductors, steel-reinforced
BSI	BS 7655-10.1	Specification for insulating and sheathing materials for cables. Polyethylene sheathing compounds. Thermoplastic medium density polyethylene (MDPE) sheathing compound
BSI	BS 7884	Specification for copper and copper-cadmium stranded conductors for overhead electric traction and power transmission systems
BSI	BS EN 1363-1	Fire resistance tests –part 1: general requirements
BSI	BS EN 50183	Conductors for overhead lines. Aluminium-magnesium-silicon alloy wires
CISPR	CISPR 11	International special committee on radio interference - industrial, scientific and medical equipment – radio-frequency disturbance characteristics – limits and methods of measurement.



GREEN-E	VERSION 2.8	Green-e energy national standard for renewable electricity products
IEC	IEC 60034	rotating electrical machines
IEC	IEC 60050-614	International electrotechnical vocabulary -part 614: generation, transmission and distribution of electricity – operation.
IEC	IEC 60050-826	International electrotechnical vocabulary –part 826: electrical installations.
IEC	IEC 60068-2-11	Basic environmental testing procedures –part 2-11: tests – test Ka: salt mist.
IEC	IEC 60085	Electrical insulation - thermal evaluation and designation
IEC	IEC 60099	Surge arresters
IEC	IEC 60512-5-1	Connectors for electronic equipment - tests and measurements - part 5-1: current-carrying capacity tests - test 5a: temperature rise
IEC	IEC 60512-5-2	Connectors for electronic equipment - tests and measurements - part 5-2: current-carrying capacity tests
IEC	IEC 60529	Degrees of protection provided by enclosures
IEC	IEC 60529	Degrees of protection provided by enclosures
IEC	IEC 60695-11-10	Fire hazard testing – part 11-10: test flames – 50W horizontal and vertical flame test methods.
IEC	IEC 60695-11-20	Fire hazard testing – part 11-20: test flames – 500W flame test methods.
IEC	IEC 60695-4	Fire hazard testing – part 4: terminology concerning fire tests for electrotechnical products.
IEC	IEC 60950-1	Information technology equipment – safety – part 1: general requirements.
IEC	IEC 60974-9	Arc welding equipment – part 9: installation and use.
IEC	IEC 61000-6-1	Electromagnetic compatibility (EMC) - part 6-1: generic std. - immunity standard for residential, commercial and light-industrial environments
IEC	IEC 61000-6-3	Electromagnetic compatibility (EMC) - part 6-3: generic std. - emission standard for residential, commercial and light-industrial environments
IEC	IEC 61089	Round wire concentric lay overhead electrical stranded conductors
IEC	IEC 61378	Converter transformers - part 1: transformers for industrial applications
IEC	IEC 61508	Functional safety of electrical/electronic/programmable electronic safety-related systems (E/E/PE, or E/E/PES))
IEC	IEC 61534 (ALL PARTS)	Powertrack systems.
IEC	IEC 62053-21	Electricity metering equipment (AC) - particular requirements - part 21: static meters for active energy (classes 1 and 2).
IEC	IEC 62262	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)
IEC	IEC 62395 (ALL PARTS)	Electrical resistance trace heating systems for industrial and commercial applications.
IEC	IEC 62444	Cable glands for electrical installations
IEC	IEC 62606	General requirements for arc fault detection devices.
IEC	IEC 81346-1	Industrial systems, installations and equipment and industrial products - structuring principles and reference designs - part 1: basic rules.
IEC	IEC GUIDE 117	Electrotechnical equipment - temperatures of touchable hot surfaces.
ISO	ISO 4190-2	Lift (us: elevator) installation — part 2: class iv lifts
ISO	ISO 7010	Graphical symbols – safety colors and safety signs – registered safety signs.
ISO	ISO 834 (ALL PARTS)	Fire resistance tests – elements of building construction.
ISO	ISO 8820 (ALL PARTS)	Road vehicles – fuse-links
ISO	ISO R65	Galvanized steel pipe
IEC	IEC 60034-30	Rotating electrical machines- Part 1.25 Efficiency classes of single-speed, three phase, cage induction motors (IE-code)



IEC	IEC 60079	(All parts) Explosive atmospheres - All parts
IEC	IEC 60331	(All parts) Tests for electric cables under fire conditions - Circuit integrity - Part 0.0416666666666667 Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up
IEC	IEC 60335-2-41	Household and similar electrical appliances- Safety-Part 2-41; Requirements for pumps.
IEC	IEC 60335-2-71	Household and similar electrical appliances-Safety- Part2-71:Particular requirements for flexible sheet heating elements for room heating.
IEC	IEC 60445	Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system.
IEC	IEC 60447	Basic and safety principles for man-machine interface, marking and identification - Actuating principles
IEC	IEC 60479-1	Effects of current on human beings and livestock - Part 0.0416666666666667 General aspects
IEC	IEC 60479-2	Effects of current on human beings and livestock - Part 0.0833333333333333 Special aspects
IEC	IEC 60519	(All parts) Safety in installations for electro-heating and electromagnetic processing.
IEC	IEC 60529	listed twice
IEC	IEC 60670	(All parts) Boxes and enclosures for electrical accessories for household and similar fixed electrical installations.
IEC	IEC 60721-3-0	Classification of environmental conditions- Part 0.125 Classification of groups of environmental parameters and their severities- Introduction
IEC	IEC 60721-3-3	Classification of environmental conditions- Part 3-3: Classification of groups of environmental parameters and their severities- Stationary use at weather-protected locations
IEC	IEC 60721-3-4	Classification of environmental conditions- Part 0.125 Classification of groups of environmental parameters and their severities- Section 0.166666666666667 Stationary use at non-weather-protected locations
IEC	IEC 60800	Heating cables with a rated voltage of 300/500V for comfort heating and prevention of ice formation.
IEC	IEC 60831	(All parts) Shunt Power capacitors of the self-heating type for ac systems and having a rated voltage up to and including 1000V
IEC	IEC 60884-1	Plugs and socket-outlets for household and similar purposes - Part1: General requirements
IEC	IEC 60896	(All parts) Stationary Lead-Acid batteries
IEC	IEC 60898	(All parts) Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations
IEC	IEC 60947	(All parts) All parts included; other sections not required
IEC	IEC 61000	(All parts) Electromagnetic compatibility (EMC)
IEC	IEC 61008-1	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)-Part-1:General rules
IEC	IEC 61009	(All parts) Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs).
IEC	IEC 61048	Auxiliaries for lamps - Capacitors for use in tubular fluorescent and other discharge lamp circuits - General and safety requirements
IEC	Transformers for	tubular discharge lamps having a no-load output voltage exceeding 1000 V (generally called neon-transformers). General and safety requirements
IEC	IEC 61050	Transformers for tubular discharge lamps having a no-load output voltage exceeding 1000 V (generally called neon-transformers). General and safety requirements



IEC	IEC 6108	(All parts) Cable trunking systems and cable ducting systems for electrical installations - Part 0.041666666666667 General requirements
IEC	IEC 61098	Radiation protection instrumentation - Installed personnel surface contamination monitoring assemblies
IEC	IEC 61200-52	Electrical installation guide - Part 2.166666666666667 Selection and erection of electrical equipment - Wiring systems
IEC	IEC 61201	Use of conventional touch voltage limits - Application guide
IEC	IEC 61215	Crystalline Silicon photovoltaic (PV) modules - Design qualification and type approval - Part 0.041666666666667 Test requirements
IEC	IEC 61347-1	Lamp controlgear - Part 0.041666666666667 General and safety requirements
IEC	IEC 61347-2-10	Lamp controlgear - Part 2-10: Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes)
IEC	IEC 61347-2-13	Lamp controlgear - Part 2-13: Particular requirements for D.C. or A.C. supplied electronic controlgear for LED modules
IEC	IEC 61347-2-2	Lamp controlgear - Part 2-2: Particular requirements for D.C. or A.C. supplied electronic step-down convertors for filament lamps
IEC	IEC 61386	(All parts) Conduit systems for cable management
IEC	IEC 61439-1	Low-voltage switchgear and controlgear assemblies - Part 0.041666666666667 General rules
IEC	IEC 61439-2	Low-voltage switchgear and controlgear assemblies - Part 0.083333333333333 Power switchgear and controlgear assemblies
IEC	IEC 61439-4	Low-voltage switchgear and controlgear assemblies - Part 0.166666666666667 Particular requirements for assemblies for construction sites (ACS)
IEC	IEC 61508	(All parts) Functional safety of electrical/electronic/programmable electronic safety-related systems
IEC	IEC 61537	Cable management - Cable tray systems and cable ladder systems
IEC	IEC 61557-2	Electrical safety in low voltage distribution systems up to 1 0 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 0.083333333333333 Insulation resistance
IEC	IEC 61557-6	Electrical safety in low voltage distribution systems up to 1 0 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 0.25 Effectiveness of residual current
IEC	IEC 61557-8	Electrical safety in low voltage distribution systems up to 1 0 V A.C. and 1 500 V D.C. - Equipment for testing, measuring or monitoring of protective measures - Part 0.333333333333333 Insulation monitoring devices for
IEC	IEC 61557-9	Electrical safety in low voltage distribution systems up to 1 0 V A.C. and 1 500 V D.C. - Equipment for testing, measuring or monitoring of protective measures - Part 0.375 Equipment for insulation fault
IEC	IEC 61557-12	Electrical safety in low voltage distribution systems up to 1 0 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 0.5 Power metering and monitoring
IEC	IEC 61921	Power capacitors - Low-voltage power factor correction banks
IEC	IEC 61643	(All parts) Low-voltage surge protective devices
IEC	IEC 61995	(All parts) Devices for the connection of luminaires for household and similar purposes
IEC	IEC 62020	Electrical accessories - Residual current monitors (RCMs)
IEC	IEC 62040	Uninterruptible power systems (UPS)



IEC	IEC 62053-22	Electricity metering equipment - Particular requirements - Part 0.916666666666667 Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)
IEC	IEC 62053-23	Electricity metering equipment - Particular requirements - Part 0.958333333333333 Static meters for reactive energy (classes 2 and 3)
IEC	IEC 62305	(All parts) Protection against lightning - All parts
IEC	IEC 62423	Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses
IEC	IEC 62440	Electric cables with a rated voltage not exceeding 450/750 V - Guide to use
CISPR	CISPR 12	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers
CISPR	CISPR 32:2015/AMD1 :2019	Amendment 1 - Electromagnetic compatibility of multimedia equipment - Emission requirements
CISPR	CISPR 14	(All parts) Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus
CISPR	CISPR 15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
CISPR	CISPR 32:2015/AMD1 :2019	Amendment 1 - Electromagnetic compatibility of multimedia equipment - Emission requirements
GSO	GSO 1899	GCC Standard voltages and frequencies for AC transmission and distribution systems
SASO	SASO 2203	Plugs and socket-outlets for household and similar purposed-safety requirements and test methods 250V/13A
SASO	SASO 2204	Plugs and socket-outlets for household and similar general uses 127V
EN	EN 50107-2	Signs and luminous-discharge-tube installations operating from a no-load rated output voltage exceeding 1 kV but not exceeding 10 kV. Requirements for earth-leakage and open-circuit protective devices
EN	EN 50214	Flat polyvinyl chloride sheathed flexible cables
ISO	ISO 8528-12	Reciprocating internal combustion engine driven alternating current generating sets — Part 0.5 Emergency power supply to safety services
ISO	ISO 11446	(All parts) Road vehicles — Connectors for the electrical connection of towing and towed vehicles
ISO	ISO 1182	Reaction to fire tests for products — Non-combustibility test
ISO	ISO 1716	Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)
ISO	ISO 1724	road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage
ISO	ISO 30061	Emergency lighting
ISO	ISO 3732	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage
ISO	ISO 50001	Energy Management Systems
IEC	IEC 60617	Graphical Symbols for Diagrams
IEC	IEC 60255-1	Measuring relays and protection equipment - Part 0.041666666666667 Common requirements
IEC	IEC 60099-4	Surge arresters - Part 0.166666666666667 Metal-oxide surge arresters without gaps for A.C. systems
IEC	IEC 60282-1	High-voltage fuses - Part 0.041666666666667 Current-limiting fuses



IEC	IEEE 693	IEEE Recommended Practice for Seismic Design of Substations
	IEC 62271-1	High-voltage switchgear and controlgear - part 0.041666666666667 common specifications for alternating current switchgear and controlgear
IEC	IEC 62271-105	High-voltage switchgear and controlgear - Part 4.375 Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV
IEC	IEC 62271-106	High-voltage switchgear and controlgear - Part 4.416666666666667 Alternating current contactors, contactor-based controllers and motor-starters
CENELEC	CENELEC EN50090	Home and Building Electronic Systems
EN	EN 13321-1	Open data communication in building automation, controls and building management - Home and building electronic system - Part 0.041666666666667 Product and system requirements
EN	EN 13321-2	Open Data Communication in Building Automation, Controls and Building Management - Home and Building Electronic Systems - Part 2
ANSI/ASHRAE	ANSI/ASHRAE E 135	Standard 135-2020 -- BACnet -- A Data Communication Protocol for Building Automation and Control Networks (ANSI Approved)
IEC	IEC 62561	(Part 1 – 7) Lightning protection system components (LPSC) - Part 44203
IEC	IEC 62054-21	Electricity metering (A.C.) - Tariff and load control - Part 0.875 Particular requirements for time switches
EN	EN 50470-1	Electricity metering equipment (A.C.) General requirements, tests and test conditions. Metering equipment (class indexes A, B and C)
EN	EN 50470-3	Electricity metering equipment (A.C.) Particular requirements. Static meters for active energy (class indexes A, B and C)
IEC	IEC/TR 60616	Terminal and tapping markings for power transformers
IEC	IEC 60214-1	Tap-changers - Part 0.041666666666667 Performance requirements and test methods
IEC	IEC 61243-5	Live working - Voltage detectors - Part 0.208333333333333 Voltage detecting systems (VDS)
IEC	ISO 3864	Graphical symbols — Safety colours and safety signs
	IEC 61869-2	Instrument transformers - Part 0.083333333333333 Additional requirements for current transformers
IEC	IEC 61869-3	Instrument transformers - Part 0.125 Additional requirements for inductive voltage transformers
IEC	IEC 61869-11	Instrument transformers - Part 0.458333333333333 Additional requirements for low power passive voltage transformers
IEC	IEC 61010	Safety requirements for electrical equipment for measurement, control, and laboratory use
IEC	ANSI/UL 508	Standard for Industrial Control Equipment
	IEC TR	61641 Enclosed low-voltage switchgear and controlgear assemblies - Guide for testing under conditions of arcing due to internal fault
BS	BS 546	Specification. Two-pole and earthing-pin plugs, socket-outlets and socket-outlet adaptors
BS	BS 1363-2	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A switched and unswitched socket-outlets
BS	BS 1363-4	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A fused connection units switched and unswitched
UL	UL 746	Standard for Polymeric Materials - Use in Electrical Equipment Evaluations
VD	VDE0108	Emergency escape lighting systems
IEC	IEC 60143-3	Series capacitors for power systems - Part 0.125 Internal fuses



12.2.2 High Voltage

ORG.	DESG.	TITLE
ANSI	ANSI C37.11	Requirements for electrical control for ac high-voltage circuit breakers rated on a symmetrical current basis or a total current basis; out of print.
ANSI	ANSI C37.32	Standard for high voltage switches, bus supports, and accessories schedules of preferred ratings, construction guidelines, and specifications
IEEE	IEEE 404	Standard for extruded and laminated dielectric shielded cable joints rated 2.5 KV to 500 KV
IEEE	IEEE C37.04	Standard rating structure for ac high-voltage circuit breakers rated on a symmetrical current basis.
IEEE	IEEE C37.06	American national standard for switchgear - ac high-voltage circuit breakers rated on a symmetrical current basis - preferred ratings and related required capabilities.
NEMA	NEMA C29.2	National electrical manufacturers association - insulators - wet process porcelain and toughened glass - transmission suspension type
NEMA	NEMA C29.7	National electrical manufacturers association - American national standard for wet-process porcelain insulators-high-voltage line-post type
NEMA	NEMA C29.3	National electrical manufacturers association - American national standard for wet-process porcelain insulators - spool type
NEMA	NEMA C29.4	National electrical manufacturers association - American national standard for wet-process porcelain insulators - strain type
IEC	IEC 60071-5:2014	Insulation co-ordination - part 5: procedures for high-voltage direct current (HVDC) converter stations
IEC	IEC 60633:2019	High-voltage direct current (HVDC) transmission - vocabulary
IEC	IEC 60700-1:2015	Thyristor valves for high voltage direct current (HVDC) power transmission - part 1: electrical testing
IEC	IEC 60700-2:2016	Thyristor valves for high voltage direct current (HVDC) power transmission - part 2: terminology
IEC	IEC 61803:2020	Determination of power losses in high-voltage direct current (HVDC) converter stations with line-commutated converters
IEC	IEC 61975:2010+A MD1:2016	High-voltage direct current (HVDC) installations - system tests
IEC	IEC 62501:2009+A MD1:2014+AM D2:2017	Voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) power transmission - electrical testing
IEC	IEC 62747:2014+A MD1:2019	Terminology for voltage-sourced converters (VSC) for high-voltage direct current (HVDC) systems
IEC	IEC 62751-1:2014+AMD1: 2018	Power losses in voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) systems - part 1: general requirements
IEC	IEC 62751-2:2014+AMD1: 2019	Power losses in voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) systems - part 2: modular multilevel converters



IEC	IEC 62895:2017	High voltage direct current (HVDC) power transmission - cables with extruded insulation and their accessories for rated voltages up to 320 KV for land applications - test methods and requirements
IEC	IEC TR 60919-1:2020	Performance of high-voltage direct current (HVDC) systems with line-commutated converters - part 1: steady-state conditions
IEC	IEC TR 60919-2:2008+AMD1:2015+AMD2:2020	Performance of high-voltage direct current (HVDC) systems with line-commutated converters - part 2: faults and switching
IEC	IEC TR 60919-3:2009+AMD1:2016	Performance of high-voltage direct current (HVDC) systems with line-commutated converters - part 3: dynamic conditions
IEC	IEC TR 62001-1:2016	High-voltage direct current (HVDC) systems - guidance to the specification and design evaluation of ac filters - part 1: overview
IEC	IEC TR 62001-2:2016	High-voltage direct current (HVDC) systems - guidance to the specification and design evaluation of ac filters - part 2: performance
IEC	IEC TR 62001-3:2016	High-voltage direct current (HVDC) systems - guidance to the specification and design evaluation of ac filters - part 3: modelling
IEC	IEC TR 62001-4:2016	High-voltage direct current (HVDC) systems - guidance to the specification and design evaluation of ac filters - part 4: equipment
IEC	IEC TR 62543:2011+AMD1:2013+AMD2:2017	High-voltage direct current (HVDC) power transmission using voltage sourced converters (VSC)
IEC	IEC TR 62544:2011+AMD1:2016+AMD2:2020	High-voltage direct current (HVDC) systems - application of active filters
IEC	IEC TR 62672:2018	Reliability and availability evaluation of HVDC systems
IEC	IEC TR 62681:2014	Electromagnetic performance of high voltage direct current (HVDC) overhead transmission lines
IEC	IEC TR 62757:2015+AMD1:2019	Fire prevention measures on converters for high-voltage direct current (HVDC) systems, static var compensators (SVC) and flexible ac transmission systems (FACTS) and their valve halls
IEC	IEC TR 62978:2017	HVDC installations - guidelines on asset management
IEC	IEC TR 63065:2017	Guidelines for operation and maintenance of line commutated converter (ICC) HVDC converter station
IEC	IEC TR 63127:2019	Guideline for the system design of HVDC converter stations with line-commutated converters
IEC	IEC TR 63179-1:2020	Guideline for planning of HVDC systems - part 1: HVDC systems with line-commutated converters
IEC	IEC TS 61973:2012+AMD1:2019	High Voltage Direct Current (HVDC) substation audible noise
IEC	IEC TS 62344:2013	Design of earth electrode stations for high-voltage direct current (HVDC) links - general guidelines



IEC	IEC TS 63014-1:2018	High voltage direct current (HVDC) power transmission - system requirements for dc-side equipment - part 1: using line-commutated converters
IEC	IEC 60071	insulation co-ordination - all parts
IEC	IEC 602271-102	high-voltage switchgear and control gear - part 102: alternating current disconnectors and earthing switches
IEC	IEC 60376	specification of technical grade Sulphur hexafluoride (SF6) and complementary gases to be used in its mixtures for use in electrical equipment
IEC	IEC 62271-1	high-voltage switchgear and control gear - part 1: common specifications for alternating current switchgear and control gear
IEC	IEC 62271-100	high-voltage switchgear and control gear - part 100: alternating-current circuit-breakers
IEC	IEC 62271-102	high-voltage switchgear and control gear - part 102: alternating current disconnectors and earthing switches
IEC	IEC 62271-103	high-voltage switchgear and control gear - part 103: switches for rated voltages above 1 KV up to and including 52 KV
IEC	IEC 62271-200	high-voltage switchgear and control gear - part 200: ac metal-enclosed switchgear and control gear for rated voltages above 1 KV and up to and including 52 KV
IEC	IEC 62271-202	high-voltage switchgear and control gear - part 202: high-voltage/ low-voltage prefabricated substation

12.2.3 Medium Voltage

ORG.	DESG.	TITLE
IEEE	IEEE 519	Recommended practice and requirements for harmonic control in electric power systems
IEEE	IEEE C37.20.2	Standard for metal-clad and station-type cubicle switchgear.
IEEE	IEEE C37.20.3	Standard for metal-enclosed interrupter switchgear.
IEEE	IEEE C37.60	International standard - high-voltage switchgear and control gear - part 111: automatic circuit reclosers and fault interrupters for alternating current systems up to 38 KV
IEEE	IEEE C57.12.00	Standard general requirements for liquid-immersed distribution, power, and regulating transformers
IEEE	IEEE C57.12.01	Standard general requirements for dry-type distribution and power transformers including those with solid cast and/or resin-encapsulated windings.
IEEE	IEEE C57.12.55	Conformance standard for dry-type transformers used in unit installations, including unit substations.
IEEE	IEEE C57.12.91	Test code for dry-type distribution and power transformers.
IEEE	IEEE C57.32	Guide for installation of liquid-immersed power transformers
IEEE	IEEE C57.94	Recommended practice for installation, application, operation, and maintenance of dry-type general purpose distribution and power transformers.
IEEE	IEEE C37.42	Standard specifications for high-voltage (>1000 V) fuses and accessories



IEEE	IEEE C62.11	Standard for metal-oxide surge arresters for ac power circuits (>1 kV)
NEMA	NEMA C12.11	National electrical manufacturers association - instrument transformers for revenue metering 10 kV BIL through 350 kV BIL (0.6 kV NSV through 69 kV NSV)
NEMA	NEMA ICS 3	National electrical manufacturers association - medium voltage controllers rated 2,001 to 7,200 Volts AC
NEMA	NEMA ST 20	National electrical manufacturers association - dry type transformers for general applications
NEMA	NEMA TP 1	National electrical manufacturers association - transformers
NEMA	NEMA WC 71	National electrical manufacturers association - standard for non-shielded cables rated 2,001-5,000 V for use in the distribution of electric energy
NEMA	NEMA WC 74	National electrical manufacturers association -5-46 kV shielded power cable for use in the transmission and distribution of electric energy
UL	UL 347	Underwriters laboratories - medium-voltage ac contactors, controllers, and control centers
UL	UL 347A	Underwriters laboratories - standard for medium voltage power conversion equipment
UL	UL 1072	Underwriters laboratories - standard for medium-voltage power cables
UL	UL 1561	Underwriters laboratories - standard for dry-type general purpose and power transformers
BSI	BS 6622	- Electric cables. Armoured cables with thermosetting insulation for rated voltages from 3.8/6.6 kV to 19/33 kV. Requirements and test methods
BSI	BS EN 50181	- Plug-in type bushings above 1 kV up to 52 kV and from 250 A to 2,50 kA for equipment other than liquid filled transformers
IEC	IEC 60076	Power transformers
IEC	IEC 60076-10	Power transformers - part 10: determination of sound levels
IEC	IEC 60076-11	Power transformers - part 11: dry-type transformers
IEC	IEC 60076-12	Power transformers - part 12: loading guide for dry-type power transformers
IEC	IEC 60076-20	Power transformers – part 20: energy efficiency for transformers 36kv and below
IEC	IEC 60076-6	Power transformers - part 6: reactors
IEC	IEC 60076-7	Power transformers - part 7: loading guide for mineral-oil-immersed power transformers
IEC	IEC 60137	Insulated bushings for alternating voltages above 1000 V
IEC	IEC 60296	Fluids for electrotechnical applications - unused mineral insulating oils for transformers and switchgear
IEC	IEC 60724	Short-circuit temperature limits of electric cables with rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)
IEC	IEC 60870 (all parts)	Telecontrol equipment and systems - all parts



IEC	IEC 61131 (all parts)	Programmable controllers - all parts
IEC	IEC 61238-1	Compression and mechanical connectors for power cables for rated voltages up to 30 kV (Um = 36 kV) - part 1: test methods and requirements
IEC	IEC 61558-2-1	Safety of power transformers, power supply units and similar – part 2-1: particular requirements for separating transformers for general use.
IEC	IEC 61558-2-4	Safety of power transformers, reactors, power supply units and similar products for supply voltages up to 1100V – part 2-4: particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers.
IEC	IEC 61558-2-5	Safety of power transformers, power supply units and similar – part 2-5: particular requirements for shaver transformers and shaver supply units.
IEC	IEC 61850 (all parts)	Communication networks and systems for power utility automation - all parts
IEC	IEC 61936-1	Power installations exceeding 1 KV AC – part 1: common rules.

12.2.4 Low Voltage

ORG.	DESG.	TITLE
ANSI	ANSI C12.1	Standard code for electricity metering.
ANSI	ANSI C80.1	Standard for electrical rigid steel conduit (ERSC).
ANSI	ANSI C80.3	Standard for steel electrical metallic tubing (EMT).
ANSI	ANSI C80.5	American national standard for electrical rigid aluminum conduit (ERAC).
ANSI	ANSI C80.6	Standard for electrical intermediate metal conduit (EIMC).
IEEE	IEEE 1015	The blue book - low-voltage circuit breakers
IEEE	IEEE 241	The gray book - commercial buildings
IEEE	IEEE 485	Recommended practice for sizing lead-acid batteries for stationary applications
IEEE	IEEE 602	The white book - health care facilities
IEEE	IEEE 902	The yellow book - maintenance, operations, and safety
IEEE	IEEE C37.20.1	Standard for metal-enclosed low-voltage power circuit breaker switchgear.
IEEE	IEEE C57.13	Standard requirements for instrument transformers.
IEEE	IEEE C62.41.2	Recommended practice on characterization of surges in low-voltage (1000 V and less) ac power circuits
IEEE	IEEE C62.41.1	Guide on the surge environment in low-voltage (1000 v and less) ac power circuits
NEMA	NEMA 250	National electrical manufacturers association - enclosures for electrical equipment (1000 volts maximum); national electrical
NEMA	NEMA BU 1	National electrical manufacturers association - busways
NEMA	NEMA BU 1.1	National electrical manufacturers association - general instructions for handling, installation, operation and maintenance of busway rated 600 V or less



NEMA	NEMA BU 1.2	National electrical manufacturers association - application information for busway rated 600 V or less
NEMA	NEMA C12.7	National electrical manufacturers association - requirements for watt-hour meter sockets
NEMA	NEMA FG 1	National electrical manufacturers association - fiberglass cable tray systems.
NEMA	NEMA ICS 18	National electrical manufacturers association - motor control centers
NEMA	NEMA ICS 2	National electrical manufacturers association - controllers, contactors and overload relays rated 600 V
NEMA	NEMA OS 1	National electrical manufacturers association - sheet-steel outlet boxes, device boxes, covers, and box supports.
NEMA	NEMA OS 2	National electrical manufacturers association - nonmetallic outlet boxes, device boxes, covers and box supports.
NEMA	NEMA PE 1	National electrical manufacturers association - uninterruptible power systems (UPS) - specification and performance verification
NEMA	NEMA TC 13	National electrical manufacturers association - polyvinyl chloride (PVC) fittings for use with rigid PVC conduit and tubing.
NEMA	NEMA TC 2	National electrical manufacturers association - polyvinyl-chloride (PVC) externally coated galvanized rigid steel conduit and intermediate metal conduit.
NEMA	NEMA TC 3	National electrical manufacturers association - electrical polyvinyl chloride (PVC) conduit.
NEMA	NEMA KS 1	National electrical manufacturers association - heavy duty enclosed and dead-front switches (600 volts maximum)
NEMA	NEMA WC 70	National electrical manufacturers association - power cables rated 2000 volts or less for the distribution of electrical energy
NESC	NESC CODE	National electrical safety code
UL	UL 1703	Underwriters laboratories - standard for flat-plate photovoltaic modules and panels
UL	UL 486A-486B	Underwriters laboratories - wire connectors
UL	UL 1008	Underwriters laboratories - transfer switch equipment
BSI	BS 13201	Road lighting.
BSI	BS 4607-1	Non-metallic conduits and fittings for electrical installations. Specification for fittings and components of insulating material
BSI	BS 4662	Boxes for flush mounting of electrical accessories. Requirements, test methods and dimensions
BSI	BS 5266-1	Emergency lighting. Code of practice for the emergency lighting of premises
BSI	BS 5489-1	Code of practice for the design of road lighting
BSI	BS 5655-11	Lifts and service lifts. Code of practice for the undertaking of modifications to existing electric lifts
BSI	BS 5655-12	Lifts and service lifts. Code of practice for the undertaking of modifications to existing hydraulic lifts
BSI	BS 5656-1	Safety rules for the construction and installation of escalators and moving walks. Examination and test of new escalators before putting into service.



BSI	BS 6387	Test method for resistance to fire of cables required to maintain circuit integrity under fire conditions
BSI	BS 7671	Requirements for electrical installations (bs 7671 IET wiring regulations).
BSI	BS 7846	Electric cables. Thermosetting insulated, armored, fire-resistant cables of rated voltage 600/1000 v, having low emission of smoke and corrosive gases when affected by fire.
BSI	BS 8434-2	Methods of test for assessment of the fire integrity of electric cables. Test for unprotected small cables for use in emergency circuits. BS EN 50200 with a 930° flame and with water spray
BSI	BS 8486-1	Examination and test of new lifts before putting into service. Specification for means of determining compliance with BS EN 81. Electric lifts
BSI	BS 8486-2	Examination and test of new lifts before putting into service. Specification for means of determining compliance with BS EN 81. Hydraulic lifts
BSI	BS 8519	Selection and installation of fire-resistant power and control cable systems for life safety and fire-fighting applications. Code of practice
BSI	BS 88-2	Low-voltage fuses. Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application). Examples of standardized systems of fuses A to K
BSI	BS EN 115-1	Safety of escalators and moving walks. Construction and installation
BSI	BS EN 1838	Lighting applications. Emergency lighting
BSI	BS EN 40	Lighting columns
BSI	BS EN 50085-1	Cable trunking systems and cable ducting systems for electrical installations - part 1: general requirements
BSI	BS EN 50085-2-1	Cable trunking systems and cable ducting systems for electrical installations. Cable trunking systems and cable ducting systems intended for mounting on walls and ceilings
BSI	BS EN 50171	Central power supply systems
BSI	BS EN 50172	Emergency escape lighting systems
BSI	BS EN 50200	Method of test for resistance to fire of unprotected small cables for use in emergency circuits
BSI	BS EN 50272-2	Safety requirements for secondary batteries and battery installations. Stationary batteries
BSI	BS EN 50363	Insulating, sheathing and covering materials for low-voltage energy cables. General introduction
BSI	BS EN 50363-5	Insulating, sheathing and covering materials for low voltage energy cables. Halogen-free, cross-linked insulating compounds
BSI	BS EN 50525-1	Electric cables. Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). General requirements
BSI	BS EN 50525-2-31	Electric cables. Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Single core non-sheathed cables with thermoplastic pvc insulation



BSI	BS EN 50525-3-41	Electric cables. Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables with special fire performance. Single core non-sheathed cables with halogen-free crosslinked insulation, and low emission of smoke
BSI	BS EN 81-20	Safety rules for the construction and installation of lifts. Lifts for the transport of persons and goods. Passenger and goods passenger lifts
BSI	BS EN 81-28	Safety rules for the construction and installation of lifts. Lifts for the transport of persons and goods. Remote alarm on passenger and goods passenger lifts
BSI	BS EN 81-3	Safety rules for the construction and installation of lifts. Electric and hydraulic service lifts
BSI	BS EN 81-50	Safety rules for the construction and installation of lifts. Examinations and tests. Design rules, calculations, examinations and tests of lift components
BSI	BS EN 81-58	Safety rules for the construction and installation of lifts. Examination and tests. Landing doors fire resistance test
BSI	BS EN 81-70	Safety rules for the construction and installation of lifts. Particular applications for passenger and goods passenger lift. Accessibility to lifts for persons including persons with disability
BSI	BS EN 81-72	Safety rules for the construction and installation of lifts. Particular applications for passenger and goods passenger lifts. Firefighters lifts
CIBSE	CIBSE DESIGN GUIDE	Chartered institution of building services engineers -the sll code for lighting
CIE	CIE 88	International commission on illumination - guide for the lighting of road tunnels and underpasses
CIE	CIE 115	International commission on illumination - lighting of roads for motor and pedestrian traffic
CIE	CIE 121	International commission on illumination - the photometry & goniophotometry of luminaires
CIE	CIE 140	International commission on illumination - road lighting calculations, 2nd edition
CIE	CIE 34	International commission on illumination - road lighting lantern and installation data - photometrics, classification and performance
CIE	CIE 40	International commission on illumination - calculations for interior lighting: basic method
CIE	CIE 43	International commission on illumination - photometry of floodlights
CIE	CIE 52	International commission on illumination - calculations for interior lighting: applied method
CIE	CIE 66	International commission on illumination - road surfaces and lighting: joint technical report CIE/PIARC
CIE	CIE 83	International commission on illumination - guide for the lighting of sports events for colour television and film systems
IEC	ICAO TM-15-2011	Luminaire classification system for outdoor luminaires



IEC	IEC 60947	Low voltage switchgear and control gear
IEC	IEC 60044-1	Instrument transformers - part 1: current transformers
IEC	IEC 60051	Direct acting indicating analogue electrical measuring instruments and their accessories - part 1: definitions and general requirements common to all parts
IEC	IEC 60068-2-68	Environmental testing - part 2-68: tests - test I: dust and sand
IEC	IEC 60146	Monocrystalline semiconductor rectifier cells, stacks, assemblies and equipment's
IEC	IEC 60255-26	Measuring relays and protection equipment –part 26: electromagnetic compatibility requirements.
IEC	IEC 60269 (ALL PARTS)	Low-voltage fuses (all parts)
IEC	IEC 60320	Appliance couplers for household and similar general purposes - part 1: general requirements
IEC	IEC 60331	Tests for electric cables under fire conditions - circuit integrity
IEC	IEC 60331-21	Tests for electric cables under fire conditions - circuit integrity - part 21: procedures and requirements - cables of rated voltage up to and including 0,6/1,0 kV
IEC	IEC 60332 (ALL PARTS)	Tests on electric and optical fibre cables under fire conditions (all parts)
IEC	IEC 60335-1	Household and similar electrical appliances – safety – part 1: general requirements.
IEC	IEC 60335-2-105	Household and similar electrical appliances –safety – part 2-105: particular requirements for multifunctional shower cabinets.
IEC	IEC 60335-2-29	Household and similar electrical appliances – safety – part 2-29: particular requirements for battery chargers.
IEC	IEC 60335-2-53	Household and similar electrical appliances – safety – part 2-53: particular requirements for sauna heating appliances and infrared cabins.
IEC	IEC 60335-2-96	Household and similar electrical appliances – safety – part 2-96: particular requirements for flexible sheet heating elements for room heating.
IEC	IEC 60360	Standard method of measurement of lamp cap temperature rise
IEC	IEC 60364-1	Low-voltage electrical installations –part 1: fundamental principles, assessment of general characteristics, definitions
IEC	IEC 60364-4-41	Low voltage electrical installations - part 4-41: protection for safety - protection against electric shock
IEC	IEC 60364-5-51	Electrical installations of buildings - part 5-51: selection and erection of electrical equipment - common rules
IEC	IEC 60364-5-53	Low-voltage electrical installations - part 5-53: selection and erection of electrical equipment - devices for protection for safety, isolation, switching, control and monitoring
IEC	IEC 60364-5-55	Electrical installations of buildings - part 5-55: selection and erection of electrical equipment - other equipment
IEC	IEC 60364-6	Low voltage electrical installations - part 6: verification



IEC	IEC 60364-7-722	Low-voltage electrical installations – part 7-722: requirements for special installations or locations – supplies for electric vehicles
IEC	IEC 60570	Electrical supply track systems for luminaires.
IEC	IEC 60598 (ALL PARTS)	Luminaires - (all parts)
IEC	IEC 60623	Secondary cells and batteries containing alkaline or other non-acid electrolytes – vented nickel-cadmium prismatic rechargeable single cells.
IEC	IEC 60669 (ALL PARTS)	Switches for household and similar fixed electrical installations.
IEC	IEC 60754-1	Test on gases evolved during combustion of materials from cables - part 1: determination of the halogen acid gas content
IEC	IEC 60754-2	Test on gases evolved during combustion of materials from cables - part 2: determination of acidity (by PH measurement) and conductivity
IEC	IEC 60896	Stationary lead-acid batter
IEC	IEC 60947 (ALL PARTS)	Low-voltage switchgear and control gear.
IEC	IEC 60947-3	Low-voltage switchgear and control gear - part 3: switches, disconnectors, witch-disconnectors and fuse-combination units
IEC	IEC 60947-6-1	Low-voltage switchgear and control gear - part 6-1: multiple function equipment - transfer switching equipment
IEC	IEC 60998 (ALL PARTS)	Connecting devices for low-voltage circuits for household and similar purposes.
IEC	IEC 61000-3-2	Electromagnetic compatibility (EMC) - part 3-2: limits - limits for harmonic current emissions (equipment input current ≤ 16 a per phase)
IEC	IEC 61167	Metal halide lamps - performance specification
IEC	IEC 61347-1	Lamp controlgear - part 1: general and safety requirements
IEC	IEC 61347-2-10	Lamp controlgear – part 2-10: particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes).
IEC	IEC 61347-2-11	Particular requirements for miscellaneous electronic circuits used with luminaires
IEC	IEC 61347-2-13	Lamp controlgear - part 2-13: particular requirements for D.C. Or A.C. Supplied electronic controlgear for led modules
IEC	IEC 61347-2-2	Lamp controlgear – part 2-2: particular requirements for dc or ac supplied electronic step-down convertors for filament lamps.
IEC	IEC 61347-2-4	Lamp controlgear - part 2-4: particular requirements for D.C. Supplied electronic ballasts for general lighting
IEC	IEC 61439	Low-voltage switchgear and control gear assemblies
IEC	IEC 61439-1	Low-voltage switchgear and controlgear assemblec - part 1: general rules
IEC	IEC 61439-2	Low-voltage switchgear and control gear assemblies - part 2: power switchgear and control gear assemblies



IEC	IEC 61439-3	Low-voltage switchgear and control gear assemblies - part 3: distribution boards intended to be operated by ordinary persons (DBO)
IEC	IEC 61439-4	Low-voltage switchgear and control gear assemblies - part 4: particular requirements for assemblies for construction sites (ACS).
IEC	IEC 61439-5	Low-voltage switchgear and control gear assemblies - part 5: assemblies for power distribution in public networks
IEC	IEC 61439-6	Low-voltage switchgear and control gear assemblies - part 6: busbar trucking systems (Busways)
IEC	IEC 61537	Cable tray systems and cable ladder systems for cable management
IEC	IEC 61547	Equipment for general lighting purposes - EMC immunity requirements
IEC	IEC 61557-12	Electrical safety in low voltage distribution systems up to 1000v ac and 1500v dc – equipment for testing, measuring or monitoring of protective measures – part 12: performance measuring and monitoring devices (PMD).
IEC	IEC 61643	Low-voltage surge protective devices
IEC	IEC 61822	Electrical installations for lighting and beaconing of aerodromes – constant current regulators
IEC	IEC 61823	Electrical installations for lighting and beaconing of aerodromes - AGL series transformers
IEC	IEC 61995 (ALL PARTS)	Devices for the connection of luminaires for household and similar purposes.
IEC	IEC 62020	Electrical accessories – residual current monitors for household and similar uses (RCMS).
IEC	IEC 62031	LED modules for general lighting - safety specifications
IEC	IEC 62034	Automatic test systems for battery powered emergency escape lighting
IEC	IEC 62040-1	Uninterruptible power systems (UPS) – part 1: general and safety requirements for ups.
IEC	IEC 62040-2	Uninterruptible power systems (UPS) – part 2: electromagnetic compatibility (EMC) requirements.
IEC	IEC 62040-3	Uninterruptible power systems (UPS) – part 3: method of specifying the performance and test requirements.
IEC	IEC 62052-11	Electricity metering equipment (A.C.) - general requirements, tests and test conditions - part 11: metering equipment
IEC	IEC 62305	Protection against lightning - all parts
IEC	IEC 62384	DC or AC supplied electronic control gear for led modules - performance requirements
IEC	IEC 62423	Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses.
IEC	IEC 62440	Electric cables with a rated voltage not exceeding 450/750 V - guide to use.
IEC	IEC 62471	Photobiological safety of lamps and lamp systems



IEC	IEC 62561	Lightning protection system components (LPSC)
IEC	IEC TS 61827	Electrical installations for lighting and beaconing of aerodromes - characteristics of inset and elevated luminaires used on aerodromes and heliports
IET	IET CODE	Institution of engineering and technology - code of practice for electric vehicle charging equipment installation.
IET	IET CODE	Institution of engineering and technology - code of practice for electrical energy storage systems
ISO	ISO 30061	Emergency lighting.
ISO	ISO 3046 (ALL PARTS)	Reciprocating internal combustion engines - performance (All parts)
ISO	ISO 4190-1	Lift (elevator) installation — part 1: class i, ii, iii and vi lifts
ISO	ISO 4190-1	Lift (elevator) installation — part 1: class i, ii, iii and vi lifts
ISO	ISO 4190-2	Lift (us: elevator) installation — part 2: class iv lifts
ISO	ISO 8528 (ALL PARTS)	Reciprocating internal combustion engine driven alternating current generating sets (All parts)

12.2.5 Electric Vehicles

ORG.	DESG.	TITLE
BSI	BS EN 61851-22	Electric vehicle conductive charging system -part 22: ac electric vehicle charging station
BSI	BS EN 61851-23	Electric vehicle conductive charging system- part 23: dc electric vehicle charging station
BSI	BS EN 61851-24	Electric vehicle conductive charging system -part 24: digital communication between a D.C. EV charging station and an electric vehicle for control of D.C. Charging
BSI	BS EN 62196-1	Plugs, socket-outlets, vehicle connectors and vehicle inlets - conductive charging of electric vehicles-part 1: general requirements
BSI	BS EN 62196-2	Plugs, socket-outlets, vehicle connectors and vehicle inlets - conductive charging of electric vehicles-part 2: dimensional compatibility and interchangeability requirements for A.C. Pin and contact-tube accessories
BSI	BS EN 62196-3	Plugs, socket-outlets, vehicle connectors and vehicle inlets - conductive charging of electric vehicles-part 3: dimensional compatibility and interchangeability requirements for D.C. And A.C./D.C. Pin and contact-tube vehicle couplers

12.2.6 V&H Transportation

ORG.	DESG.	TITLE
BSI	BS EN 81-1	Safety rules for the construction and installation of lifts - electric lifts
BSI	BS EN 81-2	Safety rules for the construction and installation of lifts - hydraulic lifts
BSI	BS EN 115-1	Safety of escalators and moving walks - construction and installation
CIBSE	CIBSE DESIGN GUIDE D	Chartered Institution of Building Services Engineers - transportation systems in buildings



13 RENEWABLE ENERGY

13.1 Saudi Regulations

ORG.	DESG.	TITLE
MOE/ SEC	MOE/ SEC	MOE/ SEC regulations

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

13.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
UFC	UFC 3-440-01	Facility Scale Renewable Energy Systems
UFC	UFC 3-440-08	Utility Scale Renewable Energy Systems
GREEN-E	Version 2.8	Green-e energy national standard for renewable electricity products
ACI	ITG-9R-16	Report on Design of Concrete Wind Turbine Towers, Part 8
TIA	TR-14	Structural Standard for Communication and Small Wind Turbine Support Structures

13.3 Additional Complementary Standards, Manuals and Best Practice References

ORG.	DESG.	TITLE
BSI	BS EN 50380	Marking and documentation requirements for photovoltaic modules
BSI	BS EN 50530	Overall efficiency of grid connected photovoltaic inverters
BSI	BS EN 50548	Junction boxes for photovoltaic modules
BSI	BS EN 61400-1	Wind turbines
IEC	IEC 60269-6	Low-voltage fuses - part 6: supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
IEC	IEC 60364-7-712	Low voltage electrical installations - part 7-712: requirements for special installations or locations - solar photovoltaic (PV) power supply systems
IEC	IEC 61646	Thin-film terrestrial photovoltaic (PV) modules - design qualification and type approval
IEC	IEC 61701	Salt mist corrosion testing of photovoltaic (PV) modules
IEC	IEC 61724	Photovoltaic system performance - part 1: monitoring
IEC	IEC 61730	Photovoltaic (PV) module safety qualification
IEC	IEC 61730-1	Photovoltaic (PV) module safety qualification - part 1: requirements for construction
IEC	IEC 61730-2	Photovoltaic (PV) module safety qualification - part 2: requirements for testing
IEC	IEC 61853-1	Photovoltaic (PV) module performance testing and energy rating - part 1: irradiance and temperature performance measurements and power rating
IEC	IEC 62109	Safety of power converters for use in photovoltaic power systems
IEC	IEC 62109-1	Safety of power converters for use in photovoltaic power systems - part 1: general requirements



IEC	IEC 62109-2	Safety of power converters for use in photovoltaic power systems - part 2: particular requirements for inverters
IEC	IEC 62446	Photovoltaic (PV) systems - requirements for testing, documentation and maintenance
IEC	IEC 62446-1	Photovoltaic (PV) systems - requirements for testing, documentation and maintenance - part 1: grid connected systems - documentation, commissioning tests and inspection
IEC	IEC 62716	Photovoltaic (PV) modules - ammonia corrosion testing
IEC	IEC TS 62548	Photovoltaic (PV) arrays - design requirements
IEC	IEC TS 62804-1	Photovoltaic (PV) modules - test methods for the detection of potential-induced degradation - part 1: crystalline silicon



14 QUALITY MANAGEMENT

14.1 Saudi/ International Standards

The listed international standards are generally used for derivation of the SASO standards.

ORG.	DESG.	TITLE
ISO	ISO 10001	Quality management - customer satisfaction - guidelines for codes of conduct for organizations
ISO	ISO 10002	Quality management - customer satisfaction - guidelines for complaints handling in organizations
ISO	ISO 10003	Quality management - customer satisfaction - guidelines for dispute resolution external to organizations
ISO	ISO 10004	Quality management - customer satisfaction - guidelines for monitoring and measuring
ISO	ISO 10005	Quality management systems - guidelines for quality plans
ISO	ISO 10006	Quality management systems - guidelines for quality management in projects
ISO	ISO 10007	Quality management systems - guidelines for configuration management
ISO	ISO 10008	Quality management - customer satisfaction - guidelines for business-to-consumer electronic commerce transactions
ISO	ISO 10012	Measurement management systems - requirements for measurement processes and measuring equipment
ISO	ISO 10013	Guidelines for quality management system documentation
ISO	ISO 10014	Quality management - guidelines for realizing financial and economic benefits
ISO	ISO 10015	Quality management - guidelines for training
ISO	ISO 10017	Guidance on statistical techniques for ISO 9001:2000
ISO	ISO 10018	Quality management - guidelines on people involvement and competence
ISO	ISO 10019	Guidelines for the selection of quality management system consultants and use of their services
ISO	ISO 17025	General Requirements for the Competence of Testing and Calibration Laboratories
ISO	ISO 19011	Guidelines for auditing management systems
ISO	ISO 9000	Quality management systems - fundamentals and vocabulary
ISO	ISO 9001	Quality management systems - requirements
ISO	ISO 9002	Quality management systems - guidelines for the application
ISO	ISO 9004	Quality management - quality of an org. - guidance to achieve sustained success
ISO	ISO 41001	Facility management - management systems - requirements with guidance for use
ISO	ISO 41011	Facility management - vocabulary
ISO	ISO 41012	Facility management - guidance on strategic sourcing and the development of agreements
ISO	ISO 41013	Facility management - scope, key concepts and benefits
ISO	ISO 50001	Energy management
ISO	ISO 55001	Asset management, management systems requirements
ISO	ISO 14001	Environmental management systems requirements with guidance for use
ISO	ISO 14040	Environmental management - life cycle assessment - principles and framework
ISO	ISO 14046	Environmental management water footprint principles
ISO	ISO 18001	Health and safety management systems
ISO	ISO 24516-1	Guidelines for the management of assets of water supply and wastewater systems



ISO ISO 31000 Risk management - guidelines

15 SPORTS FACILITIES

15.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC MOMRA	SBC301-CC MOMRA Regulations	Saudi Building Code – Loading Ministry of Municipal and Rural Affairs - Regulations for Sport Facilities

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

15.2 Referenced international Codes and standards.

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

15.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated. Additionally, consider the following documents.

ORG.	DESG.	TITLE
FIBA	FIBA design guide	Fédération Internationale de Basketball Association - guide to basketball facilities
FIFA	FIFA design guide	Fédération Internationale de Football Association - technical recommendations and requirements
FIVB	FIVB design guide	Fédération Internationale de Volleyball- sports regulations
IHF	IHF design guide	International handball federation - recommendations and guidelines for the construction of handball playing hall
ITF	ITF design guide	International tennis federation - facilities design guide
ITTF	ITTF design guide	International table tennis federation - court and table dimensions
IESNA	IESNA - rp-6-01	Illuminating engineering society of north America - recommended practice for sports and recreational area lighting

15.4 Additional Supplementary Information

The following supplemental information can be referenced as a method for design. This is considered added information for the design of the buildings and process. In no way this is considered as a



replacement. Nor does this relieve the design from compliance with Saudi Building Codes or requirements. This also does not constitute a change to the contract. The designer must follow the NEOM process for any change implemented.

15.4.1 Planning

ORG.	DESG.	TITLE
WBDG	Tm 5-803-10	Planning and design of outdoor sports facilities
WBDG	UFC 4-750-02n	Design: outdoor sports and recreational facilities
WBDG	UFC 4-740-02	Fitness centers
WBDG	PBS-P100 2018	Facilities STD. For the public buildings service



16 WATERFRONT FACILITIES (COASTAL & MARINE)

16.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC301-CC	Saudi Building Code – Loading

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

16.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ACI	ACI PRC-357	Guide for the Design and Construction of Fixed Offshore Concrete Structures
ACI	ACI PRC-357.2	Report on Floating and Float-In Concrete Structures
ACI	ACI PRC-357.3	Guide for Design and Construction of Waterfront and Coastal Concrete Marine Structures
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures
ASCE	ASCE 24	Flood Resistant Design and Construction
ASCE	ASCE 61	Seismic Design of Piers and Wharves
ASCE	MOP 50	Planning and Design Guidelines for Small Craft Harbors
ASCE	MOP 129	Mooring of Ships to Piers and Wharves
ASCE	MOP 130	Waterfront Facilities Inspection and Assessment
NFPA	NFPA 307	Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves
OCIMF	OCIMF	OCIMF Mooring Equipment Guidelines (MEG4), 4th Edition, 2018
PIANC	PIANC WG 33	Guidelines for the Design of Fenders Systems, 2002
PIANC	PIANC WG 34	Seismic Design Guidelines for Port Structures, 2001
PIANC	PIANC Report No. 121 - 2014	Harbour Approach Channels - Design Guidelines
PIANC	PIANC Report No. 180 – 2015	Guidelines for Protecting Berthing Structures from Scour Caused by Ships
USACE	USACE EM 1110-2-1100	Coastal Engineering Manual, 2002
USACE	USACE EM 1110-2-1902	Slope Stability, 2003
USACE	USACE EM 1110-2-2504	Design of Sheet Pile Walls, 1994



USACE	USACE EM 1110-2-5025	Dredging and Dredged Material Management, 2015
OSHA	OSHA 1915.82	Occupational Safety and Health Standards for Shipyard Employment

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

16.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated. Additionally, consider the following documents

The following supplemental information can be referenced as a method for design. In no way this is considered as a replacement. Nor does this relieve the design from compliance with Saudi Building Codes or requirements. This also does not constitute a change to the contract. The designer must follow the NEOM process for any change implemented.

ORG.	DESG.	TITLE
WBDG	UFC 1-200-01	DoD Building Code (General Building Requirements)
WBDG	UFC 3-301-01	Structural Engineering
WBDG	UFC 4-150-02	Dockside Utilities for Ship Service
WBDG	UFC 4-150-07	Maintenance & Operation: Maintenance of Waterfront Facilities
WBDG	UFC 4-150-08	Inspection of Mooring Hardware
WBDG	UFC 4-151-10	General Criteria for Waterfront Construction
WBDG	UFC 4-152-01	Piers and Wharves
WBDG	UFC 4-152-07	Small Craft Berthing Facilities
WBDG	UFC 4-159-01N	Hyperbaric Facilities
WBDG	UFC 4-159-03	Moorings
WBDG	UFC 4-213-10	Graving Dry Docks
WBDG	UFC 4-213-12	Drydocking Facilities Characteristics
WBDG	EM 1110-2-1100	Coastal Engineering Manual



17 TRANSPORTATION FACILITIES

17.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC301-CC	Saudi Building Code – Loading
MOT	CIRCULAR NO. 57026/01	Ministry of Transportation - Updated Vehicular Live Load on Highway Structures (August 2015)
MOT	MOT Regulations	Ministry of Transportation - Highway Design Manual - Volume 3 - Structural Specifications (May 1992)
MOT	MOT Regulations	Ministry of Transportation, General Specifications for Road and Bridge Construction - 1998
MOMRA	MA 100-C-V1/1	MOMRA Bridges, Tunnels, Culverts and Pedestrian Bridges Specifications in Urban Areas Construction Specifications
GACA	GACA STD	General Authority of Civil Aviation STD
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for roadway geometric design
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for traffic safety engineering
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for design of parking
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for design review of roadway projects
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for the design of roadway structures
MOT	MOT Regulations	Ministry of Transportation, highway design manual volume 1 & 2
MOT	MOT Regulations	Ministry of Transportation, manual and uniform traffic control devices
AMANAH	AMANAH Regulations	Amanah trip generation manual
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide specifications for roads & roadway structures
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guide for the maintenance of roadway structures & pavement

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

17.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

17.3 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated. Additionally, consider the following documents.



17.3.1 Land Survey

ORG.	DESG.	TITLE
AASHTO	AASHTO GREEN BOOK 7TH EDITION	A policy on geometric design of highways and streets
FGDC	FGDC-STD-007 PART 3-1998	Federal geographic data committee - geospatial positioning accuracy standards, part 3: national standard for spatial data accuracy
FGDC	FGDC-STD-007 PART 4-2002	Federal geographic data committee - geospatial positioning accuracy std., part 4: std. for architecture, engineering, construction (a/e/c) and facility management
FGCC	FGCC 1984	Federal geodetic control committee - std. and specifications for geodetic control points
USACE	EM 1110-1.1003	US army corps of engineers, engineering and design, Navstar global positioning system surveying – engineer manual
USACE	EM 1110-1.1005	US army corps of engineers, engineering and design, control and topographic surveying engineer manual
ALTA/NSPS	ALTA/NSPS STD.	American land title association - national society for professional surveyors - minimum std. detail requirements for ALTA/NSPS land title surveys

17.3.2 Tunnels

ORG.	DESG.	TITLE
NFPA	NFPA 502	Standard for road tunnels, bridges, and other limited access highways
ASCE	ASCE 36	Standard design and construction guidelines for micro tunneling

17.3.3 Roads

ORG.	DESG.	TITLE
AASHTO	GBF-3	Guide for the Development of Bicycle Facilities
AASHTO	GDPS-4	Guide for Design of Pavement Structures
AASHTO	GDPSS-4	Supplement to the Guide for Design of Pavement Structures
AASHTO	GREEN BOOK	A Policy on Geometric Design of Highways and Streets
AASHTO	GSCB	Guide Specifications for Design and Construction of Segmental Concrete Bridges
AASHTO	HB-17	Standard Specifications for Highway Bridges, 17th Edition
AASHTO	HM-22	The Materials Book - Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 22nd Edition
AASHTO	LTS-4	Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals
AASHTO	GDHS	A Policy on Geometric Design of Highways and Streets
AASHTO	RSDG-4	Roadside Design Guide
Department of transportation, federal	HDS-5	Hydraulic Design of Highway Culverts MUTCD, Manual on Uniform Traffic Control Devices SHSM, Standard Highway Signs and Markings

**highway
administration**

**Institute of
transportation
engineers** ITE LP-674B Highway Capacity Manual

ITE ITE 6TH
EDITION Trip Generation Manual

17.3.4 Drainage

ORG.	DESG.	TITLE
ASCE	ASCE 12	Standard guidelines for the design of urban subsurface drainage
ASCE	ASCE 13	Standard guidelines for the installation of urban subsurface drainage
ASCE	ASCE 14	Standard guidelines for the operation and maintenance of subsurface drainage
ASCE	ASCE 45	Standard guidelines for the design of urban stormwater systems
ASCE	ASCE 46	Standard guidelines for the installation of urban stormwater systems
ASCE	ASCE 47	Standard guidelines for the operation and maintenance of urban stormwater systems
ISO	ISO 20426	Guidelines for health risk assessment and management for non-potable water reuse

17.3.5 Railways

ORG.	DESG.	TITLE
UIC	UIC STD.	International Union of Railways - Railway interchange coding system
AREMA	AREMA STD.	American railway engineering and maintenance-of-way association - Manual of railway engineering
AREMA	AREMA STD.	American railway engineering and maintenance-of-way association - Communications & signals manual of recommended practices

17.3.6 Airports

ORG.	DESG.	TITLE
ACI/IATA	ACI/IATA DESIGN GUIDE (3RD EDITION)	Airports council international - Apron marking and signs handbook
FAA	AC 150/5345-12	Specification for airport and heliport beacon
Department of transportation, federal aviation administration	AC 150/5320-5	Airport Drainage Design
FAA	FAA - AC 150/5340-30	Design and installation details for airport visual aids.
FAA	FAA - AC 150/5345-10	Specification for constant current regulators and regulator monitors
FAA	FAA - AC 150/5345-26	Specification for I-823 plug and receptacle, cable connectors



FAA	FAA - AC 150/5345-27	Specification for wind cone assemblies
FAA	FAA - AC 150/5345-28	Precision approach path indicator (PAPI) system
FAA	FAA - AC 150/5345-42	Specification for airport light bases, transformer housings, junction boxes, and accessories
FAA	FAA - AC 150/5345-43	Specification for obstruction lighting equipment
FAA	FAA - AC 150/5345-45	Low-impact resistant (LIR) structures
FAA	FAA - AC 150/5345-46	Specification for runway and taxiway light fixtures
FAA	FAA - AC 150/5345-47	Specification for series to series isolation transformers for airport lighting systems
FAA	FAA - AC 150/5345-7	Specification for I-824 underground electrical cable for airport lighting circuits
FAA	FAA - AC150/5320-6F	"Airport pavement design and evaluation" - Heliport pavement design
FAA	FAA - AC150/5390-2C	"Heliport design"- For the structural design and construction of helipads.
FAA	FAA - EB - 67D	Light sources other than incandescent and xenon for airport and obstruction lighting fixtures
FAA	FAA STD.	Federal aviation administration regulations
GACA	GACA STD.	General authority of civil aviation std.
IATA	IATA - ADRM	Airport development reference manual
ICAO	ANNEX 14 – VOL. I	Aerodrome design and operations
ICAO	ICAO 8168-OPS/61	Procedures for air navigation services (PANS), aircraft operations (OPS)
ICAO	ICAO 8168-OPS/61	Procedures for air navigation services (PANS), aircraft operations (OPS)
ICAO	ICAO 9137-AN/898-PART 8	Airport services manual, airport operational services
ICAO	ICAO 9157-AN/901-PART 4	Aerodrome design manual, visual aids - part 4, Doc. 9157-AN/901
ICAO	ICAO 9157-AN/901-PART 5	Aerodrome design manual, electrical systems - part 5, Doc. 9157-AN/901
ICAO	ICAO 9157-AN/901-PART 6	Aerodrome design manual, frangibility
ICAO	ICAO 9476-AN/927	Manual of surface movement guidance and control systems (SMGCS)
ICAO	ICAO 9830-AN/452	Advanced surface movement guidance and control systems (A-SMGCS) manual
ICAO	ICAO SARPS	Standard and recommended practices (SARPS)



NFPA	NFPA 418	Standard for heliports
FAA	FAA AC 150/5300-13A	Airport Design
FAA	FAA AC 150/5340-18	Standards for Airport Sign Systems'
FAA	FAA AC 150/5340- 1	Standards for Airport Markings'
FAA	FAA AC150/5320-5D	Airport Drainage Design'
FAA	FAA AC 150/5335- 5C	Standardized Method of Reporting Airport Pavement Strength – PCN
FAA	FAA AC 150/5320- 6F	Heliport Pavement Design to Airport Pavement Design and Evaluation
FAA	FAA AC 150/5220-22B	Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns
ICAO	ICAO Doc 9184: APM Part 1	Master Planning
ICAO	ICAO Doc 9184: APM Part 2	Land Use and Environmental Management
ICAO	ICAO Annex 14	Aerodromes Vol II, Heliports
ICAO	ICAO DOC 9157: ADM Part 1	Aerodrome Design Manual Part 1 - Runways
ICAO	ICAO DOC 9157: ADM Part 2	Aerodrome Design Manual Part 2 - Taxiways, Aprons and Holding Bays
ICAO	ICAO DOC 9157: ADM Part 3	Aerodrome Design Manual Part 3 - Pavements
ICAO	ICAO 8168-OPS/61	Update, Procedures for Air Navigation Services (PANS), Aircraft Operations (OPS) to ICAO Doc 8168, Procedures for Air Navigation Services, Aircraft Operations (PANS-OPS)
ICAO	ICAO 9137-AN/898 Part 1	Airport Services Manual-Rescue and Fire Fighting
NFPA	NFPA 403	Standard for Aircraft Rescue and Fire-Fighting Services at Airports
NFPA	NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways



18 HEALTHCARE FACILITIES

18.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC301-CC	Saudi Building Code – Loading
SAUDI ARABIA	CBAHI Regulations	Central Board for Accreditation of Healthcare Institutions Regulations
SAUDI ARABIA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Regulations for Healthcare & Community Service Facilities
CBAHI	CBAHI Regulations	Central Board for Accreditation of Healthcare Institutions regulations
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - Regulations for healthcare & community service facilities

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

18.2 Referenced international Codes and standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures

18.2.1 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated. Additionally, consider the following documents

ORG.	DESG.	TITLE
FGI	FGI 2018 DESIGN GUIDE	Facility guidelines institute - Guidelines for design and construction of hospitals, outpatient facilities, residential health, care, and support facilities
NFPA	NFPA 99	Healthcare facilities code
WBDG	UFC 4-510-01	Design: Military Medical Facilities
WBDG	UFGS 22 00 70	Plumbing for Healthcare Facilities
WBDG	UFGS 22 60 70	Gas and Vacuum Systems for Healthcare Facilities
IESNA	IESNA - RP-26-06	Illuminating engineering society of north America - Lighting for hospitals and healthcare facilities
BICSI	BICSI 004	Information communication technology systems design and implementation best practices for healthcare institutions and facilities
ANSI/TIA	ANSI/TIA-1179	Healthcare facility telecommunications infrastructure



19 WATER WORKS

19.1 Local Regulations.

19.1.1 SBC

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC301-CC	Saudi Building Code – Loading
SBC	SBC701-CC	Saudi Building Code – PLUMBING

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

19.1.2 Ministries

ORG.	DESG.	TITLE
MEWA	MEWA Regulations	Ministry of Environment - Water and agriculture design guidelines
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - 2014 Specifications and manual of design and installation of modern irrigation systems
MOWE	MOWE Regulations	Ministry of Water and Electricity Regulations
AMANAH	AMANAH Regulations	Amanah Stormwater Drainage Regulations

19.1.3 Gulf Standardization Organization (GSO)

ORG.	DESG.	TITLE
ISO	ISO 19458	Water quality — Sampling for microbiological analysis
ISO	ISO 20469	Guidelines for water quality grade classification for water reuse
GCC	GSO 1025	Bottled drinking water
GCC	GSO 149	Unbottled drinking water
GCC	GSO 2146	Chemicals used for treatment of water intended for human consumption – Ammonia solution-test methods
GCC	GSO 2147	Chemicals used for treatment of water intended for human consumption – Chlorine
GCC	GSO 2148	Chemicals used for treatment of water intended for human consumption – Calcium carbonate
GCC	GSO 2149	Chemicals used for treatment of water intended for human consumption – Carbon dioxide
GCC	GSO 2150	Chemicals used for treatment of water intended for human consumption – Ammonia solution
GCC	GSO 2253	Chemicals used for treatment of water intended for human consumption – half-burnt dolomite
GCC	GSO 483	Liquid Ammonia



19.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ASCE	ASCE 7	Minimum Design Loads for Buildings and Other Structures
ICC	ICC - IPC	International Code Council - The International Plumbing Code

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline..

19.2.1 The referenced standards, manuals, guides, and handbooks in the above codes are considered part of the listed codes as stated.

19.3 Additional Complementary Standards, Manuals and Best Practice References

19.3.1 Utility Management

ORG.	DESG.	TITLE
AWWA	M1	Principles of Water Rates, Fees, and Charges, Seventh Edition
AWWA	M3	Safety Management for Utilities, Seventh Edition
AWWA	M5	Water Utility Management, Third Edition
AWWA	M19	Emergency Planning for Water and Wastewater Utilities, Fifth Edition
AWWA	M29	Fundamentals of Water Utility Capital Financing, Fourth Edition
AWWA	M47	Capital Project Delivery, Second Edition
AWWA	M54	Developing Rates for Small Systems, Second Edition
AWWA	M71	Climate Action Plans - Adaptive Management Strategies for Utilities
AWWA	G100	Water Treatment Plant Operation and Management
AWWA	G200	Distribution Systems Operation and Management
AWWA	G300	Source Water Protection
AWWA	G400	Utility Management System
AWWA	G410	Business Practices for Operation and Management
AWWA	G420	Communications and Customer Relations
AWWA	G430	Security Practices for Operation and Management



AWWA	G440	Emergency Preparedness Practices
AWWA	G480	Water Conservation and Efficiency Program Operation and Management
AWWA	G481	Reclaimed Water Program Operation and Management
AWWA	G485	Direct Potable Reuse Program Operation and Management
AWWA	G510	Wastewater Treatment Plant Operation and Management
AWWA	G520	Wastewater Collection System Operation and Management
AWWA	J100	Risk and Resilience Management of Water and Wastewater Systems
ISO	ISO 15839	Water Quality - on-line sensors/analysing equipment for water - specifications and performance tests

19.3.2 Water Quality and Treatment

ORG.	DESG.	TITLE
AWWA	M4	Water Fluoridation Principles and Practices, Sixth Edition
AWWA	M7	Problem Organisms in Water: Identification & Treatment, Third Edition
AWWA	M12	Simplified Procedures for Water Examination, Sixth Edition
AWWA	M20	Water Chlorination & Chlorination Practices & Principles, Second Edition
AWWA	M30	Precoat Filtration, Second Edition
AWWA	M37	Operational Control of Coagulation and Filtration Processes, Third Edition
AWWA	M38	Electrodialysis and Electrodialysis Reversal
AWWA	M46	Reverse Osmosis and Nanofiltration, Second Edition
AWWA	M48	Waterborne Pathogens, Second Edition
AWWA	M53	Microfiltration and Ultrafiltration Membranes for Drinking Water, Second Edition
AWWA	M56	Nitrification Prevention and Control in Drinking Water, Second Edition
AWWA	M57	Algae: Source to Treatment
AWWA	M61	Desalination of Seawater
AWWA	M64	Gas Transfer Applications in Water: Addition and Removal
AWWA	M65	On-site Generation of Hypochlorite
AWWA	M68	Water Quality in Distribution Systems
AWWA	M69	Inland Desalination and Concentrate Management



19.3.3 Treatment Standards

19.3.3.1 Filtration

ORG.	DESG.	TITLE
AWWA	B100	Granular Filter Material
AWWA	B101	Precoat Filter Media
AWWA	B102	Manganese Greensand for Filters
AWWA	B112	Microfiltration and Ultrafiltration Membrane Systems
AWWA	B114	Reverse Osmosis and Nanofiltration Systems for Water Treatment - First Edition
AWWA	B116	Electrodialysis and Ion-Exchange Membrane Systems
AWWA	B130	Membrane Bioreactor Systems

19.3.3.2 Softening

ORG.	DESG.	TITLE
AWWA	B200	Sodium Chloride
AWWA	B201	Soda Ash
AWWA	B202	Quicklime and Hydrated Lime

19.3.3.3 Disinfection Chemicals

ORG.	DESG.	TITLE
AWWA	B300	Hypochlorite's
AWWA	B301	Liquid Chlorine
AWWA	B302	Ammonium Sulfate
AWWA	B303	Sodium Chlorite
AWWA	B304	Liquid Oxygen for Ozone Generation for Water, Wastewater and Reclaimed Water Systems
AWWA	B305	Anhydrous Ammonia
AWWA	B306	Aqua Ammonia (Liquid Ammonium Hydroxide)

19.3.3.4 Coagulation

ORG.	DESG.	TITLE
AWWA	B402	Ferrous Sulfate
AWWA	B403	Aluminum Sulfate - Liquid, Ground, or Lump
AWWA	B404	Liquid Sodium Silicate
AWWA	B405	Sodium Aluminate
AWWA	B406	Ferric Sulfate
AWWA	B407	Liquid Ferric Chloride
AWWA	B408	Liquid Polyaluminum Chloride
AWWA	B451	Poly (Diallyl dimethylammonium Chloride)
AWWA	B452	EPI-DMA Polyamines
AWWA	B453	Polyacrylamide

19.3.3.5 Scale and Corrosion Control

ORG.	DESG.	TITLE
AWWA	B501	Sodium Hydroxide (Caustic Soda)



AWWA	B502	Sodium Polyphosphate, Glassy (Sodium Hexametaphosphate)
AWWA	B503	Sodium Tripolyphosphate
AWWA	B504	Monosodium Phosphate, Anhydrous
AWWA	B505	Disodium Phosphate, Anhydrous
AWWA	B506	Zinc Orthophosphate
AWWA	B507	Phosphoric Acid
AWWA	B510	Carbon Dioxide
AWWA	B511	Potassium Hydroxide
AWWA	B512	Sulfur Dioxide
AWWA	B550	Calcium Chloride

19.3.3.6 Taste and Odour Control

ORG.	DESG.	TITLE
AWWA	B600	Powdered Activated Carbon
AWWA	B601	Sodium Metabisulfite
AWWA	B602	Copper Sulfate
AWWA	B603	Permanganates
AWWA	B604	Granular Activated Carbon
AWWA	B605	Reactivation of Granular Activated Carbon

19.3.3.7 Fluorides

ORG.	DESG.	TITLE
AWWA	B701	Sodium Fluoride
AWWA	B702	Sodium Fluorosilicate
AWWA	B703	Fluorosilicic Acid

19.3.4 Distribution Systems

ORG.	DESG.	TITLE
AWWA	M2	Instrumentation & Control, Third Edition
AWWA	M6	Water Meters: Selection, Installation, Testing & Maintenance, Fifth Edition
AWWA	M9	Concrete Pressure Pipe, Third Edition
AWWA	M11	Steel Pipe: A Guide for Design and Installation, Fifth Edition
AWWA	M14	Backflow Prevention and Cross-Connection Control: Recommended Practices, Fourth Edition
AWWA	M17	Fire Hydrants: Installation, Field Testing, & Maintenance, Fifth Edition
AWWA	M22	Sizing Water Service Lines and Meters, Third Edition
AWWA	M23	PVC Pipe Design and Installation, Third Edition
AWWA	M24	Planning for the Distribution of Reclaimed Water, Fourth Edition



AWWA	M25	Flexible Membrane Covers and Linings for Potable-Water Reservoirs, Third Edition
AWWA	M27	External Corrosion Control for Infrastructure Sustainability, Third Edition
AWWA	M28	Rehabilitation of Water Mains, Third Edition
AWWA	M31	Distribution System Requirements for Fire Protection, Fourth Edition
AWWA	M32	Computer Modeling of Water Distribution Systems, Fourth Edition
AWWA	M33	Flowmeters in Water Supply, Third Edition
AWWA	M36	Water Audits and Loss Control Programs, Fourth Edition
AWWA	M41	Ductile-Iron Pipe and Fittings, Third Edition
AWWA	M42	Steel Water-Storage Tanks, Revised Edition
AWWA	M44	Distribution Valves: Selection, Installation, Field Testing & Maintenance, Third Edition
AWWA	M45	Fiberglass Pipe Design, Third Edition
AWWA	M49	Quarter-Turn Valves: Torque, Head Loss and Cavitation Analysis, Third Edition
AWWA	M51	Air Valves: Air Release, Air/Vacuum, and Combination, Second Edition
AWWA	M55	PE Pipe Design and Installation
AWWA	M58	Internal Corrosion Control in Water Distribution Systems, Second Edition
AWWA	M66	Cylinder and Vane Actuators and Controls – Design and Installation
AWWA	M72	Knife Gate Valves
AWWA	M75	Elastomers for Waterworks: Pipes, Valves, and Fittings
AWWA	M77	Condition Assessment of Water Mains

19.3.5 Pipe and Accessories

ORG.	DESG.	TITLE
AWWA	AWWA C110-12	Ductile-Iron and Gray-Iron fittings
AWWA	AWWA C219	Bolted sleeve-type couplings for plain-end pipe
AWWA	AWWA C900-16	Polyvinyl chloride (PVC) pressure pipe and fabricated fittings, 4 in. through 60 in. (100 mm through 1,500 mm)
AWWA	AWWA C907-17	Standard for injection-molded polyvinyl chloride (PVC) pressure fittings, 4 in. through 12 in. (100 mm through 300 mm), for water, wastewater, and reclaimed water service
AWWA	AWWA C950-88	AWWA standard for fiberglass pressure pipe
AWWA	AWWA M23	PVC pipe - design and installation
AWWA	ISO 2591-1/BS 1796-1	Test sieving — part 1: methods using test sieves of woven wire cloth and perforated metal plate

19.3.5.1 Ductile-Iron Pipe and Fittings

ORG.	DESG.	TITLE
AWWA	C104/A21.4	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
AWWA	C105/A21.5	Polyethylene Encasement for Ductile-Iron Pipe Systems
AWWA	C110/A21.10	Ductile Iron & Gray-Iron Fittings
AWWA	C111/A21.11	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings



AWWA	C115/A21.15	Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
AWWA	C116/A21.16	Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
AWWA	C150/A21.50	Thickness Design of Ductile-Iron Pipe
AWWA	C151/A21.51	Ductile-Iron Pipe, Centrifugally Cast
AWWA	C153/A21.53-	Ductile-Iron Compact Fittings
AWWA	C104/A21.4	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings

19.3.5.2 Steel Pipe

ORG.	DESG.	TITLE
AWWA	C200	Steel Water Pipe--6 In. (150 mm) and Larger
AWWA	C203	Coal-Tar Protective Coatings and Linings for Steel Water Pipe
AWWA	C205	Cement-Mortar Protective Lining and Coating for Steel Water Pipe--4 In. (100 mm) and Larger--Shop Applied
AWWA	C206	Field Welding of Steel Water Pipe
AWWA	C207	Steel Pipe Flanges for Waterworks Service--Sizes 4 In. Through 144 In. (100 mm Through 3600 mm)
AWWA	C208	Dimensions for Fabricated Steel Water Pipe
AWWA	C209	Tape Coatings for Steel Water Pipe and Fittings
AWWA	C210	Liquid-Epoxy Coatings and Linings for Steel Water Pipe and Fittings
AWWA	C213	Fusion-Bonded Epoxy Coatings and Linings For Steel Water Pipe and Fittings
AWWA	C214	Tape Coatings for Steel Water Pipe
AWWA	C215	Extruded Polyolefin Coatings for the Exterior of Steel Water Pipelines
AWWA	C216	Heat-Shrinkable Cross-Linked Polyolefin Coatings for Steel Water Pipe and Fittings
AWWA	C217	Microcrystalline Wax and Petrolatum Tape Coating Systems for Steel Water Pipe and Fittings
AWWA	C218	Liquid Coating for Aboveground Steel Water Pipelines and Fittings
AWWA	C219	Bolted, Sleeve-Type Couplings for Plain-End Pipe
AWWA	C220	Stainless Steel Pipe, 1/2 In. (13 mm) and Larger
AWWA	C221	Fabricated Steel Mechanical Slip-Type Expansion Joints
AWWA	C222	Polyurethane Coatings for the Interior and Exterior of Steel Water Pipe and Fittings
AWWA	C223	Fabricated Steel and Stainless-Steel Tapping Sleeves



AWWA	C224	Nylon-11-Based Polyamide Coating System for the Interior and Exterior of Steel Water Pipe, Connections, Fittings and Special Sections
AWWA	C225	Fused Polyolefin Coating System for the Exterior of Steel Water Pipelines
AWWA	C226	Stainless-Steel Fittings for Waterworks Service, Sizes 1/2 In. Through 72 In. (13 mm-1,800 mm)
AWWA	C227	Bolted, Split-Sleeve Restrained and Non-restrained Couplings for Plain-End Pipe
AWWA	C228	Stainless-Steel Pipe Flange Joints for Water Service - Sizes 2 In. Through 72 In. (50 mm Through 1,800 mm)
AWWA	C229	Fusion-Bonded Polyethylene Coatings for Steel Water Pipe and Fittings
AWWA	C230	Stainless-Steel Full-Encirclement Repair & Service Connection Clamps for 2-in. Through 12-in. (50-mm Through 300-mm) Pipe
AWWA	C231	Field Welding of Stainless-Steel Water Pipe

19.3.5.3 Concrete Pipe

ORG.	DESG.	TITLE
AWWA	C300	Reinforced Concrete Pressure Pipe, Steel-Cylinder Type
AWWA	C301	Prestressed Concrete Pressure Pipe, Steel-Cylinder Type
AWWA	C302	Reinforced Concrete Pressure Pipe, Noncylinder Type
AWWA	C303	Concrete Pressure Pipe, Bar-Wrapped, Steel-Cylinder Type
AWWA	C304	Design of Prestressed Concrete Cylinder Pipe
AWWA	C305	CFRP Renewal and Strengthening of Prestressed Concrete Cylinder Pipe (PCCP)

19.3.5.4 Valves and Hydrants

ORG.	DESG.	TITLE
AWWA	C500	Metal-Seated Gate Valves for Water Supply Service
AWWA	C502	Dry-Barrel Fire Hydrants
AWWA	C503	Wet-Barrel Fire Hydrants
AWWA	C504	Rubber-Seated Butterfly Valves
AWWA	C507	Ball Valves, 6 In. Through 60 In. (150 mm Through 1,500 mm)
AWWA	C508	Swing-Check Valves for Waterworks Service, 2 In. Through 24 In. (50-mm Through 600-mm) NPS
AWWA	C509	Resilient-Seated Gate Valves for Water Supply Service
AWWA	C510	Double Check Valve Backflow Prevention Assembly
AWWA	C511	Reduced-Pressure Principle Backflow Prevention Assembly
AWWA	C512	Air-Release, Air/Vacuum, and Combination Air Valves for Water and Wastewater Service
AWWA	C514	Air Valve and Vent Inflow Preventer Assemblies for Potable Water Distribution System and Storage Facilities
AWWA	C515	Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
AWWA	C516	Large-Diameter Rubber-Seated Butterfly Valves, Sizes 78 In. (2,000 mm) and Larger
AWWA	C517	Resilient-Seated Cast-Iron Eccentric Plug Valves



AWWA	C518	Dual-Disc Swing-Check Valves for Waterworks Service
AWWA	C519	High Performance Waterworks Butterfly Valves - 3 In. (80 mm) Through 60 In. (1,500 mm)
AWWA	C520	Knife Gate Valves, Sizes 2 In. (50 mm) Through 96 In. (2,400 mm)
AWWA	C521	Plastic Ball Valves
AWWA	C530	Pilot-Operated Control Valves
AWWA	C541	Hydraulic and Pneumatic Cylinder and Vane-Type Actuators for Valves and Slide Gates
AWWA	C542	Electric Motor Actuators for Valves and Slide Gates
AWWA	C550	Protective Interior Coatings for Valves and Hydrants
AWWA	C560	Cast-Iron Slide Gates
AWWA	C561	Fabricated Stainless-Steel Slide Gates
AWWA	C562	Fabricated Aluminum Slide Gates
AWWA	C563	Fabricated Composite Slide Gates

19.3.5.5 Pipe Installation

ORG.	DESG.	TITLE
AWWA	C600	Installation of Ductile-Iron Water Mains and Their Appurtenances
AWWA	C602	Cement - Mortar Lining of Water Pipelines in Place - 4 In. (100 mm) and Larger
AWWA	C604	Installation of Steel Water Pipe - 4 In. (100 mm) and Larger
AWWA	C605	Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
AWWA	C606	Grooved and Shouldered Joints
AWWA	C620	Spray-In-Place Polymeric Lining for Potable Water Pipelines, 4 In. (100 mm) and Larger
AWWA	C621	Internal Pipe Joint Seal Assemblies for Water Service
AWWA	C622	Pipe Bursting of Potable Water Mains 4-In. (100 mm) to 36-In. (900 mm)

19.3.6 Disinfection of Facilities

ORG.	DESG.	TITLE
AWWA	C651	Disinfecting Water Mains
AWWA	C652	Disinfection of Water-Storage Facilities
AWWA	C653	Disinfection of Water Treatment Plants
AWWA	C654	Disinfection of Wells
AWWA	C655	Field Dechlorination



AWWA	C670	Online Chlorine Analyzer Operation & Maintenance
AWWA	C671	Online Turbidimeter Operation & Maintenance

19.3.7 Meters

ORG.	DESG.	TITLE
AWWA	C700	Cold-Water Meters - Displacement Type, Bronze Main Case
AWWA	C701	Cold-Water Meters - Turbine Type, for Customer Service
AWWA	C702	Cold-Water Meters - Compound Type
AWWA	C703	Cold-Water Meters - Fire-Service Type
AWWA	C704	Propeller-Type Meters for Waterworks Applications
AWWA	C707	Encoder-Type Remote Registration Systems for Cold-Water Meters -
AWWA	C708	Cold-Water Meters - Multijet Type
AWWA	C710	Cold-Water Meters - Displacement Type, Plastic Main Case
AWWA	C712	Cold-Water Meters - Singlejet Type
AWWA	C713	Cold-Water Meters - Fluidic-Oscillator Type
AWWA	C714	Cold-Water Meters for Residential Fire Sprinkler Systems in One- and Two- Family Dwellings and Manufactured Homes
AWWA	C715	Cold-Water Meters - Electromagnetic and Ultrasonic Type for Revenue Applications
AWWA	C750	Transit-Time Flowmeters in Full Closed Conduits
AWWA	C751	Magnetic Inductive Flowmeters

19.3.8 Service Lines

ORG.	DESG.	TITLE
AWWA	C800	Underground Service Line Valves and Fittings
AWWA	C810	Replacement and Flushing of Lead Service Lines

19.3.9 Plastic Pipe

ORG.	DESG.	TITLE
AWWA	C900	Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. - 60 In. (100 mm - 1,500 mm)
AWWA	C901	Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. (13 mm) - 3 In. (76 mm), for Water Service
AWWA	C903	Polyethylene-Aluminum-Polyethylene (PE-AL-PE) Composite Pressure Pipe, 12 mm (1/2 In.) - 51 mm (2 In.), for Water Service
AWWA	C904	Cross-Linked Polyethylene (PEX) Pressure Pipe, 1/2 In. (12 mm) - 3 In. (76 mm), for Water Service
AWWA	C906	Polyethylene (PE) Pressure Pipe and Fittings, 4 In. Through 65 In. (100 mm Through 1,650 mm), for Waterworks
AWWA	C907	Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings, 4 In. Through 12 In. (100 mm Through 300 mm), for Water, Wastewater, & Reclaimed Water Services



AWWA	C909	Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 In. - 24 In. (100 mm - 600 mm), for Water, Wastewater, and Reclaimed Water Service
AWWA	C950	Fiberglass Pressure Pipe

19.3.10 Storage (Tanks)

ORG.	DESG.	TITLE
AWWA	D100	Welded Carbon Steel Tanks for Water Storage
AWWA	D102	Coating Steel Water-Storage Tanks
AWWA	D103	Factory-Coated Bolted Carbon Steel Tanks for Water Storage
AWWA	D104	Automatically Controlled, Impressed-Current Cathodic Protection for the Interior of Steel Water Storage
AWWA	D106	Sacrificial Anode Cathodic Protection Systems for the Interior Submerged Surfaces of Steel Water Storage Tanks
AWWA	D107	Composite Elevated Tanks for Water Storage
AWWA	D108	Aluminum Dome Roofs for Water Storage Facilities
AWWA	D110	Wire- and Strand-Wound, Circular, Prestressed Concrete Water Tanks
AWWA	D115	Tendon-Prestressed Concrete Water Tanks
AWWA	D120	Thermosetting Fiberglass-Reinforced Plastic Tanks
AWWA	D121	Bolted Aboveground Thermosetting Fiberglass Reinforced Plastic Panel-Type Tanks for Water Storage
AWWA	D130	Geomembrane Materials for Potable Water Applications

19.3.11 Pumps

ORG.	DESG.	TITLE
AWWA	E102	Submersible Vertical Turbine Pumps
AWWA	E103	Horizontal and Vertical Line-Shaft Pumps
AWWA	E200	Progressive Cavity Chemical Metering Pumps

19.3.12 Plant Equipment

ORG.	DESG.	TITLE
AWWA	F101	Contact-Molded, Fiberglass-Reinforced Plastic Wash-Water Troughs and Launderers
AWWA	F102	Match-Die-Molded, Fiberglass-Reinforced Plastic Weir Plates, Scum Baffles, and Mounting Brackets
AWWA	F110	Ultraviolet Disinfection Systems for Drinking Water
AWWA	F120	Ozone Systems for Water



20 ENVIRONMENTAL PROTECTION AND WASTE MANAGEMENT

20.1 Saudi Regulations

ORG.	DESG.	TITLE
SBC	SBC201-CC	Saudi Building Code – General Code
SBC	SBC701-CC	Saudi Building Code – Plumbing Code
GAMEP	ACCEPTANCE STD.	Waste acceptance criteria standard - 2012
GAMEP	TRANSPORTATION STD.	Standard on waste transportation - 2012
GAMEP	GAMEP - GERRI Regulations	General Authority of Meteorology and Environmental Protection - General Environmental Regulations and Rules for Implementation
MOMRA	MOMRA Regulations	Bylaw for Municipal Solid Waste Management - December 2015
MOMRA	MOMRA Regulations	MEMO for Municipalities on the management of hazardous medical waste disposal - 2008
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for environmental engineering municipal works
MOMRA	MOMRA Regulations	Ministry of Municipal and Rural Affairs - guidelines for environmental impact assessment of municipal works
RCJY	RCER Regulations	Royal Commission Environmental Regulations

All Saudi building codes and their referenced subcodes and standards shall be consulted in relevant discipline.

20.2 Referenced International Codes and Standards

ORG.	DESG.	TITLE
ICC	ICC - IBC	International Code Council - The International Building Code
ICC	ICC - IPC	International Code Council - The International Plumbing Code

All ICC codes and their referenced subcodes and standards shall be consulted in relevant discipline.

20.3 Air Pollution Controls

ORG.	DESG.	TITLE
EPA	EPA 40 CFR	PART 1027 - Fees for engine, vehicle, and equipment compliance programs (§§ 1027.101 - 1027.155)
EPA	EPA 40 CFR	PART 1033 - Control of emissions from locomotives (§§ 1033.1 - 1033.925)
EPA	EPA 40 CFR	PART 1036 - Control of emissions from new and in-use heavy-duty highway engines (§§ 1036.1 - 1036.825)
EPA	EPA 40 CFR	PART 1037 - Control of emissions from new heavy-duty motor vehicles (§§ 1037.1 - 1037.825)
EPA	EPA 40 CFR	PART 1039 - Control of emissions from new and in-use nonroad compression-ignition engines (§§ 1039.1 - 1039.825)



EPA	EPA 40 CFR	PART 1042 - Control of emissions from new and in-use marine compression-ignition engines and vessels (§§ 1042.1 - 1042.925)
EPA	EPA 40 CFR	PART 1043 - Control of NOX, SOX, and PM emissions from marine engines and vessels subject to the marpol protocol (§§ 1043.1 - 1043.100)
EPA	EPA 40 CFR	PART 1045 - Control of emissions from spark-ignition propulsion marine engines and vessels (§§ 1045.1 - 1045.825)
EPA	EPA 40 CFR	PART 1048 - Control of emissions from new, large nonroad spark-ignition engines (§§ 1048.1 - 1048.825)
EPA	EPA 40 CFR	PART 1051 - Control of emissions from recreational engines and vehicles (§§ 1051.1 - 1051.825)
EPA	EPA 40 CFR	PART 1054 - Control of emissions from new, small nonroad spark-ignition engines and equipment (§§ 1054.1 - 1054.825)
EPA	EPA 40 CFR	PART 1060 - Control of evaporative emissions from new and in-use nonroad and stationary equipment (§§ 1060.1 - 1060.825)
EPA	EPA 40 CFR	PART 1065 - Engine-testing procedures (§§ 1065.1 - 1065.1111)
EPA	EPA 40 CFR	PART 1066 - Vehicle-testing procedures (§§ 1066.1 - 1066.1010)
EPA	EPA 40 CFR	PART 1068 - General compliance provisions for highway, stationary, and nonroad programs (§§ 1068.1 - 1068.650)
EPA	EPA 40 CFR	PART 1074 - Preemption of state standards and procedures for waiver of federal preemption for nonroad engines and nonroad vehicles (§§ 1074.1 - 1074.115)
WHO	WHO DESIGN GUIDE	World Health Organization - Air quality guidelines for particulate matter, ozone, nitrogen, dioxide, and sulfur dioxide

20.4 Wastewater

ORG.	DESG.	TITLE
AWWA	G510	Wastewater Treatment Plant Operation and Management
AWWA	G520	Wastewater Collection System Operation and Management
AWWA	J100	Risk and Resilience Management of Water and Wastewater Systems

20.5 Solid Waste Management

ORG.	DESG.	TITLE
EPA	EPA 40 CFR	PART 239 - Requirements for state permit program determination of adequacy (§§ 239.1 - 239.13)
EPA	EPA 40 CFR	PART 240 - Guidelines for the thermal processing of solid wastes (§§ 240.100 - 240.211-3)
EPA	EPA 40 CFR	PART 241 - Solid wastes used as fuels or ingredients in combustion units (§§ 241.1 - 241.4)
EPA	EPA 40 CFR	PART 243 - Guidelines for the storage and collection of residential, commercial, and institutional solid waste (§§ 243.100 - 243.204-2)
EPA	EPA 40 CFR	PART 246 - Source separation for materials recovery guidelines (§§ 246.100 - 246.203)
EPA	EPA 40 CFR	PART 247 - Comprehensive procurement guideline for products containing recovered materials (§§ 247.1 - 247.17)



EPA	EPA 40 CFR	PART 254 - Prior notice of citizen suits (§§ 254.1 - 254.3)
EPA	EPA 40 CFR	PART 255 - Identification of regions and agencies for solid waste management (§§ 255.1 - 255.41)
EPA	EPA 40 CFR	PART 256 - Guidelines for development and implementation of state solid waste management plans (§§ 256.01 - 256.65)
EPA	EPA 40 CFR	PART 257 - Criteria for classification of solid waste disposal facilities and practices (§§ 257.1 - 257.107)
EPA	EPA 40 CFR	PART 258 - Criteria for municipal solid waste landfills (§§ 258.1 - 258.75)
EPA	EPA 40 CFR	PART 259 [Reserved]
EPA	EPA 40 CFR	PART 260 - Hazardous waste management system: general (§§ 260.1 - 260.43)
EPA	EPA 40 CFR	PART 261 - Identification and listing of hazardous waste (§§ 261.1 - 261.1090)
EPA	EPA 40 CFR	PART 262 - Standards applicable to generators of hazardous waste (§§ 262.1 - 262.265)
EPA	EPA 40 CFR	PART 263 - Standards applicable to transporters of hazardous waste (§§ 263.10 - 263.31)
EPA	EPA 40 CFR	PART 264 - Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities (§§ 264.1 - 264.1316)
EPA	EPA 40 CFR	PART 265 - Interim status standards for owners and operators of hazardous waste treatment, storage, and disposal facilities (§§ 265.1 - 265.1316)
EPA	EPA 40 CFR	PART 266 - Standards for the management of specific hazardous wastes and specific types of hazardous waste management facilities (§§ 266.20 - 266.510)
EPA	EPA 40 CFR	PART 267 - Standards for owners and operators of hazardous waste facilities operating under a standardized permit (§§ 267.1 - 267.1108)
EPA	EPA 40 CFR	PART 268 - Land disposal restrictions (§§ 268.1 - 268.50)
EPA	EPA 40 CFR	PART 270 - EPA Administered permit programs: the hazardous waste permit program (§§ 270.1 - 270.320)
EPA	EPA 40 CFR	PART 271 - Requirements for authorization of state hazardous waste programs (§§ 271.1 - 271.27)
EPA	EPA 40 CFR	PART 272 - Approved state hazardous waste management programs (§§ 272.1 - 272.2800-272.2849)
EPA	EPA 40 CFR	PART 273 - Standards for universal waste management (§§ 273.1 - 273.81)
EPA	EPA 40 CFR	PART 278 - Criteria for the management of granular mine tailings (chat) in Asphalt Concrete and Portland Cement Concrete in transportation construction projects funded in whole or in part by federal funds (§§ 278.1 - 278.4)
EPA	EPA 40 CFR	PART 279 - Standards for the management of used oil (§§ 279.1 - 279.82)
EPA	EPA 40 CFR	PART 280 - Technical standards and corrective action requirements for owners and operators of underground storage tanks (UST) (§§ 280.10 - 280.252)
EPA	EPA 40 CFR	PART 281 - Approval of state underground storage tank programs (§§ 281.10 - 281.61)
EPA	EPA 40 CFR	PART 282 - Approved underground storage tank programs (§§ 282.1 - 282.103-282.105)
EPA	EPA 40 CFR	PART 503 - Standards for the use or disposal of sewage sludge



20.5.1 Equipment and Safety

ORG.	DESG.	TITLE
ANSI	Z245.1	Mobile Wastes and Recyclable Materials Collection, Transportation and Compaction Equipment – Safety Requirements.
ANSI	Z245.2	Stationary Compactors – Safety Requirements for Maintenance, Installation and Operation
ANSI	Z245.30	Equipment Technology and Operations for Wastes and Recyclable Materials - Waste Containers - Safety Requirements
ANSI	Z245.41	Facilities for The Processing of Commingled Recyclable Materials - Safety Requirements
ANSI	Z245.42	Waste Transfer Station - Safety Requirements.
ANSI	Z245.5	Baling Equipment - Safety Requirements for Installation, Maintenance, And Operation.
ANSI	Z245.51	Baling Equipment – Safety Requirements.
ANSI	Z245.60	Equipment Technology and Operations for Wastes and Recyclable Materials - Waste Containers - Compatibility Dimensions

20.6 Construction Waste Management

ORG.	DESG.	TITLE
WBDG	UFGS 01 74	Construction Waste Management and Disposal
WBDG	UFC 1-200-02	High Performance and Sustainable Building Requirements
WBDG	UFGS 01 57 20.00 10	Environmental Protection
WBDG	UFGS 01 74 19	Construction and Demolition Waste Management
WBDG	UFGS 02 41 00	[Demolition] [and] [Deconstruction]
WBDG	PWTB 200-1-17	Recycling Interior Finish Materials - Carpet and Ceiling Tiles
WBDG	PWTB 200-1-23	Guidance for the Reduction of Demolition Waste Through Reuse and Recycling
WBDG	PWTB 200-1-24	Quantifying Waste Generated from Building Remodeling
WBDG	PWTB 200-1-26	Market Valuation of Demolition Salvage Materials
WBDG	PWTB 200-1-27	Reuse of Concrete Materials from Building Demolition
WBDG	PWTB 200-1-44	Recycling Exterior Building Finish Materials
WBDG	PWTB 200-1-45	Deconstruction of WWII-Era Wood Framed Buildings
WBDG	PWTB 200-1-48	Opportunities for Reducing Construction and Demolition Waste from Residential Communities Initiative (RCI) Programs
WBDG	PWTB 200-1-73	Reuse of Materials from Modular Relocatable Facilities
WBDG	PWTB 420-49-30	Alternatives to Demolition for Facility Reduction



20.7 Soil Quality

ORG.	DESG.	TITLE
US EPA	EPA530-R-97-007	Best Management Practices (BMPs) for Soils Treatment Technologies. Suggested Operational Guidelines to Prevent Cross-Media Transfer of Contaminants During Cleanup Activities
ISO	ISO/TC 190	Soil Quality

20.8 Coastal Water Quality

ORG.	DESG.	TITLE
US EPA	US EPA STD	US National recommended water quality criteria – aquatic life criteria table
WHO	WHO DESIGN GUIDE	WORLD HEALTH ORG. - Guidelines for safe recreational water - Volume 1

20.9 Environmental Procedures

ORG.	DESG.	TITLE
ASTM	ASTM E1527	Standard practice for environmental site assessments: PHASE I Environmental site assessment process
ASTM	ASTM E1903	Standard practice for environmental site assessments: PHASE II Environmental site assessment process
EPA	EPA	Guidelines on the information to be contained in environmental impact assessment reports
USAID	USAID 22 CFR 216	United States agency for International Development - Environmental impact assessment process
EIB	EIB REFERENCE	European Investment Bank - Assessment and management of environmental and social impacts and risks
EIB	EIB REFERENCE	European Investment Bank - Pollution prevention and abatement
EP	CIRCULAR EU 52/2014	European Parliament - Assessment of the effects of certain public and private projects on the environment
IFC	IFC PS1	International Finance Corporation - Assessment and management of environmental and social risks and impacts
IFC	IFC PS3	International Finance Corporation - Resource efficiency and pollution prevention
WORLD BANK	WORLD BANK DESIGN GUIDE	World Bank - Environmental and social framework
WORLD BANK	ESS1	World Bank - Assessment and management of environmental and social risks and impacts
WORLD BANK	ESS3	World Bank - Resource efficiency and pollution prevention

20.10 Climate Change

ORG.	DESG.	TITLE
EIB	EIB REFERENCE	European Investment Bank - Climate-related standard



20.11 Ecology

ORG.	DESG.	TITLE
ASTM	ASTM E1527	Standard Practice for Environmental Site Assessments: PHASE I Environmental site assessment process
ASTM	ASTM E1903	Standard Practice for Environmental Site Assessments: PHASE II Environmental site assessment process
EPA	EPA	Guidelines on the information to be contained in environmental impact assessment reports
USAID	USAID 22 CFR 216	United States Agency for International Development - Environmental impact assessment p standard practice for environmental site assessments
EIB	EIB REFERENCE	European Investment Bank - Assessment and management of environmental and social impacts and risks

20.12 Noise

ORG.	DESG.	TITLE
NIOSH	NIOSH STD.	National Institute for Occupational Safety and Health - Controls for noise exposure
OSHA	OSHA STD.	Occupational Safety and Health Administration - Occupational noise exposure
BSI	BS 5228	code of practice for noise and vibration control on construction and open sites
EC	EC 2002/49	European Commission - Environmental noise directive
ISO	ISO 1999	Determination of occupational noise exposure and estimation of noise-induced hearing impairment
WHO	WHO DESIGN GUIDE	World Health Organization - Environmental noise guidelines for the European region

20.13 Sediment

ORG.	DESG.	TITLE
US EPA	US EPA STD.	US Marine Sediment Screening Benchmarks - 7/2006
US EPA	US EPA STD.	US Fresh Water Sediment Screening Benchmarks - 8/2006

20.14 Industrial Discharge

ORG.	DESG.	TITLE
FAO	FAO STD.	Food and Agriculture Organization - Industrial waste discharge regulation
US EPA	US EPA STD.	US industrial Effluent Guidelines

20.15 Social Impact Assessment

ORG.	DESG.	TITLE
USAID	USAID STD.	United States Agency for International Development - Guidelines on compulsory displacement and resettlement in USAID programming
EBRD	EBRD REFERENCE	European Bank for Reconstruction and Development - Resettlement guidance and good practice
EIB	EIB REFERENCE	European Investment Bank - Involuntary resettlement



EIB	EIB REFERENCE	European Investment Bank - Rights and interests of vulnerable groups
EIB	EIB REFERENCE	European Investment Bank - Stakeholder engagement
IAIA	IAIA DESIGN GUIDE	International Association for Impact Assessment - Social Impact Assessment: Guidance for managing and accessing the social impact of projects
IFC	IFC DESIGN GUIDE	International Finance Corporation - Handbook of preparing a resettlement action plan
IFC	IFC PS5	International Finance Corporation - Land acquisition and involuntary resettlement
WORLD BANK	WORLD BANK DESIGN GUIDE	World Bank - A user's guide to poverty and social impact analysis
WORLD BANK	ESS10	World Bank - Stakeholder engagement and information
WORLD BANK	ESS5	World Bank - Land acquisition, restrictions on land use and involuntary resettlement

20.16 Occupational Health and Safety

ORG.	DESG.	TITLE
EIB	EIB REFERENCE	European Investment Bank - Labor Standard
EIB	EIB REFERENCE	European Investment Bank - Occupational and public health, safety, and security
IFC	IFC PS2	International Finance Corporation - Labor and working conditions (2012)
IFC	IFC PS4	International Finance Corporation - Community health, safety, and security (2012)
WORLD BANK	ESS2	World Bank - Labor and working conditions
WORLD BANK	ESS4	World Bank - Community health and safety

20.17 Financial Intermediaries

ORG.	DESG.	TITLE
WORLD BANK	ESS9	World Bank - Financial intermediaries

20.18 Culture Heritage and Archaeology

ORG.	DESG.	TITLE
US EPA	US EPA STD.	US National historic preservation act - Cultural resources manual for EPA region 1
CIFA	CIFA DESIGN GUIDE	Chartered institute for archeologist's standard and guidelines
EIB	EIB REFERENCE	European Investment Bank - Cultural heritage
IFC	IFC PS8	International Finance Corporation - Cultural heritage
WORLD BANK	ESS8	World Bank - Cultural heritage



APPENDIX A

A.1 Saudi Building Codes (SBC)

ORG.	DESG.	TITLE
SBC	SBC 1001-18	Saudi Building Code - green buildings
SBC	SBC 201-18	Saudi Building Code - general
SBC	SBC 301-18	Saudi Building Code - loading and forces
SBC	SBC 302-18	Saudi Building Code - Saudi construction code
SBC	SBC 303-18	Saudi Building Code - soils and foundation
SBC	SBC 304-18	Saudi Building Code - concrete structures
SBC	SBC 305-18	Saudi Building Code - masonry structures
SBC	SBC 306-18	Saudi Building Code - steel structures
SBC	SBC 401-18	Saudi Building Code - electrical
SBC	SBC 501-18	Saudi Building Code - mechanical
SBC	SBC 601-18	Saudi Building Code - energy conservation
SBC	SBC 701-18	Saudi Building Code - plumbing
SBC	SBC 702-18	Saudi Building Code - private sewage disposal
SBC	SBC 801-18	Saudi Building Code - fire

A.2 Airports

ORG.	DESG.	TITLE
GACA	GACA STD	General Authority of Civil Aviation STD

A.3 Healthcare facilities

ORG.	DESG.	TITLE
CBAHI	CBAHI regulations	Central Board for Accreditation of Healthcare Institutions regulations
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for healthcare & community service facilities

A.4 Sports facilities

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for sport facilities

A.5 Sustainability

ORG.	DESG.	TITLE
GD CD - MOI	GD CD - MOI regulations	General Directorate of Civil Defense, KSA regulations
M.HOUSING	Mostadam rating system	Saudi Ministry of Housing - Mostadam rating system for residential buildings D+C



A.6 Residential facilities

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for residential buildings

A.7 Assembly & public facilities

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for entertainment facilities
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for event facilities & resorts
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for automobile service stations
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for restaurants & food catering

A.8 warehouses & workshops

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - warehousing & workshops regulations

A.9 Commercial facilities

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - regulations for commercial buildings

A.10 Occupational facilities

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry of Municipal and Rural Affairs - Regulations for occupational facilities

A.11 Architectural

ORG.	DESG.	TITLE
KSCDR	UDG 2010 regulations	King Salman Center for Disability Research - universal accessibility built environment guidelines for the kingdom of Saudi Arabia.
KSCDR	UDG 2010 regulations	King Salman Center for Disability Research - universal accessibility destinations & places of accommodation guidelines for the kingdom of Saudi Arabia
KSCDR	UDG 2010 regulations	King Salman Center for Disability Research - universal accessibility land transportation guidelines for the kingdom of Saudi Arabia.
MODON	MODON regulations	Saudi authority for industrial cities and technology zones - MODON- guides for industrial buildings
MOE	MOE regulations	Minimum requirements for school buildings
MOH	MOH regulations	Ministry of health regulations for health care facilities
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Kingdom of Saudi Arabia persons with disabilities guidelines 2000



SASO SASO STD - Saudi Arabian STD org. - (full set of STD)
(Full set)

A.12 Structural

ORG.	DESG.	TITLE
MOT	CIRCULAR NO. 57026/01	Ministry Of Transportation - updated vehicular live load on highway structures (august 2015)
MOT	MOT regulations	Ministry Of Transportation - highway design manual - volume 3 - structural specifications (may 1992)
MOT	MOT regulations	Ministry Of Transportation , general specifications for road and bridge construction - 1998
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide specifications for roads & roadway structures
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for the maintenance of roadway structures & pavement
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for roadway geometric design
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for traffic safety engineering
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for design of parking
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for design review of roadway projects
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for the design of roadway structures

A.13 Mechanical

ORG.	DESG.	TITLE
SASO	SASO Standard	Saudi Arabian Standard Organization – full set

A.14 Electrical

ORG.	DESG.	TITLE
GACA	GACAR PART 139	General Authority of Civil Aviation STD - certification and operations - aerodromes
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for telecommunication towers
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for street lighting
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for elevators & escalators
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guide for electrical vehicle charging facilities
SASO	SASO STD - (FULL SET)	Saudi Arabian STD org. - (full set of STD)
SEC	SEC regulations (All regulations)	Saudi Electricity Company regulations - (all regulations)
SEC	SEC SDCS (ALL STD)	Saudi Electricity Company - SEC distribution construction STD - (all STD)
SEC	SEC SDMS (All specifications)	Saudi Electricity Company - SEC distribution material specifications - (all specifications)
SEC	SEC SDPS (ALL STD)	Saudi Electricity Company - SEC distribution planning STD - (all STD)



A.15 Telecoms & data

ORG.	DESG.	TITLE
CITC	CITC regulations	Communications and Information Technology Commission - technical STD for outside plant (OSP) installations
CITC	CITC regulations	Communications and Information Technology Commission - regulatory framework on information and communications technology infrastructure deployment in new developments
CITC	CITC regulations	Communications and Information Technology Commission - rules on information and communications technology infrastructure deployment in new developments
CITC	CITC regulations	Communications and Information Technology Commission - technical STD for in-building physical infrastructure (IPI) for multi dwelling units

A.16 Security

ORG.	DESG.	TITLE
MOI	MOI - HCIS	Ministry of Interior - High Commission for Industrial Security - security directives (SEC) for industrial facilities
MOI	MOI - HCIS	Ministry of Interior - High Commission for Industrial Security - safety directives (SAF) for industrial facilities
MOI	MOI regulations	Ministry of Interior - General technical specification for CCTV system.
MOI	MOI regulations	Ministry of Interior - Security requirements and conditions for the installation of CCTV system for market, commercial complexes, hotel, recreation places and other commercial activities.

A.17 Water resources

ORG.	DESG.	TITLE
AMANA	AMANA regulations	AMANA stormwater drainage regulations
MEWA	MEWA regulations	Ministry Of Environment - water and agriculture design guidelines
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - 2014 specifications and manual of design and installation of modern irrigation systems
MOT	HDM regulations	Ministry Of Transportation - highway design manual
MOWE	MOWE regulations	Ministry Of Water and Electricity regulations

A.18 Environmental

ORG.	DESG.	TITLE
GAMEP	GAMEP - GERRI regulations	General Authority of Meteorology and Environmental Protection - General Environmental Regulations and Rules for Implementation
RCJY	RCER regulations	Royal Commission Environmental Regulations
GAMEP	GAMEP regulations	General Authority of Meteorology and Environmental Protection - General environmental regulations and rules for implementation



MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for environmental engineering municipal works
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - guidelines for environmental impact assessment of municipal works

A.19 Solid waste management

ORG.	DESG.	TITLE
GAMEP	Acceptance STD	General Authority of Meteorology and Environmental Protection - Waste acceptance criteria standard - 2012
GAMEP	Transportation STD	General Authority of Meteorology and Environmental Protection - standard on waste transportation - 2012
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - bylaw for municipal solid waste management - December 2015
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - MEMO for municipalities on the management of hazardous medical waste disposal - 2008

A.20 Geotechnical

ORG.	DESG.	TITLE
MOT	Circular No.11998	Ministry Of Transportation - Requirements for multiple stress creep recovery test (AASHTO TP70) and specification requirements (AASHTO MP19) in the contract specification relevant to Road/infrastructure project in kea
MOT	Circular No.13335/01	Ministry Of Transportation - Superpave hot asphalt mix design system
MOT	Circular no. 21683	Ministry Of Transportation - Requirements of roughness (IRI) values for pavement structures.

A.21 Mobility

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	دليل التصميم الهندسي للطرق - Ministry Of Municipal and Rural Affairs
MOMRA	MOMRA regulations	المعايير الفنية والمواصفات التنفيذية لمكونات وعناصر الطرق - Ministry Of Municipal and Rural Affairs
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Guidelines for roadway geometric design
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Guide for traffic safety engineering
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Guidelines for design of parking
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Guidelines for design review of roadway projects
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Guidelines for the design of roadway structures
MOT	MOT regulations	Ministry Of Transportation, highway design manual volume 1 & 2
MOT	MOT regulations	Ministry Of Transportation, manual and uniform traffic control devices
AMANA	AMANA regulations	AMANA trip generation manual
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide specifications for roads & roadway structures



MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide specifications for roads & roadway structures
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide for the maintenance of roadway structures & pavement

A.22 Landscape

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide for site scaping
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide for recycling of agricultural disposals
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide of plantations for soft scape in KSA
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide for greenhouses
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs – Guide for execution & maintenance of softscape

A.23 Planning & urban design

ORG.	DESG.	TITLE
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Regulations for transportation hubs & facilities
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Regulations for urban planning 1436
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Summary guide for criteria of public services planning 1436
MOMRA	MOMRA regulations	Ministry Of Municipal and Rural Affairs - Regulations for signage and urban advertisement

A.24 Fire protection

ORG.	DESG.	TITLE
GDCD - MOI	GDCD regulations	General Directorate of Civil Defense, KSA regulations



References from Saudi Building Code

The codes and standards referenced in any SBC code shall be considered part of the requirements of that code to the prescribed extent of each such reference. For codes not included in this appendix, refer to the particular code in question. Furthermore, follow the references as stated in each code.

A.25 References from Saudi Building Code – 201

Aluminium Association (AA)	
ADM1	Aluminium Design Manual: Part 1—A Specification for Aluminium Structures
ASM 35	Aluminium Sheet Metal Work in Building Construction (Fourth Edition)
American Architectural Manufacturers Association (AAMA)	
1402	Standard Specifications for Aluminium Siding, Soffit and Fascia
AAMA/WDMA/CSA	
101/I.S.2/A440	North American Fenestration Standard/Specifications for Windows, Doors and Skylights
American Concrete Institute (ACI)	
216.1	Code Requirements for Determining Fire Resistance of Concrete and Masonry Construction Assemblies
530.1	Specifications for Masonry Structures
American Institute of Steel Construction (AISC)	
341	Seismic Provisions for Structural Steel Buildings
360	Specification for Structural Steel Buildings
American Iron and Steel Institute (AISI)	
AISI S100	North American Specification for the Design of Cold-formed Steel Structural Members
AISI S110 / S1	Standard for Seismic Design of Cold-Formed Steel Structural Systems Special Moment Frames
AISI S200	North American Standard for Cold-Formed Steel Framing-General Provisions
AISI S210	North American Standard for Cold-Formed Steel Framing-Floor and Roof System Design
AISI S211 / S1	North American Standard for Cold-Formed Steel Framing-Wall Stud Design
AISI S212	North American Standard for Cold-Formed Steel Framing-Header Design
AISI S213 / S1	North American Standard for Cold-Formed Steel Framing-Lateral Design
AISI S214	North American Standard for Cold-formed Steel Framing-Truss Design
AISI S220	North American Standard for Cold-formed Steel Framing-Non-structural Members
AISI S230 / S3	Standard for Cold-formed Steel Framing-Prescriptive Method for One- and Two-family Dwellings
Automotive Lift Institute (ALI)	
ALI ALCTV	Standard for Automotive Lifts-Safety Requirements for Construction, Testing and Validation (ANSI)
Air Movement and Control Association (AMCA)	
540	Test Method for Louvers Impacted by Wind Borne Debris
American National Standards Institute (ANSI)	
A13.1	Scheme for the Identification of Piping Systems
A108.1A	Installation of Ceramic Tile in the Wet-set Method, with Portland Cement Mortar
A108.1A	Installation of Ceramic Tile, quarry Tile on a Cured Portland Cement Mortar Setting Bed with Dry-set or Latex-Portland Mortar
A108.4	Installation of Ceramic Tile with Organic Adhesives or Water-cleanable Tile-setting Epoxy Adhesive



A108.5	Installation of Ceramic Tile with Dry-set Portland Cement Mortar or Latex-Portland Cement Mortar
A108.6	Installation of Ceramic Tile with Chemical-resistant, Water Cleanable Tile-setting and -grouting Epoxy
A108.8	Installation of Ceramic Tile with Chemical-resistant Furan Resin Mortar and Grout
A108.9	Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout
A108.10	Installation of Grout in Tilework
A118.1	American National Standard Specifications for Dry-set Portland Cement Mortar
A118.3	American National Standard Specifications for Chemical-resistant, Water-cleanable Tile-setting and -grouting Epoxy and Water Cleanable Tile-setting Epoxy Adhesive
A118.4	American National Standard Specifications for Latex-Portland Cement Mortar
A118.5	American National Standard Specifications for Chemical Resistant Furan Mortar and Grouts for Tile Installation
A118.6	American National Standard Specifications for Cement Grouts for Tile Installation
A118.8	American National Standard Specifications for Modified Epoxy Emulsion Mortar/Grout
A136.1	American National Standard Specifications for Organic Adhesives for Installation of Ceramic Tile
A137.1	American National Standard Specifications for Ceramic Tile
ANSI/A 190.1	Structural Glued Laminated Timber
Z 97.1	Safety Glazing Materials Used in Buildings-Safety Performance Specifications and Methods of Test
Engineered Wood Association (APA)	
ANSI/A 190.1	Structural Glued Laminated Timber
ANSI/APA PRP 210	Standard for Performance-Rated Engineered Wood Siding
ANSI/APA PRR 410	Standard for Performance-Rated Engineered Wood Rim Boards
APA PDS	Panel Design Specification
APA PDS Supplement 1	Design and Fabrication of Plywood Curved Panels
APA PDS Supplement 2	Design and Fabrication of Plywood-lumber Beams
APA PDS Supplement 3	Design and Fabrication of Plywood Stressed-skin Panels
APA PDS Supplement 4	Design and Fabrication of Plywood Sandwich Panels
APA PDS Supplement 5	Design and Fabrication of All-plywood Beams
APA PRG 320	Standard for Performance-Rated Cross-Laminated Timber
EWS R540	Builders Tips: Proper Storage and Handling of Glulam Beams
EWS S475	Glued Laminated Beam Design Tables
EWS S560	Field Notching and Drilling of Glued Laminated Timber Beams
EWS T300	Glulam Connection Details
EWS X440	Product Guide-Glulam
EWS X450	Glulam in Residential Construction-Western Edition
American Society of Agricultural and Biological Engineers (ASABE)	
EP 484.2	Diaphragm Design of Metal-clad, Wood-frame Rectangular Buildings
EP 486.2	Shallow-post and Pier Foundation Design
EP 559.1 W/Corr.1	Design Requirements and Bending Properties for Mechanically Laminated Wood Assemblies
American Society of Civil Engineers Structural Engineering Institute (ASABE/SEI)	
5	Building Code Requirements for Masonry Structures
6	Specification for Masonry Structures



7	Minimum Design Loads for Buildings and Other Structures with Supplement No. 1
8	Standard Specification for the Design of Cold-formed Stainless Steel Structural Members
19	Structural Applications of Steel Cables for Buildings
24	Flood Resistant Design and Construction
29	Standard Calculation Methods for Structural Fire Protection
32	Design and Construction of Frost Protected Shallow Foundations
49	Wind Tunnel Testing for Buildings and Other Structures
55	Tensile Membrane Structures
American Society of Mechanical Engineers (ASME)	
ASME/A17.1 /CSA B44	Safety Code for Elevators and Escalators
A17.7/ CSA B44	Performance-Based Safety Code for Elevators and Escalators
A18.1	Safety Standard for Platform Lifts and Stairway Chairlifts
A90.1	Safety Standard for Belt Manlifts
B16.18	Cast Copper Alloy Solder Joint Pressure Fittings
B16.22	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
B20.1	Safety Standard for Conveyors and Related Equipment
B31.3	Process Piping
American Society of Safety Engineers (ASSE)	
ANSI/ASSE Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, Part of the Fall Protection Code
ASTM	
A6/A6M	Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes and Sheet
A36/A36M	Specification for Carbon Structural Steel
A153/A153M	Specification for Zinc Coating (Hot-dip) on Iron and Steel Hardware
A240/A240M	Standard Specification for Chromium and Chromium-nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications
A252	Specification for Welded and Seamless Steel Pipe Piles
A283/A283M	Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
A416/A416M	Specification for Steel Strand, Uncoated Seven-wire for Pre-stressed Concrete
A463/A463M	Standard Specification for Steel Sheet, Aluminum-coated, by the Hot-dip Process
A572/A572M	Specification for High-strength Low-alloy Columbium-Vanadium Structural Steel
A588/A588M	Specification for High-strength Low-alloy Structural Steel with 50 KSI (345 MPa) Minimum Yield Point with Atmospheric Corrosion Resistance
A615/A615M	Specification for Deformed and Plain Billet-steel Bars for Concrete Reinforcement
A653/A653M	Specification for Steel Sheet, Zinc-coated Galvanized or Zinc-iron Alloy-coated Galvannealed by the Hot-dip Process
A690/A690M	Standard Specification for High-strength Low-alloy Nickel, Copper, Phosphorus Steel H-piles and Sheet Piling with Atmospheric Corrosion Resistance for Use in Marine Environments
A706/A706M	Specification for Low-alloy Steel Deformed and Plain Bars for Concrete Reinforcement
A722/A722M	Specification for Uncoated High-strength Steel Bar for Pre-stressing Concrete
A755/A755M	Specification for Steel Sheet, Metallic-coated by the Hot-dip Process and Pre-painted by the Coil-coating Process for Exterior Exposed Building Products
A792/A792M	Specification for Steel Sheet, 55% Aluminum-zinc Alloy-coated by the Hot-dip Process
A875/A875M	Standard Specification for Steel Sheet Zinc-5 percent, Aluminum Alloy-coated by the Hot-dip Process



A924/A924M	Standard Specification for General Requirements for Steel Sheet, Metallic-coated by the Hot-dip Process
B42	Specification for Seamless Copper Pipe, Standard Sizes
B43	Specification for Seamless Red Brass Pipe, Standard Sizes
B68	Specification for Seamless Copper Tube, Bright Annealed (Metric)
B88	Specification for Seamless Copper Water Tube
B101	Specification for Lead-coated Copper Sheet and Strip for Building Construction
B209	Specification for Aluminum and Aluminum Alloy Steel and Plate
B251	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube
B280	Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service
B370	Specification for Copper Sheet and Strip for Building Construction
B695	Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel Strip for Building Construction
C5	Specification for Quicklime for Structural Purposes
C22/C22M	Specification for Gypsum
C27	Specification for Classification of Fireclay and High-alumina Refractory Brick
C28/C28M	Specification for Gypsum Plasters
C31/C31M	Practice for Making and Curing Concrete Test Specimens in the Field
C33/C33M	Specification for Concrete Aggregates
C35/C35M	Specification for Inorganic Aggregates for Use in Gypsum Plaster
C55	Specification for Concrete Building Brick
C59/C59M	Specification for Gypsum Casting Plaster and Molding Plaster
C61/C61M	Specification for Gypsum Keene's Cement
C62	Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
C67	Test Methods of Sampling and Testing Brick and Structural Clay Tile
C73	Specification for Calcium Silicate Brick (Sand-lime Brick)
C90	Specification for Loadbearing Concrete Masonry Units
C91	Specification for Masonry Cement
C94/C94M	Specification for Ready-Mixed Concrete
C140	Test Method Sampling and Testing Concrete Masonry Units and Related Units
C150	Specification for Portland Cement
C172/C172M	Practice for Sampling Freshly Mixed Concrete
C199	Test Method for Pier Test for Refractory Mortars
C206	Specification for Finishing Hydrated Lime
C208	Specification for Cellulosic Fiber Insulating Board
C216	Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)
C270	Specification for Mortar for Unit Masonry
C315	Specification for Clay Flue Liners and Chimney Pots
C317/C317M	Specification for Gypsum Concrete
C330/C330M	Specification for Lightweight Aggregates for Structural Concrete
C331/C331M	Specification for Lightweight Aggregates for Concrete Masonry Units
C406/C406M	Specification for Roofing Slate
C472	Specification for Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete
C473	Test Method for Physical Testing of Gypsum Panel Products
C474	Test Methods for Joint Treatment Materials for Gypsum Board Construction
C475/C475M	Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
C514	Specification for Nails for the Application of Gypsum Board
C516	Specifications for Vermiculite Loose Fill Thermal Insulation
C547	Specification for Mineral Fiber Pipe Insulation
C549	Specification for Perlite Loose Fill Insulation



C552	Standard Specification for Cellular Glass Thermal Insulation
C557	Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing
C578	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
C587	Specification for Gypsum Veneer Plaster
C595/C595	Specification for Blended Hydraulic Cements
C631	Specification for Bonding Compounds for Interior Gypsum Plastering
C635/C635M	Specification for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
C636/C636M	Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels
C645	Specification for Nonstructural Steel Framing Members
C652	Specification for Hollow Brick (Hollow Masonry Units Made from Clay or Shale)
C726	Standard Specification for Mineral Roof Insulation Board
C728	Standard Specification for Perlite Thermal Insulation Board
C744	Specification for Prefaced Concrete and Calcium Silicate Masonry Units
C754	Specification for Installation of Steel Framing Members to Receive Screw-attached Gypsum Panel Products
C836/C836M	Specification for High-solids Content, Cold Liquid-applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
C840	Specification for Application and Finishing of Gypsum Board
C841	Specification for Installation of Interior Lathing and Furring
C842	Specification for Application of Interior Gypsum Plaster
C843	Specification for Application of Gypsum Veneer Plaster
C844	Specification for Application of Gypsum Base to Receive Gypsum Veneer Plaster
C847	Specification for Metal Lath
C887	Specification for Packaged, Dry Combined Materials for Surface Bonding Mortar
C897	Specification for Aggregate for Job-Mixed Portland Cement-based Plaster
C920	Standard for Specification for Elastomeric Joint Sealants
C926	Specification for Application of Portland Cement-based Plaster
C932	Specification for Surface-applied Bonding Compounds for Exterior Plastering
C933	Specification for Welded Wire Lath
C946	Specification for Construction of Dry-stacked, Surface-bonded Walls
C954	Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 1 to 3 mm in Thickness
C955	Standard Specification for Load-bearing Transverse and Axial Steel Studs, Runners Tracks, and Bracing or Bridging, for Screw Application of Gypsum Panel Products and Metal Plaster Bases
C956	Specification for Installation of Cast-in-place Reinforced Gypsum Concrete
C957	Specification for High-solids Content, Cold Liquid-applied Elastomeric Waterproofing Membrane with Integral Wearing Surface
C1002	Specification for Steel Self-piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
C1007	Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories
C1029	Specification for Spray-applied Rigid Cellular Polyurethane Thermal Insulation
C1032	Specification for Woven Wire Plaster Base
C1047	Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base
C1063	Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-based Plaster
C1088	Specification for Thin Veneer Brick Units Made from Clay or Shale



C1157/C1157M	Standard Performance Specification for Hydraulic Cement
C1167—11	Specification for Clay Roof Tiles
C1177/C1177M	Specification for Glass Mat Gypsum Substrate for Use as Sheathing
C1178/C1178M	Specification for Coated Mat Water-resistant Gypsum Backing Panel
C1186	Specification for Flat Fiber Cement Sheets
C1261	Specification for Firebox Brick for Residential Fireplaces
C1278M	Specification for Fiber-reinforced Gypsum Panels
C1280	Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing
C1283	Practice for Installing Clay Flue Lining
C1288	Standard Specification for Discrete Non-asbestos Fiber-cement Interior Substrate Sheets
C1289	Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
C1313/C1313M	Standard Specification for Sheet Radiant Barriers for Building Construction Applications
C1325	Standard Specification for Non-asbestos Fiber-mat Reinforced Cement Backer Units
C1328/C1328M	Specification for Plastic (Stucco Cement)
C1364	Standard Specification for Architectural Cast Stone
C1386	Specification for Precast Autoclaved Aerated Concrete (AAC) Wall Construction Units
C1396M/C1396M	Specification for Gypsum Board
C1492	Standard Specification for Concrete Roof Tile
C1600/C 1600M	Standard Specification for Rapid Hardening Hydraulic Cement
C1629/ C1629M	Standard Classification for Abuse-resistant Non-decorated Interior Gypsum Panel Products and Fiber-reinforced Cement Panels
C1658/C1658M	Standard Specification for Glass Mat Gypsum Panels
D25	Specification for Round Timber Piles
D41	Specification for Asphalt Primer Used in Roofing, Dampproofing and Waterproofing
D43	Specification for Coal Tar Primer Used in Roofing, Dampproofing and Waterproofing
D56	Test Method for Flash Point By Tag Closed Tester
D86	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
D93	Test Method for Flash Point By Pensky-Martens Closed Cup Tester
D225	Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules
D226/D226M	Specification for Asphalt-saturated Organic Felt Used in Roofing and Waterproofing
D227/D227M	Specification for Coal-tar-saturated Organic Felt Used in Roofing and Waterproofing
D312	Specification for Asphalt Used in Roofing
D422	Test Method for Particle-size Analysis of Soils
D448	Standard Classification for Sizes of Aggregate for Road and Bridge Construction
D450	Specification for Coal-tar Pitch Used in Roofing, Dampproofing and Waterproofing
D635	Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
D1143/D1143M	Test Method for Piles Under Static Axial Compressive Load
D1227	Specification for Emulsified Asphalt Used as a Protective Coating for Roofing
D1557	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort [2,700 KN m/m ³]
D1863/D1863M	Specification for Mineral Aggregate Used on Built-up Roofs
D1929	Test Method for Determining Ignition Temperature of Plastics



D1970/D1970M	Specification for Self-adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roof Underlayment for Ice Dam Protection
D2178	Specification for Asphalt Glass Felt Used in Roofing and Waterproofing
D2487	Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
D2626/D2626M	Specification for Asphalt Saturated and Coated Organic Felt Base Sheet Used in Roofing
D2822/D2822M	Specification for Asphalt Roof Cement, Asbestos Containing
D2823/D2823M	Specification for Asphalt Roof Cement, Asbestos Containing
D2824	Standard Specification for Aluminum-Pigmented Asphalt Roof Coating, Non-fibered, Asbestos Fibered and Fibered without Asbestos
D2843	Test for Density of Smoke from the Burning or Decomposition of Plastics
D2859	Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
D2898	Test Methods for Accelerated Weathering of Fire-retardant-treated Wood for Fire Testing
D3019	Specification for Lap Cement Used with Asphalt Roll Roofing, Nonfibered, Asbestos Fibered and Nonasbestos Fibered
D3161/D3161M	Test Method for a Wind Resistance of Asphalt Shingles (Fan Induced Method)
D3200	Standard Specification and Test Method for Establishing Recommended Design Stresses for Round Timber Construction Poles
D3201	Test Method for Hygroscopic Properties of Fire-retardant-treated Wood and Wood-based Products
D3278	Test Methods for Flash Point of Liquids by Small Scale Closed-cup Apparatus
D3462/D3462M	Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
D3468	Specification for Liquid-applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing
D3679	Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding
D3689	Test Methods for Deep Foundations Under Static Axial Tensile Load
D3737	Practice for Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)
D3746	Test Method for Impact Resistance of Bituminous Roofing Systems
D3747	Specification for Emulsified Asphalt Adhesive for Adhering Roof Insulation
D3909/ D3909M	Specification for Asphalt Roll Roofing (Glass Felt) Surfaced with Mineral Granules
D3957	Standard Practices for Establishing Stress Grades for Structural Members Used in Log Buildings
D4022/D4022M	Specification for Coal Tar Roof Cement, Asbestos Containing
D4272	Test Method for Total Energy Impact of Plastic Films by Dart Drop
D4318	Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils
D4434/D4434M	Specification for Poly (Vinyl Chloride) Sheet Roofing
D4479/D4479M	Specification for Asphalt Roof Coatings-Asbestos-free
D4586/D4586M	Specification for Asphalt Roof Cement-Asbestos-free
D4601/D4601M	Specification for Asphalt-coated Glass Fiber Base Sheet Used in Roofing
D4637/D4637M	Specification for EPDM Sheet Used in Single-ply Roof Membrane
D4829	Test Method for Expansion Index of Soils
D4869/D4869M	Specification for Asphalt-saturated (Organic Felt) Underlayment Used in Steep Slope Roofing
D4897/D4897M	Specification for Asphalt-coated Glass Fiber Venting Base Sheet Used in Roofing
D4945	Test Method for High-strain Dynamic Testing of Piles
D4990	Specification for Coal Tar Glass Felt Used in Roofing and Waterproofing
D5019	Specification for Reinforced Non-vulcanized Polymeric Sheet Used in Roofing Membrane



D5055	Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-joists
D5456	Specification for Evaluation of Structural Composite Lumber Products
D5516	Test Method of Evaluating the Flexural Properties of Fire-retardant treated Softwood Plywood Exposed to the Elevated Temperatures
D5643/D5643M	Specification for Coal Tar Roof Cement, Asbestos-free
D5664	Test Methods for Evaluating the Effects of Fire-retardant Treatment and Elevated Temperatures on Strength Properties of Fire-retardant treated Lumber
D5665	Specification for Thermoplastic Fabrics Used in Cold-applied Roofing and Waterproofing
D5726	Specification for Thermoplastic Fabrics Used in Hot-applied Roofing and Waterproofing
D6083	Specification for Liquid Applied Acrylic Coating Used in Roofing
D6162	Specification for Styrene-Butadiene-Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
D6163	Specification for Styrene-butadiene-styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements
D6164/D6164M	Specification for Styrene-Butadiene-Styrene (SBS) Modified Bituminous Sheet Metal Materials Using Polyester Reinforcements
D6222/D6222M	Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements
D6223/D6223M	Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
D6298	Specification for Fiberglass Reinforced Styrene-butadiene-styrene (SBS) Modified Bituminous Sheets with a Factory Applied Metal Surface
D6305	Practice for Calculating Bending Strength Design Adjustment Factors for Fire-retardant-treated Plywood Roof Sheathing
D6380	Standard Specification for Asphalt Roll Roofing (Organic) Felt
D6509/D6509M	Standard Specification for Atactic Polypropylene (APP) Modified Bituminous base Sheet Materials Using Glass Fiber Reinforcements
D6694	Standard Specification for Liquid-applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems
D6754/D6745M	Standard Specification for Ketone Ethylene Ester Based Sheet Roofing
D6757	Standard Specification for Underlayment for Use with Steep Slope Roofing
D6841	Standard Practice for Calculating Design Value Treatment Adjustment Factors for Fire-retardant-treated Lumber
D6878/D6878M	Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing
D6947	Standard Specification for Liquid Applied Moisture Cured Polyurethane Coating Used in Spray Polyurethane Foam Roofing System
D7032	Standard Specification for Establishing Performance Ratings for Wood, Plastic Composite Deck Boards and Guardrail Systems (Guards or Rails)
D7147	Specification for Testing and Establishing Allowable Loads of Joist Hangers
D7158/D7158M	Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method)
D7254	Standard Specification for polypropylene (PP) siding
D7655	Standard Classification for Size of Aggregate Used as Ballast for Roof Membrane Systems
D7672	Standard Specification for Evaluating Structural Capacities of Rim Board Products and Assemblies
E84	Test Methods for Surface Burning Characteristics of Building Materials
E90	Test Method for Laboratory Measurement of Air-borne Sound Transmission Loss of Building Partitions and Elements
E96/E96M	Test Method for Water Vapor Transmission of Materials
E108	Test Methods for Fire Tests of Roof Coverings
E119	Standard Test Methods for Fire Tests of Building Construction and Materials
E136	Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C



E283	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows Curtain Walls, and Doors Under Specified Pressure Difference Across the Specimen
E330	Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
E331	Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
E492	Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-ceiling Assemblies Using the Tapping Machine
E605	Test Method for Thickness and Density of Sprayed Fire-resistive Material (SFRM) Applied to Structural Members
E681	Test Methods for Concentration Limits of Flammability of Chemical Vapors and Gases
E736	Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
E814	Test Method of Fire Tests of Through-penetration Firestops
E970	Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source
E1300	Practice for Determining Load Resistance of Glass in Buildings
E1354	Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
E1592	Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
E1602	Guide for Construction of Solid Fuel-burning Masonry Heaters
E1886	Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missiles and Exposed to Cyclic Pressure Differentials
E1966	Test Method for Fire-resistant Joint Systems
E1996	Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
E2072	Standard Specification for Photoluminescent (Phosphorescent) Safety Markings
E2174	Standard Practice for On-Site Inspection of Installed Firestops
E2178	Standard Test Method for Air Permeance of Building Materials
E2273	Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
E2307	Standard Test Method for Determining Fire Resistance of a Perimeter Joint System Between an Exterior Wall Assembly and Floor Assembly Using the Intermediate-scale, Multistory Test Apparatus
E2393	Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barrier
E2397	Standard Practice for Determination of Dead Loads and Live Loads Associated with Green Roof Systems
E2404	Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics
E2556	Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment
E2568	Standard Specification for PB Exterior Insulation and Finish Systems
E2570	Standard Test Method for Evaluating Water-resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) for EIFS with Drainage
E2573	Standard Practice for Specimen Preparation and Mounting of Site-fabricated Stretch Systems to Assess Surface Burning Characteristics
E2599	Standard Practice for Specimen Preparation and Mounting of Reflective Insulation Materials and Vinyl Stretch Ceiling Materials for Building Applications to Assess Surface Burning Characteristics
E2634	Standard Specification for Flat Wall Insulating Concrete Form (ICF) Systems



E2751	Standard Practice for Design and Performance of Supported Glass Walkways
F547	Terminology of Nails for Use with Wood and Wood-based Materials
F1667	Specification for Driven Fasteners: Nails, Spikes and Staples
F2006	Standard/Safety Specification for Window Fall Prevention Devices for Nonemergency Escape (Egress) and Rescue (Ingress) Windows
F2090	Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms
F2200	Standard Specification for Automated Vehicular Gate Construction
G152	Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
G154	Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials
G155	Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
American Wood Council (AWC)	
AWC WCD No. 4	Wood Construction Data-Plank and Beam Framing for Residential Buildings
AWC WFCM	Wood Frame Construction Manual for One- and Two-Family Dwellings
ANSI/AWC NDS	National Design Specification (NDS) for Wood Construction with 2015 NDS Supplement
AWC STJR	Span Tables for Joists and Rafters
ANSI/AWC PWF	Permanent Wood Foundation Design Specification
AWC SDPWS	Special Design Provisions for Wind and Seismic
Association of the Wall and Ceiling Industry (AWCI)	
12-B	Technical Manual 12-B Standard Practice for the Testing and Inspection of Field Applied Thin Film Intumescent Fire-resistive Materials; an Annotated Guide, Second Edition
American Wood Protection Association (AWPA)	
C1	All Timber Products-Preservative Treatment by Pressure Processes
M4	Standard for the Care of Preservative-treated Wood Products
U1	USE CATEGORY SYSTEM: User Specification for Treated Wood Except Section 6, Commodity Specification H
American Welding Society (AWS)	
D1.4/D1.4M	Structural Welding Code-Reinforcing Steel Including Metal Inserts and Connections In Reinforced Concrete Construction
Builders Hardware Manufacturers' Association (BHMA)	
A 156.10	Power Operated Pedestrian Doors
A 156.19	Standard for Power Assist and Low Energy Operated Doors
A 156.27	Power and Manual Operated Revolving Pedestrian Doors
European Committee for Standardization (CEN)	
EN 1081	Resilient Floor Coverings—Determination of the Electrical Resistance
BS EN 15250	Slow Heat Release Appliances Fired By Solid Fuel Requirements and Test Methods
Canadian General Standards Board (CGSB)	
37-GP-52M	Roofing and Waterproofing Membrane, Sheet Applied, Elastomeric
37-GP-56M	Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing
CAN/CGSB 37.54	Polyvinyl Chloride Roofing and Waterproofing Membrane
Composite Panel Association (CPA)	
ANSI A135.4	Basic Hardboard
ANSI A135.5	Prefinished Hardboard Paneling
ANSI A135.6	Engineered Wood Siding
A208.1	Particleboard
Consumer Product Safety Commission (CPSC)	
16 CFR Part 1201	Safety Standard for Architectural Glazing Material
16 CFR Part 1209	Interim Safety Standard for Cellulose Insulation
16 CFR Part 1404	Cellulose Insulation
16 CFR Part 1500	Hazardous Substances and Articles; Administration and Enforcement Regulations



16 CFR Part 1500.44	Method for Determining Extremely Flammable and Flammable Solids
16 CFR Part 1507	Fireworks Devices
16 CFR Part 1630	Standard for the Surface Flammability of Carpets and Rugs
Canadian Standards Association (CSA)	
AAMA/WDMA/CSA 101/I.S.2/A440	Specifications for Windows, Doors and Unit Skylights
Cedar Shake and Shingle Bureau (CSSB)	
CSSB	Grading and Packing Rules for Western Red Cedar Shakes and Western Red Shingles of the Cedar Shake and Shingle Bureau
Door and Access Systems Manufacturers Association (DASMA)	
ANSI/DASMA 107	Room Fire Test Standard for Garage Doors Using Foam Plastic Insulation
108	Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference
115	Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind Pressure
U.S. Department of Commerce (DOC)	
PS-1	Structural Plywood
PS-2	Performance Standard for Wood-based Structural-use Panels
PS 20	American Softwood Lumber Standard
U.S. Department of Labor (DOL)	
29 CFR Part 1910.1000	Air Contaminants
U.S. Department of Transportation (DOTn)	
49 CFR Parts 100-185	Hazardous Materials Regulations
49 CFR Parts 173.137	Shippers-General Requirements for Shipments and Packaging-Class 8-Assignment of Packing Group
49 CFR	Specification of Transportation of Explosive and Other Dangerous Articles, UN 0335, UN 0336 Shipping Containers
Federal Emergency Management Agency (FEMA)	
FEMA-TB-11	Crawlspace Construction for Buildings Located in Special Flood Hazard Areas
Factory Mutual (FM)	
4430	Approval Standard for Heat and Smoke Vents
4470	Approval Standard for Single-Ply Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) And Liquid Applied Roof Assemblies for use in Class 1 and Non-combustible Roof Deck Construction
4474	American National Standard for Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures
4880	Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems
Gypsum Association (GA)	
GA 216	Application and Finishing of Gypsum Panel Products
GA 600	Fire-Resistance Design Manual, 20th Edition
Hardwood Plywood Veneer Association (HPVA)	
HP-1	Standard for Hardwood and Decorative Plywood
International Code Council (ICC)	
ICC A117.1	Accessible and Usable Buildings and Facilities
ICC 300	ICC Standard on Bleachers, Folding and Telescopic Seating and Grandstands
ICC 400	Standard on Design and Construction of Log Structures
ICC 500	ICC/NSSA Standard on the Design and Construction of Storm Shelters
ICC 600	Standard for Residential Construction in High-wind Regions



IEBC	International Existing Building Code®
IECC	International Energy Conservation Code®
IFC	International Fire Code®
IFGC	International Fuel Gas Code®
IMC	International Mechanical Code®
IPC	International Plumbing Code®
IPMC	International Property Maintenance Code®
IPSDC	International Private Sewage Disposal Code®
IRC	International Residential Code®
IWUIC	International Wildland-Urban Interface Code®
SBCCI SSTD 11	Test Standard for Determining Wind Resistance of Concrete or Clay Roof Tiles
International Organization (ISO)	
ISO 8115	Cotton Bales—Dimensions and Density
ISO 8336	Fiber-Cement Flat Sheets - Product Specification and Test Methods
Material Handling Institute (MHI)	
ANSI MH29.1	Safety Requirements for Industrial Scissors Lifts
National Association of Architectural Metal Manufacturers (NAAMM)	
FP 1001	Guide Specifications for Design of Metal Flag Poles
National Concrete Masonry Association (NCMA)	
TEK 5	Details for Concrete Masonry Fire Walls
National Fire Protection Association (NFPA)	
10	Standard for Portable Fire Extinguishers
11	Standard for Low Expansion Foam
12	Standard on Carbon Dioxide Extinguishing Systems
12A	Standard on Halon 1301 Fire Extinguishing Systems
13	Installation of Sprinkler Systems
13D	Standard for the Installation of Sprinkler Systems in One- and Two family Dwellings and Manufactured Homes
13R	Standard for the Installation of Sprinkler Systems in Low Rise Residential Occupancies
14	Standard for the Installation of Standpipe and Hose System
16	Standard for the Installation of Foam-water Sprinkler and Foam water Spray Systems
17	Standard for Dry Chemical Extinguishing Systems
17A	Standard for Wet Chemical Extinguishing Systems
20	Standard for the Installation of Stationary Pumps for Fire Protection
30	Flammable and Combustible Liquids Code
31	Standard for the Installation of Oil-burning Equipment
32	Standard for Dry Cleaning Plants
40	Standard for the Storage and Handling of Cellulose Nitrate Film
58	Liquefied Petroleum Gas Code
61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Product Facilities
70	National Electrical Code
72	National Fire Alarm and Signaling Code
80	Standard for Fire Doors and Other Opening Protectives
82	Standard on Incinerators and Waste and Linen Handling Systems and Equipment
85	Boiler and Combustion System Hazards Code
92	Standard for Smoke Control Systems
99	Health Care Facilities Code
101	Life Safety Code
105	Standard for Smoke Door Assemblies and Other Opening Protectives
110	Standard for Emergency and Standby Power Systems
111	Standard on Stored Electrical Energy Emergency and Standby Power Systems
120	Standard for Fire Prevention and Control in Coal Mines



170	Standard for Fire Safety and Emergency Symbols
211	Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
221	Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls
252	Standard Methods of Fire Tests of Door Assemblies
253	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
257	Standard for Fire Test for Window and Glass Block Assemblies
259	Standard Test Method for Potential Heat of Building Materials
265	Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings on Full Height Panels and Walls
268	Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source
275	Standard Method of Fire Tests for the Evaluation of Thermal Barriers
276	Standard Method of Fire Tests for Determining the Heat Release Rate of Roofing Assemblies With Combustible Above-Deck Roofing Components
285	Standard Fire Test Method for the Evaluation of Fire Propagation Characteristics of Exterior Nonload-bearing Wall Assemblies Containing Combustible Components
286	Standard Methods of Fire Test for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
288	Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal in Fire-resistance-rated Floor Systems
289	Standard Method of Fire Test for Individual Fuel Packages
409	Standard for Aircraft Hangars
418	Standard for Heliports
484	Standard for Combustible Metals
654	Standard for the Prevention of Fire & Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids
655	Standard for the Prevention of Sulfur Fires and Explosions
664	Standard for the Prevention of Fires and Explosions in Wood Processing and Wood-working Facilities
701	Standard Method of Fire Tests for Flame-Propagation of Textiles and Films
704	Standard System for the Identification of the Hazards of Materials for Emergency Response
720	Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment
750	Standard on Water Mist Fire Protection Systems
1124	Code for the Manufacture, Transportation and Storage of Fireworks and Pyrotechnic Articles
2001	Standard on Clean Agent Fire Extinguishing Systems
Precast Prestressed Concrete Institute (PCI)	
MNL 124	Design for Fire Resistance of Precast Prestressed Concrete
MNL 128	Recommended Practice for Glass Fiber Reinforced Concrete Panels
Post-Tensioning Institute (PTI)	
PTI DC—10.5	Standard Requirements for Design and Analysis of Shallow Concrete Foundations on Expansive Soils
Rack Manufacturers Institute (RMI)	
ANSI/MH16.1	Specification for Design, Testing and Utilization of Industrial Steel Storage Racks
Structural Building Components Association (SBCA)	
ANSI/FS 100	Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies
Steel Deck Institute (SDI)	
ANSI/NC1.0	Standard for Non-composite Steel Floor Deck
ANSI/RD1.0	Standard for Steel Roof Deck
SDI-C	Standard for Composite Steel Floor Deck Slabs



SDI-QA/QC	Standard for Quality Control and Quality Assurance for Installation of Steel Deck
Steel Joist Institute (SJI)	
CJ	Standard Specification for Composite Steel Joists
JG	Standard Specification for Joist Girders
K	Standard Specification for Open Web Steel Joists
LH/DLH	Standard Specification for Long span Steel Joists and Deep Long span Steel Joists
Single-Ply Roofing Institute (SPRI)	
ANSI/SPRI/FM4435-ES-1	Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems
ANSI/SPRI RP-4	Wind Design Guide for Ballasted Single-ply Roofing Systems
ANSI/SPRI VF1	External Fire Design Standard for Vegetative Roofs
Telecommunications Industry Association (TIA)	
222-G	Structural Standards for Antenna Supporting Structures and Antennas
The Masonry Society (TMS)	
216	Standard Method for Determining Fire Resistance of Concrete and Masonry Construction Assemblies
302	Standard Method for Determining the Sound Transmission Class Rating for Masonry Walls
402	Building Code for Masonry Structures
403	Direct Design Handbook for Masonry Structures
602	Specification for Masonry Structures
Truss Plate Institute (TPI)	
TPI 1	National Design Standard for Metal-plate-connected Wood Truss Construction
UL LLC (UL)	
9	Fire Tests of Window Assemblies
10A	Tin Clad Fire Doors
10B	Fire Tests of Door Assemblies
10C	Positive Pressure Fire Tests of Door Assemblies
14B	Sliding Hardware for Standard Horizontally mounted Tin Clad Fire Doors
14C	Swinging Hardware for Standard Tin Clad Fire Doors Mounted Singly and in Pairs
55A	Materials for Built-Up Roof Coverings
103	Factory-built Chimneys, for Residential Type and Building Heating Appliances
127	Factory-built Fireplaces
199E	Outline of Investigation for Fire Testing of Sprinklers and Water Spray Nozzles for Protection of Deep Fat Fryers
217	Single and Multiple Station Smoke Alarms
263	Standard for Fire Tests of Building Construction and Materials
268	Smoke Detectors for Fire Alarm Systems
294	Access Control System Units
300	Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment
300A	Outline of Investigation for Extinguishing System Units for Residential Range Top Cooking Surfaces
305	Panic Hardware
325	Door, Drapery, Gate, Louver and Window Operations and Systems
555	Fire Dampers
555C	Ceiling Dampers
555S	Smoke Dampers
580	Test for Uplift Resistance of Roof Assemblies
641	Type L Low-temperature Venting Systems
710B	Recirculating Systems
723	Standard for Test for Surface Burning Characteristics of Building Materials
790	Standard Test Methods for Fire Tests of Roof Coverings



793	Standards for Automatically Operated Roof Vents for Smoke and Heat
864	Standards for Control Units and Accessories for Fire Alarm Systems
924	Standard for Safety Emergency Lighting and Power Equipment
1040	Fire Test of Insulated Wall Construction
1256	Fire Test of Roof Deck Construction
1479	Fire Tests of Through-penetration Firestops
1482	Solid-Fuel-type Room Heaters
1703	Flat-Plate Photovoltaic Modules and Panels
1715	Fire Test of Interior Finish Material
1777	Chimney Liners
1784	Air Leakage Tests of Door Assemblies
1897	Uplift Tests for Roof Covering Systems
1975	Fire Test of Foamed Plastics Used for Decorative Purposes
1994	Luminous Egress Path Marking Systems
2017	Standards for General-purpose Signaling Devices and Systems
2034	Standard for Single- and Multiple-Station Carbon Monoxide Alarm
2075	Standard for Gas and Vapor Detectors and Sensors
2079	Tests for Fire Resistance of Building Joint Systems
2196	Tests for Fire Resistive Cables
2200	Stationary Engine Generator Assemblies
Underwriters Laboratories of Canada (ULC)	
CAN/ULC S 102.2	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies
United States Code (USC)	
18 USC Part 1,	Importation, Manufacture, Distribution and Storage of Explosive Materials
Ch.40	
West Coast Lumber Inspection Bureau (WCLIB)	
AITC Technical	Calculation of Fire Resistance of Glued Laminated Timbers
Note 7	
AITC 104	Typical Construction Details
AITC 110	Standard Appearance Grades for Structural Glued Laminated Timber
AITC 113	Standard for Dimensions of Structural Glued Laminated Timber
AITC 117	Standard Specifications for Structural Glued Laminated Timber of Softwood Species
AITC 119	Standard Specifications for Structural Glued Laminated Timber of Hardwood Species
AITC 200	Manufacturing Quality Control Systems Manual for Structural Glued Laminated Timber
Window and Door Manufacturers Association (WDMA)	
AAMA/WDMA/CSA	Specifications for Windows, Doors and Unit Skylights
101/I.S.2/A440	
Wire Reinforcement Institute (WRI)	
WRI/CRSI	Design of Slab-on-ground Foundations

A.26 References from Saudi Building Code – 301

American Architectural Manufacturers Association (AAMA)	
AAMA 501.6	Recommended Dynamic Test Method for Determining the Seismic Drift Causing Glass Fallout from a Wall System
American Concrete Institute (ACI)	
ACI 307	Code Requirements for Reinforced Concrete Chimneys and Commentary
ACI 355.2	Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary
ACI 313	Standard Practice for the Design and Construction of Concrete Silos and Stacking Tubes for Storing Granular Materials
ACI 371R	Guide to the Analysis, Design, and Construction of Concrete-Pedestal Water Towers



ACI 350.3	Standard Practice for the Seismic Design of Liquid-Containing Concrete Structures
Special Design Provisions for Wind and Seismic (AWC SDPWS)	
AWC SDPWS-08	Previously AF&PA SDPWS-08
American Institute of Steel Construction (AISC)	
ANSI/AISC 360	Specification for Structural Steel Buildings
ANSI/AISC 341	Seismic Provisions for Structural Steel Buildings
American Iron and Steel Institute (AISI)	
ANSI/AISI S100	North American Specification for the Design of Cold-Formed Steel Structural Members
ANSI/AISI S110	Standard for Seismic Design of Cold-Formed Steel Structural Systems—Special Bolted Moment Frames
ANSI/AISI S213	North American Standard for Cold-Formed Steel Framing—Lateral Design
American Petroleum Institute (API)	
API 12B	Specification for Bolted Tanks for Storage of Production Liquids
API 620	Design and Construction of Large, Welded, Low Pressure Storage Tanks
API 650	Welded Steel Tanks for Oil Storage
API 653	Tank Inspection, Repair, Alteration, and Reconstruction
American Society of Civil Engineers; Structural Engineering Institute (ASCE/SEI)	
ASCE 4	Seismic Analysis of Safety-Related Nuclear Structures
American Society of Mechanical Engineers (ASME)	
ASME A17.1	Safety Standard for Elevators and Escalators
ASME B31.1	Power Piping
ASME B31.3	Process Piping
ASME B31.4	Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
ASME B31.5	Refrigeration Piping and Heat Transfer Components
ASME B31.8	Gas Transmission and Distribution Piping Systems
ASME B31.9	Building Services Piping
ASME B31.11	Slurry Transportation Piping Systems
ASME B31.12	Hydrogen Piping and Pipelines
ASME B31Ea	Standard for the Seismic Design and Retrofit of Above-Ground Piping Systems
ASME BPVC-I	Rules for Construction of Power Boilers
ASME BPVC-IV	Rules for Construction of Heating Boilers
ASME BPVC-VIII	Rules for Construction of Pressure Vessels
Division 1	
ASME BPVC-VIII	Rules for Construction of Pressure Vessels, Alternative Rules
Division 2	
ASME BPVC-VIII	Rules for Construction of Pressure Vessels, Alternative Rules for
Division 3	Construction of High Pressure Vessels
ASTM International	
ASTM A 108	Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
ASTM A 307	Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength
ASTM A 500	Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A 653	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A706/A706M	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM C635	Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
ASTM C636	Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels
ASTM D1586	Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils
ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil



ASTM D2216	Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D2850	Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils
ASTM D4318	Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM E 580	Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions
American Water Works Association (AWWA)	
AWWA D100-05	Welded Steel Tanks for Water Storage
AWWA D103	Factory-Coated Bolted Steel Tanks for Water Storage
AWWA D110	Wire- and Strand-Wound Circular Prestressed Concrete Water Tanks
AWWA D115	Tendon-Prestressed Concrete Water Tanks
International Code Council Evaluation Service (ICCES)	
ICC-ES AC 156-04	Acceptance Criteria for Seismic Qualification by Shake-Table Testing of Nonstructural Components and Systems
Manufacturers Standardization Society of the Valve and Fitting Industry (MSS)	
MSS SP-58	Pipe Hangers and Supports—Materials, Design, and Manufacture
National Fire Protection Association (NFPA)	
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 59A	Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)
Rack Manufacturers Institute (RMI)	
ANSI/MH 16.1	Specification for the Design, Testing, and Utilization of Industrial Steel Storage Racks
Steel Joist Institute (SJI)	
ANSI/SJI-CJ	Standard Specification for Composite Steel Joists, CJ-series
ANSI/SJI-JG	Standard Specification for Joist Girders
ANSI/SJI-K	Standard Specifications for Open Web Steel Joists, K-Series
ANSI/SJI-LH/DLH	Standard Specifications for Long span Steel Joists, LH-Series and Deep Long span Steel Joists, DLH-Series
Steel Joist Institute (SJI)	
SJI-CJ	Standard Specification for Composite Steel Joists
SJI-JG	Standard Specification for Joist Girders
SJI-K	Standard Specification for Open Web Steel Joists
SJI-LH/DLH	Standard Specification for Long span Steel Joists/ Deep Long span Steel Joists
American Institute of Steel Construction	
AISC 360	Specification for Structural Steel Buildings
American Iron and Steel Institute (AISI)	
AISI S100	North American Specification for the Design of Cold-formed Steel Structural Members
American Society of Mechanical Engineers (ASME)	
ASME A17.1	American National Standard Safety Code for Elevators and Escalators
American Society of Civil Engineers (ASCE)	
ASCE/SEI 24	Flood resistant design and construction

A.27 References from Saudi Building Code – 304

American Association of State Highway and Transportation Officials (AASHTO)	
LRFDUS-6	LRFD Bridge Design Specifications, 6th Edition, 2012, Articles 5.10.9.6, 5.10.9.7.2, and 5.10.9.7.3.
LRFDCONS-3	LRFD Bridge Construction Specifications, 3rd Edition, 2010, Article 10.3.2.3
American Concrete Institute (ACI)	
301	Specifications for Structural Concrete, Article 4.2.3
318	Building Code Requirements for Structural Concrete and Commentary
318.2	Building Code Requirements for Concrete Thin Shells and Commentary
332	Residential Code Requirements for Structural Concrete and Commentary



355.2	Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary
355.4	Qualification of Post-Installed Adhesive Anchors in Concrete
374.1	Acceptance Criteria for Moment Frames Based on Structural Testing
423.7	Specification for Un-bonded Single-Strand Tendon Materials
550.3	Design Specification for Un-bonded Post Tensioned Precast Concrete Special Moment Frames Satisfying ACI 374.1 and Commentary
ITG-5.1	Acceptance Criteria for Special Un-bonded Post-Tensioned Precast Structural Walls Based on Validation Testing
ITG-5.2	Requirements for Design of a Special Un-bonded Post-Tensioned Precast Wall Satisfying ACI ITG-5.1 and Commentary
ASTM International	
A36/A36M	Standard Specification for Carbon Structural Steel
A53/A53M	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
A184/A184M	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
A242/A242M	Standard Specification for High Strength Low-Alloy Structural Steel
A307	Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60000 psi Tensile Strength
A370	Standard Test Methods and Definitions for Mechanical Testing of Steel Products
A416/A416M	Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
A421/A421M	Standard Specification for Uncoated Stress-Relieved Steel Wire for Prestressed Concrete, including Supplementary Requirement SI, Low-Relaxation Wire and Relaxation Testing
A500/A500M	Standard Specification for Cold Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
A501	Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
A572/A572M	Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
A588/A588M	Standard Specification for High-Strength Low-Alloy Structural Steel, up to 50 ksi [345 MPa] Minimum Yield Point, with Atmospheric Corrosion Resistance
A615/A615M	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
A706/A706M	Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement
A722/A722M	Standard Specification for Uncoated High-Strength Steel Bars for Prestressing Concrete
A767/A767M	Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement
A775/A775M	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
A820/A820M	Standard Specification for Steel Fibers for Fiber-Reinforced Concrete
A884/A884M	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
A934/A934M	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
A955/A955M	Standard Specification for Deformed and Plain Stainless-Steel Bars for Concrete Reinforcement
A970/A970M	Standard Specification for Headed Steel Bars for Concrete Reinforcement, including Annex A1 Requirements for Class HA Head Dimensions
A992/A992M	Standard Specification for Structural Steel Shapes
A1022/A1022M	Standard Specification for Deformed and Plain Stainless Steel Wire and Welded Wire for Concrete Reinforcement
A1035/A1035M	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement



A1044/A1044M	Standard Specification for Steel Stud Assemblies for Shear Reinforcement of Concrete
A1055/A1055M	Standard Specification for Zinc and Epoxy Dual-Coated Steel Reinforcing Bars
A1060/A1060M	Standard Specification for Zinc Coated (Galvanized) Steel Welded Wire Reinforcement, Plain and Deformed, for Concrete
A1064/A1064M	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
A1085	Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS)
C29/C29M	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
C31/C31M	Standard Practice for Making and Curing Concrete Test Specimens in the Field
C33/C33M	Standard Specification for Concrete Aggregates
C39/C39M	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
C42/C42M	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
C94/C94M	Standard Specification for Ready-Mixed Concrete
C144	Standard Specification for Aggregate for Masonry Mortar
C150/C150M	Standard Specification for Portland Cement
C172/C172M	Standard Practice for Sampling Freshly Mixed Concrete
C173/C173M	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
C231/C231M	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
C260/C260M	Standard Specification for Air Entraining Admixtures for Concrete
C330/C330M	Standard Specification for Lightweight Aggregates for Structural Concrete
C494/C494M	Standard Specification for Chemical Admixtures for Concrete
C496/C496M	Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
C567/C567M	Standard Test Method for Determining Density of Structural Lightweight Concrete
C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
C685/C685M	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
C845/C845M	Standard Specification for Expansive Hydraulic Cement
C989/C989M	Standard Specification for Slag Cement for Use in Concrete and Mortars
C1012/C1012M	Standard Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution
C1017/C1017M	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
C1077	Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
C1116/C1116M	Standard Specification for Fiber Reinforced Concrete
C1157/C1157M	Standard Performance Specification for Hydraulic Cement
C1218/C1218M	Standard Test Method for Water-Soluble Chloride in Mortar and Concrete
C1240	Standard Specification for Silica Fume Used in Cementitious Mixtures
C1580	Standard Test for Water-Soluble Sulfate in Soil
C1582/C1582M	Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete
C1602/C1602M	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
C1609/C1609M	Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam with Third-Point Loading)



D516	Standard Test Method for Sulfate Ion in Water
D4130	Standard Test Method for Sulfate Ion in Brackish Water, Seawater, and Brines
American Welding Society (AWS)	
D1.1/D1.1M	Structural Welding Code Steel
D1.4/D1.4M	Structural Welding Code Reinforcing Steel

A.28 References from Saudi Building Code – 305

The Masonry Society (TMS)	
TMS 602/ACI 530.1/ASCE 6	Specification for Masonry Structures
American Concrete Institute	
ACI 117	Standard Specifications for Tolerances for Concrete Construction and Materials
American National Standards Institute	
ANSI A 137.1	Standard Specification for Ceramic Tile
ASTM International	
ASTM A36/A36M	Standard Specification for Carbon Structural Steel
ASTM A82/A82M	Standard Specification for Steel Wire, Plain, for Concrete Reinforcement
ASTM A123/A123M	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153/A153M	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A185/A185M	Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete
ASTM A240/A240M	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A307	Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod, 414 MPas Tensile Strength
ASTM A416/A416M	Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
ASTM A421/A421M	Standard Specification for Uncoated Stress-Relieved Steel Wire for Prestressed Concrete
ASTM A480/A480M	Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip
ASTM A496/A496M	Standard Specification for Steel Wire, Deformed, for Concrete Reinforcement
ASTM A497/A497M	Standard Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete
ASTM A510/A510M	Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel
ASTM A580/A580M	Standard Specification for Stainless Steel Wire
ASTM A615/A615M	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A641/A641M	Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
ASTM A653/A653M	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A666	Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
ASTM A706/A706M	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A722/A722M	Standard Specification for Uncoated High-Strength Steel Bars for Prestressing Concrete
ASTM A767/A767M	Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement
ASTM A775/A775M	Standard Specification for Epoxy-Coated Steel Reinforcing Bars



ASTM A884/A884M	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A899	Standard Specification for Steel Wire, Epoxy-Coated
ASTM A951/A951M	Standard Specification for Steel Wire for Masonry Joint Reinforcement
ASTM A996/A996M	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1008/A1008M	Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM C34	Standard Specification for Structural Clay Load-Bearing Wall Tile
ASTM C55	Standard Specification for Concrete Building Brick
ASTM C56	Standard Specification for Structural Clay Nonloadbearing Tile
ASTM C62	Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
ASTM C67	Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
ASTM C73	Standard Specification for Calcium Silicate Brick (Sand-Lime Brick)
ASTM C90	Standard Specification for Loadbearing Concrete Masonry Units
ASTM C109/C109M	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50-mm Cube Specimens)
ASTM C126	Standard Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units
ASTM C129	Standard Specification for Nonloadbearing Concrete Masonry Units
ASTM C140	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
ASTM C143/C143M	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150/C150M	Standard Specification for Portland Cement
ASTM C212	Standard Specification for Structural Clay Facing Tile
ASTM C216	Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)
ASTM C270	Standard Specification for Mortar for Unit Masonry
ASTM C426	Standard Test Method for Linear Drying Shrinkage of Concrete Masonry Units
ASTM C476	Standard Specification for Grout for Masonry
ASTM C482	Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
ASTM C503/C503M	Standard Specification for Marble Dimension Stone
ASTM C568/C568M	Standard Specification for Limestone Dimension Stone
ASTM C615/C615M	Standard Specification for Granite Dimension Stone
ASTM C616/C616M	Standard Specification for Quartz-Based Dimension Stone
ASTM C629/C629	Standard Specification for Slate Dimension Stone
ASTM C652	Standard Specification for Hollow Brick (Hollow Masonry Units Made from Clay or Shale)
ASTM C744	Standard Specification for Prefaced Concrete and Calcium Silicate Masonry Units
ASTM C901	Standard Specification for Prefabricated Masonry Panels
ASTM C920	Standard Specification for Elastomeric Joint Sealants
ASTM C1006	Standard Test Method for Splitting Tensile Strength of Masonry Units
ASTM C1019	Standard Test Method for Sampling and Testing Grout
ASTM C1072	Standard Tests Method for Measurement of Masonry Flexural Bond Strength
ASTM C1088	Standard Specification for Thin Veneer Brick Units Made from Clay or Shale
ASTM C1314	Standard Test Method for Compressive Strength of Masonry Prisms
ASTM C1405	Standard Specification for Glazed Brick (Single Fired, Brick Units)
ASTM C1532/C1532M	Standard Practice for Selection, Removal and Shipment of Manufactured Masonry Units and Masonry Specimens from Existing Construction



ASTM C1611/C1611M	Standard Test Method for Slump Flow of Self-Consolidating Concrete
ASTM C1634	Standard Specification for Concrete Facing Brick
ASTM C 1660	Standard Specification for Thinbed Mortar for Autoclaved Aerated Concrete (AAC) Masonry
ASTM C1691	Standard Specification for Unreinforced Autoclaved Aerated Concrete (AAC) Masonry Units
ASTM C1692	Standard Practice for Construction and Testing of Autoclaved Aerated Concrete (AAC) Masonry.
ASTM C1693	Standard Specification for Autoclaved Aerated Concrete (AAC)
ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D95	Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation
ASTM D512	Standard Test Methods for Chloride Ion in Water
ASTM D566	Standard Test Method for Dropping Point of Lubricating Grease
ASTM D610	Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces
ASTM D638	Standard Test Method for Tensile Properties of Plastics
ASTM D994/D994M	Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)
ASTM D1056	Standard Specification for Flexible Cellular Materials — Sponge or Expanded Rubber
ASTM D1187/D1187M	Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal
ASTM D1227	Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing
ASTM D2000	Standard Classification System for Rubber Products in Automotive Applications
ASTM D2265	Standard Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range
ASTM D2287	Standard Specification for Nonrigid Vinyl Chloride Polymer and Copolymer Molding and Extrusion Compounds
ASTM D4289	Standard Test Method for Elastomer Compatibility of Lubricating Greases and Fluids
ASTM E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
ASTM E111	Standard Test Method for Young's Modulus, Tangent Modulus, and Chord Modulus
ASTM E328	Standard Test Methods for Stress Relaxation Tests for Materials and Structures
ASTM E488	Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements
ASTM E518/E518M	Standard Test Methods for Flexural Bond Strength of Masonry
ASTM E519/E519M	Standard Test Method for Diagonal Tension (Shear) in Masonry Assemblages
ASTM F959	Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners
ASTM F959M	Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners [Metric]
American Welding Society	
AWS D 1.4/D1.4M	Structural Welding Code –Reinforcing Steel
Federal Test Method Standard	
FTMS 791B	Oil Separation from Lubricating Grease (Static Technique). Federal Test Method Standard from the U.S. Army General Material and Parts Center, Petroleum Field Office (East), New Cumberland Army Depot, New Cumberland, PA 17070



A.29 References from Saudi Building Code – 306

ACI International (ACI)	
ACI 349	Code Requirements for Nuclear Safety-Related Concrete Structures and Commentary
American Institute of Steel Construction (AISC)	
AISC 303	Code of Standard Practice for Steel Buildings and Bridges
ANSI/AISC 341	Seismic Provisions for Structural Steel Buildings
ANSI/AISC N690	Specification for Safety-Related Steel Structures for Nuclear Facilities
American Society of Civil Engineers (ASCE)	
ASCE/SEI/SFPE 29	Standard Calculation Methods for Structural Fire Protection
American Society of Mechanical Engineers (ASME)	
ASME B18.2.6	Fasteners for Use in Structural Applications
ASME B46.1	Surface Texture, Surface Roughness, Waviness, and Lay
American Society for Nondestructive Testing (ASNT)	
ANSI/ASNT CP-189	Standard for Qualification and Certification of Nondestructive Testing Personnel
Recommended Practice No. SNT-TC-1A	Personnel Qualification and Certification in Nondestructive Testing
ASTM International (ASTM)	
A6/A6M	Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
A36/A36M	Standard Specification for Carbon Structural Steel
A53/A53M	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
A193/A193M	Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High Temperature or High Pressure Service and Other Special Purpose Applications
A194/A194M	Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
A216/A216M	Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High Temperature Service
A242/A242M	Standard Specification for High-Strength Low-Alloy Structural Steel
A283/A283M	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
A307	Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI (420 MPa) Tensile Strength
A325M	Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength
A354	Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners
A370	Standard Test Methods and Definitions for Mechanical Testing of Steel Products
A449	Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 KSI (830/730/630MPa) Minimum Tensile Strength, General Use
A490	Standard Specification for Heat-Treated Steel Structural Bolts, Alloy Steel, Heat Treated, 150 KSI (1040MPa) Minimum Tensile Strength
A490M	Standard Specification for High-Strength Steel Bolts, Classes 10.9 and 10.9.3, for Structural Steel Joints
A500/A500M	Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
A501	Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
A502	Standard Specification for Steel Structural Rivets, Steel, Structural



A514/A514M	Standard Specification for High-Yield Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding
A529/A529M	Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality
A563M	Standard Specification for Carbon and Alloy Steel Nuts
A568/A568M	Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled
A572/A572M	Standard Specification for High-Strength Low-Alloy Columbium - Vanadium Structural Steel
A588/A588M	Standard Specification for High-Strength Low-Alloy Structural Steel, up to 345 MPa Minimum Yield Point, with Atmospheric Corrosion Resistance
A606/A606M	Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance
A618/A618M	Standard Specification for Hot-Formed Welded and Seamless High-Strength Low-Alloy Structural Tubing
A668/A668M	Standard Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use
A673/A673M	Standard Specification for Sampling Procedure for Impact Testing of Structural Steel
A709/A709M	Standard Specification for Structural Steel for Bridges
A751	Standard Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products
A847/A847M	Standard Specification for Cold-Formed Welded and Seamless High-Strength, Low-Alloy Structural Tubing with Improved Atmospheric Corrosion Resistance
A852/A852M	Standard Specification for Quenched and Tempered Low-Alloy Structural Steel Plate with 485 MPa Minimum Yield Strength to 100 mm Thick
A913/A913M	Standard Specification for High-Strength Low-Alloy Steel Shapes of Structural Quality, Produced by Quenching and Self-Tempering Process (QST)
A992/A992M	Standard Specification for Structural Steel Shapes
A1011/A1011M	Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
A1043/A1043M	Standard Specification for Structural Steel with Low Yield to Tensile Ratio for Use in Buildings
C567	Standard Test Method for Determining Density of Structural Lightweight Concrete
E119	Standard Test Methods for Fire Tests of Building Construction and Materials
E165	Standard Test Method for Liquid Penetrant Examination E709-08 Standard Guide for Magnetic Particle Examination
F436	Standard Specification for Hardened Steel Washers
F436M	Standard Specification for Hardened Steel Washers
F606	Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets
F606M	Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, and Rivets
F844	Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use
F959	Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners
F959M	Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners
F1554	Standard Specification for Anchor Bolts, Steel, 36, 55, and 105 KSI (240,380, and 730 MPa) Yield Strength



User Note: ASTM F1554 is the most commonly referenced specification for anchor rods.

F1852	Standard Specification for “Twist-Off” Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 120/105 KSI (830/730MPa) Minimum Tensile Strength
F2280	Standard Specification for “Twist Off” Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 150 ksi (1040 MPa) Minimum Tensile Strength
American Welding Society (AWS)	
AWS A5.1/A5.1M	Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding
AWS A5.5/A5.5M	Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding
AWS A5.17/A5.17M	Specification for Carbon Steel Electrodes and Fluxes for Submerged Arc Welding
AWS A5.18/A5.18M	Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding
AWS A5.20/A5.20M	Specification for Carbon Steel Electrodes for Flux Cored Arc Welding
AWS A5.23/A5.23M	Specification for Low-Alloy Steel Electrodes and Fluxes for Submerged Arc Welding
AWS A5.25/A5.25M	Specification for Carbon and Low-Alloy Steel Electrodes and Fluxes for Electroslag Welding
AWS A5.26/A5.26M	Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding
AWS A5.28/A5.28M	Specification for Low-Alloy Steel Electrodes and Rods for Gas Shielded Arc Welding
AWS A5.29/A5.29M	Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding
AWS A5.32/A5.32M	Specification for Welding Shielding Gases
AWS B5.1	Specification for the Qualification of Welding Inspectors
AWS D1.1M	Structural Welding Code—Steel
AWS D1.3	Structural Welding Code—Sheet Steel
AWS D1.4/D1.4M	Structural Welding Code—Reinforcing Steel
AWS D1.4/D1.4M	Structural Welding Code—Seismic Supplement

A.30 References from Saudi Building Code – 501

Air Conditioning Contractors of America (ACCA)

Manual D	Residential Duct Systems
183	Peak Cooling and Heating Load Calculations in Buildings Except Low-rise Residential Buildings

Air-Conditioning, Heating and Refrigeration Institute (AHRI)

700	Purity Specifications for Fluorocarbon and Other Refrigerants
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Air Movement and Control Association (AMCA)

550	Test Method for High Velocity Wind Driven Rain Resistant Louvers
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American National Standards Institute (ANSI)

Z21.8	Installation of Domestic Gas Conversion Burners
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ASHRAE

ASHRAE	ASHRAE Fundamentals Handbook
15	Safety Standard for Refrigeration Systems
34	Designation and Safety Classification of Refrigerants
62.1	Ventilation for Acceptable Indoor Air Quality
170	Ventilation of Health Care Facilities
180	Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems

American Society of Mechanical Engineers (ASME)

B1.20.1	Pipe Threads, General Purpose (mm)
B16.3	Malleable Iron Threaded Fittings, Classes 150 & 300
B16.5	Pipe Flanges and Flanged Fittings NPS 1/2 through NPS 24
B16.9	Factory Made Wrought Steel Butt welding Fittings
B16.11	Forged Fittings, Socket-welding and Threaded



B16.15	Cast Bronze Threaded Fittings
B16.18	Cast Copper Alloy Solder Joint Pressure Fittings
B16.22	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
B16.24	Cast Copper Alloy Pipe Flanges and Flanged Fittings: Class 150, 300, 400, 600, 900, 1500 and 2500
B16.26	Cast Copper Alloy Fittings for Flared Copper Tubes
B16.28	Wrought Steel Butt welding Short Radius Elbows and Returns
B16.51	Copper and Copper Alloy Press-Connect Pressure Fittings
B31.5	Refrigeration Piping and Heat Transfer Components
B31.9	Building Services Piping
BPVC	ASME Boiler & Pressure Vessel Code—07 Edition
CSD-1	Controls and Safety Devices for Automatically Fired Boilers
American Society of Safety Engineers (ASSE)	
ANSI/ASSE Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, Part of the Fall Protection Code
American Society of Sanitary Engineering (ASSE)	
1017	Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems
ASTM International	
A 53/A 53M	Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless
A 106/A106M	Specification for Seamless Carbon Steel Pipe for High-Temperature Service
A 126	Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings
A 234/A234M	Standard Specification for Piping Fittings of Wrought Carbon Steel And Alloy Steel For Moderate and High Temperature Service
A 254	Specification for Copper Brazed Steel Tubing
A 395/A395M	Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures
A 420/A 420M	Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service
A 536	Standard Specification for Ductile Iron Castings
A 539	Specification for Electric-resistance-welded Coiled Steel Tubing for Gas and Fuel Oil Lines
B 32	Specification for Solder Metal
B 42	Specification for Seamless Copper Pipe, Standard Sizes
B 43	Specification for Seamless Red Brass Pipe, Standard Sizes
B 68	Specification for Seamless Copper Tube, Bright Annealed
B75	Specification for Seamless Copper Tube
B 88	Specification for Seamless Copper Water Tube
B 135	Specification for Seamless Brass Tube
B 251	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube
B 280	Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service
B 302	Specification for Threadless Copper Pipe, Standard Sizes
B 813	Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
C 315	Specification for Clay Flue Liners and Chimney Pots
C 411	Test Method for Hot-surface Performance of High-temperature Thermal Insulation
D 56	Test Method for Flash Point by Tag Closed Tester
D 93	Test Method for Flash Point of Pensky-Martens Closed Cup Tester
D 1527	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
D 1693	Test Method for Environmental Stress-Cracking of Ethylene Plastics
D 1785	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80 and 120



D 2235	Specifications for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
D 2241	Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR-Series)
D 2282	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
D 2412	Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-plate Loading
D 2464	Standard Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2466	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe Fittings, Schedule 40
D 2467	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe Fittings, Schedule 80
D 2564	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2657	Standard Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings
D 2683	Specification for Socket-type Polyethylene Fittings for Outside Diameter-controlled Polyethylene Pipe and Tubing
D 2737	Standard Specification for Polyethylene (PE) Plastic Tubing
D 2846/D 2846M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems
D 2996	Specification for Filament-wound Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Pipe
D 3035	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
D 3261	Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
D 3278	Test Methods for Flash Point of Liquids by Small Scale Closed-cup Apparatus
D 3309	Specification for Polybutylene (PB) Plastic Hot and Cold Water Distribution Systems
E 84	Test Method for Surface Burning Characteristics of Building Materials
E 119	Test Method for Fire Tests of Building Construction and Materials
E 136	Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C
E 814	Test Method for Fire Tests of Through-penetration Fire Stops
E 1509	Specification for Room Heaters, Pellet Fuel-burning Type
E 2231	Standard Practice For Specimen Preparation and Mounting of Pipe and Duct Insulation Materials to Assess Surface Burning Characteristics
E 2336	Standard Test Methods for Fire Resistive Grease Duct Enclosure Systems
F437	Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 438	Specification for Socket Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
F 439	Specification for Socket Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 441/F 441M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
F 442/F 442M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
F 493	Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
F 714	Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) based on Outside Diameter
F 876	Specification for Cross-linked Polyethylene (PEX) Tubing



F 877	Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems
F 1055	Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Cross-linked Polyethylene Pipe and Tubing
F 1281	Specification for Cross-linked Polyethylene / Aluminum / Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
F 1282	Standard Specification for Polyethylene/Aluminum/ Polyethylene (PE-AL-PE) Composite Pressure Pipe
F 1476	Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications
F 1548	Standard Specification for the Performance of Fittings for Use with Gasketed Mechanical Couplings Used in Piping Applications
F 1807	Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR 9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
F 1924	Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing
F 1960	Specification for Cold-Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
F 1974	Standard Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure Pipe
F 2080	Specification for Cold-Expansion Fittings with Metal Compression- Sleeves for Cross-linked Polyethylene (PEX) Pipe
F 2098	Standard Specification for Stainless Steel Clamps for SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal and Plastic Insert Fittings
F 2159	Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR 9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
F 2389	Specification for Pressure-rated Polypropylene Piping Systems
F 2434	Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/ Cross-linked Polyethylene (PEX-AL-PEX) Tubing
F 2623	Standard Specification for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing1
F 2735	Standard Specification for Plastic Insert Fittings for SDR 9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing
F 2769	Polyethylene of Raised Temperature (PE-RT) Plastic Hot- and Cold-water Tubing and Distribution Systems
F 2806	Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (Metric SDR-PR)
American Welding Society (AWS)	
A5.8M/A5.8	Specifications for Filler Metals for Brazing and Braze Welding
American Water Work Association (AWWA)	
C901	Polyethylene (PE) Pressure Pipe and Tubing, 12.5 mm through 75 mm for Water Service
C110/A21.10	Standard for Ductile Iron & Gray Iron Fittings
C115/A21.15	Standard for Flanged Ductile-Iron Pipe with Ductile Iron or Grey-Iron Threaded Flanges
C151/A21.51	Standard for Ductile-Iron Pipe, Centrifugally Cast for Water
C153/A21.53	Standard for Ductile-Iron Compact Fittings for Water Service
CSA Group	
B137.2	Polyvinylchloride (PVC) Injection-moulded Gasketed Fittings for Pressure Applications



B137.3	Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications
B137.6	Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot- and Cold-water Distribution Systems
B137.9	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems
B137.10	Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems
CSA C448 Series–02	Design and Installation of Earth Energy Systems–First Edition; Update 2:
CAN/CSA	Consolidated Reprint
CSA B137.1	Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services
CSA B137.5	Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications
CSA B137.11	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications
America FC1	Stationary Fuel Cell Power Systems
Department of Labor Occupational Safety and Health Administration (DOL)	
29 CFR Part 1910.1000	Air Contaminants
29 CFR Part 1910.1025	Toxic and Hazardous Substances
Federal Specifications (FS)	
WW-P-325B	Pipe, Bends, Traps, Caps and Plugs; Lead (for Industrial Pressure and Soil and Waste Applications)
International Institute of Ammonia Refrigeration (IIAR)	
2	Standard for Safe Design of Closed-circuit Ammonia Refrigeration Systems
Manufacturers Standardization Society of the Valve & Fittings Industry (MSS)	
SP 58	Pipe Hangers and Supports–Materials Design and Manufacture, Selection, Application and Installation
North American Insulation Manufacturers Association (NAIMA)	
AH116	Fibrous Glass Duct Construction Standards
National Board of Boiler and Pressure Vessel Inspectors (NBBI)	
NBIC	National Board Inspection Code, Part 3
National Fire Protection Association (NFPA)	
30A	Code for Motor Fuel-dispensing Facilities and Repair Garages
31	Standard for the Installation of Oil-burning Equipment
37	Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines
58	Liquefied Petroleum Gas Code
69	Standard on Explosion Prevention Systems
70	National Electrical Code
72	National Fire Alarm and Signaling Code
82	Standard on Incinerators and Waste and Linen Handling Systems and Equipment
85	Boiler and Combustion Systems Hazards Code
91	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids
92	Standard for Smoke Control Systems
96	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
211	Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
262	Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-handling Spaces
286	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
704	Standard System for Identification of the Hazards of Materials for Emergency Response



853	Standard on Installation of Stationary Fuel Power Plants
NSF International	
NSF 14	Plastic Piping System Components and Related Materials
NSF 358-1	Polyethylene Pipe and Fittings for Water Based Ground Source "Geothermal" Heat Pump Systems
Sheet Metal & Air-Conditioning Contractors National Assoc., (SMACNA)	
SMACNA/ANSI	HVAC Duct Construction Standards-Metal and Flexible 3rd Edition (ANSI)
SMACNA	Fibrous Glass Duct Construction Standards
UL LLC	
17	Vent or Chimney Connector Dampers for Oil-fired Appliances
103	Factory-built Chimneys, Residential Type and Building Heating Appliance
127	Factory-built Fireplaces
174	Household Electric Storage Tank Water Heaters
180	Liquid-level Indicating Gauges for Oil Burner Fuels and Other Combustible Liquids
181	Factory-made Air Ducts and Air Connectors
181A	Closure Systems for Use with Rigid Air Ducts and Air Connectors
181B	Closure Systems for Use with Flexible Air Ducts and Air Connectors
197	Commercial Electric Cooking Appliances
207	Refrigerant-containing Components and Accessories, Nonelectrical
263	Standard for Fire Test of Building Construction and Materials
268	Smoke Detectors for Fire Alarm Systems
268A	Smoke Detectors for Duct Application
343	Pumps for Oil-Burning Appliances
378	Draft Equipment
391	Solid-fuel and Combination-fuel Central and Supplementary Furnaces
412	Refrigeration Unit Coolers
471	Commercial Refrigerators and Freezers
499	Electric Heating Appliances
508	Industrial Control Equipment
536	Flexible Metallic Hose
555	Fire Dampers
555C	Ceiling Dampers
555S	Smoke Dampers
586	High-Efficiency, Particulate, Air Filter Units
641	Type L Low-temperature Venting Systems
705	Standard for Power Ventilators
710	Exhaust Hoods for Commercial Cooking Equipment
710B	Recirculating Systems
723	Standard for Test for Surface Burning Characteristics of Building Materials
726	Oil-fired Boiler Assemblies
727	Oil-fired Central Furnace
729	Oil-fired Floor Furnaces
730	Oil-fired Wall Furnaces
731	Oil-fired Unit Heaters
732	Oil-fired Storage Tank Water Heaters
737	Fireplace Stoves
762	Outline of Investigation for Power Ventilators for Restaurant Exhaust Appliances
791	Residential Incinerators
834	Heating, Water Supply and Power Boilers Electric
842	Valves for Flammable Fluids
858	Household Electric Ranges
867	Electrostatic Air Cleaners
875	Electric Dry Bath Heater
896	Oil-burning Stoves



900	Air Filter Units
907	Fireplace Accessories
923	Microwave Cooking Appliances
959	Medium Heat Appliance Factory-built Chimneys
1046	Grease Filters for Exhaust Ducts
1240	Electric Commercial Clothes-Drying Equipment
1261	Electric Water Heaters for Pools and Tubs
1453	Electric Booster and Commercial Storage Tank Water Heaters
1479	Fire Tests of Through-penetration Firestops
1482	Solid-fuel Type Room Heaters
1618	Wall Protectors, Floor Protectors and Hearth Extensions
1777	Chimney Liners—with revisions through July 2009
1812	Standard for Ducted Heat Recovery Ventilators
1815	Standard for Nonducted Heat Recovery
1820	Fire Test of Pneumatic Tubing for Flame and Smoke Characteristics
1887	Fire Tests of Plastic Sprinkler Pipe for Visible Flame and Smoke Characteristics
1978	Grease Ducts
1995	Heating and Cooling Equipment
1996	Electric Duct Heaters
2024	Standard for Safety Optical-Fiber and Communications Cable Raceway
2043	Fire Test for Heat and Visible Smoke Release for Discrete Products and their Accessories Installed in Air-handling Spaces
2158	Electric Clothes Dryers
2158A	Outline of Investigation for Clothes Dryer Transition Duct
2162	Outline of Investigation for Commercial Wood-fired Baking Ovens-Refractory Type
2200	Stationary Engine Generator Assemblies
2221	Tests of Fire Resistive Grease Duct Enclosure Assemblies
2518	Air Dispersion System Materials
2523	Solid Fuel-fired Hydronic Heating Appliances

A.31 References from Saudi Building Code – 701

American National Standards Institute (ANSI)	
A118.10	Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin Set Ceramic Tile and Dimension Stone Installation
Z4.3	Minimum Requirements for Nonsewered Waste-disposal Systems
Z21.22	Relief Valves for Hot Water Supply Systems
CSA B45.5/ IAPMO	Plastic Plumbing Fixtures
Z124	
Air-Conditioning, Heating, & Refrigeration Institute (AHRI)	
1010	Self-contained, Mechanically Refrigerated Drinking-Water Coolers
American Petroleum Institute (API)	
12D	Specification for Field Welded Tanks for Storage of Production Liquids
12F	Specification for Shop Welded Tanks for Storage of Production Liquids
American Society of Mechanical Engineers (ASME)	
A112.1.2	Air Gaps in Plumbing Systems
A112.1.3	Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances
A112.3.1	Stainless Steel Drainage Systems for Sanitary, DWV, Storm and Vacuum Applications Above and Below Ground
ASME A112.3.4/	Macerating Toilet Systems and Related Components
CSA B45.9	
A112.4.1	Water Heater Relief Valve Drain Tubes
A112.4.2	Water Closet Personal Hygiene Devices
A112.4.3	Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System



A112.4.14	Manually Operated, Quarter-Turn Shutoff Valves for Use in Plumbing Systems
A112.4-14.6	FOG (Fats, Oils and Greases) Disposal Systems
A112.6.1M	Floor-affixed Supports for Off-the-floor Plumbing Fixtures for Public Use
A112.6.2	Framing-affixed Supports for Off-the-floor Water Closets with Concealed Tanks
A112.6.3	Floor and Trench Drains
A112.6.4	Roof, Deck, and Balcony Drains
A112.6.7	Enameled and Epoxy-coated Cast-iron and PVC Plastic Sanitary Floor Sinks
A112.6.9	Siphonic Roof Drains
A112.14.1	Backwater Valves
A112.14.3	Grease Interceptors
A112.14.4	Grease Removal Devices
A112.18.1/ CSA B125.1	Plumbing Supply Fittings
A112.18.2/ CSA B125.2	Plumbing Waste Fittings
A112.18.3	Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings
A112.18.6/ CSA B125.6	Flexible Water Connectors
A112.18.7	Deck mounted Bath/Shower Transfer Valves with Integral Backflow Protection
A112.18.9	Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixtures
A112.19.1/ CSA B45.2	Enameled Cast Iron and Enameled Steel Plumbing Fixtures
A112.19.2/ CSA B45.1	Ceramic Plumbing Fixtures
A112.19.3/ CSA B45.4	Stainless Steel Plumbing Fixtures
A112.19.5/ CSA B45.15	Flush Valves and Spuds for Water-closets, Urinals, and Tanks
A112.19.7M/ CSA B45.10	Hydromassage Bathtub Systems
A112.19.12	Wall Mounted and Pedestal Mounted, Adjustable, Elevating, Tilting and Pivoting Lavatory, Sink and Shampoo Bowl Carrier Systems and Drain Systems
A112.19.14	Six-Liter Water Closets Equipped with a Dual Flushing Device
A112.19.15	Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors
A112.19.19	Vitreous China Nonwater Urinals
A112.21.3	Hydrants for Utility and Maintenance Use
A112.36.2M	Cleanouts
ASSE 1016/ ASME A112.1016/ CSA B125.16	Performance Requirements for Individual Thermostatic, Pressure Balancing and Combination Control Valves for Individual Fixture Fittings
B1.20.1	Pipe Threads, General Purpose
B 16.3	Malleable Iron Threaded Fittings Classes 150 and 300
B 16.4	Gray Iron Threaded Fittings Classes 125 and 250
B 16.9	Factory-made Wrought Steel Buttwelding Fittings
B 16.11	Forged Fittings, Socket-welding and Threaded
B 16.12	Cast-iron Threaded Drainage Fittings
B 16.15	Cast Bronze Threaded Fittings
B 16.18	Cast Copper Alloy Solder Joint Pressure Fittings
B 16.22	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
B 16.23	Cast Copper Alloy Solder Joint Drainage Fittings DWV
B 16.26	Cast Copper Alloy Fittings for Flared Copper Tubes
B 16.28	Wrought Steel Buttwelding Short Radius Elbows and Returns



B 16.29	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings (DWV)
B16.34	Valves Flanged, Threaded and Welding End
B16.51	Copper and Copper Alloy Press-Connect Pressure Fittings
American Society of Plumbing Engineers (ASPE)	
45	Siphonic Roof Drainage Systems
American Society of Sanitary Engineering (ASSE)	
1001	Performance Requirements for Atmospheric Type Vacuum Breakers
1002	Performance Requirements for Antisiphon Fill Valves (Ballcocks) for Gravity Water Closet Flush Tanks
1003	Performance Requirements for Water Pressure Reducing Valves
1004	Performance Requirements for Backflow Prevention Requirements for Commercial Dishwashing Machines
1005	Performance Requirements for Water Heater Drain Valves
1008	Performance Requirements for Plumbing Aspects of Food Waste Disposer Units
1010	Performance Requirements for Water Hammer Arresters
1011	Performance Requirements for Hose Connection Vacuum Breakers
1012	Performance Requirements for Backflow Preventers with Intermediate Atmospheric Vent
1013	Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers
1015	Performance Requirements for Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies
ASSE 1016/ ASME A112.1016/ CSA B125.16	Performance Requirements for Individual Thermostatic, Pressure Balancing and Combination Control Valves for Individual Fixture Fittings
1017	Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems
1018	Performance Requirements for Trap Seal Primer Valves; Potable Water Supplied
1019	Performance Requirements for Vacuum Breaker Wall Hydrants, Freeze Resistant, Automatic Draining Type
1020	Performance Requirements for Pressure Vacuum Breaker Assembly
1022	Performance Requirements for Backflow Preventer for Beverage Dispensing Equipment
1024	Performance Requirements for Dual Check Valve Type Backflow Preventers (for Residential Supply Service or Individual Outlets)
1035	Performance Requirements for Laboratory Faucet Backflow Preventers
1037	Performance Requirements for Pressurized Flushing Devices for Plumbing Fixtures
1044	Performance Requirements for Trap Seal Primer Devices Drainage Types and Electronic Design Types
1047	Performance Requirements for Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies
1048	Performance Requirements for Double Check Detector Fire Protection Backflow Prevention Assemblies
1049	Performance Requirements for Individual and Branch Type Air Admittance Valves for Chemical Waste Systems
1050	Performance Requirements for Stack Air Admittance Valves for Sanitary Drainage Systems
1051	Performance Requirements for Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems-fixture and Branch Devices
1052	Performance Requirements for Hose Connection Backflow Preventers
1055	Performance Requirements for Chemical Dispensing Systems
1056	Performance Requirements for Spill Resistant Vacuum Breaker



1060	Performance Requirements for Outdoor Enclosures for Fluid Conveying Components
1061	Performance Requirements for Removable and Nonremovable Push Fit Fittings
1062	Performance Requirements for Temperature Actuated, Flow Reduction Valves to Individual Supply Fittings
1066	Performance Requirements for Individual Pressure Balancing In-line Valves for Individual Fixture Fittings
1069	Performance Requirements for Automatic Temperature Control Mixing Valves
1070	Performance Requirements for Water-temperature Limiting Devices
1072	Performance Requirements for Barrier Type Floor Drain Tap Seal Protection Devices
1079	Performance Requirements for Dielectric Pipe Unions
5013	Performance Requirements for Testing Reduced Pressure Principle Backflow Prevention Assembly (RPA) and Reduced Pressure Fire Protection Backflow Preventers (RFP)
5015	Performance Requirements for Testing Double Check Valve Backflow Prevention Assemblies (DC) and Double Check Fire Protection Backflow Prevention Assemblies (DCF)
5020	Performance Requirements for Testing Pressure Vacuum Breaker Assemblies (PVBA)
5047	Performance Requirements for Testing Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies (RPDA)
5048	Performance Requirements for Testing Double Check Valve Detector Assembly (DCDA)
5052	Performance Requirements for Testing Hose Connection Backflow Preventers
5056	Performance Requirements for Testing Spill Resistant Vacuum Breaker (SRVB)
ASTM International	
A 53/A 53M	Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless
A 74	Specification for Cast-iron Soil Pipe and Fittings
A 312/A 312M	Specification for Seamless, Welded, And Heavily Cold Worked Austenitic Stainless Steel Pipes
A 733	Specification for Welded and Seamless Carbon Steel and Austenitic Stainless Steel Pipe Nipples
A 778	Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products
A 888	Specification for Hubless Cast-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application
B 32	Specification for Solder Metal
B 42	Specification for Seamless Copper Pipe, Standard Sizes
B 43	Specification for Seamless Red Brass Pipe, Standard Sizes
B 75	Specification for Seamless Copper Tube
B 88	Specification for Seamless Copper Water Tube
B 152/B 152M	Specification for Copper Sheet, Strip Plate and Rolled Bar
B 251	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube
B 302	Specification for Threadless Copper Pipe, Standard Sizes
B 306	Specification for Copper Drainage Tube (DWV)
B 447	Specification for Welded Copper Tube
B 687	Specification for Brass, Copper and Chromium-plated Pipe Nipples
B 813	Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
B 828	Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings



C 4	Specification for Clay Drain Tile and Perforated Clay Drain Tile
C 14	Specification for Nonreinforced Concrete Sewer, Storm Drain and Culvert Pipe
C 76	Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
C 425	Specification for Compression Joints for Vitrified Clay Pipe and Fittings
C 443	Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
C 564	Specification for Rubber Gaskets for Cast-iron Soil Pipe and Fittings
C 700	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
C 1053	Specification for Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications
C 1173	Specification for Flexible Transition Couplings for Underground Piping System
C 1277	Specification for Shielded Coupling Joining Hubless Cast-iron Soil Pipe and Fittings
C 1440	Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste, and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems
C 1460	Specification for Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground
C 1461	Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste and Vent (DWV) Sewer, Sanitary and Storm Plumbing Systems for Above and Below Ground Use
C 1540	Specification for Heavy Duty Shielded Couplings Joining Hubless Cast-iron Soil Pipe and Fittings
C 1563	Standard Test Method for Gaskets for Use in Connection with Hub and Spigot Cast Iron Soil Pipe and Fittings for Sanitary Drain, Waste, Vent and Storm Piping Applications
D 1253	Standard Test Method For Residual Chlorine in Water
D 1527	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
D 1785	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
D 2235	Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
D 2239	Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
D 2241	Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR-Series)
D 2282	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
D 2464	Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2466	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
D 2467	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2468	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 40
D 2564	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2609	Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
D 2657	Practice for Heat Fusion-joining of Polyolefin Pipe and Fitting Waste, and Vent Pipe and Fittings
D 2661	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings



D 2665	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
D 2672	Specification for Joints for IPS PVC Pipe Using Solvent Cement
D 2683	Standard Specification for Socket-type Polyethylene fittings for Outside Diameter-controlled Polyethylene Pipe and Tubing
D 2729	Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
D 2737	Specification for Polyethylene (PE) Plastic Tubing
D 2751	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings
D 2846/D 2846M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems
D 2855	Standard Practice for Making Solvent-cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
D 2949	Specification for 3.25-in Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
D 3034	Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
D 3035	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
D 3139	Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
D 3212	Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
D 3261	Specification for Butt Heat Fusion Polyethylene (PE) Plastic fittings for Polyethylene (PE) Plastic Pipe and Tubing
D 3311	Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns
D 4068	Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-containment Membrane
D 4551	Specification for Poly (Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-containment Membrane
E 2727	Standard Practice for the Assessment of Rainwater Quality
F 405	Specification for Corrugated Polyethylene (PE) Pipe and Fittings
F 409	Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
F 437	Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 438	Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
F 439	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 441/F 441M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
F 442/F 442M	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
F 477	Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
F 493	Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
F 628	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core
F 656	Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
F 714	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
F 876	Specification for Cross-linked Polyethylene (PEX) Tubing
F 877	Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems
F 891	Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core



F 1055	Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing
F 1281	Specification for Cross-linked Polyethylene/Aluminum/ Cross-linked Polyethylene (PEX-AL-PEX) Pressure Pipe
F 1282	Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
F 1412	Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage
F 1476	Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications
F 1488	Specification for Coextruded Composite Pipe
F 1548	Standard Specification for the Performance of Fittings for Use with Gasketed Mechanical Couplings Used in Piping Applications
F 1673	Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems
F 1807	Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
F 1866	Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
F 1960	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for use with Cross-linked Polyethylene (PEX) Tubing
F 1970	Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) OR Chlorinated Poly (Vinyl Chloride) (CPVC) Systems
F 1974	Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure Pipe
F 1986	Specification for Multilayer Pipe, Type 2, Compression Fittings and Compression Joints for Hot and Cold Drinking Water Systems
F 2080	Specifications for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX) Pipe
F 2098	Standard specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal and Plastic Insert Fittings
F 2159	Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
F 2262	Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Tubing OD Controlled SDR9
F 2306/F 2306M	12" to 60" Annular Corrugated Profile-wall Polyethylene (PE) Pipe and Fittings for Gravity Flow Storm Sewer and Subsurface Drainage Applications
F 2389	Specification for Pressure-rated Polypropylene (PP) Piping Systems
F 2434	Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/ Cross-linked Polyethylene (PEX AL-PEX) Tubing
F 2735	Standard Specification for Plastic Insert Fittings for SDR9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing
F 2769	Polyethylene or Raised Temperature (PE-RT) Plastic Hot and Cold Water Tubing and Distribution Systems
F 2831	Standard Practice for Internal Non Structural Epoxy Barrier Coating Material Used In Rehabilitation of Metallic Pressurized Piping Systems
F 2855	Specification Poly (Vinyl Chloride)/Aluminum/Poly (Vinyl Chloride) (CPVC/AL/CPVC) Composite Pressure Tubing
American Welding Society (AWS)	
A5.8M/A5.8	Specifications for Filler Metals for Brazing and Braze Welding
American Water Works Association (AWWA)	
C104/A21.4	Cement-mortar Lining for Ductile-iron Pipe and Fittings for Water



C110/A21.10	Ductile-iron and Gray-iron Fittings
C111/A21.11	Rubber-gasket Joints for Ductile-iron Pressure Pipe and Fittings
C115/A21.15	Flanged Ductile-iron Pipe with Ductile-iron or Gray-iron Threaded Flanges
C151/A21.51	Ductile-iron Pipe, Centrifugally Cast for Water
C153/A21.53	Ductile-iron Compact Fittings for Water Service
C500	Standard for Metal-Seated Gate Valves for Water Supply Service
C504	Standard for Rubber-Seated Butterfly Valves
C507	Standard for Ball Valves, 6 In. Through 60 In
C510	Double Check Valve Backflow Prevention Assembly
C511	Reduced-pressure Principle Backflow Prevention Assembly
C651	Disinfecting Water Mains
C652	Disinfection of Water-storage Facilities
C901	Polyethylene (PE) Pressure Pipe and Tubing 1/2 inch (13 mm) Through (75 mm) for Water Service
C904	Cross-linked Polyethylene (PEX) Pressure Pipe 1/2 inch (13 mm) Through 75 mm) for Water Service
D100	Standard for Welded Carbon Steel Tanks for Water Storage
D115	Standard for Tendon Prestressed-Concrete Water Tanks
D120	Standard for Thermosetting Fiberglass-Reinforced Plastic Tanks
Cast Iron Soil Pipe Institute (CISPI)	
301	Specification for Hubless Cast-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications
310	Specification for Coupling for Use in Connection with Hubless Casts-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications
CSA Group	
A257.1M	Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings
A257.2M	Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings
A257.3M	Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections and Fittings Using Rubber Gaskets
ASME A112.18.1/ CSA B125.1	Plumbing Supply Fittings
ASME A112.18.2/ CSA B125.2	Plumbing Waste Fittings
ASME A112.19.2/ B45.1	Ceramic Plumbing Fixtures
ASME A112.19.1/ CSA B45.2	Enameled Cast-iron and Enameled Steel Plumbing Fixtures
ASME A112.19.3/ CSA B45.4	Stainless-steel Plumbing Fixtures
ASME A112.19.5/ CSA B45.15	Flush Valves and Spuds for Water Closets, Urinals and Tanks
ASME A112.19.7/ CSA B45.10	Hydromassage Bathtub Systems
CSA B45.5/ IAPMO Z124	Plastic Plumbing Fixtures
ASME A112.3.4/ CSA B45.9	Macerating Systems and Related Components
ASSE 1016/ ASME A112.1016/ CSA B125.16	Performance Requirements for Individual Thermostatic, Pressure Balancing and Combination Control Valves for Individual Fixture Fittings
B64.1.1	Vacuum Breakers, Atmospheric Type (AVB)
B64.1.2	Pressure Vacuum Breakers, (PVB)
B64.1.3	Spill Resistant Pressure Vacuum Breaks (SRPVB)
B64.2	Vacuum Breakers, Hose Connection Type (HCVB)
B64.2.1	Vacuum Breakers, Hose Connection (HCVB) with Manual Draining Feature
B64.2.1.1	Hose Connection Dual Check Vacuum Breakers, (HCDVB)



B64.2.2	Vacuum Breakers, Hose Connection Type (HCVB) with Automatic Draining Feature
B64.3	Backflow Preventers, Dual Check Valve Type with Atmospheric Port (DCAP)
B64.4	Backflow Preventers, Reduced Pressure Principle Type (RP)
B64.4.1	Reduced Pressure Principle for Fire Sprinklers (RPF)
B64.5	Double Check Backflow Preventers (DCVA)
B64.5.1	Double Check Valve Backflow Preventer for Fire Systems (DCVAF)
B64.6	Dual Check Backflow Preventers Valve (DuC)
B64.7	Laboratory Faucet Vacuum Breakers (LFVB)
B64.10	Manual for the Selection and Installation of Backflow Prevention Devices
B64.10.1	Maintenance and Field Testing of Backflow Preventers
B79	Commercial and Residential Drains, and Cleanouts
B125.3	Plumbing Fittings
B137.1	Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services
B137.2	Polyvinylchloride PVC Injection-moulded Gasketed Fittings for Pressure Applications
B137.3	Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications
B137.5	Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications
B137.6	CPVC Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems
B137.9	Polyethylene/Aluminum/ Polyethylene Composite Pressure Pipe Systems
B137.10	Cross-linked Polyethylene/Aluminum/ Polyethylene Composite Pressure Pipe Systems
B137.11	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications
B181.1	Acrylonitrile-butadiene-styrene ABS Drain, Waste and Vent Pipe and Pipe Fittings
B 181.2	Polyvinylchloride PVC and chlorinated polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings
B 181.3	Polyolefin and Polyvinylidene Fluoride (PVDF) Laboratory Drainage Systems
B182.1	Plastic Drain and Sewer Pipe and Pipe Fittings
B182.2	PSM Type Polyvinylchloride PVC Sewer Pipe and Fittings
B182.4	Profile Polyvinylchloride PVC Sewer Pipe and Fittings
B182.6	Profile Polyethylene (PE) Sewer Pipe and Fittings for Leak-proof Sewer Applications
B182.8	Profile Polyethylene (PE) Storm Sewer and Drainage Pipe and Fittings
B356	Water Pressure Reducing Valves for Domestic Water Systems
B483.1	Drinking Water Treatment Units
B481.1	Testing and Rating of Grease Interceptors Using Lard
B481.3	Sizing, Selection, Location and Installation of Grease Interceptors
B602	Mechanical Couplings for Drain, Waste and Vent Pipe and Sewer Pipe
IAPMO Group	
Z1001	Prefabricated Gravity Grease Interceptors
CSA B45.5/ IAPMO	Plastic Plumbing Fixtures
Z124	
International Code Council (ICC)	
A117.1	Accessible and Usable Buildings and Facilities
IECC	International Energy Conservation Code
IRC	International Residential Code®
International Safety Equipment Association (ISEA)	
ANSI/ISEA Z358.1	Emergency Eyewash and Shower Equipment
Manufacturers Standardization Society (MSS)	
SP-67	Butterfly Valves
SP-70	Gray Iron Gate Valves, Flanged and Threaded Ends
SP-71	Gray Iron Swing Check Valves, Flanged and Threaded Ends
SP-72	Ball Valves with Flanged or Butt-Welding Ends for General Service
SP-78	Cast Iron Plug Valves, Flanged and Threaded Ends
SP-80	Bronze Gate, Globe, Angle and Check Valves



SP-110	Ball Valves, Threaded, Socket Welded, Solder Joint, Grooved and Flared Ends
National Fire Protection Association (NFPA)	
51	Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes
55	Compressed Gases and Cryogenic Fluids Code
70	National Electric Code
99	Health Care Facilities Code
NSF International	
3	Commercial Warewashing Equipment
14	Plastic Piping System Components and Related Materials
18	Manual Food and Beverage Dispensing Equipment
42	Drinking Water Treatment Units-Aesthetic Effects
44	Residential Cation Exchange Water Softeners
50	Equipment for Swimming Pools, Spas, Hot Tubs and other Recreational Facilities
53	Drinking Water Treatment Units—Health Effects
58	Reverse Osmosis Drinking Water Treatment Systems
61	Drinking Water System Components—Health Effects
62	Drinking Water Distillation Systems
350	Onsite Residential and Commercial Water Reuse Treatment Systems
359	Valves for Crosslinked Polyethylene (PEX) Water Distribution Tubing Systems
372	Drinking Water Systems Components—Lead Content
Plumbing and Drainage Institute (PDI)	
PDI G101	Testing and Rating Procedure for Grease Interceptors with Appendix of Sizing and Installation Data
PDI G102	Testing and Certification for Grease Interceptors with Fog Sensing and Alarm Devices
UL LLC	
58	Steel Underground Tanks for Flammable and Combustible Liquids
142	Steel Aboveground Tanks for Flammable and Combustible Liquids
399	Drinking-Water Coolers
430	Waste Disposers
508	Industrial Control Equipment
515	Electrical Resistance Heat Tracing for Commercial and Industrial Applications including
1316	Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol Gasoline Mixtures
1746	External Corrosion Protection Systems for Steel Underground Storage Tanks
1795	Hydromassage Bathtubs

A.32 References from Saudi Building Code – 801

American Association of State Highway and Transportation Officials (AASHTO)	
HB-17	Specification for Highway Bridges
Architectural Fabric Structures Institute (AFSI)	
ASI-77	Design and Standard Manual
American National Standards Institute (ANSI)	
ANSI E1.21	Entertainment Technology: Temporary Ground Supported Overhead Structures Used to Cover the Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events
ANSI Z21.69/CSA 6.16	Connectors for Movable Gas Appliances
American Petroleum Institute (API)	
Spec 12P	Specification for Fiberglass Reinforced Plastic Tanks
RP 651	Cathodic Protection of Aboveground Petroleum Storage Tanks



Std 653	Tank Inspection, Repair, Alteration and Reconstruction
RP 752	Management of Hazards Associated with Location of Process Plant Buildings, CMA Managers Guide
RP 1604	Closure of Underground Petroleum Storage Tanks
RP 1615	Installation of Underground-petroleum Storage Systems
Std 2000	Venting Atmosphere and Low-pressure Storage Tanks: Non-refrigerated and Refrigerated
RP 2001	Fire Protection in Refineries
RP 2003	Protection Against Ignitions Arising out of Static, Lightning and Stray Currents
Publ 2009	Safe Welding and Cutting Practices in Refineries, Gas Plants and Petrochemical Plants
Std 2015	Safe Entry and Clearing of Petroleum Storage Tanks
RP 2023	Guide for Safe Storage and Handling of Heated Petroleum-derived Asphalt Products and Crude-oil Residue
Publ 2028	Flame Arrestors in Piping Systems
Publ 2201	Procedures for Welding or Hot Tapping on Equipment in Service
RP 2350	Overfill Protection for Storage Tanks in Petroleum Facilities
American Society of Civil Engineers Structural Engineering Institute (ASCE/SEI)	
ASCE/SEI 24	Flood Resistant Design and Construction
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)	
15	Safety Standard for Refrigeration Systems
The American Society of Mechanical Engineers (ASME)	
A13.1	Scheme for the Identification of Piping Systems
ASME A17.1/CSA B44	Safety Code for Elevators and Escalators
A17.3	Safety Code for Existing Elevators and Escalators
B16.18	Cast Copper-Alloy Solder Joint Pressure Fittings
B16.22	Wrought Copper and Copper-Alloy Solder-joint Pressure Fittings.
B31.1	Power Piping
B31.3	Process Piping
B31.4	Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
B31.9	Building Services Piping
BPVC	ASME Boiler and Pressure Vessel Code
American Society of Safety Engineers (ASSE)	
ANSI/ASSE Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, Part of the Fall Protection Code
ASTM International	
B42	Specification for Seamless Copper Pipe, Standard Sizes
B43	Specification for Seamless Red Brass Pipe, Standard Sizes
B68	Specification for Seamless Copper Tube, Bright Annealed
B88	Specification for Seamless Copper Water Tube
B251	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube
B280	Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service
D56	Test Method for Flash Point by Tag Closed Tester
D86	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
D92	Test Method for Flash and Fire Points by Cleveland Open Cup
D93	Test Method for Flash Point by Pensky-Martens Closed Up Tester
D323	Test Method for Vapor Pressure of Petroleum Products (Reid Method)
D2859	Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
D3278	Test Methods for Flash Point of Liquids by Small Scale Closed-cup Apparatus
E84	Test Method for Surface Burning Characteristics of Building Materials
E108	Test Methods for Fire Tests of Roof Coverings



E681	Test Method for Concentration Limits of Flammability of Chemicals (Vapors and Gases)
E1354	Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
E1529	Test Method for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies
E1537	Test Method for Fire Testing of Upholstered Furniture
E1590	Test Method for Fire Testing of Mattresses
E1966	Test Method for Fire-resistant Joint Systems
E2072	Standard Specification for Pholuminescent (Phosphorescent) Safety Markings
E2404	Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics
E2573	Standard Practice for Specimen Preparation and Mounting of Site-fabricated Stretch Systems to Assess Surface Burning Characteristics
F1085	Standard Specification for Mattress and Box Springs for Use in Berths in Marine Vessels
F2006	Standard/Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows
F2090	Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms
F2200	Standard Specification for Automated Vehicular Gate Construction
Builders Hardware Manufacturers' Association (BHMA)	
A156.10	American National Standard for Power-operated Pedestrian Doors
A156.19	American National Standard for Power Assist and Low-energy Power-operated Doors
A156.27	Power and Manual Operated Revolving Pedestrian Doors
State of California Department of Consumer Affairs Bureau of Electronics and Appliance Repair, Home Furnishings and Thermal Insulation (CA)	
Standard reference number	Title
California Technical Bulletin 129	Flammability Test Procedure for Mattresses for Use in Public Buildings
California Technical Bulletin 133	Flammability Test Procedure for Seating Furniture for Use in Public Occupancies
Compressed Gas Association (CGA)	
C-7	Guide to the Preparation of Precautionary Labeling and Marking of Compressed Gas Containers
G-13	Storage and Handling of Silane and Silane Mixtures (an American National Standard)
P-1	Safe Handling of Compressed Gases in Containers
ANSI/P-18	Standard for Bulk Inert Gas Systems
S-1.1	Relief Device Standards—Part 1—Cylinders for Compressed Gases
S-1.2	Pressure Relief Device Standards—Part 2—Cargo and Portable Tanks for Compressed Gases
S-1.3	Pressure Relief Device Standards—Part 3—Stationary Storage Containers for Compressed Gases
V-1	Standard for Gas Cylinder Valve Outlet and Inlet Connections
Coast Guard Regulations (CGR)	
46 CFR Parts 30, 32, 35 & 39	Shipping
Consumer Product Safety Commission (CPSC)	
16 CFR Part 1500.44	Method for Testing Extremely Flammable and Flammable Solids
16 CFR Part 1500	Hazardous Substances and Articles; Administration and Enforcement Regulations
16 CFR Part 1507	Fireworks Devices
16 CFR Part 1630	Standard for the Surface Flammability of Carpets and Rugs

**U.S. Department of Commerce (DOC)**

16 CFR Part 1632 Standard for the Flammability of Mattress and Mattress Pads (FF 4-72, Amended).

U.S. Department of Labor (DOL)

29 CFR Part 1910.1000 Air Contaminants

29 CFR Part 1910.1200 Hazard Communication

U.S. Department of Transportation (DOTn)

33 CFR Part 154 Facilities Transferring Oil or Hazardous Material in Bulk

33 CFR Part 155 Oil or Hazardous Material Pollution Prevention Regulations for Vessels

33 CFR Part 156 Oil and Hazardous Material Transfer Operations

49 CFR Parts 100-185 Hazardous Materials Regulations

49 CFR Part 172 Hazardous Materials Tables, Special Provisions, Hazardous Materials Communications, Emergency Response Information and Training Requirements

49 CFR Part 173 Shippers-General Requirements for Shipments and Packaging's

49 CFR Part 173.137 Shippers-General Requirements for Shipments and Packaging's: Class 8-Assignment of Packing Group

U.S. Department of Treasury (DOTy)

27 CFR Part 55 Commerce in Explosives

European Committee for Standardization (EN)

European Standard EN 1081 Resilient Floor Coverings-Determination of the Electrical Resistance

Federal Communications Commission (FCC)

47 CFR Part 90.219 Private Land Mobile Radio Services—Use of Signal Boosters

Factory Mutual (FM)

4430 Approval Standard for Heat and Smoke Vents.

ANSI/FM 4996 Approval Standard for Classification of Pallets and Other Material Handling Products as Equivalent to Wood Pallets

International Code Council (ICC)

ICC A117.1 Accessible and Usable Buildings and Facilities

ICC 300 Standard on Bleachers, Folding and Telescopic Seating and Grandstands

IPMC International Property Maintenance Code

IWUIC International Wildland-Urban Interface Code

International Institute of Ammonia Refrigeration (IIAR)

IIAR-2 Equipment, Design and Installation of Closed-Circuit Ammonia Mechanical Refrigerating Systems

IIAR-7 Developing Operating Procedures for Closed-Circuit Ammonia Mechanical Refrigerating Systems

International Kitchen Exhaust Cleaning Association (IKECA)

ANSI/IKECA C10 Standard for Cleaning of Commercial Kitchen Exhaust Systems

International Organization for Standardization (ISO)

ISO 8115 Cotton Bales—Dimensions and Density

National Electrical Manufacturer's Association (NEMA)

250 Enclosures for Electrical Equipment (1,000 Volt Maximum) .

National Fire Protection Association (NFPA)

02 Hydrogen Technologies Code

10 Standard for Portable Fire Extinguishers

11 Standard for Low-, Medium- and High-expansion Foam

12 Standard on Carbon Dioxide Extinguishing Systems.

12A Standard on Halon 1301 Fire Extinguishing Systems

13 Standard for the Installation of Sprinkler Systems

13D Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes

13R Standard for the Installation of Sprinkler Systems in Low Rise Residential Occupancies



14	Standard for the Installation of Standpipe and Hose Systems
15	Standard for Water Spray Fixed Systems for Fire Protection
16	Standard for the Installation of Foam-water Sprinkler and Foam-water Spray Systems
17	Standard for Dry Chemical Extinguishing Systems
17A	Standard for Wet Chemical Extinguishing Systems
20	Standard for the Installation of Stationary Pumps for Fire Protection
22	Standard for Water Tanks for Private Fire Protection
24	Standard for Installation of Private Fire Service Mains and Their Appurtenances
25	Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems
30	Flammable and Combustible Liquids Code
30A	Code for Motor Fuel-dispensing Facilities and Repair Garages
30B	Code for the Manufacture and Storage of Aerosol Products
31	Standard for the Installation of Oil-burning Equipment
32	Standard for Dry Cleaning Plants
33	Standard for Spray Application Using Flammable or Combustible Materials
34	Standard for Dipping, Coating and Printing Processes Using Flammable or Combustible Liquids
35	Standard for the Manufacture of Organic Coatings
40	Standard for the Storage and Handling of Cellulose Nitrate Film
51	Standard for the Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes
51A	Standard for Acetylene Cylinder Charging Plants .
52	Vehicular Gaseous Fuel System Code
55	Compressed Gases and Cryogenic Fluids Code
56	Standard for Fire and Explosion Prevention during Cleaning and Purging of Flammable Gas Piping Systems.
58	Liquefied Petroleum Gas Code
59A	Standard for the Production, Storage and Handling of Liquefied Natural Gas (LNG)
61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
69	Standard on Explosion Prevention Systems
70	National Electrical Code
72	National Fire Alarm and Signaling Code
80	Standard for Fire Doors and Other Opening Protectives
85	Boiler and Combustion System Hazards Code
86	Standard for Ovens and Furnaces
92	Standard for Smoke Control Systems
99	Health Care Facilities Code
101	Life Safety Code
105	Standard for Smoke Door Assemblies and Other Opening Protectives
110	Standard for Emergency and Standby Power Systems
111	Standard on Stored Electrical Energy Emergency and Standby Power Systems
120	Standard for Fire Prevention and Control in Coal Mines
160	Standard for the Use of Flame Effects Before an Audience
170	Standard for Fire Safety and Emergency Symbols
204	Standard for Smoke and Heat Venting
211	Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
241	Standard for Safeguarding Construction, Alteration and Demolition Operations
253	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source



260	Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture
261	Standard Method of Test for Determining Resistance of Mock-up Upholstered Furniture Material Assemblies to Ignition by Smouldering Cigarettes
265	Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings in Full Height Panels and Walls
286	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
289	Standard Method of Fire Test for Individual Fuel Packages
303	Fire Protection Standard for Marinas and Boatyards
318	Standard for the Protection of Semiconductor Fabrication Facilities
326	Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair
385	Standard for Tank Vehicles for Flammable and Combustible Liquids
400	Hazardous Materials Code
407	Standard for Aircraft Fuel Servicing
409	Standard for Aircraft Hangars
410	Standard on Aircraft Maintenance
484	Standard for Combustible Metals
495	Explosive Materials Code
498	Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives
505	Fire Safety Standard for Powered Industrial Trucks, Including Type Designations, Areas of Use, Maintenance and Operation
654	Standard for Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids
655	Standard for the Prevention of Sulfur Fires and Explosions
664	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
701	Standard Methods of Fire Tests for Flame-propagation of Textiles and Films
703	Standard for Fire Retardant-Wood and Fire-Retardant Coatings for Building Mater
704	Standard System for Identification of the Hazards of Materials for Emergency Response
720	Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment
750	Standard on Water Mist Fire Protection Systems
914	Code for Fire Protection of Historic Structures
1122	Code for Model Rocketry
1123	Code for Fireworks Display
1124	Code for the Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles
1125	Code for the Manufacture of Model Rocket and High Power Rocket Motors
1126	Standard for the Use of Pyrotechnics Before a Proximate Audience
1127	Code for High Power Rocketry
2001	Standard on Clean Agent Fire Extinguishing Systems
Underwriters Laboratories LLC (UL)	
10C	Positive Pressure Fire Tests of Door Assemblies
30	Metal Safety Cans
58	Steel Underground Tanks for Flammable and Combustible Liquids
80	Steel Tanks for Oil-Burner Fuels and Other Combustible Liquids
87A	Outline of Investigation for Power-Operated Dispensing Devices for Gasoline and Gasoline/Ethanol Blends with Nominal Ethanol Concentrations up to 85 Percent
142	Steel Aboveground Tanks for Flammable and Combustible Liquids
199E	Outline of Investigation for Fire Testing of Sprinklers and Water Spray Nozzles for Protection of Deep Fat Fryers



217	Single and Multiple Station Smoke Alarms
268	Smoke Detectors for Fire Alarm Systems
294	Access Control System Units
300	Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment
300A	Outline of Investigation for Extinguishing System Units for Residential Range Top Cooking Surfaces
305	Panic Hardware
325	Door, Drapery, Gate, Louver and Window Operators and Systems
499	Standard for Electrical Heating Appliances
710B	Recirculating Systems
723	Standard for Test for Surface Burning Characteristics of Building Materials
790	Standard Test Methods for Fire Tests of Roof Coverings
793	Automatically Operated Roof Vents for Smoke and Heat
864	Control Units and Accessories for Fire Alarm Systems
900	Air Filter Units
924	Standard for Safety Emergency Lighting and Power Equipment
1037	Antitheft Alarms and Devices
1275	Flammable Liquid Storage Cabinets
1313	Standard for Nonmetallic Safety Cans for Petroleum Products
1315	Standard for Safety for Metal Waste Paper Containers
1316	Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-gasoline Mixtures
1363	Relocatable Power Taps
1975	Fire Tests for Foamed Plastics Used for Decorative Purpose
1994	Standard for Luminous Egress Path Marking Systems
2017	General-Purpose Signaling Devices and Systems
2034	Single and Multiple Station Carbon Monoxide Alarms
2075	Standard for Gas and Vapor Detectors and Sensors
2079	Tests for Fire Resistance of Building Joint Systems
2085	Protected Above-ground Tanks for Flammable and Combustible Liquids
2196	Tests for Fire Resistive Cables
2200	Stationary Engine Generator Assemblies
2208	Solvent Distillation Units
2245	Below-grade Vaults for Flammable Liquid Storage Tanks
2335	Fire Tests of Storage Pallets
2360	Test Methods for Determining the Combustibility Characteristics of Plastics Used in Semi-Conductor Tool Construction



APPENDIX B SUPPLEMENTAL INFORMATION

The following supplemental information can be referenced as a method for design. In no way this is considered as a replacement. Nor does this relieve the design from compliance with Saudi Building Codes or requirements. This also does not constitute a change to the contract. The designer must follow the NEOM process for any change implemented.

B.1 American Concrete Institute (ACI)

Designation	Title
117.1R	Guide for Tolerance Compatibility in Concrete Construction
117	Specification for Tolerances for Concrete Construction and materials (ACI 117 10) and Commentary
121.1R	Guide to Quality Management Auditing in the Concrete Industry
121R	Guide for Concrete Construction Quality Systems in Conformance with ISO 9001
122R	Guide to Thermal Properties of Concrete and Masonry Systems
130R	Report on the Role of Materials in Sustainable Concrete Construction
131.1R	Information Delivery Manual (IDM) for Cast in Place Concrete
131.2R	Guide to Use of Industry Foundation Classes in Exchange of Reinforcement Models
132R	Guide for Responsibility in Concrete Construction
201.1R	Guide for Conducting a Visual Inspection of Concrete in Service
201.2R	Guide to Durable Concrete
201.3T	Joint Deterioration and Chloride Based Deicing Chemicals
207.1R	Guide to Mass Concrete
207.2R	Report on Thermal and Volume Change Effects on Cracking of Mass Concrete
207.3R	Report on Practices for Evaluation of Concrete in Existing Massive Structures for Service Conditions
207.4R	Report on Cooling and Insulating Systems for Mass Concrete
207.5R	Report on Roller Compacted Mass Concrete
207.6R	Report on the Erosion of Concrete in Hydraulic Structures
209.2R	Guide for Modeling and Calculating Shrinkage and Creep in Hardened Concrete
209R	Prediction of Creep, Shrinkage, and Temperature Effects in Concrete Structures



211.1	Standard Practice for Selecting Proportions for Normal Heavyweight and Mass Concrete
211.4R	Guide for Selecting Proportions for High Strength Concrete Using Portland Cement and Other Cementitious Materials
211.5R	Guide for Submittal of Concrete Proportions
211.6T	Aggregate Suspension Mixture Proportioning Method
211.7R	Guide for Proportioning Concrete Mixtures with Ground Calcium Carbonate and Other Mineral Fillers
211.8R	Guide to Troubleshooting Concrete Mixture Issues as Influenced by Constitutive Materials Jobsite Conditions or Testing Practices
211.9R	Guide to Selecting Proportions for Pumpable Concrete
212.3R	Report on Chemical Admixtures for Concrete
213R	Guide for Structural Lightweight Aggregate Concrete
214.4R	Guide for Obtaining Cores and Interpreting Compressive Strength Results
214R	Guide to Evaluation of Strength Test Results of Concrete
216.1	Code Requirements for Determining Fire Resistance of Concrete and Masonry Construction Assemblies
221.1R	Report on Alkali Aggregate Reactivity
221R	Guide for Use of Normal Weight and Heavyweight Aggregates in Concrete
222.2R	Report on Corrosion of Prestressing Steels
222.3R	Guide to Design and Construction Practices to Mitigate Corrosion of Reinforcement in Concrete Structures
222R	Guide to Protection of Reinforcing Steel in Concrete against Corrosion
223R	Guide for the Use of Shrinkage Compensating Concrete
224.1R	Causes , Evaluation, and Repair of Cracks in Concrete Structures
224.2R	Cracking of Concrete Members in Direct Tension
224.3R	Joints in Concrete Construction
224.4R	Guide to Design Detailing to Mitigate Cracking
224R	Control of Cracking in Concrete Structures
225.1T	Removal of Optional Alkali Limit in Standard Specifications for Portland Cement
225R	Guide to the Selection and Use of Hydraulic Cements
228.1R	Report on Methods for Estimating In Place Concrete Strength



228.2R	Report on Nondestructive Test Methods for Evaluation of Concrete in Structures
229R	Report on Controlled Low Strength Materials
230.1R	Report on Soil Cement
231R	Report on Early Age Cracking: Causes, Measurement, and Mitigation
232.1R	Report on the Use of Raw or Processed Natural Pozzolans in Concrete
232.2R	Report on the Use of Fly Ash in Concrete
232.3R	Report on High Volume Fly Ash Concrete for Structural Applications
232.4T	Limits on the Proportions of Fly Ash in Concrete
233R	Guide to the Use of Slag Cement in Concrete and Mortar
234R	Guide for the Use of Silica Fume in Concrete
237R	Self Consolidating Concrete
238.1R	Report on Measurements of Workability and Rheology of Fresh Concrete
238.2T	Concrete Thixotropy
239R	Ultra High Performance Concrete: An Emerging Technology Report
241R	Report on the Application of Nanotechnology and Nanomaterials in Concrete
301	Specifications for Concrete Construction
302.1R	Guide to Concrete Floor and Slab Construction
302.2R	Guide for Concrete Slabs that Receive Moisture Sensitive Flooring Materials
303R	Guide to Cast in Place Architectural Concrete Practice
304.2R	Guide to Placing Concrete by Pumping Methods
304.3R	Heavyweight Concrete: Measuring, Mixing, Transporting, and Placing
304.4R	Guide to Placing Concrete with Belt Conveyors
304.6R	Guide for Use of Volumetric Measuring and Continuous Mixing Concrete Equipment
304R	Guide for Measuring, Mixing, Transporting, and Placing Concrete
305.1	Specification for Hot Weather Concreting
305R	Guide to Hot Weather Concreting
306.1	Standard Specification for Cold Weather Concreting
306R	Guide to Cold Weather Concreting



307	Code Requirements for Reinforced Concrete Chimneys (ACI 307 08) and Commentary
308.1	Specification for Curing Concrete
308R	Guide to External Curing Concrete of Concrete
308	Report on Internally Cured Concrete Using Prewetted Absorptive Lightweight Aggregate
309.1R	Report on Behavior of Fresh Concrete During Vibration
309.2R	Guide to Identification and Control of Visible Surface Effects of Consolidation on Formed Concrete Surfaces
309.5R	Reapproved 2006 Compaction of Roller Compacted Concrete
309R	Guide for Consolidation of Concrete
310.1	Specification for Polished Concrete Slab Finishes
310R	Guide to Decorative Concrete
311.4R	Guide for Concrete Inspection
311.6	Specification for Testing Ready Mixed Concrete
311.7	Specification for Inspection of Concrete Construction
313	Design Specification for Concrete Silos and Stacking Tubes for Storing Granular Materials
314R	Guide to Simplified Design for Reinforced Concrete Buildings
315R	Guide to Presenting Reinforcing Steel Design Details
318.2	Building Code Requirements for Concrete Thin Shells (ACI 318.2 19) and Commentary (ACI 318.2R 19)
318	Building Code Requirements for Structural Concrete (ACI 318 19) and Commentary (ACI 318R 19) stand alone part with Index and Terminology
325.11R	Report on Accelerated Techniques for Concrete Paving
325.12R	Guide for Design of Jointed Concrete Pavements for Streets and Local Roads
325.13R	Concrete Overlays for Pavement Rehabilitation
325.14R	Guide for Design and Proportioning of Concrete Mixtures for Pavements
325.9R	Guide for Construction of Concrete Pavements
327R	Guide to Roller Compacted Concrete Pavements
329.1T	Minimum Cementitious Materials Content in Specifications
329R	Report on Performance Based Requirements for Concrete
330.1	Specification for Unreinforced Concrete Parking Lots and Site Paving



330.2R	Guide for the Design and Construction of Concrete Site Paving for Industrial and Trucking Facilities
330R	Guide for the Design and Construction of Concrete Parking Lots
332.1R	Guide to Residential Concrete Construction
332	Code Requirements for Residential Concrete (ACI 332 20) and Commentary
334.1R	Concrete Shell Structures—Practice and Commentary
334.3R	Construction of Concrete Shells Using Inflated Forms
336.1	Specification for the Construction of Drilled Piers
336.3R	Report on Design and Construction of Drilled Piers
341.2R	Report on Analysis and Design of Seismic Resistant Concrete Bridge Systems
341.3R	Seismic Evaluation and Retrofit Techniques for Concrete Bridges
341.4R	Report on the Seismic Design of Bridge Columns Based on Drift
342R	Report on Flexural Live Load Distribution Methods for Evaluating Existing Bridges
343.1R	Guide for the Analysis and Design of Reinforced and Prestressed Concrete Guideway Structures
343R	Analysis and Design of Reinforced Concrete Bridge Structures
345.1R	Guide to Maintenance of Concrete Bridge Members
345.2R	Guide for Widening Highway Bridges
345R	Guide for Concrete Highway Bridge Deck Construction
347.2R	Guide for Shoring/Reshoring of Concrete Multistory Buildings
347.3R	Guide to Formed Concrete Surfaces
347R	Guide to Formwork for Concrete
349.1R	Reinforced Concrete Design for Thermal Effects on Nuclear Power Plant Structures
349.2R	Guide to the Concrete Capacity Design (CCD) Method—Embedment Design Examples
349.3R	Report on Evaluation and Repair of Existing Nuclear Safety Related Concrete Structures
349	Code Requirements for Nuclear Safety Related Concrete Structures (ACI 349 13) and Commentary
350.1	Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures (ACI 350.1 10) and Commentary
350.2R	Concrete Structures for Containment of Hazardous Materials



350.3	Seismic Design of Liquid Containing Concrete Structures (ACI 350.3 06) and Commentary
350.4R	Design Considerations for Environmental Engineering Concrete Structures
350.5	Specifications for Environmental Concrete Structures
350	Code Requirements for Environmental Engineering Concrete Structures (ACI 350 06) and Commentary
351.1R	Report on Grouting between Foundations and Bases for Support of Equipment and Machinery
351.2R	Report on Foundations for Static Equipment
351.3R	Report on Foundations for Dynamic Equipment
351.4	Specification for Installation of Cementitious Grouting between Foundations and Equipment Bases
351.5	Specification for Installation of Epoxy Grout between Foundations and Equipment Bases
352.1R	Guide for Design of Slab Column Connections in Monolithic Concrete Structures
352R	Recommendations for Design of Beam Column Connections in Monolithic Reinforced Concrete Structures
355.2	Qualification of Post Installed Mechanical Anchors in Concrete (ACI 355.2 19) and Commentary
355.3R	Guide for Design of Anchorage to Concrete: Examples Using ACI 318 Appendix D
355.4	Qualification of Post Installed Adhesive Anchors in Concrete (ACI 355.4 11) and Commentary
357.2R	Report on Floating and Float In Concrete Structures
357.3R	Guide for Design and Construction of Waterfront and Coastal Concrete Marine Structures
357R	Guide for the Design and Construction of Fixed Offshore Concrete Structures
359	Code for Concrete Containments (Synopsis only)
360R	Guide to Design of Slabs on Ground
362.1R	Guide for the Design and Construction of Durable Concrete Parking Structures
362.2R	Guide for Structural Maintenance of Parking Structures
363.2R	Guide to Quality Control and Assurance of High Strength Concrete
363R	Report on High Strength Concrete



364.10T	Rehabilitation of Structure with Reinforcement Section Loss
364.11T	Managing Alkali Aggregate Reaction Expansion in Mass Concrete
364.12T	Repair of Leaking Cracks in Walls of Liquid Containment Structures
364.13T	Repairs for Reinforcement with Shallow Cover
364.14T	Section Loss Determination of Damaged or Corroded Reinforcing Steel Bars
364.15T	Significance of the Shrinkage Compensating and Nonshrink Labels on Packaged Repair Materials
364.16T	Physical Properties and Characteristics Affecting the Sensitivity to Cracking of Cementitious Repair Materials
364.17T	How to Measure PH of a Concrete Surface prior to Installation of a Floor Covering
364.1R	Guide for Assessment of Concrete Structures before Rehabilitation
364.2T	Increasing Shear Capacity within Existing Reinforced Concrete Structures
364.3R	Guide for Cementitious Repair Material Data Sheet
364.3T	Treatment of Exposed Epoxy Coated Reinforcement in Repair
364.4T	Determining the Load Capacity of a Structure When As Built Drawings are Unavailable
364.5T	Importance of Modulus of Elasticity in Surface Repair Materials
364.6T	Concrete Removal in Repairs Involving Corroded Reinforcing Steel
364.7T	Evaluation and Minimization of Bruising (Microcracking) in Concrete Repair
364.8T	Use of Hydrodemolition for Concrete Removal in Unbonded Post Tensioned Systems
364.9T	Cracks in a Repair
365.1R	Report on Service Life Prediction
369.1	Standard Requirements for Seismic Evaluation and Retrofit of Existing Concrete Buildings (ACI 369.1 17) and Commentary
369R	Guide for Seismic Rehabilitation of Existing Concrete Frame Buildings and Commentary
370R	Report for the Design of Concrete Structures for Blast Effects
371R	Guide for the Analysis Design and Construction of Elevated Concrete and Composite Steel Concrete Water Storage Tanks
372R	Guide to Design and Construction of Circular Wire and Strand Wrapped Prestressed Concrete Structures



374.1	Acceptance Criteria for Moment Frames Based on Structural Testing (ACI 374.1 05) and Commentary
374.2R	Guide for Testing Reinforced Concrete Structural Elements under Slowly Applied Simulated Seismic Loads
374.3R	Guide to Nonlinear Modeling Parameters for Earthquake Resistant Structures
376	Code Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases (ACI 376 11) and Commentary
408.2R	Report on Bond of Steel Reinforcing Bars Under Cyclic Loads
408.3R	Guide for Lap Splice and Development Length of High Relative Rib Area Reinforcing Bars in Tension and Commentary
408R	Bond and Development of Straight Reinforcing Bars in Tension
421.1R	Guide to Shear Reinforcement for Slabs
421.2R	Guide to Seismic Design of Punching Shear Reinforcement in Flat Plates
421.3R	Guide to Design of Reinforced Two Way Slab Systems
423.10R	Guide to Estimating Prestress Losses
423.3R	Recommendations for Concrete Members Prestressed with Single Strand Unbonded Tendons
423.4R	Report on Corrosion and Repair of Unbonded Single Strand Tendons
423.7	Specification for Unbonded Single Strand Tendon Materials
423.8R	Report on Corrosion and Repair of Grouted Multistrand and Bar Tendon Systems
435.8R	Observed Deflections of Reinforced Concrete Slab Systems and Causes of Large Deflections (Synopsis only)
435R	Report on Deflection of Nonprestressed Concrete Structures
437.1R	Load Tests of Concrete Structures: Methods Magnitude Protocols and Acceptance Criteria
437.2	Code Requirements for Load Testing of Existing Concrete Structures (ACI 437.2 13) and Commentary
437R	Strength Evaluation of Existing Concrete Buildings
439.3R	Types of Mechanical Splices for Reinforcing Bars
439.4R	Report on Steel Reinforcement—Material Properties and U.S. Availability
439.5R	Guide for the Specification Manufacture and Construction Use of Welded Wire Reinforcement



439.6R	Guide for the Use of ASTM A1035/A1035M Type CS Grade 100 -690 Steel Bars for Structural Concrete
440.1R	Guide for the Design and Construction of Structural Concrete Reinforced with Fiber Reinforced Polymer (FRP) Bars
440.2R	Guide for the Design and Construction of Externally Bonded FRP Systems for Strengthening Concrete Structures
440.3R	Guide Test Methods for Fiber Reinforced Polymer (FRP) Composites for Reinforcing or Strengthening Concrete and Masonry Structures
440.4R	Prestressing Concrete Structures with FRP Tendons
440.5	Specification for Construction with Fiber Reinforced Polymer Reinforcing Bars
440.6	Specification for Carbon and Glass Fiber Reinforced Polymer Bar Materials for Concrete Reinforcement
440.7R	Guide for the Design and Construction of Externally Bonded Fiber Reinforced Polymer Systems for Strengthening Unreinforced Masonry Structures
440.8	Specification for Carbon and Glass Fiber Reinforced Polymer (FRP) Materials Made by Wet Layup for External Strengthening of Concrete and Masonry Structures Part
440.9R	Guide to Accelerated Conditioning Protocols for Durability Assessment of Internal and External Fiber Reinforced Polymer (FRP) Reinforcement
440R	Report on Fiber Reinforced Polymer (FRP) Reinforcement for Concrete Structures
441.1R	Report on Equivalent Rectangular Concrete Stress Block and Transverse Reinforcement for High Strength Concrete Columns
441R	High Strength Concrete Columns
445.1R	Report on Torsion in Structural Concrete
445R	Recent Approaches to Shear Design of Structural Concrete
446.1R	Fracture Mechanics of Concrete: Concepts Models and Determination of Material Properties (Synopsis only)
446.3R	Finite Element Analysis of Fracture in Concrete Structures
447.1R	Report on the Modeling Techniques Used in Finite Element Simulations of Concrete Structures Strengthened Using Fiber Reinforced Polymer (FRP) Materials
447R	Design Guide for Twisting Moments in Slabs
503.3	Specification for Producing a Skid Resistant Surface on Concrete by the Use of Epoxy and Aggregate
503.4	Standard Specification for Repairing Concrete with Epoxy Mortars
503.5R	Guide for the Selection of Polymer Adhesives with Concrete



503.7	Specification for Crack Repair by Epoxy Injection
506.1R	Guide to Fiber Reinforced Shotcrete
506.2	Specification for Shotcrete
506.4R	Guide for the Evaluation of Shotcrete
506.5R	Guide for Specifying Underground Shotcrete
506.6T	Visual Shotcrete Core Quality Evaluation
506R	Guide to Shotcrete
515.2R	Guide to Selecting Protective Treatments for Concrete
515.3R	Guide for Assessment and Surface Preparation for Application of Protection Systems for Concrete
522.1	Specification for Construction of Pervious Concrete Pavement
522R	Report on Pervious Concrete
523.1R	Guide for Cast in Place Low Density Cellular Concrete
523.2R	Guide for Precast Cellular Concrete Floor, Roof, and Wall Units
523.3R	Guide for Cellular Concretes above 50 lb/ft ³ (800 kg/m ³)
524R	Guide to Portland Cement Based Plaster
526R	Guide for Design and Construction with Autoclaved Aerated Concrete Panels
530	Building Code Requirements and Specification for Masonry Structures
533.1R	Guide for Design and Construction Responsibilities for Architectural Precast Concrete
533.5R	Guide for Precast Concrete Tunnel Segments
533R	Guide for Precast Concrete Wall Panels
543R	Guide to Design, Manufacture, and Installation of Concrete Piles
544.1R	Report on Fiber Reinforced Concrete
544.2R	Report on the Measurement of Fresh State Properties and Fiber Dispersion of Fiber Reinforced Concrete
544.3R	Guide for Specifying, Proportioning, and Production of Fiber Reinforced Concrete
544.4R	Guide to Design with Fiber Reinforced Concrete
544.5R	Report on the Physical Properties and Durability of Fiber Reinforced Concrete
544.6R	Report on Design and Construction of Steel Fiber Reinforced Concrete Elevated Slabs



544.7R	Report on Design and Construction of Fiber Reinforced Precast Concrete Tunnel Segments
544.8R	Report on Indirect Method to Obtain Stress Strain Response of Fiber Reinforced Concrete (FRC)
544.9R	Report on Measuring Mechanical Properties of Hardened Fiber Reinforced Concrete
546.2R	Guide to Underwater Repair of Concrete
546.3R	Guide to Materials Selection for Concrete Repair
546.4R	Guide for Jobsite Quality Control and Quality Assurance of Cementitious Packaged Materials
546R	Guide to Concrete Repair
548.1	Specification for Type MMS (Methyl Methacrylate Slurry) Polymer Overlays for Bridge and Parking Garage Decks
548.11R	Guide for the Application of Epoxy and Latex Adhesives for Bonding Freshly Mixed and Hardened Concretes
548.12	Specification for Bonding Hardened Concrete and Steel to Hardened Concrete with an Epoxy Adhesive
548.13	Specification for Bonding Fresh Concrete to Hardened Concrete with a Multi Component Epoxy Adhesive
548.14	Specification for Repairing Concrete with Epoxy Mortar
548.15	Specification for Crack Repair by Epoxy Injection
548.1R	Guide for the Use of Polymers in Concrete
548.3R	Report on Polymer Modified Concrete
548.4	Specification for Latex Modified Concrete Overlays
548.5R	Guide for Polymer Concrete Overlays
548.6R	Polymer Concrete: Guidelines for Structural Applications
548.8	Specification for Type EM (Epoxy Multi Layer) Polymer Overlay for Bridge and Parking Garage Decks
548.9	Specification for Type ES (Epoxy Slurry) Polymer Overlay for Bridge and Parking Garage Decks
549.1R	Design Guide for Ferrocement
549.3R	Report on Glass Fiber Reinforced Concrete Premix
549.4R	Guide to Design and Construction of Externally Bonded Fabric-Reinforced Cementitious Matrix and Steel-Reinforced Grout Systems for Repair and Strengthening of Concrete Structures
549.5R	Report on Spray up and Continuous Strand Glass Fiber Reinforced Concrete (GFRC)



549.6R	Guide to Design and Construction of Externally Bonded Fabric Reinforced Cementitious Matrix (FRCM) and Steel Reinforced Grout (SRG) Systems for Repair and Strengthening masonry structures
549R	Report on Ferrocement
550.1R	Guide to Emulating Cast in Place Detailing for Seismic Design of Precast Concrete Structures
550.2R	Design Guide for Connections in Precast Jointed Systems
550.3	Design Specification for Unbonded Post Tensioned Precast Concrete Special Moment Frames Satisfying ACI 374.1 (ACI 550.3 13) and Commentary
550.4	Qualification of Precast Concrete Diaphragm Connections and Reinforcement at Joints for Earthquake Loading (ACI 550.4 18) and Commentary (ACI 550.4R 18)
550.5	Code Requirements for the Design of Precast Concrete Diaphragms for Earthquake Motions (ACI 550.5 and Commentary (ACI 550.5R 18)
550.6	Acceptance Criteria for Special Unbonded Post Tensioned Precast Structural Walls Based on Validation Testing and Commentary
550.7	Requirements for Design of a Special Unbonded Post Tensioned Precast Shear Wall Satisfying ACI 550.6 (ACI 550.7) and Commentary
551.1R	Guide to Tilt Up Concrete Construction
551.2R	Design Guide for Tilt Up Concrete Panels
555R	Removal and Reuse of Hardened Concrete
560R	Report on Design and Construction with Insulating Concrete Forms (ICFs)
562	Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures (ACI 562 19) and Commentary
563	Specifications for Repair of Concrete in Buildings (ACI 563 18)
ITG 10R	Practitioner's Guide for Alternative Cements
ITG 4.3R	Report on Structural Design and Detailing for High Strength Concrete in Moderate to High Seismic Applications
ITG 7	Specification for Tolerances for Precast Concrete
ITG 9R	Report on Design of Concrete Wind Turbine Towers



B.2 American Society of Civil Engineers (ASCE)

B.2.1 ASCE Standards

ASCE Number & Version	Title
ANSI/ASCE/CI 67-17	Schedule Delay Analysis
ANSI/ASCE/EWRI 12-13, 13-13, 14-13	Standard Guidelines for the Design, Installation, and Operation and Maintenance of Urban Subsurface Drainage
ANSI/ASCE/EWRI 39-15	Guidelines for Operational Hail Suppression Programs
ANSI/ASCE/EWRI 39-15	Guidelines for Operational Hail Suppression Programs
ANSI/ASCE/EWRI 42-17	Standard Practice for the Design, Conduct, and Evaluation of Operational Precipitation Enhancement Projects
ANSI/ASCE/EWRI 44-13	Standard Practice for the Design and Operation of Supercooled Fog Dispersal Projects
ANSI/ASCE/EWRI 44-20	Standard Practice for the Design, Operation, and Evaluation of Supercooled Fog Dispersal Projects
ANSI/ASCE/EWRI 56-10, 57-10	Guidelines for the Physical Security of Water Utilities; Guidelines for the Physical Security of Wastewater/Stormwater Utilities
ANSI/ASCE/EWRI 65-17	Calculation of the Saturated Hydraulic Conductivity of Fine-Grained Soils
ANSI/ASCE/EWRI 66-17	Management Practices for Control of Erosion and Sediment from Construction Activities
ANSI/ASCE/EWRI 70-19	Estimation of Aquifer Hydraulic Properties by Inverse Numerical Modeling of Aquifer Pumping Tests
ANSI/ASCE/SEI 25-16	Earthquake-Actuated Automatic Gas Shutoff Devices
ANSI/ASCE/T&DI 21.2-08	Automated People Mover Standards, Part 2
ANSI/ASCE/T&DI 21.3-08	Automated People Mover Standards, Part 3
ANSI/ASCE/T&DI 21.4-08	Automated People Mover Standards, Part 4
ANSI/ASCE/T&DI 21-05	Automated People Mover Standards, Part 1
ANSI/ASCE/T&DI 21-13	Automated People Mover Standards
ASCE 17-96	Air-Supported Structures
ASCE 45-16, 46-16, 47-16	Standard Guidelines for the Design, Installation, and Operation and Maintenance of Urban Stormwater Systems
ASCE 4-98	Seismic Analysis of Safety-Related Nuclear Structures and Commentary
ASCE 7-16	Tsunami Design Zone Maps for Selected Locations
ASCE/CI 15-17	Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installations (SIDD)
ASCE/CI 27-17	Standard Practice for Direct Design of Precast Concrete Pipe for Jacking in Trenchless Construction
ASCE/CI 36-15	Standard Design and Construction Guidelines for Microtunneling



ASCE/CI 36-15	Standard Design and Construction Guidelines for Microtunneling
ASCE/COPRI 61-14	Seismic Design of Piers and Wharves
ASCE/EWRI 12-05, 13-05, and 14-05	Standard Guidelines for the Design of Urban Subsurface Drainage, Standard Guidelines for the Installation of Urban Subsurface Drainage, and Standard Guidelines for the Operation and Maintenance of Urban Subsurface Drainage
ASCE/EWRI 18-18	Standard Guidelines for In-Process Oxygen Transfer Testing
ASCE/EWRI 2-06	Measurement of Oxygen Transfer in Clean Water
ASCE/EWRI 33-09	Comprehensive Transboundary Water Quality Management Agreement
ASCE/EWRI 40-18	Regulated Riparian Model Water Code
ASCE/EWRI 42-04	Standard Practice for the Design and Operation of Precipitation Enhancement Project
ASCE/EWRI 45-05, 46-05, and 47-05	Standard Guidelines for the Design of Urban Stormwater Systems, Standard Guidelines for Installation of Urban Stormwater Systems, and Standard Guidelines for the Operation and Maintenance of Urban Stormwater Systems
ASCE/EWRI 50-08(R2016) and 51-08(R2016)	Standard Guideline for Fitting Saturated Hydraulic Conductivity Using Probability Density Function and Standard Guideline for Calculating the Effective Saturated Hydraulic Conductivity
ASCE/EWRI 54-10(R2016)	Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity
ASCE/EWRI 60-12	Guideline for Development of Effective Water Sharing Agreements
ASCE/EWRI 69-19	Standard Guidelines for Managed Aquifer Recharge
ASCE/G-I 53-19	Compaction Grouting Consensus Guide
ASCE/SEI 10-15	Design of Latticed Steel Transmission Structures
ASCE/SEI 19-16	Structural Applications of Steel Cables for Buildings
ASCE/SEI 24-14	Flood Resistant Design and Construction
ASCE/SEI 30-14	Guideline for Condition Assessment of the Building Envelope
ASCE/SEI 31-03	Seismic Evaluation of Existing Buildings
ASCE/SEI 37-14 (R2019)	Design Loads on Structures during Construction
ASCE/SEI 37-14 (R2019)	Design Loads on Structures during Construction
ASCE/SEI 41-06	Seismic Rehabilitation of Existing Buildings
ASCE/SEI 41-13	Tier 1 Checklists for Seismic Evaluation of Existing Buildings: Fillable Forms for Standard
ASCE/SEI 41-17	Seismic Evaluation and Retrofit of Existing Buildings
ASCE/SEI 4-16	Seismic Analysis of Safety-Related Nuclear Structures
ASCE/SEI 43-19	Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities
ASCE/SEI 48-19	Design of Steel Transmission Pole Structures
ASCE/SEI 49-12	Wind Tunnel Testing for Buildings and Other Structures
ASCE/SEI 52-10	Design of Fiberglass-Reinforced Plastic (FRP) Stacks
ASCE/SEI 55-16	Tensile Membrane Structures
ASCE/SEI 59-11	Blast Protection of Buildings
ASCE/SEI 7-10	Minimum Design Loads for Buildings and Other Structures
ASCE/SEI 7-16	Minimum Design Loads and Associated Criteria for Buildings and Other Structures



ASCE/SEI/SFPE 29-05	Standard Calculation Methods for Structural Fire Protection
ASCE/T&DI/ICPI 58-16	Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways
ASCE/T&DI/ICPI 68-18	Permeable Interlocking Concrete Pavement
CI/ASCE 36-01	Standard Construction Guidelines for Microtunneling
EWRI/ASCE 33-01	Comprehensive Transboundary International Water Quality Management Agreement
EWRI/ASCE 39-03	Standard Practice for the Design and Operation of Hail Suppression Projects

B.2.2 ASCE Manual of Practice

MOP Number	Title
MOP 143	Design and Performance of Tall Buildings for Wind
MOP 74	Guidelines for Electrical Transmission Line Structural Loading
MOP 115	Pipe Ramming
MOP 104	Recommended Practice for Fiber-Reinforced Polymer Products for Overhead Utility Line Structures
MOP 141	Wood Pole Structures for Electrical Transmission Lines: Recommended Practice for Design and Use
MOP 139	Radar Rainfall Data Estimation and Use
MOP 138	Structural Fire Engineering
MOP 140	Climate-Resilient Infrastructure: Adaptive Design and Risk Management
MOP 135	Monitoring Dam Performance: Instrumentation and Measurements
MOP 136	Concrete Foundations for Turbine Generators: Analysis, Design, and Construction
MOP 137 / WEF MOP 38	Sustainability and Energy Management for Water Resource Recovery Facilities
MOP 133	Pilot Tube and Other Guided Boring Methods
MOP 134	Water Pipeline Condition Assessment
MOP 106	Horizontal Auger Boring Projects
MOP 70	Evaporation, Evapotranspiration, and Irrigation Water Requirements
MOP 81	Guidelines for Cloud Seeding to Augment Precipitation
MOP 132	Renewal of Potable Water Pipes
MOP 130	Waterfront Facilities Inspection and Assessment
MOP 128	Building Security Rating System: Checklists to Assess Risks, Consequences, and Security Countermeasures
MOP 131	Canal Automation for Irrigation Systems
MOP 129	Mooring of Ships to Piers and Wharves
MOP 127	Hydraulics of Wells: Design, Construction, Testing, and Maintenance of Water Well Systems
MOP 108	Pipeline Design for Installation by Horizontal Directional Drilling
MOP 126	Curtain Wall Systems: A Primer
MOP 125	Pipelines for Water Conveyance and Drainage
MOP 124	Inland Navigation: Channel Training Works
MOP 50	Planning and Design Guidelines for Small Craft Harbors
MOP 123	Prestressed Concrete Transmission Pole Structures: Recommended Practice for Design and Installation



MOP 79	Steel Penstocks
MOP 73	Quality in the Constructed Project: A Guide for Owners, Designers, and Constructors
MOP 45	How To Select and Work Effectively with Consulting Engineers: Getting the Best Project
MOP 71	Agricultural Salinity Assessment and Management
MOP 102	Design Guide for FRP Composite Connections
MOP 122	Sediment Dynamics upon Dam Removal
MOP 121	Safe Operation and Maintenance of Dry Dock Facilities
MOP 120	Trenchless Renewal of Culverts and Storm Sewers
MOP 74	Guidelines for Electrical Transmission Line Structural Loading
MOP 92	Manhole Inspection and Rehabilitation
MOP 117	Inspecting Pipeline Installation
MOP 118	Belowground Pipeline Networks for Utility Cables
MOP 119	Buried Flexible Steel Pipe: Design and Structural Analysis
MOP 114	Performance-Based Design of Structural Steel for Fire Conditions: A Calculation Methodology
MOP 116	Navigation Engineering Practice and Ethical Standards
MOP 115	Pipe Ramming Projects
MOP 113	Substation Structure Design Guide
MOP 110	Sedimentation Engineering: Processes, Measurements, Modeling, and Practice
MOP 60	Gravity Sanitary Sewer Design and Construction
MOP 112	Pipe Bursting Projects
MOP 111	Reliability-Based Design of Utility Pole Structures
MOP 54	Sedimentation Engineering
MOP 81	Guidelines for Cloud Seeding to Augment Precipitation ASCE
MOP 108	Pipeline Design for Installation by Horizontal Directional Drilling
MOP 107	Ship Channel Design and Operation
MOP 105	Animal Waste Containment in Lagoons
MOP 106	Horizontal Auger Boring Projects
MOP 104	Recommended Practice for Fiber-Reinforced Polymer
MOP 103	Guide to Hiring and Retaining Great Civil Engineers
MOP 101	Underwater Investigations: Standard Practice Manual
MOP 100	Groundwater Contamination by Organic Pollutants
MOP 97	Hydraulic Modeling: Concepts and Practice
MOP 98	Conveyance of Residuals from Water and Wastewater Treatment
MOP 99	Environmental Site Characterization and Remediation Design Guidance
MOP 96	Guide to Improved Earthquake Performance of Electric Power Systems
MOP 67	Wind Tunnel Studies of Buildings and Structures
MOP 95	Urban Subsurface Drainage
MOP 94	Inland Navigation: Locks, Dams, and Channels
MOP 91	Design of Guyed Electrical Transmission Structures
MOP 90	Guide to Structural Optimization
MOP 28	Hydrology Handbook
MOP 85	Quality of Ground Water: Guidelines for Selection and Application of Frequently Used Models



MOP 84	Mechanical Connections in Wood Structures
MOP 77/WEF MOP FD-20	Design and Construction of Urban Stormwater Management Systems
MOP 78	Structural Fire Protection
MOP 57	Management, Operation and Maintenance of Irrigation and Drainage Systems
MOP 49	Urban Planning Guide
MOP 66	Structural Plastics Selection Manual



B.3 American Association of State Highway and Transportation Officials (AASHTO)

B.3.1 Administration & Economics

Designation	Title
UAAG-4-UL	Uniform Audit and Accounting Guide for Audits of Architectural And Engineering (A/E) Consulting Firms, 2016 Edition
UBA-3	User and Non-User Benefit Analysis for Highways, 3rd Edition

B.3.2 Asset Management & Planning

Designation	Title
TAMGFI-2-UL	AASHTO Transportation Asset Management Guide: A Focus on Implementation, 2nd Edition
TAMG-1-OL	Transportation Asset Management Guide, Volume 1
ERM-1-UL	AASHTO Guide for Enterprise Risk Management, 1st Edition
GTD-2-UL	AASHTO Guidelines for Traffic Data Programs, 2nd Edition

B.3.3 Bridges & Structures

Designation	Title
LRFDDBDS-9	LRFD Bridge Design Specifications, 9th Edition
ABC-1-UL	LRFD Guide Specifications for Accelerated Bridge Construction, 1st Edition
GSBTW-2-UL	Guide Design Specifications for Bridge Temporary Works, 2nd Edition, with 2020 Interim Revisions
GSWLB-1-UL	Guide Specifications for Wind Loads on Bridges During Construction, 1st Edition
BSG 1-UL	Bridge Security Guidelines, 1st Edition
LRFDMOV-2-M	AASHTO LRFD Movable Highway Bridge Design Specifications, 2nd Edition, with 2008, 2010, 2011, 2012, 2014, and 2015 Interim Revisions
NSMT-1-UL	Guide for Design and Construction of Near-Surface Mounted Titanium Alloy Bars for Strengthening Concrete Structures, 1st Edition
HBSLD-1-UL	Guide Specifications for Service Life Design of Highway Bridges, 1st Edition
LRFDSEIS-2-M	AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, with 2012, 2014, and 2015 Interim Revisions
HBP-1-UL	Historic Bridge Preservation Guide, 1st Edition
GSID-4	Guide Specifications for Seismic Isolation Design, 4th Edition
GSLR-1-UL	Guide Specifications for Bridges Carrying Light Rail Transit Loads, 1st Edition
GSDPB-2-UL	LRFD Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition, with 2015 Interim Revisions
GSDFPB-1-UL	Guide Specifications for Design of FRP Pedestrian Bridges, 1st Edition
GFRP-2-UL	for GFRP-Reinforced Concrete, 2nd Edition
CFRP-1-UL	Guide Specifications for the Design of Concrete Bridge Beams Prestressed with Carbon Fiber- Reinforced Polymer (CFRP) Systems, 1st Edition



LRDFFRP-1-UL	AASHTO LRFD Guide Specifications for Design of Concrete-Filled FRP Tubes, 1st Edition
FRPS-1-UL	Guide Specifications for Design of Bonded FRP Systems for Repair and Strengthening of Concrete Bridge Elements, 1st Edition
GHBR-1-OL	Guidelines for Historic Bridge Rehabilitation and Replacement, 1st Edition
BAS-1-UL	Bridge Aesthetics Sourcebook, 1st Edition
BVCS-1-UL	Guide Specifications for Bridges Vulnerable to Coastal Storms, 1st Edition
LRFDCONS-4	AASHTO LRFD Bridge Construction Specifications, 4th Edition, with 2020 Interim Revisions
ABC-1-UL	LRFD Guide Specifications for Accelerated Bridge Construction, 1st Edition
GSBTW-2-UL	Guide Design Specifications for Bridge Temporary Works, 2nd Edition, with 2020 Interim Revisions
CHBTW-2-UL	Construction Handbook for Bridge Temporary Works, 2nd Edition
GSWLB 1-UL	Guide Specifications for Wind Loads on Bridges During Construction, 1st Edition
NSMT-1-UL	Guide for Design and Construction of Near-Surface Mounted Titanium Alloy Bars for Strengthening Concrete Structures, 1st Edition
MBE-3	Manual for Bridge Evaluation, 3rd Edition, with 2019 Interim Revisions
CSDIM-1	Culvert and Storm Drain System Inspection Guide, 1st Edition
MBEI-2	Manual for Bridge Element Inspection, 2nd Edition
MBI-2	Movable Bridge Inspection, Evaluation, and Maintenance Manual, 2nd Edition
GSBSM-1-UL	Guide Specifications for Internal Redundancy of Mechanically-Fastened Built-Up Steel Members, 1st Edition
GSFCM-1-UL	Guide Specifications for Analysis and Identification of Fracture Critical Members and System Redundant Members, 1st Edition
LRFDTUN-1-UL	LRFD Road Tunnel Design and Construction Guide Specifications, 1st Edition
DCRT-1	Technical Manual for Design and Construction of Road Tunnels—Civil Elements, 1st Edition
LRFDLTS-1	LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 1st Edition, with 2017, 2018, 2019, and 2020 Interim Revisions
NSBAGDC-4-OL	Guidelines to Design for Constructability and Fabrication, 4th Edition, G12.1-2020
NSBASBEGS-3-OL	3rd Edition, S10.1—2019
NSBASBFQC-2-OL	Steel Bridge Fabrication QC/QA Guidelines, 2nd Edition, G4.1—2019
NSBASGBA-3-OL	Guidelines for Steel Girder Bridge Analysis, 3rd Edition, G13.1—2019
NSBASBF-4-OL	Steel Bridge Fabrication Guide Specification, 4th edition, S2.1—2018
NSBAATSC-1-OL	Specification for Application of Thermal Spray Coating Systems to Steel Bridges, 1st edition, S8.2—2017
NSBAGRSB-1-OL	Guidelines for Resolution of Steel Bridge Fabrications Errors, 1st Edition, G2.23—2016



NSBASBCS-3-OL	Guide Specification for Application of Coating Systems with Zinc-Rich Primers to Steel Bridges, 3rd Edition, S8.1—2014
NSBAQSBI-1-OL	Recommendations for the Qualification of Structural Bolting Inspectors, 1st Edition, G4.2—2006
NSBAGDD-1-OL	Guidelines for Design Details, 1st Edition, G1.4—2006
NSBASOQA-1-OL	Sample Owners Quality Assurance Manual, 1st Edition, G4.4—2006
NSBASDDP-1-OL	Shop Detail Drawing Presentation Guidelines, 1st Edition, G1.3—2002
NSBASDDRAG-1-OL	Shop Design Drawings Review/Approval Guidelines, G1.1—2000
HB-17	Standard Specifications for Highway Bridges, 17th Edition
GSCB-2-UL	Guide Specifications for Design and Construction of Segmental Concrete Bridges, 2nd Edition, with 2003 Interim Revisions
LTS-6-M	Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th Edition, with 2015, 2019, and 2020 Interim Revisions

B.3.4 Construction and Right-of-Way

Designation	Title
GSH-10	Guide Specifications for Highway Construction, 10th Edition
APH-2-UL	AAASHTO Partnering Handbook, 2nd Edition
AU-5-UL	A Policy on the Accommodation of Utilities Within Freeway Right-of-Way, 5th Edition
GAU-4-UL	A Guide for Accommodating Utilities Within Highway Right-of-Way, 4th Edition
GSRWT-1-UL	Guidance on Sharing Freeway and Highway Rights-of-Way For Telecommunications, 1st Edition

B.3.5 Design & Traffic

Designation	Title
GDHS-7	Policy on Geometric Design of Highways and Streets, 7th Edition (The “Green Book”)
RSDG-4	Roadside Design Guide, 4th Edition
VLVLR-2	Guidelines for Geometric Design of Low-Volume Roads, 2nd Edition
GL-7-UL	Roadway Lighting Design Guide, 7th Edition
FHD-1	A Guide for Achieving Flexibility in Highway Design, 1st Edition
DS-6-UL	A Policy on Design Standards—Interstate System, 6th Edition
GBF-4	Guide for the Development of Bicycle Facilities, 4th Edition
GPF-1	AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 1st Edition
TVF-1	Guide for Geometric Design of Transit Facilities on Highways and Streets, 1st Edition
GPRF-2-UL	Guide for Park-and-Ride Facilities, 2nd Edition
GHOV-3-UL	Guide for High-Occupancy Vehicle (HOV) Facilities, 3rd Edition
MUTCD-10	Manual on Uniform Traffic Control Devices, 2009 Edition
GSGLC-5-UL	AASHTO Guidelines for Supplemental Guide Signing, 5th Edition



HDG-4-UL	Highway Drainage Guidelines, 4th Edition
ADM-1-CD	AASHTO Drainage Manual, CD-ROM
VE-4-UL	Guidelines for Value Engineering, 4th Edition
DBP-1-UL	AASHTO Guide for Design-Build Procurement, 1st Edition
EST-1	Practical Guide to Cost Estimating, 1st Edition
GCC-1-UL	AASHTO Guide for Consultant Contracting, 1st Edition

B.3.6 Environment

Designation	Title
FGCP-1	Construction Stormwater Field Guide
FGMP-1	Maintenance Stormwater Field Guide
LAG-1	Leaner and Greener: Sustainability at Work in Transportation
AAB-1-OL	Above and Beyond
IQED-1-OL	Improving the Quality of Environmental Documents
PEV-1-OL	An Action Plan to Integrate Plug-in Electric Vehicles with the U.S. Electrical Grid, 1st Edition
	Practitioner Handbooks

B.3.7 Highway Transport& Trucking

Designation	Title
GSW-5-UL	Guide for Maximum Dimensions and Weights for Motor Vehicles, 5th Edition
OSOW-1-UL	A Synthesis of Safety Implications of Oversize/ Overweight Commercial Vehicles, 1st Edition

B.3.8 Maintenance

Designation	Title
MM-4	Maintenance Manual for Roadways and Bridges, 4th Edition
SOMG-1	Systems Operations and Management Guidance
MEBC-1-UL	Manual for Emulsion-Based Chip Seals for Pavement Preservation, 1st Edition
WL-1-UL	Guidelines for the Selection and Application of Warning Lights on Roadway Operations Equipment, 1st Edition
EFM-1-UL	Decision Making for Outsourcing and Privatization of Vehicle and Equipment Fleet Maintenance, 1st Edition
GVM-1-M-UL	Guidelines for Vegetation Management, 1st Edition
GSIC-1-UL	Guide for Snow and Ice Control, 1st Edition

B.3.9 Materials, Testing,& Pavement

Designation	Title
HM-40	Materials Standards, 40th Edition
MSI-1-UL	Manual on Subsurface Investigations, 1st Edition
HMAPG-1	Designing HMA Mixtures with High RAP Content: A Practical Guide
MEPDG-3	Mechanistic-Empirical Pavement Design Guide, 3rd Edition



PDCM-1	Pavement Design, Construction, and Management: A Digital Handbook, 1st Edition
GPVF-1-UL	Guide for Pavement Friction, 1st Edition
GDPS-4	Guide for Design of Pavement Structures, 4th Edition, with 1998 Supplement
GDPS-4S-UL	1998 Supplement to the AASHTO Guide for Design of Pavement Structures, 4th Edition
LCG-1	Guide for the Local Calibration of the Mechanistic-Empirical Pavement Design Guide, 1st Edition
PMG-2	Pavement Management Guide, 2nd Edition

B.3.10 Passenger Rail & Freight

Designation	Title
SRPG-1-UL	State Rail Planning Best Practices, First Edition
SRPG-1-1S-UL	State Rail Planning Best Practices, Volume 2
OPLIFE-1-OL	Survey of Operation Lifesaver State Programs, 2015 Report
IPRT-2-OL	Intercity Passenger Rail “Achieving the Vision” 2009

B.3.11 Reports

Designation	Title
CA01-5-OL	Commuting in America 2021: The National Report on Commuting Patterns and Trends—Brief 21.1. The Changing Nature of Work
CA02-5-OL	Commuting in America 2021: The National Report on Commuting Patterns and Trends—Brief 21.2. Vehicle Availability Patterns and Trends
SSFP-14-UL	Survey of State Funding for Public Transportation Final Report 2020, Based on FY 2018 Data
TGF-2-OL	Transportation Governance and Finance: A 50-State Review of State Legislatures and Departments of Transportation, 2nd Edition
SS-19-OL	2019 AASHTO Salary Survey
CGDOT-1-OL	Communications Guide for State Departments of Transportation
FRBL-2-OL	AASHTO Freight Rail Study Support Services, August 2018
SOF-2-OL	State of Freight Implementing the FAST Act and Beyond
WFT-1-OL	Waterborne Freight Transportation: Bottom Line Report
TF45-1-UL	Asset Management Data Collection Guide, AASHTO-AGC-ARTBA Task Force 45 Document, Single User PDF Download
HAZ-1-OL	Fundamental Capabilities of Effective All-Hazards Infrastructure Protection, Resilience, and Emergency Management for State Departments of Transportation
MCTE-1-OL	Managing Catastrophic Transportation Emergencies: A Guide for Transportation Executives, 1st Edition



B.3.12 Safety

Designation	Title
HSM-1-M	Highway Safety Manual, 1st Edition, with 2014 Supplement
HSM-1S	2014 Supplement to the Highway Safety Manual, 1st Edition
MASH-2	Manual for Assessing Safety Hardware, 2nd Edition
SHSP-2-OL	AASHTO Strategic Highway Safety Plan—A Comprehensive Plan to Substantially Reduce Vehicle-Related Fatalities and Injuries on the Nation's Highways, 2nd Edition
SR-3-UL	Highway Safety Design and Operations Guide, 3rd Edition



B.4 American Society for Testing and Materials (ASTM)

B.4.1 ASTM Volume 04.08, Soil and Rock (I)

Designation	Title
D420	Standard Guide for Site Characterization for Engineering Design and Construction Purposes
D425	Standard Test Method for Centrifuge Moisture Equivalent of Soils
D558/D558M	Standard Test Methods for Moisture-Density (Unit Weight) Relations of Soil- Cement Mixtures
D559/D559M	Standard Test Methods for Wetting and Drying Compacted Soil-Cement Mixtures
D560/D560M	Standard Test Methods for Freezing and Thawing Compacted Soil-Cement Mixtures
D586	Standard Test Method for Ash and Organic Matter Content of Degradable Erosion Control Products
D653	Standard Terminology Relating to Soil, Rock, and Contained Fluids
D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft ³ (600 kN- m/m ³))
D806	Standard Test Method for Cement Content of Hardened Soil-Cement Mixtures
D854	Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer
D1140	Standard Test Methods for Determining the Amount of Material Finer than 75 μ m (No. 200) Sieve in Soils by Washing
D1143/D1143M	Standard Test Methods for Deep Foundation Elements Under Static Axial Compressive Load
D1241	Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses
D1452/D1452M	Standard Practice for Soil Exploration and Sampling by Auger Borings-
D1556/D1556M	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³))
D1586/D1586M	Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
D1587/D1587M	Standard Practice for Thin-Walled Tube Sampling of Fine- Grained Soils for Geotechnical Purposes
D1632	Standard Practice for Making and Curing Soil-Cement Compression and Flexure Test Specimens in the Laboratory



D1633	Standard Test Methods for Compressive Strength of Molded Soil-Cement Cylinders
D1634	Standard Test Method for Compressive Strength of Soil-Cement Using Portions of Beams Broken in Flexure (Modified Cube Method)
D1635/D1635M	Standard Test Method for Flexural Strength of Soil-Cement Using Simple Beam with Third- Point Loading
D1883	Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils
D1997	Standard Test Method for Laboratory Determination of the Fiber Content of Peat and Organic Soils by Dry Mass
D2113	Standard Practice for Rock Core Drilling and Sampling of Rock for Site Exploration
D2166/D2166M	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
D2168	Standard Practices for Calibration of Laboratory Mechanical-Rammer Soil Compactors
D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
D2434	Standard Test Method for Permeability of Granular Soils (Constant Head)
D2435/D2435M	Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
D2488	Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)
D2573/D2573M	Standard Test Method for Field Vane Shear Test in Saturated Fine-Grained Soils
D2844/D2844M	Standard Test Method for Resistance R-Value and Expansion Pressure of Compacted Soils
D2850	Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils
D2936	Standard Test Method for Direct Tensile Strength of Intact Rock Core Specimens
D2937	Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method
D2944	Standard Practice of Sampling Processed Peat Materials
D2973	Standard Test Method for Total Nitrogen in Peat Materials



D2974	Standard Test Methods for Determining the Water (Moisture) Content, Ash Content, and Organic Material of Peat and Other Organic Soils
D2976	Standard Test Method for pH of Peat Materials
D2977	Standard Practice for Particle Size Range of Peat Materials for Horticultural Purposes
D2978	Standard Test Methods for Volume of Processed Peat Materials
D2980	Standard Test Method for Saturated Density, Moisture-Holding Capacity, and Porosity of Saturated Peat Materials
D3213	Standard Practices for Handling, Storing, and Preparing Soft Intact Marine Soil
D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
D3385	Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer
D3404	Standard Guide for Measuring Matric Potential in Vadose Zone Using Tensiometers
D3441	Standard Test Method for Mechanical Cone Penetration Testing of Soils
D3550/D3550M	Standard Practice for Thick Wall, Ring-Lined, Split Barrel, Drive Sampling of Soils
D3551	Standard Practice for Laboratory Preparation of Soil-Lime Mixtures Using Mechanical Mixer
D3689/D3689M	Standard Test Methods for Deep Foundations Under Static Axial Tensile Load
D3740	Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
D3966/D3966M	Standard Test Methods for Deep Foundations Under Lateral Load--
D3967	Standard Test Method for Splitting Tensile Strength of Intact Rock Core Specimens
D4015	Standard Test Methods for Modulus and Damping of Soils by Fixed-Base Resonant Column Devices
D4016	Standard Test Method for Viscosity and Gel Time of Chemical Grouts by Rotational Viscometer (Laboratory Method)
D4043	Standard Guide for Selection of Aquifer Test Method in Determining Hydraulic Properties by Well Techniques
D4044/D4044M	Standard Test Method for (Field Procedure) for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic Properties of Aquifers
D4050	Standard Test Method for (Field Procedure) for Withdrawal and Injection Well Testing for Determining Hydraulic Properties of Aquifer Systems



D4083	Standard Practice for Description of Frozen Soils (Visual-Manual Procedure)
D4104/D4104M	Standard Practice for (Analytical Procedures) Determining Transmissivity of Nonleaky Confined Aquifers by Overdamped Well Response to Instantaneous Change in Head (Slug Tests)
D4105/D4105M	Standard Practice for (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Modified Theis Nonequilibrium Method
D4106	Standard Practice for (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Theis Nonequilibrium Method
D4186/D4186M	Standard Test Method for One-Dimensional Consolidation Properties of Saturated Cohesive Soils Using Controlled- Strain Loading
D4220/D4220M	Standard Practices for Preserving and Transporting Soil Samples
D4221	Standard Test Method for Dispersive Characteristics of Clay Soil by Double Hydrometer
D4223/D4223M	Standard Practices for Preparation of Test Specimens of Asphalt-Stabilized Soils
D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
D4254	Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
D4373	Standard Test Method for Rapid Determination of Carbonate Content of Soils
D4394	Standard Test Method for Determining In Situ Modulus of Deformation of Rock Mass Using Rigid Plate Loading Method
D4395	Standard Test Method for Determining In Situ Modulus of Deformation of Rock Mass Using Flexible Plate Loading Method
D4403	Standard Practice for Extensometers Used in Rock
D4404	Standard Test Method for Determination of Pore Volume and Pore Volume Distribution of Soil and Rock by Mercury Intrusion Porosimetry-
D4427	Standard Classification of Peat Samples by Laboratory Testing
D4428/D4428M	Standard Test Methods for Crosshole Seismic Testing
D4435	Standard Test Method for Rock Bolt Anchor Pull Test
D4436	Standard Test Method for Rock Bolt Long-Term Load Retention Test
D4452	Standard Practice for X-Ray Radiography of Soil Samples



D4506	Standard Test Method for Determining In Situ Modulus of Deformation of Rock Mass Using Radial Jacking Test
D4511	Standard Test Method for Hydraulic Conductivity of Essentially Saturated Peat
D4525	Standard Test Method for Permeability of Rocks by Flowing Air
D4531	Standard Test Methods for Bulk and Dry Density of Peat and Peat Products
D4535	Standard Test Methods for Measurement of Thermal Expansion of Rock Using Dilatometer
D4542	Standard Test Methods for Pore Water Extraction and Determination of the Soluble Salt Content of Soils by Refractometer
D4543	Standard Practices for Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances
D4544	Standard Practice for Estimating Peat Deposit Thickness
D4546	Standard Test Methods for One-Dimensional Swell or Collapse of Soils
D4553	Standard Test Method for Determining In Situ Creep Characteristics of Rock
D4554	Standard Test Method for In Situ Determination of Direct Shear Strength of Rock Discontinuities
D4611	Standard Test Method for Specific Heat of Rock and Soil
D4612	Standard Test Method for Calculating Thermal Diffusivity of Rock and Soil
D4623	Standard Test Method for Determination of In Situ Stress in Rock Mass by Overcoring Method-Three Component Borehole Deformation Gauge
D4630	Standard Test Method for Determining Transmissivity and Storage Coefficient of Low-Permeability Rocks by In Situ Measurements Using the Constant Head Injection Test
D4631	Standard Test Method for Determining Transmissivity and Storativity of Low Permeability Rocks by In Situ Measurements Using Pressure Pulse Technique
D4633	Standard Test Method for Energy Measurement for Dynamic Penetrometers
D4643	Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating
D4644	Standard Test Method for Slake Durability of Shales and Other Similar Weak Rocks
D4647/D4647M	Standard Test Methods for Identification and Classification of Dispersive Clay Soils by the Pinhole Test



D4648/D4648M	Standard Test Methods for Laboratory Miniature Vane Shear Test for Saturated Fine-Grained Clayey Soil
D4696	Standard Guide for Pore-Liquid Sampling from the Vadose Zone
D4700	Standard Guide for Soil Sampling from the Vadose Zone
D4718/D4718M	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
D4719	Standard Test Methods for Prebored Pressuremeter Testing in Soils
D4729	Standard Test Method for In Situ Stress and Modulus of Deformation Using the Flat Jack Method
D4753	Standard Guide for Evaluating, Selecting, and Specifying Balances and Standard Masses for Use in Soil, Rock, and Construction Materials Testing
D4767	Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils
D4829	Standard Test Method for Expansion Index of Soils
D4832	Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders
D4914/D4914M	Standard Test Methods for Density of Soil and Rock in Place by the Sand Replacement Method in a Test Pit
D4943	Standard Test Method for Shrinkage Factors of Cohesive Soils by the Water Submersion Method
D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Gas Pressure Tester
D4945	Standard Test Method for High-Strain Dynamic Testing of Deep Foundations
D4959	Standard Test Method for Determination of Water Content of Soil By Direct Heating
D4971	Standard Test Method for Determining In Situ Modulus of Deformation of Rock Using Diametrically Loaded 76-mm (3- in.) Borehole Jack
D4972	Standard Test Methods for pH of Soils
D4992	Standard Practice for Evaluation of Rock to be Used for Erosion Control
D5030/D5030M	Standard Test Methods for Density of Soil and Rock in Place by the Water Replacement Method in a Test Pit
D5080	Standard Test Method for Rapid Determination of Percent Compaction
D5084	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
D5088	Standard Practice for Decontamination of Field Equipment Used at Waste Sites



D5092/D5092M	Standard Practice for Design and Installation of Groundwater Monitoring Wells
D5093	Standard Test Method for Field Measurement of Infiltration Rate Using Double-Ring Infiltrometer with Sealed- Inner Ring
D5121	Standard Practice for Preparation of Rock Slabs for Durability Testing
D5126	Standard Guide for Comparison of Field Methods for Determining Hydraulic Conductivity in Vadose Zone
D5143	Standard Test Method for Analysis of Nitroaromatic and Nitramine Explosive in Soil by High Performance Liquid Chromatography
D5195	Standard Test Method for Density of Soil and Rock In-Place at Depths Below Surface by Nuclear Methods
D5202/D5202M	Standard Test Method for Determining Triaxial Compression Creep Strength of Chemically Grouted Soils
D5220	Standard Test Method for Water Mass per Unit Volume of Soil and Rock In-Place by the Neutron Depth Probe Method
D5240/D5240M	Standard Test Method for Evaluation of the Durability of Rock for Erosion Control Using Sodium Sulfate or Magnesium Sulfate
D5255	Standard Practice for Certification of Personnel Engaged in the Testing of Soil and Rock
D5268	Standard Specification for Topsoil Used for Landscaping and Construction Purposes
D5269	Standard Test Method for Determining Transmissivity of Nonleaky Confined Aquifers by the Theis Recovery Method
D5270/D5270M	Standard Practice for (Analytical Procedures) Determining Transmissivity and Storage Coefficient of Bounded, Nonleaky, Confined Aquifers
D5298	Standard Test Method for Measurement of Soil Potential (Suction) Using Filter Paper
D5299/D5299M	Standard Guide for Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities
D5311/D5311M	Standard Test Method for Load Controlled Cyclic Triaxial Strength of Soil
D5312/D5312M	Standard Test Method for Evaluation of Durability of Rock for Erosion Control Under Freezing and Thawing Conditions
D5313/D5313M	Standard Test Method for Evaluation of Durability of Rock for Erosion Control Under Wetting and Drying Conditions
D5334	Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure
D5335	Standard Test Method for Linear Coefficient of Thermal Expansion of Rock Using Bonded Electric Resistance Strain Gauges



D5447	Standard Guide for Application of a Numerical Groundwater Flow Model to a Site-Specific Problem
D5472/D5472M	Standard Practice for Determining Specific Capacity and Estimating Transmissivity at the Control Well
D5473/D5473M	Standard Practice for (Analytical Procedures) Analyzing the Effects of Partial Penetration of Control Well and Determining the Horizontal and Vertical Hydraulic Conductivity in a Nonleaky Confined Aquifer
D5490	Standard Guide for Comparing Groundwater Flow Model Simulations to Site-Specific Information
D5519	Standard Test Methods for Particle Size Analysis of Natural and Man-Made Riprap Materials
D5520	Standard Test Method for Laboratory Determination of Creep Properties of Frozen Soil Samples by Uniaxial Compression
D5521/D5521M	Standard Guide for Development of Groundwater Monitoring Wells in Granular Aquifers
D5550	Standard Test Method for Specific Gravity of Soil Solids by Gas Pycnometer
D5607	Standard Test Method for Performing Laboratory Direct Shear Strength Tests of Rock Specimens Under Constant Normal Force
D5608	Standard Practices for Decontamination of Sampling and Non Sample Contacting Equipment Used at Low Level Radioactive Waste Sites
D5609	Standard Guide for Defining Boundary Conditions in Groundwater Flow Modeling
D5610	Standard Guide for Defining Initial Conditions in Groundwater Flow Modeling
D5611	Standard Guide for Conducting a Sensitivity Analysis for a Groundwater Flow Model Application
D5715	Standard Practice for Estimating the Degree of Humification of Peat and Other Organic Soils (Visual/Manual Method)
D5716/D5716M	Standard Test Method for Measuring the Rate of Well Discharge by Circular Orifice Weir
D5718	Standard Guide for Documenting a Groundwater Flow Model Application
D5719	Standard Guide for Simulation of Subsurface Airflow Using Groundwater Flow Modeling Codes
D5731	Standard Test Method for Determination of the Point Load Strength Index of Rock and Application to Rock Strength Classifications
D5737/D5737M	Standard Guide for Methods for Measuring Well Discharge
D5745	Standard Guide for Developing and Implementing Short-Term Measures or Early Actions for Site Remediation



D5753	Standard Guide for Planning and Conducting Geotechnical Borehole Geophysical Logging
D5777	Standard Guide for Using the Seismic Refraction Method for Subsurface Investigation
D5778	Standard Test Method for Electronic Friction Cone and Piezocone Penetration Testing of Soils
D5779/D5779M	Standard Test Method for Field Determination of Rapid Specific Gravity of Rock and Manmade Materials for Erosion Control
D5780	Standard Test Methods for Individual Piles in Permafrost Under Static Axial Compressive Load
D5781/D5781M	Standard Guide for Use of Dual-Wall Reverse- Circulation Drilling for Geoenvironmental Exploration and the Installation of Subsurface Water Quality Monitoring Devices
D5782	Standard Guide for Use of Direct Air-Rotary Drilling for Geoenvironmental Exploration and the Installation of Subsurface Water-Quality Monitoring Devices
D5783	Standard Guide for Use of Direct Rotary Drilling with Water-Based Drilling Fluid for Geoenvironmental Exploration and the Installation of Subsurface Water- Quality Monitoring Devices
D5784/D5784M	Standard Guide for Use of Hollow-Stem Augers for Geoenvironmental Exploration and the Installation of Subsurface Water Quality Monitoring Devices
D5785/D5785M	Standard Practice for (Analytical Procedure) for Determining Transmissivity of Confined Nonleaky Aquifers by Underdamped Well Response to Instantaneous Change in Head (Slug Test)
D5786	Standard Practice for (Field Procedure) for Constant Drawdown Tests in Flowing Wells for Determining Hydraulic Properties of Aquifer Systems
D5787	Standard Practice for Monitoring Well Protection At or Near Land Surface
D5850	Standard Practice for (Analytical Procedure) Determining Transmissivity, Storage Coefficient, and Anisotropy Ratio from a Network of Partially Penetrating Wells
D5855/D5855M	Standard Practice for (Analytical Procedure) Determining Transmissivity and Storage Coefficient of Confined Nonleaky or Leaky Aquifer by Constant Drawdown Method in Flowing Well
D5856	Standard Test Method for Measurement of Hydraulic Conductivity of Porous Material Using a Rigid-Wall, Compaction- Mold Permeameter
D5872/D5872M	Standard Guide for Use of Casing Advancement Drilling Methods for Geoenvironmental Exploration and Installation of Subsurface Water Quality Monitoring Devices
D5873	Standard Test Method for Determination of Rock Hardness by Rebound Hammer Method



D5874	Standard Test Methods for Determination of the Impact Value (IV) of a Soil
D5875/D5875M	Standard Guide for Use of Cable-Tool Drilling and Sampling Methods for Geoenvironmental Exploration and Installation of Subsurface Water Quality Monitoring Devices
D5876/D5876M	Standard Guide for Use of Direct Rotary Wireline Casing Advancement Drilling Methods for Geoenvironmental Exploration and Installation of Subsurface Water-Quality Monitoring Devices

B.4.2 ASTM Volume 04.09, Soil and Rock (II)

Designation	Title
D4380	Standard Test Method for Determining Density of Construction Slurries
D5549	Standard Guide for Contents of Geostatistical Site Investigation Report
D5878	Standard Guides for Using Rock-Mass Classification Systems for Engineering Purposes
D5879/D5879M	Standard Practice for Surface Site Characterization for On-Site Septic Systems
D5881	Standard Practice for (Analytical Procedures) Determining Transmissivity of Confined Nonleaky Aquifers by Critically Damped Well Response to Instantaneous Change in Head (Slug)
D5882	Standard Test Method for Low Strain Impact Integrity Testing of Deep Foundations
D5883	Standard Guide for Use of Rotary Kiln Produced Expanded Shale, Clay or Slate (ESCS) as a Mineral Amendment in Topsoil Used for Landscaping and Related Purposes
D5903	Standard Guide for Planning and Preparing for a Groundwater Sampling Event
D5912	Standard Practice for (Analytical Procedure) Determining Hydraulic Conductivity of an Unconfined Aquifer by Overdamped Well Response to Instantaneous Change in Head (Slug)
D5918	Standard Test Methods for Frost Heave and Thaw Weakening Susceptibility of Soils
D5920/D5920M	Standard Practice for (Analytical Procedure) Tests of Anisotropic Unconfined Aquifers by Neuman Method
D5922	Standard Guide for Analysis, Interpretation, and Modeling of Spatial Variation in Geostatistical Site Investigations
D5923	Standard Guide for Selection of Kriging Methods in Geostatistical Site Investigations
D5924	Standard Guide for Selection of Simulation Approaches in Geostatistical Site Investigations



D5971/D5971M	Standard Practice for Sampling Freshly Mixed Controlled Low-Strength Material
D5978/D5978M	Standard Guide for Maintenance and Rehabilitation of Groundwater Monitoring Wells
D5979	Standard Guide for Conceptualization and Characterization of Groundwater Systems
D5980	Standard Guide for Selection and Documentation of Existing Wells for Use in Environmental Site Characterization and Monitoring
D5981/D5981M	Standard Guide for Calibrating a Groundwater Flow Model Application
D5982	Standard Test Method for Determining Cement Content of Fresh Soil-Cement (Heat of Neutralization Method)
D5995	Standard Guide for Environmental Site Investigation in Cold Regions
D6000/D6000M	Standard Guide for Presentation of Water-Level Information from Groundwater Sites
D6001/D6001M	Standard Guide for Direct-Push Groundwater Sampling for Environmental Site Characterization
D6023	Standard Test Method for Density (Unit Weight), Yield, Cement Content, and Air Content (Gravimetric) of Controlled Low-Strength Material (CLSM)
D6024/D6024M	Standard Test Method for Ball Drop on Controlled Low Strength Material (CLSM) to Determine Suitability for Load Application
D6026	Standard Practice for Using Significant Digits in Geotechnical Data
D6027/D6027M	Standard Practice for Calibrating Linear Displacement Transducers for Geotechnical Purposes
D6028/D6028M	Standard Practice for (Analytical Procedure) Determining Hydraulic Properties of a Confined Aquifer Taking into Consideration Storage of Water in Leaky Confining Beds by Modified
D6029/D6029M	Standard Practice for (Analytical Procedures) Determining Hydraulic Properties of a Confined Aquifer and a Leaky Confining Bed with Negligible Storage by the Hantush-Jacob Method
D6030	Standard Guide for Selection of Methods for Assessing Groundwater or Aquifer Sensitivity and Vulnerability
D6031/D6031M	Standard Test Method for Logging In Situ Moisture Content and Density of Soil and Rock by the Nuclear Method in Horizontal, Slanted, and Vertical
D6032/D6032M	Standard Test Method for Determining Rock Quality Designation (RQD) of Rock Core
D6033	Standard Guide for Describing the Functionality of a Groundwater Modeling Code



D6034	Standard Practice for (Analytical Procedure) Determining the Efficiency of a Production Well in a Confined Aquifer from a Constant Rate Pumping Test
D6035/D6035M	Standard Test Methods for Determining the Effect of Freeze-Thaw on Hydraulic Conductivity of Compacted or Intact Soil Specimens Using a Flexible Wall Permeameter
D6036	Standard Guide for Displaying the Results of Chemical Analyses of Groundwater for Major Ions and Trace Elements-Use of Maps
D6067/D6067M	Standard Practice for Using the Electronic Piezocone Penetrometer Tests for Environmental Site Characterization and Estimation of Hydraulic Conductivity
D6089	Standard Guide for Documenting a Groundwater Sampling Event
D6092	Standard Practice for Specifying Standard Sizes of Stone for Erosion Control
D6103/D6103M	Standard Test Method for Flow Consistency of Controlled Low Strength Material (CLSM)
D6128	Standard Test Method for Shear Testing of Bulk Solids Using the Jenike Shear Tester
D6151/D6151M	Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling
D6167	Standard Guide for Conducting Borehole Geophysical Logging: Mechanical Caliper
D6169/D6169M	Standard Guide for Selection of Soil and Rock Sampling Devices Used With Drill Rigs for Environmental Investigations
D6170	Standard Guide for Selecting a Groundwater Modeling Code
D6230	Standard Test Method for Monitoring Ground Movement Using Probe-Type Inclinometers
D6235	Standard Practice for Expedited Site Characterization of Vadose Zone and Groundwater Contamination at Hazardous Waste Contaminated Sites
D6274	Standard Guide for Conducting Borehole Geophysical Logging - Gamma
D6276	Standard Test Method for Using pH to Estimate the Soil-Lime Proportion Requirement for Soil Stabilization
D6282/D6282M	Standard Guide for Direct Push Soil Sampling for Environmental Site Characterizations
D6285	Standard Guide for Locating Abandoned Wells
D6286/D6286M	Standard Guide for Selection of Drilling and Direct Push Methods for Geotechnical and Environmental Subsurface Site Characterization
D6312	Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at Waste Disposal Facilities



D6391	Standard Test Method for Field Measurement of Hydraulic Conductivity Using Borehole Infiltration
D6393	Standard Test Method for Bulk Solids Characterization by Carr Indices
D6429	Standard Guide for Selecting Surface Geophysical Methods
D6430	Standard Guide for Using the Gravity Method for Subsurface Site Characterization
D6431	Standard Guide for Using the Direct Current Resistivity Method for Subsurface Site Characterization
D6432	Standard Guide for Using the Surface Ground Penetrating Radar Method for Subsurface Investigation
D6449	Standard Test Method for Flow of Fine Aggregate Concrete for Fabric Formed Concrete (Flow Cone Method)
D6452	Standard Guide for Purging Methods for Wells Used for Ground Water Quality Investigations
D6459	Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Hillslopes from Rainfall-Induced Erosion
D6460	Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Earthen Channels from Stormwater-Induced Erosion
D6462	Standard Practice for Silt Fence Installation and Maintenance
D6467	Standard Test Method for Torsional Ring Shear Test to Determine Drained Residual Shear Strength of Cohesive Soils
D6473	Standard Test Method For Specific Gravity And Absorption of Rock For Erosion Control
D6475	Standard Test Method for Measuring Mass per Unit Area of Erosion Control Blankets
D6517	Standard Guide for Field Preservation of Ground Water Samples
D6519	Standard Practice for Sampling of Soil Using the Hydraulically Operated Stationary Piston Sampler
D6528	Standard Test Method for Consolidated Undrained Direct Simple Shear Testing of Fine Grain Soils
D6539	Standard Test Method for Measurement of the Permeability of Unsaturated Porous Materials by Flowing Air
D6564/D6564M	Standard Guide for Field Filtration of Groundwater Samples
D6572	Standard Test Methods for Determining Dispersive Characteristics of Clayey Soils by the Crumb Test
D6598	Standard Guide for Installing and Operating Settlement Points for Monitoring Vertical Deformations



D6599	Standard Practice for Construction of Live Fascines on Slopes
D6634/D6634M	Standard Guide for the Selection of Purging and Sampling Devices for Groundwater Monitoring Wells
D6635	Standard Test Method for Performing the Flat Plate Dilatometer
D6639	Standard Guide for Using the Frequency Domain Electromagnetic Method for Subsurface Site Characterizations
D6683	Standard Test Method for Measuring Bulk Density Values of Powders and Other Bulk Solids as Function of Compressive Stress
D6684	Standard Specification for Materials and Manufacture of Articulating Concrete Block (ACB) Systems
D6685	Standard Guide for the Selection of Test Methods for Fabrics Used for Fabric Formed Concrete (FFC)
D6711	Standard Practice for Specifying Rock to Fill Gabions, Revet Mattresses, and Gabion Mattresses
D6724/D6724M	Standard Guide for Installation of Direct Push Groundwater Monitoring Wells
D6725/D6725M	Standard Practice for Direct Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers
D6726	Standard Guide for Conducting Borehole Geophysical Logging-Electromagnetic Induction
D6727/D6727M	Standard Guide for Conducting Borehole Geophysical Logging-Neutron
D6758	Standard Test Method for Measuring Stiffness and Apparent Modulus of Soil and Soil-Aggregate In-Place by Electro-Mechanical Method
D6760	Standard Test Method for Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing
D6765	Standard Practice for Live Staking
D6771	Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations
D6773	Standard Test Method for Bulk Solids Using Schulze Ring Shear Tester
D6780/D6780M	Standard Test Methods for Water Content and Density of Soil In situ by Time Domain Reflectometry (TDR)
D6820	Standard Guide for Use of the Time Domain Electromagnetic Method for Geophysical Subsurface Site Investigation
D6825	Standard Guide for Placement of Riprap Revetments
D6836	Standard Test Methods for Determination of the Soil Water Characteristic Curve for Desorption Using Hanging Column, Pressure Extractor, Chilled Mirror Hygrometer, or Centrifuge
D6884	Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems



D6910/D6910M	Standard Test Method for Marsh Funnel Viscosity of Construction Slurries
D6911	Standard Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis
D6913/D6913M	Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
D6914/D6914M	Standard Practice for Sonic Drilling for Site Characterization and the Installation of Subsurface Monitoring Devices
D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
D6940/D6940M	Standard Practice for Measuring Sifting Segregation Tendencies of Bulk Solids
D6941	Standard Practice for Measuring Fluidization Segregation Tendencies of Powders
D7012	Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures
D7013/D7013M	Standard Guide for Calibration Facility Setup for Nuclear Surface Gauges
D7014	Standard Practice for Installation of Double-Twisted Wire Mesh Gabions and Revet Mattresses
D7015/D7015M	Standard Practices for Obtaining Intact Block (Cubical and Cylindrical) Samples of Soils
D7045	Standard Guide for Optimization of Groundwater Monitoring Constituents for Detection Monitoring Programs for Waste Disposal Facilities
D7047	Standard Test Method for Swell Volume of Plantago Insularis (Ovata, Psyllium)
D7048	Standard Guide for Applying Statistical Methods for Assessment and Corrective Action Environmental Monitoring Programs
D7069	Standard Guide for Field Quality Assurance in a Groundwater Sampling Event
D7070	Standard Test Methods for Creep of Rock Core Under Constant Stress and Temperature
D7099	Standard Terminology Relating to Frozen Soil and Rock
D7100	Standard Test Method for Hydraulic Conductivity Compatibility Testing of Soils with Aqueous Solutions
D7101	Standard Index Test Method for Determination of Unvegetated Rolled Erosion Control Product (RECP) Ability to Protect Soil from Rain Splash and Associated Runoff Under



D7128	Standard Guide for Using the Seismic-Reflection Method for Shallow Subsurface Investigation
D7181	Standard Test Method for Consolidated Drained Triaxial Compression Test for Soils
D7208	Standard Test Method for Determination of Temporary Ditch Check Performance in Protecting Earthen Channels from Stormwater-Induced Erosion
D7242/D7242M	Standard Practice for Field Pneumatic Slug (Instantaneous Change in Head) Tests to Determine Hydraulic Properties of Aquifers with Direct Push Groundwater Samplers
D7243	Standard Guide for Measuring the Saturated Hydraulic Conductivity of Paper Industry Sludges
D7262	Standard Test Method for Estimating the Permanganate Natural Oxidant Demand of Soil and Aquifer Solids
D7263	Standard Test Methods for Laboratory Determination of Density and Unit Weight of Soil Specimens
D7276	Standard Guide for Analysis and Interpretation of Test Data for Articulating Concrete Block (ACB) Revetment Systems in Open Channel Flow
D7277	Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow
D7299	Standard Practice for Verifying Performance of a Vertical Inclinometer Probe
D7300	Standard Test Method for Laboratory Determination of Strength Properties of Frozen Soil at a Constant Rate of Strain
D7322/D7322M	Standard Test Method for Determination of Erosion Control Product (ECP) Ability to Encourage Seed Germination and Plant Growth Under Bench-Scale Conditions
D7351	Standard Test Method for Determination of Sediment Retention Device (SRD) Effectiveness in Sheet Flow Applications
D7352	Standard Practice for Volatile Contaminant Logging Using a Membrane Interface Probe (MIP) in Unconsolidated Formations with Direct Push Methods
D7367	Standard Test Method for Determining Water Holding Capacity of Fiber Mulches for Hydraulic Planting
D7380	Standard Test Method for Soil Compaction Determination at Shallow Depths Using 5-lb (2.3 kg) Dynamic Cone Penetrometer
D7382	Standard Test Methods for Determination of Maximum Dry Unit Weight of Granular Soils Using a Vibrating Hammer
D7383	Standard Test Methods for Axial Rapid Load (Compressive Force Pulse) Testing of Deep Foundations



D7400/D7400M	Standard Test Methods for Downhole Seismic Testing
D7481	Standard Test Methods for Determining Loose and Tapped Bulk Densities of Powders using a Graduated Cylinder
D7503	Standard Test Method for Measuring the Exchange Complex and Cation Exchange Capacity of Inorganic Fine-Grained Soils
D7560	Standard Test Method for Determination of Fiber Length Percentages in Hydraulic Erosion Control Products (HECPs)
D7608	Standard Test Method for Torsional Ring Shear Test to Measure Drained Fully Softened Shear Strength and Stress Dependent Strength Envelope of Fine-Grained Soils
D7626	Standard Test Methods for Determining the Organic Treat Loading of Organophilic Clay
D7648/D7648M	Standard Practice for Active Soil Gas Sampling for Direct Push or Manual-Driven Hand-Sampling Equipment
D7663	Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapor Intrusion Evaluations
D7664	Standard Test Methods for Measurement of Hydraulic Conductivity of Unsaturated Soils
D7698	Standard Test Method for In-Place Estimation of Density and Water Content of Soil and Aggregate by Correlation with Complex Impedance Method
D7699/D7699M	Standard Practice for Minimum Geospatial Data for Abandoned Mine Land Problem Areas, Planning Units, Keyword Features, and Project Sites
D7758	Standard Practice for Passive Soil Gas Sampling in the Vadose Zone for Source Identification, Spatial Variability Assessment, Monitoring, and Vapor Intrusion Evaluations
D7759/D7759M	Standard Guide for Nuclear Surface Moisture and Density Gauge Calibration
D7760	Standard Test Method for Measurement of Hydraulic Conductivity of Materials Derived from Scrap Tires Using a Rigid Wall Permeameter
D7762	Standard Practice for Design of Stabilization of Soil and Soil-Like Materials with Self-Cementing Fly Ash
D7764	Standard Practice for Pre-Installation Acceptance Testing of Vibrating Wire Piezometers
D7765	Standard Practice for Use of Foundry Sand in Structural Fill and Embankments
D7780	Standard Practice for Minimum Geospatial Data for Representing Coal Mining Features
D7830/D7830M	Standard Test Method for In-Place Density (Unit Weight) and Water Content of Soil Using an Electromagnetic Soil Density Gauge



D7891	Standard Test Method for Shear Testing of Powders Using the Freeman Technology FT4 Powder Rheometer Shear Cell
D7928	Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis
D7929	Standard Guide for Selection of Passive Techniques for Sampling Groundwater Monitoring Wells
D7949	Standard Test Methods for Thermal Integrity Profiling of Concrete Deep Foundations
D7986	Standard Practice for Preparing Specimens of Hydraulic Erosion Control Products for Index Property Testing
D8006	Standard Guide for Sampling and Analysis of Residential and Commercial Water Supply Wells in Areas of Exploration and Production (E&P) Operations
D8012	Standard Practice for Reclamation of Scrap and Waste Asphalt Shingles to Produce Reclaimed Asphalt Shingles (RAS) for Use in Transportation Applications
D8037/D8037M	Standard Practice for Direct Push Hydraulic Logging for Profiling Variations of Permeability in Soils
D8038	Standard Practice for Reclamation of Recycled Aggregate Base (RAB) Material
D8053	Standard Guide for Data Management and Reporting Associated with Oil and Gas Development Involving Hydraulic Fracturing
D8081	Standard Guide for Theory and Principles for Obtaining Reliable and Accurate Bulk Solids Flow Data Using a Direct Shear Cell
D8082	Standard Specification for Elemental Impurity Limits in Erosion Control Products used for Land Application
D8106	Standard Test Methods for Determining the Oil Sorption Capacity of Organophilic Clay
D8107	Standard Practice for Determining Sediment Pond Skimmer Flow Rate
D8121/D8121M	Standard Test Method for Approximating the Shear Strength of Cohesive Soils by the Handheld Vane Shear Device
D8151	Standard Practice for Obtaining Rainfall Runoff from Unvegetated Rolled and Hydraulic Erosion Control Products (RECPs and HECPs) for Acute Ecotoxicity Testing
D8152	Standard Practice for Measuring Field Infiltration Rate and Calculating Field Hydraulic Conductivity Using the Modified Philip Dunne Infiltrometer Test
D8167/D8167M	Standard Test Method for In-Place Bulk Density of Soil and Soil-Aggregate by a Low-Activity Nuclear Method (Shallow Depth)
D8169/D8169M	Standard Test Methods for Deep Foundations Under Bi-Directional Static Axial Compressive Load



D8170	Standard Guide for Using Disposable Handheld Soil Core Samplers for the Collection and Storage of Soil for Volatile Organic Analysis
D8198	Standard Specification for Hydraulically Applied 100% Wood Fiber Mulches
D8199	Standard Test Method for Determining the Specific Strength of Hydraulically Applied Fiber Matrix Products for Erosion Control
D8202	Standard Specification for Hydraulically Applied 1 Wheat Straw Fiber Mulches
D8232	Standard Test Procedures for Measuring the Inclination of Deep Foundations
D8249	Standard Practice for Use of Rotary Kiln Produced Porous Ceramic as a Mineral Amendment in Topsoil Used for Landscaping and Related Purposes
D8295	Standard Test Method for Determination of Shear Wave Velocity and Initial Shear Modulus in Soil Specimens using Bender Elements
D8296	Standard Test Method for Consolidated Undrained Cyclic Direct Simple Shear Test under Constant Volume with Load Control or Displacement Control
D8297/D8297M	Standard Test Method for Determination of Erosion Control Products (ECP) Performance in Protecting Slopes from Sequential Rainfall-Induced Erosion Using a Tilted Bed Slope
D8298/D8298M	Standard Test Method for Determination of Erosion Control Products (ECP) Performance in Protecting Slopes from Continuous Rainfall-Induced Erosion Using a Tilted Bed Slope
D8299	Standard Guide for Using Metal Ratios in Soils to Distinguish Between Anthropogenic and Natural Beryllium
D8326	Standard Practice for Measurement of the Kinetic Energy of Simulated Rainfall
D8359	Standard Test Method for Determining the In Situ Rock Deformation Modulus and Other Associated Rock Properties Using a Flexible Volumetric Dilatometer

B.4.3 ASTM Volume 04.13, Geosynthetics

Designation	Title
D1987	Standard Test Method for Biological Clogging of Geotextile or Soil/Geotextile Filters
D2643/D2643M	Standard Specification for Prefabricated Bituminous Geomembrane Used as Canal and Ditch Liner (Exposed Type)
D4354	Standard Practice for Sampling of Geosynthetics and Rolled Erosion Control Products (RECPs) for Testing



D4355/D4355M	Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc-Type Apparatus
D4437/D4437M	Standard Practice for Nondestructive Testing (NDT) for Determining the Integrity of Seams Used in Joining Flexible Polymeric Sheet Geomembranes
D4439	Standard Terminology for Geosynthetics
D4491/D4491M	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
D4533/D4533M	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
D4594/D4594M	Standard Test Method for Effects of Temperature on Stability of Geotextiles
D4595	Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
D4632/D4632M	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
D4716/D4716M	Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
D4751	Standard Test Methods for Determining Apparent Opening Size of a Geotextile
D4759	Standard Practice for Determining the Specification Conformance of Geosynthetics
D4833/D4833M	Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
D4873/D4873M	Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples
D4884/D4884M	Standard Test Method for Strength of Sewn or Bonded Seams of Geotextiles
D4885	Standard Test Method for Determining Performance Strength of Geomembranes by the Wide Strip Tensile Method
D4886	Standard Test Method for Abrasion Resistance of Geotextiles (Sandpaper/Sliding Block Method)
D5101	Standard Test Method for Measuring the Filtration Compatibility of Soil-Geotextile Systems
D5141	Standard Test Method for Determining Filtering Efficiency and Flow Rate of the Filtration Component of a Sediment Retention Device
D5199	Standard Test Method for Measuring the Nominal Thickness of Geosynthetics
D5261	Standard Test Method for Measuring Mass per Unit Area of Geotextiles



D5262	Standard Test Method for Determining the Unconfined Tension Creep and Creep Rupture Behavior of Planar Geosynthetics Used for Reinforcement Purposes
D5321/D5321M	Standard Test Method for Determining the Shear Strength of Soil-Geosynthetic and Geosynthetic-Geosynthetic Interfaces by Direct Shear
D5322	Standard Practice for Laboratory Immersion Procedures for Evaluating the Chemical Resistance of Geosynthetics to Liquids
D5323	Standard Practice for Determination of 2 % Secant Modulus for Polyethylene Geomembranes
D5397	Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes Using Notched Constant Tensile Load Test
D5493	Standard Test Method for Permittivity of Geotextiles Under Load
D5494	Standard Test Method for the Determination of Pyramid Puncture Resistance of Unprotected and Protected Geomembranes
D5496	Standard Practice for In-Field Immersion Testing of Geosynthetics
D5514/D5514M	Standard Test Method for Large-Scale Hydrostatic Puncture Testing of Geosynthetics
D5567	Standard Test Method for Hydraulic Conductivity Ratio (HCR) Testing of Soil/Geotextile Systems
D5596	Standard Test Method For Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics
D5617	Standard Test Method for Multi-Axial Tension Test for Geosynthetics
D5641/D5641M	Standard Practice for Geomembrane Seam Evaluation by Vacuum Chamber
D5721	Standard Practice for Air-Oven Aging of Polyolefin Geomembranes
D5747/D5747M	Standard Practice for Tests to Evaluate the Chemical Resistance of Geomembranes to Liquids
D5818	Standard Practice for Exposure and Retrieval of Samples to Evaluate Installation Damage of Geosynthetics
D5819	Standard Guide for Selecting Test Methods for Experimental Evaluation of Geosynthetic Durability
D5820	Standard Practice for Pressurized Air Channel Evaluation of Dual-Seamed Geomembranes
D5884/D5884M	Standard Test Method for Determining Tearing Strength of Internally Reinforced Geomembranes
D5885/D5885M	Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High-Pressure Differential Scanning Calorimetry
D5886	Standard Guide for Selection of Test Methods to Determine Rate of Fluid Permeation Through Geomembranes for Specific Applications



D5887/D5887M	Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter
D5888	Standard Guide for Storage and Handling of Geosynthetic Clay Liners
D5889/D5889M	Standard Practice for Quality Control of Geosynthetic Clay Liners
D5890	Standard Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners
D5891/D5891M	Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners
D5970/D5970M	Standard Test Method for Deterioration of Geotextiles from Outdoor Exposure
D5993	Standard Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners
D5994/D5994M	Standard Test Method for Measuring Core Thickness of Textured Geomembranes
D6072/D6072M	Standard Practice for Obtaining Samples of Geosynthetic Clay Liners
D6088	Standard Practice for Installation of Geocomposite Pavement Drains
D6102	Standard Guide for Installation of Geosynthetic Clay Liners
D6140	Standard Test Method to Determine Asphalt Retention of Paving Fabrics Used in Asphalt Paving for Full-Width Applications
D6141	Standard Guide for Screening Clay Portion and Index Flux of Geosynthetic Clay Liner (GCL) for Chemical Compatibility to Liquids
D6213	Standard Practice for Tests to Evaluate the Chemical Resistance of Geogrids to Liquids
D6214/D6214M	Standard Test Method for Determining the Integrity of Field Seams Used in Joining Geomembranes by Chemical Fusion Methods
D6241	Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe
D6243/D6243M	Standard Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method
D6244	Standard Test Method for Vertical Compression of Geocomposite Pavement Panel Drains
D6364	Standard Test Method for Determining Short-Term Compression Behavior of Geosynthetics
D6365	Standard Practice for Nondestructive Testing of Geomembrane Seams Using the Spark Test
D6388	Standard Practice for Tests to Evaluate the Chemical Resistance of Geonets to Liquids



D6389	Standard Practice for Tests to Evaluate the Chemical Resistance of Geotextiles to Liquids
D6392	Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods
D6434	Standard Guide for the Selection of Test Methods for Flexible Polypropylene Geomembranes
D6454/D6454M	Standard Test Method for Determining the Short-Term Compression Behavior of Turf Reinforcement Mats (TRMs)
D6455	Standard Guide for the Selection of Test Methods for Prefabricated Bituminous Geomembranes (PBGMs)
D6461/D6461M	Standard Specifications for Silt Fence Materials
D6495/D6495M	Standard Guide for Acceptance Testing Requirements for Geosynthetic Clay Liners
D6496/D6496M	Standard Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners
D6497/D6497M	Standard Guide for Mechanical Attachment of Geomembrane to Penetrations or Structures
D6523	Standard Guide for Evaluation and Selection of Alternative Daily Covers (ADCs) for Sanitary Landfills
D6524/D6524M	Standard Test Method for Measuring the Resiliency of Turf Reinforcement Mats (TRMs)
D6525/D6525M	Standard Test Method for Measuring Nominal Thickness of Rolled Erosion Control Products
D6566	Standard Test Method for Measuring Mass Per Unit Area of Turf Reinforcement Mats
D6567	Standard Test Method for Measuring the Light Penetration of a Rolled Erosion Control Product (RECP)
D6574/D6574M	Standard Test Method for Determining the (In-Plane) Hydraulic Transmissivity of a Geosynthetic by Radial Flow
D6575/D6575M	Standard Test Method for Determining Stiffness of Geosynthetics Used as Turf Reinforcement Mats (TRMs)
D6636	Standard Test Method for Determination of Ply Adhesion Strength of Reinforced Geomembranes
D6637/D6637M	Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method
D6638	Standard Test Method for Determining Connection Strength Between Geosynthetic Reinforcement and Segmental Concrete Units (Modular Concrete Blocks)



D6693/D6693M	Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes
D6706	Standard Test Method for Measuring Geosynthetic Pullout Resistance in Soil
D6707/D6707M	Standard Specification for Circular-Knit Geotextile for Use in Subsurface Drainage Applications
D6747	Standard Guide for Selection of Techniques for Electrical Leak Location of Leaks in Geomembranes
D6766	Standard Test Method for Evaluation of Hydraulic Properties of Geosynthetic Clay Liners Permeated with Potentially Incompatible Aqueous Solutions
D6767	Standard Test Method for Pore Size Characteristics of Geotextiles by Capillary Flow Test
D6768/D6768M	Standard Test Method for Tensile Strength of Geosynthetic Clay Liners
D6817/D6817M	Standard Specification for Rigid Cellular Polystyrene Geofoam
D6818	Standard Test Method for Tensile Properties of Rolled Erosion Control Products
D6826	Standard Specification for Sprayed Slurries, Foams and Indigenous Materials Used As Alternative Daily Cover for Municipal Solid Waste Landfills
D6916	Standard Test Method for Determining the Shear Strength Between Segmental Concrete Units (Modular Concrete Blocks)
D6917	Standard Guide for Selection of Test Methods for Prefabricated Vertical Drains (PVD)
D6918	Standard Test Method for Testing Vertical Strip Drains in the Crimped Condition
D6992	Standard Test Method for Accelerated Tensile Creep and Creep-Rupture of Geosynthetic Materials Based on Time-Temperature Superposition Using the Stepped Isothermal Method
D7001	Standard Specification for Geocomposites for Pavement Edge Drains and Other High-Flow Applications
D7002	Standard Practice for Electrical Leak Location on Exposed Geomembranes Using the Water Puddle Method
D7003/D7003M	Standard Test Method for Strip Tensile Properties of Reinforced Geomembranes
D7004/D7004M	Standard Test Method for Grab Tensile Properties of Reinforced Geomembranes
D7005/D7005M	Standard Test Method for Determining the Bond Strength (Ply Adhesion) of Geocomposites



D7006	Standard Practice for Ultrasonic Testing of Geomembranes
D7007	Standard Practices for Electrical Methods for Locating Leaks in Geomembranes Covered with Water or Earthen Materials
D7008	Standard Specification for Geosynthetic Alternate Daily Covers
D7056	Standard Test Method for Determining the Tensile Shear Strength of Prefabricated Bituminous Geomembrane Seams
D7106/D7106M	Standard Guide for Selection of Test Methods for Ethylene Propylene Diene Terpolymer (EPDM) Geomembranes
D7176	Standard Specification for Non-Reinforced Polyvinyl Chloride (PVC) Geomembranes Used in Buried Applications
D7177/D7177M	Standard Specification for Air Channel Evaluation of Polyvinyl Chloride (PVC) Dual Track Seamed Geomembranes
D7178	Standard Practice for Determining the Number of Constrictions “m” of Non-Woven Geotextiles as a Complementary Filtration Property
D7179	Standard Test Method for Determining Geonet Breaking Force
D7180/D7180M	Standard Guide for Use of Expanded Polystyrene (EPS) Geofoam in Geotechnical Projects
D7238	Standard Test Method for Effect of Exposure of Unreinforced Polyolefin Geomembrane Using Fluorescent UV Condensation Apparatus
D7239	Standard Specification for Hybrid Geosynthetic Paving Mat for Highway Applications
D7240	Standard Practice for Electrical Leak Location Using Geomembranes with an Insulating Layer in Intimate Contact with a Conductive Layer via Electrical Capacitance Technique (Conductive-Backed Geomembrane Spark Test)
D7272	Standard Test Method for Determining the Integrity of Seams Used in Joining Geomembranes by Premanufactured Taped Methods
D7273/D7273M	Standard Guide for Acceptance Testing Requirements for Geonets and Geonet Drainage Geocomposites
D7274	Standard Test Method for Mineral Stabilizer Content of Prefabricated Bituminous Geomembranes (PBGMs)
D7275	Standard Test Method for Tensile Properties of Bituminous Geomembranes (BGMs)
D7361	Standard Test Method for Accelerated Compressive Creep of Geosynthetic Materials Based on Time-Temperature Superposition Using the Stepped Isothermal Method
D7406	Standard Test Method for Time-Dependent Compressive Deformation Under Constant Pressure for Geosynthetic Drainage Products
D7407	Standard Guide for Determining the Transmission of Gases Through Geomembranes



D7408	Standard Specification for Non-Reinforced PVC (Polyvinyl Chloride) Geomembrane Seams
D7409	Standard Test Method for Carboxyl End Group Content of Polyethylene Terephthalate (PET) Yarns
D7465/D7465M	Standard Specification for Ethylene Propylene Diene Terpolymer (EPDM) Sheet Used In Geomembrane Applications
D7466/D7466M	Standard Test Method for Measuring Asperity Height of Textured Geomembranes
D7498/D7498M	Standard Test Method for Vertical Strip Drains Using a Large Scale Consolidation Test
D7499/D7499M	Standard Test Method for Measuring Geosynthetic-Soil Resilient Interface Shear Stiffness
D7556	Standard Test Methods for Determining Small-Strain Tensile Properties of Geogrids and Geotextiles by In-Air Cyclic Tension Tests
D7557/D7557M	Standard Practice for Sampling of Expanded Polystyrene Geofoam Specimens
D7613	Standard Specification for Flexible Polypropylene Reinforced (fPP-R) and Nonreinforced (fPP) Geomembranes
D7700	Standard Guide for Selecting Test Methods for Geomembrane Seams
D7702/D7702M	Standard Guide for Considerations When Evaluating Direct Shear Results Involving Geosynthetics
D7703	Standard Practice for Electrical Leak Location on Exposed Geomembranes Using the Water Lance Method
D7737/D7737M	Standard Test Method for Individual Geogrid Junction Strength
D7747/D7747M	Standard Test Method for Determining Integrity of Seams Produced Using Thermo-Fusion Methods for Reinforced Geomembranes by the Strip Tensile Method
D7748/D7748M	Standard Test Method for Flexural Rigidity of Geogrids, Geotextiles and Related Products
D7749	Standard Test Method for Determining Integrity of Seams Produced Using Thermo-Fusion Methods for Reinforced Geomembranes by the Grab Method
D7852	Standard Practice for Use of an Electrically Conductive Geotextile for Leak Location Surveys
D7853	Standard Test Method for Hydraulic Pullout Resistance of a Geomembrane with Locking Extensions Embedded in Concrete
D7864/D7864M	Standard Test Method for Determining the Aperture Stability Modulus of Geogrids
D7865	Standard Guide for Identification, Packaging, Handling, Storage and Deployment of Fabricated Geomembrane Panels



D7880/D7880M	Standard Test Method for Determining Flow Rate of Water and Suspended Solids Retention from a Closed Geosynthetic Bag
D7909	Standard Guide for Placement of (Blind) Actual Leaks During Electrical Leak Location Surveys of Geomembranes
D7931	Standard Guide for Specifying Drainage Geocomposites
D7953	Standard Practice for Electrical Leak Location on Exposed Geomembranes Using the Arc Testing Method
D7982	Standard Practice for Testing of Factory Thermo-Fusion Seams for Fabricated Geomembrane Panels
D8030/D8030M	Standard Practice for Sample Preparation for GCCM
D8057	Standard Specification for Inlet Filters with a Rigid Frame
D8058	Standard Test Method for Determining the Flexural Strength of a Geosynthetic Cementitious Composite Mat (GCCM) Using the Three-Point Bending Test
D8102	Standard Practice for Manufacturing Quality Control of Geotextiles
D8105	Standard Guide for Use and Application of Geosynthetic Reinforcement Reduction Factor Test Results
D8117	Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by Differential Scanning Calorimetry
D8172	Standard Test Method for Shear and Peel Strength of Solvent-Welded Seams with Nonreinforced Geomembranes
D8173	Standard Guide for Site Preparation, Layout, Installation, and Hydration of Geosynthetic Cementitious Composite Mats
D8203	Standard Test Method for Determination of the Horizontal Water Flow Rate of a Geosynthetic Screening Material, Product, or Device
D8204	Standard Practice for Burial and Retrieval of Samples in a Test Pad to Evaluate Installation Effects on Geosynthetic Clay Liners
D8265	Standard Practices for Electrical Methods for Mapping Leaks in Installed Geomembranes
D8329	Standard Test Method for Determination of Water/Cementitious Materials Ratio for Geosynthetic Cementitious Composite Mats (GCCMs) and Measurement of the Compression Strength of the Cementitious Material Contained Within
D8364/D8364M	Standard Specification for Geosynthetic Cementitious Composite Mat (GCCM) Materials

B.4.4 ASTM Volume 04.02: Concrete and Aggregates

Designation	Title
C29/C29M	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate



C31/C31M	Standard Practice for Making and Curing Concrete Test Specimens in the Field
C33/C33M	Standard Specification for Concrete Aggregates
C39/C39M	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
C40/C40M	Standard Test Method for Organic Impurities in Fine Aggregates for Concrete
C42/C42M	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
C70	Standard Test Method for Surface Moisture in Fine Aggregate
C78/C78M	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
C87/C87M	Standard Test Method for Effect of Organic Impurities in Fine Aggregate on Strength of Mortar
C88/C88M	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
C94/C94M	Standard Specification for Ready-Mixed Concrete
C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
C123/C123M	Standard Test Method for Lightweight Particles in Aggregate
C125	Standard Terminology Relating to Concrete and Concrete Aggregates
C127	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate
C128	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate
C131/C131M	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
C136/C136M	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
C138/C138M	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
C142/C142M	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
C143/C143M	Standard Test Method for Slump of Hydraulic-Cement Concrete
C156	Standard Test Method for Water Loss [from a Mortar Specimen] Through Liquid Membrane-Forming Curing Compounds for Concrete
C157/C157M	Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete



C171	Standard Specification for Sheet Materials for Curing Concrete
C172/C172M	Standard Practice for Sampling Freshly Mixed Concrete
C173/C173M	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
C174/C174M	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
C192/C192M	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
C215	Standard Test Method for Fundamental Transverse, Longitudinal, and Torsional Resonant Frequencies of Concrete Specimens
C231/C231M	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
C232/C232M	Standard Test Method for Bleeding of Concrete
C233/C233M	Standard Test Method for Air-Entraining Admixtures for Concrete
C260/C260M	Standard Specification for Air-Entraining Admixtures for Concrete
C293/C293M	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)
C294	Standard Descriptive Nomenclature for Constituents of Concrete Aggregates
C295/C295M	Standard Guide for Petrographic Examination of Aggregates for Concrete
C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
C311/C311M	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
C330/C330M	Standard Specification for Lightweight Aggregates for Structural Concrete
C331/C331M	Standard Specification for Lightweight Aggregates for Concrete Masonry Units
C332	Standard Specification for Lightweight Aggregates for Insulating Concrete
C341/C341M	Standard Practice for Preparation and Conditioning of Cast, Drilled, or Sawed Specimens of Hydraulic-Cement Mortar and Concrete Used for Length Change Measurements
C387/C387M	Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar
C403/C403M	Standard Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance



C418	Standard Test Method for Abrasion Resistance of Concrete by Sandblasting
C441/C441M	Standard Test Method for Effectiveness of Pozzolans or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction
C457/C457M	Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete
C469/C469M	Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
C470/C470M	Standard Specification for Molds for Forming Concrete Test Cylinders Vertically
C490/C490M	Standard Practice for Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete
C494/C494M	Standard Specification for Chemical Admixtures for Concrete
C495/C495M	Standard Test Method for Compressive Strength of Lightweight Insulating Concrete
C496/C496M	Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
C511	Standard Specification for Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
C512/C512M	Standard Test Method for Creep of Concrete in Compression
C513/C513M	Standard Test Method for Obtaining and Testing Specimens of Hardened Lightweight Insulating Concrete for Compressive Strength
C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
C567/C567M	Standard Test Method for Determining Density of Structural Lightweight Concrete
C586	Standard Test Method for Potential Alkali Reactivity of Carbonate Rocks as Concrete Aggregates (Rock-Cylinder Method)
C597	Standard Test Method for Pulse Velocity Through Concrete
C617/C617M	Standard Practice for Capping Cylindrical Concrete Specimens
C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
C637	Standard Specification for Aggregates for Radiation-Shielding Concrete
C638	Standard Descriptive Nomenclature of Constituents of Aggregates for Radiation-Shielding Concrete



C641	Standard Test Method for Iron Staining Materials in Lightweight Concrete Aggregates
C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
C666/C666M	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
C670	Standard Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials
C685/C685M	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
C702/C702M	Standard Practice for Reducing Samples of Aggregate to Testing Size
C779/C779M	Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces
C796/C796M	Standard Test Method for Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam
C802	Standard Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction Materials
C803/C803M	Standard Test Method for Penetration Resistance of Hardened Concrete
C805/C805M	Standard Test Method for Rebound Number of Hardened Concrete
C823/C823M	Standard Practice for Examination and Sampling of Hardened Concrete in Constructions
C827/C827M	Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures
C856/C856M	Standard Practice for Petrographic Examination of Hardened Concrete
C869/C869M	Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete
C873/C873M	Standard Test Method for Compressive Strength of Concrete Cylinders Cast in Place in Cylindrical Molds
C876	Standard Test Method for Corrosion Potentials of Uncoated Reinforcing Steel in Concrete
C878/C878M	Standard Test Method for Restrained Expansion of Shrinkage-Compensating Concrete
C881/C881M	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
C882/C882M	Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear
C884/C884M	Standard Test Method for Thermal Compatibility Between Concrete and an Epoxy-Resin Overlay



C900	Standard Test Method for Pullout Strength of Hardened Concrete
C918/C918M	Standard Test Method for Measuring Early-Age Compressive Strength and Projecting Later-Age Strength
C928/C928M	Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs
C937	Standard Specification for Grout Fluidifier for Preplaced-Aggregate Concrete
C938	Standard Practice for Proportioning Grout Mixtures for Preplaced-Aggregate Concrete
C939/C939M	Standard Test Method for Flow of Grout for Preplaced-Aggregate Concrete (Flow Cone Method)
C940	Standard Test Method for Expansion and Bleeding of Freshly Mixed Grouts for Preplaced-Aggregate Concrete in the Laboratory
C941	Standard Test Method for Water Retentivity of Grout Mixtures for Preplaced-Aggregate Concrete in the Laboratory
C942/C942M	Standard Test Method for Compressive Strength of Grouts for Preplaced-Aggregate Concrete in the Laboratory
C943	Standard Practice for Making Test Cylinders and Prisms for Determining Strength and Density of Preplaced-Aggregate Concrete in the Laboratory
C944/C944M	Standard Test Method for Abrasion Resistance of Concrete or Mortar Surfaces by the Rotating-Cutter Method
C953	Standard Test Method for Time of Setting of Grouts for Preplaced-Aggregate Concrete in the Laboratory
C979/C979M	Standard Specification for Pigments for Integrally Colored Concrete
C989/C989M	Standard Specification for Slag Cement for Use in Concrete and Mortars
C1017/C1017M	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
C1040/C1040M	Standard Test Methods for In-Place Density of Unhardened and Hardened Concrete, Including Roller Compacted Concrete, By Nuclear Methods
C1059/C1059M	Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete
C1064/C1064M	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
C1067	Standard Practice for Conducting a Ruggedness Evaluation or Screening Program for Test Methods for Construction Materials
C1073	Standard Test Method for Hydraulic Activity of Slag Cement by Reaction with Alkali



C1074	Standard Practice for Estimating Concrete Strength by the Maturity Method
C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
C1084	Standard Test Method for Portland-Cement Content of Hardened Hydraulic-Cement Concrete
C1090/C1090M	Standard Test Method for Measuring Changes in Height of Cylindrical Specimens of Hydraulic-Cement Grout
C1105	Standard Test Method for Length Change of Concrete Due to Alkali-Carbonate Rock Reaction
C1107/C1107M	Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
C1116/C1116M	Standard Specification for Fiber-Reinforced Concrete
C1138M	Standard Test Method for Abrasion Resistance of Concrete (Underwater Method)
C1140/C1140M	Standard Practice for Preparing and Testing Specimens from Shotcrete Test Panels
C1141/C1141M	Standard Specification for Admixtures for Shotcrete
C1152/C1152M	Standard Test Method for Acid-Soluble Chloride in Mortar and Concrete
C1170/C1170M	Standard Test Method for Determining Consistency and Density of Roller-Compacted Concrete Using a Vibrating Table
C1176/C1176M	Standard Practice for Making Roller-Compacted Concrete in Cylinder Molds Using a Vibrating Table
C1181/C1181M	Standard Test Methods for Compressive Creep of Chemical-Resistant Polymer Machinery Grouts
C1202	Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
C1218/C1218M	Standard Test Method for Water-Soluble Chloride in Mortar and Concrete
C1231/C1231M	Standard Practice for Use of Unbonded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens
C1240	Standard Specification for Silica Fume Used in Cementitious Mixtures
C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
C1293	Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction
C1315	Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete



C1339/C1339M	Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts
C1383	Standard Test Method for Measuring the P-Wave Speed and the Thickness of Concrete Plates Using the Impact-Echo Method
C1385/C1385M	Standard Practice for Sampling Materials for Shotcrete
C1399/C1399M	Standard Test Method for Obtaining Average Residual-Strength of Fiber-Reinforced Concrete
C1435/C1435M	Standard Practice for Molding Roller-Compacted Concrete in Cylinder Molds Using a Vibrating Hammer
C1436	Standard Specification for Materials for Shotcrete
C1438	Standard Specification for Latex and Powder Polymer Modifiers for use in Hydraulic Cement Concrete and Mortar
C1439	Standard Test Methods for Evaluating Latex and Powder Polymer Modifiers for use in Hydraulic Cement Concrete and Mortar
C1451	Standard Practice for Determining Variability of Concrete-Making Materials From a Single Source
C1524	Standard Test Method for Water-Extractable Chloride in Aggregate (Soxhlet Method)
C1542/C1542M	Standard Test Method for Measuring Length of Concrete Cores
C1550	Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel)
C1556	Standard Test Method for Determining the Apparent Chloride Diffusion Coefficient of Cementitious Mixtures by Bulk Diffusion
C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
C1579	Standard Test Method for Evaluating Plastic Shrinkage Cracking of Restrained Fiber Reinforced Concrete (Using a Steel Form Insert)
C1580	Standard Test Method for Water-Soluble Sulfate in Soil
C1581/C1581M	Standard Test Method for Determining Age at Cracking and Induced Tensile Stress Characteristics of Mortar and Concrete under Restrained Shrinkage
C1582/C1582M	Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete
C1583/C1583M	Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)
C1585	Standard Test Method for Measurement of Rate of Absorption of Water by Hydraulic-Cement Concretes



C1602/C1602M	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
C1603	Standard Test Method for Measurement of Solids in Water
C1604/C1604M	Standard Test Method for Obtaining and Testing Drilled Cores of Shotcrete
C1609/C1609M	Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading)
C1610/C1610M	Standard Test Method for Static Segregation of Self-Consolidating Concrete Using Column Technique
C1611/C1611M	Standard Test Method for Slump Flow of Self-Consolidating Concrete
C1621/C1621M	Standard Test Method for Passing Ability of Self-Consolidating Concrete by J-Ring
C1622/C1622M	Standard Specification for Cold-Weather Admixture Systems
C1646/C1646M	Standard Practice for Making and Curing Test Specimens for Evaluating Resistance of Coarse Aggregate to Freezing and Thawing in Air-Entrained Concrete
C1679	Standard Practice for Measuring Hydration Kinetics of Hydraulic Cementitious Mixtures Using Isothermal Calorimetry
C1688/C1688M	Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete
C1697	Standard Specification for Blended Supplementary Cementitious Materials
C1698	Standard Test Method for Autogenous Strain of Cement Paste and Mortar
C1701/C1701M	Standard Test Method for Infiltration Rate of In Place Pervious Concrete
C1708/C1708M	Standard Test Methods for Self-leveling Mortars Containing Hydraulic Cements
C1709	Standard Guide for Evaluation of Alternative Supplementary Cementitious Materials (ASCM) for Use in Concrete
C1712	Standard Test Method for Rapid Assessment of Static Segregation Resistance of Self-Consolidating Concrete Using Penetration Test
C1723	Standard Guide for Examination of Hardened Concrete Using Scanning Electron Microscopy
C1740	Standard Practice for Evaluating the Condition of Concrete Plates Using the Impulse-Response Method
C1741	Standard Test Method for Bleed Stability of Cementitious Post-Tensioning Tendon Grout
C1747/C1747M	Standard Test Method for Determining Potential Resistance to Degradation of Pervious Concrete by Impact and Abrasion



C1753/C1753M	Standard Practice for Evaluating Early Hydration of Hydraulic Cementitious Mixtures Using Thermal Measurements
C1757	Standard Test Method for Determination of One-Point, Bulk Water Sorption of Dried Concrete
C1758/C1758M	Standard Practice for Fabricating Test Specimens with Self-Consolidating Concrete
C1761/C1761M	Standard Specification for Lightweight Aggregate for Internal Curing of Concrete
C1768/C1768M	Standard Practice for Accelerated Curing of Concrete Cylinders
C1777	Standard Test Method for Rapid Determination of the Methylene Blue Value for Fine Aggregate or Mineral Filler Using a Colorimeter
C1778	Standard Guide for Reducing the Risk of Deleterious Alkali-Aggregate Reaction in Concrete
C1792	Standard Test Method for Measurement of Mass Loss versus Time for One-Dimensional Drying of Saturated Concretes
C1797	Standard Specification for Ground Calcium Carbonate and Aggregate Mineral Fillers for use in Hydraulic Cement Concrete
C1798/C1798M	Standard Specification for Returned Fresh Concrete for Use in a New Batch of Ready-Mixed Concrete
C1800/C1800M	Standard Test Method for Determining Density of Roller-Compacted Concrete Specimens Using the Gyratory Compactor
C1803	Standard Guide for Abrasion Resistance of Mortar Surfaces Using a Rotary Platform Abraser
C1810/C1810M	Standard Guide for Comparing Performance of Concrete-Making Materials Using Mortar Mixtures
C1812/C1812M	Standard Practice for Design of Journal Bearing Supports to be Used in Fiber Reinforced Concrete Beam Tests
C1827	Standard Test Method for Determination of the Air-Entraining Admixture Demand of a Cementitious Mixture
C1849/C1849M	Standard Test Method for Density and Air Content (Pressure Method) of Freshly Mixed Roller-Compacted Concrete
C1856/C1856M	Standard Practice for Fabricating and Testing Specimens of Ultra-High Performance Concrete
C1857/C1857M	Standard Test Method for Evaluating the Adhesion (Pull-Off) Strength of Concrete Repair and Overlay Mortar
C1866/C1866M	Standard Specification for Ground-Glass Pozzolan for Use in Concrete
C1876	Standard Test Method for Bulk Electrical Resistivity or Bulk Conductivity of Concrete
C1890	Standard Test Method for K-slump of Freshly Mixed Concrete



C1897	Standard Test Methods for Measuring the Reactivity of Supplementary Cementitious Materials by Isothermal Calorimetry and Bound Water Measurements
E329	Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection
R0030	Manual of Aggregate and Concrete Testing (This is not an ASTM standard; available as PDF, only)
R0031	Metric Practice Guide for Concrete and Concrete Aggregates (This is not an ASTM standard; available as PDF, only)

B.4.5 ASTM Volume 04.04 Roofing and Waterproofing

Designation	Title
C836/C836M	Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
C898/C898M	Standard Guide for Use of High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Separate Wearing Course
C957/C957M	Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane With Integral Wearing Surface
C981	Standard Guide for Design of Built-Up Bituminous Membrane Waterproofing Systems for Building Decks
C1127/C1127M	Standard Guide for Use of High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with an Integral Wearing Surface
C1305/C1305M	Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
C1306/C1306M	Standard Test Method for Hydrostatic Pressure Resistance of a Liquid-Applied Waterproofing Membrane
C1471/C1471M	Standard Guide for the Use of High Solids Content Cold Liquid-Applied Elastomeric Waterproofing Membrane on Vertical Surfaces
C1522	Standard Test Method for Extensibility After Heat Aging of Cold Liquid-Applied Elastomeric Waterproofing Membranes
D4	Standard Test Method for Bitumen Content
D6/D6M	Standard Test Method for Loss on Heating of Oil and Asphaltic Compounds
D36/D36M	Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
D41/D41M	Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing
D43/D43M	Standard Specification for Coal Tar Primer Used in Roofing, Dampproofing, and Waterproofing



D88/D88M	Standard Test Method for Saybolt Viscosity
D146/D146M	Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing
D173/D173M	Standard Specification for Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing
D226/D226M	Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
D227/D227M	Standard Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing
D228/D228M	Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing
D312/D312M	Standard Specification for Asphalt Used in Roofing
D449/D449M	Standard Specification for Asphalt Used in Dampproofing and Waterproofing
D450/D450M	Standard Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing
D451/D451M	Standard Test Method for Sieve Analysis of Granular Mineral Surfacing For Asphalt Roofing Products
D452/D452M	Standard Test Method for Sieve Analysis of Surfacing for Asphalt Roofing Products
D1079	Standard Terminology Relating to Roofing and Waterproofing
D1187/D1187M	Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal
D1227/D1227M	Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing
D1327/D1327M	Standard Specification for Bitumen-Saturated Woven Burlap Fabrics Used in Roofing and Waterproofing
D1370/D1370M	Standard Test Method for Contact Compatibility Between Asphaltic Materials (Oliensis Test)
D1668/D1668M	Standard Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing
D1669/D1669M	Standard Practice for Preparation of Test Panels for Accelerated and Outdoor Weathering of Bituminous Coatings
D1670/D1670M	Standard Test Method for Failure End Point in Accelerated and Outdoor Weathering of Bituminous Materials
D1863/D1863M	Standard Specification for Mineral Aggregate Used on Built-Up Roofs
D1864/D1864M	Standard Test Method for Moisture in Mineral Aggregate Used on Built-Up Roofs



D1865/D1865M	Standard Test Method for Hardness of Mineral Aggregate Used on Built-Up Roofs
D1970/D1970M	Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
D2178/D2178M	Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing
D2521/D2521M	Standard Specification for Asphalt Used in Canal, Ditch, and Pond Lining
D2523/D2523M	Standard Practice for Testing Load-Strain Properties of Roofing Membranes
D2626/D2626M	Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing
D2746/D2746M	Standard Test Method for Staining Tendency of Asphalt (Stain Index)
D2824/D2824M	Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, and Fibered without Asbestos
D2829/D2829M	Standard Practice for Sampling and Analysis of Existing Built-Up Roof Systems
D3018/D3018M	Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules
D3019/D3019M	Standard Specification for Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, and Fibered
D3105	Standard Index of Methods for Testing Elastomeric and Plastomeric Roofing and Waterproofing Materials
D3161/D3161M	Standard Test Method for Wind Resistance of Steep Slope Roofing Products (Fan-Induced Method)
D3320/D3320M	Standard Specification for Emulsified Coal-Tar Pitch (Mineral Colloid Type)
D3409/D3409M	Standard Test Method for Adhesion of Asphalt-Roof Cement to Damp, Wet, or Underwater Surfaces
D3423/D3423M	Standard Practice for Application of Emulsified Coal-Tar Pitch (Mineral Colloid Type)
D3462/D3462M	Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
D3468/D3468M	Standard Specification for Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing
D3617/D3617M	Standard Practice for Sampling and Analysis of Built-Up Roof Systems During Application
D3746/D3746M	Standard Test Method for Impact Resistance of Bituminous Roofing Systems



D3791/D3791M	Standard Practice for Evaluating the Effects of Heat on Asphalts
D3805/D3805M	Standard Guide for Application of Aluminum-Pigmented Asphalt Roof Coatings
D3909/D3909M	Standard Specification for Asphalt Roll Roofing (Glass Felt) Surfaced With Mineral Granules
D4073/D4073M	Standard Test Method for Tensile-Tear Strength of Bituminous Roofing Membranes
D4074/D4074M	Standard Test Method for Bitumen and Aggregate Content of Bitumen-Aggregate Mixtures From Roofing Samples
D4402/D4402M	Standard Test Method for Viscosity Determination of Asphalt at Elevated Temperatures Using a Rotational Viscometer
D4434/D4434M	Standard Specification for Poly(Vinyl Chloride) Sheet Roofing
D4479/D4479M	Standard Specification for Asphalt Roof Coatings—Asbestos-Free
D4586/D4586M	Standard Specification for Asphalt Roof Cement, Asbestos-Free
D4601/D4601M	Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing
D4637/D4637M	Standard Specification for EPDM Sheet Used In Single-Ply Roof Membrane
D4798/D4798M	Standard Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)
D4799/D4799M	Standard Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Fluorescent UV, Water Spray, and Condensation Method)
D4811/D4811M	Standard Specification for Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing
D4830/D4830M	Standard Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing
D4866/D4866M	Standard Performance Specification for Coal Tar Pitch Emulsion Pavement Sealer Mix Formulations Containing Mineral Aggregates and Optional Polymeric Admixtures
D4869/D4869M	Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing
D4897/D4897M	Standard Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing
D4932/D4932M	Standard Test Method for Fastener Rupture and Tear Resistance of Roofing and Waterproofing Sheets, Roll Roofing, and Shingles
D4977/D4977M	Standard Test Method for Granule Adhesion to Mineral-Surfaced Roofing by Abrasion
D4989/D4989M	Standard Test Method for Apparent Viscosity (Flow) of Roofing Bitumens Using the Parallel Plate Plastometer



D4990	Standard Specification for Coal-Tar Glass Felt Used in Roofing and Waterproofing
D5076/D5076M	Standard Test Method for Measuring Voids in Roofing and Waterproofing Membranes
D5081/D5081M	Standard Test Method for Aggregate Layer Hiding Power
D5100/D5100M	Standard Test Method for Adhesion of Mineral Aggregate to Hot Bitumen
D5147/D5147M	Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material
D5295/D5295M	Standard Guide for Preparation of Concrete Surfaces for Adhered (Bonded) Membrane Waterproofing Systems
D5385/D5385M	Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes
D5405/D5405M	Standard Test Method for Conducting Time-to-Failure (Creep-Rupture) Tests of Joints Fabricated from Nonbituminous Organic Roof Membrane Material
D5602/D5602M	Standard Test Method for Static Puncture Resistance of Roofing Membrane Specimens
D5635/D5635M	Standard Test Method for Dynamic Puncture Resistance of Roofing Membrane Specimens
D5636/D5636M	Standard Test Method for Low Temperature Unrolling of Felt or Sheet Roofing and Waterproofing Materials
D5643/D5643M	Standard Specification for Coal Tar Roof Cement, Asbestos Free
D5665/D5665M	Standard Specification for Thermoplastic Fabrics Used in Cold-Applied Roofing and Waterproofing
D5683/D5683M	Standard Test Method for Flexibility of Roofing and Waterproofing Materials and Membranes
D5726	Standard Specification for Thermoplastic Fabrics Used in Hot-Applied Roofing and Waterproofing
D5727/D5727M	Standard Specification for Emulsified Refined Coal Tar (Mineral Colloid Type)
D5843/D5843M	Standard Guide for Application of Fully Adhered Vulcanized Rubber Sheets Used in Waterproofing
D5849/D5849M	Standard Test Method for Evaluating Resistance of Modified Bituminous Roofing Membrane to Cyclic Fatigue (Joint Displacement)
D5869/D5869M	Standard Practice for Dark Oven Heat Exposure of Roofing and Waterproofing Materials
D5898/D5898M	Standard Guide for Standard Details for Adhered Sheet Waterproofing
D5957	Standard Guide for Flood Testing Horizontal Waterproofing Installations



D6083/D6083M	Standard Specification for Liquid-Applied Acrylic Coating Used in Roofing
D6134/D6134M	Standard Specification for Vulcanized Rubber Sheets Used in Waterproofing Systems
D6136/D6136M	Standard Test Method for Kerosine Number of Unsaturated (Dry) Felt by Vacuum Method
D6152/D6152M	Standard Specification for SEBS-Modified Mopping Asphalt Used in Roofing
D6162/D6162M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
D6163/D6163M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements
D6164/D6164M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements
D6221/D6221M	Standard Specification for Reinforced Bituminous Flashing Sheets for Roofing and Waterproofing
D6222/D6222M	Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements
D6223/D6223M	Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
D6225/D6225M	Standard Test Method for Granule Cover of Mineral-Surfaced Roofing
D6294/D6294M	Standard Test Method for Corrosion Resistance of Ferrous Metal Fastener Assemblies Used in Roofing and Waterproofing
D6298/D6298M	Standard Specification for Fiberglass Reinforced Styrene-Butadiene-Styrene (SBS) Modified Bituminous Sheets with a Factory Applied Metal Surface
D6356/D6356M	Standard Test Method for Hydrogen Gas Generation of Aluminum Emulsified Asphalt Used as a Protective Coating for Roofing
D6380/D6380M	Standard Specification for Asphalt Roll Roofing (Organic Felt)
D6381/D6381M	Standard Test Method for Measurement of Asphalt Shingle Mechanical Uplift Resistance
D6382/D6382M	Standard Practice for Dynamic Mechanical Analysis and Thermogravimetry of Roofing and Waterproofing Membrane Material
D6383/D6383M	Standard Practice for Time-to-Failure (Creep-Rupture) of Adhesive Joints Fabricated from EPDM Roof Membrane Material
D6451/D6451M	Standard Guide for Application of Asphalt Based Protection Board
D6506/D6506M	Standard Specification for Asphalt Based Protection Board for Below-Grade Waterproofing



D6509/D6509M	Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Base Sheet Materials Using Glass Fiber Reinforcements
D6511/D6511M	Standard Test Methods for Solvent Bearing Bituminous Compounds
D6622/D6622M	Standard Guide for Application of Fully Adhered Hot-Applied Reinforced Waterproofing Systems
D6630/D6630M	Standard Guide for Low Slope Insulated Roof Membrane Assembly Performance
D6694/D6694M	Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems
D6705/D6705M	Standard Guide for Repair and Recoat of Spray Polyurethane Foam Roofing Systems
D6753/D6753M	Standard Specification for Coal Tar Adhesive
D6754/D6754M	Standard Specification for Ketone Ethylene Ester Based Sheet Roofing
D6757/D6757M	Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing
D6769/D6769M	Standard Guide for Application of Fully Adhered, Cold-Applied, Prefabricated Reinforced Modified Bituminous Membrane Waterproofing Systems
D6805	Standard Practice for Infrared (IR) Procedure for Determination of Aromatic/ Aliphatic Ratio of Bituminous Emulsions
D6878/D6878M	Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing
D6945/D6945M	Standard Specification for Emulsified Refined Coal-Tar (Ready to Use, Commercial Grade)
D6946/D6946M	Standard Specification for Emulsified Refined Coal-Tar (Driveway Sealer, Ready to Use, Primarily Residential Grade)
D6947/D6947M	Standard Specification for Liquid Applied Moisture Cured Polyurethane Coating Used in Spray Polyurethane Foam Roofing System
D6948/D6948M	Standard Practice for Application of Refined Coal Tar (Ready to Use, Commercial Grade)
D7051	Standard Test Method for Cyclic Thermal Shock of SBS-Modified Bituminous Roofing Sheets with Factory-Applied Metal Surface
D7052/D7052M	Standard Test Method for Determining Impact Resistance of New Low Slope Roof Membranes Using Steel Balls (Z8295Z)
D7053/D7053M	Standard Guide for Determining and Evaluating Causes of Water Leakage of Low-Sloped Roofs
D7105/D7105M	Standard Test Method for Determining the Adhesive and Cohesive Strength Between Materials in Roofing or Waterproofing Membranes and Systems



D7119/D7119M	Standard Guide for Sampling Spray Polyurethane Foam and Coating in Roofing
D7120/D7120M	Standard Guide for Evaluation and Preparation of Roof Membranes for Coating Application
D7158/D7158M	Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method)
D7186	Standard Practice for Quality Assurance Observation of Roof Construction and Repair
D7281	Standard Test Method for Determining Water Migration Resistance Through Roof Membranes
D7349/D7349M	Standard Test Method for Determining the Capability of Roofing and Waterproofing Materials to Seal Around Fasteners
D7379/D7379M	Standard Test Methods for Strength of Modified Bitumen Sheet Material Laps Using Cold Process Adhesive
D7425/D7425M	Standard Specification for Spray Polyurethane Foam Used for Roofing Applications
D7492/D7492M	Standard Guide for Use of Drainage System Media with Waterproofing Systems
D7505/D7505M	Standard Specification for Self-Adhesive Polyester Fabric Reinforced Polymer Modified Asphalt Steep Slope Roll Roofing Surfaced with Mineral Granules
D7530/D7530M	Standard Specification for Self-Adhesive Glass Fiber Fabric Reinforced Polymer Modified Asphalt Steep Slope Roll Roofing Surfaced with Mineral Granules
D7635/D7635M	Standard Test Method for Measurement of Thickness of Coatings Over Fabric Reinforcement
D7636/D7636M	Standard Practice for Sampling and Analysis of Modified Bitumen Roof Systems
D7654/D7654M	Standard Specification for Asphalt Used in Roofing Measured by Dynamic Shear Rheometer
D7655/D7655M	Standard Classification for Size of Aggregate Used as Ballast for Membrane Roof Systems
D7693/D7693M	Standard Guide for Application of Heat Weldable Modified Bituminous Waterproofing Membranes Systems for New Concrete Decks
D7694/D7694M	Standard Test Methods for Self-Adhesive Modified Bituminous Sheet Material
D7832/D7832M	Standard Guide for Performance Attributes of Waterproofing Membranes Applied to Below-Grade Walls / Vertical Surfaces (Enclosing Interior Spaces)
D7851	Standard Guide for Design of Sustainable, Low-Slope Roofing Systems



D7877	Standard Guide for Electronic Methods for Detecting and Locating Leaks in Waterproof Membranes
D7897	Standard Practice for Laboratory Soiling and Weathering of Roofing Materials to Simulate Effects of Natural Exposure on Solar Reflectance and Thermal Emittance
D7954/D7954M	Standard Practice for Moisture Surveying of Roofing and Waterproofing Systems Using Nondestructive Electrical Impedance Scanners
D8013	Standard Guide for Establishing a Recycle Program for Roof Coverings, Roofing Membrane, and Shingle Materials
D8014	Standard Guide for Selection of Membranes Used in Vegetative Roofing Systems
D8051/D8051M	Standard Specification for Wax-Modified Asphalt Used in Roofing
D8052/D8052M	Standard Test Method for Quantification of Air Leakage in Low-Sloped Membrane Roof Assemblies
D8099/D8099M	Standard Specification for Asphalt Emulsion Pavement Sealer (Mineral Colloid or Chemically Stabilized Type)
D8109	Standard Guide for Waterproofing Repair of Concrete by Chemical Grout Crack Injection
D8154	Standard Test Methods for ¹ H-NMR Determination of Ketone-Ethylene-Ester and Polyvinyl Chloride Contents in KEE-PVC Roofing Fabrics
D8231	Standard Practice for the Use of a Low Voltage Electronic Scanning System for Detecting and Locating Breaches in Roofing and Waterproofing Membranes
D8257/D8257M	Standard Specification for Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing
E102/E102M	Standard Test Method for Saybolt Furol Viscosity of Bituminous Materials at High Temperatures
E1918	Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field
E1980	Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
E2396/E2396M	Standard Test Method for Saturated Water Permeability of Granular Drainage Media [Falling-Head Method] for Vegetative (Green) Roof Systems
E2397/E2397M	Standard Practice for Determination of Dead Loads and Live Loads Associated with Vegetative (Green) Roof Systems
E2398/E2398M	Standard Test Method for Water Capture and Media Retention of Geocomposite Drain Layers for Vegetative (Green) Roof Systems
E2399/E2399M	Standard Test Method for Maximum Media Density for Dead Load Analysis of Vegetative (Green) Roof Systems



E2400/E2400M	Standard Guide for Selection, Installation, and Maintenance of Plants for Vegetative (Green) Roof Systems
E2777	Standard Guide for Vegetative (Green) Roof Systems
E2788/E2788M	Standard Specification for Use of Expanded Shale, Clay and Slate (ESCS) as a Mineral Component in the Growing Media and the Drainage Layer for Vegetative (Green) Roof Systems
R0009	Abbreviated Metric Practice Guide for the Roofing Industry (This is not an ASTM standard)

B.4.6 ASTM Volume 04.11, Building Constructions (I)

Designation	Title
E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
E73	Standard Practice for Static Load Testing of Truss Assemblies
E154/E154M	Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
E196	Standard Practice for Gravity Load Testing of Floors and Low Slope Roofs
E241	Standard Guide for Limiting Water-Induced Damage to Buildings
E283/E283M	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
E330/E330M	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
E331	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
E405	Standard Test Methods for Wear Testing Rotary Operators for Windows
E455	Standard Test Method for Static Load Testing of Framed Floor or Roof Diaphragm Constructions for Buildings
E488/E488M	Standard Test Methods for Strength of Anchors in Concrete Elements
E529	Standard Guide for Conducting Flexural Tests on Beams and Girders for Building Construction
E546	Standard Test Method for Frost/Dew Point of Sealed Insulating Glass Units
E547	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference



E564	Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings
E575	Standard Practice for Reporting Data from Structural Tests of Building Constructions, Elements, Connections, and Assemblies
E576	Standard Test Method for Frost/Dew Point of Sealed Insulating Glass Units in the Vertical Position
E605/E605M	Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members
E631	Standard Terminology of Building Constructions
E661	Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads
E695	Standard Test Method of Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading
E736/E736M	Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
E741	Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution
E754	Standard Test Method for Pullout Resistance of Ties and Anchors Embedded in Masonry Mortar Joints
E759/E759M	Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members
E760/E760M	Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members
E761/E761M	Standard Test Method for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members
E779	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization
E783	Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors
E833	Standard Terminology of Building Economics
E859/E859M	Standard Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members
E864	Standard Practice for Surface Preparation of Aluminum Alloys to Be Adhesively Bonded in Honeycomb Shelter Panels
E865	Standard Specification for Structural Film Adhesives for Honeycomb Sandwich Panels
E866	Standard Specification for Corrosion-Inhibiting Adhesive Primer for Aluminum Alloys to Be Adhesively Bonded in Honeycomb Shelter Panels



E874	Standard Practice for Adhesive Bonding of Aluminum Facings to Nonmetallic Honeycomb Core for Shelter Panels
E894	Standard Test Method for Anchorage of Permanent Metal Railing Systems and Rails for Buildings
E917	Standard Practice for Measuring Life-Cycle Costs of Buildings and Building Systems
E935	Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings
E937/E937M	Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members
E964	Standard Practice for Measuring Benefit-to-Cost and Savings-to-Investment Ratios for Buildings and Building Systems
E987	Standard Test Methods for Deglazing Force of Fenestration Products
E990	Standard Specification for Core-Splice Adhesive for Honeycomb Sandwich Structural Panels
E997	Standard Test Method for Evaluating Glass Breakage Probability Under the Influence of Uniform Static Loads by Proof Load Testing
E998	Standard Test Method for Structural Performance of Architectural Glass Products Under the Influence of Uniform Static Loads
E1057	Standard Practice for Measuring Internal Rate of Return and Adjusted Internal Rate of Return for Investments in Buildings and Building Systems
E1074	Standard Practice for Measuring Net Benefits and Net Savings for Investments in Buildings and Building Systems
E1091	Standard Specification for Nonmetallic Honeycomb Core for Use in Shelter Panels
E1105	Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static AirPressure Difference
E1121	Standard Practice for Measuring Payback for Investments in Buildings and Building Systems
E1155M	Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers (Metric)
E1155	Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers
E1185	Standard Guide for Selecting Economic Methods for Evaluating Investments in Buildings and Building Systems
E1186	Standard Practices for Air Leakage Site Detection in Building Envelopes and Air Barrier Systems



E1190	Standard Test Methods for Strength of Power-Actuated Fasteners Installed in Structural Members
E1233/E1233M	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Cyclic Air Pressure Differential
E1258	Standard Test Method for Airflow Calibration of Fan Pressurization Devices
E1300	Standard Practice for Determining Load Resistance of Glass in Buildings
E1307	Standard Practice for Surface Preparation and Structural Adhesive Bonding of Precured, Nonmetallic Composite Facings to Structural Core for Flat Shelter Panels
E1369	Standard Guide for Selecting Techniques for Treating Uncertainty and Risk in the Economic Evaluation of Buildings and Building Systems
E1399/E1399M	Standard Test Method for Cyclic Movement and Measuring the Minimum and Maximum Joint Widths of Architectural Joint Systems
E1423	Standard Practice for Determining Steady State Thermal Transmittance of Fenestration Systems
E1424	Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure and Temperature Differences Across the Specimen
E1425	Standard Practice for Determining the Acoustical Performance of Windows, Doors, Skylight, and Glazed Wall Systems
E1480	Standard Terminology of Facility Management (Building-Related)
E1481	Standard Terminology of Railing Systems and Rails for Buildings
E1486	Standard Test Method for Determining Floor Tolerances Using Waviness, Wheel Path and Levelness Criteria
E1486M	Standard Test Method for Determining Floor Tolerances Using Waviness, Wheel Path and Levelness Criteria (Metric)
E1509	Standard Specification for Room Heaters, Pellet Fuel-Burning Type
E1512	Standard Test Methods for Testing Bond Performance of Bonded Anchors
E1513/E1513M	Standard Practice for Application of Sprayed Fire-Resistive Materials (SFRMs)
E1514	Standard Specification for Structural Standing Seam Steel Roof Panel Systems
E1554/E1554M	Standard Test Methods for Determining Air Leakage of Air Distribution Systems by Fan Pressurization
E1555	Standard Specification for Structural Paste Adhesive for Sandwich Panel Repair



E1556	Standard Specification for Epoxy Resin System for Composite Skin, Honeycomb Sandwich Panel Repair
E1557	Standard Classification for Building Elements and Related Sitework—Uniformat II
E1592	Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
E1602	Standard Guide for Construction of Solid Fuel Burning Masonry Heaters
E1612/E1612M	Standard Specification for Preformed Architectural Compression Seals for Buildings and Parking Structures
E1637	Standard Specification for Structural Standing Seam Aluminum Roof Panel Systems
E1643	Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs
E1646	Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference
E1660	Standard Classification for Serviceability of an Office Facility for Support for Office Work
E1661	Standard Classification for Serviceability of an Office Facility for Meetings and Group Effectiveness
E1662	Standard Classification for Serviceability of an Office Facility for Sound and Visual Environment
E1663	Standard Classification for Serviceability of an Office Facility for Typical Office Information Technology
E1664	Standard Classification for Serviceability of an Office Facility for Layout and Building Factors
E1665	Standard Classification for Serviceability of an Office Facility for Facility Protection
E1666	Standard Classification for Serviceability of an Office Facility for Work Outside Normal Hours or Conditions
E1667	Standard Classification for Serviceability of an Office Facility for Image to the Public and Occupants
E1668	Standard Classification for Serviceability of an Office Facility for Amenities to Attract and Retain Staff
E1669	Standard Classification for Serviceability of an Office Facility for Location, Access and Wayfinding
E1670	Standard Classification for Serviceability of an Office Facility for Management of Operations and Maintenance
E1671	Standard Classification for Serviceability of an Office Facility for Cleanliness



E1677	Standard Specification for Air Barrier (AB) Material or Assemblies for Low-Rise Framed Building Walls
E1679	Standard Practice for Setting the Requirements for the Serviceability of a Building or Building-Related Facility, and for Determining What Serviceability is Provided or Proposed
E1680	Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems
E1692	Standard Classification for Serviceability of an Office Facility for Change and Churn by Occupants
E1693	Standard Classification for Serviceability of an Office Facility for Protection of Occupant Assets
E1694	Standard Classification for Serviceability of an Office Facility for Special Facilities and Technologies
E1699	Standard Practice for Performing Value Engineering (VE)/Value Analysis (VA) of Projects, Products and Processes
E1700	Standard Classification for Serviceability of an Office Facility for Structure and Building Envelope
E1701	Standard Classification for Serviceability of an Office Facility for Manageability
E1730	Standard Specification for Rigid Foam for Use in Structural Sandwich Panel Cores
E1745	Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
E1748	Standard Test Method for Evaluating the Engagement Between Windows and Insect Screens as an Integral System
E1749	Standard Terminology Relating to Rigid Wall Relocatable Shelters
E1765	Standard Practice for Applying Analytical Hierarchy Process (AHP) to Multiattribute Decision Analysis of Investments Related to Projects, Products, and Processes
E1773	Standard Practice for Sealing Rigid Wall Tactical Shelters with Polysulfide Based Sealants
E1783/E1783M	Standard Specification for Preformed Architectural Strip Seals for Buildings and Parking Structures
E1793	Standard Practice for Preparation of Aluminum Alloy for Bonding in Foam and Beam Type Transportable Shelters
E1794	Standard Specification for Adhesive for Bonding Foam Cored Sandwich Panels (200 °F Elevated Humidity Service), Type II Panels
E1800	Standard Specification for Adhesive for Bonding Foam Cored Sandwich Panels (160 °F Elevated Humidity Service), Type I Panels



E1801	Standard Practice for Adhesive Bonding of Aluminum Facings in Foam and Beam Type Shelters
E1803	Standard Test Methods for Determining Strength Capacities of Structural Insulated Panels
E1804	Standard Practice for Performing and Reporting Cost Analysis During the Design Phase of a Project
E1825	Standard Guide for Evaluation of Exterior Building Wall Materials, Products, and Systems
E1826	Standard Specification for Low Volatile Organic Compound (VOC) Corrosion-Inhibiting Adhesive Primer for Aluminum Alloys to Be Adhesively Bonded
E1827	Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door
E1836/E1836M	Standard Practice for Building Floor Area Measurements for Facility Management
E1851	Standard Test Method for Electromagnetic Shielding Effectiveness of Durable Rigid Wall Relocatable Structures
E1857	Standard Guide for Selection of Cleaning Techniques for Masonry, Concrete, and Stucco Surfaces
E1886	Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
E1925	Specification for Engineering and Design Criteria for Rigid Wall Relocatable Structures
E1946	Standard Practice for Measuring Cost Risk of Buildings and Building Systems and Other Constructed Projects
E1974	Standard Specification for Shelter, Electrical Equipment S-250/G
E1975	Standard Specification for Shelter, Electrical, Equipment S-280/G
E1976	Standard Specification for Shelter, Tactical, Nonexpandable
E1977	Standard Specification for Shelter, Tactical, Expandable, One-Side
E1978	Standard Specification for Shelter, Tactical, Expandable, Two-Side
E1993/E1993M	Standard Specification for Bituminous Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs
E1996	Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
E1998	Standard Guide for Assessing Depressurization-Induced Backdrafting and Spillage from Vented Combustion Appliances
E2004	Standard Test Method for Facing Cleavage of Sandwich Panels



E2013	Standard Practice for Developing Functions, Constructing FAST Diagrams, and Performing Function Analysis During Value Engineering (VE)/Value Analysis (VA) Study
E2026	Standard Guide for Seismic Risk Assessment of Buildings
E2029	Standard Test Method for Volumetric and Mass Flow Rate Measurement in a Duct Using Tracer Gas Dilution
E2068	Standard Test Method for Determination of Operating Force of Sliding Windows and Doors
E2083	Standard Classification for Building Construction Field Requirements, and Office Overhead & Profit
E2098/E2098M	Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS),after Exposure to a Sodium Hydroxide Solution
E2099	Standard Practice for the Specification and Evaluation of Pre-Construction Laboratory Mockups of Exterior Wall Systems
E2103/E2103M	Standard Classification for Bridge Elements-UNIFORMAT II
E2110	Standard Terminology for Exterior Insulation and Finish Systems (EIFS)
E2112	Standard Practice for Installation of Exterior Windows, Doors and Skylights
E2121	Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings
E2126	Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings
E2127	Standard Methods of Static Load Test for Combined Tensile and Transverse Load Resistance of Paneled Wall Systems in Building Construction
E2128	Standard Guide for Evaluating Water Leakage of Building Walls
E2134/E2134M	Standard Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS)
E2136	Standard Guide for Specifying and Evaluating Performance of Single Family Attached and Detached Dwellings-Durability
E2140	Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head
E2141	Standard Test Method for Accelerated Aging of Electrochromic Devices in Sealed Insulating Glass Units
E2150	Standard Classification for Life-Cycle Environmental Work Elements—Environmental Cost Element Structure



E2156 Standard Guide for Evaluating Economic Performance of Alternative Designs, Systems, and Materials in Compliance with Performance Standard Guides for Single-Family Attached and Detached Dwellings

E2166 Standard Practice for Organizing and Managing Building Data

B.4.7 ASTM Volume 04.12, Building Constructions (II): Asset Management; Sustainability; Technology and Underground Utilities

Designation	Title
D779	Standard Test Method for Determining the Water Vapor Resistance of Sheet Materials in Contact with Liquid Water by the Dry Indicator Method
E1971	Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings
E2114	Standard Terminology for Sustainability Relative to the Performance of Buildings
E2129	Standard Practice for Data Collection for Sustainability Assessment of Building Products
E2131	Standard Practice for Addressing and Reporting Losses of Tangible Property
E2132	Standard Practice for Inventory Verification: Electronic and Physical Inventory of Assets
E2135	Standard Terminology for Property and Asset Management
E2168	Standard Classification for Allowance, Contingency, and Reserve Sums in Building Construction Estimating
E2174	Standard Practice for On-Site Inspection of Installed Firestop Systems
E2178	Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials
E2188	Standard Test Method for Insulating Glass Unit Performance
E2189	Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units
E2190	Standard Specification for Insulating Glass Unit Performance and Evaluation
E2204	Standard Guide for Summarizing the Economic Impacts of Building-Related Projects
E2260	Standard Guide for Repointing (Tuckpointing) Historic Masonry
E2264	Standard Practice for Determining the Effects of Temperature Cycling on Fenestration Products
E2265	Standard Terminology for Anchors and Fasteners in Concrete and Masonry



E2266	Standard Guide for Design and Construction of Low-Rise Frame Building Wall Systems to Resist Water Intrusion
E2267	Standard Guide for Specifying and Evaluating Performance of Single Family Attached and Detached Dwellings—Indoor Air Quality
E2268	Standard Test Method for Water Penetration of Exterior Windows, Skylights, and Doors by Rapid Pulsed Air Pressure Difference
E2269	Standard Test Method for Determining Argon Concentration in Sealed Insulating Glass Units using Gas Chromatography
E2270	Standard Practice for Periodic Inspection of Building Facades for Unsafe Conditions
E2273	Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
E2279	Standard Practice for Establishing the Guiding Principles of Property Asset Management
E2306	Standard Guide for Disposal of Personal Property Assets
E2319	Standard Test Method for Determining Air Flow Through the Face and Sides of Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
E2320	Standard Classification for Serviceability of an Office Facility for Thermal Environment and Indoor Air Conditions
E2321	Standard Practice for Use of Test Methods for Determining the Water Vapor Transmission (WVT) of Exterior Insulation and Finish Systems (EIFS)
E2322	Standard Test Method for Conducting Transverse and Concentrated Load Tests on Panels used in Floor and Roof Construction
E2342/E2342M	Standard Test Method for Durability Testing of Duct Sealants
E2351	Standard Guide for Specifying and Evaluating Performance of Single Family Attached and Detached Dwellings—Functionality
E2353	Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades
E2357	Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies
E2358	Standard Specification for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades
E2359/E2359M	Standard Test Method for Field Pull Testing of an In-Place Exterior Insulation and Finish System Clad Wall Assembly
E2377	Standard Specification for Shelter, Electrical Equipment, Lightweight
E2378	Standard Practice for the Recognition of Impaired or Retired Property Assets
E2392/E2392M	Standard Guide for Design of Earthen Wall Building Systems



E2393	Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers
E2395	Standard Specification for Voluntary Security Performance of Window and Door Assemblies with Glazing Impact
E2430/E2430M	Standard Specification for Expanded Polystyrene ("EPS") Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems ("EIFS")
E2431	Standard Practice for Determining the Resistance of Single Glazed Annealed Architectural Flat Glass to Thermal Loadings
E2432	Standard Guide for General Principles of Sustainability Relative to Buildings
E2452	Standard Practice for Equipment Management Process Maturity (EMPM) Model
E2453	Standard Practice for Estimating the Life-Cycle Cost of Ownership of Property Assets
E2461	Standard Practice for Determining the Thickness of Glass in Airport Traffic Control Tower Cabs
E2462	Standard Performance Specification for Cargo Bed Cover (CBC) HMMWV, Type I
E2463	Standard Performance Specification for Cargo Bed Cover (CBC) M105A2 Trailer, Type II
E2484	Standard Specification for Multi-Story Building External Evacuation Controlled Descent Devices
E2485/E2485M	Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings
E2486/E2486M	Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
E2495	Standard Practice for Prioritizing Asset Resources in Acquisition, Utilization, and Disposition
E2497	Standard Practice for Calculation of Asset Movement Velocity (AMV)
E2499	Standard Practice for Classification of Asset Location Information
E2505	Standard Practice for Industrial Rope Access
E2506	Standard Guide for Developing a Cost-Effective Risk Mitigation Plan for New and Existing Constructed Facilities
E2511	Standard Guide for Detailing of EIFS-Clad Barrier and Drainage Wall Assemblies
E2513	Standard Specification for Multi-Story Building External Evacuation Platform Rescue Systems



E2514	Standard Practice for Presentation Format of Elemental Cost Estimates, Summaries, and Analyses
E2515	Standard Test Method for Determination of Particulate Matter Emissions Collected by a Dilution Tunnel
E2516	Standard Classification for Cost Estimate Classification System
E2517	Standard Specification for Cargo Bed Cover, Type III (M35A2, 212 Ton Cargo Truck/M1078, 212 Ton Lightweight Medium Tactical Vehicle (LMTV)/ M1082, 212 Ton LMTV Trailer)
E2518	Standard Specification for Cargo Bed Cover, Type IV (M923, 5 Ton Cargo Truck/M1083, 5 Ton Medium Tactical Vehicle (MTV)/M1082, 5 Ton MTV Trailer)
E2556/E2556M	Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment
E2557	Standard Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due-Diligence Assessments
E2558	Standard Test Method for Determining Particulate Matter Emissions from Fires in Wood-Burning Fireplaces
E2568	Standard Specification for PB Exterior Insulation and Finish Systems
E2570/E2570M	Standard Test Methods for Evaluating Water-Resistive Barrier (WRB) Coatings Used under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage
E2604	Standard Practice for Data Characteristics of Equipment Asset Record
E2605	Standard Practice for Receiving Assets
E2606	Standard Practice for Receipt Notification as a Result of Tangible Asset Movement
E2607	Standard Practice for Cannibalization/Reclamation of Serviceable Equipment Components to Support Demand Requirements
E2608	Standard Practice for Equipment Control Matrix (ECM)
E2618	Standard Test Method for Measurement of Particulate Emissions and Heating Efficiency of Solid Fuel-Fired Hydronic Heating Appliances
E2619/E2619M	Standard Practice for Measuring and Calculating Building Loss Features That Take Up Floor Area in Buildings
E2620	Standard Classification for Program and Project Estimate Summaries
E2631	Standard Practice for Physical Placement of an Entity-Controlled Supplemental Identification Label
E2634	Standard Specification for Flat Wall Insulating Concrete Form (ICF) Systems
E2635	Standard Practice for Water Conservation in Buildings Through In-Situ Water Reclamation



E2637	Standard Guide for Utilizing the Environmental Cost Element Structure Presented by Classification
E2649	Standard Test Method for Determining Argon Concentration in Sealed Insulating Glass Units Using Spark Emission Spectroscopy
E2671	Standard Practice for Defining Movements, Shipments, and Transfers of Tangible Property
E2672	Standard Practice for Identification and Categorization of Tooling
E2675	Standard Practice for Property Management System Outcomes
E2676	Standard Practice for Tangible Property Mobility Index (MI)
E2691	Standard Practice for Job Productivity Measurement
E2692	Standard Test Method for Structural Performance of Thermal Barriers in Fenestration Products
E2715	Standard Practice for Moveable Property Storage
E2717	Standard Practice for Estimating the Environmental Load of Residential Wastewater
E2727	Standard Practice for Assessment of Rainwater Quality
E2728	Standard Guide for Water Stewardship in the Design, Construction, and Operation of Buildings
E2751/E2751M	Standard Practice for Design and Performance of Supported Laminated Glass Walkways
E2772	Standard Specification for Evaluation and Selection of Accommodations for Environmentally Sustainable Meetings, Events, Trade Shows, and Conferences
E2778	Standard Specification for Custom Tiled/Mortared Masonry Heaters (Stoves)
E2779	Standard Test Method for Determining Particulate Matter Emissions from Pellet Heaters
E2780	Standard Test Method for Determining Particulate Matter Emissions from Wood Heaters
E2785	Standard Test Method for Exposure of Firestop Materials to Severe Environmental Conditions
E2786	Standard Test Methods for Measuring Expansion of Intumescent Materials Used in Firestop and Joint Systems
E2811	Standard Practice for Management of Low Risk Property (LRP)
E2812	Standard Practice for Uniform Data Management in Asset Management Records Systems
E2813	Standard Practice for Building Enclosure Commissioning
E2817	Standard Test Method for Test Fueling Masonry Heaters



E2841	Standard Guide for Conducting Inspections of Building Facades for Unsafe Conditions
E2843	Standard Specification for Demonstrating That a Building is in Walkable Proximity to Neighborhood Assets
E2844	Standard Specification for Demonstrating That a Building's Location Provides Access to Public Transit
E2858	Standard Practice for Sales of Personal Property
E2921	Standard Practice for Minimum Criteria for Comparing Whole Building Life Cycle Assessments for Use with Building Codes, Standards, and Rating Systems
E2923	Standard Practice for Longevity Assessment of Firestop Materials Using Differential Scanning Calorimetry
E2924	Standard Practice for Intumescent Coatings
E2925	Standard Specification for Manufactured Polymeric Drainage and Ventilation Materials Used to Provide a Rainscreen Function
E2936	Standard Guide for Contractor Self-Assessment for U.S. Government Asset Management Systems
E2947	Standard Guide for Building Enclosure Commissioning
E2953	Standard Specification for Evaluating Accelerated Aging Performance of Electrochromic Devices in Sealed Insulating Glass Units
E2954	Standard Test Method for Axial Compression Test of Reinforced Plastic and Polymer Matrix Composite Vertical Members
E2962	Standard Guide for Fleet Management
E2969	Standard Test Methods for Transverse Load Tests on Panels Used in Wall Construction
E2979	Standard Classification for Discarded Materials from Manufacturing Facilities and Associated Support Facilities
E2986	Standard Guide for Evaluation of Environmental Aspects of Sustainability of Manufacturing Processes
E2987/E2987M	Standard Terminology for Sustainable Manufacturing
E3008/E3008M	Standard Classification for Transportation Surface Elements—UNIFORMAT II
E3012	Standard Guide for Characterizing Environmental Aspects of Manufacturing Processes
E3014	Standard Practice for Managing Sustainability in Dentistry
E3015	Standard Guide for Management of Customer-Owned Property Assets in Possession of Supplier, Contractor or Subcontractor
E3027	Standard Guide for Making Sustainability-Related Chemical Selection Decisions in the Life-Cycle of Products



E3035	Standard Classification for Facility Asset Component Tracking System (FACTS)
E3036	Standard Guide for Notating Facade Conditions in the Field
E3037	Standard Test Method for Measuring Relative Movement Capabilities of Through-Penetration Firestop Systems
E3038	Standard Practice for Assessing and Qualifying Candidates as Inspectors of Firestop Systems and Fire-Resistive Joint Systems
E3053	Standard Test Method for Determining Particulate Matter Emissions from Wood Heaters Using Cordwood Test Fuel
E3054/E3054M	Standard Guide for Characterization and Use of Hygrothermal Models for Moisture Control Design in Building Envelopes
E3056	Standard Guide for Strategic Warehousing
E3069	Standard Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to Thermal and Moisture Properties of the Wall
E3073	Standard Guide for Development of Waste Management Plan for Construction, Deconstruction, or Demolition Projects
E3075	Standard Test Method for Water Immersion and Drying for Evaluation of Flood Damage Resistance
E3087	Standard Test Method for Measuring Capture Efficiency of Domestic Range Hoods
E3096	Standard Guide for Definition, Selection, and Organization of Key Performance Indicators for Environmental Aspects of Manufacturing Processes
E3118/E3118M	Standard Test Methods to Evaluate Seismic Performance of Suspended Ceiling Systems by Full-Scale Dynamic Testing
E3119	Standard Test Method for Accelerated Aging of Environmentally Controlled Dynamic Glazing
E3120	Standard Specification for Evaluating Accelerated Aging Performance of Environmentally Controlled Dynamic Glazings
E3121/E3121M	Standard Test Methods for Field Testing of Anchors in Concrete or Masonry
E3130	Standard Guide for Developing Cost-Effective Community Resilience Strategies
E3140	Standard Guide for Asset Management Career Development, Education, and Training
E3157	Standard Guide for Understanding and Using Information Related to Installation of Firestop Systems
E3158	Standard Test Method for Measuring the Air Leakage Rate of a Large or Multizone Building



E3173	Standard Guide for Decommissioning and Disposal of Medical Equipment
E3182	Standard Practice for Preparing an Occupant Exposure Screening Report (OESR) for Substances in Installed Building Products
E3200	Standard Guide for Investment Analysis in Environmentally Sustainable Manufacturing
E3210	Standard Practice for Infrastructure Management
E3221	Standard Guide for Motorized Equipment
E3223/E3223M	Standard Guide for Specifying and Testing Field-Constructed Exterior Building Wall System Mockups in New Construction
F588	Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
F842	Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact
F2233	Standard Guide for Safety, Access Rights, Construction, Liability, and Risk Management for Optical Fiber Networks in Existing Sewers
F2303	Standard Practice for Selection of Gravity Sewers Suitable for Installation of Optical Fiber Cable and Conduits
F2304	Standard Practice for Sealing of Sewers Using Chemical Grouting
F2414	Standard Practice for Sealing Sewer Manholes Using Chemical Grouting
F2454	Standard Practice for Sealing Lateral Connections and lines from the mainline Sewer Systems by the Lateral Packer Method, Using Chemical Grouting
F2462	Standard Practice for Operation and Maintenance of Sewers with Optical Fiber Systems
F2550	Standard Practice for Locating Leaks in Sewer Pipes By Measuring the Variation of Electric Current Flow Through the Pipe Wall
F2551	Standard Practice for Installing a Protective Cementitious Liner System in Sanitary Sewer Manholes
F3079	Standard Practice for Use of Distributed Optical Fiber Sensing Systems for Monitoring the Impact of Ground Movements During Tunnel and Utility Construction on Existing Underground Utilities
F3080	Standard Practice for Laser Technologies for Measurement of Cross-Sectional Shape of Pipeline and Conduit by Non-Rotating Laser Projector, Infrared Measurement, and CCTV Camera System
F3092	Standard Terminology Relating to Optical Fiber Sensing Systems
F3095	Standard Practice for Laser Technologies for Direct Measurement of Cross Sectional Shape of Pipeline and Conduit by Rotating Laser Diodes and CCTV Camera System



F3110	Standard Practice for Proper Use of Mechanical Trenchless Point Repair Sleeve with Locking Gear Mechanism for Pipes of Varying Inner Diameter and Offset Joints
F3220	Standard Practice for Prioritizing Sewer Pipe Cleaning Operations by Using Transmissive Acoustic Inspection
F3314	Standard Terminology Relating to Technology and Underground Infrastructure

B.4.8 ASTM Volume 11.04, Waste Management

Designation	Title
D3987	Standard Practice for Shake Extraction of Solid Waste with Water
D4447	Standard Guide for Disposal of Laboratory Chemicals and Samples
D4448	Standard Guide for Sampling Ground-Water Monitoring Wells
D4547	Standard Guide for Sampling Waste and Soils for Volatile Organic Compounds
D4646	Standard Test Method for 24-h Batch-Type Measurement of Contaminant Sorption by Soils and Sediments
D4687	Standard Guide for General Planning of Waste Sampling
D4793	Standard Test Method for Sequential Batch Extraction of Waste with Water
D4843	Standard Test Method for Wetting and Drying Test of Solid Wastes
D4874	Standard Test Method for Leaching Solid Material in a Column Apparatus
D4978	Standard Test Methods for Screening of Reactive Sulfides in Waste
D4979	Standard Practice for Physical Description Screening Analysis in Waste
D4981	Standard Practice for Screening of Oxidizers in Waste
D4982	Standard Test Methods for Flammability Potential Screening Analysis of Waste
D5013	Standard Practices for Sampling Wastes from Pipes and Other Point Discharges
D5050	Standard Guide for Commercial Use of Lime Kiln Dusts and Portland Cement Kiln Dusts
D5057	Standard Test Method for Screening Apparent Specific Gravity and Bulk Density of Waste
D5058	Standard Practices for Compatibility of Screening Analysis of Waste
D5198	Standard Practice for Nitric Acid Digestion of Solid Waste
D5231	Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste



D5232	Standard Practice for Determining the Stability and Miscibility of a Solid, Semi-Solid, or Liquid Waste Material
D5233	Standard Test Method for Single Batch Extraction Method for Wastes
D5283	Standard Practice for Generation of Environmental Data Related to Waste Management Activities: Quality Assurance and Quality Control Planning and Implementation
D5284	Standard Test Method for Sequential Batch Extraction of Waste with Acidic Extraction Fluid
D5358	Standard Practice for Sampling With a Dipper or Pond Sampler
D5359	Standard Specification for Glass Cullet Recovered from Waste for Use in Manufacture of Glass Fiber
D5451	Standard Practice for Sampling Using a Trier Sampler
D5495	Standard Practice for Sampling With a Composite Liquid Waste Sampler (COLIWASA)
D5513	Standard Practice for Microwave Digestion of Industrial Furnace Feed Streams and Waste for Trace Element Analysis
D5530	Standard Test Method for Total Moisture of Hazardous Waste Fuel by Karl Fischer Titrimetry
D5633	Standard Practice for Sampling with a Scoop
D5658	Standard Practice for Sampling Unconsolidated Waste from Trucks
D5679	Standard Practice for Sampling Consolidated Solids in Drums or Similar Containers
D5680	Standard Practice for Sampling Unconsolidated Solids in Drums or Similar Containers
D5681	Standard Terminology for Waste and Waste Management
D5743	Standard Practice for Sampling Single or Multilayered Liquids, With or Without Solids, in Drums or Similar Containers
D5744	Standard Test Method for Laboratory Weathering of Solid Materials Using a Humidity Cell
D5759	Standard Guide for Characterization of Coal Fly Ash and Clean Coal Combustion Fly Ash for Potential Uses
D5792	Standard Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives
D5830	Standard Test Method for Solvents Analysis in Hazardous Waste Using Gas Chromatography
D5831	Standard Practice for Screening Fuels in Soils
D5839	Standard Test Method for Trace Element Analysis of Hazardous Waste Fuel by Energy-Dispersive X-Ray Fluorescence Spectrometry



D5928	Standard Practice for Screening of Waste for Radioactivity
D5929	Standard Test Method for Determining Biodegradability of Materials Exposed to Source-Separated Organic Municipal Solid Waste Mesophilic Composting Conditions by Respirometry
D5956	Standard Guide for Sampling Strategies for Heterogeneous Wastes
D5975	Standard Test Method for Determining the Stability of Compost by Measuring Oxygen Consumption
D6009	Standard Guide for Sampling Waste Piles
D6044	Standard Guide for Representative Sampling for Management of Waste and Contaminated Media
D6050	Standard Test Method for Determination of Insoluble Solids in Organic Liquid Hazardous Waste
D6051	Standard Guide for Composite Sampling and Field Subsampling for Environmental Waste Management Activities
D6052	Standard Test Method for Preparation and Elemental Analysis of Liquid Hazardous Waste by Energy-Dispersive X-Ray Fluorescence
D6063	Standard Guide for Sampling of Drums and Similar Containers by Field Personnel
D6232	Standard Guide for Selection of Sampling Equipment for Waste and Contaminated Media Data Collection Activities
D6234	Standard Test Method for Shake Extraction of Mining Waste by the Synthetic Precipitation Leaching Procedure
D6270	Standard Practice for Use of Scrap Tires in Civil Engineering Applications
D6311	Standard Guide for Generation of Environmental Data Related to Waste Management Activities: Selection and Optimization of Sampling Design
D6323	Standard Guide for Laboratory Subsampling of Media Related to Waste Management Activities
D6346	Standard Guide for Accepting, Segregating, and Packaging Materials Collected Through Household Hazardous Waste Programs
D6538	Standard Guide for Sampling Wastewater With Automatic Samplers
D6640	Standard Practice for Collection and Handling of Soils Obtained in Core Barrel Samplers for Environmental Investigations
D6661	Standard Practice for Field Collection of Organic Compounds from Surfaces Using Wipe Sampling
D6699	Standard Practice for Sampling Liquids Using Bailers
D6700	Standard Guide for Use of Scrap Tires as Tire-Derived Fuel
D6759	Standard Practice for Sampling Liquids Using Grab and Discrete Depth Samplers



D6907	Standard Practice for Sampling Soils and Contaminated Media with Hand-Operated Bucket Augers
D6956	Standard Guide for Demonstrating and Assessing Whether a Chemical Analytical Measurement System Provides Analytical Results Consistent with Their Intended Use
D6982	Standard Practice for Detecting Hot Spots Using Point-Net (Grid) Search Patterns
D7203	Standard Practice for Screening Trichloroethylene (TCE)-Contaminated Media Using a Heated Diode Sensor
D7204	Standard Practice for Sampling Waste Streams on Conveyors
D7294	Standard Guide for Collecting Treatment Process Design Data at a Contaminated Site-A Site Contaminated with Chemicals of Interest
D7353	Standard Practice for Sampling of Liquids in Waste Management Activities Using a Peristaltic Pump
D7831	Standard Practice for Sampling of Tanks by Field Personnel
D7858	Standard Test Method for Determination of Bisphenol A in Soil, Sludge, and Biosolids by Pressurized Fluid Extraction and Analyzed by Liquid Chromatography/Tandem Mass Spectrometry
D7968	Standard Test Method for Determination of Polyfluorinated Compounds in Soil by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)
D8018	Standard Test Method for Determination of (Tri-n-butyl)-n-tetradecylphosphonium chloride (TTPC) in Soil by Multiple Reaction Monitoring Liquid Chromatography/Mass Spectrometry (LC/MS/MS)
D8064	Standard Test Method for Elemental Analysis of Soil and Solid Waste by Monochromatic Energy Dispersive X-ray Fluorescence Spectrometry Using Multiple Monochromatic Excitation Beams
D8155	Standard Practice for Shake Extraction of Solid Mining and Metallurgical Processing Waste with Water
D8174	Standard Test Method for Finite Flash Point Determination of Liquid Wastes by Small-Scale Closed Cup Tester
D8175	Standard Test Method for Finite Flash Point Determination of Liquid Wastes by Pensky-Martens Closed Cup Tester
D8187	Standard Guide for Interpretation of Standard Humidity Cell Test Results
D8310	Standard Test Method for Analysis of Target Phenols (TPs) in Soil by Multiple Reaction Monitoring Liquid Chromatography/Mass Spectrometry (LC/MS/MS)
E701	Standard Test Methods for Municipal Ferrous Scrap
E702	Standard Specification for Municipal Ferrous Scrap



E708	Standard Specification for Waste Glass as a Raw Material for the Manufacture of Glass Containers
E775	Standard Test Methods for Total Sulfur in the Analysis Sample of Refuse-Derived Fuel
E776	Standard Test Method for Determination of Forms of Chlorine in Refuse-Derived Fuel
E777	Standard Test Method for Carbon and Hydrogen in the Analysis Sample of Refuse-Derived Fuel
E778	Standard Test Methods for Nitrogen in Refuse-Derived Fuel Analysis Samples
E790	Standard Test Method for Residual Moisture in Refuse-Derived Fuel Analysis Samples
E791	Standard Test Method for Calculating Refuse-Derived Fuel Analysis Data from As-Determined to Different Bases
E829	Standard Practice for Preparing Refuse-Derived Fuel (RDF) Laboratory Samples for Analysis
E887	Standard Test Method for Silica in Refuse-Derived Fuel (RDF) and RDF Ash
E889	Standard Test Method for Composition or Purity of a Solid Waste Materials Stream
E953/E953M	Standard Practice for Fusibility of Refuse-Derived Fuel (RDF) Ash
E956	Standard Classification for Municipal-Mixed Nonferrous Metals (MNM)
E959	Standard Test Method for Characterizing the Performance of Refuse Size-Reduction Equipment
E1037	Standard Test Method for Measuring Particle Size Distribution of RDF-5
E1107	Standard Test Method for Measuring the Throughput of Resource-Recovery Unit Operations
E1108	Standard Test Method for Determination of the Recovery of a Product in a Materials Separation Device
E1109	Standard Test Method for Determining the Bulk Density of Solid Waste Fractions
E1248	Standard Practice for Shredder Explosion Protection
E1266	Standard Practice for Processing Mixtures of Lime, Fly Ash, and Heavy Metal Wastes in Structural Fills and Other Construction Applications
E2787	Standard Test Method for Determination of Thiodiglycol in Soil Using Pressurized Fluid Extraction Followed by Single Reaction Monitoring Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)



E2838 Standard Test Method for Determination of Thiodiglycol on Wipes by Solvent Extraction Followed by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)

E2866 Standard Test Method for Determination of Diisopropyl Methylphosphonate, Ethyl Methylphosphonic Acid, Isopropyl Methylphosphonic Acid, Methylphosphonic Acid and Pinacolyl Methylphosphonic Acid in Soil by Pressurized Fluid Extraction and Analyzed by Liquid Chromatography/Tandem Mass Spectrometry

B.4.9 ASTM Volume 11.05 Environmental Assessment, Risk Management and Corrective Action

Designation	Title
D5746	Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities
D6008	Standard Practice for Conducting Environmental Baseline Surveys
E1194	Standard Test Method for Vapor Pressure
E1527	Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
E1528	Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process
E1689	Standard Guide for Developing Conceptual Site Models for Contaminated Sites
E1739	Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites
E1848	Standard Guide for Selecting and Using Ecological Endpoints for Contaminated Sites
E1903	Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process
E1943	Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites
E1990	Standard Guide for Performing Evaluations of Underground Storage Tank Systems for Operational Conformance with 40 CFR, Part 280 Regulations
E2018	Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process
E2020	Standard Guide for Data and Information Options for Conducting an Ecological Risk Assessment at Contaminated Sites
E2060	Standard Guide for Use of Coal Combustion Products for Solidification/Stabilization of Inorganic Wastes
E2081	Standard Guide for Risk-Based Corrective Action



E2091	Standard Guide for Use of Activity and Use Limitations, Including Institutional and Engineering Controls
E2107	Standard Practice for Environmental Regulatory Compliance Audits
E2137	Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters
E2173	Standard Guide for Disclosure of Environmental Liabilities
E2201	Standard Terminology for Coal Combustion Products
E2205/E2205M	Standard Guide for Risk-Based Corrective Action for Protection of Ecological Resources
E2243	Standard Guide for Use of Coal Combustion Products (CCPs) for Surface Mine Reclamation: Re-contouring and Highwall Reclamation
E2247	Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property
E2256	Standard Guide for Hydraulic Integrity of New, Repaired, or Reconstructed Aboveground Storage Tank Bottoms for Petroleum Service
E2277	Standard Guide for Design and Construction of Coal Ash Structural Fills
E2278	Standard Guide for Use of Coal Combustion Products (CCPs) for Surface Mine Reclamation: Revegetation and Mitigation of Acid Mine Drainage
E2348	Standard Guide for Framework for a Consensus-based Environmental Decision-making Process
E2365	Standard Guide for Environmental Compliance Performance Assessment
E2435	Standard Guide for Application of Engineering Controls to Facilitate Use or Redevelopment of Chemical-Affected Properties
E2531	Standard Guide for Development of Conceptual Site Models and Remediation Strategies for Light Nonaqueous-Phase Liquids Released to the Subsurface
E2600	Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions
E2616	Standard Guide for Remedy Selection Integrating Risk-Based Corrective Action and Non-Risk Considerations
E2681	Standard Guide for Environmental Management of Underground Storage Tank Systems Storing Hazardous Substances or Petroleum
E2718	Standard Guide for Financial Disclosures Attributed to Climate Change
E2725	Standard Guide for Basic Assessment and Management of Greenhouse Gases



E2733	Standard Guide for Investigation of Equipment Problems and Releases for Petroleum Underground Storage Tank Systems
E2790	Standard Guide for Identifying and Complying With Continuing Obligations
E2797	Standard Practice for Building Energy Performance Assessment for a Building Involved in a Real Estate Transaction
E2856	Standard Guide for Estimation of LNAPL Transmissivity
E2876	Standard Guide for Integrating Sustainable Objectives into Cleanup
E2893	Standard Guide for Greener Cleanups
E2942	Standard Guide for Security of Tank Farm Installations for Compliance with Spill Prevention, Control and Countermeasure Plan (SPCC) Regulations
E2993	Standard Guide for Evaluating Potential Hazard as a Result of Methane in the Vadose Zone
E3026	Standard Guide for Readily Observable Moisture Affected Materials and Conditions Conducive to Elevated Moisture in Commercial Buildings: Visual Moisture Assessment Process
E3032	Standard Guide for Climate Resiliency Planning and Strategy
E3033	Standard Guide for Beneficial Use of Landfills and Chemically Impacted Sites
E3123	Standard Guide for Recognition and Derecognition of Environmental Liabilities
E3136	Standard Guide for Climate Resiliency in Water Resources
E3155	Standard Guide for Assessing Mammal Health at Chemically Contaminated Terrestrial Sites Using Rodent Sperm Analysis
E3163	Standard Guide for Selection and Application of Analytical Methods and Procedures Used during Sediment Corrective Action
E3164	Standard Guide for Sediment Corrective Action – Monitoring
E3183	Standard Guide for Harvesting Coal Combustion Products Stored in Active and Inactive Storage Areas for Beneficial Use
E3224	Standard Guide for Building Energy Performance and Improvement Evaluation in the Assessment of Property Condition
E3225	Standard Practice for Performing a Liquid Test of Spill Prevention Equipment and Containment Sumps Used for Interstitial Monitoring of Piping by Visual Examination
E3228	Standard Guide for Environmental Knowledge Management
E3240	Standard Guide for Risk-Based Corrective Action for Contaminated Sediment Sites



E3241	Standard Guide for Coordination and Cooperation between Facilities, Local Emergency Planning Committees, and Emergency Responders
E3242	Standard Guide for Determination of Representative Sediment Background Concentrations
E3248	Standard Guide for NAPL Mobility and Migration in Sediment – Conceptual Models for Emplacement and Advection
E3268	Standard Guide for NAPL Mobility and Migration in Sediment—Sample Collection, Field Screening, and Sample Handling

B.4.10 ASTM Volume 11.01: Water (I)

Designation	Title
D511	Standard Test Methods for Calcium and Magnesium In Water
D512	Standard Test Methods for Chloride Ion In Water
D513	Standard Test Methods for Total and Dissolved Carbon Dioxide in Water
D516	Standard Test Method for Sulfate Ion in Water
D596	Standard Guide for Reporting Results of Analysis of Water
D807	Standard Practice for Assessing the Tendency of Industrial Boiler Waters to Cause Embrittlement (USBM Embrittlement Detector Method)
D857	Standard Test Method for Aluminum in Water
D858	Standard Test Methods for Manganese in Water
D859	Standard Test Method for Silica in Water
D888	Standard Test Methods for Dissolved Oxygen in Water
D1066	Standard Practice for Sampling Steam
D1067	Standard Test Methods for Acidity or Alkalinity of Water
D1068	Standard Test Methods for Iron in Water
D1125	Standard Test Methods for Electrical Conductivity and Resistivity of Water
D1126	Standard Test Method for Hardness in Water
D1129	Standard Terminology Relating to Water
D1179	Standard Test Methods for Fluoride Ion in Water
D1193	Standard Specification for Reagent Water
D1246	Standard Test Method for Bromide Ion in Water
D1253	Standard Test Method for Residual Chlorine in Water
D1292	Standard Test Method for Odor in Water
D1293	Standard Test Methods for pH of Water



D1385	Standard Test Method for Hydrazine in Water
D1426	Standard Test Methods for Ammonia Nitrogen In Water
D1429	Standard Test Methods for Specific Gravity of Water and Brine
D1498	Standard Test Method for Oxidation-Reduction Potential of Water
D1687	Standard Test Methods for Chromium in Water
D1688	Standard Test Methods for Copper in Water
D1691	Standard Test Methods for Zinc in Water
D1886	Standard Test Methods for Nickel in Water
D1941	Standard Test Method for Open Channel Flow Measurement of Water with the Parshall Flume
D1971	Standard Practices for Digestion of Water Samples for Determination of Metals by Flame Atomic Absorption, Graphite Furnace Atomic Absorption, Plasma Emission Spectroscopy, or Plasma Mass Spectrometry
D1976	Standard Test Method for Elements in Water by Inductively-Coupled Plasma Atomic Emission Spectroscopy
D2688	Standard Test Method for Corrosivity of Water in the Absence of Heat Transfer (Weight Loss Method)
D2777	Standard Practice for Determination of Precision and Bias of Applicable Test Methods of Committee D19 on Water
D2791	Standard Test Method for On-Line Determination of Sodium in Water
D2972	Standard Test Methods for Arsenic in Water
D3082	Standard Test Method for Boron in Water
D3223	Standard Test Method for Total Mercury in Water
D3370	Standard Practices for Sampling Water from Flowing Process Streams
D3372	Standard Test Method for Molybdenum in Water
D3373	Standard Test Method for Vanadium in Water
D3557	Standard Test Methods for Cadmium in Water
D3558	Standard Test Methods for Cobalt in Water
D3559	Standard Test Methods for Lead in Water
D3645	Standard Test Methods for Beryllium in Water
D3697	Standard Test Method for Antimony in Water
D3856	Standard Guide for Management Systems in Laboratories Engaged in Analysis of Water
D3858	Standard Test Method for Open-Channel Flow Measurement of Water by Velocity-Area Method



D3859	Standard Test Methods for Selenium in Water
D3862	Standard Test Method for Retention Characteristics of 0.2-µm Membrane Filters Used in Routine Filtration Procedures for the Evaluation of Microbiological Water Quality
D3864	Standard Guide for On-Line Monitoring Systems for Water Analysis
D3866	Standard Test Methods for Silver in Water
D3867	Standard Test Methods for Nitrite-Nitrate in Water
D3919	Standard Practice for Measuring Trace Elements in Water by Graphite Furnace Atomic Absorption Spectrophotometry
D3920	Standard Test Method for Strontium in Water
D4127	Standard Terminology Used with Ion-Selective Electrodes
D4188	Standard Practice for Performing Pressure In-Line Coagulation-Flocculation-Filtration Test in Water
D4189	Standard Test Method for Silt Density Index (SDI) of Water
D4190	Standard Test Method for Elements in Water by Direct-Current Plasma Atomic Emission Spectroscopy
D4191	Standard Test Method for Sodium in Water by Atomic Absorption Spectrophotometry
D4192	Standard Test Method for Potassium in Water by Atomic Absorption Spectrophotometry
D4309	Standard Practice for Sample Digestion Using Closed Vessel Microwave Heating Technique for the Determination of Total Metals in Water
D4327	Standard Test Method for Anions in Water by Suppressed Ion Chromatography
D4382	Standard Test Method for Barium in Water, Atomic Absorption Spectrophotometry, Graphite Furnace
D4409	Standard Test Method for Velocity Measurements of Water in Open Channels with Rotating Element Current Meters
D4410	Terminology for Fluvial Sediment
D4453	Standard Practice for Handling of High Purity Water Samples
D4519	Standard Test Method for On-Line Determination of Anions and Carbon Dioxide in High Purity Water by Cation Exchange and Degassed Cation Conductivity
D4638	Standard Guide for Preparation of Biological Samples for Inorganic Chemical Analysis
D4658	Standard Test Method for Sulfide Ion in Water
D4691	Standard Practice for Measuring Elements in Water by Flame Atomic Absorption Spectrophotometry



D4778	Standard Test Method for Determination of Corrosion and Fouling Tendency of Cooling Water Under Heat Transfer Conditions
D4840	Standard Guide for Sample Chain-of-Custody Procedures
D4841	Standard Practice for Estimation of Holding Time for Water Samples Containing Organic and Inorganic Constituents
D5089	Standard Test Method for Velocity Measurements of Water in Open Channels with Electromagnetic Current Meters
D5127	Standard Guide for Ultra-Pure Water Used in the Electronics and Semiconductor Industries
D5128	Standard Test Method for On-Line pH Measurement of Water of Low Conductivity
D5129	Standard Test Method for Open Channel Flow Measurement of Water Indirectly by Using Width Contractions
D5130	Standard Test Method for Open-Channel Flow Measurement of Water Indirectly by Slope-Area Method
D5172	Standard Guide for Documenting the Standard Operating Procedures Used for the Analysis of Water
D5173	Standard Guide for On-Line Monitoring of Total Organic Carbon in Water by Oxidation and Detection of Resulting Carbon Dioxide
D5196	Standard Guide for Bio-Applications Grade Water
D5242	Standard Test Method for Open-Channel Flow Measurement of Water with Thin-Plate Weirs
D5243	Standard Test Method for Open-Channel Flow Measurement of Water Indirectly at Culverts
D5257	Standard Test Method for Dissolved Hexavalent Chromium in Water by Ion Chromatography
D5387	Standard Guide for Elements of a Complete Data Set for Non-Cohesive Sediments
D5388	Standard Test Method for Indirect Measurements of Discharge by Step-Backwater Method
D5389	Standard Test Method for Open-Channel Flow Measurement by Acoustic Velocity Meter Systems
D5390	Standard Test Method for Open-Channel Flow Measurement of Water with Palmer-Bowlus Flumes
D5391	Standard Test Method for Electrical Conductivity and Resistivity of a Flowing High Purity Water Sample
D5463	Standard Guide for Use of Test Kits to Measure Inorganic Constituents in Water
D5464	Standard Test Method for PH Measurement of Water of Low Conductivity



D5540	Standard Practice for Flow Control and Temperature Control for On-Line Water Sampling and Analysis
D5541	Standard Practice for Developing a Stage-Discharge Relation for Open Channel Flow
D5542	Standard Test Methods for Trace Anions in High Purity Water by Ion Chromatography
D5543	Standard Test Method for Low-Level Dissolved Oxygen in Water
D5544	Standard Test Method for On-Line Measurement of Residue After Evaporation of High-Purity Water
D5612	Standard Guide for Quality Planning and Field Implementation of a Water Quality Measurement Program
D5810	Standard Guide for Spiking into Aqueous Samples
D5851	Standard Guide for Planning and Implementing a Water Monitoring Program
D5905	Standard Practice for the Preparation of Substitute Wastewater
D5906	Standard Guide for Measuring Horizontal Positioning During Measurements of Surface Water Depths
D5907	Standard Test Methods for Filterable Matter (Total Dissolved Solids) and Nonfilterable Matter (Total Suspended Solids) in Water
D5996	Standard Test Method for Measuring Anionic Contaminants in High-Purity Water by On-Line Ion Chromatography
D5997	Standard Test Method for On-Line Monitoring of Total Carbon, Inorganic Carbon in Water by Ultraviolet, Persulfate Oxidation, and Membrane Conductivity Detection
D6071	Standard Test Method for Low Level Sodium in High Purity Water by Graphite Furnace Atomic Absorption Spectroscopy
D6091	Standard Practice for 99 %/95 % Interlaboratory Detection Estimate (IDE) for Analytical Methods with Negligible Calibration Error
D6145	Standard Guide for Monitoring Sediment in Watersheds
D6146	Standard Guide for Monitoring Aqueous Nutrients in Watersheds
D6301	Standard Practice for Collection of On-Line Composite Samples of Suspended Solids and Ionic Solids in Process Water
D6317	Standard Test Method for Low Level Determination of Total Carbon, Inorganic Carbon and Organic Carbon in Water by Ultraviolet, Persulfate Oxidation, and Membrane Conductivity Detection
D6318	Standard Practice for Calibrating a Fathometer Using a Bar Check Method
D6326	Standard Practice for The Selection of Maximum Transit-Rate Ratios and Depths for the U.S. Series of Isokinetic Suspended-Sediment Samplers



D6362	Standard Practice for Certificates of Reference Materials for Water Analysis
D6501	Standard Test Method for Phosphonate in Brines
D6502	Standard Test Method for Measurement of On-line Integrated Samples of Low Level Suspended Solids and Ionic Solids in Process Water by X-Ray Fluorescence (XRF)
D6504	Standard Practice for On-Line Determination of Cation Conductivity in High Purity Water
D6512	Standard Practice for Interlaboratory Quantitation Estimate
D6568	Standard Guide for Planning, Carrying Out, and Reporting Traceable Chemical Analyses of Water Samples
D6569	Standard Test Method for On-Line Measurement of pH
D6581	Standard Test Methods for Bromate, Bromide, Chlorate, and Chlorite in Drinking Water by Suppressed Ion Chromatography
D6689	Standard Guide for Optimizing, Controlling, and Reporting Test Method Uncertainties from Multiple Workstations in the Same Laboratory Organization
D6698	Standard Test Method for On-Line Measurement of Turbidity Below 5 NTU in Water
D6764	Standard Guide for Collection of Water Temperature, Dissolved-Oxygen Concentrations, Specific Electrical Conductance, and pH Data from Open Channels
D6808	Standard Practice for Competency Requirements of Reference Material Producers for Water Analysis
D6855	Standard Test Method for Determination of Turbidity Below 5 NTU in Static Mode
D7126	Standard Test Method for On-Line Colorimetric Measurement of Silica
D7315	Standard Test Method for Determination of Turbidity Above 1 Turbidity Unit (TU) in Static Mode
D7366	Standard Practice for Estimation of Measurement Uncertainty for Data from Regression-based Methods
D7510	Standard Practice for Performing Detection and Quantitation Estimation and Data Assessment Utilizing DQCALC Software, based on ASTM Practices D6091 and D6512 of Committee D19on Water
D7512	Standard Guide for Monitoring of Suspended-Sediment Concentration in Open Channel Flow Using Optical Instrumentation
D7677	Standard Test Method for the Continuous Measurement of Dissolved Ozone in Low Conductivity Water
D7725	Standard Test Method for the Continuous Measurement of Turbidity Above 1 Turbidity Unit (TU)



D7726	Standard Guide for The Use of Various Turbidimeter Technologies for Measurement of Turbidity in Water
D7729	Standard Practice for Determining and Expressing Precision of Measurement Results, in the Analysis of Water, as Relative Standard Deviation, Utilizing DQCALC Software
D7782	Standard Practice for Determination of the 99 %/95 % Critical Level (WCL) and a Reliable Detection Estimate (WDE) Based on Within-laboratory Data
D7783	Standard Practice for Determination of the 99 %/95 % Critical Level (WCL) and a Reliable Detection Estimate (WDE) Based on Within-laboratory Data
D7937	Standard Test Method for In-situ Determination of Turbidity Above 1 Turbidity Unit (TU) in Surface Water
D7980	Standard Guide for Ion-Chromatographic Analysis of Anions in Grab Samples of Ultrapure Water (UPW) in the Semiconductor Industry
D8234	Standard Test Method for Anions in High Ionic Water by Ion Chromatography using Tandem Suppressed Conductivity and UV Detection
D8272	Standard Guide for Development and Optimization of D19 Chemical Analysis Methods Intended for EPA Compliance Reporting
D8361	Standard Test Method for Total Organic Carbon in Water by Two Stage Wet Chemical Catalyzed Hydroxyl Radical Oxidation with Infra-Red Detection of Resulting Carbon Dioxide
F660	Standard Practice for Comparing Particle Size in the Use of Alternative Types of Particle Counters

B.4.11 ASTM Volume 11.02 Water (II)

Designation	Title
D887	Standard Practices for Sampling Water-Formed Deposits
D932	Standard Practice for Filamentous Iron Bacteria in Water and Water-Formed Deposits
D933	Standard Practice for Reporting Results of Examination and Analysis of Water-Formed Deposits
D934	Standard Practices for Identification of Crystalline Compounds in Water-Formed Deposits By X-Ray Diffraction
D1141	Standard Practice for the Preparation of Substitute Ocean Water
D1245	Standard Practice for Examination of Water-Formed Deposits by Chemical Microscopy



D1252	Standard Test Methods for Chemical Oxygen Demand (Dichromate Oxygen Demand) of Water
D1291	Standard Practice for Estimation of Chlorine Demand of Water
D1782	Standard Test Methods for Operating Performance of Particulate Cation-Exchange Materials
D1783	Standard Test Methods for Phenolic Compounds in Water
D1890	Standard Test Method for Beta Particle Radioactivity of Water
D1943	Standard Test Method for Alpha Particle Radioactivity of Water
D2035	Standard Practice for Coagulation-Flocculation Jar Test of Water
D2036	Standard Test Methods for Cyanides in Water
D2187	Standard Test Methods and Practices for Evaluating Physical and Chemical Properties of Particulate Ion-Exchange Resins
D2330	Standard Test Method for Methylene Blue Active Substances
D2331	Standard Practices for Preparation and Preliminary Testing of Water-Formed Deposits
D2332	Standard Practice for Analysis of Water-Formed Deposits by Wavelength-Dispersive X-Ray Fluorescence
D2460	Standard Test Method for Alpha-Particle-Emitting Isotopes of Radium in Water
D2580	Standard Test Method for Phenols in Water by Gas-Liquid Chromatography
D2687	Standard Practices for Sampling Particulate Ion-Exchange Materials
D2908	Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography
D3084	Standard Practice for Alpha-Particle Spectrometry of Water
D3087	Standard Test Method for Operating Performance of Anion-Exchange Materials for Strong Acid Removal
D3325	Standard Practice for Preservation of Waterborne Oil Samples
D3326	Standard Practice for Preparation of Samples for Identification of Waterborne Oils
D3328	Standard Test Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography
D3352	Standard Test Method for Strontium Ion in Brackish Water, Seawater, and Brines
D3375	Standard Test Method for Column Capacity of Particulate Mixed Bed Ion Exchange Materials
D3415	Standard Practice for Identification of Waterborne Oils



D3454	Standard Test Method for Radium-226 in Water
D3483	Standard Test Methods for Accumulated Deposition in a Steam Generator Tube
D3561	Standard Test Method for Lithium, Potassium, and Sodium Ions in Brackish Water, Seawater, and Brines by Atomic Absorption Spectrophotometry
D3590	Standard Test Methods for Total Kjeldahl Nitrogen in Water
D3648	Standard Practices for the Measurement of Radioactivity
D3649	Standard Practice for High-Resolution Gamma-Ray Spectrometry of Water
D3651	Standard Test Method for Barium in Brackish Water, Seawater, and Brines
D3694	Standard Practices for Preparation of Sample Containers and for Preservation of Organic Constituents
D3695	Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography
D3731	Standard Practices for Measurement of Chlorophyll Content of Algae in Surface Waters
D3739	Standard Practice for Calculation and Adjustment of the Langelier Saturation Index for Reverse Osmosis
D3865	Standard Test Method for Plutonium in Water
D3868	Standard Test Method for Fluoride Ions in Brackish Water, Seawater, and Brines
D3869	Standard Test Methods for Iodide and Bromide Ions in Brackish Water, Seawater, and Brines
D3871	Standard Test Method for Purgeable Organic Compounds in Water Using Headspace Sampling
D3875	Standard Test Method for Alkalinity in Brackish Water, Seawater, and Brines
D3923	Standard Practices for Detecting Leaks in Reverse Osmosis and Nanofiltration Devices
D3972	Standard Test Method for Isotopic Uranium in Water by Radiochemistry
D3973	Standard Test Method for Low-Molecular Weight Halogenated Hydrocarbons in Water
D3974	Standard Practices for Extraction of Trace Elements from Sediments
D3975	Standard Practice for Development and Use (Preparation) of Samples for Collaborative Testing of Methods for Analysis of Sediments
D3976	Standard Practice for Preparation of Sediment Samples for Chemical Analysis



D3977	Standard Test Methods for Determining Sediment Concentration in Water Samples
D3986	Standard Test Method for Barium in Brines, Seawater, and Brackish Water by Direct-Current Argon Plasma Atomic Emission Spectroscopy
D4012	Standard Test Method for Adenosine Triphosphate (ATP) Content of Microorganisms in Water
D4025	Standard Practice for Reporting Results of Examination and Analysis of Deposits Formed from Water for Subsurface Injection
D4107	Standard Test Method for Tritium in Drinking Water
D4128	Standard Guide for Identification and Quantitation of Organic Compounds in Water by Combined Gas Chromatography and Electron Impact Mass Spectrometry
D4129	Standard Test Method for Total and Organic Carbon in Water by High Temperature Oxidation and by Coulometric Detection
D4130	Standard Test Method for Sulfate Ion in Brackish Water, Seawater, and Brines
D4131	Standard Practice for Sampling Fish with Rotenone
D4165	Standard Test Method for Cyanogen Chloride in Water
D4193	Standard Test Method for Thiocyanate in Water
D4194	Standard Test Methods for Operating Characteristics of Reverse Osmosis and Nanofiltration Devices
D4195	Standard Guide for Water Analysis for Reverse Osmosis and Nanofiltration Application
D4196	Standard Test Method for Confirming the Sterility of Membrane Filters
D4198	Standard Test Methods for Evaluating Absorbent Pads Used with Membrane Filters for Bacteriological Analysis and Growth
D4200	Standard Test Method for Evaluating Inhibitory Effects of Ink Grids on Membrane Filters
D4266	Standard Test Methods for Precoat Capacity of Powdered Ion-Exchange Resins
D4282	Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion
D4328	Standard Practice for Calculation of Supersaturation of Barium Sulfate, Strontium Sulfate, and Calcium Sulfate Dihydrate (Gypsum) in Brackish Water, Seawater, and Brines
D4411	Standard Guide for Sampling Fluvial Sediment in Motion
D4412	Standard Test Methods for Sulfate-Reducing Bacteria in Water and Water-Formed Deposits



D4456	Standard Test Methods for Physical and Chemical Properties of Powdered Ion Exchange Resins
D4458	Standard Test Method for Chloride Ions in Brackish Water, Seawater, and Brines
D4472	Standard Guide for Recordkeeping for Reverse Osmosis and Nanofiltration Systems
D4489	Standard Practices for Sampling of Waterborne Oils
D4516	Standard Practice for Standardizing Reverse Osmosis Performance Data
D4517	Standard Test Method for Low-Level Total Silica in High-Purity Water by Flameless Atomic Absorption Spectroscopy
D4520	Standard Practice for Determining Water Injectivity Through the Use of On-Site Floods
D4548	Standard Test Method for Anion-Cation Balance of Mixed Bed Ion-Exchange Resins
D4692	Standard Practice for Calculation and Adjustment of Sulfate Scaling Salts (CaSO ₄ , SrSO ₄ , and BaSO ₄) for Reverse Osmosis and Nanofiltration
D4698	Standard Practice for Total Digestion of Sediment Samples for Chemical Analysis of Various Metals
D4763	Standard Practice for Identification of Chemicals in Water by Fluorescence Spectroscopy
D4785	Standard Test Method for Low-Level Analysis of Iodine Radioisotopes in Water
D4822	Standard Guide for Selection of Methods of Particle Size Analysis of Fluvial Sediments (Manual Methods)
D4823	Standard Guide for Core Sampling Submerged, Unconsolidated Sediments
D4839	Standard Test Method for Total Carbon and Organic Carbon in Water by Ultraviolet, or Persulfate Oxidation, or Both, and Infrared Detection
D4922	Standard Test Method for Determination of Radioactive Iron in Water
D4962	Standard Practice for NaI(Tl) Gamma-Ray Spectrometry of Water
D4993	Standard Practice for Calculation and Adjustment of Silica (SiO ₂) Scaling for Reverse Osmosis
D4994	Standard Practice for Recovery of Viruses from Wastewater Sludges
D5072	Standard Test Method for Radon in Drinking Water
D5073	Standard Practice for Depth Measurement of Surface Water



D5074	Standard Practice for Preparation of Natural-Matrix Sediment Reference Samples for Major and Trace Inorganic Constituents Analysis by Partial Extraction Procedures
D5090	Standard Practice for Standardizing Ultrafiltration Permeate Flow Performance Data
D5091	Standard Guide for Water Analysis for Electrodialysis/Electrodialysis Reversal Applications
D5131	Standard Guide for Record Keeping for Electrodialysis/Electrodialysis Reversal Systems
D5174	Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry
D5175	Standard Test Method for Organohalide Pesticides and Polychlorinated Biphenyls in Water by Microextraction and Gas Chromatography
D5176	Standard Test Method for Total Chemically Bound Nitrogen in Water by Pyrolysis and Chemiluminescence Detection
D5217	Standard Guide for Detection of Fouling and Degradation of Particulate Ion Exchange Materials
D5241	Standard Practice for Micro-Extraction of Water for Analysis of Volatile and Semi-Volatile Organic Compounds in Water
D5245	Standard Practice for Cleaning Laboratory Glassware, Plasticware, and Equipment Used in Microbiological Analyses
D5246	Standard Test Method for Isolation and Enumeration of Pseudomonas aeruginosa from Water
D5256	Standard Test Method for Relative Efficacy of Dynamic Solvent Systems for Dissolving Water-Formed Deposits
D5258	Standard Practice for Acid-Extraction of Elements from Sediments Using Closed Vessel Microwave Heating
D5259	Standard Test Method for Isolation and Enumeration of Enterococci from Water by the Membrane Filter Procedure
D5315	Standard Test Method for Determination of N-Methyl-Carbamoyloximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Post-Column Derivatization
D5316	Standard Test Method for 1,2-Dibromoethane and 1,2-Dibromo-3-Chloropropane in Water by Microextraction and Gas Chromatography
D5317	Standard Test Method for Determination of Chlorinated Organic Acid Compounds in Water by Gas Chromatography with an Electron Capture Detector
D5392	Standard Test Method for Isolation and Enumeration of Escherichia coli in Water by the Two-Step Membrane Filter Procedure
D5411	Standard Practice for Calculation of Average Energy Per Disintegration (\bar{E}) for a Mixture of Radionuclides in Reactor Coolant



D5412	Standard Test Method for Quantification of Complex Polycyclic Aromatic Hydrocarbon Mixtures or Petroleum Oils in Water
D5413	Standard Test Methods for Measurement of Water Levels in Open-Water Bodies
D5462	Standard Test Method for On-Line Measurement of Low-Level Dissolved Oxygen in Water
D5465	Standard Practices for Determining Microbial Colony Counts from Waters Analyzed by Plating Methods
D5613	Standard Test Method for Open-Channel Measurement of Time of Travel Using Dye Tracers
D5614	Standard Test Method for Open Channel Flow Measurement of Water with Broad-Crested Weirs
D5615	Standard Test Method for Operating Characteristics of Home Reverse Osmosis Devices
D5627	Standard Test Method for Water Extractable Residue from Particulate Ion-Exchange Resins
D5640	Standard Guide for Selection of Weirs and Flumes for Open-Channel Flow Measurement of Water
D5673	Standard Test Method for Elements in Water by Inductively Coupled Plasma—Mass Spectrometry
D5674	Standard Guide for Operation of a Gaging Station
D5739	Standard Practice for Oil Spill Source Identification by Gas Chromatography and Positive Ion Electron Impact Low Resolution Mass Spectrometry
D5765	Standard Practice for Solvent Extraction of Total Petroleum Hydrocarbons from Soils and Sediments Using Closed Vessel Microwave Heating
D5788	Standard Guide for Spiking Organics into Aqueous Samples
D5790	Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry
D5811	Standard Test Method for Strontium-90 in Water
D5847	Standard Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis
D5904	Standard Test Method for Total Carbon, Inorganic Carbon, and Organic Carbon in Water by Ultraviolet, Persulfate Oxidation, and Membrane Conductivity Detection
D6104	Standard Practice for Determining the Performance of Oil/Water Separators Subjected to Surface Run-Off



D6157	Standard Practice for Determining the Performance of Oil/Water Separators Subjected to a Sudden Release
D6161	Standard Terminology Used for Microfiltration, Ultrafiltration, Nanofiltration, and Reverse Osmosis Membrane Processes
D6238	Standard Test Method for Total Oxygen Demand in Water
D6239	Standard Test Method for Uranium in Drinking Water by High-Resolution Alpha-Liquid-Scintillation Spectrometry
D6302	Standard Practice for Evaluating the Kinetic Behavior of Ion Exchange Resins
D6503	Standard Test Method for Enterococci in Water Using Enterolert
D6508	Standard Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte
D6520	Standard Practice for the Solid Phase Micro Extraction (SPME) of Water and its Headspace for the Analysis of Volatile and Semi-Volatile Organic Compounds
D6530	Standard Test Method for Total Active Biomass in Cooling Tower Waters (Kool Kount Assay; KKA)
D6696	Standard Guide for Understanding Cyanide Species
D6800	Standard Practice for Preparation of Water Samples Using Reductive Precipitation Preconcentration Technique for ICP-MS Analysis of Trace Metals
D6807	Standard Test Method for Operating Performance of Continuous Electrodeionization Systems on Reverse Osmosis Permeates from 2 to 100 $\mu\text{S}/\text{cm}$
D6850	Standard Guide for QC of Screening Methods in Water
D6888	Standard Test Method for Available Cyanides with Ligand Displacement and Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection
D6889	Standard Practice for Fast Screening for Volatile Organic Compounds in Water Using Solid Phase Microextraction (SPME)
D6908	Standard Practice for Integrity Testing of Water Filtration Membrane Systems
D6919	Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography
D6994	Standard Test Method for Determination of Metal Cyanide Complexes in Wastewater, Surface Water, Groundwater and Drinking Water Using Anion Exchange Chromatography with UV Detection
D7065	Standard Test Method for Determination of Nonylphenol, Bisphenol A, p-tert-Octylphenol, Nonylphenol Monoethoxylate and Nonylphenol



Diethoxylate in Environmental Waters by Gas Chromatography Mass Spectrometry

D7066	Standard Test Method for dimer/trimer of chlorotrifluoroethylene (S-316) Recoverable Oil and Grease and Nonpolar Material by Infrared Determination
D7168	Standard Test Method for 99Tc in Water by Solid Phase Extraction Disk
D7237	Standard Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection
D7282	Standard Practice for Set-up, Calibration, and Quality Control of Instruments Used for Radioactivity Measurements
D7283	Standard Test Method for Alpha and Beta Activity in Water By Liquid Scintillation Counting
D7284	Standard Test Method for Total Cyanide in Water by Micro Distillation followed by Flow Injection Analysis with Gas Diffusion Separation and Amperometric Detection
D7285	Standard Guide for Recordkeeping Microfiltration and Ultrafiltration Systems
D7316	Standard Guide for Interpretation of Existing Field Instrumentation to Influence Emergency Response Decisions
D7362	Standard Guide for Rapid Screening of Vegetation for Radioactive Strontium Aerial Deposition
D7363	Standard Test Method for Determination of Parent and Alkyl Polycyclic Aromatics in Sediment Pore Water Using Solid-Phase Microextraction and Gas Chromatography/Mass Spectrometry in Selected Ion Monitoring Mode
D7365	Standard Practice for Sampling, Preservation and Mitigating Interferences in Water Samples for Analysis of Cyanide
D7485	Standard Test Method for Determination of Nonylphenol, p-tert-Octylphenol, Nonylphenol Monoethoxylate and Nonylphenol Diethoxylate in Environmental Waters by Liquid Chromatography/Tandem Mass Spectrometry
D7511	Standard Test Method for Total Cyanide by Segmented Flow Injection Analysis, In-Line Ultraviolet Digestion and Amperometric Detection
D7513	Standard Test Method for Capacity of Mixed Bed Ion Exchange Cartridges
D7535	Standard Test Method for Lead-210 in Water
D7572	Standard Guide for Recovery of Aqueous Cyanides by Extraction from Mine Rock and Soil
D7573	Standard Test Method for Total Carbon and Organic Carbon in Water by High Temperature Catalytic Combustion and Infrared Detection



D7574	Standard Test Method for Determination of Bisphenol A in Environmental Waters by Liquid Chromatography/Tandem Mass Spectrometry
D7575	Standard Test Method for Solvent-Free Membrane Recoverable Oil and Grease by Infrared Determination
D7597	Standard Test Method for Determination of Diisopropyl Methylphosphonate, Ethyl Hydrogen Dimethylamidophosphate, Ethyl Methylphosphonic Acid, Isopropyl Methylphosphonic Acid, Methylphosphonic Acid and Pinacolyl Methylphosphonic Acid in Water by Liquid Chromatography/Tandem Mass Spectrometry
D7598	Standard Test Method for Determination of Thiodiglycol in Water by Single Reaction Monitoring Liquid Chromatography/Tandem Mass Spectrometry
D7599	Standard Test Method for Determination of Diethanolamine, Triethanolamine, N-Methyldiethanolamine and N-Ethyldiethanolamine in Water by Single Reaction Monitoring Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)
D7600	Standard Test Method for Determination of Aldicarb, Carbofuran, Oxamyl and Methomyl by Liquid Chromatography/Tandem Mass Spectrometry
D7601	Standard Practice for Pressure Driven Membrane Separation Element/Bundle Evaluation
D7644	Standard Test Method for Determination of Bromadiolone, Brodifacoum, Diphacinone and Warfarin in Water by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)
D7645	Standard Test Method for Determination of Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Carbofuran, Methomyl, Oxamyl, and Thiofanox in Water by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)
D7678	Standard Test Method for Total Oil and Grease (TOG) and Total Petroleum Hydrocarbons (TPH) in Water and Wastewater with Solvent Extraction using Mid-IR Laser Spectroscopy
D7727	Standard Practice for Calculation of Dose Equivalent Xenon (DEX) for Radioactive Xenon Fission Products in Reactor Coolant
D7728	Standard Guide for Selection of ASTM Analytical Methods for Implementation of International Cyanide Management Code Guidance
D7730	Standard Test Method for Determination of Dioctyl Sulfosuccinate in Sea Water by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)
D7731	Standard Test Method for Determination of Dipropylene Glycol Monobutyl Ether and Ethylene Glycol Monobutyl Ether in Sea Water by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)
D7742	Standard Practice for Determination of Nonylphenol Polyethoxylates (NPnEO, $3 \leq n \leq 18$) and Octylphenol Polyethoxylates (OPnEO, $2 \leq$



n ≤ 12) in Water by Single Reaction Monitoring (SRM) Liquid Chromatography/ Tandem Mass Spectrometry (LC/MS/MS)

D7781	Standard Test Method for Nitrite-Nitrate in Water by Nitrate Reductase
D7784	Standard Practice for the Rapid Assessment of Gamma-ray Emitting Radionuclides in Environmental Media by Gamma Spectrometry
D7902	Standard Terminology for Radiochemical Analyses
D7903	Standard Practice for Determining the Capacity of Oxygen Removal Ion Exchange Cartridges
D7938	Standard Practice for Sampling of C-14 in Gaseous Effluents
D7939	Standard Test Method for Rapid Radiochemical Determination of Americium-241 in Water
D7979	Standard Test Method for Determination of Per- and Polyfluoroalkyl Substances in Water, Sludge, Influent, Effluent, and Wastewater by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)
D8001	Standard Test Method for Determination of Total Nitrogen, Total Kjeldahl Nitrogen by Calculation, and Total Phosphorus in Water, Wastewater by Ion Chromatography
D8002	Standard Test Method for Modified Fouling Index (MFI-0.45) of Water
D8024	Standard Test Method for Determination of (Tri-n-butyl)-n-tetradecylphosphonium chloride (TTPC) in Water by Multiple Reaction Monitoring Liquid Chromatography/Mass Spectrometry (LC/MS/MS)
D8025	Standard Test Method for Determination of Select Pesticides in Water by Multiple Reaction Monitoring Liquid Chromatography Tandem Mass Spectrometry
D8026	Standard Practice for Determination of Tc-99 in Water by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
D8027	Standard Practice for Concentration of Select Radionuclides Using MnO ₂ for Measurement Purposes
D8028	Standard Test Method for Measurement of Dissolved Gases Methane, Ethane, Ethylene, and Propane by Static Headspace Sampling and Flame Ionization Detection (GC/FID)
D8083	Standard Test Method for Total Nitrogen, and Total Kjeldahl Nitrogen (TKN) by Calculation, in Water by High Temperature Catalytic Combustion and Chemiluminescence Detection
D8084	Standard Test Method for Photoelectrochemical Oxygen Demand of Freshwater Sources for Drinking Water Treatment Plants and Treated Drinking Water
D8193	Standard Test Method for Total Oil and Grease (TOG) and Total Petroleum Hydrocarbon (TPH) in Water and Wastewater with Solvent Extraction Using Non-Dispersive Mid-IR Transmission Spectroscopy



D8243	Standard Test Method for Determination of APS Reductase to Estimate Sulfate Reducing Bacterial Bioburdens in Water – Enzyme-Linked Immunosorbent Assay Method
D8273	Standard Practice for Determination of Total and Available Cyanide in Solid Waste and Soil after Alkaline Extraction
D8293	Standard Guide for Evaluating and Expressing the Uncertainty of Radiochemical Measurements
D8332	Standard Practice for Collection of Water Samples with High, Medium, or Low Suspended Solids for Identification and Quantification of Microplastic Particles and Fibers
D8333	Standard Practice for Preparation of Water Samples with High, Medium, or Low Suspended Solids for Identification and Quantification of Microplastic Particles and Fibers Using Raman Spectroscopy, IR Spectroscopy, or Pyrolysis-GC/MS
E1198	Standard Practice for Sampling Zooplankton with Pumps
E1199	Standard Practice for Sampling Zooplankton with a Clarke-Bumpus Plankton Sampler
E1200	Standard Practice for Preserving Zooplankton Samples
E1201	Standard Practice for Sampling Zooplankton with Conical Tow Nets
F316	Standard Test Methods for Pore Size Characteristics of Membrane Filters by Bubble Point and Mean Flow Pore Test

B.4.12 Section: 10 Electrical Insulation and Electronics

- Volume 10.01 Electrical Insulation (I):
- Volume 10.02 Electrical Insulation (II):
- Volume 10.03 Electrical Insulating Liquids and Gases; Electrical Protective Equipment
- Volume 10.04 Electronics; Declarable Substances in Materials; 3D Imaging Systems; Additive Manufacturing Technologies



B.5 National Fire Protection Association (NFPA)

Designation	Title
NFPA 1	Fire Code
NFPA 2	Hydrogen Technologies Code
NFPA 3	Standard for Commissioning of Fire Protection and Life Safety Systems
NFPA 4	Standard for Integrated Fire Protection and Life Safety System Testing
NFPA 10	Standard for Portable Fire Extinguishers
NFPA 11	Standard for Low-, Medium-, and High-Expansion Foam
NFPA 11A	Standard for Medium- and High-Expansion Foam Systems
NFPA 11C	Standard for Mobile Foam Apparatus
NFPA 12	Standard on Carbon Dioxide Extinguishing Systems
NFPA 12A	Standard on Halon 1301 Fire Extinguishing Systems
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 13D	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
NFPA 13E	Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems
NFPA 13R	Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies
NFPA 14	Standard for the Installation of Standpipe and Hose Systems
NFPA 15	Standard for Water Spray Fixed Systems for Fire Protection
NFPA 16	Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems
NFPA 17	Standard for Dry Chemical Extinguishing Systems
NFPA 17A	Standard for Wet Chemical Extinguishing Systems
NFPA 18	Standard on Wetting Agents
NFPA 18A	Standard on Water Additives for Fire Control and Vapor Mitigation
NFPA 20	Standard for the Installation of Stationary Pumps for Fire Protection
NFPA 22	Standard for Water Tanks for Private Fire Protection
NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
NFPA 25	Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
NFPA 30	Flammable and Combustible Liquids Code



NFPA 30A	Code for Motor Fuel Dispensing Facilities and Repair Garages
NFPA 30B	Code for the Manufacture and Storage of Aerosol Products
NFPA 31	Standard for the Installation of Oil-Burning Equipment
NFPA 32	Standard for Dry cleaning Facilities
NFPA 33	Standard for Spray Application Using Flammable or Combustible Materials
NFPA 34	Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids
NFPA 35	Standard for the Manufacture of Organic Coatings
NFPA 36	Standard for Solvent Extraction Plants
NFPA 37	Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines
NFPA 40	Standard for the Storage and Handling of Cellulose Nitrate Film
NFPA 42	Code for the Storage of Pyroxylin Plastic
NFPA 45	Standard on Fire Protection for Laboratories Using Chemicals
NFPA 46	Recommended Safe Practice for Storage of Forest Products
NFPA 50	Standard for Bulk Oxygen Systems at Consumer Sites
NFPA 50A	Standard for Gaseous Hydrogen Systems at Consumer Sites
NFPA 50B	Standard for Liquefied Hydrogen Systems at Consumer Sites
NFPA 51	Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes
NFPA 51A	Standard for Acetylene Cylinder Charging Plants
NFPA 51B	Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 52	Vehicular Natural Gas Fuel Systems Code
NFPA 53	Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched Atmospheres
NFPA 54	National Fuel Gas Code
NFPA 55	Compressed Gases and Cryogenic Fluids Code
NFPA 56	Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems
NFPA 57	Liquefied Natural Gas (LNG) Vehicular Fuel Systems Code
NFPA 58	Liquefied Petroleum Gas Code
NFPA 59	Utility LP-Gas Plant Code
NFPA 59A	Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)



NFPA 61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
NFPA 67	Guide on Explosion Protection for Gaseous Mixtures in Pipe Systems
NFPA 68	Standard on Explosion Protection by Deflagration Venting
NFPA 69	Standard on Explosion Prevention Systems
NFPA 70®	National Electrical Code®
NFPA 70A	National Electrical Code® Requirements for One- and Two-Family Dwellings
NFPA 70B	Recommended Practice for Electrical Equipment Maintenance
NFPA 70E®	Standard for Electrical Safety in the Workplace®
NFPA 72®	National Fire Alarm and Signaling Code®
NFPA 73	Standard for Electrical Inspections for Existing Dwellings
NFPA 75	Standard for the Fire Protection of Information Technology Equipment
NFPA 76	Standard for the Fire Protection of Telecommunications Facilities
NFPA 77	Recommended Practice on Static Electricity
NFPA 78	Guide on Electrical Inspections
NFPA 79	Electrical Standard for Industrial Machinery
NFPA 80	Standard for Fire Doors and Other Opening Protectives
NFPA 80A	Recommended Practice for Protection of Buildings from Exterior Fire Exposures
NFPA 82	Standard on Incinerators and Waste and Linen Handling Systems and Equipment
NFPA 85	Boiler and Combustion Systems Hazards Code
NFPA 86	Standard for Ovens and Furnaces
NFPA 86C	Standard for Industrial Furnaces Using a Special Processing Atmosphere
NFPA 86D	Standard for Industrial Furnaces Using Vacuum as an Atmosphere
NFPA 87	Standard for Fluid Heaters
NFPA 88A	Standard for Parking Structures
NFPA 88B	Standard for Repair Garages
NFPA 90A	Standard for the Installation of Air-Conditioning and Ventilating Systems
NFPA 90B	Standard for the Installation of Warm Air Heating and Air-Conditioning Systems
NFPA 91	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Particulate Solids
NFPA 92	Standard for Smoke Control Systems



NFPA 92A	Standard for Smoke-Control Systems Utilizing Barriers and Pressure Differences
NFPA 92B	Standard for Smoke Management Systems in Malls, Atria, and Large Spaces
NFPA 96	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
NFPA 97	Standard Glossary of Terms Relating to Chimneys, Vents, and Heat-Producing Appliances
NFPA 99	Health Care Facilities Code
NFPA 99B	Standard for Hypobaric Facilities
NFPA 101®	Life Safety Code®
NFPA 101A	Guide on Alternative Approaches to Life Safety
NFPA 101B	Code for Means of Egress for Buildings and Structures
NFPA 102	Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures
NFPA 105	Standard for Smoke Door Assemblies and Other Opening Protectives
NFPA 110	Standard for Emergency and Standby Power Systems
NFPA 111	Standard on Stored Electrical Energy Emergency and Standby Power Systems
NFPA 115	Standard for Laser Fire Protection
NFPA 120	Standard for Fire Prevention and Control in Coal Mines
NFPA 121	Standard on Fire Protection for Self-Propelled and Mobile Surface Mining Equipment
NFPA 122	Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities
NFPA 123	Standard for Fire Prevention and Control in Underground Bituminous Coal Mines
NFPA 130	Standard for Fixed Guideway Transit and Passenger Rail Systems
NFPA 140	Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations
NFPA 150	Fire and Life Safety in Animal Housing Facilities Code
NFPA 160	Standard for the Use of Flame Effects Before an Audience
NFPA 170	Standard for Fire Safety and Emergency Symbols
NFPA 200	Standard for Hanging and Bracing of Fire Suppression Systems
NFPA 203	Guide on Roof Coverings and Roof Deck Constructions
NFPA 204	Standard for Smoke and Heat Venting



NFPA 211	Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
NFPA 214	Standard on Water-Cooling Towers
NFPA 220	Standard on Types of Building Construction
NFPA 221	Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls
NFPA 225	Model Manufactured Home Installation Standard
NFPA 230	Standard for the Fire Protection of Storage
NFPA 231	Standard for General Storage
NFPA 231C	Standard for Rack Storage of Materials
NFPA 231D	Standard for Storage of Rubber Tires
NFPA 231E	Recommended Practice for the Storage of Baled Cotton
NFPA 231F	Standard for the Storage of Roll Paper
NFPA 232	Standard for the Protection of Records
NFPA 232A	Guide for Fire Protection for Archives and Records Centers
NFPA 241	Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 251	Standard Methods of Tests of Fire Resistance of Building Construction and Materials
NFPA 252	Standard Methods of Fire Tests of Door Assemblies
NFPA 253	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
NFPA 255	Standard Method of Test of Surface Burning Characteristics of Building Materials
NFPA 256	Standard Methods of Fire Tests of Roof Coverings
NFPA 257	Standard on Fire Test for Window and Glass Block Assemblies
NFPA 258	Recommended Practice for Determining Smoke Generation of Solid Materials
NFPA 259	Standard Test Method for Potential Heat of Building Materials
NFPA 260	Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture
NFPA 261	Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes
NFPA 262	Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces



NFPA 265	Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls
NFPA 266	Standard Method of Test for Fire Characteristics of Upholstered Furniture Exposed to Flaming Ignition Source
NFPA 267	Standard Method of Test for Fire Characteristics of Mattresses and Bedding Assemblies Exposed to Flaming Ignition Source
NFPA 268	Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source
NFPA 269	Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling
NFPA 270	Standard Test Method for Measurement of Smoke Obscuration Using a Conical Radiant Source in a Single Closed Chamber
NFPA 271	Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
NFPA 272	Standard Method of Test for Heat and Visible Smoke Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calorimeter
NFPA 274	Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation
NFPA 275	Standard Method of Fire Tests for the Evaluation of Thermal Barriers
NFPA 276	Standard Method of Fire Test for Determining the Heat Release Rate of Roofing Assemblies with Combustible Above-Deck Roofing Components
NFPA 277	Standard Methods of Tests for Evaluating Fire and Ignition Resistance of Upholstered Furniture Using a Flaming Ignition Source
NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components
NFPA 286	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
NFPA 287	Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA)
NFPA 288	Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies
NFPA 289	Standard Method of Fire Test for Individual Fuel Packages
NFPA 290	Standard for Fire Testing of Passive Protection Materials for Use on LP-Gas Containers
NFPA 291	Recommended Practice for Fire Flow Testing and Marking of Hydrants
NFPA 295	Standard for Wildfire Control
NFPA 297	Guide on Principles and Practices for Communications Systems



NFPA 298	Standard on Foam Chemicals for Wildland Fire Control
NFPA 299	Standard for Protection of Life and Property from Wildfire
NFPA 301	Code for Safety to Life from Fire on Merchant Vessels
NFPA 302	Fire Protection Standard for Pleasure and Commercial Motor Craft
NFPA 303	Fire Protection Standard for Marinas and Boatyards
NFPA 306	Standard for the Control of Gas Hazards on Vessels
NFPA 307	Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves
NFPA 312	Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up
NFPA 318	Standard for the Protection of Semiconductor Fabrication Facilities
NFPA 326	Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair
NFPA 328	Recommended Practice for the Control of Flammable and Combustible Liquids and Gases in Manholes, Sewers, and Similar Underground Structures
NFPA 329	Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases
NFPA 350	Guide for Safe Confined Space Entry and Work
NFPA 385	Standard for Tank Vehicles for Flammable and Combustible Liquids
NFPA 386	Standard for Portable Shipping Tanks for Flammable and Combustible Liquids
NFPA 395	Standard for the Storage of Flammable and Combustible Liquids at Farms and Isolated Sites
NFPA 400	Hazardous Materials Code
NFPA 401	Recommended Practice for the Prevention of Fires and Uncontrolled Chemical Reactions Associated with the Handling of Hazardous Waste
NFPA 402	Guide for Aircraft Rescue and Fire-Fighting Operations
NFPA 403	Standard for Aircraft Rescue and Fire-Fighting Services at Airports
NFPA 405	Standard for the Recurring Proficiency of Airport Fire Fighters
NFPA 407	Standard for Aircraft Fuel Servicing
NFPA 408	Standard for Aircraft Hand Portable Fire Extinguishers
NFPA 409	Standard on Aircraft Hangars
NFPA 410	Standard on Aircraft Maintenance
NFPA 412	Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment
NFPA 414	Standard for Aircraft Rescue and Fire-Fighting Vehicles



NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways
NFPA 418	Standard for Heliports
NFPA 422	Guide for Aircraft Accident/Incident Response Assessment
NFPA 423	Standard for Construction and Protection of Aircraft Engine Test Facilities
NFPA 424	Guide for Airport/Community Emergency Planning
NFPA 430	Code for the Storage of Liquid and Solid Oxidizers
NFPA 432	Code for the Storage of Organic Peroxide Formulations
NFPA 434	Code for the Storage of Pesticides
NFPA 440	Guide for Aircraft Rescue and Firefighting Operations and Airport/Community Emergency Planning
NFPA 450	Guide for Emergency Medical Services and Systems
NFPA 451	Guide for Community Health Care Programs
NFPA 460	Standard for Aircraft Rescue and Firefighting Services at Airports, Recurring Proficiency of Airport Fire Fighters, and Evaluating Aircraft Rescue and Firefighting Foam Equipment
NFPA 461	Standard for Fire Protection of Spaceport Facilities
NFPA 470	Hazardous Materials Standards for Responders
NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents
NFPA 472	Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials/Weapons of Mass Destruction Incidents
NFPA 475	Recommended Practice for Organizing, Managing, and Sustaining a Hazardous Materials/Weapons of Mass Destruction Response Program
NFPA 480	Standard for the Storage, Handling, and Processing of Magnesium Solids and Powders
NFPA 481	Standard for the Production, Processing, Handling, and Storage of Titanium
NFPA 482	Standard for the Production, Processing, Handling, and Storage of Zirconium
NFPA 484	Standard for Combustible Metals
NFPA 485	Standard for the Storage, Handling, Processing, and Use of Lithium Metal
NFPA 490	Code for the Storage of Ammonium Nitrate
NFPA 495	Explosive Materials Code
NFPA 496	Standard for Purged and Pressurized Enclosures for Electrical Equipment



NFPA 497	Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas
NFPA 498	Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives
NFPA 499	Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas
NFPA 501	Standard on Manufactured Housing
NFPA 501A	Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities
NFPA 502	Standard for Road Tunnels, Bridges, and Other Limited Access Highways
NFPA 505	Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations
NFPA 513	Standard for Motor Freight Terminals
NFPA 520	Standard on Subterranean Spaces
NFPA 550	Guide to the Fire Safety Concepts Tree
NFPA 551	Guide for the Evaluation of Fire Risk Assessments
NFPA 555	Guide on Methods for Evaluating Potential for Room Flashover
NFPA 556	Guide on Methods for Evaluating Fire Hazard to Occupants of Passenger Road Vehicles
NFPA 557	Standard for Determination of Fire Loads for Use in Structural Fire Protection Design
NFPA 560	Standard for the Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation
NFPA 600	Standard on Facility Fire Brigades
NFPA 601	Standard for Security Services in Fire Loss Prevention
NFPA 610	Guide for Emergency and Safety Operations at Motorsports Venues
NFPA 650	Standard for Pneumatic Conveying Systems for Handling Combustible Particulate Solids
NFPA 651	Standard for the Machining and Finishing of Aluminum and the Production and Handling of Aluminum Powders
NFPA 652	Standard on the Fundamentals of Combustible Dust
NFPA 654	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids
NFPA 655	Standard for Prevention of Sulfur Fires and Explosions
NFPA 664	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities



NFPA 701	Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
NFPA 703	Standard for Fire-Retardant-Treated Wood and Fire-Retardant Coatings for Building Materials
NFPA 704	Standard System for the Identification of the Hazards of Materials for Emergency Response
NFPA 705	Recommended Practice for a Field Flame Test for Textiles and Films
NFPA 715	Standard for the Installation of Fuel Gases Detection and Warning Equipment
NFPA 720	Standard for the Installation of Carbon Monoxide(CO) Detection and Warning Equipment
NFPA 730	Guide for Premises Security
NFPA 731	Standard for the Installation of Premises Security Systems
NFPA 750	Standard on Water Mist Fire Protection Systems
NFPA 770	Standard on Hybrid (Water and Inert Gas) Fire Extinguishing Systems
NFPA 780	Standard for the Installation of Lightning Protection Systems
NFPA 790	Standard for Competency of Third-Party Field Evaluation Bodies
NFPA 791	Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation
NFPA 801	Standard for Fire Protection for Facilities Handling Radioactive Materials
NFPA 803	Standard for Fire Protection for Light Water Nuclear Power Plants
NFPA 804	Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants
NFPA 805	Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants
NFPA 806	Performance-Based Standard for Fire Protection for Advanced Nuclear Reactor Electric Generating Plants Change Process
NFPA 820	Standard for Fire Protection in Wastewater Treatment and Collection Facilities
NFPA 850	Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations
NFPA 851	Recommended Practice for Fire Protection for Hydroelectric Generating Plants
NFPA 853	Standard for the Installation of Stationary Fuel Cell Power Systems
NFPA 855	Standard for the Installation of Stationary Energy Storage Systems
NFPA 900	Building Energy Code
NFPA 901	Standard Classifications for Fire and Emergency Services Incident Reporting
NFPA 902	Fire Reporting Field Incident Guide



NFPA 903	Fire Reporting Property Survey Guide
NFPA 904	Incident Follow-up Report Guide
NFPA 906	Guide for Fire Incident Field Notes
NFPA 909	Code for the Protection of Cultural Resource Properties - Museums, Libraries, and Places of Worship
NFPA 914	Code for the Protection of Historic Structures
NFPA 915	Standard for Remote Inspections
NFPA 921	Guide for Fire and Explosion Investigations
NFPA 950	Standard for Data Development and Exchange for the Fire Service
NFPA 951	Guide to Building and Utilizing Digital Information
NFPA 1000	Standard for Fire Service Professional Qualifications Accreditation and Certification Systems
NFPA 1001	Standard for Fire Fighter Professional Qualifications
NFPA 1002	Standard for Fire Apparatus Driver/Operator Professional Qualifications
NFPA 1003	Standard for Airport Fire Fighter Professional Qualifications
NFPA 1005	Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters
NFPA 1006	Standard for Technical Rescue Personnel Professional Qualifications
NFPA 1021	Standard for Fire Officer Professional Qualifications
NFPA 1022	Standard on Fire Service Analysts Technical Specialists Professional Qualifications
NFPA 1026	Standard for Incident Management Personnel Professional Qualifications
NFPA 1030	Standard for Professional Qualifications for Fire Prevention Program Positions
NFPA 1031	Standard for Professional Qualifications for Fire Inspector and Plan Examiner
NFPA 1033	Standard for Professional Qualifications for Fire Investigator
NFPA 1035	Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications
NFPA 1037	Standard on Fire Marshal Professional Qualifications
NFPA 1041	Standard for Fire and Emergency Services Instructor Professional Qualifications
NFPA 1051	Standard for Wildland Firefighting Personnel Professional Qualifications
NFPA 1061	Standard for Public Safety Telecommunications Personnel Professional Qualifications
NFPA 1071	Standard for Emergency Vehicle Technician Professional Qualifications



NFPA 1072	Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications
NFPA 1078	Standard for Electrical Inspector Professional Qualifications
NFPA 1081	Standard for Facility Fire Brigade Member Professional Qualifications
NFPA 1082	Standard for Facilities Fire and Life Safety Director Professional Qualifications
NFPA 1091	Standard for Traffic Incident Management Personnel Professional Qualifications
NFPA 1122	Code for Model Rocketry
NFPA 1123	Code for Fireworks Display
NFPA 1124	Code for the Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles
NFPA 1125	Code for the Manufacture of Model Rocket and High-Power Rocket Motors
NFPA 1126	Standard for the Use of Pyrotechnics Before a Proximate Audience
NFPA 1127	Code for High Power Rocketry
PYR 1128	Standard Method of Fire Test for Flame Breaks
PYR 1129	Standard Method of Fire Test for Covered Fuse on Consumer Fireworks
NFPA 1140	Standards for Wildland Firefighting
NFPA 1141	Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas
NFPA 1142	Standard on Water Supplies for Suburban and Rural Fire Fighting
NFPA 1143	Standard for Wildland Fire Management
NFPA 1144	Standard for Reducing Structure Ignition Hazards from Wildland Fire
NFPA 1145	Guide for the Use of Class A Foams in Fire Fighting
NFPA 1150	Standard on Foam Chemicals for Fires in Class A Fuels
NFPA 1192	Standard on Recreational Vehicles
NFPA 1194	Standard for Recreational Vehicle Parks and Campgrounds
NFPA 1201	Standard for Providing Fire and Emergency Services to the Public
NFPA 1221	Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
NFPA 1225	Standards for Emergency Services Communications
NFPA 1231	Standard on Water Supplies for Suburban and Rural Fire Fighting
NFPA 1250	Recommended Practice in Fire and Emergency Service Organization Risk Management



NFPA 1300	Standard on Community Risk Assessment and Community Risk Reduction Plan Development
NFPA 1321	Standard for Fire Investigation Units
NFPA 1401	Recommended Practice for Fire Service Training Reports and Records
NFPA 1402	Standard on Facilities for Fire Training and Associated Props
NFPA 1403	Standard on Live Fire Training Evolutions
NFPA 1404	Standard for Fire Service Respiratory Protection Training
NFPA 1405	Guide for Land-Based Fire Departments that Respond to Marine Vessel Fires
NFPA 1407	Standard for Training Fire Service Rapid Intervention Crews
NFPA 1408	Standard for Training Fire Service Personnel in the Operation, Care, Use, and Maintenance of Thermal Imagers
NFPA 1410	Standard on Training for Emergency Scene Operations
NFPA 1451	Standard for a Fire and Emergency Service Vehicle Operations Training Program
NFPA 1452	Guide for Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies
NFPA 1500™	Standard on Fire Department Occupational Safety, Health, and Wellness Program
NFPA 1521	Standard for Fire Department Safety Officer Professional Qualifications
NFPA 1550	Standard for Emergency Responder Health and Safety
NFPA 1561	Standard on Emergency Services Incident Management System and Command Safety
NFPA 1581	Standard on Fire Department Infection Control Program
NFPA 1582	Standard on Comprehensive Occupational Medical Program for Fire Departments
NFPA 1583	Standard on Health-Related Fitness Programs for Fire Department Members
NFPA 1584	Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises
NFPA 1585	Standard on Contamination Control
NFPA 1600®	Standard on Continuity, Emergency, and Crisis Management
NFPA 1616	Standard on Mass Evacuation, Sheltering, and Re-entry Programs
NFPA 1620	Standard for Pre-Incident Planning
NFPA 1660	Standard on Community Risk Assessment, Pre-Incident Planning, Mass Evacuation, Sheltering, and Re-entry Programs
NFPA 1670	Standard on Operations and Training for Technical Search and Rescue Incidents



NFPA 1700	Guide for Structural Fire Fighting
NFPA 1710	Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments
NFPA 1720	Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments
NFPA 1730	Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations
NFPA 1801	Standard on Thermal Imagers for the Fire Service
NFPA 1802	Standard on Two-Way, Portable RF Voice Communications Devices for Use by Emergency Services Personnel in the Hazard Zone
NFPA 1851	Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
NFPA 1852	Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)
NFPA 1855	Standard on Selection, Care, and Maintenance of Protective Ensembles for Technical Rescue Incidents
NFPA 1858	Standard on Selection, Care, and Maintenance of Life Safety Rope and Equipment for Emergency Services
NFPA 1859	Standard on Selection, Care, and Maintenance of Tactical Operations Video Equipment
NFPA 1877	Standard on Selection, Care, and Maintenance of Wildland Fire Fighting Clothing and Equipment
NFPA 1891	Standard on Selection, Care, and Maintenance of Hazardous Materials Clothing and Equipment
NFPA 1900	Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances
NFPA 1901	Standard for Automotive Fire Apparatus
NFPA 1906	Standard for Wildland Fire Apparatus
NFPA 1910	Standard for Marine Firefighting Vessels and the Inspection, Maintenance, Testing, Refurbishing, and Retirement of In-Service Emergency Vehicles
NFPA 1911	Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles
NFPA 1912	Standard for Fire Apparatus Refurbishing
NFPA 1914	Standard for Testing Fire Department Aerial Devices
NFPA 1915	Standard for Fire Apparatus Preventive Maintenance Program
NFPA 1917	Standard for Automotive Ambulances



NFPA 1925	Standard on Marine Fire-Fighting Vessels
NFPA 1931	Standard for Manufacturer's Design of Fire Department Ground Ladders
NFPA 1932	Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders
NFPA 1936	Standard on Rescue Tools
NFPA 1937	Standard for the Selection, Care, and Maintenance of Rescue Tools
NFPA 1951	Standard on Protective Ensembles for Technical Rescue Incidents
NFPA 1952	Standard on Surface Water Operations Protective Clothing and Equipment
NFPA 1953	Standard on Protective Ensembles for Contaminated Water Diving
NFPA 1960	Standard for Fire Hose Connections, Spray Nozzles, Manufacturer's Design of Fire Department Ground Ladders, Fire Hose, and Powered Rescue Tools
NFPA 1961	Standard on Fire Hose
NFPA 1962	Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances
NFPA 1963	Standard for Fire Hose Connections
NFPA 1964	Standard for Spray Nozzles and Appliances
NFPA 1965	Standard for Fire Hose Appliances
NFPA 1970	Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel and Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services, and Personal Alert Safety Systems (PASS)
NFPA 1971	Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
NFPA 1975	Standard on Emergency Services Work Apparel
NFPA 1976	Standard on Protective Ensemble for Proximity Fire Fighting
NFPA 1977	Standard on Protective Clothing and Equipment for Wildland Fire Fighting
NFPA 1981	Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services
NFPA 1982	Standard on Personal Alert Safety Systems (PASS)
NFPA 1983	Standard on Life Safety Rope and Equipment for Emergency Services
NFPA 1984	Standard on Respirators for Wildland Fire Fighting Operations
NFPA 1986	Standard on Respiratory Protection Equipment for Tactical and Technical Operations
NFPA 1987	Standard on Combination Unit Respirator Systems for Tactical and Technical Operations
NFPA 1989	Standard on Breathing Air Quality for Emergency Services Respiratory Protection



NFPA 1990	Standards for Protective Ensembles for Hazardous Material and Emergency Medical Operations
NFPA 1991	Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies and CBRN Terrorism Incidents
NFPA 1992	Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies
NFPA 1994	Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
NFPA 1999	Standard on Protective Clothing and Ensembles for Emergency Medical Operations
NFPA 2001	Standard on Clean Agent Fire Extinguishing Systems
NFPA 2010	Standard for Fixed Aerosol Fire-Extinguishing Systems
NFPA 2112	Standard on Flame-Resistant Clothing for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire
NFPA 2113	Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire
NFPA 2400	Standard for Small Unmanned Aircraft Systems (sUAS) Used for Public Safety Operations
NFPA 2500	Standards for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services
NFPA 2800	Standard on Facility Emergency Action Plans
NFPA 3000™	Standard for an Active Shooter/Hostile Event Response (ASHER) Program
NFPA 5000®	Building Construction and Safety Code®
NFPA 8501	Standard for Single Burner Boiler Operation
NFPA 8502	Standard for the Prevention of Furnace Explosions/Implosions in Multiple Burner Boilers
NFPA 8503	Standard for Pulverized Fuel Systems
NFPA 8504	Standard on Atmospheric Fluidized-Bed Boiler Operation
NFPA 8505	Standard for Stoker Operation
NFPA 8506	Standard on Heat Recovery Steam Generator Systems



B.6 Uniform Facility Criteria (UFC)

Designation	Title
1-200-01	DoD Building Code
1-200-02	High Performance and Sustainable Building Requirements
1-201-01	Non-Permanent DoD Facilities in Support of Military Operations
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240.0	Industrial Clutches and Clutch Couplings	13-18	May-00



241.0	Fans and Blowers	13-24	Jul-20
242.0	Internal Combustion Engines	13-25	Jul-20
243.0	Monitoring and Diagnosis of Vibration in Rotating Machinery	17-4	Jan-00