

1997 UNIFORM BUILDING CODE[®]

VOLUME 1



Table of Contents—Volume 1

Administrative, Fire- and Life-Safety, and Field Inspection Provisions

Effective Use of the <i>Uniform Building Code</i>	1-xvii	Chapter 5 General Building Limitations	1-51
Sample Ordinance for Adoption of the <i>Uniform Building Code, Volumes 1, 2 and 3</i>	1-xix	Section 501 Scope	1-51
Chapter 1 Administration	1-1	Section 502 Premises Identification	1-51
Section 101 Title, Purpose and Scope	1-1	Section 503 Location on Property	1-51
Section 102 Unsafe Buildings or Structures	1-1	Section 504 Allowable Floor Areas	1-52
Section 103 Violations	1-1	Section 505 Allowable Area Increases	1-53
Section 104 Organization and Enforcement	1-1	Section 506 Maximum Height of Buildings and Increases	1-53
Section 105 Board of Appeals	1-2	Section 507 Mezzanines	1-53
Section 106 Permits	1-2	Section 508 Fire-resistive Substitution	1-54
Section 107 Fees	1-4	Section 509 Guardrails	1-54
Section 108 Inspections	1-5	Chapter 6 Types of Construction	1-61
Section 109 Certificate of Occupancy	1-6	Section 601 Classification of All Buildings by Types of Construction and General Requirements	1-61
Chapter 2 Definitions and Abbreviations	1-7	Section 602 Type I Fire-resistive Buildings	1-62
Chapter 3 Use or Occupancy	1-13	Section 603 Type II Buildings	1-63
Section 301 Occupancy Classified	1-13	Section 604 Type III Buildings	1-63
Section 302 Mixed Use or Occupancy	1-13	Section 605 Type IV Buildings	1-64
Section 303 Requirements for Group A Occupancies	1-14	Section 606 Type V Buildings	1-65
Section 304 Requirements for Group B Occupancies	1-15	Chapter 7 Fire-resistant Materials and Construction	1-67
Section 305 Requirements for Group E Occupancies	1-16	Section 701 Scope	1-67
Section 306 Requirements for Group F Occupancies	1-18	Section 702 Definitions	1-67
Section 307 Requirements for Group H Occupancies	1-19	Section 703 Fire-resistive Materials and Systems	1-67
Section 308 Requirements for Group I Occupancies	1-24	Section 704 Protection of Structural Members	1-68
Section 309 Requirements for Group M Occupancies	1-26	Section 705 Projections	1-69
Section 310 Requirements for Group R Occupancies	1-26	Section 706 Fire-resistive Joint Systems	1-69
Section 311 Requirements for Group S Occupancies	1-28	Section 707 Insulation	1-69
Section 312 Requirements for Group U Occupancies	1-31	Section 708 Fire Blocks and Draft Stops	1-69
Chapter 4 Special Use and Occupancy	1-41	Section 709 Walls and Partitions	1-70
Section 401 Scope	1-41	Section 710 Floor Ceilings or Roof Ceilings	1-72
Section 402 Atria	1-41	Section 711 Shaft Enclosures	1-72
Section 403 Special Provisions for Group B Office Buildings and Group R, Division 1 Occupancies	1-41	Section 712 Usable Space under Floors	1-73
Section 404 Covered Mall Buildings	1-43	Section 713 Fire-resistive Assemblies for Protection of Openings	1-73
Section 405 Stages and Platforms	1-46	Section 714 Through-penetration Fire Stops	1-75
Section 406 Motion Picture Projection Rooms	1-47	Chapter 8 Interior Finishes	1-91
Section 407 Cellulose Nitrate Film	1-48	Section 801 General	1-91
Section 408 Amusement Buildings	1-48	Section 802 Testing and Classification of Materials	1-91
Section 409 Pedestrian Walkways	1-48	Section 803 Application of Controlled Interior Finish	1-91
Section 410 Medical Gas Systems in Groups B and I Occupancies	1-49	Section 804 Maximum Allowable Flame Spread	1-91
Section 411 Compressed Gases	1-49	Section 805 Textile Wall Coverings	1-91
Section 412 Aviation Control Towers	1-49	Section 806 Insulation	1-92
Section 413 Detention and Correction Facilities	1-49	Section 807 Sanitation	1-92
Section 414 Agricultural Buildings	1-49	Chapter 9 Fire-protection Systems	1-93
Section 415 Group R, Division 3 Occupancies	1-49	Section 901 Scope	1-93
Section 416 Group R, Division 4 Occupancies	1-49	Section 902 Standards of Quality	1-93
Section 417 Barriers for Swimming Pools	1-49	Section 903 Definitions	1-93
Section 418 Reserved	1-49	Section 904 Fire-extinguishing Systems	1-94
		Section 905 Smoke Control	1-96
		Section 906 Smoke and Heat Venting	1-102

TABLE OF CONTENTS—VOLUME 1

Chapter 10 Means of Egress	1-105	Excerpts from Chapter 17	
Section 1001 Administrative	1-105	Structural Tests and Inspections	1-165
Section 1002 Definitions	1-105	Excerpts from Chapter 18	
Section 1003 General	1-105	Foundations and Retaining Walls	1-169
Section 1004 The Exit Access	1-111	Excerpts from Chapter 19	
Section 1005 The Exit	1-115	Concrete	1-177
Section 1006 The Exit Discharge	1-118	Excerpts from Chapter 21	
Section 1007 Means of Egress Requirements Based on Occupancy	1-119	Masonry	1-193
Section 1008 Reviewing Stands, Grandstands, Bleachers, and Folding and Telescoping Seating	1-122	Excerpts from Chapter 22	
Section 1009 Building Security	1-124	Steel	1-203
Chapter 11 Accessibility	1-127	Excerpts from Chapter 23	
Section 1101 Scope	1-127	Wood	1-205
Section 1102 Definitions	1-127	Chapter 24 Glass and Glazing	1-257
Section 1103 Building Accessibility	1-127	Section 2401 Scope	1-257
Section 1104 Egress and Areas of Refuge	1-129	Section 2402 Identification	1-257
Section 1105 Facility Accessibility	1-130	Section 2403 Area Limitations	1-257
Section 1106 Type B Dwelling Units	1-131	Section 2404 Glazing Support and Framing	1-257
Chapter 12 Interior Environment	1-135	Section 2405 Louvered Windows and Jalousies	1-257
Section 1201 General	1-135	Section 2406 Safety Glazing	1-257
Section 1202 Light and Ventilation in Groups A, B, E, F, H, I, M and S Occupancies ...	1-135	Section 2407 Hinged Shower Doors	1-258
Section 1203 <i>Light and Ventilation in</i> Group R Occupancies	1-136	Section 2408 Racquetball and Squash Courts	1-258
Section 1204 Eaves	1-136	Section 2409 Sloped Glazing and Skylights	1-259
Section 1205 Alternate Ventilation when Applicable	1-136	Chapter 25 Gypsum Board and Plaster	1-261
Chapter 13 Energy Conservation	1-139	Section 2501 Scope	1-261
Section 1301 Solar Energy Collectors	1-139	Section 2502 Materials	1-261
Chapter 14 Exterior Wall Coverings	1-141	Section 2503 Vertical Assemblies	1-262
Section 1401 General	1-141	Section 2504 Horizontal Assemblies	1-262
Section 1402 Weather Protection	1-141	Section 2505 Interior Lath	1-262
Section 1403 Veneer	1-141	Section 2506 Exterior Lath	1-262
Section 1404 Vinyl Siding	1-143	Section 2507 Interior Plaster	1-263
Chapter 15 Roofing and Roof Structures	1-145	Section 2508 Exterior Plaster	1-263
Section 1501 Scope	1-145	Section 2509 Exposed Aggregate Plaster	1-264
Section 1502 Definitions	1-145	Section 2510 <i>Pneumatically Placed Plaster (Gunitite)</i> .	1-264
Section 1503 Roofing Requirements	1-146	Section 2511 Gypsum Wallboard	1-264
Section 1504 <i>Roofing Classification</i>	1-146	Section 2512 Use of Gypsum in Showers and Water Closets	1-265
Section 1505 Attics: Access, Draft Stops and Ventilation	1-146	Section 2513 Shear-resisting Construction with Wood Frame	1-265
Section 1506 Roof Drainage	1-146	Chapter 26 Plastic	1-273
Section 1507 Roof-covering Materials and Application	1-147	Section 2601 Scope	1-273
Section 1508 Valley Flashing	1-147	Section 2602 Foam Plastic Insulation	1-273
Section 1509 Other Flashing	1-148	Section 2603 Light-transmitting Plastics	1-274
Section 1510 Roof Insulation	1-148	Section 2604 Plastic Veneer	1-276
Section 1511 <i>Penthouses and Roof Structures</i>	1-148	Chapter 27 Electrical Systems	1-279
Section 1512 Towers and Spires	1-148	Section 2701 Electrical Code	1-279
Section 1513 Access to Rooftop Equipment	1-148	Chapter 28 Mechanical Systems	1-281
Excerpts from Chapter 16		Section 2801 Mechanical Code	1-281
Structural Design Requirements	1-157	Section 2802 Refrigeration System Machinery Room	1-281
		Chapter 29 Plumbing Systems	1-283
		Section 2901 Plumbing Code	1-283
		Section 2902 Number of Fixtures	1-283
		Section 2903 Alternate Number of Fixtures	1-283
		Section 2904 Access to Water Closet Stool	1-283

Chapter 30 Elevators, Dumbwaiters, Escalators and Moving Walks	1-285	Division II Agricultural Buildings	1-312
Section 3001 Scope	1-285	Section 326 Scope	1-312
Section 3002 Elevator and Elevator Lobby Enclosures	1-285	Section 327 Construction, Height and Allowable Area	1-312
Section 3003 Special Provisions	1-285	Section 328 Occupancy Separations	1-312
Section 3004 Hoistway Venting	1-287	Section 329 Exterior Walls and Openings	1-312
Section 3005 Elevator Machine Room	1-287	Section 330 Means of Egress	1-312
Section 3006 Change in Use	1-287	Division III Requirements for Group R, Division 3 Occupancies	1-313
Section 3007 Additional Doors	1-287	Section 331 General	1-313
Chapter 31 Special Construction	1-289	Section 332 One and Two Family Dwelling Code Adopted	1-313
Section 3101 Scope	1-289	Division IV Requirements for Group R, Division 4 Occupancies	1-314
Section 3102 Chimneys, Fireplaces and Barbecues	1-289	Section 333 General	1-314
Section 3103 Temporary Buildings or Structures	1-291	Section 334 Construction, Height and Allowable Area	1-314
Chapter 32 Construction in the Public Right of Way ..	1-295	Section 335 Location on Property	1-314
Section 3201 General	1-295	Section 336 Means of Egress and Emergency Escapes	1-314
Section 3202 Projection into Alleys	1-295	Section 337 Light, Ventilation and Sanitation	1-314
Section 3203 Space below Sidewalk	1-295	Section 338 Yards and Courts	1-314
Section 3204 Balconies, Sun-control Devices and Appendages	1-295	Section 339 Room Dimensions	1-314
Section 3205 Marquees	1-295	Section 340 Shaft Enclosures	1-315
Section 3206 Awnings	1-295	Section 341 Fire Alarm Systems	1-315
Section 3207 Doors	1-296	Section 342 Heating	1-315
Chapter 33 Site Work, Demolition and Construction ..	1-297	Section 343 Special Hazards	1-315
Section 3301 Excavations and Fills	1-297	Appendix Chapter 4 Special Use and Occupancy	1-317
Section 3302 Preparation of Building Site	1-297	Division I Barriers for Swimming Pools, Spas and Hot Tubs	1-317
Section 3303 Protection of Pedestrians during Construction or Demolition	1-297	Section 419 General	1-317
Chapter 34 Existing Structures	1-299	Section 420 Definitions	1-317
Section 3401 General	1-299	Section 421 Requirements	1-317
Section 3402 Maintenance	1-299	Division II Aviation Control Towers	1-319
Section 3403 Additions, Alterations or Repairs	1-299	Section 422 General	1-319
Section 3404 Moved Buildings	1-299	Section 423 Construction, Height and Allowable Area	1-319
Section 3405 Change in Use	1-299	Section 424 Means of Egress	1-319
Chapter 35 Uniform Building Code Standards	1-301	Section 425 Fire Alarms	1-319
Section 3501 UBC Standards	1-301	Section 426 Accessibility	1-319
Section 3502 Adopted Standards	1-301	Section 427 Standby Power and Emergency Generation Systems	1-319
Section 3503 Standard of Duty	1-301	Appendix Chapter 9 Basement Pipe Inlets	1-321
Section 3504 Recognized Standards	1-301	Section 907 Basement Pipe Inlets	1-321
Appendix Chapter 3 Use or Occupancy	1-309	Appendix Chapter 10 Building Security	1-323
Division I Detention and Correctional Facilities	1-309	Section 1010 Building Security	1-323
Section 313 Scope	1-309	Appendix Chapter 11 Accessibility	1-325
Section 314 Application	1-309	Division I Site Accessibility	1-325
Section 315 Definitions	1-309	Section 1107 Accessible Exterior Routes	1-325
Section 316 Construction, Requirement Exceptions	1-309	Section 1108 Parking Facilities	1-325
Section 317 Compartmentation	1-309	Section 1109 Passenger Loading Zones	1-325
Section 318 Occupancy Separations	1-309	Division II Accessibility for Existing Buildings	1-326
Section 319 Glazing	1-309	Section 1110 Scope	1-326
Section 320 Electrical	1-309	Section 1111 Definitions	1-326
Section 321 Automatic Sprinkler and Standpipe Systems	1-309	Section 1112 Alterations	1-326
Section 322 Fire Alarm Systems	1-310	Section 1113 Change of Occupancy	1-326
Section 323 Smoke Management	1-310	Section 1114 Historic Preservation	1-326
Section 324 Means of Egress	1-310	Appendix Chapter 12 Interior Environment	1-327
Section 325 Fenced Enclosures	1-310	Division I Ventilation	1-327
		Section 1206 Scope	1-327

TABLE OF CONTENTS—VOLUME 1

Section 1207 Ventilation	1-327	Section 3112 Type of Construction and General Requirements	1-403
Division II Sound Transmission Control	1-331	Section 3113 Inflation Systems	1-403
Section 1208 Sound Transmission Control	1-331	Section 3114 Section Provisions	1-404
Section 1209 Sound Transmission Control Systems ..	1-331	Section 3115 Engineering Design	1-404
Appendix Chapter 13 Energy Conservation in New Building Construction	1-333	Division III Patio Covers	1-405
Section 1302 General	1-333	Section 3116 Patio Covers Defined	1-405
Appendix Chapter 15 Reroofing	1-335	Section 3117 Design Loads	1-405
Section 1514 General	1-335	Section 3118 Light and Ventilation	1-405
Section 1515 Inspection and Written Approval	1-335	Section 3119 Footings	1-405
Section 1516 Reroofing Overlays Allowed	1-335	Appendix Chapter 33 Excavation and Grading	1-407
Section 1517 Tile	1-336	Section 3304 Purpose	1-407
Section 1518 Metal Roof Covering	1-336	Section 3305 Scope	1-407
Section 1519 Other Roofing	1-336	Section 3306 Permits Required	1-407
Section 1520 Flashing and Edging	1-336	Section 3307 Hazards	1-407
Excerpts from Appendix Chapter 16 Structural Forces	1-337	Section 3308 Definitions	1-407
Excerpts from Appendix Chapter 18 Waterproofing and Dampproofing Foundations ...	1-343	Section 3309 Grading Permit Requirements	1-408
Excerpts from Appendix Chapter 19 Protection of Residential Concrete Exposed to Freezing and Thawing	1-345	Section 3310 Grading Fees	1-409
Excerpts from Appendix Chapter 21 Prescriptive Masonry Construction in High-wind Areas	1-347	Section 3311 Bonds	1-410
Excerpts from Appendix Chapter 23 Conventional Light-frame Construction in High-wind Areas	1-391	Section 3312 Cuts	1-410
Appendix Chapter 29 Minimum Plumbing Fixtures ..	1-397	Section 3313 Fills	1-410
Section 2905 General	1-397	Section 3314 Setbacks	1-410
Appendix Chapter 30 Elevators, Dumbwaiters, Escalators and Moving Walks	1-399	Section 3315 Drainage and Terracing	1-410
Section 3008 Purpose	1-399	Section 3316 Erosion Control	1-411
Section 3009 Scope	1-399	Section 3317 Grading Inspection	1-411
Section 3010 Definitions	1-399	Section 3318 Completion of Work	1-411
Section 3011 Permits—Certificates of Inspection ...	1-399	Appendix Chapter 34 Existing Structures	1-413
Section 3012 ANSI Code Adopted	1-399	Division I Life-safety Requirements for Existing Buildings Other than High-rise Buildings	1-413
Section 3013 Design	1-399	Section 3406 General	1-413
Section 3014 Requirements for Operation and Maintenance	1-399	Section 3407 Exits	1-413
Section 3015 Unsafe Conditions	1-400	Section 3408 Enclosure of Vertical Shafts	1-414
Appendix Chapter 31 Special Construction	1-401	Section 3409 Basement Access or Sprinkler Protection	1-414
Division I Flood-resistant Construction	1-401	Section 3410 Standpipes	1-414
Section 3104 General	1-401	Section 3411 Smoke Detectors	1-414
Section 3105 Manufactured Structures	1-401	Section 3412 Separation of Occupancies	1-414
Section 3106 Protection of Mechanical and Electrical Systems	1-401	Division II Life-safety Requirements for Existing High-rise Buildings	1-415
Section 3107 Flood Hazard Zones—A Zones	1-401	Section 3413 Scope	1-415
Section 3108 Coastal High Hazard Zones— V Zones	1-401	Section 3414 General	1-415
Section 3109 Elevation Certification	1-402	Section 3415 Compliance Data	1-415
Section 3110 Design Requirements	1-402	Section 3416 Authority of the Building Official	1-415
Division II Membrane Structures	1-403	Section 3417 Appeals Board	1-415
Section 3111 General	1-403	Section 3418 Specific Provisions and Alternates ...	1-415
		Division III Repairs to Buildings and Structures Damaged by the Occurrence of a Natural Disaster	1-419
		Section 3419 Purpose	1-419
		Section 3420 General	1-419
		Section 3421 Structural Repairs	1-419
		Section 3422 Nonstructural Repairs to Light Fixtures and Suspended Ceilings	1-419
		UNIT CONVERSION TABLES	1-421
		INDEX	1-425

Table of Contents—Volume 2

Structural Engineering Design Provisions

Effective Use of the <i>Uniform Building Code</i>	2-xxxiii	Chapter 18 Foundations and Retaining Walls	2-43
Chapter 16 Structural Design Requirements	2-1	Division I General	2-43
Division I General Design Requirements	2-1	Section 1801 Scope	2-43
Section 1601 Scope	2-1	Section 1802 Quality and Design	2-43
Section 1602 Definitions	2-1	Section 1803 Soil Classification—Expansive Soil	2-43
Section 1603 Notations	2-1	Section 1804 Foundation Investigation	2-43
Section 1604 Standards	2-1	Section 1805 Allowable Foundation and Lateral Pressures	2-44
Section 1605 Design	2-1	Section 1806 Footings	2-44
Section 1606 Dead Loads	2-2	Section 1807 Piles—General Requirements	2-45
Section 1607 Live Loads	2-2	Section 1808 Specific Pile Requirements	2-46
Section 1608 Snow Loads	2-3	Section 1809 Foundation Construction— Seismic Zones 3 and 4	2-48
Section 1609 Wind Loads	2-3	Division II Design Standard for Treated Wood Foundation System	2-51
Section 1610 Earthquake Loads	2-3	Section 1810 Scope	2-51
Section 1611 Other Minimum Loads	2-3	Section 1811 Materials	2-51
Section 1612 Combinations of Loads	2-4	Section 1812 Drainage and Moisture Control	2-51
Section 1613 Deflection	2-5	Section 1813 Design Loads	2-52
Division II Snow Loads	2-6	Section 1814 Structural Design	2-52
Section 1614 Snow Loads	2-6	Division III Design Standard for Design of Slab-on-ground Foundations to Resist the Effects of Expansive Soils and Compressible Soils	2-54
Division III Wind Design	2-7	Section 1815 Design of Slab-on-Ground Foundations [Based on Design of Slab-on-Ground Foundations of the Wire Reinforcement Institute, Inc. (August, 1981)]	2-54
Section 1615 General	2-7	Section 1816 Design of Posttensioned Slabs on Ground (Based on Design Specification of the Posttensioning Institute)	2-55
Section 1616 Definitions	2-7	Section 1817 Appendix A (A Procedure for Estimation of the Amount of Climate Controlled Differential Movement of Expansive Soils)	2-60
Section 1617 Symbols and Notations	2-7	Section 1818 Appendix B (Simplified Procedures for Determining Cation Exchange Capacity and Cation Exchange Activity)	2-60
Section 1618 Basic Wind Speed	2-7	Section 1819 Design of Posttensioned Slabs on Compressible Soils (Based on Design Specifications of the Posttensioning Institute)	2-61
Section 1619 Exposure	2-7	Chapter 19 Concrete	2-97
Section 1620 Design Wind Pressures	2-7	Division I General	2-97
Section 1621 Primary Frames and Systems	2-7	Section 1900 General	2-97
Section 1622 Elements and Components of Structures	2-8	Division II	2-98
Section 1623 Open-frame Towers	2-8	Section 1901 Scope	2-98
Section 1624 Miscellaneous Structures	2-8	Section 1902 Definitions	2-98
Section 1625 Occupancy Categories	2-8	Section 1903 Specifications for Tests and Materials	2-99
Division IV Earthquake Design	2-9	Section 1904 Durability Requirements	2-101
Section 1626 General	2-9	Section 1905 Concrete Quality, Mixing and Placing	2-102
Section 1627 Definitions	2-9	Section 1906 Formwork, Embedded Pipes and Construction Joints	2-105
Section 1628 Symbols and Notations	2-10	Section 1907 Details of Reinforcement	2-106
Section 1629 Criteria Selection	2-11	Section 1908 Analysis and Design	2-110
Section 1630 Minimum Design Lateral Forces and Related Effects	2-13	Section 1909 Strength and Serviceability Requirements	2-112
Section 1631 Dynamic Analysis Procedures	2-16		
Section 1632 Lateral Force on Elements of Structures, Nonstructural Components and Equipment Supported by Structures	2-18		
Section 1633 Detailed Systems Design Requirements	2-19		
Section 1634 Nonbuilding Structures	2-21		
Section 1635 Earthquake-recording Instrumentations	2-22		
Division V Soil Profile Types	2-23		
Section 1636 Site Categorization Procedure	2-23		
Chapter 17 Structural Tests and Inspections	2-39		
Section 1701 Special Inspections	2-39		
Section 1702 Structural Observation	2-40		
Section 1703 Nondestructive Testing	2-41		
Section 1704 Prefabricated Construction	2-41		

TABLE OF CONTENTS—VOLUME 2

Section 1910 Flexure and Axial Loads	2-115	Section 2105 Quality Assurance	2-209
Section 1911 Shear and Torsion	2-121	Section 2106 General Design Requirements	2-210
Section 1912 Development and Splices of Reinforcement	2-131	Section 2107 Working Stress Design of Masonry	2-214
Section 1913 Two-way Slab Systems	2-136	Section 2108 Strength Design of Masonry	2-219
Section 1914 Walls	2-141	Section 2109 Empirical Design of Masonry	2-225
Section 1915 Footings	2-142	Section 2110 Glass Masonry	2-227
Section 1916 Precast Concrete	2-144	Section 2111 Chimneys, Fireplaces and Barbecues	2-228
Section 1917 Composite Concrete Flexural Members	2-146	Chapter 22 Steel	2-237
Section 1918 Prestressed Concrete	2-147	Division I General	2-237
Section 1919 Shells and Folded Plates	2-151	Section 2201 Scope	2-237
Section 1920 Strength Evaluation of Existing Structures	2-153	Section 2202 Standards of Quality	2-237
Section 1921 Reinforced Concrete Structures Resisting Forces Induced by Earthquake Motions	2-154	Section 2203 Material Identification	2-237
Section 1922 Structural Plain Concrete	2-165	Section 2204 Design Methods	2-237
Division III Design Standard for Anchorage to Concrete	2-168	Section 2205 Design and Construction Provisions	2-237
Section 1923 Anchorage to Concrete	2-168	Division II Design Standard for Load and Resistance Factor Design Specification for Structural Steel Buildings	2-239
Division IV Design and Construction Standard for Shotcrete	2-170	Section 2206 Adoption	2-239
Section 1924 Shotcrete	2-170	Section 2207 Amendments	2-239
Division V Design Standard for Reinforced Gypsum Concrete	2-171	Division III Design Standard for Specification for Structural Steel Buildings Allowable Stress Design and Plastic Design	2-240
Section 1925 Reinforced Gypsum Concrete	2-171	Section 2208 Adoption	2-240
Division VI Alternate Design Method	2-172	Section 2209 Amendments	2-240
Section 1926 Alternate Design Method	2-172	Division IV Seismic Provisions for Structural Steel Buildings	2-241
Division VII Unified Design Provisions	2-176	Section 2210 Amendments	2-241
Section 1927 Unified Design Provisions for Reinforced and Prestressed Concrete Flexural and Compression Members	2-176	Section 2211 Adoption	2-243
Division VIII Alternative Load-factor Combination and Strength Reduction Factors	2-178	Division V Seismic Provisions for Structural Steel Buildings for Use with Allowable Stress Design	2-255
Section 1928 Alternative Load-factor Combination and Strength Reduction Factors	2-178	Section 2212 General	2-255
Chapter 20 Lightweight Metals	2-185	Section 2213 Seismic Provisions for Structural Steel Buildings in Seismic Zones 3 and 4	2-255
Division I General	2-185	Section 2214 Seismic Provisions for Structural Steel Buildings in Seismic Zones 1 and 2	2-261
Section 2001 Material Standards and Symbols	2-185	Division VI Load and Resistance Factor Design Specification for Cold-formed Steel Structural Members	2-264
Section 2002 Allowable Stresses for Members and Fasteners	2-186	Section 2215 Adoption	2-264
Section 2003 Design	2-187	Section 2216 Amendments	2-264
Section 2004 Fabrication and Erection	2-187	Division VII Specification for Design of Cold-formed Steel Structural Members	2-265
Division II Design Standard for Aluminum Structures	2-192	Section 2217 Adoption	2-265
Section 2005 Scope	2-192	Section 2218 Amendments	2-265
Section 2006 Materials	2-192	Division VIII Lateral Resistance for Steel Stud Wall Systems	2-266
Section 2007 Design	2-192	Section 2219 General	2-266
Section 2008 Allowable Stresses	2-192	Section 2220 Special Requirements in Seismic Zones 3 and 4	2-266
Section 2009 Special Design Rules	2-192	Division IX Open Web Steel Joists	2-268
Section 2010 Mechanical Connections	2-195	Section 2221 Adoption	2-268
Section 2011 Fabrication	2-196	Division X Design Standard for Steel Storage Racks	2-269
Section 2012 Welded Construction	2-197	Section 2222 General Provisions	2-269
Section 2013 Testing	2-198	Section 2223 Design Procedures and Dimensional Limitations	2-270
Chapter 21 Masonry	2-203	Section 2224 Allowable Stresses and Effective Widths	2-270
Section 2101 General	2-203	Section 2225 Pallet and Stacker-rack Beams	2-270
Section 2102 Material Standards	2-205	Section 2226 Frame Design	2-270
Section 2103 Mortar and Grout	2-206	Section 2227 Connections and Bearing Plates	2-270
Section 2104 Construction	2-207		

Section 2228	Loads	2-270	Section 2336	Design	2-374
Section 2229	Special Rack Design Provisions	2-271	Excerpts from Chapter 24		
Division XI	Design Standard for Structural Applications of Steel Cables for Buildings	2-272	Glass and Glazing		2-379
Section 2230	Adoption	2-272	Excerpts from Chapter 25		
Chapter 23	Wood	2-273	Gypsum Board and Plaster		2-381
Division I	General Design Requirements	2-273	Excerpts from Chapter 35		
Section 2301	General	2-273	Uniform Building Code Standards		2-383
Section 2302	Definitions	2-273	Section 3501	UBC Standards	2-383
Section 2303	Standards of Quality	2-274	Section 3502	Adopted Standards	2-383
Section 2304	Minimum Quality	2-274	Section 3503	Standard of Duty	2-383
Section 2305	Design and Construction Requirements	2-275	Section 3504	Recognized Standards	2-383
Division II	General Requirements	2-276	Appendix Chapter 16	Structural Forces	2-387
Section 2306	Decay and Termite Protection	2-276	Division I	Snow Load Design	2-387
Section 2307	Wood Supporting Masonry or Concrete	2-277	Section 1637	General	2-387
Section 2308	Wall Framing	2-277	Section 1638	Notations	2-387
Section 2309	Floor Framing	2-277	Section 1639	Ground Snow Loads	2-387
Section 2310	Exterior Wall Coverings	2-277	Section 1640	Roof Snow Loads	2-387
Section 2311	Interior Paneling	2-278	Section 1641	Unbalanced Snow Loads, Gable Roofs	2-388
Section 2312	Sheathing	2-278	Section 1642	Unbalanced Snow Load for Curved Roofs	2-388
Section 2313	Mechanically Laminated Floors and Decks	2-278	Section 1643	Special Eave Requirements	2-388
Section 2314	Post-Beam Connections	2-278	Section 1644	Drift Loads on Lower Roofs, Decks and Roof Projections	2-388
Section 2315	Wood Shear Walls and Diaphragms	2-279	Section 1645	Rain on Snow	2-389
Division III	Design Specifications for Allowable Stress Design of Wood Buildings	2-291	Section 1646	Deflections	2-389
Section 2316	Design Specifications	2-291	Section 1647	Impact Loads	2-389
Section 2317	Plywood Structural Panels	2-293	Section 1648	Vertical Obstructions	2-389
Section 2318	Timber Connectors and Fasteners	2-293	Division II	Earthquake Recording Instrumentation	2-400
Section 2319	Wood Shear Walls and Diaphragms	2-294	Section 1649	General	2-400
Division IV	Conventional Light-frame Construction	2-299	Section 1650	Location	2-400
Section 2320	Conventional light-frame Construction Design Provisions	2-299	Section 1651	Maintenance	2-400
Division V	Design Standard for Metal Plate Connected Wood Truss	2-339	Section 1652	Instrumentation of Existing Buildings	2-400
Section 2321	Metal Plate Connected Wood Truss Design	2-339	Division III	Seismic Zone Tabulation	2-401
Division VI	Design Standard for Structural Glued Built-up Members—Plywood Components	2-340	Section 1653	For Areas Outside the United States	2-401
Section 2322	Plywood Stressed Skin Panels	2-340	Division IV	Earthquake Regulations for Seismic-isolated Structures	2-405
Section 2323	Plywood Curved Panels	2-340	Section 1654	General	2-405
Section 2324	Plywood Beams	2-342	Section 1655	Definitions	2-405
Section 2325	Plywood Sandwich Panels	2-344	Section 1656	Symbols and Notations	2-405
Section 2326	Fabrication of Plywood Components	2-345	Section 1657	Criteria Selection	2-407
Section 2327	All-plywood Beams	2-349	Section 1658	Static Lateral Response Procedure	2-407
Division VII	Design Standard for Span Tables for Joists and Rafters	2-357	Section 1659	Dynamic Lateral-Response Procedure	2-409
Section 2328	Span Tables for Joists and Rafters	2-357	Section 1660	Lateral Load on Elements of Structures and Nonstructural Components Supported by Structures	2-410
Section 2329	Design Criteria for Joists and Rafters	2-357	Section 1661	Detailed Systems Requirements	2-411
Section 2330	Lumber Stresses	2-357	Section 1662	Nonbuilding Structures	2-412
Section 2331	Moisture Content	2-357	Section 1663	Foundations	2-412
Section 2332	Lumber Size	2-357	Section 1664	Design and Construction Review	2-412
Section 2333	Span Tables for Joists and Rafters	2-357	Section 1665	Required Tests of Isolation System	2-412
Division VIII	Design Standard for Plank-and-beam Framing	2-374	Appendix Chapter 18	Waterproofing and Dampproofing Foundations	2-417
Section 2334	Scope	2-374	Section 1820	Scope	2-417
Section 2335	Definition	2-374	Section 1821	Groundwater Table Investigation	2-417
			Section 1822	Dampproofing Required	2-417
			Section 1823	Floor Dampproofing	2-417
			Section 1824	Wall Dampproofing	2-417

TABLE OF CONTENTS—VOLUME 2

Section 1825	Other Dampproofing Requirements . . .	2-417
Section 1826	Waterproofing Required	2-417
Section 1827	Floor Waterproofing	2-418
Section 1828	Wall Waterproofing	2-418
Section 1829	Other Dampproofing and Waterproofing Requirements	2-418
Appendix Chapter 19	Protection of Residential Concrete Exposed to Freezing and Thawing	2-419
Section 1928	General	2-419
Appendix Chapter 21	Prescriptive Masonry Construction in High-wind Areas	2-421
Section 2112	General	2-421
Appendix Chapter 23	Conventional Light-frame Construction in High-wind Areas	2-465
Section 2337	General	2-465
UNIT CONVERSION TABLES		2-471
INDEX		2-475

Table of Contents—Volume 3

Material, Testing and Installation Standards

UBC Standard 2-1	Noncombustible Material—Tests	3-1	UBC Standard 15-7	Automatic Smoke and Heat Vents	3-325
UBC Standard 4-1	Proscenium Firesafety Curtains	3-3	UBC Standard 18-1	Soils Classification	3-327
UBC Standard 7-1	Fire Tests of Building Construction and Materials	3-9	UBC Standard 18-2	Expansion Index Test	3-331
UBC Standard 7-2	Fire Tests of Door Assemblies	3-19	UBC Standard 19-1	Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction	3-333
UBC Standard 7-3	Tinclad Fire Doors	3-23	UBC Standard 19-2	Mill-mixed Gypsum Concrete and Poured Gypsum Roof Diaphragms	3-335
UBC Standard 7-4	Fire Tests of Window Assemblies	3-37	UBC Standard 21-1	Building Brick, Facing Brick and Hollow Brick (Made from Clay or Shale)	3-337
UBC Standard 7-5	Fire Tests of Through-penetration Fire Stops	3-39	UBC Standard 21-2	Calcium Silicate Face Brick (Sand-lime Brick)	3-343
UBC Standard 7-6	Thickness, Density Determination and Cohesion/Adhesion for Spray-applied Fire-resistive Material	3-45	UBC Standard 21-3	Concrete Building Brick	3-345
UBC Standard 7-7	Methods for Calculating Fire Resistance of Steel, Concrete, Wood, Concrete Masonry and Clay Masonry Construction	3-49	UBC Standard 21-4	Hollow and Solid Load-bearing Concrete Masonry Units	3-347
UBC Standard 7-8	Horizontal Sliding Fire Doors Used in a Means of Egress	3-89	UBC Standard 21-5	Nonload-bearing Concrete Masonry Units	3-349
UBC Standard 8-1	Test Method for Surface-burning Characteristics of Building Materials	3-91	UBC Standard 21-6	In-place Masonry Shear Tests	3-351
UBC Standard 8-2	Standard Test Method for Evaluating Room Fire Growth Contribution of Textile Wall Covering	3-105	UBC Standard 21-7	Tests of Anchors in Unreinforced Masonry Walls	3-353
UBC Standard 9-1	Installation of Sprinkler Systems	3-117	UBC Standard 21-8	Pointing of Unreinforced Masonry Walls	3-355
UBC Standard 9-2	Standpipe Systems	3-241	UBC Standard 21-9	Unburned Clay Masonry Units and Standard Methods of Sampling and Testing Unburned Clay Masonry Units	3-357
UBC Standard 9-3	Installation of Sprinkler Systems in Group R Occupancies Four Stories or Less	3-273	UBC Standard 21-10	Joint Reinforcement for Masonry	3-359
UBC Standard 10-1	Power-operated Egress Doors	3-289	UBC Standard 21-11	Cement, Masonry	3-363
UBC Standard 10-2	Stairway Identification	3-291	UBC Standard 21-12	Quicklime for Structural Purposes	3-367
UBC Standard 10-3	Exit Ladder Device	3-293	UBC Standard 21-13	Hydrated Lime for Masonry Purposes	3-369
UBC Standard 10-4	Panic Hardware	3-295	UBC Standard 21-14	Mortar Cement	3-371
UBC Standard 14-1	Kraft Waterproof Building Paper	3-297	UBC Standard 21-15	Mortar for Unit Masonry and Reinforced Masonry Other than Gypsum	3-375
UBC Standard 14-2	Vinyl Siding	3-299	UBC Standard 21-16	Field Tests Specimens for Mortar	3-377
UBC Standard 15-1	Roofing Aggregates	3-301	UBC Standard 21-17	Test Method for Compressive Strength of Masonry Prisms	3-379
UBC Standard 15-2	Test Standard for Determining the Fire Retardancy of Roof Assemblies	3-303	UBC Standard 21-18	Method of Sampling and Testing Grout	3-381
UBC Standard 15-3	Wood Shakes	3-311	UBC Standard 21-19	Grout for Masonry	3-383
UBC Standard 15-4	Wood Shingles	3-317	UBC Standard 21-20	Standard Test Method for Flexural Bond Strength of Mortar Cement	3-385
UBC Standard 15-5	Roof Tile	3-321	UBC Standard 22-1	Material Specifications for Structural Steel	3-391
UBC Standard 15-6	Modified Bitumen, Thermoplastic and Thermostet Membranes Used for Roof Coverings	3-323			

TABLE OF CONTENTS—VOLUME 3

UBC Standard 23-1 Classification, Definition, Methods of Grading and Development of Design Values for All Species of Lumber	3-395
UBC Standard 23-2 Construction and Industrial Plywood	3-397
UBC Standard 23-3 Performance Standard for Wood-based Structural-use Panels	3-425
UBC Standard 23-4 Fire-retardant-treated Wood Tests on Durability and Hygroscopic Properties	3-427
UBC Standard 23-5 Fire-retardant-treated Wood	3-429
UBC Standard 24-1 Flat Glass	3-433
UBC Standard 24-2 Safety Glazing	3-437
UBC Standard 25-1 Plastic Cement	3-447
UBC Standard 25-2 Metal Suspension Systems for Acoustical Tile and For Lay-in Panel Ceilings	3-451
UBC Standard 26-1 Test Method to Determine Potential Heat of Building Materials	3-457
UBC Standard 26-2 Test Method for the Evaluation of Thermal Barriers	3-459
UBC Standard 26-3 Room Fire Test Standard for Interior of Foam Plastic Systems	3-463
UBC Standard 26-4 Method of Test for the Evaluation of Flammability Characteristics of Exterior, Nonload-bearing Wall Panel Assemblies Using Foam Plastic Insulation	3-467
UBC Standard 26-5 Chamber Method of Test for Measuring the Density of Smoke from the Burning or Decomposition of Plastic Materials	3-481
UBC Standard 26-6 Ignition Properties of Plastics	3-487
UBC Standard 26-7 Method of Test for Determining Classification of Approved Light-transmitting Plastics	3-491
UBC Standard 26-8 Room Fire Test Standard for Garage Doors Using Foam Plastic Insulation	3-493
UBC Standard 26-9 Method of Test for the Evaluation of Flammability Characteristics of Exterior, Nonload-bearing Wall Assemblies Containing Combustible Components Using the Intermediate-scale, Multistory Test Apparatus	3-507
UBC Standard 31-1 Flame-retardant Membranes	3-533
UNIT CONVERSION TABLES	3-535