2009 BUILDING CODE CHANGES

CHAPTER 1:

107.1 Provisions regarding document submittal now states that two or more copies must be submitted to the building official, including the geotechnical report.

CHAPTER 3:

310.1 The code now allows for transient (less than 30 days) residential occupancies to be classified and constructed as R-3 occupancies and designed under the International Residential Code. (IRC)

This section has also added the new concept of the **Live/Work Unit** and is given the R-2 classification. This is a new concept in the code and is meant to address the type of building where an artist may have his studio on the first floor and have his residence either on an upper level or on the back portion of the space.

CHAPTER 4:

402.2 This code section brings in the new concept of the Open Mall into the code. The open mall is becoming increasingly popular throughout the country and in Utah. These very large-scale projects such as the Gateway Mall and the new City Centre in Downtown Salt Lake present unique code issues that were not properly addressed in previous codes.

402.6.1 This section allows the same reduction in open space for covered mall buildings that want to take advantage of the unlimited area provisions of the code.

403. High Rise Buildings- Significant changes have been made in the code to address life safety within high rise buildings. High rise buildings are defined as those that have an occupied floor located 75 feet above the lowest level of fire department vehicle access.
The code is now addressing several issues in high rise buildings with heights of 120 and 420 feet. The code now requires Emergency Responder Radio Coverage, smoke removal or ventilation, additional exit stairway in buildings 420 feet in height, luminous egress paths in enclosed stairways and a Fire Service Elevator in buildings 120 feet in height.

408.7 The code is now addressing security glazing in jails. This provision was long overdue.

419 New requirements for live/work units have been introduced in the code. This section has reduced and clarified the code requirements for dwelling units which may want to conduct a business within a portion of the building.

CHAPTER 5:

502.1 The definition of basement has been simplified to show that a basement is simply a floor level that does not qualify as a story above grade plane.

Table 503 For building types II-B and III-B unprotected construction, the building height has been reduced for business, mercantile and storage buildings. This was due to the inconsistencies found in the table when the three model codes were brought together into the IBC.

507.6 and 507.7 The code now allows A-3 assembly buildings of type III and IV Construction to be unlimited in floor areas when several established conditions are met.

508.2.5 Incidental use areas are now "Incidental Accessory Occupancies." These occupancies have been reformatted to impose a size limitation on these uses. Table 508.2.5 now includes rooms containing fire pumps in high-rise buildings and non high rise buildings, but parking garages and storage rooms have been removed.

509.2 Changes have been made in the Horizontal Separation of Buildings to make the use of this special provision applicable to more occupancy groups.

509.5 The special height increases allowed for Group R-2 occupancies in buildings of Type II-A and III-A construction have been extended to R-1 occupancies.

CHAPTER 7:

703.6 Rated walls required to have protected openings or protected penetrations must now be identified above the ceiling where a concealed space is created.

703.7 This section better defines the primary structural frame of the building and identifies the members requiring fire protection. In addition, columns requiring a fire resistive rating must now be protected by individual encasement regardless of loading conditions.

704.9 Corner guards or other forms of impact protection are no longer required for concrete columns in an open or enclosed parking garage.

704.13 The application of sprayed fire-resistant materials is now specifically regulated to minimize the potential for the materials to be dislodged.

705.5 Exterior walls required to be fire-resistance rated must now be rated for fire exposure from both sides where the fire separation distance is 10 feet or less.

708.2 The extent of a concealed space in regard to the allowance for two stories to be open to each other without shaft protection has been clarified.

708.14.1 Group I-2 occupancies must now be afforded the protection provided by elevator lobbies in the same manner as required for Group I-3 occupancies and high rise buildings.

714.4.1 An approved material capable of resisting the spread of fire and hot gases must now be installed in open space that occurs at the intersection of an exterior curtain wall and a nonfire-restistance-rated wall.

CHAPTER 9:

903.2.3 The fire area threshold at which an E (Educational) occupancy must be provided with an automatic sprinkler system has been reduced from 20,000 to 12,000.

903.2.7 Automatic sprinkler protection is now required in all Group M (mercantile) occupancies that display or sell upholstered furniture regardless of the size of the fire area.

903.2.10 Unless located beneath occupancy groups, Group S-2 enclosed parking garages now require automatic sprinkler protection only when the fire area exceeds 12,000 square feet.

903.3.1.2.1 Automatic sprinkler protection of dwelling unit exterior decks and balconies in now required only where there is a combustible deck or roof above.

903.3.1.2.2 The reference to NFPA 13D sprinkler systems has been extended to include townhouses.

906 The International Fire Code provisions addressing portable fire extinguishers have been added to the IBC.

913 Rooms inside buildings that house fire pumps require a fire resistance separation.

CHAPTER 10:

1005.1 The allowance for the reduction in the minimum required calculated means of egress width because of the presence of an automatic sprinkler system has been eliminated.

1007.3 Areas of refuge are no longer required elements of an accessible means of egress in sprinkled buildings.

1007.6.3 A means of two-way communication is now also required in multi-story buildings in which areas of refuge are not provided.

1008.1.2 A manually operated horizontal sliding door is now permitted as a means of egress element in occupancies other than H, provided that the occupant load is 10 or less.

1008.1.9.4 The use of manually operated edge or surface mounted bolts on the inactive leaf of a pair of doors is now allowed in limited applications in groups F, S, B and I-2 occupancies.

1008.1.9.5 The installation of locking devices not usable by patients of Group I-2 occupancy is now permitted where multiple conditions are met, provided the clinical needs of the patient require such locks.

1008.1.9.6 In limited occupancy groups, doors that are electromagnetically locked during building occupancy are now permitted to be used as a means of egress if equipped with listed hardware that incorporates a built-in switch that meets specified conditions.

1009.4.5 In groups F, H, and S occupancies, open risers are now permitted at stairways located in areas not accessible to the public.

1009.12 Within dwelling units and sleeping units of Group R-2 and R-3 occupancies, a handrail is now required only for stairs having four or more risers instead of one riser.

1009.14. Where access to a roof or rooftop penthouse is required in order to maintain elevator equipment, a stairway must be provided for access purposes.

1010.9.1 The minimum required height of 4 inches for a curb used as edge protection at the side of ramps and ramp landings has been clarified.

1011.1 Exit signs are now required within exits and exit passageways at intervening doors within exits to clearly indicate the direction of means of egress travel.

1011.4 Internally illuminated exit signs, including electrically powered, self-luminous and photo luminescent signs, are now required to be listed and labeled per UL 924.

1012.3 New criteria have been provided for additional complying handrail shapes, identified as Type II handrails, which are permitted in selective residential applications.

1013.1 When determining where a guard is required, the vertical distance from the walking surface to the grade or floor below is now based on the lowest point within a 36-inch radius measured horizontally from the edge of the open-sided walking surface.

1013.2 Fixed seating adjacent to a guard is now considered a walking surface and the minimum height of the guard is to be measured from that surface rather than from the floor.

1013.3 The permitted maximum size of openings in the upper portion of guards has been reduced from 8 inches to 4 and 3/8 inches.

1014.3 The allowance for an extended common path of egress travel in Group R-2 occupancies is now also available in buildings that are protected throughout with an NFPA 13R automatic sprinkler system.

1015.1 The occupant load threshold at which a second means of egress is required from a Group R-2 occupancy has been increased from 11 to 21 in buildings in which an automatic sprinkler system is provided.

1016.1 The appropriate measurement of travel distance has been clarified to indicate that it includes travel on unenclosed exit access stairways.

1016.2 The allowance for an increased travel distance in fully sprinkled group F-1 and S-1 occupancies that are provided with automatic smoke and heat vents has been eliminated.

1018.4 The permissible length of a dead-end corridor has been extended to 50 feet in Group E, I-1, R-1, R-2, R-4, S, and U occupancies if the building is provided throughout with an NFPA 13 automatic sprinkler system.

1021.2 The allowance for single-exit buildings has been clarified to address egress from individual stories within the buildings.

1022.1 Consistent with the provisions for shaft enclosures, the fire-resistance rating of an exit enclosure cannot be less than the rating of the floor construction penetrated by the enclosure.

1024. Photo luminescent or self-luminous exit path markings are now required in exit enclosures and exit passageways of high rise buildings.

1028.1 Assembly uses classified as Group E occupancies are now subject to the specific means of egress provisions set forth for Group A occupancies in Section 1028.

1028.4 The physical barrier required to separate the waiting areas within lobbies of Group A-1 occupancies from the means of egress paths are no longer mandated.

CHAPTER 11: ACCESSIBILITY

1103.2.3 The maximum size of employee work areas exempted from all accessibility requirements has been increased from 150 square feet to 300 square feet.

1103.2.13 In live/work units constructed in accordance with Section 419, the portion of the unit utilized for nonresidential use is required to be accessible. The residential portion is required to be evaluated separately in accordance with Sections 1107.6.2 and 1107.7.

1106.5. Van-accessible spaces required within private garages serving groups R-2 or R-3 occupancies will be allowed to have vertical clearances of 7 feet.

1107.3 The maneuvering clearance mandated adjacent to passage doors is no longer required at the room side of doors to sleeping units in group I-2 facilities.

1107.6.1.1 The required type of bathing facilities in accessible dwelling units and sleeping units has been modified to offer the same bathing options as found in standard rooms.

1107.6.1.1 The general requirement for courtroom accessibility has been replaced with several provisions that address elements specific to the judicial activities that occur.

1109.2.1 The unisex toilet room required in large assembly and mercantile occupancies is now identified as a “family or assisted-use” toilet room in order to distinguish it from other types of toilet rooms designated as unisex.

1109.2.3. Where the total number of lavatories provided in a toilet room or bathing facility is six or more, at least one lavatory with enhanced reach ranges in accordance with ICC A117.1 shall be provided.

1109.12.1 In Group R-2 apartment houses, monasteries and convents in which accessible rooms in Type A units are provided with operable windows, at least one window in each room shall be accessible.

CHAPTER 12.

1210.1 Smooth, hard, nonabsorbent vertical base materials of 4 inches above the floor is now permitted in toilet rooms. This is a reduction from 6 to 4 inches.

CHAPTER 15.

1509.2. The height, area and use limitations of penthouses and similar rooftop structures have been clarified to indicate that such structures are not to be included in the building area or fire area.

1509.2.4. The use of fire-retardant-treated wood is now permitted for penthouse construction and equipment enclosures in one and two-story buildings of Type I construction as well as all buildings of type I, II, III, IV and V construction.

CHAPTER 16

ASCE/SEI 7-05 Supplement No. 2 to the 2005 edition of the ASCE/SEI 7 is now referenced in Chapter 16 and revises the minimum base shear equation for both building and nonbuilding structures.

1602 AND TABLE 1607.1. Decks and balconies now have the same live load as the occupancy they serve.

1603.1.6 The construction documents must clearly provide the geotechnical information.

Table 1604.5 The nature of the occupancies has been further clarified in some instances.

1604.8.2. All walls must now be anchored to floors, roofs and other structural elements that provide lateral support for the wall. In addition, the minimum prescribed strength level horizontal seismic force of 280 plf applicable to concrete and masonry walls was replaced with a minimum horizontal force equal to 5% of the weight of the wall tributary to the anchor.

1604.8.3 New uplift requirements are given for that attachment of cantilevered portions of decks to exterior walls or other framing members.

1605.1.1 If factored loads are used when performing stability analysis of structures, soil resistance and strength reduction factors must now be considered.

1605.3.1 The allowable stress design load combinations are now consistent where roof live load and earthquake load effects are combined.

1607.7.1.3 The allowance for one-third stress increase for the allowable stress design of handrails and guards has been deleted.

1607.7.3 A second point of application of loading for vehicle barrier systems in parking structures has been introduced that will provide more adequate barrier design requirements addressing heavier and taller vehicles.

1607.11.2.2 In the design of special-purpose roofs used for promenade purposes, roof gardens, assembly uses or other special purposes, a live load reduction is not permitted for live loads of 100 psf or more at areas of roofs classified as Group A occupancies.

1609.1.1 and 1609.6 A new simplified wind design method based on the ASCE 7 analytical procedure, identified as the alternate all-heights method, is now available as an alternate to ASCE 7 Methods 1 and 2.

1609.1.1 and 1609.1.1.2 Recommendations pertaining to wind tunnel testing from the ASCE/SEI 7-05 commentary have been incorporated directly into the code so that they are enforceable.

1609.1.1 and 2308.2.1 The reference to the ICC legacy standard SSTD 10-99 has been deleted and replaced with a reference to the new 2008 edition of ICC-600, Standard for Residential Construction in High Wind Regions.

1610.1 and 1807 The code provisions pertaining to soil lateral loads, foundation walls, and embedded posts and poles have been reorganized and technical revisions were made to clarify the provisions.

1611. Clarifies that the design rainfall is to be based upon 100-year hourly rainfall rates as indicated on new Figure 1611.1.

1612.3 New provisions have been provided for establishing design flood level elevations and determining their impacts.

1612.4 The design and construction of buildings within flood hazard areas now must conform to both Chapter 5 of ASCE 7 and ASCE 24.

1613.6.1 and 2305 Substantial portions of Section 2305 pertaining to lateral design of wood structures were deleted because they now reference the 2008 AF&PA "Special Design Provisions for Wind and Seismic" standard.

1613.6.3 Automatic sprinkler systems installed in accordance with the 2007 edition of NFPA 13 are now recognized as compliant with the ASCE 7 seismic bracing provisions.

1613.6.4 Seismic design coefficients and limitations for autoclaved aerated concrete (AAC) masonry shear wall systems have been added to the IBC, thus extending the use of these systems to seismic applications in Seismic Design Categories B and C. These systems are not permitted in Seismic Categories D, E, and F.

1613.6.5 New requirements for seismic controls for elevators.

1613.6.6 ASCE 7 Section 12.2.5.4 has been amended to permit height increases for steel braced frames, special steel plate shear walls, and special reinforced concrete shearwalls.

1613.6.7 Requirements for minimum building separation that were in prior editions of the IBC have been restored and a minimum required separation distance between adjoining buildings that are not structurally connected has been established.

1613.6.8 The exemptions from seismic bracing requirements in Section 13.6.7 of ASCE 7 have been extended to include small ducts where Ip =1.5.

1613.7 Section 11.7.5 of ASCE 7 has been amended by eliminating the requirement for a minimum horizontal seismic force of 280 plf and replacing with a minimum horizontal force equal to 5% of the weight of the wall tributary to the anchor.

1614. Minimum structural integrity requirements have been provided for high-rise buildings assigned to Occupancy Categories III an IV.

CHAPTER 17

1704. The requirements pertaining to special inspector qualifications have been clarified, and the special inspection exemption for R-3 occupancies has been deleted.

1704.3.4 and 1704.6.2. Special inspection of the permanent and temporary bracing is now required for metal-plate wood trusses and cold-formed steel trusses that span more than 60-feet.

1704.4 Continuous special inspection is now required for cast-in-place bolts installed in concrete where strength design is used, and periodic special inspection is now required for anchors post-installed in hardened concrete.

1706. Establishes new special inspection requirements for buildings located within areas of high wind.

1707.4 Cold-formed steel framing is now exempt from special inspection where gypsum board or fiberboard is used, or where the sheathing is attached using fastener spacing greater than 4”o.c.

1710.1 The structural observer provide the building official with the frequency and extent of the structural observations.

CHAPTER 18

This chapter was revised in its entirety. The following items note some of the many changes that were made.

1807.2 In the design analysis for a retaining wall, lateral soil pressures on both sides of the keyway are now explicitly required to be considered in the sliding analysis.

1810.3.1.5 New provisions have been added regulating the design and installation of helical pile foundations.

CHAPTER 19

Chapter 19. The concrete provisions of Chapter 19 have been updated and coordinated with the 2008 edition of ACI 318 standard.

1904.2 and 1904.3. Significant changes have been made to the exposure categories and classes provided in ACI 318. The most restrictive requirements govern.

1908.1.9 Anchors designed to support nonstructural components per ASCE 7 are not required to satisfy Section D.3.3.4 of ACI 318-08.

1908.1.16 Added exceptions to the requirements for ductility for concrete wall anchorages that have been designed for maximum expected seismic forces.

CHAPTER 21

Chapter 21. The masonry provisions have been updated and coordinated with the building code requirements and specifications for masonry structures and related commentaries, also known as the Masonry Standards Joint Committee code, 2008 edition.

2101.3 Additional items are now required to be shown on the construction documents.

2111.3 The Seismic Design Category ‘D’ requirements for reinforcing and anchorage of masonry and concrete fireplaces and chimneys have been extended to include Seismic Design Category ‘C’.

CHAPTER 22

2208.1 The code is now referencing the latest version of the Rack Manufacturers Institute standard (RMI/ANSI MH 16.1-08), which includes many clarifications regarding the seismic design of racks.

2209. The code now references the latest cold-formed steel construction standards (AISI S100, ANSI/SDI-NC1.0, and ANSI/SDI-RD1.0).

2209.2.2 Non-composite decks must be designed per the ACI 318 standard, which does not allow fibers or fibrous admixtures to substitute for required steel temperature and shrinkage reinforcement.

2210. The code now references the latest cold-formed steel light-framed construction standards (AISI S200, S210, S211, S212, S213, S214, and S230).

2210.3 New truss provisions have been added for cold-formed steel trusses.

CHAPTER 23

2301.2 ICC 400 Standard for the Design and Construction of Log Structures is now referenced in Chapter 23 and provides tools for the design, construction and inspection of log homes.

2304.6.1 The code now provides guidelines for selecting wood structural panel wall sheathing used to resist component and cladding wind loads.

2304.9.5 The requirement for fasteners used in preservative-treated and fire-retardant-treated wood have been clarified to eliminate confusion between the code requirements and the manufacturer’s recommendations. Nails, timber rivets, wood screws and lag screws used in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment are not required to be hot dipped galvanized.

2304.11.2.6 A minimum vertical clearance of 2 inches is required between wood siding and concrete steps, porch slabs, patio slabs and similar surfaces.

2305.1 The code now references the latest edition of AF&PA SDPWS. Many of the design requirements previously included in the code are now located within this referenced standard.

2306.6 Added provisions for the use of fiberboard shearwalls. This is not allowed in Seismic Design Category 'D' or above.

2308.2 Clarification of floor-to-floor stud height limitations for conventional wood frame construction.

2308.3.2 The connection resisting wind and seismic lateral forces apply to the Entire braced wall line, not just the braced wall panel portion of the wall.

2308.6 The permitted use of strap anchors in lieu of anchor bolts in high-seismic regions has been clarified.

2308.9.1 Except for trimmer and cripple studs at opening in walls, wall studs are now required to be continuous from a support at the sole plate to a support at the top plate in order to resist out-of-plane loads perpendicular to the wall.

CHAPTER 24

2406.1.1 Safety glazing material may now comply with ANSI Z97.1 rather than CPSC 16 CFR 1201 where used in limited number of specified hazardous locations.

CHAPTER 29

2902.1.1 The method of determining the minimum required number of plumbing fixtures has been clarified for buildings that contain multiple occupancies.
2903 Each water closet utilized by the public or employees shall occupy a separate compartment with walls or partitions and a door enclosing the fixture to ensure privacy. Three exceptions are provided along with urinal partitions.

CHAPTER 30

3002.4 Where an elevator car is required to accommodate and ambulance stretcher, the size of the stretcher used for the minimum car size has been modified to more accurately identify the minimum required elevator car dimensions.

3007 A fire service access elevator using key features to assist firefighters in access and rescue operations is now required in high-rise buildings with an occupied floor more than 120 feet above the lowest level of fire department access.

3008 This is a new code section addressing occupant evacuation elevators as a means of egress in tall buildings.

CHAPTER 34

3401.4 Alternative compliance with Chapter 34 provisions may be accomplished in accordance with the 2008 IEBC.

3402.1 A definition of “substantial structural damage” has been provided. This is an important item and is noted throughout the Chapter.

3403. More detailed structural provisions have been given for additions to existing buildings.

3404. More detailed structural provisions have been given for alterations to existing buildings.

3404.5 New provisions regarding “voluntary” seismic improvements have been added.

3404.6 Means of egress requirements shall be in accordance with the code adopted at the time of construction, not the current code being used for the alteration to the existing building.

3405. More detailed structural provisions have been given for repairs to existing buildings.