Council Bill Number: 113671
Ordinance Number: 120379

AN ORDINANCE relating to the 1997 Seattle Building Code, Chapter 22.100 of the Seattle Municipal Code, as adopted by Ordinance 119079 and amended by Ordinance 120157: amending Sections 103, 104, 106, 202, 206, 302, 307, 310, 311, 313, 402, 403, 404, 405, 502, 601, 711, 715, 902, 904, 905, 1003, 1004, 1005, 1206, 1506, 3002, 3003, 3004, 3011, 3013, 3016, 3022, 3027, 3202, 3404, Tables 5-A, 10-A, 16-A, 23-II-I-1, and 23-II-I-2 of the Seattle Building Code.

Status: Passed
Note: FIRST QUARTER 2001 SALARY ORDINANCE
Vote: 8-0 (Excused: Drago)
Date filed with the City Clerk: 2001/05/24
Date of Mayor's signature: 2001/05/21 (about the signature date)

Date introduced/referred to committee: 2001/05/14
Committee: Landlord/Tenant and Land Use
Sponsor: NICASTRO
Committee Recommendation: Pass

Index Terms: BUILDING-CODES, CODE-ENFORCEMENT, ADMINISTRATIVE-PROCEDURES, PERMITS, BUILDING-PERMITS, PUBLIC-REGULATIONS

Electronic Copy: PDF scan of Ordinance No. 120379

Reference: Amending: Ord 119081. Related: CF 304655

Text:

AN ORDINANCE relating to the 1997 Seattle Building Code, Chapter 22.100 of the Seattle Municipal Code, as adopted by Ordinance 119079 and amended by Ordinance 120157: amending Sections 103, 104, 106, 202, 206, 302, 307, 310, 311, 313, 402, 403, 404, 405, 502, 601, 711, 715, 902, 904, 905, 1003, 1004, 1005, 1206, 1506, 3002, 3003, 3004, 3011, 3013, 3016, 3022, 3027, 3202, 3404, Tables 5-A, 10-A, 16-A, 23-II-I-1, and 23-II-I-2 of the Seattle Building Code.

Section 1. Subsection 103.3 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

103.3 Civil Penalties. Any person, firm or corporation failing to comply with the provisions of this code shall be subject to a cumulative civil penalty in an amount not to exceed $500 per day for each violation from the date the violation occurs or begins until compliance is achieved. In cases where the building official has issued a notice of violation, the violation will be deemed to begin, for purposes of determining the number of days of violation, on the date compliance is required by the notice of violation. In any civil action for a penalty, the City has the burden of proving by a preponderance of the evidence that a violation exists or existed; the issuance of the notice of violation or of an order following a review by the Director is not itself evidence that a violation exists.

Section 2. Subsection 103.5 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

103.5 Additional Relief. The building official may seek legal or equitable relief to enjoin any acts or practices and abate any condition ~~which~~ that constitutes a violation of this code when civil or criminal penalties are inadequate to effect

compliance. In any such action, the City has the burden of proving by a preponderance of the evidence that a violation exists or will exist; the issuance of the notice of violation or of an order following a review by the Director is not itself evidence that a violation exists or will exist.

Section 3. Subsection 104.10 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

104.10 Responsibilities of Structural Engineer of Record. It is the responsibility of the Structural Engineer of Record to:

1. Design the primary structure;

Exception: A licensed engineer other than the Structural Engineer of Record may design the primary structure of single-story metal buildings.

2. Specify design loads, configurations, controlling dimensions, deflection limits and/or other criteria necessary for the design of secondary structural components and sub- systems and the selection of structurally qualified products;

3. Determine the adequacy and conformance of the application of the structurally qualified products with the design intent of the City-approved contract documents;

4. Review for compatibility with the design intent of the City-approved contract documents the shop drawings for the primary structural parts and design and shop drawings for secondary structural parts for the following structural elements:

Wood trusses Glue-lam beams

Steel joists Structural steel

Steel decking Prefabricated stair systems

Precast concrete piles Post-tensioned floor systems

Curtain wall systems Precast prestress planks

Major skylight frames Precast concrete/masonry wall panels

The building official may approve additions to, or deletions from this list.

5. When required by the building official or the Structural Engineer of Record, review the compatibility with the design intent of the City-approved contract documents of the design and shop drawings for mechanical and electrical life safety equipment anchorage required by Section 403.10, including generators, pressurization fans, fire pumps and elevator drive and suspension systems.

If there is no Structural Engineer of Record on the project, the Project Architect shall assume these responsibilities.

For the purpose of this section, primary structure and secondary structural parts shall be defined as follows:

1. Primary Structure consists of the foundation(s), structural floor(s), roof and walls, bracing members, columns, all other structural components and all connections within and between these elements, which, acting together, provide a complete stable structural framework.

2. Secondary Structural Part (component or subsystem) is a structurally significant portion of the building that is supported by the primary structure, but which does not contribute to the strength or stability of the primary structure. Such a part must have internal structural integrity to perform its function and must have its interactions with, and its attachments to the primary structure analyzed and designed to assure its proper integration within the total structure.

Section 4. Subsection 106.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

106.2 Work Exempt from Permit. A building permit shall not be required for the work listed below. Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of the City.

1. Minor repairs or alterations which, as determined by the building official, cost the owner $4,000 or less in any 6-month period~~, provided that no structural changes are made and egress, light, air and ventilation are not reduced~~. Such repairs and alterations shall not include the removal, reduction alteration, or relocation of any loadbearing support. Egress, light, ventilation, and fire- resistance shall not be reduced.

Note: A shoreline substantial development permit may be required for work with a value of more than $2,500.

2. Miscellaneous work including the following, provided no changes are made to the building envelope: patio and concrete slabs on grade, painting or cleaning a building, repointing a chimney, installing kitchen cabinets, paneling or other surface finishes over existing wall and ceiling systems applied in accordance with Sections 801-806, insulating existing buildings, abatement of hazardous materials, demolition of nonstructural interior tenant improvements in retail and office uses, and in-kind or similar replacement of or repair of deteriorated members of a structure.

3. One-story detached accessory buildings used for greenhouse, tool or storage shed, or similar uses, provided:

3.1 The projected roof area does not exceed 120 square feet; and

3.2 The building is not placed on a concrete foundation other than a slab on grade.

4. Fences not over 8 feet high which do not have masonry or concrete elements above 6 feet.

5. Cases, counters and partitions not over 5 feet 9 inches high.

6. Retaining walls and rockeries which are not over 4 feet in height measured from the bottom of the footing to the top of the wall, provided:

6.1 There is no surcharge or impoundment of Class I, II or III-A liquids.

6.2 Construction is not in a critical area or an environmentally sensitive area, nor supports soils in areas of geologic hazard, steep slope or having landslide potential as identified in the environmentally sensitive and critical area regulations contained in Chapters 25.05 and 25.09 of the Seattle Municipal Code.

6.3 Possible failure would likely cause no damage to adjoining property or structures.

7. Platforms, walks and driveways not more than 18 inches above grade and not over any basement or story below.

8. Temporary motion picture, television and theater stage sets and scenery.

9. Window awnings supported by an exterior wall of Group R, Division 3, and Group U Occupancies when projecting not more than 54 inches.

10. Prefabricated swimming pools, spas and similar equipment accessory to a Group R, Division 3 occupancy in which the pool walls are entirely above the adjacent grade and if the capacity does not exceed 5,000 gallons.

11. Replacement of roofing materials and siding. This shall not include structural changes, replacement of sheathing or alterations to doors and windows. In single-family dwelling reroofing projects, the existing roof sheathing may be replaced and roof structure may be repaired without permit provided no changes are made to the building envelope

other than adding or replacing insulation, and the work is equivalent or better than the existing structure. See Energy Code Sections 101.3.2.5 and 1132.1 for insulation requirements for existing buildings.

12. School, park or private playground equipment including playhouses and tree houses.

13. Removal and/or replacement of underground storage tanks that are subject to regulation by a state or federal agency.

Note: A Fire Department permit is required for removal, replacement and decommissioning of underground storage tanks.

14. Installation of dish and panel antennas ~~and video programming service antennas~~ 6.56 feet (2 m) or less in diameter or diagonal measurement~~, used for receiving only~~.

Section 5. Subsection 106.6 of the Seattle Building Code, adopted by Ordinance 120157, is amended as follows:

106.6 Permit Issuance.

106.6.1 General. The application, plans, specifications and other data filed by an applicant for permit shall be reviewed by the building official. Such plans may be reviewed by other departments of the City to check compliance with the laws and Ordinances under their jurisdiction. The building official shall mail notice to or otherwise notify the applicant within twenty-eight days of application if additional information is required and what additional information is required before the application will be complete. Within fourteen days of receiving the additional information, the building official shall notify the applicant in writing whether the application is now complete or what additional information is necessary. An application shall be deemed to be complete if the building official does not notify the applicant in writing by the deadlines in this section that the application is incomplete. The Director shall approve, condition or deny the application within 180 days of notification that the application is complete. In determining the number of days that have elapsed since the notification that the application is complete, the following periods shall be excluded:

1. Any period during which the applicant has been requested to correct plans, perform required studies, or provide additional requested information, until the determination that the request has been satisfied;

2. Any extension of time mutually agreed upon by the building official and the applicant.

3. If the application is substantially revised by the applicant, the time period shall start from the date at which the revised application is determined to be complete.

If the building official finds that the work as described in an application for permit and the plans, specifications, and other data filed therewith substantially conforms to the requirements of this code and other pertinent laws and Ordinances and that the fees specified in the Fee Subtitle have been paid, he/she shall issue a permit therefor to the applicant who becomes the permit holder or authorized agent.

EXCEPTIONS: 1. The building official may issue a permit for the construction of part of a building or structure before complete plans for the whole building or structure have been submitted or approved, provided that the proposed project complies with the State Environmental Policy Act as adopted by the City (Chapter 25.05 Seattle Municipal Code) and as amended and the Land Use Code, as amended; and provided further that adequate information and plans have been filed and checked to assure compliance with all pertinent requirements of this and other pertinent codes. The holder of such a permit shall proceed at his/her own risk without the assurance that the permit for the entire building or structure will be granted.

2. After approval of a Master Use Permit as required by the Land Use Code, a permit for excavation may be issued.

The building official may condition a permit where he/she determines that risks associated with development, construction, ownership, and occupation in areas of the city, including, but not limited to potential slide areas, can be reduced to an acceptable level. The building official may deny such permit where he/she determines that the risks

cannot be reduced to an acceptable level.

106.6.2 Compliance with Approved Plans and Permit. When the building official issues a permit, he/she shall endorse the permit in writing and endorse in writing or stamp the plans APPROVED. Such approved plans and permit shall not be changed, modified, or altered without authorization from the building official, and all work shall be done in accordance with the approved plans and permit except as the building official may require during field inspection to correct errors or omissions.

106.6.3 Amendments to the Permit. When substitutions or changes are made during construction, approval shall be secured prior to execution, however, the building inspector may approve minor modifications to the plans for work not reducing the structural strength or fire and life safety of the structure. The building inspector shall determine if it is necessary to revise the approved plans. Substitutions or changes made during construction subject to special inspection required by Section 1701 shall be approved by the building official. Substitutions, changes, and clarifications shall be shown on two sets of plans that shall be submitted to and approved by the building official, accompanied by fees specified in the Fee Subtitle prior to occupancy. These substitutions and changes shall conform to the requirements of this code and other pertinent laws and Ordinances.

106.6.4 Cancellation of Permit Application. ~~An application shall be deemed abandoned and void if a permit is not issued after a period of sixty days from the date of written notice of approval for issuance or if complete corrections are not received after a period of sixty days from the date of written notification of required corrections for compliance with this code. The building official may extend the period for issuance or submission of corrections if the building official determines that there are satisfactory reasons for the delay, or if a different schedule is agreed upon in writing before the end of the sixty day period. The building official may require the applicant to submit a written request for the extension with rationale before the end of the sixty day period. If the permit application is canceled, the site may be inspected to verify that no work has taken place. The application and any accompanying plans and specifications may be destroyed. If the application is being reviewed concurrently with a Master Use Permit application, and it is for a project vested to prior Land Use Code or Zoning Ordinance provisions, and the project does not conform with the codes in effect while it is being reviewed for Master Use Permit approval, cancellation of the building permit application under the provisions of this section shall cause the concurrent cancellation of the Master Use Permit application.~~ Applications shall expire if no permit is issued by the earlier of the following: (1) within twelve months following the date of application; or (2) within sixty days from the date of written notice of approval for issuance. Plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official.

At the discretion of the building official, applications for projects that require more than twelve months to complete may be extended for a period that provides reasonable time to complete the work, but in no case longer than twenty-four months from the date of application. Requests for extension shall be made at least thirty days before expiration of the application. No application shall be extended more than once. In order to renew action on an application after expiration, the applicant shall submit a new application and pay a new fee.

Notwithstanding other provisions of this code, applications may be extended where issuance of the permit is delayed by litigation, preparation of environmental impact statements, appeals, strikes, or other causes related to the application that are beyond the applicant's control.

The building official shall notify the applicant in writing at least thirty days before the application is due to expire.

See the Fee Subtitle for fee refunds.

Section 6. Section 202 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 202 3/4 A

ACCESS FLOOR SYSTEM is an assembly consisting of panels mounted on pedestals to provide an under-floor space for the installations of mechanical, electrical, communication or similar systems or to serve as an air-supply or return-air plenum.

ACCREDITATION BODY is an approved, third-party organization that initially accredits and subsequently monitors, on a continuing basis, the competency and performance of a grading or inspection agency related to carrying out specific tasks.

ACI is the American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48219.

ADDITION is an extension or increase in floor area or height of a building or structure.

ADULT FAMILY HOME means a family abode in which a person or persons provide personal care, special care, room, and board to more than one but not more than six adults who are not related by blood or marriage to the person or persons providing the services.

AEROSOL is a product that is dispensed by a propellant from a metal can up to a maximum size of 33.8 fluid ounces (1000 mL) or a glass or plastic bottle up to a size of 4 fluid ounces (118.3 mL), other than a rim-vented container.

VIAQ: AGGREGATE, for the purpose of emission control design is crushed stone, stone, or other inert material or combinations thereof having hard, strong, durable pieces.

AGRICULTURAL BUILDING is a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

VIAQ: AIR BARRIER is a continuous material or system of materials used for the purpose of minimizing the movement of air across a defined boundary, and capable of withstanding the maximum pressure developed across it, without failing by becoming significantly more leaky.

VIAQ: AIR, SUPPLY is that air delivered to the conditioned space and used for ventilation, heating, cooling, humidification or dehumidification.

AISC is the American Institute of Steel Construction, Inc., One East Wacker Drive, Suite 3100, Chicago, Illinois 60601-2001.

ALLEY is any public way or thoroughfare 16 feet (4877 mm) or less but not less than 10 feet (3048 mm) in width that has been dedicated or deeded to the public for public use.

ALTER or ALTERATION is any change, addition or modification in construction or occupancy.

AMUSEMENT BUILDING. See Section 408.2.

ANSI is the American National Standards Institute, 1430 Broadway, New York, New York 10018.

APARTMENT HOUSE is any building or portion thereof that contains three or more dwelling units and, for the purpose of this code, includes residential condominiums.

APPROVED, as to materials and types of construction, refers to approval by the building official as the result of investigation and tests conducted by the building official, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

APPROVED AGENCY is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved.

APPROVED FABRICATOR is an established and qualified person, firm or corporation approved by the building official pursuant to Section 1701.7 of this code.

ARCHITECT. See "project architect or engineer."

AREA. See "floor area."

ASSEMBLY BUILDING is a building or portion of a building used for the gathering together of 50 or more persons for such purposes as deliberation, education, instruction, worship, entertainment, amusement, drinking or dining, or awaiting transportation.

ASTM is the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428.

ATRIUM is an opening through two or more floor levels other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Floor levels, as used in this definition, do not include balconies within assembly occupancies or mezzanines that comply with Section 507.

AUTOMATIC, as applied to fire-protection devices, is a device or system providing an emergency function without the necessity of human intervention and activated as a result of a predetermined temperature rise, rate of rise of temperature or increase in the level of combustion products.

AWNING. See Section 3203.

AWNING SIGN. See Section 3203.

Section 7. Section 206 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 206 - E

EFFICIENCY DWELLING UNIT is a dwelling unit containing only one habitable room.

ELECTRICAL CODE is the National Electrical Code promulgated by the National Fire Protection Association, as adopted by this jurisdiction.

ELEVATOR CODE is the safety code for elevators, dumbwaiters, escalators, and moving walks as adopted by this jurisdiction (see Chapter 30).

EMERGENCY CONTROL STATION is an approved location on the premises of a Group H, Division 6 Occupancy where signals from emergency equipment are received and that is continually staffed by trained personnel.

EMERGENCY POWER SYSTEM refers to electrical systems that comply with Electrical Code Article 700. Emergency power systems provide power to specified equipment when the normal electrical supply is interrupted. The Electrical Code requires emergency power systems to make power available within 10 seconds. The time allowed for equipment to become operational may be longer than 10 seconds. For example, smoke control systems for atria are required to have an emergency power source, but are allowed 60 seconds to become operational by Section 905.14.

ENERGY CODE is the ~~Seattle~~ Washington State Energy Code with Seattle Amendments.

ENGINEER. See "project architect or engineer" and "structural engineer of record."

EXISTING BUILDINGS. See "building, existing."

EXIT. See Section 1005.1.

EXIT COURT. See Section 1006.3.5.1.

EXIT PASSAGEWAY. See Section 1005.3.4.

EXIT PLACARD. See Section 1002.

EXIT SIGN. See Section 1002.

EXTERIOR STAIRWAY. See Section 1006.3.3.1.

Section 8. Subsection 302.4 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

302.4 Fire Ratings for Occupancy Separations. Occupancy separations shall be provided between the various groups and divisions of occupancies as set forth in Table 3-B. For required separation of specific uses in Group I, Division 1 hospitals and nursing homes, see Table 3-C. See also Section 504.6.1.

EXCEPTIONS: 1. A three-hour occupancy separation may be used between a Group A, Division 1 and a Group S, Division 3 Occupancy used exclusively for the parking or storage of private or pleasure-type motor vehicles provided no repair or fueling is done. A two-hour occupancy separation may be used between a Group A, Division 2, 2.1, 3, or 4 or E or I Occupancy and a Group S, Division 3 Occupancy used exclusively for the parking or storage of private or pleasure-type motor vehicles provided no repair or fueling is done.

2. Unless required by Section 601.2.2, the three-hour occupancy separation between a Group R, Division 1 Occupancy and a Group S, Division 3 Occupancy used only for the parking or storage of private or pleasure-type motor vehicles with no repair or fueling may be reduced to two hours. Such occupancy separation may be further reduced to one hour where the area of such Group S, Division 3 Occupancy does not exceed 3,000 square feet (279 m2).

Code Alternate CA302.4a: When EXCEPTION 2 above is used for areas larger than 3,000 square feet and not exceeding 10,000 square feet, a one-hour occupancy separation is permitted provided the garage is equipped with an approved automatic sprinkler system.

3. In the one-hour occupancy separation between Group R, Division 3 and Group U Occupancies, the separation may be limited to the installation of 1/2-inch gypsum wallboard on the garage side and a self-closing, tightfitting solid-wood door 1 3/8 inches (35 mm) in thickness, or a self-closing, tightfitting door having a fire-protection rating of not less than 20 minutes when tested in accordance with Part II of UBC Standard 7-2, which is a part of this code, is permitted in lieu of a one-hour fire assembly. Fire dampers need not be installed in air ducts passing through the wall, floor, or ceiling separating a Group R, Division 3 Occupancy from a Group U Occupancy, provided such ducts within the Group U Occupancy are constructed of steel having a thickness not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) and have no openings into the Group U Occupancy.

4. Group H, Division 2 and Group H, Division 3 Occupancies need not be separated from Group H, Division 7 Occupancies when such occupancies also comply with the requirements for a Group H, Division 7 Occupancy.

5. Storage or laundry rooms serving Group R, Division 1 Occupancies that are used in common by tenants may be separated from the rest of the building by not less than one- hour fire-resistive occupancy separation.

Interpretation I302.4: The construction requirements of Section 307 for storage and mixing rooms apply when EXCEPTION 4 above is used.

Code Alternate CA302.4b: No occupancy separation is required between Group A, Division 2.1 and Groups B or M occupancies when both are protected by an automatic sprinkler system.

Code Alternate CA302.4c: Subject to the approval of the building official, opening protection in occupancy separation walls may be waived between Group S, Division 3 or Division 4 parking areas and enclosed portions of buildings such

as entry lobbies and similar areas provided:

A. The floors of the enclosed building, where the opening protection is waived, are protected by an automatic sprinkler system;

B. The openings are glazed with either tempered or laminated glazing materials;

C. When required by the building official, the glazing is protected on the parking side with a sprinkler system designed to wet the entire glazed surface; and

D. The Group S, Division 3 or Division 4 occupancy is used primarily for passenger loading and unloading and vehicle drive-through uses.

Section 9. Subsection 307.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

307.2 Construction, Height and Allowable Area.

307.2.1 General. Buildings or parts of buildings classed in Group H because of the use or character of the occupancy shall be limited to the types of construction set forth in Table 5-B and shall not exceed, in area or height, the limits specified in Sections 504, 505, and 506. For restrictions on Group H Occupancies in the Downtown Fire District, see Section 511.

307.2.2 Floors. Except for surfacing, floors in areas containing hazardous materials and in areas where motor vehicles, boats, helicopters, or airplanes are stored, repaired, or operated shall be of noncombustible, liquid-tight construction.

EXCEPTION: In Group H, Divisions 4 and 5 Occupancies, floors may be surfaced or waterproofed with asphaltic paving materials in that portion of the facility where no repair work is done.

307.2.3 Spill control and secondary containment for the storage of hazardous materials liquids and solids.

307.2.3.1 Applicability. When required by the Fire Code, rooms, buildings, or areas used for the storage of liquid or solid hazardous materials shall be provided with spill control and secondary containment in accordance with Section 307.2.3.

See the Fire Code for outdoor storage provisions.

307.2.3.2 Spill control for hazardous materials liquids. Rooms, buildings, or areas used for the storage of hazardous materials liquids in individual vessels having a capacity of more than 55 gallons (208.2 L) or when the aggregate capacity of multiple vessels exceeds 1,000 gallons (3785 L) shall be provided with spill control to prevent the flow of liquids to adjoining areas. Floors shall be constructed to contain a spill from the largest single vessel by one of the following methods:

1. Liquid-tight sloped or recessed floors,

2. Liquid-tight floors provided with liquid-tight raised or recessed sills or dikes, or

3. Sumps and collection systems.

Except for surfacing, the floors, sills, dikes, sumps, and collection systems shall be constructed of noncombustible material, and the liquid-tight seal shall be compatible with the material stored. When liquid-tight sills or dikes are provided, they are not required at perimeter openings, which are provided with an open-grate trench across the opening that connects to an approved collection system.

307.2.3.3 Secondary containment for hazardous materials liquids and solids. When required by the Fire Code, buildings,

rooms, or areas used for the storage of hazardous materials liquids or solids shall be provided with secondary containment in accordance with this section when the capacity of an individual vessel or the aggregate capacity of multiple vessels exceeds the following:

Liquids: Capacity of an individual vessel exceeds 55 gallons (208.2 L) or the aggregate capacity of multiple vessels exceeds 1,000 gallons (3785 L).

Solids: Capacity of an individual vessel exceeds 550 pounds (248.8 kg) or the aggregate capacity of multiple vessels exceeds 10,000 pounds (4524.8 kg).

The building, room, or area shall contain or drain the hazardous materials and fire-protection water through the use of one of the following methods:

1. Liquid-tight sloped or recessed floors,

2. Liquid-tight floors provided with liquid-tight raised or recessed sills or dikes,

3. Sumps and collection systems, or

4. Drainage systems leading to an approved location.

Incompatible materials shall be separated from each other in the secondary containment system.

Secondary containment for indoor storage areas shall be designed to contain a spill from the largest vessel, plus the design flow volume of fire-protection water calculated to discharge from the fire-extinguishing system over the minimum required system design area or area of the room or area in which the storage is located, whichever is smaller, for a period of 20 minutes.

A monitoring method shall be provided to detect hazardous materials in the secondary containment system. The monitoring method is allowed to be visual inspection of the primary or secondary containment, or other approved means. Where secondary containment is subject to the intrusion of water, a monitoring method for detecting water shall be provided. When monitoring devices are provided, they shall be connected to distinct visual or audible alarms.

Drainage systems shall be in accordance with the Plumbing Code and the following:

1. The slope of floors to drains shall not be less than 1 percent,

2. Drains shall be sized to carry the volume of the fire- protection water as determined by the design density discharged from the automatic fire-extinguishing system over the minimum required system design area or area of the room or area in which the storage is located, whichever is smaller,

3. Materials of construction for drainage systems shall be compatible with the materials stored,

4. Incompatible materials shall be separated from each other in the drainage system, and

5. Drains shall terminate in an approved location away from buildings, valves, means of egress, fire-access roadways, adjoining property and storm drains.

307.2.4 Spill control and secondary containment for use of hazardous materials liquids.

307.2.4.1 Open containers and systems.

307.2.4.1.1 Spill control for hazardous materials liquids. When required by the Fire Code, buildings, rooms, or areas where hazardous materials liquids are dispensed into vessels exceeding a 1.1-gallon (4 L) capacity or used in open

systems exceeding a 5.3-gallon (20 L) capacity shall be provided with spill control in accordance with Section 307.2.3.2.

307.2.4.1.2 Secondary containment for hazardous materials liquids. When required by the Fire Code, buildings, rooms, or areas where hazardous materials liquids are dispensed or used in open systems shall be provided with secondary containment in accordance with Section 307.2.3.3 when the capacity of an individual vessel or system or the capacity of multiple vessels or systems exceeds the following:

Individual vessel or system: Greater than 1.1 gallons (4 L)

Multiple vessels or systems: Greater than 5.3 gallons (20 L)

307.2.4.2 Closed containers and systems.

307.2.4.2.1 Spill control for hazardous materials liquids. When required by the Fire Code, buildings, rooms, or areas where hazardous materials liquids are used in individual vessels exceeding a 55-gallon (208.2 L) capacity shall be provided with spill control in accordance with Section 307.2.3.2.

307.2.4.2.2 Secondary containment for hazardous materials liquids. When required by the Fire Code, buildings, rooms, or areas where hazardous materials liquids are used in vessels or systems shall be provided with secondary containment in accordance with Section 307.2.3.3 when the capacity of an individual vessel or system or the capacity of multiple vessels or systems exceeds the following:

Individual vessel or system: Greater than 55 gallons (208.2 L)

Multiple vessels or systems: Greater than 1,000 gallons (3785 L)

307.2.5 Smoke and heat vents. Smoke and heat venting shall be provided in areas containing hazardous materials as set forth in the Fire Code in addition to the provisions of this code.

~~307.2.6 Standby power. Standby power shall be provided in Group H, Divisions 1, 2 and 3 Occupancies and in Group H, Division 7 Occupancies in which there is use or storage of corrosives, highly toxic solids and liquids. The standby power system shall be designed and installed in accordance with Article 701-11 (a), (b), (c) or (f) of the Electrical Code to automatically supply power to all required electrical equipment when the normal electrical supply system is interrupted.~~

307.2.7 Emergency power. An emergency power system shall be provided in Group H, Divisions 1, 2, 3, and 6 Occupancies and in Group H, Division 7 Occupancies in which highly toxic or toxic gases are stored or used. The emergency power system shall be designed and installed in accordance with the Electrical Code to automatically supply power to all required electrical equipment when the normal electrical supply system is interrupted.

Interpretation I307.2: The ~~standby and~~ emergency power system~~s~~ required by Section~~s 307.2.6 and~~ 307.2.7 shall be provided for required mechanical exhaust ventilation, treatment, temperature control, liquid-level limit control, pressure control, alarm, and detection or other required electrically-operated systems. For required systems, see the Fire Code.

The systems shall be designed and installed in accordance with Article 700-12 (a), (b), (c), or (e) of the Electrical Code, or, if the building official approves at the predesign conference, they may be designed and installed in accordance with Article 700-12 (d) of the Electrical Code.

307.2.8 Special provisions for Group H, Division 1 Occupancies. Group H, Division 1 Occupancies shall be in buildings used for no other purpose, without basements, crawl spaces, or other under-floor spaces. Roofs shall be of lightweight construction with suitable thermal insulation to prevent sensitive material from reaching its decomposition temperature.

Group H, Division 1 Occupancies containing materials, which are in themselves both physical and health hazards in

quantities exceeding the exempt amounts in Table 3-E, shall comply with requirements for both Group H, Division 1 and Group H, Division 7 Occupancies.

307.2.9 Special provisions for Group H, Divisions 2 and 3 Occupancies. Group H, Divisions 2 and 3 Occupancies containing quantities of hazardous materials in excess of those set forth in Table 3-G shall be in buildings used for no other purpose, shall not exceed one story in height and shall be without basements, crawl spaces, or other under-floor spaces.

Group H, Divisions 2 and 3 Occupancies containing water- reactive materials shall be resistant to water penetration. Piping for conveying liquids shall not be over or through areas containing water reactives, unless isolated by approved liquid-tight construction.

EXCEPTION: Fire-protection piping may be installed over reactives without isolation.

307.2.10 Special provisions for Group H, Division 4 Occupancies. Group H, Division 4 Occupancies having a floor area not exceeding 2,500 square feet (232 m2) may have exterior walls of not less than two-hour fire-resistive construction when less than 5 feet (1524 mm) from a property line and not less than one-hour fire-resistive construction when less than 16 feet (4877 mm) from a property line.

307.2.11 Special provisions for Group H, Division 6 Occupancies. See Section 307.10.

Section 10. Subsection 310.1 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

310.1 Group R Occupancies Defined. Group R Occupancies shall be:

Division 1. Hotels and apartment houses.

Congregate residences (each accommodating more than 10 persons).

Division 2. Not used.

Division 3. Lodging houses and detached dwellings.

Family child day care homes.

<u>Adult family homes.</u>

For occupancy separations, see Table 3-B.

Interpretation I310.1: For the purposes of this code, one or two dwelling units located in a mixed occupancy building shall be regulated the same as apartment houses except where the only other occupancy is Group U. Living quarters for a building's watchkeeper or caretaker occupied by not more than 2 adults shall be considered Group R, Division 3 Occupancies.

Interpretation I310.2: See the following definitions related to Group R, Division 3: "Dwelling"; "Dwelling unit"; "Congregate residence"; "Family".

Group R, Division 3 "detached dwellings" includes single- family residences; duplexes; and buildings containing one or two congregate residences, each of which accommodates 10 or fewer persons.

WSBC: Foster family care homes licensed by the Washington State Department of Social and Health Services shall be permitted, as an accessory use to a dwelling unit, for six or fewer children including those of the resident family.

Section 11. Subsection 310.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

310.2 Construction, Height and Allowable Area.

310.2.1 General. Buildings or parts of buildings classed in Group R because of the use or character of the occupancy shall be limited to the types of construction set forth in Table 5-B and shall not exceed, in area or height, the limits specified in Sections 504, 505, and 506.

For radon-resistive construction standards and formaldehyde reduction requirements, see Chapter 12.

310.2.2 Special provisions. Walls and floors separating individual dwelling units in the same building, separating individual guest rooms in hotels and walls separating dwelling units and guest rooms from corridors, or guest rooms in Group R, Division 1 Hotel Occupancies, shall not be of less than one-hour fire-resistive construction. Roof-ceiling soffits shall be provided with a minimum of 1/2-inch gypsum wallboard in buildings of Types II-N, III-N and V-N construction.

Group R, Division 1 Occupancies more than two stories in height or having more than 3,000 square feet (279 m2) of floor area above the first story shall not be of less than one-hour fire-resistive construction throughout, except as provided in Section 601.5.2.2.

~~Storage or laundry rooms that are within Group R, Division 1 Occupancies that are used in common by tenants shall be separated from the rest of the building by not less than one-hour fire-resistive occupancy separation.~~ Individual storage lockers in storage rooms serving Group R, Division 1 Occupancies shall be separated from each other with one-hour fire-resistive construction, and openings in the separation shall have one-hour protection.

EXCEPTION: The separation between individual storage lockers may be non-rated in rooms 500 square feet (46 m2) or less in area and in sprinklered rooms of any size.

For occupancy separation requirements for storage or laundry rooms serving Group R, Division 1 Occupancies, see Section 302.4.

For automatic sprinkler system requirements for storage rooms in basements and basement-like stories, see Section 904.2.2.

For Group R, Division 1 Occupancies with a Group S, Division 3 parking garage in the basement or first story, see Section ~~311.2.2~~ 601.2.2.

For attic space partitions and draft stops, see Section 708.

Section 12. Subsection 310.6 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

310.6 Room Dimensions.

310.6.1 Ceiling heights. ~~Habitable space shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) except as otherwise permitted in this section. Kitchens, halls, bathrooms and toilet compartments may have a ceiling height of not less than 7 feet (2134 mm) measured to the lowest projection from the ceiling. Where exposed beam ceiling members are spaced at less than 48 inches (1219 mm) on center, ceiling height shall be measured to the bottom of these members. Where exposed beam ceiling members are spaced at 48 inches (1219 mm) or more on center, ceiling height shall be measured to the bottom of the deck supported by these members, provided that the bottom of the members is not less than 7 feet (2134 mm) above the floor.~~

~~If any room in a building has a sloping ceiling, the prescribed ceiling height for the room is required in only one half the area thereof. No portion of the room measuring less than 5 feet (1524 mm) from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.~~

~~If any room has a furred ceiling, the prescribed ceiling height is required in two thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet (2134 mm).~~ Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet (2134 mm). The required height shall be measured from the finished floor to the lowest projection from the ceiling.

EXCEPTIONS: 1. Beams and girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (153 mm) below the required ceiling height.

Interpretation I310.6: Ducts and architectural features such as soffits and coved ceilings may project not more than 6 inches (153 mm) below the required ceiling height allowed for beams and girders.

2. Ceilings in basements may project to within 6 feet 8 inches (2032 mm) of the finished floor, and beams, girders, ducts or other obstructions may project to within 6 feet 4 inches (1931 mm) of the finished floor.

3. Not more than 50 percent of the required floor area of a room or space is permitted to have a sloped ceiling less than the prescribed height, with no portion of the required floor area less than 5 feet (1524 mm) in height.

4. The ceiling height along an accessible route of travel, as defined in Chapter 11, shall be at least 79 inches (2007 mm), including allowable projections below the minimum ceiling height.

310.6.2 Floor area. Dwelling units and congregate residences shall have at least one common room that shall have not less than 120 square feet (11.2 m2) of floor area. Every room which is used for both cooking and living or both living and sleeping quarters shall have a floor area of not less than 130 square feet (12 m2) if used or intended to be used by only one occupant, or of not less than 150 square feet (14 m2) if used or intended to be used by more than one occupant. Where more than two persons occupy a room used for sleeping purposes, the required floor area shall be increased at the rate of 50 square feet (4.6 m2) for each occupant in excess of two. In a dormitory, minimum floor area shall be 60 square feet (5.5 m2) per single or double bunk and aisles not less than 3 feet (914 mm) in width shall be provided between the sides of bunks and from every bunk to an exit or exit-access doorway. Other habitable rooms except kitchens shall have an area of not less than 70 square feet (6.5 m2). Efficiency dwelling units shall comply with the requirements of Section 310.7.

310.6.3 Width. Habitable rooms other than a kitchen shall not be less than 7 feet (2134 mm) in any dimension.

Section 13. New subsection 310.15 is added to the Seattle Building Code, adopted by Ordinance 119079, as follows:

310.15 Adult Family Homes.

310.15.1 General. This section shall apply to all newly constructed adult family homes and all existing single family homes being converted to adult family homes. This section shall not apply to those adult family homes licensed by the State of Washington Department of Social and Health Services prior to July 1, 2001.

310.15.2 Submittal Standards. In addition to those requirements in Section 106.3, the submittal shall identify the project as a Group R, Division 3 Adult Family Home Occupancy. A floor plan shall be submitted identifying the means of egress and the components in the means of egress such as stairs, ramps, platform lifts and elevators. The plans shall indicate the rooms used for clients and the sleeping room classification of each room.

310.15.3 Sleeping Room Classification. Each sleeping room in an adult family home shall be classified as:

1. Type S - where the means of egress contains stairs, elevators, or platform lifts.

2. Type NS1 - where one means of egress is at grade level or a ramp to grade is provided that is constructed in accordance with 1106.8.

3. Type NS2 - where two means of egress are at grade level or ramps to grade are provided that are constructed in

accordance with 1106.8.

310.15.4 Types of Locking Devices. All bedroom and bathroom doors shall be openable from the outside when locked.

Every closet shall be readily openable from the inside.

310.15.5 Smoke Alarm Requirements. All adult family homes shall be equipped with smoke alarms installed as required in Section 310.9.1. Alarms shall be installed in such a manner so that the fire warning may be audible in all parts of the dwelling upon activation of a single device.

310.15.6 Escape Windows and Doors. Every sleeping room shall be provided with emergency escape and rescue windows as required by Section 310.4.

310.15.7 Fire Apparatus Access Roads and Water Supply for Fire Protection. Adult family homes shall be served by fire apparatus access roads and water supplies meeting the requirements Article 9 of the Fire Code for new construction.

Section 14. Subsection 311.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

311.2 Construction, Height and Allowable Area.

311.2.1 General. Buildings or parts of buildings classed in Group S Occupancy because of the use or character of the occupancy shall be limited to the types of construction set forth in Table 5-B and shall not exceed, in area or height, the limits specified in Sections 504, 505, and 506.

311.2.2 Special provisions.

311.2.2.1 ~~Group R, Division 1 or Group S, Division 3 with Group A, Division 3; Group B; Group M; Group R, Division 1 or Group S, Division 3 Occupancy above. Other provisions of this code notwithstanding, a basement first or second story of a building may be considered as a separate and distinct building for the purpose of area limitations, limitation of number of stories and type of construction, when all of the following conditions are met:~~

~~1. The basement, first and second stories are of Type I construction and are separated from the building above with a three-hour occupancy separation. See Section 302.3.~~

~~2. The building above the three-hour occupancy separation contains only Group A, Division 3; Group B; or Group M or R, Division 1 Occupancies, or a Group S, Division 3 Occupancy used exclusively for the parking and storage of private or pleasure-type motor vehicles.~~

~~3. The building below the three-hour occupancy separation is a Group R, Division 1 or Group S, Division 3 Occupancy used exclusively for the parking and storage of private or pleasure-type motor vehicles.~~

~~EXCEPTIONS: 1. Entry lobbies, mechanical rooms and similar uses incidental to the operation of the building.~~

~~2. Group A, Division 3 and Group B office, drinking and dining establishments and Group M retail occupancies in addition to those uses incidental to the operation of the building (including storage areas), provided that the entire structure below the three-hour occupancy separation is protected throughout by an automatic sprinkler system.~~

~~4. The maximum building height in feet shall not exceed the limits set forth in Table 5-B for the least type of construction involved.~~

~~5. Where a second story is located below the three-hour occupancy separation, the building shall comply with the following:~~

~~5.1 The three-hour occupancy separation shall be no more than 15 feet above the highest grade and no more than 25 feet~~

~~above the lowest grade; and~~

~~5.2 When the building above the three-hour occupancy separation contains more than three stories of Type III or Type V construction, all portions of the buildings above and below the occupancy separation shall be protected throughout with an automatic sprinkler system that complies with UBC Standard 9-1; and~~

~~5.3 Occupied areas, including roof decks, shall be not more than 75 feet above the lowest level of fire department vehicle access.~~

~~Code Alternate CA311.2a: When the upper building is of Type V-One hour construction, the height may be measured from the three-hour occupancy separation, provided the building above and below the separation is protected throughout by an automatic sprinkler system designed to UBC Standard 9-1.~~

~~Code Alternate CA311.2b: Exterior walls on floors in the Type I building may have opening protection as required for the building above the three-hour occupancy separation, provided thhe following criteria are met~~

~~1. The floor contains a Group S, Division 3 parking garage; and~~

~~2. The floor is protected by an automatic sprinkler system conforming to UBC Standard 9-1.~~

<u>See Section 601.2.2.</u>

311.2.2.2 Group S, Division 3 Occupancy with Group S, Division 4 Occupancy above. Other provisions of this code notwithstanding, a Group S, Division 3 Occupancy, located in the basement or first story below a Group S, Division 4 Occupancy, as defined in Section 311.9, may be classified as a separate and distinct building for the purpose of determining the type of construction when all of the following conditions are met:

1. The allowable area of the structure shall be such that the sum of the ratios of the actual area divided by the allowable area for each separate occupancy shall not exceed one.

2. The Group S, Division 3 Occupancy is of Type I or II construction and is at least equal to the fire resistance of the Group S, Division 4 Occupancy.

3. The height and the number of the tiers above the basement shall be limited as specified in Table 3-H or Section 311.9.5.

4. The floor-ceiling assembly separating the Group S, Division 3 and Group S, Division 4 Occupancy shall be protected as required for the floor-ceiling assembly of the Group S, Division 3 Occupancy. Openings between the Group S, Division 3 and Group S, Division 4 Occupancy, except exit openings, need not be protected.

5. The Group S, Division 3 Occupancy is used exclusively for the parking or storage of private or pleasure-type motor vehicles, but may contain (i) mechanical equipment rooms incidental to the operation of the building and (ii) an office, and waiting and toilet rooms having a total area of not more than 1,000 square feet (93 m2).

311.2.3 Specific use provisions.

311.2.3.1 Group S, Divisions 3 and 5 Occupancies. In areas where motor vehicles, boats, or aircraft are stored, and in motor vehicle fuel-dispensing stations and repair garages, floor surfaces shall be of noncombustible, nonabsorbent materials. Floors shall drain to an approved oil separator or trap discharging to sewers in accordance with the Plumbing Code.

EXCEPTION: Floors may be surfaced or waterproofed with asphaltic paving materials in areas where motor vehicles or aircraft are stored or operated.

311.2.3.2 Marine or motor vehicle fuel-dispensing stations. Marine or motor vehicle fuel-dispensing stations, including canopies and supports over fuel-dispensers, shall be of noncombustible, fire-retardant-treated wood or of one-hour fire-resistive construction.

EXCEPTIONS: 1. Roofs of one-story fuel-dispensing stations may be of heavy-timber construction.

2. Canopies conforming to Section 2603.13 may be erected over pumps.

Canopies under which fuels are dispensed shall have a clear, unobstructed height of not less than 13 feet 6 inches (4114 mm) to the lowest projecting element in the vehicle drive- through area.

A one-hour occupancy separation need not be provided between fuel dispensers covered with a canopy that is open on three or more sides, and a Group M Occupancy retail store having an area of less than 2,500 square feet (232 m2) when the following conditions exist:

1. The Group M Occupancy is provided with two exits or exit- access doorways separated as required by Section 1004.2.4 and not located in the same exterior wall.

2. Fuel-dispenser islands are not located within 20 feet (6096 mm) of the Group M Occupancy retail store.

311.2.3.3 Parking garage headroom. Parking garages shall have an unobstructed headroom clearance of not less than 6 feet 6 inches (1981 mm) above the finish floor to any ceiling, beam, pipe, or similar obstruction, except for wall-mounted shelves, storage surfaces, racks, or cabinets. See Section 1107 for requirements for accessible parking.

311.2.3.4 Group S, Division 2 Occupancy roof-framing. In Division 2 Occupancies, the roof-framing system may be of unprotected construction.

311.2.3.5 Vehicle barriers. In parking garages where any parking area is located more than 5 feet (1524 mm) above the adjacent grade, vehicle barriers shall be provided.

EXCEPTION: Parking garages of Group U, Division 1 Occupancies.

Vehicle barriers shall have a minimum vertical dimension of 12 inches (305 mm) and shall be centered at 18 inches (457 mm) above the parking surface. See Table 16-B for load criterion.

311.2.3.6 Mini-storage warehouses. In mini-storage warehouse buildings, individual storage lockers shall be separated from each other with one-hour fire-resistive construction, and openings in the separation shall have one-hour protection.

EXCEPTION: The separation between individual storage lockers may be non-rated in rooms 500 square feet (46 m2) or less in area and in sprinklered rooms of any size.

For storage accessory to Group R, Division 1 Occupancies, see Section 310.2.2. For automatic sprinkler system requirements for storage rooms in basements and basement-like stories, see Section 904.2.2.

Section 15. Subsection 313.1 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

313.1 Group LC Occupancies Defined. Group LC Occupancies shall include buildings, structures, or portions thereof, used for the business of providing licensed care to clients in one of the following categories regulated by either the Washington Department of Health or the Department of Social and Health Services:

1. ~~Adult family home.~~

~~2.~~)) Adult residential rehabilitation facility.

~~3.~~)) 2. Alcoholism intensive inpatient treatment service.

~~4.~~ 3. Alcoholism detoxification service.

~~5.~~ 4. Alcoholism long term treatment service.

~~6.~~ 5. Alcoholism recovery house service.

~~7.~~ 6. Boarding home.

~~8.~~ 7. Group care facility.

~~9.~~ 8. Group care facility for severely and multiple handicapped children.

~~10.~~ 9. Residential treatment facility for psychiatrically impaired children and youth.

EXCEPTION: Where the care provided at an alcoholism detoxification service is acute care similar to that provided in a hospital, the facility shall be classified as a Group I, Division 1.1 hospital.

Section 16. Subsection 313.6 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

313.6 Room Dimensions.

313.6.1 Ceiling Heights. ~~Habitable space shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) except as otherwise permitted in this section. Kitchens, halls, bathrooms and toilet compartments may have a ceiling height of not less than 7 feet (2134 mm) measured to the lowest projection from the ceiling. Where exposed beam ceiling members are spaced at less than 48 inches (1219 mm) on center, ceiling height shall be measured to the bottom of those members. Where exposed beam ceilings members are spaced at 48 inches (1219 mm) or more on center, ceiling height shall be measured to the bottom of the deck supported by these members, provided that the bottom of the members is not less than 7 feet (2134 mm) above the floor.~~

~~If any room in a building has a sloping ceiling, the prescribed ceiling height for the room is required in only one half of the area thereof. No portion of the room measuring less than 5 feet (1524 mm) from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.~~

~~If any room has a furred ceiling, the prescribed ceiling height is required in two thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet (2134 mm).~~ Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet (2134 mm). The required height shall be measured from the finished floor to the lowest projection from the ceiling.

EXCEPTIONS: 1. Beams and girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (153 mm) below the required ceiling height.

2. Ceilings in basements without habitable spaces may project to within 6 feet 8 inches (2032 mm) of the finished floor, and beams, girders, ducts or other obstructions may project to within 6 feet 4 inches (1931 mm) of the finished floor.

3. Not more than 50 percent of the required floor area of a room or space is permitted to have a sloped ceiling less than 7 feet (2134 mm) in height, with no portion of the required floor area less than 5 feet (1524 mm) in height.

313.6.2 Floor area. Group LC Occupancies shall have at least one room which shall have not less than 120 square feet (11.2 m2) of floor area. Other habitable rooms except kitchens shall have an area of not less than 70 square feet (6.5 m2).

Portions of a room with a sloped ceiling measuring less than 5 feet (1524 mm) or a flat ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum habitable area of that room.

313.6.3 Width. Habitable rooms other than kitchens shall not be less than 7 feet (2134 mm) in any dimension.

Section 17. Subsection 402.7 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

402.7 ~~Standby~~ Emergency Power. Smoke control for the atrium and the smoke-control system for the tenant space shall be provided with ~~standby~~ emergency power as required in Section 905.8.

Code Alternate CA402.7: ~~Standby~~ Emergency power is not required for smoke control systems in buildings that have at least two exits and atria with a total volume of less than 40,000 cubic feet (1133 m3).

Section 18. Subsection 403.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

403.2 Automatic Sprinkler System.

403.2.1 System design. The automatic sprinkler system shall be provided throughout the building as specified by UBC Standard 9-1, and shall be designed in accordance with that standard and the following:

1. Shutoff valves and water-flow devices shall be provided for each floor.

2. An on-site supply of water equal to a twenty-minute demand or 15,000 gallons (56 781 L) on a combined sprinkler and standpipe, whichever is the smaller, shall be provided. This supply shall be automatically available if the principal supply fails.

EXCEPTION: Subject to the approval of the fire chief, the on-site water supply may be waived when water is supplied to the property from two different water mains which are separated by a sectional valve.

3. The sprinkler system shall be looped between standpipe risers. The installation of check valves shall be approved by the fire chief. The standpipe risers shall be interconnected and have an isolation valve for each standpipe. Two four-way fire department connections shall be provided, piped to separate standpipe risers. At least one fire department connection shall be piped to the standpipe side of an isolation valve.

EXCEPTION: Dry pipe sprinkler systems serving parking garages may be supplied separately from the standpipe risers and use a separate two-way fire department connection. The systems shall be connected to both water supplies.

4. Pitching of lines is not required.

5. A minimum of two fire pumps independently driven shall be provided and sized for the sprinkler demand and for standpipe operations. At least one fire pump shall be piped to the standpipe side of an isolation valve.

EXCEPTION: Subject to the approval of the fire chief, the secondary fire pump may be sized for the sprinkler demand only when an on-site water supply is provided in accordance with Item 2 above.

403.2.2 Modifications. The following modifications of code requirements are permitted:

1. In buildings of Type I construction, the fire-resistive time periods set forth in Table 6-A may be reduced by one hour for interior-bearing walls, exterior-bearing and nonbearing walls, roofs and the beams supporting roofs, provided they do not frame into columns or support tributary areas exceeding 500 square feet (46 m2). In buildings of Type II-F.R. construction, the fire-resistive time period set forth in Table 6-A may be reduced by one hour for interior-bearing walls, exterior-bearing and nonbearing walls, but no reduction is allowed for roofs. The fire-resistive time period reduction as specified herein shall not apply to exterior- bearing and nonbearing walls whose fire-resistive rating is less than four

hours.

Shafts other than stairway enclosures and elevator shafts may be reduced to one hour when sprinklers are installed within the shafts at alternate floors.

2. Except for corridors required by Section 1004.3.4 and partitions separating dwelling units or guest rooms, all interior nonbearing partitions required to be one-hour fire- resistive construction by Table 6-A may be of noncombustible construction without a fire-resistive time period.

3. ~~See exceptions for buildings with automatic sprinkler systems in Section 709.3.2.~~ Reserved.

4. Emergency windows required by Section 310.4 are not required.

5. A manually-operated fire alarm system is not required on floors occupied by Group B offices.

Section 19. Subsection 403.5 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

403.5 Fire Alarm and Communication Systems.

403.5.1 General. The fire alarm, emergency voice/alarm signaling system and fire department communication systems shall be designed and installed as set forth in this code and the Fire Code. For Group B office occupancies alarm sound levels shall not be less than 55 dBa. Audibility tests shall be performed with the doors open to offices of 300 square feet (28 m2) or less and all other doors closed.

403.5.2 Emergency voice alarm signaling system. The operation of any automatic fire detector, sprinkler, or water- flow device shall automatically sound a warning signal which conforms to fire department standards followed by voice instructions giving appropriate information and direction on a general or selective basis to the following terminal areas:

1. Elevators.

2. Elevator lobbies.

3. Corridors.

4. Exit stairways.

5. Rooms and tenant spaces exceeding 1,000 square feet (93 m2) in area.

6. Dwelling units in apartment houses.

7. Hotel guest rooms or suites.

8. Areas for evacuation assistance (as defined in Section 1104).

A manual override for emergency voice communication shall be provided for all paging zones.

403.5.3 Fire department communication system. A two-way, approved fire department communication system shall be provided for fire department use. It shall operate between the central control station and elevators, elevator lobbies, emergency ~~and standby~~ power rooms and on the stairway side of every entry door into enclosed stairways. The stairway phones or phone jacks shall be a part of this system.

Section 20. Subsection 403.8 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

403.8 ~~Standby Power, Light and~~ Emergency Power Systems.

403.8.1 ~~Standby~~ Emergency power. An ~~standby~~ emergency power-generator set conforming to the Electrical Code shall be provided on the premises. The set shall supply all functions required by this section at full power. Set supervisions with manual start and transfer override features shall be provided at the central control station.

An on-premises fuel supply sufficient for not less than two hours' full-demand operation of the system shall be provided.

The ~~standby~~ emergency power system shall have a capacity and rating that would supply all equipment required to be operational at the same time, including a selected elevator in each bank, as defined in Section 403.7 above. ~~The generating capacity need not be sized to operate all the connected electrical equipment simultaneously.~~

All power and control wiring for lighting, signal, communication and ~~emergency~~ other facilities specified in Sections 403.3, 403.4, 403.5, 403.6, and 403.7 ~~and 403.8~~, as applicable; fire pumps required to maintain pressure, ~~standby~~ egress lighting and normal circuits supplying exit signs and means of egress illumination shall be transferable to the ~~standby source~~ emergency power system. Each elevator shall be transferable to the ~~standby~~ emergency power ~~source~~ system. ~~Other than the selected car(s), the elevators need not run simultaneously and the switching may be either manual or automatic.~~ See Section 3016.7 for operation of elevators on the emergency power system.

~~403.8.2 Standby lighting. Standby lighting shall be provided as follows:~~

~~1. Separate lighting circuits and fixtures sufficient to provide light at the rate of 1/4 watt of incandescent illumination per square foot of floor area in all corridors, stairways, pressurized enclosures, elevator cars and lobbies and other areas that are clearly a part of the escape route.~~

~~Code Alternate CA403.8: Installations using fluorescent lamps shall have a minimum wattage of at least 1/3 of the incandescent requirements.~~

~~2. All circuits supply lighting for the central control station and mechanical equipment room.~~

403.8.3 Emergency ~~systems~~ power loads. The following ~~are classified as emergency systems and~~ shall operate within 10 seconds of failure of the normal power supply:

1. Exit sign and means of egress illumination as required by Sections 1003.2.8 and 1003.2.9.

2. Elevator car lighting.

3. Fire alarm system.

4. Lighting and equipment power circuits in the central control station required by Section 403.6.

Section 21. Subsection 403.9 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

403.9 Means of Egress. Means of egress shall comply with other requirements of this code and the following:

1. All stairway doors that are locked from the stairway side shall have the capability of being unlocked simultaneously without unlatching upon a signal from the central control station.

2. A telephone or other two-way communications system connected to an approved emergency service that operates continuously shall be provided at not less than every fifth floor in each required stairway where other provisions of this code permit the doors to be locked.

~~3. Re-entry shall be provided at approximately 5-story intervals at all times the building is occupied.~~

~~4.~~ 3. All required exit stairways shall terminate at the roof in a penthouse with a door complying with Sections

1003.3.1.3 and 1003.3.1.5. The building official may approve an alternate design for rescue purposes at the pre-design conference.

Code Alternate CA403.9: In lieu of item 2 above, re-entry may be provided at approximately five-story intervals at all times the building is occupied. A sign meeting the requirements of Section 1003.2.8 for means of egress identification shall identify each re-entry floor.

Section 22. Subsection 404.3 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

404.3 Special Provisions.

404.3.1 Automatic sprinkler systems. The covered mall building shall be provided with an automatic sprinkler system conforming to the provisions of UBC Standard 9-1, which is a part of this code. See Chapter 35. In addition to these standards, the automatic sprinkler system shall comply with the following:

1. All automatic sprinkler system control valves shall be electrically supervised by an approved central, proprietary, or remote station or a local alarm service that will give an audible signal at a constantly attended location.

2. The automatic sprinkler system shall be complete and operative throughout the covered mall building prior to occupancy of any of the tenant spaces. The separation between an unoccupied tenant space and the covered mall building shall be subject to the approval of the building official and the fire department.

Interpretation I404.3: Item 2 above requires that the sprinkler system be completed only in the common areas of the covered mall building, not in unoccupied tenant spaces.

3. Sprinkler protection for the mall shall be independent from that provided for tenant spaces. However, tenant spaces may be supplied by the same system if they can be independently controlled.

The respective increases for area and height for covered mall buildings, including anchor buildings, specified in Sections 311.9, 505, and 506, shall be permitted.

404.3.2 Standpipes. There shall be a combined Class I standpipe outlet connected to a system sized to deliver 250 gallons per minute (946.4 L/m) at the most hydraulically remote outlet. The outlet shall be supplied from the mall zone sprinkler system and shall be hydraulically calculated. Standpipe outlets shall be provided at each of the following locations:

1. Within the mall at the entrance to each exit passage or corridor.

2. At each floor-level landing within enclosed stairways opening directly onto the mall.

3. At exterior public entrances to the mall.

404.3.3 Smoke-control system. A smoke-control system meeting the requirements of Section 905 shall be provided.

EXCEPTION: A smoke-control system need not be provided when both of the following conditions exist:

1. The mall does not exceed one story, and

2. The gross leasable area does not exceed 24,000 square feet (2230 m2).

404.3.4 Fire department access to equipment. Rooms or areas containing controls for air-conditioning systems; automatic fire-extinguishing systems; or other detection, suppression, or control elements shall be identified for use by the fire department.

404.3.5 Tenant separation. Each tenant space shall be separated from other tenant spaces by a wall having a fire-resistive rating of not less than one hour. The separation wall shall extend from the floor to the underside of the ceiling above. Except as required by other provisions of this code, the ceiling need not be a fire-resistive assembly. A separation is not required between any tenant space and a mall except for occupancy separations required by Section 404.5 or for smoke-control purposes.

404.3.6 Public address system. Covered mall buildings exceeding 50,000 square feet (4645 m2) in total floor area shall be provided with a public address system accessible for use by the fire department. Covered mall buildings of 50,000 square feet (4645 m2) or less in total floor area, when provided with a public address system, shall have such system accessible for use by the fire department.

404.3.7 Plastic panels and plastic signs. Within every story or level and from side wall to side wall of each tenant space or mall, plastic panels and plastic signs shall comply with the following:

1. Plastics other than foam plastics shall be approved plastic materials as defined in Section 217.

2. Foam plastics shall have a maximum heat-release rate of 150 kilowatts when tested in accordance with approved recognized standards (see Chapter 35, Part IV) and shall have the following physical characteristics:

2.1 A density not less than 20 pounds per cubic foot (320.4 kg/m3) and

2.2 A thickness not greater than 1/2 inch (12.7 mm).

3. They shall not exceed 20 percent of the wall area facing the mall.

4. They shall not exceed a height of 36 inches (914 mm) except that if the sign is vertical, then the height shall not exceed 96 inches (2438 mm) and the width shall not exceed 36 inches (914 mm).

5. They shall be located a minimum distance of 18 inches (457 mm) from adjacent tenants.

404.3.8 Openings between anchor building and mall. Except for the occupancy separation between Group R, Division 1 sleeping rooms and the mall, openings between anchor buildings of Type I, Type II-F.R., Type II One-hour, or Type II-N construction and the mall need not be protected.

404.3.9 ~~Standby~~ Emergency power. Covered mall buildings exceeding 50,000 square feet (4645 m2) shall be provided with ~~standby~~ emergency power systems that are capable of operating the public address system, the smoke-control activation system, and the smoke-control equipment as required by Section 905.

Section 23. Subsection 405.3 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

405.3 Stages.

405.3.1 Construction. The minimum type of construction for stages shall be as required for the building except that the finish floor, in all types of construction, may be of wood.

Stages having a stage height exceeding 50 feet (15 240 mm) shall be separated from the balance of the building by not less than a two-hour occupancy separation.

EXCEPTION: The opening in the proscenium wall used for viewing performances may be protected by a proscenium fire- safety curtain conforming to UBC Standard 4-1.

Where permitted by the building construction type or where the stage is separated from all other areas as required in the paragraph above, the stage floor may be of unprotected noncombustible or heavy-timber framing members with a minimum 11/2-inch-thick (38 mm) wood deck.

Where a stage floor is required to be of one-hour fire- resistive-rated construction, the stage floor may be unprotected when the space below the stage is sprinklered throughout.

Where the stage height is 50 feet (15 240 mm) or less, the stage area shall be separated from accessory spaces by a one-hour fire-resistive occupancy separation.

EXCEPTION: Control rooms and follow spot rooms may be open to the audience.

405.3.2 Accessory rooms. Dressing rooms, workshops, storerooms, and other accessory spaces contiguous to stages shall be separated from one another and other building areas by a one-hour fire-resistive occupancy separation.

EXCEPTION: A separation is not required for stages having a floor area not exceeding 500 square feet (46.5 m2).

405.3.3 Ventilation. Emergency ventilation shall be provided for all stage areas greater than 1,000 square feet (93 m2) or with a stage height of greater than 50 feet (15 240 mm) to provide a means of removing smoke and combustion gases directly to the outside in the event of a fire. Ventilation shall be by one or a combination of the following methods in Section 405.3.3.1 and 405.3.3.2.

405.3.3.1 Smoke control. A means shall be provided to maintain the smoke level not less than 6 feet (1829 mm) above the highest level of assembly seating or above the top of the proscenium opening where proscenium wall and opening protection is provided. The system shall be activated independently by each of the following: (1) activation of the sprinkler system in the stage area and (2) by a manually operated switch at an approved location. The emergency ventilation system shall be connected to both normal and ~~standby~~ emergency power. The fan(s) power wiring and ducts shall be located and properly protected to ensure a minimum 20 minutes of operation in the event of activation.

405.3.3.2 Roof vents. Two or more vents shall be located near the center of and above the highest part of the stage area. They shall be raised above the roof and provide a net free vent area equal to 5 percent of the stage area. Vents shall be constructed to open automatically by approved heat-activated devices. Supplemental means shall be provided for manual operation of the ventilator from the stage floor. Vents shall be labeled by an approved agency.

405.3.4 Proscenium walls. The proscenium opening shall be protected by an approved fire curtain or an approved water curtain complying with UBC Standard 4-1. The fire curtain shall be designed to close automatically upon automatic detection of a fire and upon manual activation and shall resist the passage of flame and smoke for 20 minutes between the stage area and the audience area.

405.3.5 Gridirons, fly galleries and pinrails. Beams designed only for the attachment of portable or fixed theater equipment, gridirons, galleries, and catwalks shall be constructed of materials consistent with the building type of construction. A fire-resistance rating is not required.

EXCEPTION: Combustible materials shall be permitted for use as the floors of galleries and catwalks of all types of construction.

405.3.6 Flame-retardant requirements. Combustible scenery of cloth, film, dry vegetation, and similar materials shall meet the requirements of the Fire Code. Foam plastics shall have a maximum heat release rate of 100 kilowatts.

Section 24. Subsection 502.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

502.2 Numbering System Prescribed. The numerical designation of all doorways and entrances to buildings~~,~~ and lots~~, yards and grounds~~ fronting upon the ~~several ways, avenues, streets, drives, places and squares~~ named right-of-ways of the City are established in accordance with the following system:

Except where otherwise specified, 100 numbers are allotted to each block, provided that where a named right-of-way intervenes between consecutively numbered right-of-ways, 50 numbers shall be allotted for each block; one whole

number is allotted to each 20 feet (6096 mm) of frontage in each block; even numbers shall be used on the northerly side of ~~streets or ways~~ named right-of-ways extending in an easterly and westerly direction and on the easterly side of ~~avenues or ways~~ named right-of-ways extending in a northerly and southerly direction; odd numbers shall be used on the southerly side of ~~streets or ways~~ named right-of-ways extending in an easterly and westerly direction and on the westerly side of ~~avenues or ways~~ named right-of-ways extending in a northerly and southerly direction.

In the case of irregular ~~drives, places, streets, ways or avenues~~ named right-of-ways, the frontages shall be numbered as near as may be according to the uniform series of block numbers with which they most nearly correspond.

Section 25. Subsection 502.3 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

502.3 Numbering of Buildings

502.3.1 Numbering of Buildings Downtown. Between Yesler Way and Denny Way all frontages upon ~~avenues~~ named right-of-ways extending in a northerly and southerly direction and lying west of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

Yesler Way to Fir Street number 100 and upwards, Fir Street to Spruce Street number 150 and upwards, Spruce Street to Alder Street number 200 and upwards, continuing by consecutive hundreds to Pine Street; Pine Street to Olive ~~Street~~ Way number 1600 and upwards, Olive ~~Street~~ Way to Howell Street number 1700 and upwards, Howell Street to Stewart Street number 1800 and upwards, Stewart Street to Virginia Street number 1900 and upwards, continuing by consecutive hundreds to Denny Way.

Between East Yesler Way and East Denny Way all frontages upon ~~avenues~~ named right-of-ways extending in a northerly and southerly direction and lying east of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

East Yesler Way to East Fir Street number 100 and upwards, East Fir Street to East Spruce Street number 150 and upwards, East Spruce Street to East Alder Street number 200 and upwards, continuing by consecutive hundreds to East Marion Street; East Marion Street to East Spring Street number 900 and upwards, East Spring Street to East Union Street number 1100 and upwards, East Union Street to East Pike Street number 1400 and upwards, continuing by consecutive hundreds to East Denny Way.

Between East Yesler Way and East Denny Way all frontages upon ~~ways and streets~~ named right-of- ways extending in an easterly and westerly direction and lying west of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

~~Westward~~ Southwesterly from Elliott Avenue, or Alaskan Way if south of Lenora Street, number 51 and downwards~~,~~; Elliott Avenue (or Alaskan Way) to Western Avenue number 52 and upwards~~,~~; Western Avenue to First Avenue number 76 and upwards~~,~~; First Avenue to Second Avenue number 100 and upwards, continuing ~~eastward~~ northeasterly to Broadway, East Union Street, Minor Avenue, or Melrose Avenue by consecutive hundreds.

Between East Yesler Way and East Denny Way all frontages upon ~~ways and streets~~ named right-of- ways extending in an easterly and westerly direction and lying east of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

Melrose Avenue to Bellevue Avenue number 300 and upwards, Bellevue Avenue to Summit Avenue number 400 and upwards, continuing by consecutive hundreds to Broadway.

Broadway to Tenth Avenue number 900 and upwards, Tenth Avenue to Eleventh Avenue number 1000 and upwards, continuing by consecutive hundreds corresponding with the numbered series of avenues eastward to Lake Washington.

On East Olive Way eastward from Melrose Avenue, the street numbers shall run upwards consecutively, eastward from the existing street numbers which are west of the Melrose Avenue intersection.

502.3.2 Numbering of Buildings South of Downtown and East of the East Waterway. South of Yesler Way the frontages upon the ~~avenues~~ named right-of-ways extending in a northerly and southerly direction shall be numbered as follows:

Yesler Way (or East Yesler Way) to South Washington Street number 100 and upwards, ~~continuing by consecutive hundreds to South ((Orcas)) Jackson Street with blocks and streets on the east side of 1st Avenue South being taken as a controlling series for numbering purposes~~ South Washington Street to South Main Street number 200 and upwards, South Main Street to South Jackson St number 300 and upwards, South Jackson Street to South King Street number 400 and upwards, continuing by consecutive hundreds to South Barton Place, with blocks and streets on Rainier Avenue South being taken as the controlling series.

South of South ~~Orcas Street~~ Barton Place , 51st Avenue South shall be taken as the controlling series to the southern City limits. ~~Note: Between South Othello Street and South Barton, 51st Avenue South becomes Rainier Avenue South, which shall be used for the controlling series until 51st Avenue South separates from Rainier Avenue South and continues on southward.~~

On ~~the~~ Second Avenue Extension South from ~~Jackson Street~~ Fourth Avenue South to Yesler Way ~~all~~, the frontages shall be numbered as follows:

From Fourth Avenue South to South Jackson Street number 100 and upwards, South Jackson Street to South Main Street number 200 and upwards, South Main Street to South Washington Street number 300 and upwards, South Washington Street to Yesler Way number 400 and upwards.

South of Yesler Way the frontages upon ~~ways and streets~~ named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Westward from First Avenue South to the Harbor Line or East Waterway number 99 and downwards, First Avenue South to Occidental Avenue South number 100 and upwards, Occidental Avenue South to Second Avenue South number 150 and upwards, Second Avenue South to Third Avenue South number 200 and upwards, continuing by consecutive hundreds to Sixth Avenue South; Sixth Avenue South to Maynard Avenue South number 600 and upwards, Maynard Avenue South to Seventh Avenue South number 650 and upwards, Seventh Avenue South to Eighth Avenue South (or Airport Way south of South Hinds Street) number 700 and upwards, Eighth Avenue South (or Airport Way south of South Hinds Street) to Airport Way South (or Ninth Avenue South south of South Hinds Street) number 800 and upwards, Airport Way South (or Ninth Avenue South south of South Hinds Street) to Interstate-5 number 900 and upwards, continuing eastward by consecutive hundreds corresponding with the numbered series of avenues to Lake Washington~~, provided, that on South Michigan Street from 5th Place South to Seventh Avenue South all frontages shall be numbered as follows:~~

~~From 5th Place South to 6th Avenue South numbers 550 to 570 inclusive, and from 6th Avenue South to 7th Avenue South numbers 600 to 624 inclusive; and on South River Street from 5th Place South to 7th Avenue South all frontages shall be numbered as follows:~~

~~From 5th Place South to 6th Avenue South numbers 550 to 570 inclusive, and from 6th Avenue South to 7th Avenue South numbers 600 to 624 inclusive~~.

502.3.3 Numbering of Buildings Between Downtown and the Lake Washington Ship Canal. North of Denny Way ~~(and~~ , East Denny Way~~)~~, and East Howell Street east of Madrona Drive the frontages upon the ~~avenues~~ named right-of-ways extending in a northerly and southerly direction shall be numbered as follows:

Denny Way (and East or West Denny Way) to John Street (and East or West John Street) number 100 and upwards, continuing by consecutive hundreds ~~to Galer Street (and East Galer Street)~~, the blocks and streets on ~~the east side of~~ Queen Anne Avenue North being taken as a controlling series for numbering purposes west of Fairview Avenue North (or Fairview Avenue East) and south of Bertona Street (or West Bertona Street); 36th Avenue West being taken as the controlling series for numbering purposes west of Fairview Ave North (or Fairview Ave East) and north of Bertona

Street (or West Bertona Street); 10th Avenue East being taken as the controlling series for numbering purposes east of Fairview Avenue North (or Fairview Avenue East).

~~Galer Street (and East Galer Street) to Garfield Street (and East Garfield Street) number 1500 and upwards, continuing by consecutive hundreds to Smith Street (and Louisa Street), the blocks and streets along the east side of First Avenue North being taken as a controlling series for numbering purposes; Smith Street (and Louisa Street) to Raye and West Raye Street (and Roanoke Street) number 2500 and upwards, continuing by consecutive hundreds to Barrett Street, East Roanoke Street to Edgar Street number 2600 and upwards, continuing by consecutive hundreds north to Lake Union; the blocks and streets along Queen Anne Avenue shall be taken as a controlling series for numbering purposes.~~

~~West Barrett Street number 3000 and upwards, to West Grover Street number 3400 and upwards, continuing by consecutive hundreds to West Emerson Street; West Emerson Street to West Thurman Street number 3800 and upwards, continuing by consecutive hundreds based on the shortest series of blocks northward to Salmon Bay and Admiralty Inlet.~~

Between Queen Anne Avenue North and Eastlake Avenue ~~and Lake Union~~ East (East Galer being the northeast boundary of this subsection) the frontages on the ~~ways and streets~~ named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Queen Anne Avenue North to First Avenue North number 1 and upwards, First Avenue North to Warren Avenue North number 100 and upwards, Warren Avenue North to Second Avenue North number 150 and upwards, Second Avenue North to Third Avenue North number 200 and upwards, continuing by consecutive hundreds corresponding to the numbered series of avenues with half hundreds in the case of Nob Hill, Taylor, Bigelow, Mayfair, and Dexter Avenues North, to Ninth Avenue North; Ninth Avenue North to Westlake Avenue North number 900 and upwards, Westlake Avenue North to Terry Avenue North number 950 and upwards, Terry Avenue North to Boren Avenue North number 1000 and upwards, Boren Avenue North to Fairview Avenue North number 1100 and upwards, Fairview Avenue North to Minor Avenue North number 1150 and upwards, Minor Avenue North to Pontius Avenue North number 1200 and upwards, Pontius Avenue North to ~~Howard Avenue North and~~ Yale Avenue North number 1250 and upwards, ~~Howard Avenue North and~~ Yale Avenue North to Eastlake Avenue East number 1300 and upwards.

East of Eastlake Avenue ~~and Lake Union~~ East (or Fairview Avenue East north of East Galer Street) and North of East Denny Way the frontages upon the ~~ways and streets~~ named east-west right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Eastlake Avenue East to Melrose Avenue ~~North~~ East number 200 and upwards continuing by consecutive hundreds eastward to ~~North~~ Broadway East; ~~North~~ Broadway East to Tenth Avenue ~~North~~ East number 900 and upwards, Tenth Avenue ~~North~~ East to Federal Avenue East number 1000 and upwards, Federal Avenue East to Eleventh Avenue ~~North~~ East number 1050 and upwards, Eleventh Avenue ~~North~~ East to Twelfth Avenue ~~North~~ East number 1100 and upwards, continuing by consecutive hundreds eastward to Lake Washington ~~by consecutive hundreds corresponding with the numbered series of avenues with half hundreds where an additional avenue intervenes between two consecutively numbered avenues~~.

West of Queen Anne Avenue North the frontages upon ~~ways and streets~~ named east-west right-of-ways extending in an easterly and westerly direction shall be numbered westward ~~from Queen Anne Avenue, all numbers being prefixed by the letter W,~~ as follows:

Queen Anne Avenue North to First Avenue West number ~~W~~ 1 and upwards, First Avenue West to Second Avenue West number ~~W~~ 100 and upwards, continuing by consecutive hundreds westward ~~consecutive hundreds corresponding with the numbered avenues with half hundreds where an additional avenue intervenes between two consecutively numbered avenues~~ to Puget Sound.

502.3.4 Numbering of Buildings North of ~~Union Bay of Lake Washington, Lake Union, Salmon Bay and~~ the Lake Washington Ship Canal. The plan for the numbering of frontages upon the various ~~avenues, streets and other public places~~ named right-of-ways in that portion of the City of Seattle lying north of ~~Union Bay of Lake Washington, Lake~~

~~Union, Salmon Bay and~~ the Lake Washington Ship Canal is established as follows:

The frontages upon the ~~avenues and places which run in a general northerly and southerly direction,~~ named right-of-ways extending in a northerly and southerly direction shall be numbered in accordance with the designations of the intersecting numbered streets~~,~~ as follows:~~northward~~ from ~~the southern-most line of~~ the State Harbor Line ~~abutting Gas Works Park, from,~~ number 2900 and upwards~~; from North Thirtieth Street, from 3000 upwards, from Fiftieth Street (or Northeast Fiftieth Street, or Northwest Fiftieth Street) from 5000 upwards; one hundred numbers being allowed for each block, except in cases where a named "place" intervenes between two consecutively numbered streets, and in such case 50 numbers shall be allowed for each block. Frontages on avenues and places shall number from 3400 upwards in the block commencing from North Thirty-fourth Street and running north; from 3500 upwards in the block north from North and Northwest Thirty- fifth Street and from 3600 upwards in the block north of North, Northwest and Northeast Thirty-sixth Street~~.

The frontages upon the ~~streets and places which run in a general~~ named right-of-ways extending in an easterly and westerly direction~~,~~ shall be numbered as follows:

West from First Avenue Northwest, commencing with 100, and continuing west in correspondence with the numbers of the avenues~~; 100 numbers being allowed for each block, except where an avenue or place intervenes between two consecutively numbered avenues, and in such case 50 numbers shall be allowed for each block~~ to Puget Sound.

East from First Avenue Northwest, commencing with 100 and continuing as follows: East from Palatine Avenue North, 200 and upwards; from Greenwood Avenue North, 300 and upwards; from Phinney Avenue North, 400 and upwards; from ~~Sunset Place~~ Francis Avenue North, 450 and upwards; from Dayton Avenue North, 500 and upwards; from Evanston Avenue North, 600 and upwards; from Fremont Avenue North, 700 and upwards; from North Park Avenue North, 800 and upwards; from Linden Avenue North, ~~800~~ 900 and upwards (800 and upwards south of North 65th Street); from Aurora Avenue North, 900 and upwards (1100 and upwards north of North 65th Street); from Winslow Place North, 950 and upwards; from Whitman Avenue North 1000 and upwards; from Albion Place North, 1050 and upwards; from Woodland Park Avenue North, 1100 and upwards; from Nesbit Avenue North, 1150 and upwards; from Midvale Avenue North, 1200 and upwards; from Lenora Place North, 1250 and upwards; from Stone Avenue North (Stone Way North south of North 46th Street), 1300 and upwards; from Interlake Avenue North, 1400 and upwards; from Ashworth Avenue North, l500 and upwards; from Carr Place North , 1550 and upwards; from Woodlawn Avenue North, 1600 and upwards, from Densmore Avenue North, 1700 and upwards; from Caroline Avenue North and Courtland Place North, 1750 and upwards; from Wallingford Avenue North , 1800 and upwards; from Burke Avenue North and Canfield Place North, 1900 and upwards; From Stroud Avenue North and Wayne Place North, 2000 and upwards; from Meridian Avenue North, 2100 and upwards; from Bagley Avenue North, 2200 and upwards; from Corliss Avenue North, 2300 and upwards; from Sunnyside Avenue North, 2400 and upwards; and from Eastern Avenue North, 2500 and upwards.

East from First Avenue Northeast, commencing with 100, and continuing east in correspondence with the numbered avenues~~; 100 numbers being allowed for each block, except where an avenue or place intervenes between two consecutively numbered avenues, and in such case 50 numbers shall be allowed for each block~~ to Lake Washington.

502.3.5 Numbering Buildings on Harbor Island. The frontages upon ~~avenues and places which run in a general~~ named right-of-ways extending in a northerly and southerly direction~~,~~ shall be numbered as follows:

~~South of Southwest Massachusetts Street, commencing with 1700 and continuing south corresponding with the numbers of the intersecting streets to the southernmost edge of Harbor Island~~ Southwest Massachusetts Street to Southwest Florida Street, number 1700 and upwards; Southwest Florida Street to Southwest Lander Street, number 2500 and upwards; Southwest Lander Street to Southwest Hanford Street, number 2700 and upwards; Southwest Hanford Street to Southwest Spokane Street, number 3200 and upwards.

The frontages upon named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

~~West of the East Waterway beginning with 1000 and continuing westward to the West Waterway~~ The East Waterway

to 11th Avenue Southwest, number 900 and upwards; 11th Avenue Southwest to 13th Avenue Southwest, number 1100 and upwards; 13th Avenue Southwest to 16th Avenue Southwest, number 1300 and upwards; 16th Avenue Southwest to the West Waterway, number 1600 and upwards.

502.3.6 Numbering Buildings West of the West Waterway and the Duwamish Waterway. The frontages upon ~~avenues and places which run in a general~~ named right-of-ways extending in a northerly and southerly direction, shall be numbered as follows:

North of Southwest Andover Street, commencing with 3800 and continuing north ~~in correspondence with the numbers of the intersecting streets~~ to the Duwamish Head by consecutive hundreds, the blocks and streets on California Avenue Southwest being taken as the controlling series for numbering purposes.

South of Southwest Andover Street, commencing with 4000 and continuing south to Southwest Roxbury Street by consecutive hundreds , the blocks and streets of California Avenue Southwest being taken as the controlling series for numbering purposes.

South of Southwest Roxbury Street, commencing with 9600 and continuing south to the south City limits by consecutive hundreds, in correspondence with the numbers of the intersecting streets ~~to the south City limits~~.

The frontages upon ~~streets and places which run in a general~~ named right-of-ways extending in an easterly and westerly direction, shall be numbered as follows:

West of California Avenue Southwest, commencing with 4300 and continuing westward in correspondence with the numbers of the intersecting avenues to Puget Sound~~, provided that Thirty-fifth Avenue Southwest shall control the series south of Southwest Holden Street~~.

East of California Avenue Southwest, commencing with 4200 and continuing eastward in correspondence with the numbers of the intersecting avenues to the Duwamish Waterway~~; provided that Thirty-fifth Avenue Southwest shall be taken as the controlling series south of Southwest Holden Street~~.

Section 26. Table 5-A of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

TABLE 5-A-EXTERIOR WALL AND OPENING PROTECTION BASED ON LOCATION ON PROPERTY FOR ALL CONSTRUCTION TYPES1,2,3,8

OCCUPANCY CONSTRUCTION EXTERIOR WALLS GROUP4 TYPE

Bearing Nonbearing OPENINGS5

Distances are measured to property lines (see Section 503). x 304.8 for mm

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. than 5 feet than 5 feet Two-hour N/C less Protected less than than 16 feet 16 feet One-hour N/C less A-1 than 40 feet NR, N/C elsewhere

II One-hour II-N III One-hour III-N Group A, Division 1 Occupancies are not allowed in IV-H.T. these construction types. V One-hour V-N

A-2 I-F.R. Four-hour N/C Four-hour N/C less Not permitted less A-2.19 II-F.R. than 5 feet than 5 feet A-3 III One-hour Two-hour N/C less Protected less than A-4 IV-H.T. than 16 feet 16 feet One-hour N/C less than 40 feet NR, N/C elsewhere

A-2 II One-hour Two-hour N/C Same as bearing Not permitted less A-2.12,9 less than 10 except NR, N/C 40 than 5 feet feet feet or greater Protected less than One-hour N/C 10 feet elsewhere

II-N Group A, III-N Divisions 2 V-N and 2.1 Occupancies are not allowed in these construction types.

V One-hour Two-hour less Same as bearing Not permitted less than 10 feet than 5 feet One-hour Protected less than elsewhere 10 feet

II One-hour Two-hour N/C Same as bearing Not permitted less less than 5 except NR, N/C 40 than 5 feet feet feet or greater Protected less than One-hour N/C 10 feet elsewhere

II-N Two-hour N/C Same as bearing Not permitted less less than 5 than 5 feet feet Protected less than One-hour N/C 10 feet A-3 less than 16 feet NR, N/C elsewhere

III-N Four-hour N/C Four-hour N/C less Not permitted less than 5 feet than 5 feet Two-hour N/C less Protected less than than 16 feet 16 feet One-hour N/C less than 40 feet NR, N/C elsewhere

V One-hour Two-hour less Same as bearing Not permitted less than 5 feet than 5 feet One-hour Protected less than elsewhere 10 feet

V-N Two-hour less Same as bearing Not permitted less than 5 feet than 5 feet One-hour less Protected less than than 16 feet 10 feet NR elsewhere

II One-hour One-hour N/C Same as bearing Protected less than except NR, N/C 40 10 feet feet or greater

II-N One-hour N/C Same as bearing Protected less than less than 10 10 feet feet NR, N/C elsewhere

A-4 III-N Four-hour N/C Four-hour N/C less Not permitted less than 5 feet than 5 feet Two-hour N/C less Protected less than than 16 feet 10 feet One-hour N/C less than 40 feet NR, N/C elsewhere

V One-hour One-hour Same as bearing Protected less than 10 feet

V-N One-hour less Same as bearing Protected less than than 10 feet 10 feet NR elsewhere

B, F-1, M, I-F.R. Four-hour N/C Four-hour N/C less Not permitted less S-1, S-318 II-F.R. less than 5 than 5 feet than 5 feet III One-hour feet Two-hour N/C less Protected less than B, F-1, M, III-N Two-hour N/C than 16 feet 16 feet S-1, S-318 IV-H.T. elsewhere One-hour N/C less Continued than 40 feet NR, N/C elsewhere

II One-hour One-hour N/C Same as bearing Not permitted less except NR, N/C 40 than 5 feet feet or greater Protected less than 10 feet

B II-N3 One-hour N/C Same as bearing Not permitted less F-1 less than 10 than 5 feet M feet Protected less than S-1, S-3 NR, N/C 10 feet elsewhere

V One-hour One-hour Same as bearing Not permitted less than 5 feet Protected less than 10 feet

V-N One-hour less Same as bearing Not permitted less than 10 feet than 5 feet NR elsewhere Protected less than 10 feet

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. than 5 feet than 5 feet III One-hour Two-hour N/C less Protected less than III-N than 16 feet 16 feet IV-H.T. One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour Two-hour N/C Same as bearing Not permitted less less than 5 except than 5 feet feet NR, N/C 40 feet or Protected less than One-hour N/C greater 10 feet elsewhere

E-1 II-N Two-hour N/C Same as bearing Not permitted less E-26,10 less than 5 than 5 feet E-36,10 feet Protected less than One-hour N/C 10 feet less than 10 feet NR, N/C elsewhere

V One-hour Two-hour less Same as bearing Not permitted less than 5 feet than 5 feet One-hour Protected less than elsewhere 10 feet

V-N Two-hour less Same as bearing Not permitted less than 5 feet than 5 feet One-hour less Protected less than than 10 feet 10 feet NR elsewhere

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. less than 3 than 3 feet than 3 feet III One-hour feet Two-hour N/C less Protected less than III-N Two-hour N/C than 16 feet 16 feet IV-H.T. elsewhere One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour One-hour N/C Same as bearing Not permitted less NR, N/C 40 feet or than 5 feet greater

F-2 II-N3 One-hour N/C Same as bearing Not permitted less S-2 less than 5 than 5 feet feet NR, N/C elsewhere

V One-hour One-hour Same as bearing Not permitted less than 5 feet

V-N One-hour less Same as bearing Not permitted less than 5 feet than 5 feet NR elsewhere

I-F.R. Four-hour N/C NR N/C Not restricted3 II-F.R.

II One-hour One-hour N/C NR N/C Not restricted3

H-12,3,11,12 II-N NR N/C Same as bearing Not restricted3

III One-hour III-N IV-H.T. Group H, Division 1 Occupancies are not allowed in V One-hour buildings of these construction types. V-N

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. than 5 feet than 5 feet III One-hour Two-hour N/C less Protected less than III-N than 10 feet 16 feet IV-H.T. One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour Four-hour N/C Four-hour N/C less Not permitted less less than 5 than 5 feet than 5 feet feet Two-hour N/C less Protected less than Two-hour N/C than 10 feet 16 feet less than 10 One-hour N/C less feet than 16 feet One-hour N/C NR, N/C elsewhere elsewhere

H-22,3,11,13 II-N Four-hour N/C Same as bearing Not permitted less H-32,3,11,14 less than 5 than 5 feet H-43,11,15 feet Protected less than H-6 Two-hour N/C 16 feet H-7 less than 10 feet One-hour N/C less than 16 feet NR, N/C elsewhere

V One-hour Four-hour less One-hour less than Not permitted less than 5 feet 10 feet than 5 feet Two-hour less NR elsewhere Protected less than than 10 feet 16 feet One-hour elsewhere

V-N Four-hour less Same as bearing Not permitted less than 5 feet than 5 feet Two-hour less Protected less than than 10 feet 16 feet One-hour less than 16 feet NR elsewhere

I-F.R. Four-hour N/C Four-hour N/C less Protected less than II-F.R. than 40 feet 60 feet III One-hour One-hour N/C less III-N than 60 feet IV-H.T. NR, N/C elsewhere

H-52,12 II One-hour One-hour N/C Same as bearing, Protected less than except NR, 60 feet N/C 60 feet or greater

II-N One-hour N/C Same as bearing Protected less than H-52,12 less than 60 60 feet feet NR, N/C elsewhere

Continued V One-hour One-hour Same as bearing Protected less than 60 feet

V-N One-hour less Same as bearing Protected less than than 60 feet 60 feet NR elsewhere

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less I-1.1 II-F.R. than 5 feet than 5 feet I-1.2 Two-hour N/C less Protected less than I-2 than 16 feet 16 feet I-3 One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour Two-hour N/C Same as bearing Not permitted less I-1.1, I-1.2, less than 5 except than 5 feet I-32,16 feet; One-hour NR, N/C 40 feet or Protected less than N/C elsewhere greater 10 feet

V One-hour Two-hour less Same as bearing Not permitted less than 5 feet than 5 feet One-hour Protected less than elsewhere 10 feet

I-1.1 II-N These occupancies are not allowed in buildings of I-1.2 III-N these construction types.7,16 I-2 V-N I-3

I-3 IV-H.T. Group I, Division 3 Occupancies are not allowed in buildings of this construction type.

I-1.1 III One-hour Four-hour N/C Same as bearing Not permitted less I-1.2 except than 5 feet I-2 NR, N/C 40 feet or Protected less than I-316 greater 16 feet

I-1.1 IV-H.T. Four-hour N/C Same as bearing Not permitted less I-1.2 except than 5 feet I-2 NR, N/C 40 feet or Protected less than greater 16 feet

I-2 II One-hour One-hour N/C Same as bearing Not permitted less except than 5 feet NR, N/C 40 feet or Protected less than greater 10 feet

V One-hour One-hour Same as bearing Not permitted less than 5 feet Protected less than 10 feet

R-1 I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. less than 3 than 3 feet than 3 feet III One-hour feet Two-hour N/C less Protected less than III-N Two-hour N/C than 16 feet 16 feet IV-H.T. elsewhere One-hour N/C less than 40 feet NR, N/C elsewhere

R-1 II One-hour One-hour N/C Same as bearing Not permitted less Continued except than 5 feet NR, N/C 40 feet or greater

II-N One-hour N/C Same as bearing Not permitted less less than 5 than 5 feet feet NR, N/C elsewhere

V One-hour One-hour Same as bearing Not permitted less than 5 feet

V-N One-hour less Same as bearing Not permitted less than 5 feet than 5 feet NR elsewhere

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. than 3 feet than 3 feet III One-hour Two-hour N/C less Protected less than III-N than 16 feet 16 feet IV-H.T. One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour One-hour N/C Same as bearing Not permitted less except than 3 feet NR, N/C 40 feet or greater

R-3 II-N One-hour N/C Same as bearing Not permitted less less than 3 than 3 feet feet NR, N/C elsewhere

V One-hour One-hour Same as bearing Not permitted less than 3 feet

V-N One-hour less Same as bearing Not permitted less than 3 feet than 3 feet NR elsewhere

I-F.R. One-hour N/C Same as bearing Not permitted less II-F.R. less than 10 than 5 feet II One-hour feet Protected less than II-N3 NR, N/C 10 feet S-4 elsewhere

III One-hour III-N IV-H.T. Group S, Division 4 open parking garages are V One-hour not permitted in these types of construction. V-N

S-5 I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. less than 5 than 5 feet than 5 feet III One-hour feet Two-hour N/C less Protected less than III-N Two-hour N/C than 16 feet 16 feet IV-H.T. elsewhere One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour One-hour N/C Same as bearing Not permitted less except NR, N/C 40 than 5 feet feet or greater Protected less than 16 feet

S-5 II-N3 One-hour N/C Same as bearing Not permitted less Continued less than 16 than 5 feet feet Protected less than NR, N/C 16 feet elsewhere

V One-hour One-hour Same as bearing Not permitted less than 5 feet Protected less than 16 feet

V-N3 One-hour less Same as bearing Not permitted less than 16 feet than 5 feet NR elsewhere Protected less than 16 feet

I-F.R. Four-hour N/C Four-hour N/C less Not permitted less II-F.R. than 3 feet than 3 feet III One-hour Two-hour N/C less Protected less than III-N than 16 feet 16 feet IV-H.T. One-hour N/C less than 40 feet NR, N/C elsewhere

II One-hour One-hour N/C Same as bearing Not permitted less except than 3 feet NR, N/C 40 feet or greater

U-13 V One-hour One-hour Same as bearing Not permitted less than 3 feet

II-N2 One-hour N/C Same as bearing Not permitted less less than 3 than 3 feet feet3,17 NR, N/C elsewhere

V-N One-hour less Same as bearing Not permitted less than 3 than 3 feet feet3,17 NR elsewhere

U-2 All Not regulated N/C - Noncombustible.

NR - Nonrated.

H.T. - Heavy timber.

F.R. - Fire resistive.

1 See Section 503 for types of walls affected and requirements covering percentage of openings permitted in exterior walls. For walls facing streets, yards and public ways, see also Section 601.5.

2 For additional restrictions, see Chapters 3 and 6.

3 For special provisions and exceptions, see also Section 503.4.

4 See Table 3-A for a description of each occupancy type.

5 Openings requiring protection in exterior walls shall be protected by a fire assembly having at least a three-fourths-hour fire-protection rating.

6 Group E, Divisions 2 and 3 Occupancies having an occupant load of not more than 20 may have exterior wall and opening protection as required for Group R, Division 3 Occupancies.

7 See Section 308.2.1, Exception 3.

8 See Sections 602 and 603 for allowances of fire-retardant- treated wood in walls which otherwise are required to be noncombustible.

9 See Section 303.2.2.1 for limitations on Group A-2.1 Occupancies with an occupant load in excess of 1000.

10 See Section 305.2.3 for exceptions for Types II-One hour, II-N and V construction.

11 For special provisions for Group H Occupancies, see Sections 307.2.10, 307.2.11, and 307.3. When a detached building is required for Group H, Division 1, 2, or 3 Occupancies, there are no requirements for wall and opening protection based on location.

12 Group H, Divisions 1 and 5 Occupancies are prohibited in the Fire District. See Section 511.

13 Group H, Division 2 Occupancies with floor area greater than 500 square feet (46 m2) are prohibited in the Fire District. See Section 511.

14 Group H, Division 3 Occupancies with floor area greater than 1,500 square feet (139 m2) are prohibited in the Fire District. See Section 511.

15 Group H, Division 4 Occupancies having a floor area not exceeding 2,500 square feet (232 m2) may have exterior walls of not less than two-hour fire-resistive construction when less than 5 feet (1524 mm) from a property line and of not less than one-hour fire-resistive construction when 5 feet (1524 mm) or more but less than 16 feet (4877 mm) from a property line. See Section 307.2.10.

16 See Section 308.2.2.2 for special provisions for Group I-3 Occupancies.

17 The requirement for one-hour fire-resistive construction may be limited to the installation of materials approved for such on ~~the outside~~ one side only. (See Sections 302 and 503).

18 For code alternate for Group S-3 Occupancies in mixed-use buildings, see Section ~~311.2.2.1~~ 601.2.2.

Section 27. Subsection 601.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

601.2 Mixed Types of Construction.

601.2.1 General. When a building contains more than one distinct type of construction, the area of the entire building shall not exceed the least area permitted for the types of construction involved.

EXCEPTION: Each portion of a building separated by one or more area separation walls as specified in Section 504.6 may be considered a separate building for the purpose of classification of types of construction. The fire-resistive time period for such type of construction separation shall not be less than the most restrictive requirement in Section 504.6.2 based on the types of construction involved.

601.2.2 Special Provisions for Mixed Types of Construction with Group A, Division 3; Group B; Group M; Group R, Division 1; or Group S, Division 3 Occupancies.

601.2.2.1 General. Other provisions of this code notwithstanding, the lower stories of a building may be considered as a separate and distinct building for the purpose of area limitations, limitation of number of stories, and type of construction, when all of the following conditions are met:

1. The basement and/or lower stories are of Type I construction and are separated from upper stories by a three- hour occupancy separation. See Section 302.3.

2. The building contains only Group A, Division 3; Group B; Group M; Group R, Division 1 Occupancies; or Group S, Division 3 Occupancies used exclusively for the parking and storage of private or pleasure-type motor vehicles.

3. The maximum building height in feet shall not exceed the limits set forth in Table 5-B for the least type of construction involved.

4. Buildings constructed using the provisions of Section 601.2.2 shall be protected throughout by an automatic fire sprinkler system that complies with UBC Standard 9-1.

5. Where the story or stories above the three-hour occupancy separation are of Type II-One hour, Type III-One hour, Type IV, or Type V-One hour construction, the highest floor used for human occupancy shall be located not more than 75 feet above the lowest level of fire department vehicle access. Roof decks with an occupant load of less than 10 may be located above 75 feet.

601.2.2.2 Special height and story provisions for buildings with upper stories of Type II-One hour, Type III-One hour, Type IV, or Type V-One hour construction.

1. Reference Datums. For purposes of this Section 601.2.2.2, the following two reference datums are established from which to measure building height or number of stories or both:

1.1 The finished floor of the second story; or

1.2 The finished floor of the third story in buildings where the second story is below a three-hour occupancy separation and the finished floor of the third story is no more than 15 feet above the highest grade and no more than 25 feet above the lowest grade.

2. Type V-One hour construction. For buildings that comply with Section 601.2.2.1 and have stories of Type V-One hour construction above the three-hour occupancy separation, the height in feet and number of stories may be measured from either reference datum established in Item 1 of this Section 601.2.2.2.

3. Type II-One hour, Type III-One hour, and Type IV construction. For buildings that comply with Section 601.2.2.1 and have stories of Type II One-hour, Type III One- hour, or Type IV construction above the three-hour occupancy separation, the number of stories may be measured from the reference datums established in Item 1 of this Section 601.2.2.2. The height of the building shall be measured from the reference datum established in Section 209 under the definition "height of building".

Code Alternate CA601.2.2: Exterior walls of buildings complying with Section 601.2.2.1 shall have opening protection as required by Table 5-A.

EXCEPTION: Exterior walls of Group S, Division 3 parking garages in the Type I portion of the building may have opening protection as required for the portion of the building above the three-hour occupancy separation, provided the Type I portion of the building is protected by an automatic sprinkler system conforming to UBC Standard 9-1.

Section 28. Subsection 711.1 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

711.1 General. Openings through floors shall be enclosed in a shaft enclosure of fire-resistive construction having the time period set forth in Table 6-A for "shaft enclosures" except as permitted in Sections 711.3, 711.5, and 711.6 ~~and 711.7~~. See also Section 304.6 for shafts in Group B Occupancies, Section 306.6 for shafts in Group F Occupancies, Sections 307.6 and 307.11.2.3 for shafts in Group H Occupancies, Section 309.6 for shafts in Group M Occupancies , and Section 311.6 for shafts in Group S Occupancies.

Section 29. Section 715 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 715 ELECTRICAL WIRING, PIPES, DUCTS AND EQUIPMENT IN ELEVATOR HOISTWAYS AND MACHINE ROOMS

~~Electrical wiring and equipment, pipes, ducts and mechanical equipment shall not be installed in any hoistway, elevator~~

~~machine room or machinery space unless installed to serve that space only.~~

~~EXCEPTIONS: 1. Electrical conduit may pass through an elevator machine room or machinery space provided it is separated from the room or space by construction equal to the rated construction of the room or space and so located that all required clearances are maintained.~~

~~2. Ducts used for heating, cooling, ventilating or pressurization; and equipment used for heating of hoistways, elevator machine rooms or machinery spaces may be installed in accordance with Section 3022.~~

~~3. Ducts may pass through an elevator machine room or machinery space provided they are separated from the room or space by construction equal to the rated construction of the room or space and so located that all required clearances are maintained.~~

See ~~also~~ Section 3022.

Section 30. Subsection 902 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 902 - STANDARDS OF QUALITY

Fire-extinguishing systems, including automatic sprinkler systems, Class I, Class II and Class III standpipe systems, special automatic extinguishing systems, basement pipe inlets, smoke-control systems, and smoke and heat vents shall be approved and shall be subject to such periodic tests as may be required.

The standards listed below labeled a "UBC standard" are also listed in Chapter 35, Part II, and are part of this code. The other standards listed below are recognized standards (see Sections 3503 and 3504).

1. Fire-extinguishing system.

1.1 UBC Standard 9-1, Installation of Sprinkler Systems

1.2 UBC Standard 9-3, Installation of Sprinkler Systems in Group R Occupancies Four Stories or Less

1.3 NFPA Standard 13D as published by the National Fire Protection Association, ~~1994~~ 1999 edition.

2. Standpipe systems.

UBC Standard 9-2, Standpipe Systems

3. Smoke control.

3.1 UBC Standard 7-2, Fire Tests of Door Assemblies

3.2 UL 555, Fire Dampers

3.3 UL 555C, Ceiling Dampers

3.4 UL 555S, Leakage Rated Dampers for Use in Smoke Control Systems

3.5 UL 33, Heat Response Links for Fire Protection Service

3.6 UL 353, Limit Controls

4. Smoke and heat vents.

UBC Standard 15-7, Automatic Smoke and Heat Vents

Section 31 Subsection 904.2 of the Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

904.2 Automatic Fire-extinguishing Systems.

904.2.1 Where required. An automatic fire-extinguishing system shall be installed in the occupancies and locations as set forth in this section.

For provisions on special hazards and hazardous materials, see the Fire Code.

904.2.2 All occupancies except Group R, Division 3 and Group U Occupancies. Except for Group R, Division 3 and Group U Occupancies, an automatic sprinkler system shall be installed:

1. In every story or basement of all buildings when the floor area exceeds 1,500 square feet (139.4 m2) and there is not provided at least 20 square feet (1.86 m2) of opening entirely above the adjoining ground level in each 50 lineal feet (15 240 mm) or fraction thereof of exterior wall in the story or basement on at least one side of the building. Openings shall have a minimum dimension of not less than 30 inches (762 mm). Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that firefighting or rescue cannot be accomplished from the exterior.

When openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet (22 860 mm) from such openings, the story shall be provided with an approved automatic sprinkler system, or openings as specified above shall be provided on at least two sides of an exterior wall of the story.

If any portion of a basement or basement-like story is located more than 75 feet (22 860 mm) from openings required in this section, the basement or basement-like story shall be provided with an approved automatic sprinkler system.

2. At the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Sprinkler heads shall be accessible for servicing.

3. In protected combustible fiber storage vaults as defined in the Fire Code.

4. In waterfront structures as specified in Sections 413.5.3 and 413.6.9.

5. In warehouses, factories, workshops, and stores which are not otherwise covered by this section, where height exceeds four stories.

6. In any basement or basement-like story used for automobile parking or for the storage or sale of combustible materials.

EXCEPTIONS: 1. Portions of the basement or basement- like story not containing combustible materials and protected by a one-hour fire-resistive occupancy separation.

2. Storage rooms not exceeding 500 square feet (46 m2) in area, protected by a one-hour fire-resistive occupancy separation, containing no material classified as a flammable liquid, hazardous material or highly combustible material, and served by exterior fire access or interior access by a one- hour fire-resistive corridor as specified in Section 1004.3.4. No more than 3 such rooms shall be permitted in any one basement or basement-like story.

3. In other than a Group U Occupancy, passenger car parking when the ceiling is at least a one-hour occupancy separation; Fire Department access is provided which complies with Section 904.2.2, Item 1; an additional opening, other than an exit enclosure serving upper floors, is provided opposite the Fire Department access openings; automatic heat detection connected to the building fire alarm system is provided and an approved central station monitor is

provided in buildings requiring a fire alarm system.

904.2.3 Group A Occupancies.

904.2.3.1 Drinking establishments. An automatic sprinkler system shall be installed in rooms used by the occupants for the consumption of alcoholic beverages and unseparated accessory uses where the total area of such unseparated rooms and assembly uses exceeds 5,000 square feet (465 m2). For uses to be considered as separated, the separation shall not be less than as required for a one-hour occupancy separation. The area of other uses shall be included unless separated by at least a one-hour occupancy separation.

904.2.3.2 Basements. An automatic sprinkler system shall be installed in basements and basement-like stories classified as a Group A Occupancy when the basement is larger than 1,500 square feet (139.4 m2) in floor area.

904.2.3.3 Exhibition and display rooms. An automatic sprinkler system shall be installed in Group A Occupancies that have more than 12,000 square feet (1115 m2) of floor area that can be used for exhibition or display purposes.

904.2.3.4 Stairs. An automatic sprinkler system shall be installed in enclosed usable space below or over a stairway in Group A, Divisions 2, 2.1, 3, and 4 Occupancies. See Section 1005.3.3.6.

904.2.3.5 Multitheater complexes. An automatic sprinkler system shall be installed in every building containing a multitheater complex.

904.2.3.6 Amusement buildings. An automatic sprinkler system shall be installed in all ~~permanent and portable~~ amusement buildings. The main water-flow switch shall be electrically supervised. The sprinkler main cutoff valve shall be supervised. When the amusement building is portable <u>or temporary</u>, the sprinkler water supply system may be of an approved temporary type.

EXCEPTION: An automatic sprinkler system need not be provided when the floor area of a portable <u>or temporary</u> amusement building is less than 1,000 square feet (92.9 m2) and the exit travel distance from any point is less than 50 feet (15 240 mm).

904.2.3.7 Stages. All stages shall be provided with an automatic sprinkler system. Such sprinklers shall be provided throughout the stage and in dressing rooms, workshops, storerooms, and other accessory spaces contiguous to such stages.

EXCEPTIONS: 1. Sprinklers are not required for stages 1,000 square feet (92.9 m2) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery, or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs, and a single backdrop.

2. Under stage areas less than 4 feet (1219 mm) in clear height used exclusively for chair or table storage and lined on the inside with 5/8-inch (16 mm) Type X gypsum wallboard or an approved equal.

904.2.3.8 Smoke-protected assembly seating. All areas enclosed with walls and ceilings in buildings or structures containing smoke-protected assembly seating shall be protected with an approved automatic sprinkler system.

EXCEPTION: Press boxes and storage facilities less than 1,000 square feet (92.9 m2) in area and in conjunction with outdoor seating facilities where all means of egress in the seating area are essentially open to the outside.

904.2.4 Group E Occupancies.

904.2.4.1 General.

WSBC: An automatic fire extinguishing system shall be installed throughout all buildings classified as a Group E, Division 1 Occupancy. A minimum water supply meeting the requirements of UBC Standard 9-1 is required. The fire

chief may reduce fire flow requirements for buildings protected by an approved automatic sprinkler system.

EXCEPTION: Portable school classrooms provided:

1. The aggregate area of clusters of portable school classrooms does not exceed 5,000 square feet (1465 m2); and

2. Clusters of portable school classrooms shall be separated as required by Chapter 5.

When not required by other provisions of this chapter, a fire- extinguishing system installed in accordance with UBC Standard 9-1 may be used for increases allowed in Chapter 5.

904.2.4.2 Basements. An automatic sprinkler system shall be installed in basements and basement-like stories classified as Group E, Division 1 Occupancies.

904.2.4.3 Stairs. An automatic sprinkler system shall be installed in enclosed usable space below or over a stairway in Group E, Division 1 Occupancies. See Section 1005.3.3.6.

904.2.4.4 Boiler Rooms. An automatic sprinkler system shall be installed in every boiler room or room containing a central heating plant below usable space unless separated by a three-hour fire-resistive occupancy separation.

904.2.5 Group F Occupancies.

904.2.5.1 Woodworking occupancies. An automatic fire sprinkler system shall be installed in Group F woodworking occupancies over 2,500 square feet (232.3 m2) in area that use equipment, machinery, or appliances that generate finely divided combustible waste or that use finely divided combustible materials.

904.2.6 Group H Occupancies.

904.2.6.1 General. An automatic fire-extinguishing system shall be installed in Group H, Divisions 1, 2, 3 and 7 Occupancies.

904.2.6.2 Group H, Division 4 Occupancies. An automatic fire- extinguishing system shall be installed in Group H, Division 4 Occupancies having a floor area of more than 3,000 square feet (279 m2).

904.2.6.3 Group H, Division 6 Occupancies. An automatic fire- extinguishing system shall be installed throughout buildings containing Group H, Division 6 Occupancies. The design of the sprinkler system shall not be less than that required under UBC Standard 9-1 for the occupancy hazard classifications as follows:

LOCATION OCCUPANCY HAZARD

CLASSIFICATION

Fabrication areas Ordinary Hazard Group 2

Service corridors Ordinary Hazard Group 2

Storage rooms without dispensing Ordinary Hazard Group 2

Storage rooms with dispensing Extra Hazard Group 2

Corridors Ordinary Hazard Group 21

1 When the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers that needs to be calculated is 13.

904.2.7 Group I Occupancies. An automatic sprinkler system shall be installed in Group I Occupancies. In Group I, Division 1.1 and Group I, Division 2 Occupancies, approved quick-response or residential sprinklers shall be installed throughout patient sleeping areas.

EXCEPTION: In jails, prisons and reformatories, the piping system may be dry, provided a manually operated valve is installed at a continuously monitored location. Opening of the valve will cause the piping system to be charged. Sprinkler heads in such systems shall be equipped with fusible elements or the system shall be designed as required for deluge systems in UBC Standard 9-1.

904.2.8 Group M Occupancies. An automatic sprinkler system shall be installed in rooms classed as Group M Occupancies and in rooms for storage of combustible materials where the floor area exceeds 12,000 square feet (1115 m2) on any floor or 24,000 square feet (2230 m2) on all floors or in Group M Occupancies more than three stories in height. The area of mezzanines shall be included in determining the areas where sprinklers are required.

Automatic sprinkler systems shall be installed in liquor stores located below a residential occupancy other than a caretaker's unit.

904.2.9 Group R Occupancies.

904.2.9.1. General. An automatic sprinkler system shall be installed in Group R occupancies which do not have approved fire department access, which do not have adequate fire flow, or which are located more than 500 feet (152 400 mm) from the nearest hydrant.

EXCEPTION: For Group R, Division 3 Occupancies, the fire chief may authorize a greater distance, but in no case more than 1,000 feet (304 800 mm) from the nearest hydrant.

904.2.9.2 Group R, Division 1 Occupancies. An automatic sprinkler system shall be installed in each of the following Group R, Division 1 Occupancies:

1. Buildings having three or more stories of height; ~~or~~

2. Buildings having two floors of Group R, Division 1 Occupancy located above any occupancy other than:

2.1 Group U;

2.2 Group S, Division 3 parking garage; or

2.3 Storage, mechanical, or laundry or similar rooms accessory to the Group R, Division 1 occupancy.

3. Apartment buildings containing five or more dwelling units; ~~or~~

4. Hotels containing ten or more guest rooms; ~~or~~ and

5. Congregate residences of 50 or more occupants.

EXCEPTIONS: 1. An automatic sprinkler system shall not be required by Item 1 or 2 above when the building contains no more than two dwelling units ~~which~~ that are separated by one-hour fire-resistive construction, and each dwelling unit has separate exits.

2. The requirement for an automatic sprinkler system may be waived in Group R, Division 1 townhouses ~~which~~ that are separated by ~~two-hour fire-resistive construction~~ an area separation wall, where the building official determines there is adequate fire department access to the site.

Interpretation I904.2a: Determination of Stories. For the purpose of this section, in mixed occupancy buildings, the number of stories shall be determined based on the total building, including those stories occupied by occupancies other than Group R, Division 1, provided the other occupancies are sprinklered when specifically required for each occupancy.

Interpretation I904.2b: Area Separation Walls. Area separation walls may be used as provided in Section 504 of this code provided, for the purpose of this subsection, the total number of dwelling units or total number of guest rooms shall be determined based on the complete, attached building regardless of area separation walls.

Interpretation I904.2c: Sprinkler Systems. Sprinkler systems installed in Group R, Division 3 ~~o~~Occupancies and in Group R, Division 1 townhouses may comply with NFPA Standard 13D. Sprinkler systems installed in other Group R, Division 1 ~~o~~O ccupancies may be installed in accordance with NFPA Standard 13R (UBC Standard 9-3); provided where a sprinkler system is required throughout, the system shall comply with NFPA 13 (UBC Standard 9-1). With either standard, residential sprinkler heads shall be used in the dwelling unit and guest room portions of the building.

Sprinkler systems which have 100 or more sprinkler heads shall comply with Section 904.3.

904.2.10 Group S Occupancies. An automatic sprinkler system shall be installed in liquor warehouses.

An automatic sprinkler system shall be installed in rooms used for storage of combustible materials where the floor area exceeds 12,000 square feet (1115 m2) on any floor or 24,000 square feet (2230 m2) on all floors.

See also Section 904.2.2, Item 6.

Section 32. Subsection 905.2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

905.2 Design Methods.

905.2.1 General. Buildings or portions thereof required by this code to have a smoke-control system shall have such systems designed in accordance with the requirements of this section.

EXCEPTIONS: 1. Smoke and heat venting required by Section 906.

2. Where ~~emergency~~ elevator or stairway shaft pressurization is required to comply with Code Alternate CA ~~1003.2b~~ 1004.2b or exception 4 of Section 1004.3.4.5, the pressurization system may comply with the following:

2.1. Shafts in buildings that are not protected throughout with an automatic sprinkler system shall be pressurized to 0.15 inch of water column relative to atmospheric pressure. Stairway pressurization shall be measured with all stairway doors closed. Elevator pressurization shall be measured with elevator cars at the designated recall level with the doors in the open position.

Elevator shafts in buildings that are protected throughout with an automatic sprinkler system, may be pressurized to not less than 0.10 inch of water column.

2.2. The ~~emergency~~ shaft pressurization shall be activated by a fire alarm system ~~which~~ that shall include smoke detectors in the corridors located near the shaft on each floor in a manner approved by the building official and the fire chief. If the building has a fire alarm panel, smoke detectors shall be connected to, with power supplied by, the fire alarm panel.

2.3. ~~Emergency p~~ Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by construction equal to that required for the shaft.

2.4. Shaft pressurization air intakes for shafts other than elevators shall be located at the exterior of the building. Intakes for elevator shaft pressurization may be located within the building provided they are located no more than 20 feet

(6096 mm) from major openings in the building exterior such as loading docks and vehicular entrances. Such intake shall be provided with smoke detectors ~~which~~ that shall deactivate the pressurization system for that shaft.

2.5. An emergency source of power shall be provided for the fire alarm system.

2.6. A legally-required standby source of power shall be provided for the ~~emergency~~ pressurization system. One power source shall be permitted if it conforms to Seattle Electrical Code Section ~~230-82, exception 5~~ 701- 11 (d) or (e); otherwise two sources of power shall be provided conforming to Electrical Code Section ~~700.12 (a) through (e)~~ 701.11 (a), (b), (c), or (f).

2.7. The pressurization system shall comply with Section 905.14.

2.8. Other measures to prevent loss of pressurization shall be provided in the design and construction of shafts, such as quality of workmanship and caulking of penetrations and joints.

905.2.2 Rationality.

905.2.2.1 General. Systems or methods of construction to be used in smoke control shall be based on a rational analysis in accordance with well-established principles of engineering. The analysis shall include, but not be limited by, Sections 905.2.2.2 through 905.2.2.6.

905.2.2.2 Stack effect. The system shall be designed such that the maximum probable normal or reverse stack effects will not adversely interfere with the system's capabilities. In determining the maximum probable stack effects, altitude, elevation, weather history and interior temperatures shall be used.

905.2.2.3 Temperature effect of fire. Buoyancy and expansion caused by the design fire (Section 905.6) shall be analyzed. The system shall be designed such that these effects do not adversely interfere with the system's capabilities.

905.2.2.4 Wind effect. The design shall consider the adverse effects of wind. Such consideration shall be consistent with the requirements of Chapter 16, Division III-Wind Design.

905.2.2.5 HVAC systems. The design shall consider the effects of the heating, ventilating and air-conditioning (HVAC) systems on both smoke and fire transport. The analysis shall include all permutations of systems status. The design shall consider the effects of the fire on the heating, ventilating and air-conditioning systems.

905.2.2.6 Climate. The design shall consider the effects of low temperatures on systems, property and occupants. Air inlets and exhausts shall be located so as to prevent snow or ice blockage.

905.2.3 Smoke barrier construction. A smoke barrier may or may not have a fire-resistive rating. Smoke barriers shall be constructed and sealed to limit leakage areas exclusive of protected openings. Maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

1. Walls: A/AW = 0.00100

2. Exit enclosures: A/AW = 0.00035

3. All other shafts: A/AW = 0.00150

4. Floors and roofs: A/AF = 0.00050

WHERE:

A = total leakage area, square feet (m2).

AF = unit floor or roof area of barrier, square feet (m2).

AW = unit wall area of barrier, square feet (m2).

Total leakage area of the barrier is the product of the smoke barrier gross area times the allowable leakage area ratio. Compliance shall be determined by achieving the minimum air pressure difference across the barrier with the system in the smoke-control mode for mechanical smoke-control systems. Passive smoke-control systems may be tested using other approved means such as door fan testing.

905.2.4 Opening protection. Openings in smoke barriers shall be protected by self-closing devices or automatic-closing devices actuated by the required controls for the mechanical smoke-control system.

EXCEPTIONS: 1. Passive smoke-control systems may have automatic-closing devices actuated by spot-type smoke detectors listed for releasing service.

2. The airflow method may be used to protect openings fixed in a permanently open position which are located between smoke zones.

Door openings shall be protected in accordance with Section 1004.3.4.3.2.

EXCEPTIONS: 1. In Group I, Division 1 Occupancies when such doors are installed across corridors, a pair of opposite- swinging doors without a center mullion shall be installed having vision panels with approved fire-rated glazing materials in approved fire-rated frames, the area of which shall not exceed that tested. The doors shall be close fitting within operational tolerances, and shall not have undercuts, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and automatic-closing devices. Positive latching devices may be omitted.

2. Group I, Division 3 Occupancies.

Duct and other heating, ventilating and air-conditioning openings shall be equipped with a minimum Class II, 250nvironmentalF (121nvironmentalC) smoke damper as defined and tested in accordance with approved recognized standards. See Chapter 35, Part IV.

905.2.5 Duration of operation. All portions of active or passive smoke-control systems shall be capable of continued operation after detection of the fire event for not less than 20 minutes.

Section 33. Subsection 905.8 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

905.8 Power Systems.

905.8.1 General. The smoke-control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved ~~standby~~ emergency source complying with the Electrical Code. The ~~standby~~ emergency power source and its transfer switches shall be in a separate room from the normal power transformers and switchgear and shall be enclosed in a room of not less than one-hour fire-resistive construction, ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes.

Transfer to full ~~standby~~ emergency power shall be automatic and within ~~60~~ 10 seconds of failure of the primary power. The systems shall comply with the Electrical Code.

905.8.2 Power sources and power surges. Elements of the smoke-management system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of the smoke-management system susceptible to power surges shall be suitably protected by conditioners, suppressors or other approved means.

Section 34. Subsection 905.9 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

905.9 Detection and Control Systems.

905.9.1 General. Fire-detection and control systems for mechanical smoke-control systems shall be supervised in accordance with the Fire Code. Supervision shall further provide positive confirmation of actuation, testing of devices, manual override mechanisms, and the presence of power downstream of all disconnects. When supervision requires the sensing of damper position, it shall be accomplished by limit or proximity switches. When supervision requires sensing of air flow, it shall be by differential pressure transmitters. Required supervision shall be indicated at the Fire Fighter's Control Panel. The fire-detection and control system shall be listed.

~~Section 905.9.2 Wiring. In addition to meeting requirements of the Electrical Code, all wiring, regardless of voltage, shall be fully enclosed within continuous raceways.~~

905.9.3 Activation. Smoke-control systems shall be activated as follows:

1. Mechanical smoke-control systems, using the pressurization method, serving buildings having no occupied floor more than 300 feet (91 440 mm) above or 75 feet (22 860 mm) below exit grade shall have automatic control of pressurized stairwell enclosure systems. All other portions of the smoke-control system may be manual in accordance with Section 905.13.

EXCEPTION: When required in Group I Occupancies, they shall be entirely automatic.

2. Mechanical smoke-control systems, using the pressurization method, serving buildings having occupied floors more than 300 feet (91 440 mm) above or 75 feet (22 860 mm) below exit grade shall have completely automatic control.

3. Mechanical smoke-control systems using the airflow or exhaust method shall have completely automatic control.

4. Passive smoke-control systems may be actuated by approved spot-type detectors listed for releasing service.

905.9.4 Automatic control. Whenever completely automatic control is required or used, the automatic-control sequences shall be initiated from an appropriately zoned automatic sprinkler system meeting the requirements of UBC Standard 9-1 or from an appropriately zoned, total coverage smoke-detection system meeting the requirements of the Fire Code.

905.9.5 Smoke detection. Smoke detectors shall be listed and shall be installed in accordance with the Fire Code.

Section 35. Subsection 905.15 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

905.15 Acceptance Testing.

905.15.1 General. Devices, equipment, components and sequences shall be individually tested. These tests, in addition to those required above or by other provisions of this code, shall consist of determination of function, sequence and, where applicable, capacity of their installed condition.

<u>See Section 1701.5 for special inspection requirements.</u>

905.15.2 Detection devices. Smoke or fire detectors that are a part of a smoke-control system shall be tested in accordance with the Fire Code in their installed condition. When applicable, this testing shall include verification of airflow in both minimum and maximum conditions.

905.15.3 Ducts. Ducts that are part of a smoke-control system shall be traversed using generally accepted practices to determine actual air quantities.

905.15.4 Dampers. Dampers shall be tested for function in their installed condition.

905.15.5 Inlets and outlets. Inlets and outlets shall be read using generally accepted practices to determine air quantities.

905.15.6 Fans. Fans shall be examined for correct rotation. Measurements of voltage, amperage, revolutions per minute and belt tension shall be made.

905.15.7 Smoke barriers. Measurements using inclined manometers shall be made of the pressure differences across smoke barriers. Such measurements shall be conducted for each possible smoke-control condition.

905.15.8 Controls. Each smoke zone, equipped with an automatic initiation device, shall be put into operation by the actuation of one such device. Each additional such device within the zone shall be verified to cause the same sequence but the operation of fan motors may be bypassed to prevent damage.

Control sequences shall be verified throughout the system, including verification of override from the firefighter's control panel and simulation of ~~standby~~ emergency power conditions.

905.15.9 Reports. A complete report of testing shall be prepared by the required special inspector or special inspection agency. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values and identification tag or mark. The report shall be reviewed by the responsible designer, and when satisfied that the design intent has been achieved, the responsible designer shall affix the designer's signature and date to the report with a statement as follows:

I have reviewed this report and by personal knowledge and on-site observation certify that the smoke-control system is in substantial compliance with the design intent, and to the best of my understanding complies with requirements of the code.

A copy of the final report shall be filed with the building official and an identical copy shall be maintained in an approved location at the building.

905.15.10 Identification and documentation. Charts, drawings and other documents identifying and locating each component of the smoke-control system, and describing their proper function and maintenance requirements shall be maintained on file at the building with the above-described report.

Devices shall have an approved identifying tag or mark on them consistent with the other required documentation and shall be dated indicating the last time they were successfully tested and by whom.

Section 36. Subsection 1003.2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

1003.2 System Design Requirements. The general design requirements specified in this section shall apply to all three elements of the means of egress system, in addition to those specific design requirements for the exit access, the exit and the exit discharge detailed elsewhere in this chapter.

1003.2.1 Use.

1003.2.1.1 General. The building official shall assign a use category as set forth in Table 10-A to all portions of a building. When an intended use is not listed in Table 10-A, the building official shall establish a use based on a listed use that most nearly resembles the intended use.

1003.2.1.2 Change in use. No change in use or occupancy shall be made to any existing building or structure unless the means of egress system is made to comply with the requirements of this chapter for the new use or occupancy. See Section 3405.

1003.2.2 Occupant load.

1003.2.2.1 General. The basis for the design of the means of egress system is the occupant load served by the various components of such system.

1003.2.2.2 Determination of occupant load. Occupant loads shall be determined in accordance with the requirements of this section.

1003.2.2.2.1 Areas to be included. In determining the occupant load, all portions of a building shall be presumed to be occupied at the same time.

EXCEPTION: Accessory use areas that ordinarily are used only by persons who occupy the main areas of an occupancy shall be provided with means of egress as though they are completely occupied, but their occupant load need not be included when computing the total occupant load of the building.

Interpretation I1003.2a: Accessory use areas may include foyers, corridors, halls, toilet facilities, file rooms, storage rooms, closets, stairways, elevator enclosures and other service facilities.

Interpretation I1003.2b: In places of worship containing social halls, occupant load for the purpose of determining occupancy group may be computed as the sum of the areas reasonably expected to be occupied at one time, including principal worship area and classrooms or instructional areas, and principal worship area and social hall, and social hall and classrooms or instructional areas. Exits shall be computed on total capacity.

1003.2.2.2.2 Areas without fixed seats. For areas without fixed seats, the occupant load shall not be less than the number determined by dividing the floor area under consideration by the occupant load factor assigned to the use for such area as set forth in Table 10-A.

The occupant load for buildings or areas containing two or more uses or occupancies shall be determined by adding the occupant loads of the various use areas as computed in accordance with the applicable requirements of Section 1003.2.2.2.

Where an individual area has more than one proposed use, the occupant load for such area shall be determined based on that use that yields the largest occupant load.

1003.2.2.2.3 Areas with fixed seats. For areas having fixed seats, the occupant load for such areas shall be determined by the number of fixed seats installed therein.

For areas having fixed benches or pews, the occupant load shall not be less than the number of seats based on one person for each 18 inches (457 mm) of length of pew or bench. Where fixed booths are used in dining areas, the occupant load shall be based on one person for each 24 inches (610 mm) of booth length. Where fixed benches, pews or booths are curved, the larger radius shall determine the booth length.

1003.2.2.2.4 Outdoor areas. The occupant load of yards, patios, courts and similar outdoor areas shall be assigned by the building official in accordance with their anticipated use. Such outdoor areas accessible to and usable by the building occupants shall be provided with a means of egress as required by this chapter. Where an outdoor area exits only through a building, the occupant load of such outdoor area shall be considered in the design of the means of egress system of that building.

1003.2.2.2.5 Reviewing stands, grandstands and bleachers. The occupant load for reviewing stands, grandstands and bleachers shall be calculated in accordance with Section 1003.2.2.2 and the specific requirements contained in Section 1008.

1003.2.2.3 Maximum occupant load.

1003.2.2.3.1 Assembly occupancies. The maximum occupant load for an assembly occupancy shall not exceed the

occupant load determined in accordance with Section 1003.2.2.2.

EXCEPTION: When approved by the building official, the occupant load for an assembly occupancy may be increased, provided the maximum occupant load served does not exceed the capacity of the means of egress system for such increased number of occupants.

For temporary increases of occupant loads in places of assembly, see the Fire Code.

1003.2.2.3.2 Other occupancies. For other than assembly occupancies, an occupant load greater than that determined in accordance with Section 1003.2.2.2 is permitted; however, the means of egress system shall comply with the requirements of this chapter for such increased occupant load.

1003.2.2.4 Minimum occupant load. An occupant load less than that determined in accordance with Section 1003.2.2.2 shall not be used.

1003.2.2.5 Revised occupant load. No increase in occupant load shall be made to any existing building or structure unless the means of egress system is made to comply with the requirements of this chapter for such increased occupant load. See Section 3405.

1003.2.3 Width.

1003.2.3.1 General. The width of the means of egress system or any portion thereof shall be based on the occupant load served.

1003.2.3.2 Minimum width. The width, in inches (mm), of any component in the means of egress system shall not be less than the product determined by multiplying the total occupant load served by such component by the applicable factor set forth in Table 10-B. In no case shall the width of an individual means of egress component be less than the minimum required for such component as specified elsewhere in this chapter.

Where more than one exit or exit-access doorway serves a building or portion thereof, such calculated width shall be divided approximately equally among the means of egress components serving as exits or exit-access doorways for that area.

1003.2.3.3 Maintaining width. If the minimum required width of the means of egress system increases along the path of exit travel based on cumulative occupant loads served, such width shall not be reduced or otherwise diminished to less than the largest minimum width required to that point along the path of exit travel.

EXCEPTION: In other than Group H, Divisions 1, 2, 3 and 7 Occupancies, the width of doors from an exit enclosure may be based on the largest occupant load of any level served by such exit enclosure multiplied by a factor of 0.2 (5.08).

1003.2.3.4 Exiting from adjacent levels. No cumulative or contributing occupant loads from adjacent building levels need be considered when determining the required width of means of egress components from a given level.

Where an exit enclosure from an upper floor and a lower floor converge at an intermediate floor, the width of the exit from the intermediate floor shall be based on the sum of the occupant loads of such upper and lower floors.

1003.2.3.5 Two-way exits. Where exit or exit-access doorways serve paths of exit travel from opposite directions, the width of such exit or exit-access doorways shall be based on the largest occupant load served. Where such exit or exit-access doorways are required to swing in the direction of exit travel by Section 1003.3.1.5, separate exit width for each path of exit travel shall be provided based on the occupant load of the area that is served.

1003.2.4 Height. Except as allowed elsewhere in this code, the means of egress system shall have a clear height of not less than 7 feet (2134 mm) measured vertically from the walking surface to the lowest projection from the ceiling or

overhead structure.

1003.2.5 Exit continuity. The path of exit travel along a means of egress shall not be interrupted by any building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the required width of a means of egress except projections permitted by this chapter. The required capacity of a means of egress system shall not be diminished along the path of exit travel.

1003.2.6 Changes in elevation. All exterior elevation changes and any interior elevation changes of 12 inches (305 mm) or more along the path of exit travel shall be made by steps, stairs or stairways conforming with the requirements of Section 1003.3.3.3 or ramps conforming with the requirements of Section 1003.3.4.

Interior elevation changes of less than 12 inches (305 mm) along the path of exit travel serving an occupant load of 10 or more shall be by ramps conforming with the requirements of Section 1003.3.4.

EXCEPTIONS: 1. In Group R, Division 3 Occupancies and within individual dwelling units of Group R, Division 1 Occupancies.

2. Along aisles adjoining seating areas.

Interpretation I1003.2c: At the exterior of a building, all changes in elevation are required to be made by steps, stairs or stairways that conform to Section 1003.3.3.3 or ramps that conform to Section 1003.3.4. In the interior of a building, only changes in elevation of 12 inches or more are required to conform with those two sections.

1003.2.7 Elevators or escalators. Elevators or escalators shall not be used as a required means of egress component, unless otherwise approved by the building official.

1003.2.8 Means of egress identification.

1003.2.8.1 General. For the purposes of Section 1003.2.8, the term "exit sign" shall mean those required signs that indicate the path of exit travel within the means of egress system.

1003.2.8.2 Where required. The path of exit travel to and within exits in a building shall be identified by exit signs conforming to the requirements of Section 1003.2.8. Exit signs shall be readily visible from any direction of approach. Exit signs shall be located as necessary to clearly indicate the direction of egress travel. Exit signs shall be located so that every point in the means of egress is within 100 feet (30 480 mm) of a location from which an exit sign is visible.

EXCEPTIONS: 1. Main exterior exit doors that obviously and clearly are identifiable as exit doors need not have exit signs when approved by the building official.

2. Rooms or areas that require only one exit or exit access other than in buildings designed with a single exit stairway according to Code Alternate CA1004.2b.

3. In Group R, Division 3 Occupancies and within individual units of Group R, Division 1 Occupancies.

4. Exits or exit access from rooms or areas with an occupant load of less than 50 where located within a Group I, Division 1.1, 1.2 or 2 Occupancy or a Group E, Division 3 day- care occupancy.

5. Exit signs are not required within individual tenant spaces of Group B offices.

Interpretation I1003.2d: Exit placards may be used to identify exits in occupancies where exit signs are not required.

Interpretation I1003.2e: Exit signs shall not be required on exterior stairways serving exterior exit balconies.

Interpretation I1003.2f: Either exit signs or exit placards shall be located at any other location determined by the

building official to be necessary to clearly indicate the direction of egress.

1003.2.8.3 Graphics. The color and design of lettering, arrows and other symbols on exit signs shall be in high contrast with their background. Exit signs and placards shall have the word "EXIT" on the sign in green block capital letters not less than 6 inches (152 mm) in height with a stroke of not less than 3/4 inch (19 mm). The word "EXIT" shall have letters having a width of not less than 2 inches (51 mm) except for the letter "I" and a minimum spacing between letters of not less than 3/8 inch (9.5 mm). Signs and placards with lettering larger than the minimum dimensions established herein shall have the letter width, stroke and spacing in proportion to their height.

EXCEPTION: Existing exit signs or placards with letters at least 5 inches (127 mm) in height may be reused.

All exit signs shall be listed. See Section 213 for the definition of "listed".

1003.2.8.4 Illumination. All exit signs shall be illuminated at all times.

1003.2.8.5 Power Source. Power shall be supplied as required for means of egress illumination in Section 1003.2.9.

1003.2.8.6 Not-an-Exit Warnings. Placards reading "NOT AN EXIT" shall be installed at all doorways, passageways or stairways which are not exits, exit accesses or exit discharges, and which may be mistaken for an exit. A sign indicating the use of the doorway, passageway or stairway, such as "TO BASEMENT", "STORE ROOM", "LINEN CLOSET", is permitted in lieu of the "NOT AN EXIT" sign.

1003.2.9 Means of egress illumination.

1003.2.9.1 General. Any time a building is occupied, the means of egress shall be illuminated at an intensity of not less than 1 footcandle (10.76 lx) at the floor level at every point in the exit path. Exit illumination shall be installed whenever exit signs are required as specified in Section 1003.2.8.

EXCEPTION: In Group R, Division 3 Occupancies and within individual units of Group R, Division 1 Occupancies.

Code Alternate CA1003.2g: Compliance with the following paragraphs will be deemed to satisfy the requirement for means of egress illumination with intensity of one footcandle at every point in the means of egress.

1. Location and Fixture Placement. Means of egress illumination shall be located in stairways, corridors, halls, passenger elevator cars, lobbies, rooms with an occupant load of 100 or more, and other areas required to provide safe egress from the premises and immediately outside of the building exit when required by the building official. Fixtures shall be installed to not less than the following schedule:

Interior and exterior stairways and At least one per landing

landings and outside building exit

Corridors and halls and designated At least one for each 40 lineal feet

means of egress paths in parking garages

Lobbies, vestibules, foyers, elevator At least one for each 250 sq. ft.

cars and other similar areas as required

Warehouses See Item 2 below

These fixtures may be included in the watts per square foot calculation for means of egress illumination.

2. Amount of Illumination. Where means of egress illumination is required, illumination shall be provided at the rate of 0.1 watt of fluorescent illumination per square foot of area. Installations using incandescent lamps shall have a minimum wattage of at least 3 times the fluorescent requirements. Use of other light sources shall be subject to the approval of the building official.

EXCEPTIONS: 1. In warehouses, the allowable minimum illumination may be 0.1 watt per square foot (0.03 watts for fluorescent) provided fixtures are placed either:

1.1 Where means of egress pathways are not designated, fixtures shall be placed to cover an area not larger than 1,600 square feet, or

1.2 Where means of egress pathways are designated, fixtures shall be placed at least one for every 40 lineal feet.

2. In theaters, auditoriums or other places of assembly where motion pictures or other projections are made by means of directed light, the minimum allowable illumination may be reduced to 0.05 watts per square foot of floor area (0.02 watts for fluorescent).

3. In Groups B, F-1, M and S-1 Occupancies, when approved by the building official, the minimum allowable illumination may be reduced to 0.05 watts per square foot (0.02 watts for fluorescent) of floor area.

4. In Group B Occupancies and parking garages with walls meeting the openness requirements for Group S, Division 4 open parking garages, when approved by the building official, the illumination may be eliminated when within 50 feet of a window wall or open side and light is not totally obscured.

Means of egress illumination fixtures shall be spaced and designed to give adequate distribution of light for safe egress and so that the failure of any individual lighting element, such as the burning out of a light bulb, will not leave any individual space in total darkness. Illumination from battery operated fixtures shall provide the same level of illumination required for hard-wired fixtures.

1003.2.9.2 Power supply. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of its failure, illumination shall be automatically provided from an emergency system for Group I, Divisions 1.1 and 1.2 Occupancies and for all other occupancies where the means of egress system serves an occupant load of 100 or more. Such emergency systems shall be installed in accordance with Seattle Electrical Code Section 700-12 a, b, c, or e. Egress illumination shall be provided within 10 seconds of failure of the normal power supply.

For high-rise buildings, see Section 403.

1003.2.10 Building accessibility. In addition to the requirements of this chapter, means of egress, which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11 of the Washington State Building Code.

Section 37. Section 1003.3 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

1003.3 Means of egress components. Doors, gates, stairways and ramps that are incorporated into the design of any portion of the means of egress system shall comply with the requirements of this section. These means of egress components may be selectively included in the exit access, the exit or the exit discharge portions of the means of egress system.

1003.3.1 Doors.

1003.3.1.1 General. For the purposes of Section 1003.3.1, the term "exit door" shall mean all of those doors or doorways along the path of exit travel anywhere in a means of egress system.

Exit doors serving the means of egress system shall comply with the requirements of Section 1003.3.1. Where additional doors are installed for egress purposes, they shall conform to all requirements of this section. Buildings or structures used for human occupancy shall have at least one exterior exit door that meets the requirements of Section 1003.3.1.3.

WSBC: Section 1003.3.1.5 shall apply to all exit doors within an accessible route, regardless of occupant load.

Exit doors shall be readily distinguishable from the adjacent construction and shall be easily recognizable as exit doors. Mirrors or similar reflecting materials shall not be used on exit doors, and exit doors shall not be concealed by curtains, drapes, decorations and similar materials.

1003.3.1.2 Special doors. Revolving, sliding and overhead doors serving an occupant load of 10 or more shall not be used as required exit doors.

EXCEPTIONS: 1. Approved revolving doors having leaves that will collapse under opposing pressures may be used, provided

1.1 Such doors have a minimum width of 6 feet 6 inches (1981 mm).

1.2 At least one conforming exit door is located adjacent to each revolving door.

1.3 The revolving door shall not be considered to provide any required width when computing means of egress width in accordance with Section 1003.2.3.

2. Horizontal sliding doors complying with UBC Standard 7-8 may be used

2.1 In elevator lobby separations.

2.2 In other than Groups A and H Occupancies, where smoke barriers are required.

2.3 In other than Group H Occupancies, where serving an occupant load of less than 50.

Power-operated doors complying with UBC Standard 10-1 may be used for egress purposes. Such doors, where swinging, shall have two guide rails installed on the swing side projecting out from the face of the door jambs for a distance not less than the widest door leaf. Guide rails shall not be less than 30 inches (762 mm) in height with solid or mesh panels to prevent penetration into door swing and shall be capable of resisting a horizontal load at top of rail of not less than 50 pounds per lineal foot (730 N/m).

EXCEPTIONS: 1. Walls or other types of separators may be used in lieu of the above guide rail, provided all the criteria are met.

2. Guide rails in industrial or commercial occupancies not accessible to the public may comply with the exception to Section 509.3.

3. Doors swinging toward flow of traffic shall not be permitted unless actuating devices start to function at least 8 feet 11 inches (2718 mm) beyond the door in an open position and guide rails extend 6 feet 5 inches (1956 mm) beyond the door in an open position.

WSBC: Where revolving or overhead doors or turnstiles are used, an adjacent accessible gate or door shall be provided where an accessible route is required by Chapter 11.

Clearances for guide rails shall be as follows:

1. Six inches (152 mm) maximum between rails and leading edge of door at the closest point in its arc of travel.

2. Six inches (152 mm) maximum between rails and the door in an open position.

3. Two inches (51 mm) minimum between rail at hinge side and door in an open position.

4. Two inches (51 mm) maximum between freestanding rails and jamb or other adjacent surface.

1003.3.1.3 Width and height. Every required exit doorway serving an occupant load of 10 or more shall be of a size to permit the installation of a door not less than 3 feet (914 mm) in nominal width and not less than 6 feet 8 inches (2032 mm) in nominal height. Where installed, exit doors shall be capable of opening such that the clear width of the exit is not less than 32 inches (813 mm). In computing the exit width as required by Section 1003.2.3, the net dimension of the doorway shall be used.

Interpretation I1003.3a: Every building or structure used for human occupancy shall have at least one exterior exit door which meets the requirements of Section 1003.3.1.3 that is not an overhead door.

1003.3.1.4 Door leaf width. A single leaf of an exit door serving an occupant load of 10 or more shall not exceed 4 feet (1219 mm) in width.

1003.3.1.5 Swing and opening force. Exit doors serving an occupant load of 10 or more shall be of the pivoted, balanced or side-hinged swinging type. Exit doors shall swing in the direction of the path of exit travel where the area served has an occupant load of 50 or more. The door shall swing to the fully open position when an opening force not to exceed 30 pounds (133.45 N) is applied to the latch side. For other door opening forces, see Section 905.3 and Chapter 11 of the Washington State Building Code. See Section 3201 for doors swinging over public property.

WSBC: Within an accessible route, such force shall not exceed 8.5 pounds (37.8 N) at exterior doors; and shall not exceed 5 pounds (22.24 N) at sliding and folding doors and interior swinging doors. At exterior doors where environmental conditions require greater closing pressure, power-operated doors shall be used within the accessible route.

EXCEPTIONS: 1. Group I, Division 3 Occupancy used as a place of detention.

2. In other than accessible dwelling units, doors within or serving an individual dwelling unit.

3. Special doors conforming to Section 1003.3.1.2.

WSBC: 4. The opening force at required fire doors within an accessible route may be not greater than 30 pounds (133.45 N).

Double-acting doors shall not be used as exits where any of the following conditions exist:

1. The occupant load served by the door is 100 or more.

2. The door is part of a fire assembly.

3. The door is part of a smoke- and draft-control assembly.

4. Panic hardware is required or provided on the door.

A double-acting door shall be provided with a view panel of not less than 200 square inches (0.129 m2).

1003.3.1.6 Floor level at doors. Regardless of the occupant load served, there shall be a floor or a landing on each side of a door. Where access for persons with disabilities is required by Chapter 11 of the Washington State Building Code, the floor or landing shall not be more than l/2 inch (12.7 mm) lower than the threshold of the doorway. Where such

access is not required, the threshold shall not exceed 1 inch (25 mm). Landings shall be level except that exterior landings may have a slope not to exceed l/4 unit vertical in 12 units horizontal (2% slope).

EXCEPTIONS: 1. In Group R, Division 3, and Group U Occupancies and within individual units of Group R, Division 1 Occupancies:

1.1 A door may open at the top step of a flight of stairs, provided the door does not swing over the top step.

1.2 A door may open at a landing that is not more than 8 inches (203 mm) lower than the floor level, provided the door does not swing over the landing.

1.3 Screen doors and storm doors may swing over stairs, steps or landings.

2. Doors serving building equipment rooms that are not normally occupied.

WSBC: At exterior sliding doors within accessible dwelling units, the floor or landing may be no more than 3/4 inch (19 mm) lower than the threshold of the doorway, including the sliding door tracks, provided that an additional accessible entrance door is provided into the dwelling unit.

1003.3.1.7 Landings at doors. Regardless of the occupant load served, landings shall have a width not less than the width of the door or the width of the stairway served, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). Doors in any position shall not encroach on the required stairway width by more than 12 inches (305 mm). Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

EXCEPTION: In Group R, Division 3, and Group U Occupancies and within individual units of Group R, Division 1 Occupancies, such length need not exceed 36 inches (914 mm).

When doors open over landings, doors in any position shall not reduce the landing length to less than 12 inches (305 mm).

A landing that has no adjoining door, or where the door does not swing over the landing, shall comply with the requirements of Section 1003.3.3.5.

Interpretation I1003.3b: Landing length, width and slope shall be measured as specified in Section 1003.3.3.5. See Figures 10-1 and 10-2 for illustrations of the requirements of this section.

1003.3.1.8 Type of lock or latch. Regardless of the occupant load served, exit doors shall be openable from the inside without the use of a key or any special knowledge or effort.

EXCEPTIONS: 1. In Groups A, Division 3; B; F; M and S Occupancies and in all churches, key-locking hardware may be used on the main exit where the main exit consists of a single door or pair of doors where there is a readily visible, durable sign on or adjacent to the door stating, "THIS DOOR MUST REMAIN UNLOCKED DURING BUSINESS HOURS." The sign shall be in letters not less than 1 inch (25 mm) high on a contrasting background. When unlocked, the single door or both leaves of a pair of doors must be free to swing without operation of any latching device. Single-cylinder, manually operated bolts are permitted provided they are manually operable on the inside. The use of this exception may be revoked by the building official for due cause.

2. Exit doors from individual dwelling units; Group R, Division 3 congregate residences; and guest rooms of Group R Occupancies having an occupant load of 10 or less may be provided with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool and mounted at a height not to exceed 48 inches (1219 mm) above the finished floor.

Interpretation I1003.3c: When doors are used in pairs the added door leaf, if not required for exit purposes by other

provisions of this code, may have manually operated bolts or self-latching flush bolts, provided the door leaf having the bolts shall have no dummy trim on the exit side, thus rendering it readily distinguishable from the required door leaf.

Where exit doors are used in pairs and approved automatic flush bolts are used, the door leaf having the automatic flush bolts shall have no doorknob or surface-mounted hardware. The unlatching of any leaf shall not require more than one operation.

EXCEPTIONS: 1. Group R, Division 3 Occupancies.

2. Where a pair of doors serving a room not normally occupied is needed for the movement of equipment, manually operated edge- or surface-mounted bolts or self-latching flush bolts may be used.

1003.3.1.9 Panic hardware. Panic hardware, where installed, shall comply with the requirements of UBC Standard 10-4. The activating member shall be mounted at a height of not less than 30 inches (762 mm) nor more than 44 inches (1118 mm) above the floor. The unlatching force shall not exceed 15 pounds (66.72 N) when applied in the direction of travel.

Where pivoted or balanced doors are used and panic hardware is required, panic hardware shall be of the push-pad type and the pad shall not extend across more than one half of the width of the door measured from the latch side.

1003.3.1.10 Special Locking Arrangements.

1003.3.1.10.1 Special egress-control devices. When approved by the building official, exit doors in Group A libraries other than at main exit doors; Group B; Group E, Division 3; Group F; Group I, Divisions 1.1, 1.2 and 2; Group M, Group LC and Group S Occupancies may be equipped with approved listed special egress-control devices, provided the building is protected throughout by an approved automatic sprinkler system and an approved automatic smoke-detection system. Such devices shall conform to all the following:

1. The egress-control device shall automatically deactivate upon activation of either the sprinkler system or the smoke-detection system.

2. The egress-control device shall automatically deactivate upon loss of electrical power to any one of the following:

2.1 The egress-control device itself.

2.2 The smoke-detection system.

2.3 Means of egress illumination as required by Section 1003.2.9.

3. The egress-control device shall be capable of being deactivated by a signal from a switch located in an approved location.

4. An irreversible process that will deactivate the egress- control device shall be initiated whenever a manual force of not more than 15 pounds (66.72 N) is applied for two seconds to the panic bar or other door-latching hardware. The egress- control device shall deactivate within an approved time period not to exceed a total of 15 seconds. The time delay established for each egress-control device shall not be field adjustable.

5. Actuation of the panic bar or other door-latching hardware shall activate an audible signal at the door.

6. The unlatching shall not require more than one operation.

A sign shall be provided on the door located above and within 12 inches (305 mm) of the panic bar or other door-latching hardware reading: KEEP PUSHING. THIS DOOR WILL OPEN IN _____ SECONDS. ALARM WILL SOUND.

Sign lettering shall be at least 1 inch (25 mm) in height and shall have a stroke of not less than l/8 inch (3.2 mm).

Regardless of the means of deactivation, relocking of the egress-control device shall be by manual means only at the door.

WSBC: EXCEPTION: Subject to the approval of the building official, special units for the care of dementia patients in nursing homes which are identified and approved by the state agency licensing such units, may use special egress-control devices where a panic bar is not part of the egress-control mechanism.

1003.3.1.10.2 Access-controlled egress doors. The building official may approve access-controlled egress doors conforming to the requirements of NFPA 101 Section 5-2.1.6.2 provided:

1. The space is provided with an automatic sprinkler system or a fire alarm system which includes a smoke detector within 15 feet (4572 mm) of the door;

2. The lock, motion sensor, push button and control are listed; and

3. A test description for annual confidence test is provided to the building owner and confidence test unit of the Seattle Fire Marshal's Office.

1003.3.1.11 Safety glazing identification. Regardless of the occupant load served, glass doors shall conform to the requirements specified in Section 2406.

1003.3.2 Gates.

1003.3.2.1 General. Gates serving a means of egress system shall comply with the requirements of Section 1003.3.2.

1003.3.2.2 Detailed requirements. Gates used as a component in a means of egress system shall conform to the applicable requirements of Section 1003.3.1.

EXCEPTION: Gates surrounding stadiums may be of the horizontal sliding or swinging type and may exceed the 4-foot (1219 mm) maximum leaf width limitation.

1003.3.3 Stairways.

1003.3.3.1 General. Every stairway having two or more risers serving any building or portion thereof shall comply with the requirements of Section 1003.3.3. For the purposes of Section 1003.3.3, the term "stairway" shall include stairs, landings, handrails and guardrails as applicable. Where aisles in assembly rooms have steps, they shall comply with the requirements in Section 1004.3.2.

EXCEPTIONS: 1. Stairs or ladders used only to attend equipment or window wells are exempt from the requirements of this section.

WSBC: 2. Stairs or ladders used within individual dwelling units to gain access to areas 200 square feet (18.6 m2) or less which do not contain the primary bathroom or kitchen are exempt from the requirements of this section.

For the purpose of this chapter, the term "step" shall mean those portions of the means of egress achieving a change in elevation by means of a single riser. Individual steps shall comply with the detailed requirements of this chapter that specify applicability to steps.

1003.3.3.2 Width. The width of stairways shall be determined as specified in Section 1003.2.3, but such width shall not be less than 44 inches (1118 mm), except as specified herein and in Chapter 11 of the Washington State Building Code. Stairways serving an occupant load less than 50 shall not be less than 36 inches (914 mm) in width.

Handrails may project into the required width a distance of 31/2 inches (89 mm) from each side of a stairway. Stringers and other projections such as trim and similar decorative features may project into the required width 1l/2 inches (38 mm) from each side.

1003.3.3.3 Rise and run. The rise of steps and stairs shall not be less than 4 inches (102 mm) nor more than 7-1/2 inches (190 mm). The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Except as permitted in Sections 1003.3.3.8.1, 1003.3.3.8.2 and 1003.3.3.8.3, the run shall not be less than 10 inches (254 mm) as measured horizontally between the vertical planes of the furthermost projection of adjacent treads or nosings. Stair treads shall be of uniform size and shape, except the largest tread run within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

EXCEPTIONS: 1. Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with an 8-inch-maximum (203 mm) rise and a 9-inch-minimum (229 mm) run.

2. Where the bottom or top riser adjoins a sloping public way, walk or driveway having an established grade (other than natural earth) and serving as a landing, the bottom or top riser may be reduced along the slope.

WSBC: Where Exception 2 to Section 1103.2.2 is used in a building design, the run of stair treads shall not be less than 11 inches (279 mm), as measured horizontally between the vertical planes of the furthermost projections of adjacent tread. The largest tread run within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

1003.3.3.4 Headroom. Every stairway shall have a headroom clearance of not less than 6 feet 8 inches (2032 mm). Such clearances shall be measured vertically from a plane parallel and tangent to the stairway tread nosings to the soffit or other construction above at all points.

1003.3.3.5 Landings. There shall be a floor or a landing at the top and bottom of each stairway or stair run. Every landing shall have a dimension measured in the direction of travel not less than the width of the stairway. Such dimension need not exceed 44 inches (1118 mm) where the stair has a straight run. At least one intermediate landing shall be provided for each 12 feet (3658 mm) of vertical stairway rise measured between the horizontal planes of adjacent landings. Landings shall have a slope not steeper than 1 vertical to 48 horizontal ~~except that exterior landings may have a slope not to exceed l/4 unit vertical in 12 units horizontal~~ (2% slope). For landings with adjoining doors, see Section 1003.3.1.7

EXCEPTIONS: 1. In Group R, Division 3, and Group U Occupancies and within individual units of Group R, Division 1 Occupancies, such length need not exceed 36 inches (914 mm) where the stair has a straight run.

2. Stairs serving an unoccupied roof are exempt from these requirements.

1003.3.3.6 Handrails. Stairways shall have handrails on each side, and every stairway required to be more than 88 inches (2235 mm) in width shall be provided with not less than one intermediate handrail for each 88 inches (2235 mm) of required width. Intermediate handrails shall be spaced approximately equally across with the entire width of the stairway.

EXCEPTIONS: 1. Stairways less than 44 inches (1118 mm) in width or stairways serving one individual dwelling unit in Group R, Division 1 or 3 Occupancy or a Group R, Division 3 congregate residence may have one handrail.

WSBC: This exception shall not be used concurrently with the second exception to the first paragraph of Section 1103.2.2

2. Private stairways 30 inches (762 mm) or less in height may have a handrail on one side only.

WSBC: This exception shall not be used concurrently with the second exception to the first paragraph of Section 1103.2.2

3. Stairways having less than four risers and serving one individual dwelling unit in Group R, Division 1 or 3, or a Group R, Division 3 congregate residence or Group U Occupancies need not have handrails.

The top of handrails and handrail extensions shall not be placed less than 34 inches (864 mm) nor more than 38 inches (965 mm) above landings and the nosing of treads. Handrails shall be continuous the full length of the stairs and, except for private stairways, at least one handrail shall extend in the direction of the stair run not less than 12 inches (305 mm) beyond the top riser nor less than a length equal to one tread depth plus 12 inches (305 mm) beyond the bottom riser. Ends shall be returned or shall terminate in newel posts or safety terminals.

EXCEPTIONS: 1. Private stairways do not require handrail extensions.

2. Handrails may have starting newels within the first tread on stairways in Group R, Division 3 Occupancies and within individual dwelling units of Group R, Division 1 Occupancies.

The handgrip portion of handrails shall not be less than1l/4 inches (32 mm) nor more than 2 inches (51 mm) in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Handrails projecting from a wall shall have a space of not less than 1l/2 inches (38 mm) between the wall and the handrail.

Any recess containing a handrail shall allow a clearance of not less than 18 inches above the top of the rail, and shall be not more than 3 inches (76 mm) in horizontal depth.

Handrails shall not rotate within their fittings.

1003.3.3.7 Guardrails. Stairways open on one or both sides shall have guardrails as required by Section 509.

1003.3.3.8 Alternative stairways.

1003.3.3.8.1 Circular stairways. Circular stairways conforming to the requirements of this section may be used as a means of egress component in any occupancy. The minimum width of run shall not be less than 10 inches (254 mm) and the smaller stairway radius shall not be less than twice the width of the stairway.

1003.3.3.8.2 Winding stairways. In Group R, Division 3 Occupancies and in private stairways in Group R, Division 1 Occupancies, winding stairways may be used if the required width of run is provided at a point not more than 12 inches (305 mm) from the side of the stairway where the treads are narrower, but in no case shall the width of run be less than 6 inches (152 mm) at any point.

1003.3.3.8.3 Spiral stairways. In Group R, Division 3 Occupancies, in private stairways within individual units of Group R, Division 1 Occupancies and in Group U Occupancies, spiral stairways may be installed. A spiral stairway is a stairway having a closed circular form in its plan view with uniform section shaped treads attached to and radiating about a minimum diameter supporting column. Such stairways may be used as a required means of egress component for not more than one floor, balcony or mezzanine; and in Groups B, F, Division 1, M and S, Division 1 Occupancies serving areas of not more than 400 square feet (37 m2) which are not open to the public. Spiral stairways may also be used as a convenience stairway in Groups B, F, M and S Occupancies when such stairways are not open to the public and are not required for exits.

Interpretation I1003.3d: Spiral stairways may not serve as an accessible stairway.

The tread shall provide a clear walking area measuring at least 26 inches (660 mm) from the outer edge of the supporting column to the inner edge of the handrail. The effective tread is delineated by the nosing radius line, the exterior arc (inner edge of railing) and the overlap radius line (nosing radius line of tread above). Effective tread dimensions are taken along a line perpendicular to the center line of the tread. A run of at least 71/2 inches (191 mm) shall be provided at a point 12 inches (305 mm) from where the tread is the narrowest. The rise shall be sufficient to provide a headroom clearance of not less than 6 feet 6 inches (1981 mm); however, such rise shall not exceed 9l/2

inches (241 mm).

1003.3.3.9 Interior stairway construction. Interior stairways shall be constructed based on type of construction requirements as specified in Sections 602.4, 603.4, 604.4, 605.4 and 606.4.

Except where enclosed usable space under stairs is prohibited by Section 1005.3.3.6, the walls and soffits of such enclosed space shall be protected on the enclosed side as required for one-hour fire-resistive construction.

EXCEPTION: Gypsum wallboard 1/2-inch (13 mm) thick may be used in Group R, Division 3 Occupancies and within individual dwelling units of Group R, Division 1 Occupancies where one- hour fire-resistive construction is not otherwise required throughout.

Stairways exiting directly to the exterior of a building four or more stories in height shall be provided with a means for emergency entry for fire department access. (See the Fire Code Section 902.4.)

1003.3.3.10 Protection of exterior wall openings. All openings in the exterior wall below and within 10 feet (3048 mm), measured horizontally, of openings in an interior exit stairway serving a building over two stories in height or a floor level having such openings in two or more floors below, shall be protected by fixed or self-closing fire assemblies having a three-fourths-hour fire-protection rating. See Section 1006.3.3.1.

EXCEPTIONS: 1. Group R, Division 3 Occupancies.

2. Protection of exterior wall openings is not required where the exterior openings in the interior stairway are protected by fixed or self-closing fire assemblies having a three-fourths-hour fire-protection rating.

3. Protection of openings is not required for open parking garages conforming to Section 405.

1003.3.3.11 Stairway to roof. In buildings four or more stories in height, other than Group R, Division 3 Occupancies, one stairway shall extend to the roof surface, unless the roof has a slope steeper than 4 units vertical in 12 units horizontal (33% slope).

1003.3.3.12 Roof hatches. All required interior stairways that extend to the top floor in any building four or more stories in height shall have, at the highest point of the stair shaft, an approved ladder and roof hatch openable to the exterior not less than 11 square feet (1.1 m2) in area and having a minimum dimension of 2 feet, 6 inches (762 mm).

EXCEPTION: A roof hatch need not be provided on pressurized enclosures or on stairways that extend to the roof with an opening onto that roof.

1003.3.3.13 Stairway identification. Stairway identification signs shall be located at each floor level in all enclosed stairways in buildings four or more stories in height. Such signs shall identify the stairway, indicate whether or not there is roof access, roof hatch or no roof access, the floor level, and the upper and lower terminus of the stairway. The sign shall be located approximately 5 feet (1524 mm) above the landing floor in a position that is readily visible when the door is in either the open or closed position. Signs shall comply with requirements of UBC Standard 10-2.

WSBC: Each door to a floor level also shall have a tactile sign, including raised letters and Braille, identifying the floor level and shall comply with Part II of Chapter 11.

1003.3.4 Ramps.

1003.3.4.1 General. Ramps used as a component in a means of egress system shall conform to the requirements of Section 1003.3.4.

EXCEPTION: Ramped aisles within assembly rooms shall conform to the requirements in Section 1004.3.2.

1003.3.4.2 Width. The width of ramps shall be determined as specified in Section 1003.2.3, but shall not be less than 44 inches (1118 mm), except as specified herein and in Chapter 11 of the Washington State Building Code. Ramps serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width.

Handrails may project into the required width a distance of 31/2 inches (89 mm) from each side of a ramp. Other projections, such as trim and similar decorative features, may project into the required width 11/2 inches (38 mm) from each side.

1003.3.4.3 Slope. The slope of ramps required by Chapter 11 of the Washington State Building Code that are located within an accessible route of travel shall not be steeper than 1 unit vertical in 12 units horizontal (8.3% slope). The slope of other ramps shall not be steeper than 1 unit vertical in 8 units horizontal (12.5% slope).

EXCEPTION: When provided with fixed seating, theaters and similar assembly rooms may have a slope not steeper than 1 vertical to 5 horizontal (20% slope).

1003.3.4.4 Landings. Ramps having slopes steeper than 1 unit vertical in 20 units horizontal (5% slope) shall have landings at the top and bottom, and at least one intermediate landing shall be provided for each 5 feet (1524 mm) of vertical rise measured between the horizontal planes of adjacent landings. ~~Top landings and intermediate l~~Landings shall have a dimension measured in the direction of ramp run of not less than 5 feet (1524 mm). ~~Landings at the bottom of ramps shall have a dimension in the direction of ramp run of not less than 6 feet (1829 mm)~~ Landings shall provide maneuvering clearances at doors as required in Chapter 11.

1003.3.4.5 Handrails. Ramps having slopes steeper than 1 unit vertical in 20 units horizontal (5% slope) shall have handrails as required for stairways, except that intermediate handrails shall not be required. Ramped aisles serving fixed seating shall have handrails as required in Section 1004.3.2.

Section 38. Subsection 1004.2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

1004.2 Exit-Access Design Requirements.

1004.2.1 General. The exit access portion of the means of egress system shall comply with the applicable design requirements of Section 1004.2. For the purposes of Section 1004.2, the term "exit-access doorway" shall mean the point of entry to one portion of the building or structure from another along the path of exit travel. An exit-access doorway occurs where access to all exits is not direct (see Section 1004.2.3). An exit-access doorway does not necessarily include a door. When a detailed requirement specifies an "exit-access door," however, then a door shall be included as a portion of the doorway.

1004.2.2 Travel through intervening rooms. The required access to exits from any portion of a building shall be directly from the space under consideration to an exit or to a corridor that provides direct access to an exit. Exit access shall not be interrupted by intervening rooms.

EXCEPTIONS: 1. Access to exits may occur through foyers, lobbies and reception rooms.

2. Where access to only one exit is required from a space under consideration, exit access may occur through an adjoining or intervening room, which in turn provides direct access to an exit or to a corridor that provides direct access to an exit.

3. Rooms with a cumulative occupant load of less than 10 may access exits through more than one intervening room.

4. Where access to more than one exit is required from a space under consideration, such spaces may access one required exit through an adjoining or intervening room, which in turn provides direct access to an exit or to a corridor that provides direct access to an exit. All other required access to exits shall be directly from the space under consideration to an exit or to a corridor that provides direct access to an exit.

5. In a one- or two-story building classified as a Group F, Group S or Group H, Division 5 Occupancy, offices and similar administrative areas may have access to two required exits through an adjoining or intervening room, which in turn provides direct access to an exit or to a corridor that provides direct access to an exit, if the building is equipped with an automatic sprinkler system throughout and is provided with smoke and heat ventilation as specified in Section 906. Such areas shall not exceed 25 percent of the floor area of the major use.

6. Rooms within dwelling units may access exits through more than one intervening room.

Hallways shall be considered as intervening rooms.

Interior courts enclosed on all sides shall be considered as interior intervening rooms. EXCEPTION: Such courts not less than 10 feet (3048 mm) in width and not less than the width determined as specified in Section 1003.2.3 and providing direct access to the exit need not be considered intervening rooms.

In other than dwelling units, a means of egress shall not pass through kitchens, storerooms, restrooms, closets or spaces used for similar purposes.

A means of egress serving other than Group H Occupancies shall not pass through rooms that contain Group H Occupancies.

1004.2.3 Access to exits.

1004.2.3.1 General. Exits shall be provided from each building level. Additionally, access to such exits shall be provided from all occupied areas within building levels. The maximum number of exits required from any story, basement or individual space shall be maintained until arrival at grade or the public way.

1004.2.3.2 From individual floors. For the purposes of Section 1004.2, floors, stories, occupied roofs, and similar designations of building levels other than basements and mezzanines shall be considered synonymous.

Every occupant on the first story and stories where the means of egress discharges within four feet, measured vertically, of adjacent finish ground level shall have access to not less than one exit and not less than two exits when required by Table 10-A. Every occupant in basements and on stories where the means of egress does not discharge within four feet, measured vertically, of adjacent finished ground level shall have access to not less than two exits.

EXCEPTIONS: 1. Second stories having an occupant load less than 10 may be provided with access to only one exit.

2. Two or more dwelling units on the second story or in a basement may have access to only one exit where the total occupant load served by that exit does not exceed 10.

3. Except as provided in Table 10-A, access to only one exit need be provided within and from an individual dwelling unit or a Group R, Division 3 congregate residence.

4. Floors or basements used exclusively for the service of the building may have access to only one exit. For the purposes of this exception, storage rooms, laundry rooms, maintenance offices and similar uses shall not be considered as providing service to the building.

5. Basements not exceeding 900 square feet (83.61 m2) in floor area with a travel distance of less than 50 feet (15240 mm) and containing only storage rooms, laundry rooms, and maintenance offices may be provided with access to only one exit or exit-access doorway.

6. Group B Occupancy office buildings not exceeding two stories in height and not exceeding 3,500 square feet (325 m2) per floor may have access to only one exit.

No cumulative or contributing occupant loads from adjacent levels need be considered when determining the number of

required exits from a given level.

Code Alternate CA1004.2a: Any dwelling unit which has an exit directly to the street or yard at ground level or by way of an exterior stairway or an enclosed stairway with fire-resistance rating of one hour or more serving that dwelling unit only and not communicating with any floor below the floor of exit discharge or other area not a part of the dwelling unit served may have a single exit.

Code Alternate CA1004.2b: Not more than 5 stories of Group R Division 1 apartment occupancy in buildings not over 6 stories may be served by a single exit under the following conditions:

1. There are no more than four dwelling units on any floor.

2. The building shall be of not less than one-hour fire- resistive construction and shall also be protected throughout by an automatic sprinkler system. The sprinkler system shall conform to UBC Standard 9-1. Residential type sprinkler heads shall be used in all habitable spaces in each dwelling unit.

3. There shall be no more than two single exit stairway conditions on the same property.

4. ~~A stairway pressurized in accordance with exception 2 to Section 905.2.1, or a~~ An exterior stairway or exit enclosure shall be provided. The exit enclosure, including any related exit passageway, shall be pressurized in accordance with exception 2 to Section 905.2.1. Doors in ~~pressurized stairways~~ the exit enclosure shall swing into the ~~stairway~~ exit enclosure regardless of the occupant load served, provided that doors from the ~~stairway~~ exit enclosure to the building exterior may swing in the direction of exit travel.

5. A corridor shall separate each dwelling unit entry/exit door from the door to an ~~enclosed stairway~~ exit enclosure, including any related exit passageway, on each floor. Dwelling unit doors shall not open directly into an enclosed stairway. Dwelling unit doors may open directly into an exterior stairway.

6. There shall be no more than 20 feet (6096 mm) of travel distance to the exit stairway from the entry/exit door of any dwelling unit.

7. The exit shall not terminate in an exit court where the court depth exceeds the court width unless it is possible to exit in either direction to the public way.

8. Elevators shall be pressurized in accordance with exception 2 to Section 905.2.1 or shall open into elevator lobbies. Elevator lobbies shall be separated from the remainder of the building and from the exit stairway with construction as required for corridors in Section 1004.3.4. Doors shall be automatic closing actuated by smoke detector. Where approved by the building official, natural ventilation may be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases.

9. Other occupancies may be permitted in the same building provided they comply with all the requirements of this code. Except for parking garages accessory to the Group R Occupancy, other occupancies shall not communicate with the Group R Occupancy portion of the building or with the single-exit stairway.

1004.2.3.3 From individual spaces. All occupied portions of the building shall have access to not less than one exit or exit-access doorway. Access to not less than two exits, exit- access doorways or combination thereof shall be provided when the individual or cumulative occupant load served by a portion of the exit access is equal to, or greater than, that listed in Table 10-A.

EXCEPTIONS: 1. Elevator lobbies may have access to only one exit or exit-access doorway provided the use of such exit or exit-access doorway does not require keys, tools, special knowledge, or effort.

2. ~~Storage rooms, laundry rooms and maintenance offices in basements not exceeding 900 square feet (83.61 m2) in floor area and a travel distance of less than 50 feet (15 240 mm) may be provided with access to only one exit or exit-~~

~~access doorway.~~

~~3.~~ Occupied roofs with an occupant load of 10 or less may have one exit.

Unless approved by the building official, where two or more exits are required, exit travel shall not pass through an exit enclosure as the only way to reach another exit.

1004.2.3.4 Additional access to exits. Access to not less than three exits, exit-access doorways or combination thereof shall be provided when the individual or cumulative occupant load served by the exit access is 501 to 1,000.

Access to not less than four exits, exit-access doorways or combination thereof shall be provided when the individual or cumulative occupant load served by the exit access exceeds 1,000.

1004.2.4 Separation of exits or exit-access doorways. Where two or more exits or exit-access doorways are required from any level or portion of the building, at least two of the exits or exit-access doorways shall be placed a distance apart equal to not less than forty percent of the length of the maximum overall diagonal dimension of the area served measured in a straight line between the center of such exits or exit- access doorways. Additional exits or exit-access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.

EXCEPTIONS: 1. The separation distance determined in accordance with this section may be measured along a direct path of exit travel within a corridor serving exit enclosures. The walls of any such exit enclosure shall not be less than 15 feet 4572 mm), measured in a straight line, from the walls of another exit enclosure.

Interpretation I1004.2a: Exception 1 applies where the corridor meets the requirements of Sections 1004.3.4.3, 1004.3.4.3.1, 1004.3.4.3.2, 1004.3.4.3.2.1 and 1004.3.4.3.2.2.

2. Where buildings are constructed in accordance with Section 403, vertical exits may be placed a distance apart equal to not less than 30 percent of the length of the maximum overall diagonal dimension of the building. Exception 1 may be used concurrently.

3. For retail and office tenant spaces in Group B and M Occupancies, exits from the tenant space shall be as far apart as reasonably practicable.

1004.2.5 Travel distance.

1004.2.5.1 General. Travel distance is that distance an occupant must travel from any point within occupied portions of the exit access to the door of the nearest exit. Travel distance shall be measured in a straight line along the path of exit travel from the most remote point through the center of exit-access doorways to the center of the exit door. Travel distance shall include that portion of the path of exit travel through or around permanent construction features and building elements. Travel around tables, chairs, furnishings, cabinets and similar temporary or movable fixtures or equipment need not be considered as the normal presence of such items is factored into the permitted travel distance.

Unless prohibited elsewhere in this chapter, travel within the exit access may occur on multiple levels by way of unenclosed stairways or ramps. Where the path of exit travel includes unenclosed stairways or ramps within the exit access, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

1004.2.5.2 Maximum travel distance. The travel distance to at least one exit shall not exceed that specified in this section.

Special travel distance requirements are contained in other sections of this code as follows:

1. For atria, see Section 402.5.

2. For Group E Occupancies, see Section 1007.3.

3. For Group H Occupancies, see Section 1007.4.

4. For malls, see Sections 404.4.3 and 404.4.5.

1004.2.5.2.1 Nonsprinklered buildings. In buildings not equipped with an automatic sprinkler system throughout, the travel distance shall not exceed 200 feet (60 960 mm).

1004.2.5.2.2 Sprinklered buildings. In buildings equipped with an automatic sprinkler system throughout, the travel distance shall not exceed 250 feet (76 200 mm).

1004.2.5.2.3 Corridor increases. The travel distances specified in Sections 1004.2.5.2.1, 1004.2.5.2.2, 1004.2.5.2.4 and 1004.2.5.2.5 may be increased up to an additional 100 feet (30 480 mm) provided that the last portion of exit access leading to the exit occurs within a corridor. The length of such corridor shall not be less than the amount of the increase taken, in feet (mm).

Interpretation I1004.2b: Section 1004.2.5.2.3 applies where the corridor meets the requirements of Sections 1004.3.4.3, 1004.3.4.3.1, 1004.3.4.3.2, 1004.3.4.3.2.1 and 1004.3.4.3.2.2.

1004.2.5.2.4 Open parking garages. In a Group S, Division 4 open parking garage as defined in Section 311.9, the travel distance shall not exceed 300 feet (91 440 mm) in a building not equipped with an automatic sprinkler system throughout and 400 feet (121 920 mm) in a building equipped with an automatic sprinkler system throughout. The travel distance may be measured to open stairways, which are permitted in accordance with Section 1005.3.3.1. When standpipes are required by Chapter 9, additional standpipe connections may be required where the hose travel distance exceeds 150 feet (45 720 mm).

Interpretation I1004.2c: Section 1004.2.5.2.4 may apply to Group S, Division 3 garages, or individual floors thereof, which provide openings which comply with the standards of Section 311.9.

1004.2.5.2.5 Factory, hazardous and storage occupancies. In a one-story building classified as a Group H, Division 5 aircraft repair hangar, or as a Group F or Group S Occupancy, the travel distance shall not exceed 300 feet (91 440 mm) and may be increased to 400 feet (121 920 mm) if the building is equipped with an automatic sprinkler system throughout and is also provided with smoke and heat ventilation as specified in Section 906.

1004.2.6 Dead Ends. Where more than one exit or exit-access doorway is required, the exit access shall be arranged such that there are no dead ends in hallways and corridors. In other than Group B office occupancies in Types I- and II-F.R. construction, dead ends shall not be more than 25 feet (7620 mm) in length. In buildings of Type I- and II- F.R. construction, areas containing Group B offices may have dead ends not exceeding 75 feet (22 860 mm) in length, provided the cumulative occupant load shall not exceed 50 for all areas for which the dead end serves as the only means of egress.

No part of areas open to the public shall be more than 25 feet (7620 mm) from an aisle, or 50 feet (15240 mm) from an aisle or corridor providing two directions of travel.

Section 39. Subsection 1004.3 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

1004.3 Exit-Access Components.

1004.3.1 General. Exit-access components incorporated into the design of the exit-access portion of the means of egress system shall comply with the requirements of Section 1004.3.

1004.3.2 Aisles.

1004.3.2.1 General. Aisles serving as a portion of an exit access in the means of egress system shall comply with the requirements of Section 1004.3.2. Aisles shall be provided from all occupied portions of the exit access that contain seats, tables, furnishings, displays, and similar fixtures or equipment.

1004.3.2.2 Width in occupancies without fixed seats. The width of aisles in occupancies without fixed seats shall be determined in accordance with the following:

1. In areas serving employees only, the minimum aisle width shall be 24 inches (610 mm), but not less than the width determined as specified in Section 1003.2.3.

2. In public areas of Groups B and M Occupancies, and in assembly occupancies without fixed seats, the minimum clear aisle width shall be 36 inches (914 mm) where seats, tables, furnishings, displays and similar fixtures or equipment are placed on only one side of the aisle and 44 inches (1118 mm) where such fixtures or equipment are placed on both sides of the aisle.

The required width of aisles shall be unobstructed.

EXCEPTION: Handrails and doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features may project into the required width 11/2 inches (38 mm) from each side.

1004.3.2.3 Areas with fixed seats. Aisles in areas with fixed seats shall comply with the requirements of this section.

1004.3.2.3.1 Width. The clear width of aisles shall be based on the number of fixed seats served by such aisles. The required width of aisles serving fixed seats shall not be used for any other purpose.

The clear width of an aisle in inches shall not be less than the occupant load served by the aisle multiplied by 0.3 for aisles with slopes greater than 1 vertical to 8 horizontal and not less than 0.2 for aisles with slopes of 1 vertical to 8 horizontal or less. In addition, when the rise of steps in aisles exceeds 7 inches, the aisle clear width shall be increased by 1-1/4 inches for each 100 occupants or fraction thereof served for each 1/4 inch of riser height above 7 inches.

EXCEPTION: For buildings with smoke-protected assembly seating and for which an approved life-safety evaluation is conducted, the minimum clear width of aisles and other means of egress may be in accordance with Table 10-D. For Table 10- D, the number of seats specified must be within a single assembly place, and interpolation shall be permitted between the specified values shown. If Table 10-D is used the minimum clear widths shown shall be modified in accordance with the following:

1. Where risers exceed 7 inches (178 mm) in height, multiply the stairway width in the tables by factor A, where:

(riser height - 7.0 inches)

A = 1 + 5 (4-1)

For SI: (riser height - 178 mm)

A = 1 + 127

Where risers do not exceed 7 inches (178 mm) in height, A = 1.

2. Stairways not having a handrail within a 30-inch (762 mm) horizontal distance shall be 25 percent wider than otherwise calculated, i.e., multiply by B = 1.25. For all other stairs, B = 1.

3. Ramps steeper than 1 unit vertical in 10 units horizontal (10% slope) where used in ascent shall have their width

increased by 10 percent, i.e., multiply by C = 1.10. For ramps not steeper than 1 unit vertical in 10 units horizontal (10% slope), C = 1. Where fixed seats are arranged in rows, the clear width of aisles shall not be less than set forth above or less than the following minimum widths:

3.1 Forty-eight inches (1219 mm) for stairways having seating on both sides.

3.2 Thirty-six inches (914 mm) for stairways having seating on one side.

3.3 Twenty-three inches (584 mm) between a stairway handrail and seating where the aisles are subdivided by the handrail.

3.4 Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.

3.5 Thirty-six inches (914 mm) for level or ramped aisles having seating on one side.

3.6 Twenty-three inches (584 mm) between a stairway handrail and seating where an aisle does not serve more than five rows on one side.

Where exit access is possible in two directions, the width of such aisles shall be uniform throughout their length. Where aisles converge to form a single path of exit travel, the aisle width shall not be less than the combined required width of the converging aisles.

1004.3.2.3.2 Seat spacing. Where seating rows have 14 or less seats, the minimum clear width of aisle accessways shall not be less than 12 inches (305 mm) measured as the clear horizontal distance from the back of the row or guardrail ahead and the nearest projection of the row behind. Where seats are automatic or self-rising, measurement may be made with the seats in the raised position. Where seats are not automatic or self-rising, the minimum clear width shall be measured with the seat in the down position.

The clear width shall be increased as follows:

1. For rows of seating served by aisles or doorways at both ends, there shall be no more than 100 seats per row. The minimum clear width of 12 inches (305 mm) for aisle accessways shall be increased by 0.3 inch (7.6 mm) for every additional seat beyond 14, but the minimum clear width need not exceed 22 inches (559 mm). If the aisles are dead-ended, see Section 1004.3.2.4 for further limitations.

EXCEPTION: For smoke-protected assembly seating, the row length limits, beyond which the minimum clear width of 12 inches (305 mm) must be increased, may be in accordance with Table 10-E.

2. For rows of seating served by an aisle or doorway at one end only, the minimum clear width of 12 inches (305 mm) for aisle accessways shall be increased by 0.6 inch (15 mm) for every additional seat beyond seven, but the minimum clear width need not exceed 22 inches (559 mm).

EXCEPTION: For smoke-protected assembly seating, the row length limits, beyond which the minimum clear width of 12 inches (305 mm) must be increased, may be in accordance with Table 10-E.

In addition, the distance to the point where the occupant has a choice of two directions of travel to an exit shall not exceed 30 feet (9144 mm) from the point where the occupant is seated.

EXCEPTION: For smoke-protected assembly seating, the distance to the point where the occupant has a choice of two directions of travel to an exit may be increased to 50 feet (15 240 mm) from the point where the occupant is seated.

1004.3.2.4 Aisle termination. Aisles shall terminate at a cross aisle, vomitory, foyer or doorway. Aisles shall not have a dead end more than 25 feet (7620 mm) in length.

EXCEPTIONS: 1. A longer dead-end aisle is permitted where seats served by the dead-end aisle are not more than 24 seats from another aisle measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15 mm) for each additional seat above seven in a row.

2. When seats are without backrests, dead ends in vertical aisles shall not exceed a distance of 16 rows.

3. For smoke-protected assembly seating, the dead ends in vertical aisles shall not exceed a distance of 21 rows.

4. For smoke-protected assembly seating, a longer dead- end aisle is permitted where seats served by the dead-end aisle are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row.

Each end of a cross aisle shall terminate at an aisle, vomitory, foyer or doorway.

1004.3.2.5 Aisle steps.

1004.3.2.5.1 Where prohibited. Steps shall not be used in aisles having a slope of 1 unit vertical in 8 units horizontal (12.5% slope) or less.

1004.3.2.5.2 Where required. Aisles with a slope steeper than 1 unit vertical in 8 units horizontal (12.5% slope) shall consist of a series of risers and treads extending across the entire width of the aisle except as provided in Section 1004.3.2.6.

The height of risers shall not be more than 8 inches (203 mm) nor less than 4 inches (102 mm) and the tread run shall not be less than 10 inches (254 mm). The riser height shall be uniform within each flight and the tread run shall be uniform throughout the aisle. Variations in run or height between adjacent treads or risers shall not exceed 3/16 inch (4.8 mm).

EXCEPTION: Where the slope of aisle steps and the adjoining seating area is the same, the riser heights may be increased to a maximum of 9 inches (229 mm) and may be nonuniform, but only to the extent necessitated by changes in the slope of the adjoining seating area to maintain adequate sight lines. Variations may exceed 3/16 inch (4.8 mm) between adjacent risers, provided the exact location of such variations is identified with a marking stripe on each tread at the nosing or leading edge adjacent to the nonuniform riser. The marking stripe shall be distinctively different from the contrasting marking stripe.

A contrasting marking stripe or other approved marking shall be provided on each tread at the nosing or leading edge such that the location of each tread is readily apparent when viewed in descent. Such stripe shall be a minimum of 1 inch (25 mm) wide and a maximum of 2 inches (51 mm) wide.

EXCEPTION: The marking stripe may be omitted where tread surfaces are such that the location of each tread is readily apparent when viewed in descent.

1004.3.2.6 Ramp slope. The slope of ramped aisles shall not be more than 1 unit vertical in 8 units horizontal (12.5% slope). Ramped aisles shall have a slip-resistant surface.

EXCEPTION: When provided with fixed seating, theaters and similar assembly rooms may have a slope not steeper than 1 vertical to 5 horizontal (20% slope).

1004.3.2.7 Handrails. Handrails shall comply with the height, size and shape dimensions set forth in Section 1003.3.3.6, and ends shall be returned or shall have rounded terminations or bends. Ramped aisles having a slope steeper than 1 unit vertical in 15 units horizontal (6.7% slope) and aisle stairs (two or more adjacent steps) shall have handrails located either at the side or within the aisle width. Handrails may project into the required aisle width a distance of 31/2 inches (89 mm).

EXCEPTIONS: 1. Handrails may be omitted on ramped aisles having a slope not steeper than 1 unit vertical in 5 units horizontal 20% slope) and on stairways having fixed seats on both sides of the aisle.

2. Handrails may be omitted where a guardrail is at the side of an aisle that conforms to the size and shape requirements for handrails.

Handrails located within the aisle width shall be discontinuous with gaps or breaks at intervals not to exceed five rows. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) nor more than 36 inches (914 mm) measured horizontally.

1004.3.3 Hallways.

1004.3.3.1 General. Hallways serving as a portion of the exit access in the means of egress system shall comply with the requirements of Section 1004.3.3. Hallways may be used as an exit-access component unless specifically prohibited based on requirements specified elsewhere in this chapter. For exit- access design purposes, hallways shall be considered as intervening rooms.

1004.3.3.2 Width. The width of hallways shall be determined as specified in Section 1003.2.3, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Hallways serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width.

Except as otherwise required by Chapter 11 of the Washington State Building Code, hallways in Group R, Division 3 Occupancies and within dwelling units in Group R, Division 1 Occupancies shall have a minimum width of 30 inches (762 mm).

The required width of hallways shall be unobstructed.

EXCEPTION: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features may project into the required width 11/2 inches (38 mm) from each side.

1004.3.3.3 Construction. Hallways are not required to be of fire-resistive construction unless a building element of the hallway is required to be of fire-resistive construction by some other provision of this code.

Hallways in buildings of Types I or II construction shall be of noncombustible construction, except where combustible materials are permitted in applicable building elements by other provisions of this code. Hallways in buildings of Types III, IV or V construction may be of combustible or noncombustible construction.

Hallways may have walls of any height. Partitions, rails, counters and similar space dividers not over 6 feet (1829 mm) in height above the floor shall not be construed to form a hallway.

1004.3.3.4 Openings. There is no restriction as to the amount and type of openings permitted in hallways, unless protection of openings is required by some other provision of this code.

1004.3.3.5 Elevator lobbies. Elevators opening into hallways need not be provided with elevator lobbies unless smoke- and draft-control assemblies are required for the protection of elevator door openings by some other provision of this code.

1004.3.4 Corridors.

1004.3.4.1 General. Corridors serving as a portion of an exit access in the means of egress system shall comply with the requirements of Section 1004.3.4.

For restrictions on the use of corridors to convey air, see Chapter 6 of the Mechanical Code.

1004.3.4.2 Width. The width of corridors shall be determined as specified in Section 1003.2.3, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Corridors serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width.

Except as otherwise required by Chapter 11 of the Washington State Building Code, corridors in Group R, Division 3 Occupancies and within dwelling units in Group R, Division 1 Occupancies shall have a minimum width of 30 inches (762 mm).

The required width of corridors shall be unobstructed.

EXCEPTION: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features may project into the required width 11/2 inches (38 mm) from each side.

1004.3.4.3 Construction. Corridors shall be fully enclosed by walls, a floor, a ceiling and permitted protected openings. The walls and ceilings of corridors shall be constructed of fire-resistive materials as specified in Section 1004.3.4.3.1. See Section 3403.2 for corridor construction requirements for existing buildings.

EXCEPTIONS: 1. One-story buildings housing Group F, Division 2 and Group S, Division 2 Occupancies.

2. Corridors more than 30 feet (9144 mm) in width where occupancies served by such corridors have at least one exit independent from the corridor. (See Chapter 4 for covered malls.)

3. In Group I, Division 3 Occupancies such as jails, prisons, reformatories and similar buildings with open-barred cells forming corridor walls, the corridors and cell doors need not be fire-resistive.

4. Corridor walls and ceilings need not be of fire- resistive construction when serving office spaces having an occupant load of 100 or less when the entire story in which the space is located is equipped with an automatic sprinkler system throughout and an automatic smoke-detection system installed within the corridor. The actuation of any detector shall activate alarms audible in all areas served by the corridor.

5. Corridor walls and ceilings need not be of fire- resistive construction when serving office spaces having an occupant load of 100 or less when the building in which the space is located is equipped with an automatic sprinkler system throughout.

6. In Group B office buildings of Type I, Type II-F.R. and Type II-one-hour construction, corridor walls and ceilings need not be of fire-resistive construction when serving office spaces of a single tenant when the entire story in which the space is located is equipped with an approved automatic sprinkler system and an automatic smoke-detection system is installed within the corridor. The actuation of any detector shall activate alarms audible in all areas served by the corridor.

7. In Group M Occupancies, when the floor on which the occupancy is located is protected by an automatic sprinkler system throughout, walls and ceilings of corridors need not be of one-hour fire-resistive construction.

8. Corridor walls and ceilings need not be of fire- resistive construction when serving Group B outpatient clinics, medical offices and related laboratories having an occupant load of 100 or less when the building in which the space is located is equipped with an automatic sprinkler system throughout.

9. In Group B eating and drinking establishments without grease-producing cooking, motor vehicle showrooms, banks, barber and beauty shops, florists and nurseries, walls and ceilings of corridors need not be of fire-resistive construction, provided the floor on which they are located is equipped with an automatic sprinkler system.

10. In office areas located in buildings of Types I or II-F.R. construction, corridor walls need not be of fire- resistive

construction provided that the corridor side of the corridor walls shall be constructed with finish materials with a maximum flame-spread of Class II as specified in Chapter 8. This exception does not apply to outpatient clinics and medical offices.

11. The occupant load of Group B conference rooms, lunch rooms without grease-producing cooking and other assembly rooms with an occupant load of less than 50 in each room need not be considered when determining whether corridor construction is required, provided such rooms are accessory to an office tenant located in a building of Type I or II- F.R. construction. This provision may be used in other construction types when the floor on which the assembly room is located is equipped with an automatic sprinkler system.

12. The occupant load of an assembly room need not be considered when determining whether corridor construction is required under the following conditions:

12.1. The occupant load of the assembly room is less than 100;

12.2. The assembly room is accessory to an office tenant;

12.3. The assembly room is located in a high rise building;

12.4. No food preparation which produces grease is allowed;

12.5. The building is equipped with an automatic sprinkler system throughout;

12.6. All stairway and elevator shafts are pressurized; and

12.7. Corridors serving such rooms comply with the 25- foot dead-end requirement of Section 1004.2.6.

13. The occupant load of occupancies whose primary business is providing adult training and education need not be considered when determining whether corridor construction is required, under the following conditions:

13.1 The occupancy is located in a high rise office building;

13.2 The building in which the occupancy is located is equipped with an automatic sprinkler system throughout;

13.3 The stairways and elevator shafts in the building are pressurized; and

13.4 Corridors serving the training and education rooms shall comply with the 25-foot dead end requirement of Section 1004.2.6.

14. The occupant load of occupancies whose primary business is providing adult training and education need not be considered when determining whether corridor construction is required under the following conditions in buildings without an automatic sprinkler system:

14.1. The occupancy is located in a high rise building which is occupied primarily by office occupancies;

14.2. Doors in corridors serving the training rooms are self-closing;

14.3. The total trainee occupant load does not exceed 100, and the occupant load of individual training rooms shall not exceed 25;

14.4. Corridors serving the training and education rooms comply with the 25-foot dead end requirement of Section 1004.2.6; and

14.5. Smoke detectors connected to the building's alarm system are provided in all rooms opening into corridors serving

the training rooms.

Corridor floors are not required to be of fire-resistive construction unless specified by some other provision of this code.

Corridors in buildings of Type I or II construction shall be of noncombustible construction, except where combustible materials are permitted in applicable building elements by other provisions of this code. Corridors in buildings of Type III, IV or V construction may be of combustible or noncombustible construction.

1004.3.4.3.1 Fire-resistive materials. Corridor walls shall be constructed of materials approved for one-hour fire-resistive construction on each side. Corridor walls shall extend vertically to a floor-ceiling or roof-ceiling constructed in accordance with one of the following:

1. The corridor-side fire-resistive membrane of the corridor wall shall terminate at the corridor ceiling membrane constructed of materials approved for a one-hour fire- resistive floor-ceiling or roof-ceiling assembly to include suspended ceilings, dropped ceilings and lay-in roof-ceiling panels, which are a portion of a fire-resistive assembly.

The room-side fire-resistive membrane of the corridor wall shall terminate at the underside of a floor or roof constructed of materials approved for a one-hour fire- resistive floor-ceiling or roof-ceiling assembly.

EXCEPTION: Where the corridor ceiling is an element of not less than a one-hour fire-resistive floor-ceiling or roof-ceiling assembly at the entire story, both sides of corridor walls may terminate at the ceiling membrane.

2. The corridor ceiling may be constructed of materials approved for a fire-resistive wall assembly. When this method is utilized, the corridor-side fire-resistive membrane of the corridor wall shall terminate at the lower ceiling membrane and the room-side fire-resistive membrane of the corridor wall shall terminate at the upper ceiling membrane.

Corridor ceilings of noncombustible construction may be suspended below the fire-resistive ceiling membrane.

For wall and ceiling finish requirements, see Table 8-B.

1004.3.4.3.2 Openings. Openings in corridors shall be protected in accordance with the requirements of this section.

EXCEPTIONS: 1. Corridors that are excepted from fire- resistive requirements by Section 1004.3.4.3.

2. Corridors on the exterior walls of buildings may have unprotected openings to the exterior when permitted by Table 5-A.

3. Corridors in multitheater complexes may have unprotected openings where each motion picture auditorium has at least one half of its required exit or exit-access doorways opening directly to the exterior or into an exit passageway.

1004.3.4.3.2.1 Doors. All exit-access doorways and doorways from unoccupied areas to a corridor shall be protected by tightfitting smoke- and draft-control assemblies having a fire-protection rating of not less than 20 minutes when tested in accordance with UBC Standard 7-2, Part II. Such doors shall not have louvers, mail slots or similar openings. The door and frame shall bear an approved label or other identification showing the rating thereof, followed by the letter "S," the name of the manufacturer and the identification of the service conducting the inspection of materials and workmanship at the factory during fabrication and assembly. Doors shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector in accordance with Section 713.2. Smoke- and draft-control door assemblies shall be provided with a gasket installed so as to provide a seal where the door meets the stop on both sides and across the top.

EXCEPTION: View ports may be installed if they require a hole not larger than 1 inch (25 mm) in diameter through the door, have at least a 1/4-inch-thick (6.4 mm) glass disc and the holder is of metal that will not melt out when subject to temperatures of 1,700nvironmentalF (927nvironmentalC).

Code Alternate CA1004.3: Unlisted door frames, in walls of other than noncombustible construction, may be used in conjunction with labeled doors without bearing a label, provided they are fabricated and installed according to the requirements specified in Figures 10-3 through 10-6.

Exit doors from a corridor shall comply with the requirements for the individual exit component being accessed as specified elsewhere in this chapter.

1004.3.4.3.2.2 Windows. Windows in corridor walls shall be protected by fixed, approved 1/4-inch-thick wired glass installed in steel frames. The total area of windows in a corridor shall not exceed 25 percent of the area of a common wall with any room.

1004.3.4.3.2.3 Duct openings. For duct openings in corridors, see Sections 713.10 and 713.11. Where both smoke dampers and fire dampers are required by Sections 713.10 and 713.11, combination fire/smoke dampers shall be used.

1004.3.4.4 Intervening rooms. Corridors shall not be interrupted by intervening rooms.

EXCEPTIONS: 1. Foyers, lobbies or reception rooms constructed as required for corridors shall not be construed as intervening rooms.

2. In fully sprinklered office buildings, corridors may lead through enclosed elevator lobbies if all areas of the building have access to at least one required exit without passing through the elevator lobby.

1004.3.4.5 Elevators. Elevators opening into a corridor shall be provided with an elevator lobby at each floor containing such a corridor. The lobby shall completely separate the elevators from the corridor by construction conforming to Section 1004.3.4.3.1 and all openings into the lobby wall contiguous with the corridor shall be protected as required by Section 1004.3.4.3.2.

EXCEPTIONS: 1. In office buildings, separations need not be provided from a street floor elevator lobby, provided the entire street floor is protected with an automatic sprinkler system.

2. Elevators not required to meet the shaft enclosure requirements of Section 711.

3. Where additional doors are provided in accordance with Section ~~3007~~ 3016.9.

4. Where elevator shafts are pressurized in accordance with Exception 2 to Section 905.2.1, elevator lobbies need not be provided.

Elevator lobbies shall comply with the requirements of Section 3002.

Section 40. Subsection 1005.3 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

1005.3 Exit Components.

1005.3.1 General. Exit components incorporated into the design of the exit portion of the means of egress system shall comply with the requirements of Section 1005.3.

Once a given level of fire-resistive protection is achieved in an exit component, the fire-resistive time-period of such component shall not be reduced until arrival at the exit discharge or the public way.

EXCEPTION: Horizontal exits may lead to an exit-access element complying with the requirements of Section 1004.

Doors of exit components that open directly to the exterior of a building shall not be located in areas where openings are not permitted due to location on property by Table 5-A.

1005.3.2 Exterior exit doors.

1005.3.2.1 General. Exterior exit doors serving as an exit in a means of egress system shall comply with the requirements of Section 1005.3.2. Buildings or structures used for human occupancy shall have at least one exterior exit door that meets the requirements of Section 1003.3.1.3. See Section 3201 for doors swinging over public property.

1005.3.2.2 Detailed requirements. Exterior exit doors shall comply with the applicable requirements of Section 1003.3.1.

1005.3.2.3 Arrangement. Exterior exit doors shall lead directly to the exit discharge or the public way.

1005.3.3 Exit enclosures.

1005.3.3.1 General. Exit enclosures serving as an exit in a means of egress system shall comply with the requirements of Section 1005.3.3. Exit enclosures shall not be used for any purpose other than as a means of egress.

EXCEPTION: Unfired unit heaters may be installed in exit enclosures where required for freeze protection of fire protection equipment. CA1004.2b shall not be used concurrently with this exception.

Interior stairways, ramps or escalators shall be enclosed as specified in this section.

EXCEPTIONS: 1. In other than Groups H and I Occupancies, an exit enclosure need not be provided for a stairway, ramp or escalator serving only one adjacent floor. Any two such atmospherically interconnected floors shall not communicate with other floors. For enclosure of escalators serving Groups B, F, M and S Occupancies, see Sections 304.6, 306.6, 309.6 and 311.6.

2. Stairways in Group R, Division 3 Occupancies and stairways within individual dwelling units in Group R, Division 1 Occupancies need not be enclosed.

3. Stairs in open parking garages, as defined in Section 311.9, need not be enclosed.

4. In Group S, Division 3 garages which provide openings which comply with the standards of Section 311.9, stairways serving only the garage need not be enclosed.

1005.3.3.2 Construction. Exit enclosures shall be of fire- resistive construction as follows:

1. In buildings of other than Type I- or Type II-F.R. construction and four or less ~~than four~~ stories in height, exit enclosures shall not be of less than one-hour fire-resistive construction.

2. In buildings of Type I- or Type II-F.R. construction of any height, exit enclosures shall not be of less than two-hour fire-resistive construction.

3. In buildings of any type of construction and more than four stories in height, exit enclosures shall not be of less than two-hour fire-resistive construction.

EXCEPTION: In sprinkler-protected parking garages restricted to the storage of private or pleasure-type motor vehicles, exit enclosures of one- or two-hour fire-resistive construction may be enclosed with glazing meeting the requirements of Sections 713.7, 713.8, and 713.9.

Exit enclosures in buildings of Type I or Type II construction shall be of noncombustible construction except where combustible materials are permitted in applicable building elements by other provisions of this code. Exit enclosures in buildings of Type III, IV, or V construction may be of combustible or noncombustible construction.

1005.3.3.3 Extent of enclosure. Exit enclosures shall be continuous and fully enclose all portions of the stairway or

ramp to include parts of floors connecting stairway flights. Exit enclosures shall exit directly to the exterior of the building or shall include an exit passageway on the ground floor leading from the exit enclosure directly to the exterior of the building. Openings into the exit passageway shall comply with the requirements of Section 1005.3.3.5.

EXCEPTIONS: 1. Exit passageways are not required from unenclosed stairways or ramps.

2. In office buildings, and Group I, Division 1.1 hospitals and nursing homes, a maximum of 50 percent of the exits may pass through a street-floor lobby, provided the entire street floor and any floor which is open to it are protected with an automatic sprinkler system, there is direct and obvious access to the exterior, and Code Alternate CA1005.3a is not used concurrently. The street floor lobby shall be limited to the following criteria:

2.1. Group B occupancies, Group M retail occupancies, and restaurants of either Group A, Division 2.1 or 3 Occupancy may open into the street floor lobby. Cooking areas of restaurants requiring Type I commercial kitchen hoods as provided by Mechanical Code Section 508 shall be separated from the lobby with construction for enclosures as specified in Section 1005.3.3.2 and exception 4 of Section 302.4 is not used concurrently.

2.2. The street floor lobby may be open above to one adjacent floor.

2.3. The street floor lobby shall not be open to a floor below.

2.4. Atria and escalators open to more than one adjacent floor shall be separated from the street floor lobby as required by Section 1005.3.3.2.

Code Alternate CA1005.3a: A maximum of 50 percent of the required exit enclosures may terminate in a parking garage level provided the following criteria are met:

1. The parking garage level contains exterior exit doors within 4 feet (1219 mm) of grade.

2. The exit pathway from the enclosures to the exterior is free, unobstructed and provides a direct and obvious access to the exterior door. The required exit width shall be maintained. The exit pathway shall be equipped with illumination as required by Section 1003.2.9.

3. The level used for an exit pathway from an exit enclosure and all levels of the parking garage open to such level are protected by an automatic sprinkler system.

1005.3.3.4 Barrier. A stairway in an exit enclosure shall not continue below the exit level nearest grade unless an approved barrier is provided at the ground-floor level to prevent persons from accidentally continuing below the exit level. Directional exit signs shall be provided as specified in Section 1003.2.8.

1005.3.3.5 Openings and penetrations. Openings in exit enclosures shall be limited to those necessary for egress from normally occupied spaces into the enclosure and those necessary for egress from the enclosure.

EXCEPTION: Exit enclosures on the exterior walls of buildings may have unprotected openings to the exterior when permitted by Table 5-A.

All interior exit doors in an exit enclosure shall be protected by a fire assembly having a fire-protection rating of not less than one hour where one-hour enclosure construction is permitted in Section 1005.3.3.2 and one and one-half hours where two-hour enclosure construction is required by Section 1005.3.3.2. Such doors shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector as specified in Section 713.2. All hold-open devices shall be listed for the intended purpose and shall close or release the fire assembly to the closed position in the event of a power failure. The maximum transmitted temperature end point for such doors shall not exceed 450nvironmentalF (232nvironmentalC) above ambient at the end of 30 minutes of the fire exposure specified in UBC Standard 7-2. See also Section 711.2.

Penetrations passing entirely through both protective membranes of an exit enclosure are prohibited except for those serving the exit enclosure such as ductwork and equipment necessary for independent stairway pressurization, sprinkler piping, standpipes and electrical conduit terminating in a listed box not exceeding 16 square inches (10 323 mm2) and piping used exclusively for the drainage of rainfall runoff from roof areas provided the roof shall not be used for a helistop or heliport in area. Penetrations and communicating openings between exit enclosures in the same building are not permitted regardless of their protection. Penetrations shall be protected as required by Section 709.

Interpretation I1005.3a: Elevators and accessory rooms such as restrooms, storage closets and laundry rooms shall not open into an exit enclosure.

Interpretation I1005.3b: Unfired unit heaters allowed by Section 1005.3.3.1 to be installed in exit enclosures may penetrate one membrane. The conduit serving the heater may penetrate both membranes.

1005.3.3.6 Use of space under stairway or ramp. There shall not be enclosed usable space under stairways or ramps in an exit enclosure. The open space under such stairways shall not be used for any purpose.

1005.3.3.7 Pressurized enclosure. In a building having a floor level used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access, all required exit enclosures shall be pressurized in accordance with Section 905 and this section. Pressurization shall occur automatically upon activation of an approved fire alarm system.

EXCEPTION: If the building is not equipped with a fire alarm system, pressurization shall be upon activation of a spot-type smoke detector listed for releasing service located within 5 feet (1524 mm) of each vestibule entry.

A controlled relief vent capable of discharging a minimum of 2,500 cubic feet per minute (1180 L/s) of air at the design pressure difference shall be located in the upper portion of such pressurized exit enclosures.

1005.3.3.7.1 Vestibules. Pressurized exit enclosures shall be provided with a pressurized entrance vestibule that complies with the requirements of this section.

EXCEPTION: Pressurized vestibules are not required for enclosures which comply with CA905.

1005.3.3.7.1.1 Vestibule size. Vestibules shall not be less than 44 inches (1118 mm) in width and not less than 72 inches (1829 mm) in the direction of travel.

1005.3.3.7.1.2 Vestibule construction. Vestibules shall have walls, floors and ceilings of not less than two-hour fire-resistive construction.

1005.3.3.7.1.3 Vestibule doors. The door assembly from the building into the vestibule shall not have less than a one and one-half hour fire-protection rating, and the door assembly from the vestibule to the exit enclosure shall be a smoke- and draft-control assembly having not less than a 20-minute fire- protection rating. Doors shall be maintained self-closing or shall be automatic closing by activation of a smoke detector installed in accordance with Section 713. All hold-open devices shall be listed for the intended purpose and shall close or release the fire assembly to the closed position in the event of a power failure. The maximum transmitted temperature end point for the vestibule entry doors shall not exceed 450nvironmentalF (232nvironmentalC) above ambient at the end of 30 minutes of the fire exposure specified in UBC Standard 7-2.

1005.3.3.7.1.4 Pressure differences. The minimum pressure differences within the vestibule with the doors closed shall be 0.05-inch water gage (12.44 Pa) positive pressure relative to the fire floor and 0.05-inch water gage (12.44 Pa) negative pressure relative to the exit enclosure. No pressure difference is required relative to a nonfire floor.

1005.3.3.7.1.5 Standpipes. Fire department standpipe connections and valves serving the floor shall be within the vestibule and located in such a manner so as not to obstruct egress where hose lines are connected and charged.

1005.3.4 Exit passageways.

1005.3.4.1 General. Exit passageways serving as an exit in a means of egress system shall comply with the requirements of Section 1005.3.4. Exit passageways shall not be used for any purpose other than as a means of egress.

1005.3.4.2 Width. The width of exit passageways shall be determined as specified in Section 1003.2.3, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Exit passageways serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width.

The required width of exit passageways shall be unobstructed.

EXCEPTION: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features may project into the required width 11/2 inches (38 mm) on each side.

1005.3.4.3 Construction. Exit passageways less than 400 feet (121 920 mm) in length shall have walls, floors and ceilings of not less than one-hour fire-resistive construction. Exit passageways 400 feet (121 920 mm) or more in length shall have walls, floors and ceilings of not less than two-hour fire- resistive construction.

Exit passageways in buildings of Type I or II construction shall be of noncombustible construction except where combustible materials are permitted in applicable building elements by other provisions of this code. Exit passageways in buildings of Type III, IV or V construction may be of combustible or noncombustible construction.

1005.3.4.4 Openings and penetrations. Openings into exit passageways shall be limited to those necessary for egress from normally occupied spaces into the exit passageway and those necessary for egress from the exit passageway. Elevators shall not open into an exit passageway.

All interior exit doors in an exit passageway shall be protected by a fire assembly having a fire-protection rating of not less than one hour where one-hour exit passageway construction is permitted in Section 1005.3.4.3 and not less than one and one-half hours where two-hour exit passageway construction is required by Section 1005.3.4.3. Such doors shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector as specified in Section 713.2. All hold-open devices shall be listed for the intended purpose and shall close or release the fire assembly to the closed position in the event of a power failure. The maximum transmitted temperature end point for such doors shall not exceed 450nvironmentalF (232nvironmentalC) above ambient at the end of 30 minutes of the fire exposure specified in UBC Standard 7-2.

Penetrations into or through an exit passageway are prohibited except for those serving the exit passageway such as sprinkler piping, standpipes and electrical conduit terminating in a listed box not exceeding 16 square inches (10 323 mm2) in area.

1005.3.4.5 Intervening rooms. Exit passageways shall not be interrupted by intervening rooms.

EXCEPTION: In office buildings, a maximum of 50 percent of the exits may discharge through a street-floor lobby provided the entire street floor is protected with an automatic sprinkler system.

1005.3.4.6 Dead ends. Where an exit passageway is used and more than one exit is required, exit doors shall be arranged so that it is possible to go in either direction from any point in the exit passageway to a separate exit door, except for dead ends not exceeding 25 feet (7620 mm) in length.

1005.3.5 Horizontal exits.

1005.3.5.1 General. Horizontal exits serving as an exit in a means of egress system shall comply with the requirements of Section 1005.3.5. A horizontal exit is a wall that completely divides a floor of a building into two or more separate exit- access areas to afford safety from fire and smoke in the exit- access area of incident origin.

It is permissible for a horizontal exit to serve as an exit for each adjacent exit-access area (e.g., a two-way exit), providing that the exit-access design requirements for each exit-access area are independently satisfied.

A horizontal exit shall not serve as the only exit from the exit access. Where two or more exits are required from the exit access, not more than one half of the total number of exits or total exit width may be provided by horizontal exits.

1005.3.5.2 Construction. The wall containing a horizontal exit shall be constructed as required for an occupancy separation having a fire-resistive rating of not less than two hours. The horizontal exit wall shall be continuous from exterior wall to exterior wall and shall extend from the floor to the underside of the floor or roof directly above so as to completely divide the floor that is served by the horizontal exit. Structural members supporting a horizontal exit shall be protected by equivalent fire-resistive construction.

Horizontal exits in buildings of Type I, II or III construction shall be of noncombustible construction. Horizontal exits in buildings of Type IV or V construction may be of combustible or noncombustible construction.

1005.3.5.3 Openings and penetrations. Openings in a horizontal exit shall be protected by a fire assembly having a fire-protection rating of not less than one and one-half hours. Such fire assemblies shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector as specified in Section 713.2. All hold-open devices shall be listed for the intended purpose and shall close or release the fire assembly to the closed position in the event of a power failure. The maximum transmitted temperature end point for such doors shall not exceed 450nvironmentalF (232nvironmentalC) above ambient at the end of 30 minutes of the fire exposure specified in UBC Standard 7-2.

1005.3.5.4 Refuge area. The floor area of the exit access to which a horizontal exit leads shall be of sufficient size to accommodate 100 percent of the occupant load of the exit access from which refuge is sought, plus 100 percent of the normal occupant load of the exit access serving as the refuge area. The capacity of such refuge floor area shall be determined by allowing 3 square feet (0.28 m2) of net clear floor area of aisles, hallways and corridors per occupant. The area of stairs, elevators and other shafts shall not be used. In Group I, Division 1.1 Occupancies, the capacity of the refuge area shall be determined by allowing 15 square feet (1.4 m2) of net clear floor area per ambulatory occupant and 30 square feet (2.8 m2) of net clear floor area per nonambulatory occupant.

The design of the exit access serving as the refuge area shall comply with the requirements of Section 1004.2 based on the normal occupant load served and need not consider the increased occupant load imposed by persons entering such refuge area through horizontal exits.

Section 41. Table 10-A of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

USE2 MINIMUM OF TWO OCCUPANT LOAD MEANS OF EGRESS FACTOR3 ARE REQUIRED (square feet) WHERE NUMBER OF OCCUPANTS IS AT LEAST 0.0929 for m2

1. Aircraft hangars 10 500 (no repair)

2. Auction rooms 50 7

3. Assembly areas, 50 7 concentrated use (without fixed seats) Auditoriums Churches and chapels Dance floors Lobby accessory to assembly occupancy Lodge rooms Reviewing stands 50 3 Stadiums Waiting area

4. Assembly areas, 50 15 less-concentrated use Conference rooms Dining rooms Drinking establishments Exhibit rooms Gymnasiums Lounges Stages 50 11 Gaming: keno, slot machine and live games area

5. Bowling alley 50 4 (assume no occupant load for bowling lanes)

6. Classrooms 50 ((20)) 25

7. Congregate residences Accommodating 10 or 10 300 fewer persons and having an area of 3,000 square feet or less Accommodating more 10 200 than 10 persons or having an area of more than 3,000 sq. ft.

8. Courtrooms 50 40

9. Dormitories 10 50

10. Dwellings 10 300

11. Exercising rooms 50 50

12. Garage, parking 30 200

13. Health care facilities - Sleeping rooms 8 120 Treatment rooms 10 240

14. Hotels and apartments 10 200

15. Kitchen-commercial 30 200

16. Laboratories Instructional and 10 50 teaching laboratories at colleges (Group B) All other Group B labs 10 100 Group E laboratories See Sec. 1007.3.8 ---

17. Library- Reading rooms 50 50 Stack areas 30 100

18. Locker rooms 30 50

19. Malls (see Chapter 4) - -

20. Manufacturing areas 30 200

21. Mechanical equipment room (For electrical 30 300 equipment areas, see also Sections 110-16 and 110-33 of the Electrical Code)

22. Nurseries for 7 35 children (day care), day treatment centers, preschools

23. Offices Offices without 50 100 sprinkler protection Offices on floors 50 130 protected by an automatic sprinkler system

24. School shops and 50 50 vocational rooms

25. Skating rinks 50 50 on the skating area; 15 on the deck

26. Storage and stock 30 300 rooms

27. Stores-retail sales rooms Basements and ground 50 30 floor Upper floors 50 60

28. Swimming pools 50 50 for the pool area; 15 on the deck

29. Warehouses5 30 500

30. All others 50 100

1 Access to, and egress from, buildings for persons with disabilities shall be provided as specified in Chapter 11 of the Washington State Building Code.

2 For additional provisions on number of exits from Groups H and I Occupancies and from rooms containing fuel-fired equipment or cellulose nitrate, see Sections 1007.4, 1007.5., and 1007.7, respectively.

3 This table shall not be used to determine working space requirements per person.

4 Occupant load based on five persons for each alley, including 15 feet (4572 mm) of runway.

5 Occupant load for warehouses containing approved high rack storage systems designed for mechanical handling may be based on the floor area exclusive of the rack area rather than the gross floor area.

Section 42. Section 1206.7 of the 1997 Seattle Building Code, as adopted by Ordinance 119079, is amended as follows:

Section 1206.7 Sound Transmission Control Systems. Generic systems as listed in the Fire Resistance Design Manual, Thirteenth Edition, dated April 1992, as published by the Gypsum Association may be accepted where a laboratory test indicates that the requirements of Section 1206 are met by the system.

VIAQ: RADON RESISTIVE CONSTRUCTION STANDARDS.

(a) General. The criteria of this section establish minimum radon resistive construction requirements for all Group R Occupancies.

(b) Crawl Spaces. All crawl spaces shall be ventilated as specified in Section 2306.7

If the ventilation openings in a crawl space are less than 1 square foot for each 300 square feet of crawl space area, or if the crawl space vents are equipped with operable louvers, a radon vent shall be installed to originate from a point between the ground cover and soil. The radon vent shall be installed in accordance with Section (c)5 below.

(c) Crawl Space Plenum Systems.

1. General. In crawl space plenum systems used for providing supply air for an HVAC system, aggregate, a permanently sealed soil gas retarder membrane and a radon vent pipe shall be installed in accordance with this section. Crawl spaces shall not be used for return air plenums.

In addition, an operable radon vent fan shall be installed. The fan shall be located as specified in this section. The fan shall be capable of providing at least 100 CFM at one-inch water column static pressure. The fan shall be controlled by a readily accessible manual switch. The switch shall be labeled "RADON VENT FAN."

2. Aggregate. A layer of aggregate of 4-inch-minimum thickness shall be placed beneath the concrete slab. The aggregate shall be continuous to the extent practical. Aggregate shall:

A. Comply with ASTM Standard No. C-33 Standard Specification for Concrete Aggregate and shall be size No. ~~67~~8 or larger size aggregate as listed in Table No. 2, Grading Requirements for Coarse Aggregate; or

B. Meet the 1988 Washington State Department of Transportation specification 9-03.1 (3) "Coarse Aggregate for Portland Cement Concrete", or any equivalent standards approved by the building official. Aggregate size shall be of Grade ~~5~~8 or larger as listed in section 9-03.1 (3) C, "Grading"; or

C. Be screened, washed ~~and~~ pea gravel free of deleterious substances in a manner consistent with ASTM Standard No. C-33 with 100 percent ~~of the gravel~~ passing a one-half inch sieve and less than ~~2~~ 5 percent passing a ~~4-inch~~ No. 16 sieve. Sieve characteristics shall conform to those acceptable under ASTM Standard No. C-33.

EXCEPTION: Aggregate shall not be required if a substitute material or system, with sufficient load bearing characteristics, and having approved capability to provide equal or superior air flow, is installed.

3. Soil-gas Retarder Membrane. A soil-gas retarder membrane, consisting of at least one layer of virgin polyethylene with a thickness of at least 6 mil, or equivalent flexible sheet material, shall be either placed directly under the concrete slab so that the slab is in direct contact with the membrane, or on top of the aggregate with 2-inches minimum of fine sand or pea gravel installed between the concrete slab and membrane. The flexible sheet shall extend to the foundation wall or to the outside edge of the monolithic slab. Seams shall overlap at least 12 inches. The membrane shall also be fitted tightly to all pipes, wires, and other penetrations of the membrane and sealed with an approved sealant or tape. All punctures or tears shall be repaired with the same or approved material and similarly lapped and sealed.

~~EXCEPTION: If the membrane is not in direct contact with the bottom of the concrete slab, all overlapping seams shall be sealed with an approved tape or sealant, and the material shall be sealed to the foundation wall in a permanent manner. The membrane shall also be fitted tightly to all pipes, wire, and other penetrations of the membrane and sealed with an approved sealant or tape. All punctures or tears shall be repaired with the same or approved material and similarly lapped and sealed. In no case shall the membrane be installed below the aggregate.~~

4. Sealing of Penetrations and Joints. All penetrations and joints in concrete slabs or other floor systems and walls below grade shall be sealed by an approved sealant to create an air barrier to limit the movement of soil gas into the indoor air.

Sealants shall be approved by the manufacturer for the intended purpose. Sealant joints shall conform to manufacturer's specifications. There shall be no gaps or voids after the sealant has cured.

Concrete block walls connected to below grade areas shall be considered unsealed surfaces. All openings in concrete block walls that will not remain accessible upon completion of the building shall be sealed at both vertical and horizontal surfaces, in order to create a continuous air barrier to limit the transport of soil gas into the indoor air.

5. Radon Vent. One continuous sealed pipe shall run from a point within the aggregate under each concrete slab to a point outside the building. Joints and connections shall be permanently gas tight.

The continuous sealed pipe shall interface with the aggregate in the following manner, or by other approved equal method: The pipe shall be permanently connected to a "T" lie within the aggregate area. A minimum of five feet of perforated drain pipe of three inches minimum diameter shall join to and extend from the "T". The perforated pipe shall remain in the aggregate area and shall not be capped at the ends. The "T" and its perforated pipe extensions shall be located at least five feet horizontally from the exterior perimeter of the aggregate area.

The continuous sealed pipe shall terminate no less than 12 inches above the eave, and more than 10 horizontal feet from a woodstove or fireplace chimney, or operable window. The continuous sealed pipe shall be labeled "Radon Vent". The label shall be placed so as to remain visible to an occupant.

The minimum pipe diameter shall be 3 inches unless otherwise approved. Acceptable sealed plastic pipe shall be smooth walled, and may include either PVC schedule 40 or ABS schedule of equivalent wall thickness.

The entire sealed pipe system shall be sloped to drain to the sub-slab aggregate.

The sealed pipe system may pass through an unconditioned attic before exiting the building; but to the extent practicable, the sealed pipe shall be located inside the thermal envelope of the building in order to enhance passive stack venting.

EXCEPTION: A radon vent shall not be required if a fan- forced sub-slab depressurization system is installed. A fan-forced sub-slab depressurization system includes:

1. Soil-gas retarder membrane as specified in Section (c)3;

2. Sealing of penetrations and joints as specified in Section (c) 4;

3. A 3-inch continuous sealed radon pipe which shall run from a point within the aggregate under each concrete slab to a point outside the building;

4. Joints and connections may be gas tight, and may be of either PVC schedule 40 or ABS schedule of equivalent wall thickness;

5. A label of "Radon Vent" shall be placed on the pipe so as to remain visible to the occupant; and

6. Fan circuit and wiring as specified in Section (c) 6 and a fan.

If the sub-slab depressurization system is exhausted through the concrete foundation wall or rim joist, the exhaust terminus shall be a minimum of six feet from operable widows and outdoor air intake vents and shall be directed away from operable windows and outdoor air intake vents to prevent radon re-entrainment.

6. Fan Circuit and Wiring and Location. An area for location of an in-line fan shall be provided. The location shall be as close as practicable to the radon vent pipe's point of exit from the building, or shall be outside the building shell. It shall be located so that the fan and all downstream piping is isolated from the indoor air.

Provisions shall be made to allow future activation of an in-line fan on the radon vent pipe without the need to place new wiring. A 110 volt power supply shall be provided at a junction box near the fan location.

7. Separate Aggregate Areas. If the 4 inch aggregate area underneath the concrete slab is not continuous, but is separated into distinct isolated aggregate areas by a footing or other barrier, a minimum of one radon vent pipe shall be installed into each separate aggregate area.

EXCEPTION: Separate aggregate areas may be considered a single area if a minimum 3 inch diameter connection joining the separate areas is provided for every 30 feet of barrier separating those areas.

VIAQ: FORMALDEHYDE REDUCTION MEASURES. In all Group R Occupancies all structural panel components within the conditioned space such as plywood, particle board, wafer board, and oriented strand board shall be identified as "EXPOSURE 1", "EXTERIOR" OR "HUD APPROVED".

Section 43. Subsection 1506.3 of the 1997 Seattle Building Code, as adopted by Ordinance 119079, is amended as follows:

1506.3 Overflow Drains and Scuppers. Where roof drains are required, overflow drains, sized to accommodate the area to be drained with no more than 2 inches (51 mm) of ponding, shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) may be installed in the adjacent parapet walls with the inlet flow line located 2 inches (51 mm) above the low point of the adjacent roof.

All roof drains and overflow drains shall be provided with strainers.

Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.

Interpretation I1506: Overflow leaders may connect to roof drain risers when the roof drain riser is sized in accordance with either Table No. ~~4-4~~ 1100-1 or ~~Appendix D~~ Chapter 11 (2-inch (51 mm) rainfall column) of the Seattle Plumbing Code.

Section 44. Table 16-A of the 1997 Seattle Building Code, as adopted by Ordinance 119079, is amended as follows:

TABLE 16-A-UNIFORM AND CONCENTRATED LOADS

USE OR OCCUPANCY UNIFORM CONCENTRATED LOAD1 LOAD (psf) (pounds)

Category Description x0.0479 for x0.004 48 for kN kN/m2

1. Access floor Office use 50 2,0002 systems

Computer use 100 2,0002

2. Armories 150 0

3. Assembly Fixed seating 50 0 areas3 and areas auditoriums and balconies therewith

Movable 100 0 seating and other areas

Stage areas 125 0 and enclosed platforms

4. Marquees10 604 0

5. Exit 100 06 facilities5

6. Garages11 General 100 7 storage and/or repair

Private or 50 7 pleasure-type motor vehicle storage

7. Hospitals Wards and 40 1,0002 rooms

8. Libraries Reading rooms 60 1,0002

Stack rooms 125 1,5002

9. Manufacturing Light 75 2,0002

Heavy 125 3,0002

10. Offices 50 2,0002

11. Printing Press rooms 150 2,5002 plants

Composing and 100 2,0002 linotype rooms

12. Residential8 Basic floor 40 06 area

Storage 40 0

13. Restrooms9

14. Reviewing 100 0 stands, grandstands, bleachers, and folding and telescoping seating

15. Decks Same as area served or for the type of occupancy accommodated 15.1 Private 404 decks accessory to a dwelling unit 15.2 Common use decks generally 604 not accessible to the public 15.3 All other 1004 decks

16. Schools Classrooms 40 1,0002

17. Sidewalks Public access 250 7 and driveways

18. Storage Light 125

Heavy 250

19. Stores Retail 75 2,0002

Wholesale 100 3,0002

20. Pedestrian 100 bridges and walkways

1 See Section 1607 for live load reductions.

2 See Section 1607.3.3, first paragraph, for area of load application.

3 Assembly areas include such occupancies as dance halls, drill rooms, gymnasiums, playgrounds, plazas, terraces, and similar occupancies that are generally accessible to the public.

4 When snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design as determined by the building official. See Section 1614. For special-purpose roofs, see Section 1607.4.4.

5 Exit facilities shall include such uses as corridors serving an occupant load of 10 or more persons, exterior exit balconies, stairways, fire escapes, and similar uses.

6 Individual stair treads shall be designed to support a 300- pound (1.33 kN) concentrated load placed in a position that would cause maximum stress. Stair stringers may be designed for the uniform load set forth in the table.

7 See Section 1607.3.3, second paragraph, for concentrated loads. See Table 16-B for vehicle barriers.

8 Residential occupancies include private dwellings, apartments, congregate residences, and hotel and lodging house guest rooms.

9 Restroom loads shall not be less than the load for the occupancy with which they are associated, but need not exceed 50 pounds per square foot (2.4 kN/m2).

10 This loading condition need only be considered for marquees that are less than 10 feet above the ground at all points, ~~more~~ less than 10 feet below an adjacent roof, or are located less than 10 feet from operable openings above or adjacent to the level of the marquee and which have a slope of less than 30 degrees from horizontal on their upper surface. For other marquees, roof loads as specified in Section 1607 shall be applied.

11 See Section 311.2.3.5 for vehicle barriers.

Section 45. Table 23-II-I-1 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

TABLE 23-II-I-1-ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES IN POUNDS PER FOOT FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE1,2,3

MINIMUM PANELS APPLIED OVER 1/2-INCH (13mm) NOMINAL MINIMUM PANELS APPLIED DIRECTLY TO OR 5/8-INCH (16mm) GYPSUM SHEATHING PANEL NAIL FRAMING PANEL THICKNESS PENETRATION GRADE (inches) IN FRAMING (inches)

Nail size Nail Spacing Nail size Nail Spacing at Panel (Common or at Panel Edges (Common or Edges Galvanized (in.) Galvanized (in.) Box)5 Box)5 x 25.4 for mm x 25.4 for mm 6 4 3 2 6 4 3 2 x 25.4 for mm x 0.0146 for N/mm x 0.0146

for N/mm

5/16 1 1/4 6d 200 300 390 510 8d 200 300 390 510 Structural I

3/8 2304 3604 4604 6104 1 1/2 8d 10d 280 430 550 730

7/16 2554 3954 5054 6704

15/32 280 430 550 730

15/32 1 5/8 10d 340 510 665 870 -- -- -- -- --

C-D, C-C 5/16 1 1/4 6d 180 270 350 450 8d 180 270 350 450 Sheathing, plywood panel siding and other grades covered in UBC Standard 23-2 or 23-3

3/8 200 300 390 510 200 300 390 510

3/8 2204 3204 4104 5304 1 1/2 8d 10d 260 380 490 640

7/16 2404 3504 4504 5854

15/32 260 380 490 640

15/32 1 5/8 10d 310 460 600 770 -- -- -- -- --

19/32 340 510 665 870

Nail Size Nail Size (Galvanized (Galvanized Casing) Casing)

Plywood 5/16 1 1/4 6d 140 210 275 360 8d 140 210 275 360 panel siding in grades covered in UBC Standard 23-2

3/8 1 1/2 8d 160 240 310 410 10d 160 240 310 410

MINIMUM PANELS APPLIED OVER 1/2-INCH (13mm) NOMINAL MINIMUM PANELS APPLIED DIRECTLY TO OR 5/8-INCH (16mm) GYPSUM SHEATHING PANEL NAIL FRAMING PANEL THICKNESS PENETRATION GRADE (inches) IN FRAMING (inches)

Nail size Nail Spacing Nail size Nail Spacing at Panel (Common or at Panel Edges (Common or Edges Galvanized (in.) Galvanized (in.) Box)5 Box)5 x 25.4 for mm x 25.4 for mm 6 4 3 2 6 4 3 2 x 25.4 for mm x 0.0146 for N/mm x 0.0146 for N/mm

5/16 1 1/4 6d 200 300 390 510 8d 200 300 390 510 Structural I

3/8 2304 3604 4604 6104 1 1/2 8d 10d 280 430 550 730

7/16 2554 3954 5054 6704

15/32 280 430 550 730

15/32 1 5/8 10d 340 510 665 870 -- -- -- -- --

C-D, C-C 5/16 1 1/4 6d 180 270 350 450 8d 180 270 350 450 Sheathing, plywood panel siding and other grades covered in UBC Standard 23-2 or 23-3

3/8 200 300 390 510 200 300 390 510

3/8 2204 3204 4104 5304 1 1/2 8d 10d 260 380 490 640

7/16 2404 3504 4504 5854

15/32 260 380 490 640

15/32 1 5/8 10d 310 460 600 770 -- -- -- -- --

19/32 340 510 665 870

Nail Size Nail Size (Galvanized (Galvanized Casing) Casing)

Plywood 5/16 1 1/4 6d 140 210 275 360 8d 140 210 275 360 panel siding in grades covered in UBC Standard 23-2

3/8 1 1/2 8d 160 240 310 410 10d 160 240 310 410

1 All panel edges backed with 2-inch (51 mm) nominal or wider framing. Panels installed either horizontally or vertically. Space nails at 6 inches (152 mm) on center along intermediate framing members for 3/8-inch (9.5 mm) and 7/16-inch (11 mm) panels installed on studs spaced 24 inches (610 mm) on center and 12 inches (305 mm) on center for other conditions and panel thicknesses. These values are for short-time loads due to wind or earthquake and must be reduced 25 percent for normal loading.

Allowable shear values for nails in framing members of other species set forth in Division III, Part III, shall be calculated for all other grades by multiplying the shear capacities for nails in Structural I by the following factors:~~0.82 for species with specific gravity greater than or equal to 0.42 but less than 0.49, and 0.65 for species with a specific gravity less than 0.42.

2 Where panels are applied on both faces of a wall and nail spacing is less than 6 inches (152 mm) on center on either side, panel joints shall be offset to fall on different framing members or framing shall be 3-inch (76 mm) nominal or thicker and nails on each side shall be staggered.

3 In Seismic Zones 3 and 4, where allowable shear values exceed 350 pounds per foot (5.11 N/mm), foundation sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch (76 mm) nominal member and foundation sill plates shall not be less than a single 3-inch (76 mm) nominal member. In shear walls where total wall design shear does not exceed 600 pounds per foot (8.76 N/mm), a single 2-inch (51 mm) nominal sill plate may be used, provided anchor bolts are designed for a load capacity of 50 percent or less of the allowable capacity and bolts have a minimum of 2-inch-by-2-inch-by-3/16-inch (51 mm by 51 mm by 5 mm) thick plate washers. Plywood joint and sill plate nailing shall be staggered in all cases.

4 The values for 3/8-inch (9.5 mm) and 7/16-inch (11 mm) panels applied direct to framing may be increased to values shown for 15/32-inch (12 mm) panels, provided studs are spaced a maximum of 16 inches (406 mm) on center or panels are applied with long dimension across studs.

5 Galvanized nails shall be hot-dipped or tumbled.

Section 46. Table 23-II-I-2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

TABLE 23-II-I-2-ALLOWABLE SHEAR IN POUNDS PER FOOT FOR PARTICLEBOARD

SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE1,2,3

PANEL GRADE

MINIMUM PANELS APPLIED DIRECT TO FRAMING NOMINAL MINIMUM NAIL PANEL PENETRATION THICKNESS IN FRAMING PANEL GRADE (inches) (inches) Allowable Shear (pounds per foot)1 Nail Spacing at Panel Edges (inches) Nail Size (Common or Galvanized Box) x 25.4 for mm 6 4 3 2 x 25.4 for mm x 0.0146 for N/mm

3/8 1 1/2 6d 120 180 230 300 M-S4 and M-24 3/8 1 1/2 8d 130 190 240 315 1/2 140 210 270 350 1/2 1 5/8 10d5 185 275 360 460 5/8 200 305 395 520

1 All panel edges backed with 2-inch (51 mm) nominal or wider framing. Space nails at 6 inches (152 mm) on center along intermediate framing members for 3/8-inch (9.5 mm) panel installed with the long dimension parallel to studs spaced 24 inches (610 mm) on center and 12 inches (305 mm) on center for other conditions and panel thicknesses. These values are for short-time loads due to wind or earthquake and must be reduced 25 percent for normal loading.

Allowable shear values for nails in framing members of other species set forth in Division III, Part III, shall be calculated for all grades by multiplying the values for common and galvanized box nails by the following factors: Group III, 0.82 and Group IV, 0.65.

2 Where particleboard is applied on both faces of a wall and nail spacing is less than 6 inches (152 mm) on center on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3-inch (76 mm) nominal or thicker and nails on each side shall be staggered.

3 In Seismic Zones 3 and 4, where allowable shear values exceed 350 pounds per foot (5.11 N/mm), foundation sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch (76 mm) nominal member and foundation sill plates shall not be less than a single 3-inch (76 mm) nominal member. In shear walls where total wall design shear does not exceed 600 pounds per foot (8.76 N/mm), a single 2-inch (51 mm) nominal sill plate may be used, provided anchor bolts are designed for a load capacity of 50 percent or less of the allowable capacity and bolts have a minimum of 2-inch-by-2-inch-by-3/16-inch (51 mm by 51 mm by 5 mm) thick plate washers. Plywood joint and sill plate nailing shall be staggered in all cases.

4 Products shall be manufactured with exterior glue and shall be identified with the words "Exterior Glue" following the product grade designation.

5 Framing at adjoining panel edges shall be 3-inch (76 mm) nominal or wider and nails shall be staggered where 10d nails having penetration into framing of more than 1-5/8 inches (41 mm) are spaced 3 inches (76 mm) or less on center.

Section 47. Section 3002.2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3002.2 Application to Existing Conveyances.

Section 3002.2.1 Minimum Standard for Existing Conveyances. All existing conveyances shall comply with Washington Administrative Code (WAC) Chapter 296-~~95~~96 Part D as a minimum standard.

Section 3002.2.2 Maintenance. All conveyances covered under this chapter, both existing and new, and all parts thereof shall be maintained ina safe condition. All devices and/or safeguards which are required by this chapter shall be maintained in good working order. All devices or safeguards which were required by a code in effect when the conveyance was installed, altered, or repaired shall be maintained in good working order. The owner or his/her designated agent shall be responsible for the maintenance of such equipment.

Section 3002.2.3 Repairs and Replacements. Repairs to existing conveyances and replacements of devices and components shall be made with parts of at least equivalent material, strength and design. They shall comply with ~~Washington Administrative Code~~ WAC 296-~~95~~ 96 Part D. In addition, repairs shall comply with ASME A17.1 Rule 1200.4, and replacements shall comply with ASME A 17.1 Rule 1200.5.

Section 3002.2.4 Additions and Alterations. Additions and alterations may be made to the conveyance system of

existing buildings or structures without making the entire system comply with all of the requirements of this chapter of rnew buildings or structures, provided the additions and alterations that are made shall comply with the requirements of this chapter for a new system, except as otherwise specifically provided in this code and in other applicable retroactive ordinances of the city.

Unless otherwise approved by the building official, alterations, repairs, replacements and maintenance of conveyances shall comply with the requirements of Part XII of ASME 17.1. Where Part XII refers to a requirement which has been amended by this chapter, the requirements of this chapter shall take precedence. Where Part XII refers to ASME 17.3, the requirements of WAC 296-~~95~~96 Part D shall apply. Alterations to existing material lifts shall conform with the requirements of WAC 296-~~95~~96 Part C Material Lifts.

Section 3002.2.5 Seismic Improvements. The Director may promulgate rules to establish standards for seismic improvements to existing conveyances.

Section 3002.2.6 Change of Use. When the use of an existing freight elevator is ~~charged~~ changed to conveyance of passengers, the elevator must comply with the retroactive requirements of this code and WAC 296-~~95~~ 96 Part D for passenger elevators.

Section 3002.2.7 Historic Buildings and Structures. See Section 3403.8 for regulations regarding historic buildings or structures.

Section 48. Section 3003 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 3003 - CODES ADOPTED BY REFERENCE

The following codes are hereby adopted by reference and together with the provisions of this chapter shall constitute the Elevator Code of the City of Seattle. A copy of each is filed with the City Clerk.

1. ASME Codes:

1.1 Safety Code for Elevators and Escalators, ASME A17.1-1996 with A17.1a-1997, A17.1b-1998, and A17.1c- 1999 Addenda.

EXCEPTION: Part XIX of ASME A17.1, Elevators Used for Construction, is not adopted.

1.2 Safety Standard For Platform Lifts and Stairway Chairlifts, ASME A18.1-1999.

2. The building official may adopt by administrative rule, in accordance with Section 104.17 of this code, addenda to the Safety Code for Elevators and Escalators, ASME A17.1- 1996 which further the intent and purpose of this code, which encourage the use of state of the art technology, materials or methods of construction, and which provide standards which are equal or better than those contained in this code.

3. Safety ~~rules governing~~ regulations for all elevators, dumbwaiters, escalators and other ~~lifting devices - moving walks,~~)) conveyances, Washington Administrative Code Chapter 296-~~81~~96, ~~Sections .005 through .370, inclusive,~~ effective January ~~1, 1993~~ 22, 2001. ~~All references to WAC 296-81 shall apply to new conveyances only.~~

EXCEPTIONS: The following sections of WAC Chapter 296- 96 are not adopted:

1. Part B, Regulations and Fees for all Elevators, Dumbwaiters, Escalators, and Other Devices, WAC 296-96-01000 through -01080.

2. Part C2, Construction, Operation, Maintenance and Inspection of Private Residence Conveyances for Transporting Property for Residential Use, WAC 296-96-08010 through -08250.

3. Part C3, Temporary Hoists; Personnel Hoists; Material Hoists, WAC 296-96-09001 through -10001.

4. Part C4, Additional Types of Conveyances: Belt Manlifts; Hand-powered Manlifts; Casket Lifts; Boat Launching Elevators; Mechanized Parking Garage Equipment, WAC 296-96- 11000 through -20005.

~~4. Safety regulations for casket lifts in mortuaries, Washington Administrative Code Chapter 296-91, 1986 Edition.~~

~~5. Chapter 296-93A Washington Administrative Code for Material Lifts, 1986 Edition.~~

~~6. Chapter 296-95 Washington Administrative Code establishes minimum standards for all existing conveyances effective March, 1995. All references to A17.3 in Part XII of ASME A17.1 shall mean WAC 296-95.~~

Section 49. Section 3004 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 3004 - DEFINITIONS

The following definitions are in addition to Section 3 of ASME A17.1, RCW 70.87, Laws Governing Elevators and Other Lifting Devices, and Chapter 2 of this code.

ALTERATIONS, REPAIRS AND REPLACEMENTS. See Part XII, ASME A17.1.

ASME CODE shall mean the American National Standard Safety Code for Elevators and Escalators with Appendices A through J, published by the American Society of Mechanical Engineers, designated ASME A17.1-1996.

AUTOMATIC ELEVATOR shall mean a type of elevator which does not require an attendant. All calls are registered by the passengers.

AUTOMOBILE PARKING ELEVATOR shall mean an elevator located in either a stationary or horizontally moving hoistway and used exclusively for parking automobiles where, during the parking process, each automobile is moved under its own power onto and off the elevator directly into parking spaces or cubicles in line with the elevator and where no persons are normally stationed on any level except the receiving level.

CONVEYANCE shall mean an elevator, escalator, dumbwaiter, material lift, automobile parking elevator or moving walk.

CONVEYANCES IN SERVICE shall mean that the units are in operation, are inspected and certified for operation by the building official.

CONVEYANCES OUT OF SERVICE shall mean the use of the unit has been prohibited either temporarily or permanently in accordance with Section 3005 below.

ENFORCING AUTHORITY as used in the ASME Code means the building official.

EXISTING INSTALLATIONS means all conveyances which have been tested and approved for use by the building official.

INSPECTOR means inspectors employed by the City of Seattle and working under order from the building official.

MATERIAL LIFT means a fixed, stationary conveyance that:

1. Has a car or platform that moves in guides;

2. Serves two or more floors or landings of a building or structure;

3. Has a vertical rise of at least five feet (1524 mm) and no more than sixty feet (18 288 mm);

4. Has a maximum speed of fifty feet (15 240 mm) per minute;

5. Is an isolated, self-contained lift and is not a part of a conveying system;

6. Travels in an inclined or vertical, but not horizontal, direction;

7. Is operated only by, or under the direct supervision of, an individual designated by the employer; and

8. Is installed in a commercial or industrial area, and not in an area that is open to access by the general public.

OTHER LIFTING DEVICES As regulated by WAC 296-~~81~~ 96 Part C, Material Lifts, Part C1 shall include the equipment listed under Section 1.1 of ASME A17.1. The building official shall have the responsibility for making a decision as to whether the proposed installation and use of the device is subject to the requirements of this chapter.

Section 50. Section 3011.1 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3011.1 General. Existing conveyances shall be made to comply with the State of Washington "Safety Rules Governing Existing Elevators, Dumbwaiters, and Escalators~~, and Moving Walks~~" (WAC 296-~~95~~96 Part D and the provisions of this section.

Section 51. Sections 3011.7 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3011.7 Access to Terminal Landings. Mechanical access to terminal landings of elevator hoistways shall be provided in accordance with ~~ASME A17.1, Rule 111.9(e) or~~ WAC 296-~~95-162(1)~~96-23162(1).

Section 52. Sections 3011.8 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3011.8 Wall Covering Material for Passenger Cars. Wall covering material for passenger cars shall comply with ~~the following:~~

~~1.~~ ASME A17.1, Rule 204.2a, as amended by the following:

1.~~1~~ Seattle Building Code regulations concerning flame spread ratings for wall coverings and use of plastics (See Chapters 7 and 8);

~~1.~~2. WAC 296-~~95-216~~96-23216 , except that interior finish materials need not be firmly bonded flat to the enclosure and may be padded.

Section 53. Section 3013 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

3013 - Requirements for New Material Lifts.

New material lifts shall comply with ASME A17.1, Sections 101 and 102, and Rules 300.2 and 300.2a, and the requirements of WAC 296-~~93~~-96 Part C, Material Lifts.

Section 54. Subsections 3016.1 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3016.1 General. All new elevators, escalators, moving walks and dumbwaiters and their installation shall conform to the requirements of ASME A17.1 as amended in this section and to the specific requirements of Sections 3017, 3018 and 3019. For elevator shaft requirements ~~contained in Chapter 296- 93 of the Washington Administrative Code~~ see Table 6A . Material lifts shall conform to the requirements contained in WAC 296-96 Part C, Material Lifts.

Section 55. Subsections 3016.2 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3016.2 Wall Covering Material for Passenger Cars. Wall covering material for passenger cars shall comply with the following:

1. ASME A17.1, Section 204.

2. Seattle Building Code requirements concerning flame spread ratings for wall coverings and use of plastics. (See Chapters 7 and 8.)

3. WAC 296-~~95-216~~96-23216, except that interior finish materials need not be firmly bonded flat to the enclosure and may be padded.

Section 56. Subsection 3016.5 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3016.5 Requirements to Accommodate People with Disabilities. All new elevators shall comply with Washington State Building Code Chapter 11, 51-20-3100 Washington Administrative Code. In addition, WAC 296-~~81-300~~ 96-02300 through ~~365~~02365 shall apply.

Section 57. Subsection 3016.7 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

3016.7 Elevator Operation on Emergency Power. All elevators ~~operating on~~ required to be supplied with emergency ~~or standby~~ power~~, when supplied,~~ shall comply with the following:

1. Each elevator shall be transferable to the emergency power supply system ~~when the emergency supply is designed with the capacity to accommodate the elevators~~.

2. Emergency power supply systems capable of handling all elevators on the premises need no sequencing or switching other than the possibility of staggering the restarting of the generators.

3. Emergency power supply systems whose capacity can only handle one elevator of a duplex or one elevator in each group of elevators shall comply with the following. (For the purposes of this section, group is defined as all elevators serving the same portions of a building: highrise, midrise, lowrise, etc.)

3.1 All elevators on automatic operation shall be automatically assigned emergency power in sequence and returned to the Phase I recall or lobby floor, where they shall open their doors and then time out of service.

3.2 The last car down will generally be the selected car of a duplex or a group to remain in service. The service shall continue to be automatic.

3.3 The assignment of emergency power will skip or rotate past cars which may be out of service (emergency stop switch pulled, malfunction, car top operation, etc.). If assignment is made to a manual or attendant-operated car and the car is unattended, the system shall rotate past the car as though it is out of service.

4. The car and elevator machine room lights shall be activated on the emergency system.

5. A manual emergency power assignment switch or switches shall be in an elevator status panel located in the fire department central control station. Each elevator shall be capable of being assigned emergency power from this location. The manual switching shall be effective at all times other than when the cars are automatically sequencing to the lobby or when the selected car is traveling. The switch shall not remove power in midflight or with doors closed.

6. Elevators on Phase II car operation shall remain in their respective locations upon loss of power. They shall remain in

Phase II mode and shall not move unless the elevator is under the control of the operator and normal power has been restored or emergency power has been assigned to the car by either automatic or manual means.

7. Loss of power and initiation of emergency power immediately after Phase I recall operation has occurred shall not cause any cars to be stranded in the building. Upon the application of emergency power to the equipment, the cars shall follow the normal sequencing to the lobby, open their doors and time out of service. When all cars have been bypassed (out of service) or returned to the lobby, the assigned car shall then become available for firefighter's use on Phase II in-car operation.

8. Each elevator operating on emergency power shall be tested in accordance with applicable ASME A17.1-1996, Rules 207.8 and 210.10, and ASME A17.2-1985, Division 118. Note:~~Rule 207.8 and Division 118 require the tests to be performed with 125 percent of rated load.

9. If the elevator cars are recalled to the alternate floor by Phase I recall and a loss of power occurs, the cars shall be sequenced to the alternate floor upon assignment of ~~standby or~~ emergency power. The cars shall not go to the primary designated recall floor under these conditions.

10. The elevator position indicator system when provided shall not become disoriented due to the loss of power or any other reason, however, upon the resumption of power, the car may move to reestablish absolute car position.

11. Communications to the car shall remain in service.

Section 58. Subsection 3016.8 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

3016.8 Multiple Hoistways. The number of elevators permissible in a hoistway shall be in accordance with this subsection. The requirements of ASME A17.1, Rule 100.1d are superseded by the following:

1. No more than four elevators may be in a single hoistway.

2. No more than three elevators serving all or the same portion of a building may be in a single hoistway.

EXCEPTION: Four elevators serving all or the same portions of a building may be in a common hoistway under the following conditions:

1. The hoistway is pressurized; and

2. ~~Standby~~ Emergency generator power is available to serve both the elevators and pressurization equipment.

Section 59. Subsection 3016.12 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

Section 3016.12 Access to Elevator Hoistways from Terminal Landings. Mechanical access at terminal landings to elevator hoistways shall be provided in accordance with ASME A17.1, Rule 111.9e and WAC 296-~~95-162(1)~~96-23162(1).

Section 60. Section 3022 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 3022 - INSTALLATION OF PIPES OR DUCTS CONVEYING GASES, VAPORS OR LIQUIDS OR ELECTRICAL WIRING IN HOISTWAYS, MACHINE ROOMS OR MACHINERY SPACES (ASME A17.1, RULE 102.2)

3022.1 Prohibited Wiring, Pipes and Ducts. In accordance with ASME A17.1, Rule 102, non-elevator electric wiring, pipes and ducts shall be prohibited in elevator machine rooms and hoistways except as otherwise provided in this section. The use of false ceilings and furring does not remove such items from the elevator spaces and shall not be

acceptable except as allowed by ASME A17.1 Rule 102.2(b) as amended below. ~~See also Section 715.~~

3022.2 All elevator hoistways and machine rooms shall comply with ASME A17.1, Rule 102.2, Installation of Pipes or Ducts Conveying Gases, Vapors or Liquids in Hoistways, Machine Rooms or Machinery Spaces, as amended below:

Rule 102.2 Installation of Pipes or Ducts Conveying Gases, Vapors or Liquids in Hoistways, Machine Rooms, or Machinery Spaces

(a) Pipes conveying gases, vapors or liquids are not permitted to be installed in hoistways, machine rooms, and machinery spaces unless necessary for operation or maintenance of the elevator and not used for any other purpose .

(b) Only ducts for heating, cooling, ventilating, and venting these spaces are permitted to be installed in the hoistway, machine room, and machinery space.

Ducts and electrical conduit may pass through an elevator machine room or machinery space provided they are separated from the room or space by construction equal to the rated construction of the room or space and so located that all required clearances are maintained.

If a vented machine room is not vented directly to the outside of the building, the vent shall be enclosed within one-hour fire-resistive construction, or as required for shafts where it passes through occupied floors.

(c) Standard sprinkler protection conforming to the requirements of ANSI/NFPA 13 shall be permitted to be installed in these spaces, subject to rules promulgated by the building official.

(d) Other pipes or ducts conveying gases, vapors, or liquid and not used in connection with the operation of the elevator shall not be installed in any hoistway, machine room, or machinery space.

Section 61. Section 3027 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 3027 - GUARDS AT CEILING INTERSECTION (ASME A17.1, RULE 802.3g)

All escalators shall comply with ASME A17.1, Rule 802.3g, Guard at Ceiling Intersection, WAC 296-~~95-410~~96- 23410, and the following:

Guards shall be provided at any pinching, snagging or wedging points between the handrail, balustrade and adjacent building components or equipment when such points are within the clearances delineated in Rule 802.3g.

Section 62. Subsection 3202.4 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

3202.4 Drainage. Marquees shall be provided with conductors for water which shall drain back to the building line and be connected to a sewer or, if approved by the Director of Seattle Public Utilities, to a dry well or under a sidewalk to a gutter.

EXCEPTION: Marquees may drain away from the building line, provided the water drains uniformly over the edge of the marquee. The marquee shall be sloped a minimum of 1 unit vertical in 48 units horizontal (2% slope). Marquees complying with this exception may drain onto the public right of way.

Section 63. Section 3404 of the 1997 Seattle Building Code, adopted by Ordinance 119079, is amended as follows:

SECTION 3404 - MOVED BUILDINGS

~~B~~ 3404.1 Nonresidential Buildings or Structures. Nonresidential buildings or structures moved into or within the city shall comply with standards adopted by the building official. ~~No building shall be moved into or within the city unless, prior to moving, the building official has inspected the building for compliance with this building code and the permit~~

~~holder has agreed to correct all deficiencies found and has been issued a building permit for the work~~ The building official may require an inspection of the building before or after moving. The permit holder shall correct all deficiencies identified by the inspection. A bond or cash deposit in an amount sufficient to abate or demolish the building ~~shall~~ may be required to be posted prior to issuance of a permit. See Section 106 for information required on plans. Any moved building that is not in complete compliance with standards for moved buildings within eighteen months from the date of permit issuance and is found to be a public nuisance may be abated.

3404.2 Residential Buildings or Structures. Residential buildings or structures moved into or within the city are not required to comply with all of the requirements of this code if the original occupancy classification of the building or structure is not changed. Compliance with all of the requirements of this chapter will be required if the moved residential buildings or structures undergo substantial alteration. Work performed on new and existing foundations shall comply with all of the requirements of this code for new construction.

Section 64. This Ordinance shall take effect and be in force thirty (30) days from and after its approval by the Mayor, but if not approved and returned by the Mayor within ten (10) days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Passed by the City Council the _____ day of _____, 2001, and signed by me in open session in authentication of its passage this _____ day of _____, 2001. _____ President Pageler of the City Council

Approved by me this ____ day of _____, 2001. _____ Paul Schell, Mayor

Filed by me this _____ day of _____, 2001. _____ City Clerk

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