RESOLUTION NO. RES-16-0111

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LONG BEACH ADOPTING AND MAKING EXPRESS FINDINGS AND DETERMINATIONS RELATING TO THE ENACTMENT OF ADMINISTRATIVE AMENDMENTS, AND, WHERE APPROPRIATE, MORE RESTRICTIVE BUILDING STANDARDS CODE PROVISIONS THAN THOSE OF THE CALIFORNIA BUILDING CODE, CALIFORNIA RESIDENTIAL CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA MECHANICAL CODE, UNIFORM HOUSING CODE, CALIFORNIA GREEN BUILDING STANDARDS CODE, CALIFORNIA FIRE CODE, CALIFORNIA EXISTING BUILDING CODE, AND CALIFORNIA HISTORICAL BUILDING CODE; FINDING THAT SAID AMENDMENTS AND MODIFICATIONS TO THE CODES ARE REASONABLY NECESSARY BECAUSE OF THE LOCAL CLIMATIC, GEOLOGICAL OR TOPOGRAPHICAL CONDITIONS EXISTING IN LONG BEACH; AND INSTRUCTING THE DIRECTOR OF DEVELOPMENT SERVICES AND THE FIRE CHIEF TO TRANSMIT SAID FINDINGS AND DETERMINATIONS TO THE CALIFORNIA BUILDING STANDARDS COMMISSIONS, THE CALIFORNIA HOUSING AND COMMUNITY DEVELOPMENT DEPARTMENT, AND THE STATE HISTORICAL BUILDING SAFETY BOARD IN ACCORDANCE WITH SECTIONS 17958.7, 18941.5 AND 18959 OF THE CALIFORNIA HEALTH AND SAFETY CODE

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WHEREAS, Sections 17922, 17950, 17958, and 18938(b) of the California Health and Safety Code requires the City of Long Beach to adopt the California Building Standards Code adopted pursuant to the provisions of Chapter 4 of Part 2.5 of Division 13 of the California Health and Safety Code and the 1997 Edition of the Uniform Housing Code adopted pursuant to the California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, Article 5, Section 32, as the City of Long Beach Building Standards Code; and

WHEREAS, Section 13143.5(a) of the California Health and Safety Code provides, in pertinent part, as follows:

"...any city, county, or city and county may, by ordinance, make changes or modifications that are more stringent than the requirements published in the California Building Standards Code relating to fire and panic safety and the other regulations adopted pursuant to this part. Any changes or modifications that are more stringent than the requirements published in the California Building Standards Code relating to fire and panic safety shall be subject to subdivision (b) of Section 18941.5."

WHEREAS, Section 17958.5 of the California Health and Safety Code provides, in pertinent part, as follows:

"...a city or county may make those changes or modifications in the requirements contained in the provisions published in the California Building Standards Code and the other regulations adopted pursuant to Section 17922, including, but not limited to, green building standards, as it determines, pursuant to the provisions of Section 17958.7, are reasonably necessary..."; and

WHEREAS, Section 17958.7 of the California Health and Safety Code provides, in pertinent part, as follows:

"...before making any modifications or changes pursuant to Section 17958.5, shall make an express finding that such modifications or changes are reasonably necessary because of local climatic, geologic or topographic conditions..."; and

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WHEREAS, Section 18941.5(b) of the California Health and Safety Code provides, in pertinent part, as follows:

"Neither the State Building Standards Law contained in this part, nor the application of building standards contained in this section, shall limit the authority of a city, county, or city and county to establish more restrictive building standards, including, but not limited to, green building standards, reasonably necessary because of local climatic, geological, or topographical conditions."

WHEREAS, Section 18959(f) of the California Health and Safety Code provides, in pertinent part, as follows:

"When administering and enforcing this part, each local agency may make changes or modifications in the requirements contained in the California Historical Building Code, as described in Section 18944.7, as it determines are reasonably necessary because of local climatic, geological, seismic, and topographical conditions."

WHEREAS, the City of Long Beach is traversed by the Newport-Inglewood Fault System, is near the San Andreas Fault, and is surrounded by other earthquake faults; and

WHEREAS, the Newport-Inglewood Fault System is a right lateral, local reverse slip type of faulting, approximately 75 km in length extending from Culver City to the north to Costa Mesa to the south of the City, has a slip rate of 0.6 mm/yr with a probable magnitude of 6.0 to 7.2, and is generally considered a major Southern California earthquake fault which may experience rupture at any time; and

WHEREAS, the City is located by the International Building Code in Seismic Design Category D, E or F, and the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world; and

WHEREAS, the Northridge Earthquake that occurred on January 17, 1994, was only a moderate Richter Magnitude 6.8 earthquake, yet caused damage in the Los Angeles Basin area to more than 115,000 buildings and the vacation of 21,000 residential

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units including 2,000 homes; and

WHEREAS, there were 57 persons who lost their lives in this earthquake, but there could have been several thousand more casualties, if the earthquake had occurred at midday during the workweek when most buildings would be occupied instead of at 4:31 a.m. on a holiday; and

WHEREAS, seismic experts report a significantly high probability for a larger earthquake occurring in the greater Los Angeles Basin area within the next 30 years; and

WHEREAS, unusually large earthquakes cause extraordinary stresses on buildings and structures and Fire Department resources which require more stringent building and fire life-safety regulations than would otherwise be required; and

WHEREAS, the City requires the extra margin of safety due to the necessity of providing on site fire protection in a seismic emergency when Fire Department resources could be greatly delayed or overwhelmed; and

WHEREAS, the Northridge Earthquake provided valuable insight into the vulnerabilities of some building systems, designs and materials to the unanticipated level of damage; and

WHEREAS, the City, in cooperation with other major jurisdictions within the region, are continuing efforts to protect the community from the hazards of future earthquakes through the Los Angeles Regional Uniform Code Program (LARUCP) which creates uniformity of building regulations adopted by the cities and county of the Los Angeles region; and

WHEREAS, the California Building Code, California Residential Code, California Fire Code, California Existing Building Code, and California Historical Building Code has not yet fully addressed the lessons learned from the Northridge Earthquake; and

WHEREAS, the City is located within the Los Angeles Basin, one of the most polluted metropolitan areas and one of the most heavily modified watersheds in the

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nation, with a climate system capable of producing major winds, fire and rain related disasters and is a densely populated area having residential and nonresidential buildings constructed within a region where environmental resources are scarce; and

WHEREAS, the City is located within a Mediterranean, semi-arid climate system that produces warm dry summers and cool wet winters and thus receives approximately 13 inches of rain water per year on average; and

WHEREAS, the City is impacted by impermeable layer of clay that lies between the City's surface and the groundwater basin underneath the City, preventing precipitations that falls locally from replenishing the basin; and

WHEREAS, the City's groundwater pumping activities meets only half of the water demand of five hundred thousand Long Beach residents; and

WHEREAS, in February 2010, the Long Beach City Council adopted a Sustainable City Action Plan, which includes initiatives, goals and actions to create a more sustainable Long Beach, and specifically calls out goals for green building and sustainable development, urban nature, waste reduction, and water and energy conservation.

NOW, THEREFORE, in order to provide adequate protection under the unique local climatic, geologic and topographic conditions set forth above, the City of Long Beach makes the following findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions than those of the California Building Code, California Residential Code, California Electrical Code, California Plumbing Code, California Mechanical Code, Uniform Housing Code, California Green Building Standards Code, California Fire Code, California Existing Building Code and California Historical Building Code:

Section 1. Findings and determinations relative to the adoption of administrative amendments to the California Building Standards Code, Title 24 of the California Code of Regulations:

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Chapters 18.01 thru 18.30, 18.60 thru 18.99 – Amendment is necessary for local administrative clarification, does not modify a Building Standards as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 2. Findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions amendments to the California Building Code, Part 2, Title 24 of the California Code of Regulations:

Sections 18.40.010 – 18.40.060 – Amendment is necessary for local administrative clarification, does not modify a Building Standards as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.40.070 – Amendment is necessary on the basis of a local geological condition. The modification to omit the importance factor from Equation 12.12-1 will ensure that a safe seismic separation distance is maintained for important facilities from adjoining structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.080 – Amendment is necessary on the basis of a local geological condition. Observed damages to one and two family dwellings of light frame construction after the Northridge Earthquake may have been partially attributed to vertical irregularities common to this type of occupancy and construction. The proposed modification to limit mixed structural system to two stories is intended to improve quality of construction by reducing potential damages that may result from vertical irregularities of the structural system in buildings subject to high seismic load. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity

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and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.090 – Amendment is necessary on the basis of a local geological condition. The proposed amendment to require special anchorage of the diaphragm to the wall and limit the allowable shear will address special needs for concrete and masonry construction with flexible wood diaphragm The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.100 – Amendment is necessary on the basis of a local geological condition. The proposed amendment requiring safe design and construction requirements for ceiling suspension systems to resist seismic loads is intended to minimize the amount of damage within a building and along the path of the means of egress. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.110 – Amendment is necessary on the basis of a local geological condition. The proposed amendment to require the registered design professional in responsible charge for the structural design to observe the construction will help ensure acceptable standards of workmanship is provided and to improve the quality of the observation. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.120 – Amendment is necessary on the basis of a local geological condition. The proposed modification ensures better performance of buildings or structures by requiring special inspection for concrete with a compressive strength greater than 2,500 pounds per square inch. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

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Section 18.40.130 – Amendment is necessary on the basis of a local geological condition. The proposed modification to exclude structures assigned to Seismic Design Category D, E or F from being exempt from requiring special inspections will improve quality assurance and ensures better performance of buildings or structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.140 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.40.150 – Amendment is necessary on the basis of a local geological and climatic condition. No substantiating data has been provided to show that wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood foundation systems when they are not properly treated and protected against deterioration have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result in using wood foundation systems that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic or climatic activity and to establish criteria for repair of damaged property following a local

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emergency.

Section 18.40.160 – Amendment is necessary on the basis of a local geological condition. With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions that does not take into consideration the surrounding environment. Plain concrete performs poorly in withstanding the cyclic forces resulting from seismic events. In addition, no substantiating data has been provided to show that under-reinforced foundation walls are effective in resisting seismic loads and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.170 – Amendment is necessary on the basis of a local geological condition. With the higher seismic demand placed on buildings and structures in this region, precautionary steps are proposed to reduce or eliminate potential problems that may result for under reinforced footings located on sloped surfaces. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.180 – Amendment is necessary on the basis of a local geological condition. No substantiating data has been provided to show that under-reinforced footings are effective in resisting seismic loads and may potentially lead to a higher risk of failure. Therefore, the amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings

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during a seismic event. With the higher seismic demand placed on buildings and structures in this region, precautionary steps are proposed to reduce or eliminate potential problems that may result by following prescriptive design provisions for footing that do not take into consideration the surrounding environment. It was important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.190 – Amendment is necessary on the basis of a local geological and climatic condition. No substantiating data has been provided to show that timber footings are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic or climatic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.200 – Amendment is necessary on the basis of a local geological

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and climatic condition. No substantiating data has been provided to show that timber footings is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic or climatic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.210 – Amendment is necessary on the basis of a local geological and climatic condition. No substantiating data has been provided to show that wood used in retaining or crib walls are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood used in retaining or crib walls, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result by using wood in retaining or crib walls that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth

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and proliferation of wood-destroying organisms. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic or climatic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.220 – Amendment is necessary on the basis of a local geological condition. The overdriving of nails into the structural wood panels still remains a concern when pneumatic nail guns are used for wood structural panel shear wall nailing. Box nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the 1994 Northridge Earthquake. The use of clipped head nails continues to be restricted from being used in wood structural panel shear walls where the minimum nail head size must be maintained in order to minimize nails from pulling through sheathing materials. Clipped or mechanically driven nails used in wood structural panel shear wall construction were found to perform much less in previous wood structural panel shear wall testing done at the University of California Irvine. The existing test results indicated that, under cyclic loading, the wood structural panel shear walls were less energy absorbent and less ductile. The panels reached ultimate load capacity and failed at substantially less lateral deflection than those using same size hand-driven nails. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.230 – Amendment is necessary on the basis of a local geological condition. ICC-ES AC 155 Acceptance Criteria for Hold-downs (Tie-Downs) Attached to Wood Members is widely used to establish allowable values for hold-down connectors in evaluation reports. AC 155 uses monotonic loading to establish allowable values. Yet, cyclic and dynamic forces imparted on buildings and structures by seismic activity cause

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more damage than equivalent forces that are applied in a monotonic manner. However, the engineering, regulatory and manufacturing industries have not reached consensus on the appropriate cyclic or dynamic testing protocols. This condition is expected to continue for some time. This amendment continues to limit the allowable capacity to 75% of the acceptance report value to provide an additional factor of safety for statically tested anchorage devices. Steel plate washers will reduce the additional damage that can result when hold-down connectors are fastened to wood framing members. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.240 – Amendment is necessary on the basis of a local geological condition. The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damage to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panels fastened with staples appeared to be much lower in

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strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and county within the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.250 – Amendment is necessary on the basis of a local geological condition. The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with stapled nails are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with stapled nails would exhibit the same behavior as the wood structural panels fastened with common nails. The

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Section 18.40.260 – Amendment is necessary on the basis of a local geological condition. The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with stapled nails are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with stapled nails would

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Section 18.40.270 – Amendment is necessary on the basis of a local geological condition. This amendment specifies minimum sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structure in this region. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.280 – Amendment is necessary on the basis of a local geological

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condition. This amendment specifies minimum sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structures in this region. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.290 – Amendment is necessary on the basis of a local geological condition. This amendment specifies minimum sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structures in this region. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.300 – Amendment is necessary on the basis of a local geological condition. With the higher seismic demand placed on buildings and structures in this region, interior walls can easily be called upon to resist over half of the seismic loading imposed on simple buildings or structures. Without a continuous foundation to support the braced wall line, seismic loads would be transferred through other elements such as non-structural concrete slab floors, wood floors, etc. The change is to limit the use of the exception to structures assigned to Seismic Design Category A, B or C where lower

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seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.310 – Amendment is necessary on the basis of a local geological condition. Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this amendment limits the use of staple fasteners in resisting or transferring seismic forces. In September 2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. The test results of the stapled wood structural shear panels appeared much lower in strength and drift than the nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.320 – Amendment is necessary on the basis of a local geological condition. Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this amendment limit the use of staple fasteners in resisting or transferring seismic forces. In September 2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. The test results of the stapled wood structural shear panels appeared much lower in strength and drift than the nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic

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testing. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Sections 18.40.330 – 18.40.350 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.40.360 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.40.370 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Section 18.40.380 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Sections 18.40.390 – 18.40.430 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code.

Section 18.40.440 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Sections 18.40.450 – 18.40.480 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code.

Section 18.40.490 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Section 18.40.500 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Sections 18.40.510 – 18.40.520 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code.

Section 18.40.530 – Amendment is necessary on the basis of a local geological condition. The City of Long Beach is located in Seismic Design Category D, E or F as determined by the International Building Code, and in Seismic Design Category D_2 or E as determined by the International Residential Code, which is considered by experts to be one of the most active seismic regions in the world, and therefore the proposed amendment is required to ensure that a reasonable margin of safety is provided due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed.

Sections 18.40.540 – 18.40.5780 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express

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findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code.

Section 3. Findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions amendments to the California Residential Code, Part 2.5, Title 24 of the California Code of Regulations:

Sections 18.41.010 – 18.41.030 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.41.040 – Amendment is necessary on the basis of a local geological condition. After the 1994 Northridge Earthquake, the Wood Frame Construction Joint Task Force recommended that the quality of wood frame construction needed to be greatly improved. One such recommendation identified by the Task Force is to improve the quality and organization of structural plans prepared by the engineer or architect so that plan examiners, building inspectors, contractors and special inspectors may logically follow and construct the presentation of the seismic force-resisting systems in the construction documents. For buildings or structures located in Seismic Design Category D0, D1, D2 or E that are subject to a greater level of seismic forces, the requirement to have a California licensed architect or engineer prepare the construction documents is intended to minimize or reduce structural deficiencies that may cause excessive damage or injuries in wood frame buildings. Structural deficiencies such as plan and vertical irregularities, improper shear transfer of the seismic force-resisting system, missed details or connections important to the structural system, and the improper application of the prescriptive requirements of the California Residential Code can be readily addressed by a registered design professional. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to

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establish criteria for repair of damaged property following a local emergency.

Section 18.41.050 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.41.060 – Amendment is necessary on the basis of a local geological condition. With the higher seismic demand placed on buildings and structures in this region, precautionary steps are proposed to reduce or eliminate potential problems that may result by limiting the type of irregular conditions specified in the International Residential Code. Such limitations are intended to reduce the potential structural damage expected in the event of an earthquake. The cities and county of the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of the shear walls and all associated elements when designed for high levels of seismic loads. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.070 – Amendment is necessary on the basis of a local geological and climatic condition. No substantiating data has been provided to show that wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood foundations, not properly treated and protected against deterioration, have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result in using wood foundation that

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Long Beach, CA 90802-4664

experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. However, an exception is made for non-occupied, single-story storage structures that pose significantly less risk to human safety and may utilize the wood foundation guidelines specified in this Chapter. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic and climatic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.080 – Amendment is necessary on the basis of a local geological condition. With the higher seismic demand placed on buildings and structures in this region, precautionary steps are proposed to reduce or eliminate potential problems that may result for under-reinforced footings located on sloped surfaces. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.090 – Amendment is necessary on the basis of a local geological condition. The amendment limit the use of the exception to structures assigned to Seismic Design Category A, B or C where lower seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.100 – Amendment is necessary on the basis of a local geological condition. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of

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damaged property following a local emergency.

Section 18.41.110 – Amendment is necessary on the basis of a local geological and climatic condition. No substantiating data has been provided to show that wood foundation walls are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood foundation walls, when they are not properly treated and protected against deterioration, have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result in using wood foundation walls that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic and climatic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.120 – Amendment is necessary on the basis of a local geological condition. Section R502.10 of the Code does not provide any prescriptive criteria to limit the maximum floor opening size nor does Section R503 provide any details to address the issue of shear transfer near larger floor openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damages caused by seismic forces. Requiring blocking with metal ties around larger floor openings and limiting opening size is consistent with the requirements of Section R301.2.2.2.5. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local

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emergency.

Section 18.41.130 – Amendment is necessary on the basis of a local geological condition. The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with staples appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D0, D1 and D2 unless it can be substantiated by cyclic testing. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.140 – Amendment is necessary on the basis of a local geological condition. The cities and county of the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of the shear wall system for buildings and structures subject to high seismic loads by eliminating single top plate construction. The performance of modern day braced wall panel construction is directly related to an

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adequate load path extending from the roof diaphragm to the foundation system. A single top plate is likely to be over nailed due to the nailing requirements at a rafter, stud, top plate splice, and braced wall panel edge in a single location. In addition, notching on a single top plate for plumbing, ventilation and electrical wiring may reduce the load transfer capacity of the plate without proper detailing. A majority of buildings and structures designed and built per the California Residential Code with a single top plate may not need structural observation and special inspections. The potential construction mistakes mentioned above could not be caught and corrected by knowledgeable engineers and inspectors, and could jeopardize structural performance of buildings and structures located in high seismic areas. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.150 – Amendment is necessary on the basis of a local geological condition. The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with staples appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was

OFFICE OF THE CITY ATTORNEY
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recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D0, D1 and D2 unless it can be substantiated by cyclic testing. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.160 – Amendment is necessary on the basis of a local geological condition. The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification reduces the aspect ratio help to maintain minimum quality of construction and performance standards of structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.170 – Amendment is necessary on the basis of a local geological condition. Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment increases the length and limits the location where shear walls sheathed with lath, plaster or gypsum board are used in multi-level buildings. In addition, shear walls sheathed with other materials are prohibited in Seismic Design Category D0, D1 and D2 to be consistent with the design limitation for similar shear walls found in the California Building Code. The poor performance of such shear walls in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force and formed the basis for this amendment. Considering that shear walls sheathed with lath, plaster or gypsum board are less ductile than steel moment frames or wood structural panel shear walls, the cities and county of the Los Angeles region has taken the necessary measures to limit the

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Long Beach, CA 90802-4664

potential structural damage that may be caused by the use of such walls at the lower level of multi-level building that are subject to higher levels of seismic loads. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.180 – Amendment is necessary on the basis of a local geological condition. 3/8" thick 3-ply plywood shear walls experienced many failures during the Northridge Earthquake. Box nails were observed to cause massive and multiple failures of the typical 3/8" thick 3-ply plywood during the Northridge Earthquake. This amendment specifies minimum sheathing thickness, nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands and reduce and limit potential damages to property. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with staples appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D0, D1 and D2 unless it can be substantiated by cyclic testing. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.190 – Amendment is necessary on the basis of a local geological

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

condition. 3/8" thick 3-ply plywood shear walls experienced many failures during the Northridge Earthquake. Box nails were observed to cause massive and multiple failures of the typical 3/8" thick 3-ply plywood during the Northridge Earthquake. This amendment specifies minimum sheathing thickness, nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands and reduce and limit potential damages to property. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.200 – Amendment is necessary on the basis of a local geological condition. 3/8" thick 3-ply plywood shear walls experienced many failures during the Northridge Earthquake. Box nails were observed to cause massive and multiple failures of the typical 3/8" thick 3-ply plywood during the Northridge Earthquake. This amendment specifies minimum sheathing thickness, nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands and reduce and limit potential damages to property. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.210 – Amendment is necessary on the basis of a local geological

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

condition. It was observed by the Structural Engineer Association of Southern California (SEAOSC) and the Los Angeles City Task Force that high aspect ratio shear walls experienced many failures during the 1994 Northridge Earthquake. This proposed amendment provides a uniform standard of construction for buildings to ensure that the structural integrity with respect to maximum shear wall aspect ratios is maintained. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.220 – Amendment is necessary on the basis of a local geological condition. 3/8" thick 3-ply plywood shear walls experienced many failures during the Northridge Earthquake. Box nails were observed to cause massive and multiple failures of the typical 3/8" thick 3-ply plywood during the Northridge Earthquake. This amendment specifies minimum sheathing thickness, nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands and reduce and limit potential damages to property. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.230 – Amendment is necessary on the basis of a local geological condition. Reinforcement using longitudinal wires for buildings and structures located in high seismic areas are deficient and not as ductile as deformed rebar. Having vertical reinforcement closer to the ends of masonry walls will helps to improve the seismic performance of masonry buildings and structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.240 – Amendment is necessary on the basis of a local geological condition. Section R802 of the Code does not provide any prescriptive criteria to limit the maximum roof opening size nor does Section R803 provide any details to address the issue of shear transfer near larger roof openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damages caused by seismic forces. Requiring blocking with metal ties around larger roof openings and limiting opening size is consistent with the requirements of Section R301.2.2.2.5. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.41.250 – Amendment is necessary on the basis of a local geological condition. The performance of fireplace/chimney without anchorage to the foundation has been observed to be inadequate during major earthquakes. The lack of anchorage to the foundation can result in the overturning or displacement of the fireplace/chimney. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 4. Findings and determinations relative to the adoption of administrative amendments to the California Electrical Code, Part 3, Title 24 of the California Code of Regulations:

Chapter 18.42 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

Section 5. Findings and determinations relative to the adoption of administrative amendments to the California Plumbing Code, Part 4, Title 24 of the California Code of Regulations:

Chapter 18.43 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 6. Findings and determinations relative to the adoption of administrative amendments to the California Mechanical Code, Part 5, Title 24 of the California Code of Regulations:

Chapter 18.44 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 7. Findings and determinations relative to the adoption of administrative amendments to the Uniform Housing Code, Section 32, Article 5, Subchapter 1, Division 1, of Title 25 of the California Code of Regulations:

Chapter 18.45 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 8. Findings and determinations relative to the adoption of administrative amendments to the California Energy Code, Part 6, Title 24 of the California Code of Regulations:

Chapter 18.46 – Amendment is necessary for local administrative clarification,

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does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 9. Findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions amendments to the California Green Building Standards Code, Part 11, Title 24 of the California Code of Regulations:

Sections 18.47.010 – 18.47.020 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.47.030 – Amendment is necessary on the basis of a local climatic condition. The City of Long Beach is a densely populated area having buildings and structures constructed within heavily traveled traffic corridors and highways, near and within the proximity of the Long Beach airport and port, and near the ocean and within flood prone area. This impacts the quality of the air, causes higher decibel noise levels, and increases the risk of rising sea or flood levels. The proposed modification to increase the number of EV charging spaces and stations will help to address and significantly reduce local air and noise pollution and greenhouse gas emissions will improve the health and welfare of the city's residents, businesses and visitors and reduce the rise in sea or flood levels, including in San Pedro Bay, that could put at risk the city's homes and businesses, public facilities, airport and port. Therefore, this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the California Green Building Standards Code.

Section 18.47.040 – Amendment is necessary on the basis of a local climatic

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

condition. The City of Long Beach is a densely populated area having buildings and structures constructed within heavily traveled traffic corridors and highways, near and within the proximity of the Long Beach airport and port, and near the ocean and within flood prone area. This impacts the quality of the air, causes higher decibel noise level, and increases the risk of rising sea or flood levels. The proposed modification to increase the number of EV charging space and station will help to address and significantly reduce local air and noise pollutions and greenhouse gas emissions will improve the health and welfare of the city's residents, businesses and visitors and reduce the rise in sea or flood levels, including in San Pedro Bay, that could put at risk the city's homes and businesses, public facilities, airport and port. Therefore this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the California Green Building Standards Code.

Section 18.47.050 – Amendment is necessary on the basis of a local climatic condition. The City of Long Beach is a densely populated area having buildings and structures constructed within heavily traveled traffic corridors and highways, near and within the proximity of the Long Beach airport and port, and near the ocean and within flood prone area. This impacts the quality of the air, causes higher decibel noise levels, and increases the risk of rising sea or flood levels. The proposed modification to increase the number of EV charging spaces and stations will help to address and significantly reduce local air and noise pollution and greenhouse gas emissions will improve the health and welfare of the city's residents, businesses and visitors and reduce the rise in sea or flood levels, including in San Pedro Bay, that could put at risk the city's homes and businesses, public facilities, airport and port. Therefore this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the California Green Building Standards Code.

Section 18.47.060 – Amendment is necessary on the basis of a local climatic

OFFICE OF THE CITY ATTORNEY
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Long Beach, CA 90802-4664

condition. The proposed amendment makes modification and changes to better preserve and protect the community where environmental resources are scarce and to realize a healthier, cleaner and more viable environment for the City's residents, its workforce and visitors.

Section 18.47.070 – Amendment is necessary on the basis of a local climatic condition. The proposed amendment makes modification and changes to better preserve and protect the community where environmental resources are scarce and to realize a healthier, cleaner and more viable environment for the City's residents, its workforce and visitors.

Section 18.47.080 – Amendment is necessary on the basis of a local climatic condition. The City is reliant on imported water, importing as much as 40% from the Metropolitan Water District. To address the impact of imminent water supply shortages as the result of a statewide, multi-year droughts, critically low levels in key state reservoirs and significant pumping restrictions on imported water supplies from the State Water Project, it is necessary to increase water conservation efforts to ensure sufficient water resources is available for current and future residents of the City. Nearly 36% of water usage in the City can be attributed to multifamily residential or mixed-use buildings where water consumption in each individual dwelling unit is not measured. Therefore this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the California Green Building Standards Code.

Section 18.47.090 – Amendment is necessary on the basis of a local climatic condition. The City is reliant on imported water, importing as much as 40% from the Metropolitan Water District. To address the impact of imminent water supply shortage as the result of a statewide, multi-year droughts, critically low levels in key state reservoirs and significant pumping restrictions on imported water supplies from the State Water Project, it is necessary to increase water conservation efforts to ensure sufficient water

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resources is available for current and future residents of the City. Nearly 36% of water usage in the City can be attributed to multifamily residential or mixed-use buildings where water consumption in each individual dwelling unit is not measured. Therefore this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the California Green Building Standards Code.

Section 10. Findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions amendments to the California Fire Code, Part 9, Title 24 of the California Code of Regulations:

Section 18.48.010 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment adopts the latest edition of the California Fire Code and makes minor editorial changes to reflect adopted or deleted chapters and sections.

Section 18.48.020 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment reference the various amendments proposed to the California Fire Code.

Section 18.48.030 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment names this code as the Fire Code for the City of Long

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Beach.

Section 18.48.040 – Amendment is necessary on the basis of local topographical conditions. This amendment adds vessels on ocean waters under Long Beach jurisdiction to the Fire Code.

Section 18.48.050 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment adds supplemental rules and regulations to carry out the intent of the code.

Section 18.48.060 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies the appointment of the fire code official.

Section 18.48.070 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment provides special requirements for ocean areas and the vessels that operate there.

Section 18.48.080 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies length of time records shall be retained.

Section 18.48.090 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California

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Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to provide for three types of permits.

Section 18.48.100 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to include inspections permits.

Section 18.48.110 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment provides for a declaration of intended use.

Section 18.48.120 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies the expiration of permits.

Section 18.48.130 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to include additional operational permits.

Section 18.48.140 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and

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Safety Code. This amendment expands language to include additional operational permits.

Section 18.48.150 -- Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies quantity of combustible liquid allowed.

Section 18.48.160 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to include inspection permits.

Section 18.48.170 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to include additional construction and inspection permits.

Section 18.48.180 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment requires electronic submission of records.

Section 18.48.190 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for the responsibility of keeping an

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accurate count of building occupants.

Section 18.48.200 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies language for violation penalties.

Section 18.48.210 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies language for stop work orders.

Section 18.48.220 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies language for permit fees.

Section 18.48.230 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for cost recovery and reporting requirements.

Section 18.48.240 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment provides additional definitions.

Section 18.48.250 – Amendment is necessary for local administrative clarification,

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does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment establishes conditions for open burning.

Section 18.48.260 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment establishes conditions for recreational burning.

Section 18.48.270 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies language for sky lanterns.

Section 18.48.280 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for installation of guard posts.

Section 18.48.290 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment establishes conditions for fire safety officer.

Section 18.48.300 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and

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Safety Code. This amendment expands language for fire access roads.

Section 18.48.310 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies surface conditions of fire access roads

Section 18.48.320 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for fire access roads.

Section 18.48.330 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for size of address numbers.

Section 18.48.340 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify location and illumination of address numbers.

Section 18.48.350 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for key box maintenance.

Section 18.48.360 – Amendment is necessary for local administrative clarification,

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does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for private fire service mains.

Section 18.48.370 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands code references for fire hydrant systems.

Section 18.48.380 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for fire hydrant systems.

Section 18.48.390 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for acceptance testing.

Section 18.48.400 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these densely populated occupancies have this added means of escape.

Section 18.48.410 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic

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Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides clarifications for fire sprinkler systems.

Section 18.48.420 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment directs the code user to the proper section for protection of vehicular damage.

Section 18.48.430 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides clarifications for fire sprinkler systems.

Section 18.48.440 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides fire sprinkler requirements for non-residential buildings.

Section 18.48.450 – Amendment is necessary on the basis of local geological

OFFICE OF THE CITY ATTORNEY
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conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides fire sprinkler requirements for residential buildings.

Section 18.48.460 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment provides for a safety margin when performing hydraulic calculations.

Section 18.48.470 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies location of control valves.

Section 18.48.480 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify fire alarm signal reporting.

Section 18.48.490 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies remote annunciators in sprinkler monitoring

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systems.

Section 18.48.500 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for exterior alarm device.

Section 18.48.510 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment adds language for alarm devices.

Section 18.48.520 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment adds language to clarify minimum pressure requirements.

Section 18.48.530 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies location of hose valves in stairways.

Section 18.48.540 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and

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Safety Code. This amendment adds language to clarify building evacuation and fire alarm systems.

Section 18.48.550 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies duct smoke detectors.

Section 18.48.560 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies duct smoke detectors.

Section 18.48.570 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site life safety systems in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment adds language for fire alarm and smoke removal systems.

Section 18.48.580 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands code references for smoke and heat vents.

Section 18.48.590 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination

OFFICE OF THE CITY ATTORNEY
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required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify temperature ratings of smoke and heat vents.

Section 18.48.600 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires this extra margin of safety due to the probability of damage to water supplies. This amendment provides requirements for fire department connections.

Section 18.48.610 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify location of fire department connections.

Section 18.48.620 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify access to fire department connections.

Section 18.48.630 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify protection of exit ways from vehicular damage.

OFFICE OF THE CITY ATTORNEY
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Section 18.48.640 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment adds language to clarify access to roof hatch or trap doors.

Section 18.48.650 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify the protection against physical damage from vehicles.

Section 18.48.660 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands code references for vapor-processing systems.

Section 18.48.670 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for the installation and maintenance of vapor processing systems.

Section 18.48.680 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment adds language for welding and cutting aboard vessels.

OFFICE OF THE CITY ATTORNEY
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Section 18.48.690 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies hose cabinet requirements.

Section 18.48.700 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies requirement for fire safety officers.

Section 18.48.710 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify qualifications of those handling or firing explosives.

Section 18.48.720 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify the City of Long Beach insurance requirements.

Section 18.48.730 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify the City of Long Beach prohibition of fireworks and associated insurance requirements.

OFFICE OF THE CITY ATTORNEY
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Section 18.48.740 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language to clarify the amounts of flammable or combustible liquids in residential occupancies.

Section 18.48.750 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment clarifies requirement for construction documents.

Section 18.48.760 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for the storage of liquefied petroleum gas in buildings.

Section 18.48.770 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for the use of liquefied petroleum gas.

Section 18.48.780 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 13143.5, 17958.7 and 18941.5(b) of the California Health and Safety Code. This amendment expands language for the installation of liquefied petroleum gas in tanks.

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Section 18.48.790 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides language to clarify reduction of fire flow requirements in one- and two-family dwellings, Group R-3 and R-4 buildings and townhomes.

Section 18.48.800 – Amendment is necessary on the basis of local geological conditions. The City of Long Beach is located by the International Building Code in Seismic Design Category D, E or F, and by the International Residential Code in Seismic Design Category D_2 or E, which is considered by experts to be one of the most active seismic regions in the world, and therefore requires these extra margins of safety due to the necessity of providing on site fire protection in a seismic emergency when fire department resources could be greatly delayed and overwhelmed. This amendment provides language to clarify reduction of fire flow requirements Buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhomes.

Section 11. Findings and determinations relative to the adoption of administrative amendments, and where appropriate, the adoption of more restrictive building standards code provisions amendments to the California Existing Building Code, Part 10, Title 24 of the California Code of Regulations:

Sections 18.49.010 – 18.49.030 – Amendment is necessary for local administrative clarification, and does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code pursuant to Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 18.49.040 – 18.49.060 – Amendment is necessary on the basis of a local geological condition. Due to the high geologic activities in the Southern California area

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and the expected higher level of performance on buildings and structures, this amendment ensures that new occupancies with a high occupant load are properly evaluated to reduce or mitigate any potential hazards to future occupants in existing URM buildings or structures. The amendment makes modification and changes to better limit personal injury and property damage as a result of seismic activity and to establish criteria for repair of damaged property following a local emergency.

Section 18.49.070 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 12. Findings and determinations relative to the adoption of administrative amendments to the California Historical Building Code, Part 8, Title 24 of the California Code of Regulations:

Chapter 18.50 – Amendment is necessary for local administrative clarification, does not modify a Building Standard as defined in Section 18909(c) of the California Health and Safety Code, and does not require the express findings and determination required by Sections 17958, 17958.5 and 17958.7 of the California Health and Safety Code.

Section 13. The Director of Development Services and the Fire Chief are instructed to, and shall, transmit a copy of this resolution together with any appropriate supporting documentation, to the California Building Standards Commission, the California Housing and Community Development Department, and the State Historical Building Safety Board in accordance with Sections 17858.7, 18941.5 and 18959 of the California Health and Safety Code.

Section 14. This resolution shall take effect on January 1, 2017, upon its adoption by the City Council, and the City Clerk shall certify to the vote adopting this resolution.

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I hereby certify that the foregoing resolution was adopted by the City Council of the City of Long Beach at its meeting of November 15, 2016, by the following vote:

Councilmembers: Pearce, Price, Supernaw, Mungo, Andrews, Uranga, Austin, Richardson.

Noes: Councilmembers: None.

Absent: Councilmembers: Gonzalez.

City Clerk

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