

Proposed URM Retrofit Standards and Timelines | URM Retrofit Policy Committee | March 20, 2017

URM Class	Retrofit Standard	Timeline	Enforcement	Incentives
<p>Class 1 = Critical buildings and essential facilities.</p> <p>Class 1 includes all the buildings in Oregon Structural Specialty Code (OSSC) Risk Category IV plus essential utilities</p> <p>Number of Class 1 URM buildings = 10</p>	<p>Immediate Occupancy after a "Design Level Earthquake" (BSE-1N), and Life Safety under "Maximum Considered Earthquake" (BSE-2N)</p>	<ul style="list-style-type: none"> <li>ASCE-41 Evaluation = 3 years</li> <li>Seismic retrofit = 10 years</li> </ul>	<p><b>Failure to submit ASCE-41 evaluation:</b></p> <ul style="list-style-type: none"> <li>\$150/month for first six months, then \$300 per month up to maximum \$6,000.</li> </ul> <p><b>Failure to brace parapets, cornices and wall-to-roof attachments:</b></p> <ul style="list-style-type: none"> <li>\$500 per month for first six months, then \$1,000/month up to a maximum of \$12,000</li> <li>At the owner's expense, the City may also post a sign identifying it as a URM building that is potentially hazardous in the event of an earthquake.</li> <li>URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete wall-to-floor attachments and wall strengthening:</b></p> <ul style="list-style-type: none"> <li>\$1,000/month for 12 months. If the work is not completed within that 12-month period, the fines will be increased to \$2,000 per month up to a maximum of \$24,000.</li> <li>Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>The URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete all seismic upgrades:</b></p> <ul style="list-style-type: none"> <li>A penalty equal to 1% per year of the Real Market Value (RMV) of the property as obtained from the Multnomah County Assessor's data will be prorated and assessed quarterly.</li> <li>Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>The URM building owners will also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> <li>If not already recorded, the City will record against the title that the property is not in compliance with City ordinance.</li> <li>If all the work required is not completed two years after the deadline, then the certificate of occupancy may be revoked.</li> </ul>	<p>Waiver of additional upgrade triggers beyond seismic</p>

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<p>Class 2 = All school buildings and OSSC Risk Category III buildings</p> <p>Number of Class 2 URM buildings = 88</p>	<p>Between Life Safety and Operational performance level for "Design Level Earthquake" (BSE-1E), and between Life safety and Collapse Prevention under "Maximum Considered Earthquake" (BSE-2E)</p>	<ul style="list-style-type: none"> <li>• ASCE-41 Evaluation = 3 years</li> <li>• Parapet, cornice and chimney bracing and wall to roof attachment = 10 years</li> <li>• Seismic retrofit = 20 years</li> </ul>	<p><b>Failure to submit ASCE-41 evaluation:</b></p> <ul style="list-style-type: none"> <li>• \$150/month for first six months, then \$300 per month up to maximum \$6,000.</li> </ul> <p><b>Failure to brace parapets, cornices and wall-to-roof attachments:</b></p> <ul style="list-style-type: none"> <li>• \$500 per month for first six months, then \$1,000/month up to a maximum of \$12,000</li> <li>• At the owner's expense, the City may also post a sign identifying it as a URM building that is potentially hazardous in the event of an earthquake.</li> <li>• URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete wall-to-floor attachments and wall strengthening:</b></p> <ul style="list-style-type: none"> <li>• \$1,000/month for 12 months. If the work is not completed within that 12-month period, the fines will be increased to \$2,000 per month up to a maximum of \$24,000.</li> <li>• Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>• The URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete all seismic upgrades:</b></p> <ul style="list-style-type: none"> <li>• A penalty equal to 1% per year of the Real Market Value (RMV) of the property as obtained from the Multnomah County Assessor's data will be prorated and assessed quarterly.</li> <li>• Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>• The URM building owners will also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> <li>• If not already recorded, the City will record against the title that the property is not in compliance with City ordinance. If all the work required is not completed two years after the deadline, then the certificate of occupancy may be revoked.</li> </ul>	<p>Waiver of additional upgrade triggers beyond seismic</p>

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<p>Class 3 = All other URM buildings not categorized as URM building Class 1, 2 or 4</p> <p>Number of Class 3 URM buildings = 1,357</p>	<p>Modified Bolts Plus if the building qualifies; otherwise Life Safety after a "Design Level Earthquake" (BSE-1E), and Collapse Prevention under "Maximum Considered Earthquake" (BSE-2E) + bracing for URM parapets, cornices and chimney.</p> <p><b>Modified Bolts Plus:</b></p> <ul style="list-style-type: none"> <li>o Brace URM parapets, cornices and chimneys</li> <li>o Anchor URM walls to floors and roofs for out-of-plane loading</li> <li>o Attach diaphragm to vertical elements to transfer in plane shear</li> <li>o Out-of-plane URM wall bracing if h/t ratio exceeds that required by ASCE 41-13 Table 11-5</li> </ul>	<ul style="list-style-type: none"> <li>• ASCE-41 Evaluation = 5 years</li> <li>• Parapet, cornice and chimney bracing and wall to roof attachment = 10 years</li> <li>• All bearing and exterior wall to floor attachments and out-of-plane wall strengthening = 20 years</li> <li>• Seismic retrofit = 25 years + 5 years with demonstrable hardship</li> </ul>	<p><b>Failure to submit ASCE-41 evaluation:</b></p> <ul style="list-style-type: none"> <li>• \$150/month for first six months, then \$300 per month up to maximum \$6,000.</li> </ul> <p><b>Failure to brace parapets, cornices and wall-to-roof attachments:</b></p> <ul style="list-style-type: none"> <li>• \$500 per month for first six months, then \$1,000/month up to a maximum of \$12,000</li> <li>• At the owner's expense, the City may also post a sign identifying it as a URM building that is potentially hazardous in the event of an earthquake.</li> <li>• URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete wall-to-floor attachments and wall strengthening:</b></p> <ul style="list-style-type: none"> <li>• \$1,000/month for 12 months. If the work is not completed within that 12-month period, the fines will be increased to \$2,000 per month up to a maximum of \$24,000.</li> <li>• Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>• The URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete all seismic upgrades:</b></p> <ul style="list-style-type: none"> <li>• A penalty equal to 1% per year of the Real Market Value (RMV) of the property as obtained from the Multnomah County Assessor's data will be prorated and assessed quarterly.</li> <li>• Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>• The URM building owners will also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> <li>• If not already recorded, the City will record against the title that the property is not in compliance with City ordinance. If all the work required is not completed two years after the deadline, then the certificate of occupancy may be revoked.</li> </ul>	<ul style="list-style-type: none"> <li>• Tax exemption for seismic retrofits</li> <li>• Central City FAR bonus and transfer system for projects that do not trigger inclusionary housing requirements</li> <li>• Waiver of additional upgrade triggers beyond seismic</li> <li>• Earthquake ombudsman</li> <li>• \$5M Old Town/Chinatown Urban Renewal Area</li> </ul>

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<p>Class 4 = 1 and 2-story URM buildings with 0-10 occupants</p> <p>Number of Class 4 URM buildings = 203</p>	<ul style="list-style-type: none"> <li>○ Brace URM parapets, cornices and chimneys</li> <li>○ Anchor URM walls to floors and roofs for out-of-plane loading</li> <li>○ Attach diaphragm to vertical elements to transfer in plane shear</li> <li>○ Out-of-plane URM wall bracing if h/t ratio greater than 16 for one story buildings or h/t ratio greater than 18 for the first story of a multistory building or h/t ratio greater than 14 for walls in top story of a multi-story building</li> </ul>	<ul style="list-style-type: none"> <li>● Parapet, cornice and chimney bracing, wall to roof attachment, all bearing and exterior wall to floor attachments and out-of-plane wall strengthening = 10 years</li> </ul>	<p><b>Failure to brace parapets, cornices and wall-to-roof attachments:</b></p> <ul style="list-style-type: none"> <li>● \$500 per month for first six months, then \$1,000/month up to a maximum of \$12,000</li> <li>● At the owner's expense, the City may also post a sign identifying it as a URM building that is potentially hazardous in the event of an earthquake.</li> <li>● URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul> <p><b>Failure to complete wall-to-floor attachments and wall strengthening:</b></p> <ul style="list-style-type: none"> <li>● \$1,000/month for 12 months. If the work is not completed within that 12-month period, the fines will be increased to \$2,000 per month up to a maximum of \$24,000.</li> <li>● Additionally, if a posting does not already exist, a sign will be posted at the owner's expense, that the building is potentially hazardous in the event of an earthquake.</li> <li>● The URM building owners may also be required to notify building tenants that they have not completed required seismic upgrades. If the owner does not provide a notice to tenants, the City may also send a notice to the tenants at the owner's expense.</li> </ul>	<ul style="list-style-type: none"> <li>● Tax exemption for seismic retrofits</li> <li>● Central City FAR bonus and transfer system for projects that do not trigger inclusionary housing requirements</li> <li>● Waiver of additional upgrade triggers beyond seismic</li> <li>● Earthquake ombudsman</li> <li>● \$5M Old Town/Chinatown Urban Renewal Area</li> </ul>

<b>OTHER RECOMMENDATIONS</b>	
<ul style="list-style-type: none"> <li>• <b>Revised definition of URM building:</b> Unreinforced Masonry Wall Building means a building that contains either:                             <ul style="list-style-type: none"> <li>A. At least one Unreinforced Masonry Bearing Wall, or</li> <li>B. At least one Unreinforced Masonry Wall that participates in the main lateral force-resisting system.</li> </ul> </li> </ul> <p>Exception: A building is exempt from this definition if both of the following are satisfied:</p> <ol style="list-style-type: none"> <li>1. All existing lateral load <math>\square</math>carrying structural elements have a demand <math>\square</math>capacity ratio no more than 10 percent greater when neglecting all Unreinforced Masonry Walls than their demand<math>\square</math>capacity ratio including all Unreinforced Masonry Walls, and</li> <li>2. The demand <math>\square</math>capacity ratio, determined by neglecting all Unreinforced Masonry Walls, from the Quick Check Procedures for the appropriate Life Safety Structural Checklist of ASCE 41<math>\square</math>13 shall not exceed 2.0. The appropriate Life Safety Structural Checklist shall be determined based on the building type neglecting all Unreinforced Masonry Walls.</li> </ol> <p>Where the building is exempt per Item 1 and 2 above, the deficiencies in all Unreinforced Masonry Walls meeting Items A or B must still be evaluated and retrofitted.</p>	
<ul style="list-style-type: none"> <li>• City shall notify all owners, in writing, of <b>URM building status</b>.                             <ul style="list-style-type: none"> <li>○ City shall additionally notify URM building owners whose buildings are situated in high and moderate liquefaction zones as identified in the DOGAMI maps and <i>recommend</i> a geotechnical investigation under these circumstances.</li> <li>○ Appeals process.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Exceptions</b> to URM Building Retrofit Policy:                             <ul style="list-style-type: none"> <li>○ One- and two-family homes.</li> <li>○ Buildings that have already undergone seismic strengthening, and meet the standards below:                                     <ul style="list-style-type: none"> <li>▪ Buildings that have been fully upgraded to Seismic Zone 3 requirements under the Oregon Structural Specialty Code (OSSC) 1993 or later editions.</li> <li>▪ Buildings with currently approved Phased Seismic Strengthening Agreements with the City for a full seismic upgrade, as long as the building remains in the same or lower URM building classification.</li> <li>▪ Class 2 URM buildings that have already fully upgraded to the requirements for a Risk Category II structure.</li> <li>▪ Class 3 or 4 URM buildings that have already undergone a full seismic upgrade to ASCE 31/41 standards.</li> </ul> </li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Modify existing Title 24.85:</b> <ul style="list-style-type: none"> <li>○ Roof repair or replacement: removal of greater than 50% of total roof area within a (5) <b>15-year time period</b> requires conformance to ASCE-41 standards for wall anchorage for both in plane and out of plane forces and parapet bracing</li> <li>○ Costs of alterations or repair: when costs associated with building alterations or repair in a (2) <b>5-year time period</b> or 15-year time period exceeds listed costs, entire building shall be improved to resist seismic forces to meet ASCE-(31) <b>41</b> criteria</li> <li>○ Change in occupancy: seismic upgrade is required due to a change in occupancy or use when:                                     <ul style="list-style-type: none"> <li>▪ More than 33% of the building area undergoes a change in occupancy to higher hazard classification.</li> <li>▪ Increase in occupant load by more than (149) <b>99</b> persons.</li> <li>▪ Occupancy change to same or lower hazard classification if occupant load is increased by more than (149) <b>99</b> persons.</li> <li>▪ Occupancy changes to essential facility.</li> </ul> </li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• Extension of timeline (beyond roof and parapet bracing) for <b>affordable housing</b> if owners enter into Preservation &amp; Resiliency Agreement.                             <ul style="list-style-type: none"> <li>○ Portland Housing Bureau has agreed to present to City Council Affordable Housing Preservation and Resiliency Strategy, including targeted milestones and preservation timeframes no later than December 30, 2017.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Voluntary placarding</b> of upgraded URM buildings</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Historic properties</b> shall be prioritized for public support</li> </ul>	
<ul style="list-style-type: none"> <li>• Conduct comprehensive <b>public education campaign</b></li> </ul>	
<ul style="list-style-type: none"> <li>• In future years, conduct <b>inventory of soft-story and non-ductile concrete buildings</b> and consider enacting similar retrofit requirements for these buildings</li> </ul>	