Bureau of Development Services

DRAC Meeting

Updates to PCC Title 24.85

February 16, 2023

Bureau of Development Services FROM CONCEPT TO CONSTRUCTION

Proposed Updates to Title 24.85

Revise standard of seismic Improvement for change of occupancy from Office (B or M occupancy) to Residential (R2 occupancy) from current ASCE 41-BPON to ASCE 41-BPOE

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Proposed Updates to Title 24.85

Under Current Code (PCC Title 24.85) :
A Seismic Upgrade to current Code would be triggered

TABLE 24.85-A		
Relative Hazard Classification	**OSSC Occupancy Classification**	**Seismic Improvement Standard**
5 (Highest)	A, E, I-2, I-3, H-1, H-2, H-3, H-4, H-5	OSSC or ASCE 41-BPON
4	R-1,R-2, SR, I-1, I-4	
3	B, M	41-BPOE
2	F-1, F-2, S-1, S-2	
1 (Lowest)	R-3, U	

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ASCE : American Society of Civil Engineers

ASCE 41 : Standard published by ASCE for evaluation and Retrofit of existing Structures

ASCE 41- BPON : A retrofit performance standard where a building after it has been retrofitted to this standard is expected to perform equivalent to new buildings in an seismic event

ASCE 41- BPOE : A retrofit performance standard for existing building

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For buildings rehabilitated to the BPOE performance standard we can expect that the level of damage experienced by these buildings likely will be greater than that expected in similar properly designed and constructed new buildings or existing buildings evaluated and retrofitted to the BPON standard.

So why is a BPOE performance standard acceptable?

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- The increase in risk is tempered by the recognition that an existing building often has a shorter remaining life than a new building.
- BPON retrofits are very expensive
- The BPOE recognizes the cost of achieving the higher level of certainty in performance that comes with “new building equivalence” is often disproportionate to the incremental
- Difficult to achieve a BPON upgrade for certain type of buildings such as URM’s

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- Above all it provides for Life Safety and is a robust upgrade

- And this standard for existing buildings approximates the regulatory policy traditionally applied to existing buildings in many seismically active areas of the United States.

Proposed Updates to Title 24.85

Outreach to

- San Francisco
- Los Angeles
- Seattle
- San Diego

Structural Engineering Advisory Committee

BOMA and NAIOP

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Changing the Retrofit Standard for Change of Occupancy to Residential will:

- Does not compromise Public Safety
- Simplify evaluation and analysis and seismic upgrades required
- Lower the cost for seismic upgrades and when combined with other incentives City council may consider such as SDC waivers it may trigger office to residential conversions
- Will align City of Portland regulatory policy with other jurisdictions along the west coast
- Will reduce or eliminate the need for buildings of more recent vintage to be seismically upgraded and not immediately rendered them deficient whenever the code changes in such a manner as to become more conservative
- These changes if approved by council will be a permanent change to Title 24.85

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4	R-1,R-2, SR, I-1, I-4	
3	B, M	41-BPOE
2	F-1, F-2, S-1, S-2	
1 (Lowest)	R-3, U	

EXISTING TABLE 24.85-A

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Relative Hazard Classification	OSSC Occupancy Classification	Seismic Improvement Standard
6~~5~~ (Highest)	A, E, I-2, I-3, H-1, H-2, H-3, H-4, H-5	OSSC or ASCE 41-BPON
5~~4~~	R-1,~~R-2,~~ SR, I-1, I-4	
4	R-2	ASCE 41-BPOE
3	B, M	
2	F-1, F-2, S-1, S-2	
1 (Lowest)	R-3, U	

PROPOSED TABLE 24.85-A

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