

# Unreinforced Masonry Buildings (URMs) and Retrofit Policy Development

*November 8, 2012*



## Department of Planning and Development

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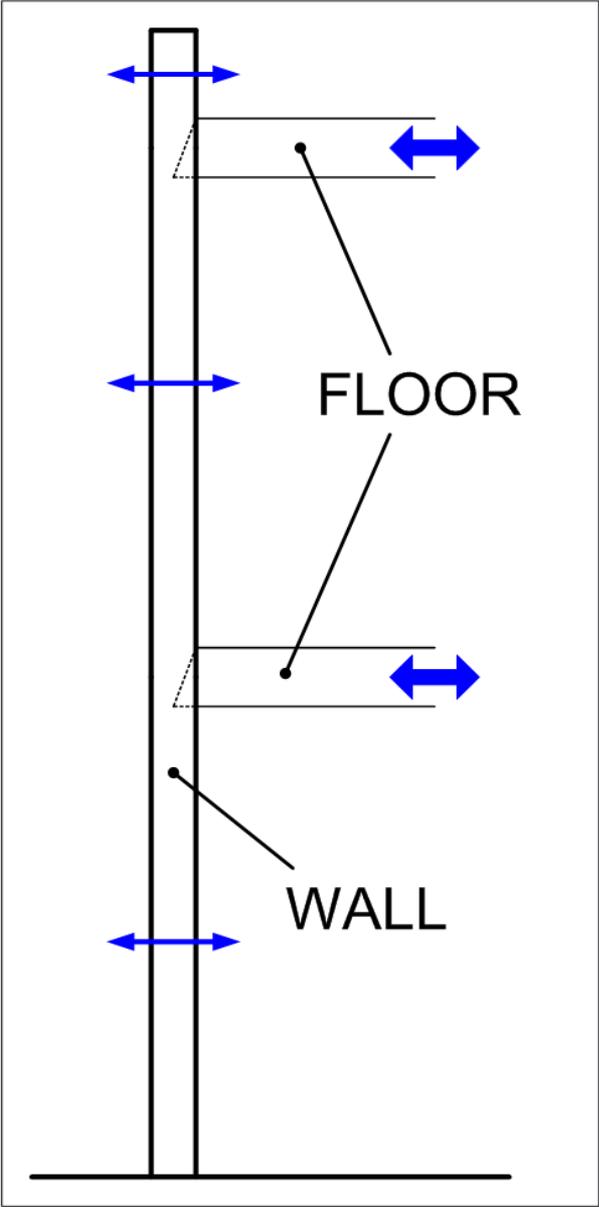
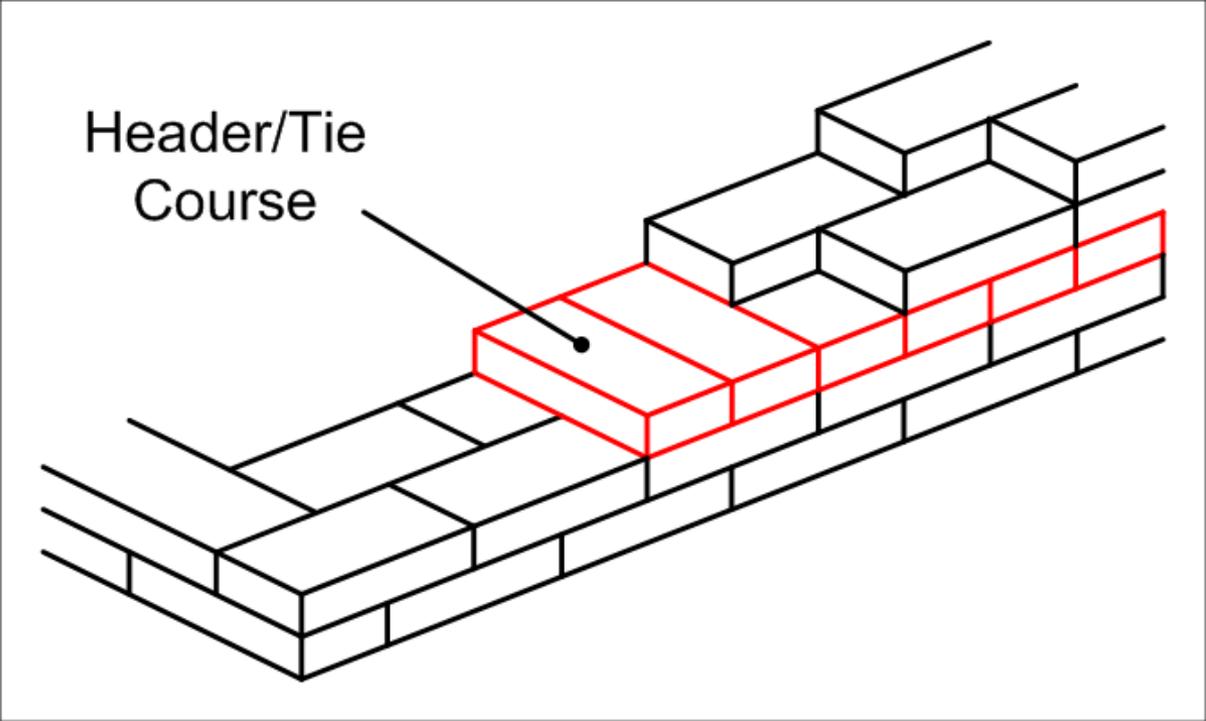
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# What is a URM?



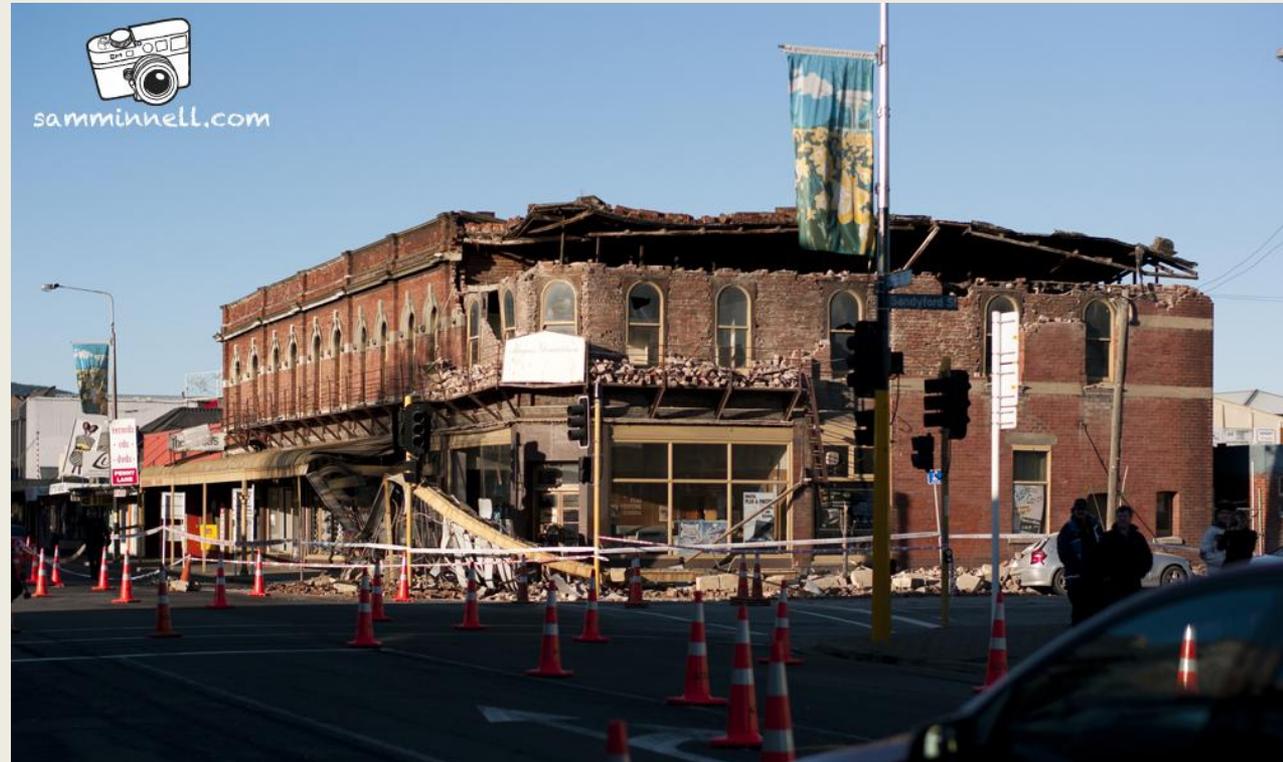
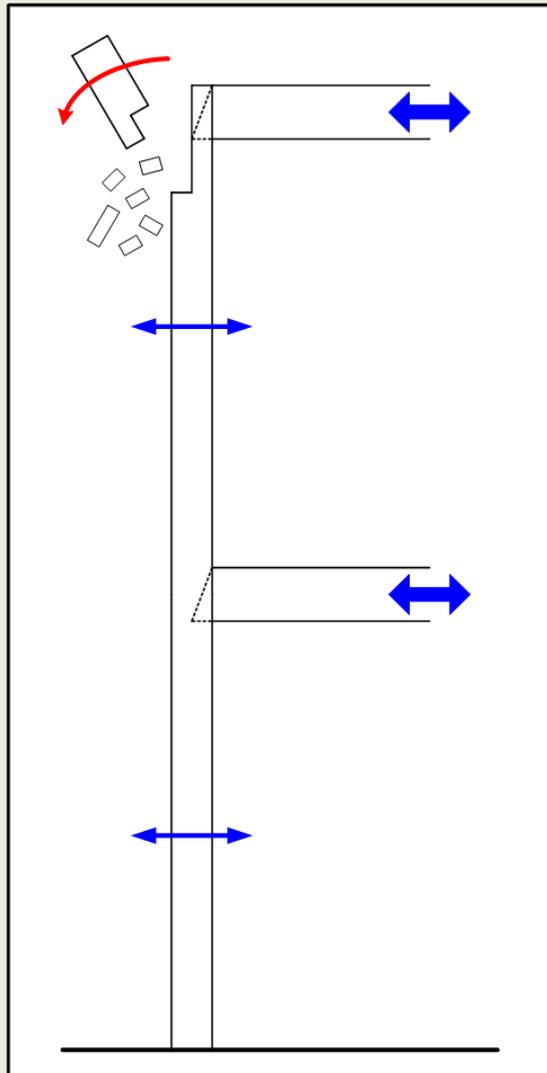
# What is a URM?



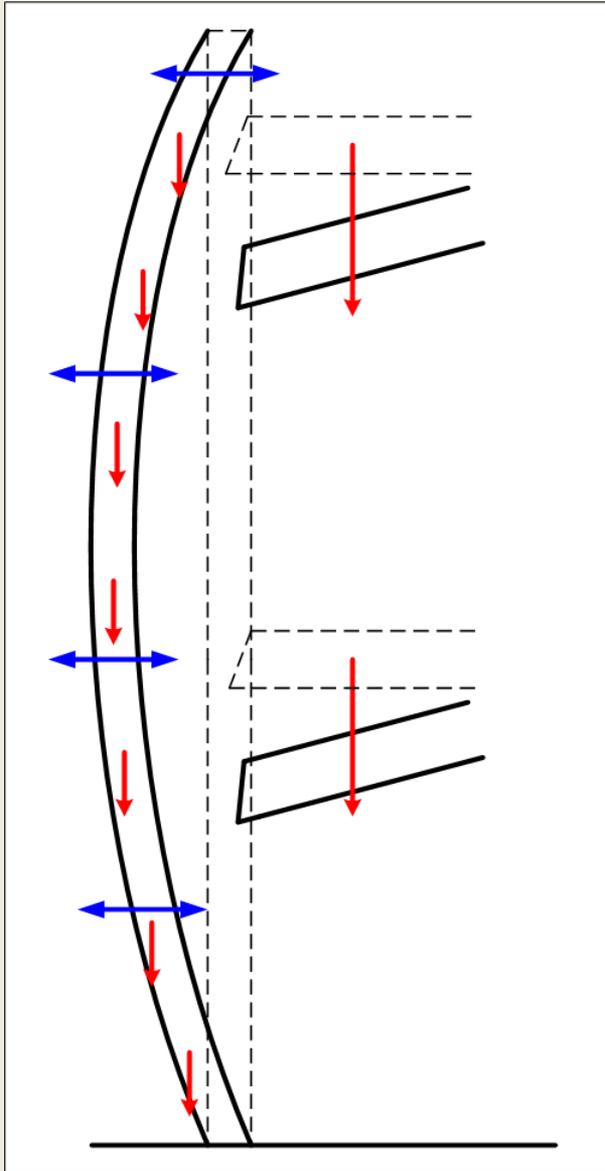
# What is a URM?



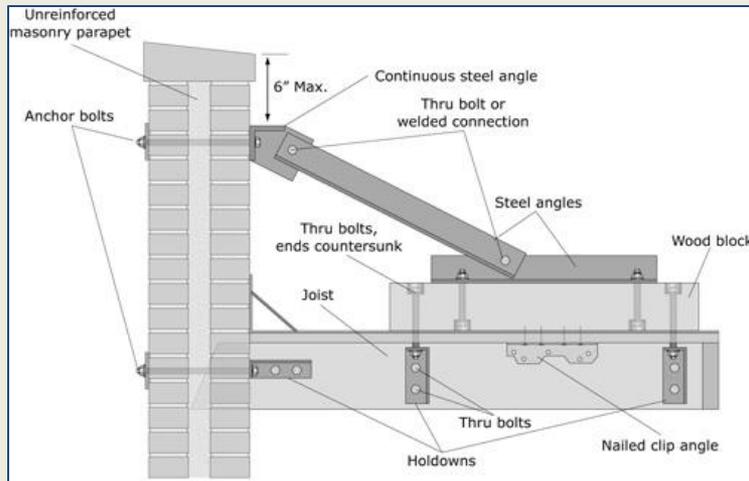
# Earthquake (Mis)Behavior



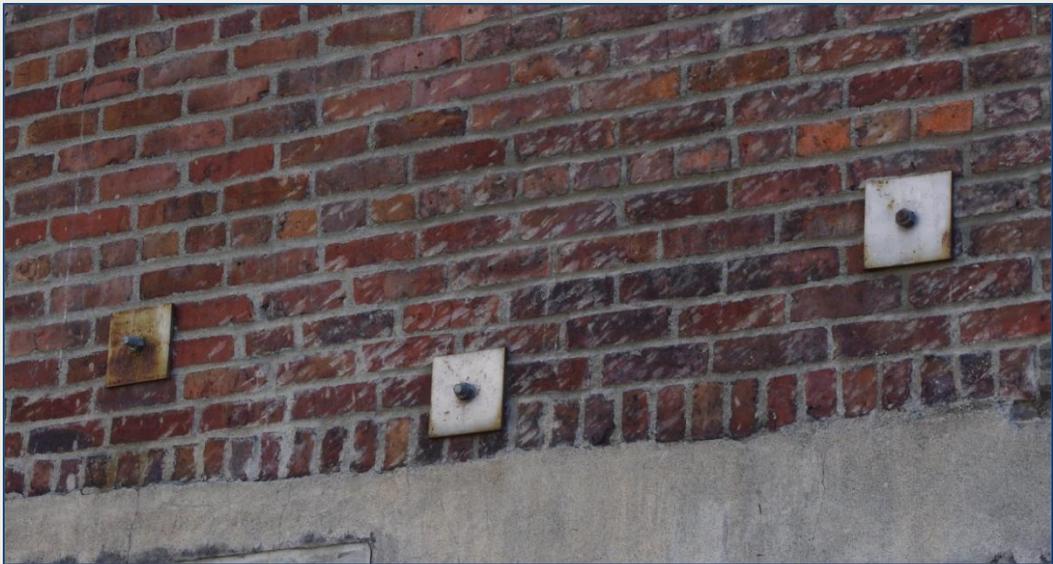
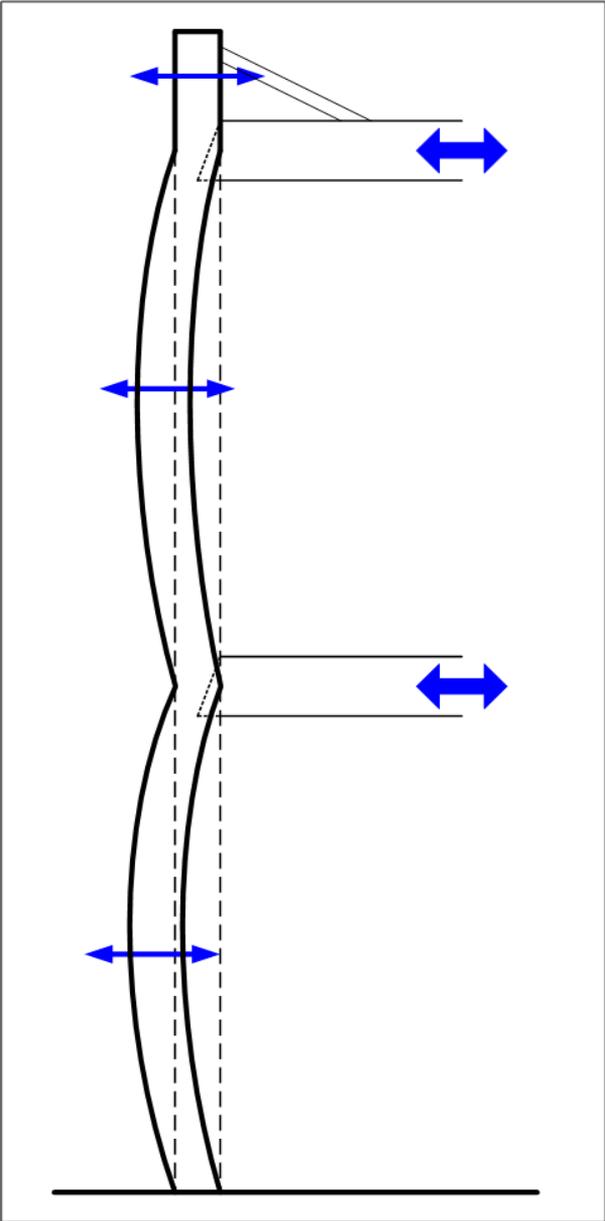
# Earthquake (Mis)Behavior



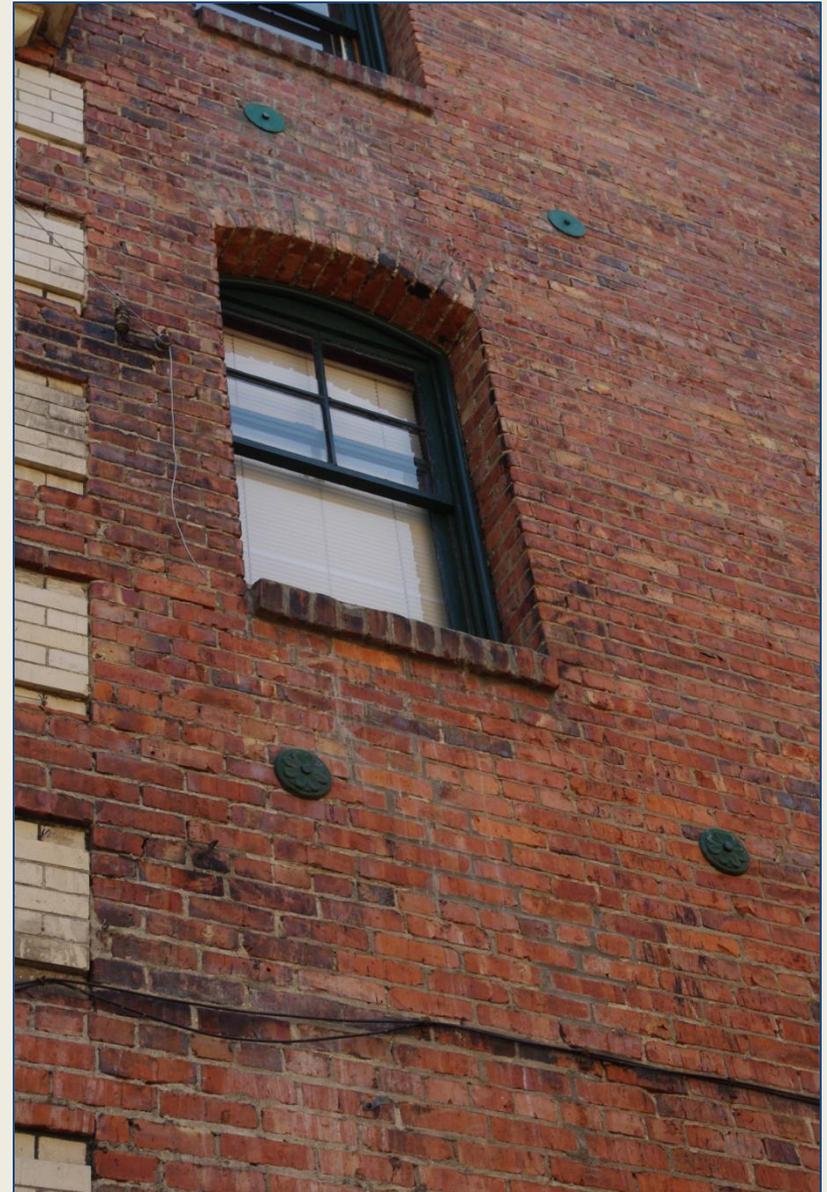
# Retrofits – Brace Parapets



# Retrofits – Bolt Wall to Floor/Roof



# Retrofits – Bolt Wall to Floor/Roof



# Retrofits – Add Braces/Walls



# Retrofits – Strengthen Walls



# Performance of Retrofitted URM's

- ❑ Less damage in Nisqually EQ
- ❑ Saved lives, did not always save buildings in Northridge EQ
- ❑ Preserved some buildings in multiple Darfield/Canterbury (Christchurch) EQ's

# Current City Policy

Un-braced parapets required to be abated

Triggered when doing work requiring permit:

- ❑ Limited strengthening if minor to moderate damage from event
- ❑ Seismic report, retrofit when trigger “substantial repair/alteration”
  - Substantial increase in occupant load
  - Extending useful or economic life of building
  - Major damage from event

# Previous Efforts

- ❑ Dangerous buildings ordinances (1974-1978)
- ❑ 2008-2009

## **Technical Committee**

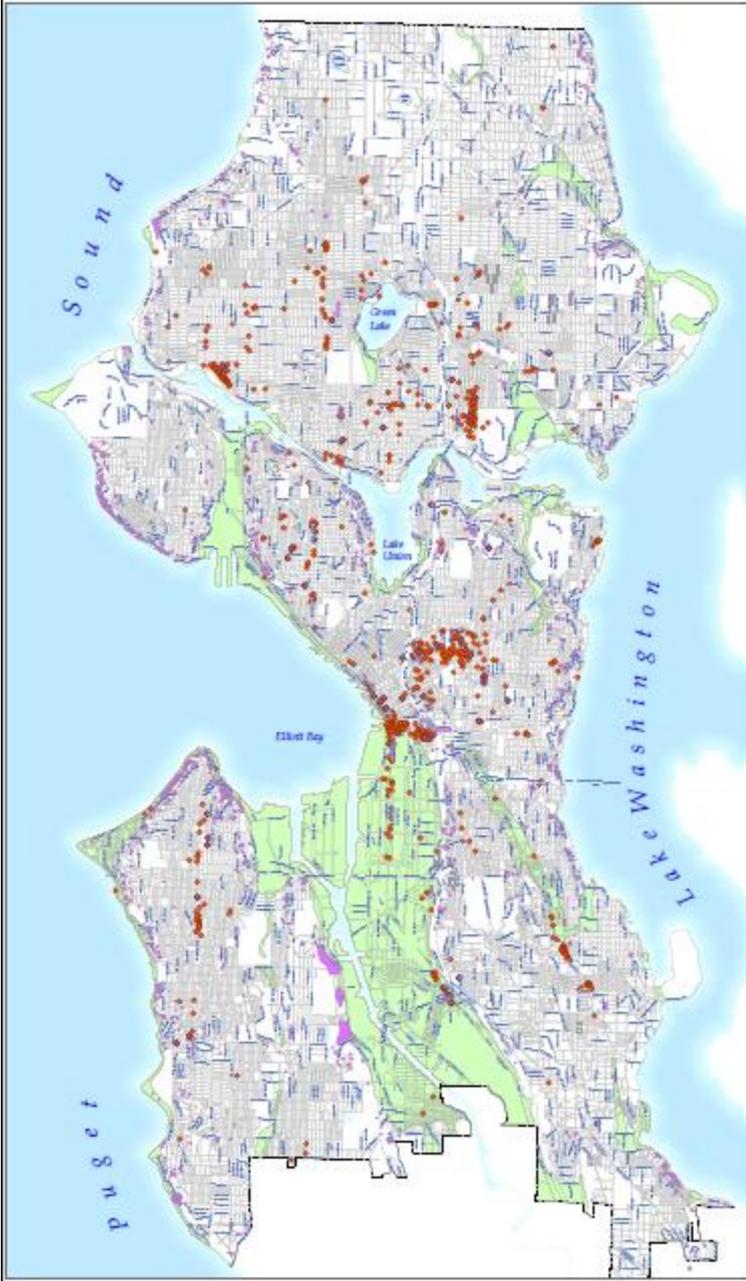
- Goal – establish least costly but effective retrofit to reduce likelihood of collapse of URM's during an earthquake
- Developed recommended retrofit standard (“bolts-plus”)
- Intended to protect lives of building inhabitants and those nearby – not expected to prevent damage to the building in moderate-to-large earthquakes

## **Policy Committee**

- Project mothballed in 2010 for lack of resources
- Biggest issue = cost of retrofit

# Current 2012-13 Efforts

- URM Survey Report
- Report Summarizing State of California Retrofit Laws
- URM “Appeal” Process
- URM Retrofit Policy Committee and program development



# 2012 URM Survey Report

Prepared by Department of  
Planning and Development (DPD)

# URM Survey Information

- ❑ Intended as the starting point for identifying URM buildings
- ❑ Information about specific buildings has not been verified, and may not be accurate
- ❑ Some of the buildings on the list may already be retrofitted to an extent that they meet the proposed technical standard
- ❑ Some buildings will require a fairly modest effort to bring them into compliance with the proposed standard; some will likely require extensive work

# List of Potential URMs identified by DPD

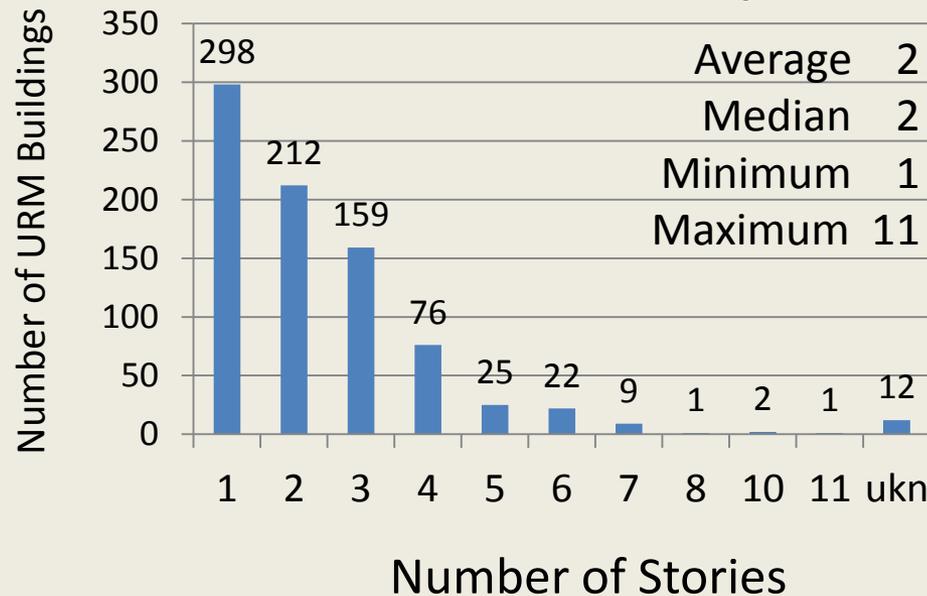
Information about specific buildings has not been verified, and may not be accurate.											
NEIGHBORHOOD	ADDRESS				YEAR BUILT	NO. STORY	OCCUPANCY		Appears to Meet Proposed Retrofit Standard	Retrofit to Some Degree	No External Evidence of Retrofit
Ballard	1100	NW	Leary	Way		1	C	1			
Ballard	1406	NW	Leary	Way		1	C	1			
Ballard	2406	NW	54th			1	C	1			
Ballard	2418		28th	Ave W		2	S-Pub	3			
Ballard	3208		15th	Ave W		1	C	1			
Ballard	5101		Ballard	Ave NW	1905	2	O/C	2			
Ballard	5109		Ballard	Ave NW	1900	2	C	2			
Ballard	5135		Ballard	Ave NW	1900	2	O/C	2			
Ballard	5140		Ballard	Ave NW	1902	2	P	2			

- DPD notified URMs owners of the scope and schedule for the policy development, and how they can participate in the process
- DPD has a procedure for working with DPD engineers to correct any inconsistencies in URM building designations
- DPD is currently evaluating/investigating buildings with no external evidence of retrofits and will update as information becomes available
- DPD will only remove buildings if there are no URM bearing walls
- DPD will add URMs to the list as new potential buildings are identified

# Average Number of Stories

## URM Survey Data:

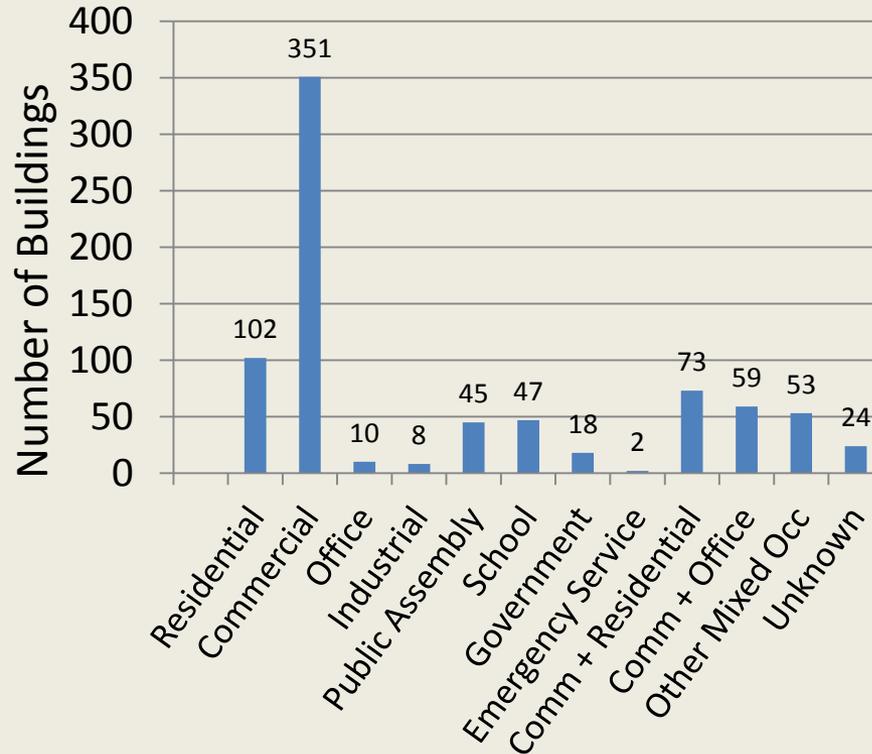
*Number of Stories*



Of the 819 identified URM buildings in the survey, the majority of these are less than 3 stories, with an average of 2 stories.

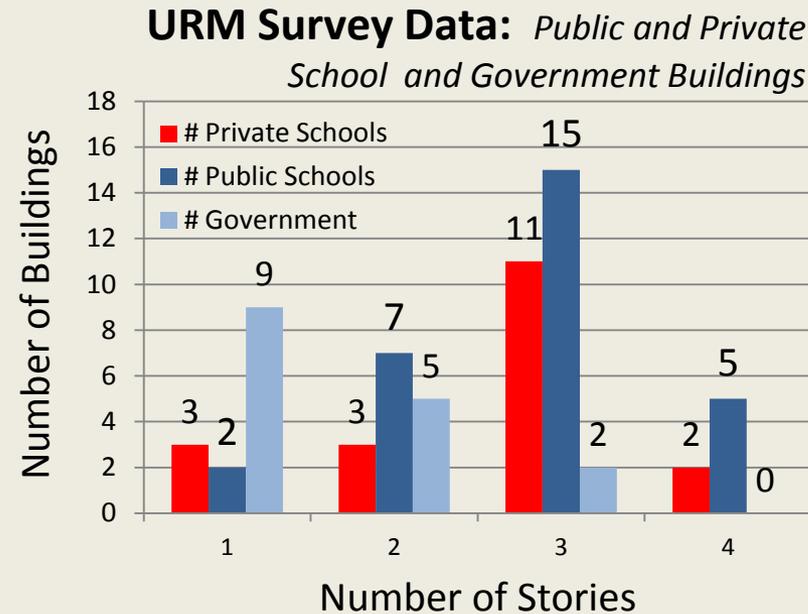
# Occupancy Type

URM Survey Data: *Occupancy Type*



- ❑ The majority of the occupancies observed in the URM survey are commercial, office and residential use.
- ❑ The majority of commercial uses are in one-story buildings and the majority of residential uses are in 3 story buildings.

# Schools and Government Buildings



- ❑ There are a total of 50 schools on the URM survey list; 30 of them are public schools including colleges
- ❑ Most of those retrofitted appear to meet the proposed technical standard

# URM Policy Committee

**Invited representatives from Property Owners, Engineers, Housing Developers, Commercial Developers, UW, USGS, Architects, Planners, Non-profits, Preservation advocates:**

- Bellwether
- UW Institute for Hazard Mitigation Planning Research
- Degenkolb Engineers
- Property Owner
- Preservation Green Lab
- Solid Ground
- Coughlin Porter Lundeen
- SCID Preservation and Development Authority
- Rental Housing Association of Puget
- Environmental Works/AIA Disaster Response Committee
- Collins Woerman
- MRP Engineering
- A.I.D. Development Group
- The Alliance for Pioneer Square
- USGS
- Historic Seattle

# Public Process

- Policy Committee Meeting Agendas, summary notes, and background information on URM website
- Policy Committee meetings are open to the public
- An email mail-box for comments from the public
- Monthly updates to URM email list

# Outreach

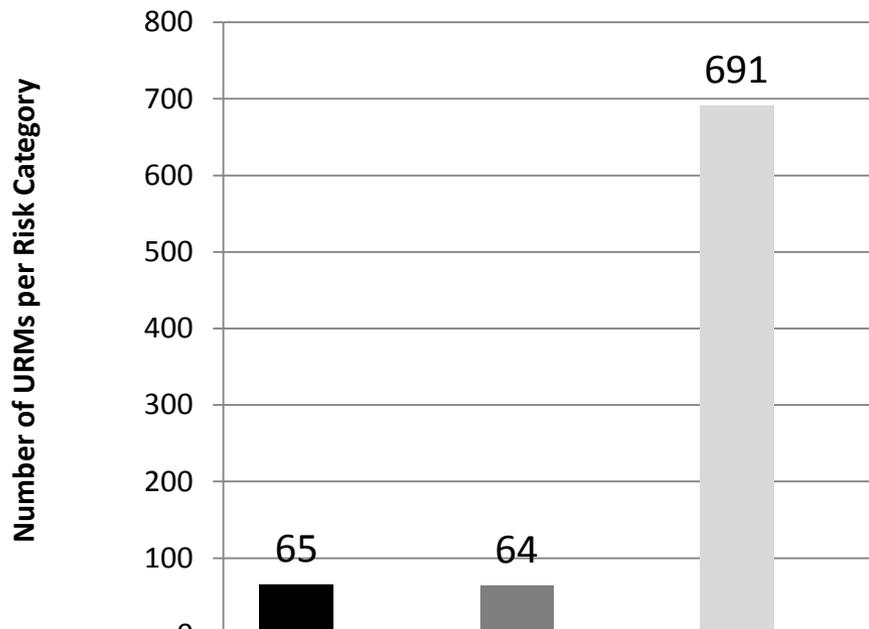
- ❑ Articles in DPD INFO on policy development
- ❑ DJC article covered the launch of the URM Policy committee in April 2012
- ❑ Press release with posting of Survey Report and List of Potential URM Buildings in July 2012
- ❑ Small Group Meetings
  - Housing Development Consortium - June 27, 2012
  - Office of Emergency Management – July 26, 2012
  - Department of Neighborhoods – August 28, 2012
  - Selected Pioneer Square & ID Building Owners – November 8, 2012
- ❑ FEMA Grant for Outreach and Education

# Topics

- ❑ **Threshold for retrofit requirement:** Single family homes and multifamily with 2 or fewer units are exempt
- ❑ **Timeline for retrofit:** Based on key steps in the process and Risk Categories - Critical, High and Medium
- ❑ **Incentive options:** Options such as transfer of development rights programs, waiving permit fees, city program facilitator
- ❑ **Enforcement:** Penalties for noncompliance at each step
- ❑ **Financial incentives:** Options for financing retrofits – Subcommittee worked with experts

# Preliminary Risk Categories / Timelines

**Number of URM structures by Risk Category**



# Structures	65	64	691
Percent of URMs	8%	8%	84%

- ❑ **Critical-risk** : schools and critical facilities (hospitals, fire stations, etc.) – **7 years** to comply with a retrofit program
- ❑ **High-risk**: buildings greater than 3 stories on poor soil or URMs with more than 100 occupants in assembly – **10 years** to comply with a retrofit program
- ❑ **Medium-risk**: all other URM buildings – **13 years** to comply with a retrofit program

# Process for Compliance

## *Number of Years to Complete Retrofit*

	Critical Risk	High Risk	Medium Risk
Assessment	1	2	3
Permit Application	1	2	2
Permit Approval	1	1	1
Completion of Retrofit	4	5	7
	<b>7</b>	<b>10</b>	<b>13</b>

# Goals for Incentives

- Encouraging retrofits beyond the policy's minimum requirements
- Encouraging early participation
- Easy for building owners to understand and the city to implement
- Building broad-based support
- Minimizing the cost of retrofits

# Encouraging Retrofits beyond Bolts-Plus

- ❑ Consider Transfer of Development Rights (TDRs) if retrofit exceed Bolts-Plus
- ❑ Consider implementation of a partnership/rebate program modeled on the City's energy-efficiency partnership program (Community Power Works)
- ❑ Potential outcomes:
  - Reduced insurance costs as a result of the building's increased seismic safety
  - Increased future revenue if retrofits allow the building to be re-opened more quickly following an earthquake



# Encouraging Early Participation

## *Potential incentives*

### Consider:

- Place an expiration date on certain funding sources or tools
- Waive permitting fees in early years of program
- Any City grant assistance sunsets

# Easy for Building Owners to Understand

- ❑ Develop Program information (Client Assistance Memo) that includes
  - a description of how the Bolts Plus standard applies to buildings,
  - the cost and benefits of Bolts Plus, and
  - a description of probable maximum loss (PML) and its correlation to potential loans
- ❑ Develop a standardized assessment protocol
- ❑ Post a vetted list of contractors on the City's website



# Easy Permitting

*Predictable and timely permit process*

## Consider:

- “Master” permit to allow retrofits to be implemented over a number of years
- Two (2) free hours of permit pre-submittal coaching
- Liaison position to navigate the retrofit policy and process
- Interdepartmental and inter-agency permit facilitator
- Expedite historic landmark or Section 106 review
- Decouple seismic retrofits from other code upgrades, such as ADA and Fire
- Waive parking requirements for URM retrofits
- Guidelines for permit reviewers and inspectors for consistent decision-making

# Build Broad-based Support

## Consider:

- Education and outreach campaign to URM owners and neighborhood representatives about the policy and its requirements
- Comprehensive information on City's website specifically directed at industry and trade association members
- Post information about buildings that have been successfully retrofitted
- Economic impact analysis that includes benefits both to life safety and increased resiliency to earthquakes

# Enforcement Concepts

## Consider:

- Penalties should have teeth – don't be wimpy
- Increase the severity of fines if no compliance in previous process steps
- Use standard DPD Notice of Violation (NOV) Process
- Include notice to tenants when owner has NOV
- Post signs on retrofitted buildings and on internet
- Fair and consistent process

# Minimizing the cost of retrofits

- ❑ Provide funding support options that property owners can access
- ❑ Met with a Financing Subcommittee to develop a short list
  - Economist
  - Planner
  - Historic Preservation/Renovation expert
  - Office of Economic Development
  - Office of Emergency management
  - Developer

# 21 Potential Financial Incentive Options

Property tax abatement	Real estate investment trust
Levy & general obligation bond	Waiving or capping permit fees
Transfer Development Rights	Real estate excise tax
Grants for AE fees	Historic Landmark tax credits (20%)
Community Development Block Grants	Low interest loans
Revolving loan fund	Frontloading payments by utility
Historic buildings tax credits (10%)	Tax Increment Financing
FEMA grants for construction	City grants to private owners
City-backed bond funds for 501(c)3	City-backed bond funds
Reduced insurance costs	Local Improvement District
New market tax credits	

# Funding Options Matrix

	Legality	Provides Significant Funding?	New or Redirected Source?	Ease of Use for Owners	Ease of Use for the City	Enhance Compliance?	Political Benefit?	Equal Impact?	Equal Access?	Ownership	Other Considerations	Present as Funding Option?
Property tax abatement	Legal	Yes	Redirection of existing money	Easy to use	Easy to use	Yes	Yes	No, if building value is low	Private owners only	Private only		YES
Levy & general obligation bond	Legal, with limits	Yes	New source	Easy to use	Difficult to use	n/a	Risky	Subject to program distribution	Subject to program distribution	Subject to program distribution	Fluctuates with real estate market	YES
Transfer Development Rights	Legal	Yes	New source	Difficult to use	Difficult to use	n/a	Some	Project specific	Project specific	Private and non-profit	Fluctuates with real estate market	YES
Grants for AE fees	Legal	Limited funding availability	New source	Difficult to use	Difficult to implement	n/a	n/a	n/a	n/a	Non-profit		YES
Community Development Block Grants	Legal	Limited funding availability	Redirecting money away from other projects	Difficult to use, very competitive		n/a	n/a					YES
Revolving loan fund	Legal	Limited funding availability	New source	Easy to use	Easy to use	Yes	Yes	Subject to program distribution	Subject to program distribution	Private and non-profit	Fluctuates with real estate market	YES
Historic buildings tax credits (10%)	Legal	10% of eligible	New source	Easy to use; owner can	Easy to use	n/a	n/a			Any building built before 1936	Subject to elimination in federal budget	YES
FEMA grants for construction	Legal	Limited funding availability	New source	Difficult to use	Require match from City	n/a	n/a			Public or non-profit only		YES
City-backed bond funds (501(c)3)	Legal	No	New source, highly competitive	Difficult to use	City would need to	n/a	n/a	Not specific to URM's	Only non-profits	Tax exempt		YES
Reduced insurance costs	Legal	Yes	New source	Easy to use	Easy to use	Yes	Yes				Applied to buildings with a higher PML rating; need more info from insurance industry to evaluate; perhaps used for education and incentives	INCENTIVE
Real estate investment trust	Legal	Limited funding availability	New source	Difficult to use	Difficult to use	n/a	n/a					POTENTIAL
New market tax credits	Legal	Limited funding availability	New source	Difficult to use	City would need to	n/a	Yes	No, targeted towards	No, project size	Any income	Incentive; funding from federal industry may be cut	NO
Local Improvement District	Legal	Relative to the size of project	New source	High bar for agreement	Difficult to use	n/a	Risky	No	Self-determined	No city or tax-exempt buildings		NO
Waiving or capping permit fees	Legal	Small monetary benefit	Redirection of existing money in the general fund	Highly competitive		Yes	Yes					NO
Real estate excise tax	Legal	Limited funding availability	Redirection of existing money	Highly competitive		n/a	n/a	Yes	Yes		Could subsidize the waiving of permitting fees	NO
Historic buildings tax credits (20%)	Legal	Limited funding availability	New source	Difficult to use	Difficult to use	n/a	n/a			Commercial buildings only	Subject to elimination in federal budget	NO
Low interest loans	Legal	Limited funding availability	New source	Difficult to use	Difficult to use	n/a	n/a			Commercial		NO
Frontloading payments by utility	Legal	Limited	New source	Yes	FEMA would reimburse	Yes	Yes				Could fund an educational campaign	NO
Tax Increment Financing	Not legal										Good potential if this becomes legal	NO
City grants to private owners	Not legal											NO
City-backed bond funds	Not legal, except for low-income housing											NO

- Is this a legal funding source?
- Does it provide a significant level of funding?
- Is this a new source of funding or does it instead redirect funds from another source?
- Is this easy for property owners to use?
- Is this easy for the City to administer (if applicable)?
- Do all building owners have equal access to this funding source?
- Are there factors to consider that will increase or decrease the impact of this funding source (e.g., is this dependent on tax revenue or subject to federal government funding cuts)?

# URM Financing Options

<b>Public/Non-Profit Ownership</b>	<b>Private Ownership</b>
FEMA/CDBG/other grants	
General obligation bonds	
Levy	10% building tax credit
Tax abatement	Tax abatement
Revolving loan fund	Revolving loan fund
TDRs	TDRs
A/E grants & resources	A/E grants & resources
Building owner contribution	Building owner contribution
Education funding	Education funding

# Next Steps

## ***Program Development (anticipated schedule):***

- Policy Committee preliminary recommendations to DPD January 2013
- Cost Benefit Analysis of program options – 1-2 Q 2013
- Begin drafting legislation, mid-2013
- Legislation to Council, 4 Q 2013

## ***Program Implementation (anticipated):***

- Commence planning for implementation of mandatory retrofit program 2013
- Begin outreach and education, following adoption of ordinance.
- Program implementation will depend on effective date of ordinance.

# Information on URM Policy Development

## DPD website

[www.seattle.gov/dpd/Emergency/UnreinforcedMasonryBuildings](http://www.seattle.gov/dpd/Emergency/UnreinforcedMasonryBuildings)

## DPD Contacts:

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