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# Unreinforced Masonry Building (URM) Outreach Survey Report

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The City of Seattle – Department  
of Planning and Development

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## Table of Contents

EXECUTIVE SUMMARY .....	3
INTRODUCTION .....	5
Background and Purpose .....	5
California URM Programs .....	6
Methodology .....	7
Sample Size and Participants .....	8
OVERALL FINDINGS .....	11
FINDINGS BY GROUP.....	12
URM Awareness: Yes vs. No .....	12
Earthquake Experience: Negative vs. Non-negative vs. No Earthquake Experience .....	12
Language Preference: English vs. Non-English .....	13
Property Ownership: Property Owners vs. Non-property Owners .....	14
Residents vs. Workers vs. Business Owners vs. Visitors .....	15
APPENDIX: Result Summaries by Question.....	17
REFERENCES .....	26

## EXECUTIVE SUMMARY

The City of Seattle's 2013 Unreinforced Masonry Building (URM) Survey aimed to understand URM awareness and perception among Columbia City residents, workers, small business owners, visitors and other stakeholders. The survey resulted in 99 responses, of which 92 were completed in person and conducted by in-language surveyors through street team outreach; 7 were completed online through community-based organization outreach.

### KEY FINDINGS

Below are some finding highlights from the survey. Detailed results are available in the body of the full report and Appendix.

#### **Over half of the property owners and business owners were aware of URM, though URM awareness remained low among the general public.**

- 51% of the surveyed property owners were aware of URM.
- 61% of the surveyed business owners or managers were aware of URM.
- Among non-property owners, residents, workers and visitors, URM awareness ranged from 15% to 25%.
- When respondents were provided with a definition of URM, 40% of the surveyed participants were able to identify if they currently live/work/shop in a URM.

#### **Participants with negative or no earthquake experience were more concerned about earthquakes and would not feel safe about a URM.**

- 47% of the participants with negative earthquake experience and 42% of the participants with no earthquake experience indicated they were very much concerned about earthquakes. However, only 15% of the participants with non-negative earthquake experience (e.g., mild earthquake) indicated were very much concerned about earthquakes. The type of experience or lack of experience with earthquakes determined the participants' perception of safety about URMs.
- Participants that experienced an earthquake previously were more aware about URM, regardless if the experience was negative or non-negative. However, they were also more likely to think that the building they live/work/shop in can withstand an earthquake due to their previous experience with the earthquakes.

#### **Non-English participants were less aware of URM and more concerned about earthquakes.**

- Only 11% of the non-English participants were aware of URM compared to 29% for the English participants.

- 41% of the non-English participants indicated they were very much concerned about earthquakes compared to 28% for the English participants.

**Property owners were motivated by financial support (86%), tax incentives (63%), education (37%) and professional support (37%).**

- One-third (34%) of the property owners indicated that they would retrofit a URM immediately.
- One-third (34%) of the property owners indicated that they would probably not retrofit a URM for a long while.
- The remaining one-third of the property owners indicated they would retrofit a URM anywhere between 5-15 years.

## **RECOMMENDATIONS**

Based on the findings of The City of Seattle’s 2013 Unreinforced Masonry Building (URM) Survey, messaging to raise awareness and educate the public on URM and retrofitting should take into consideration the following guidelines:

- Messaging should focus on the direct correlation between URM and tenant safety. When the audiences’ awareness level of URM was higher their concern level for safety on a URM was lower. Therefore, the messaging should focus on the direct correlation to counter the inverse reaction of the audience on awareness and safety concern.
- Property owners preferred to be incentivized to retrofit URM via financial support rather than being mandated. Messaging should focus on properly incentivizing the owners rather than demanding URM retrofit from the property owners. Individuals with non-negative earthquake experience had the lowest level of concerns for URM. Therefore, the messaging should focus on converting the perception of the non-negative earthquake experience to not sway on their perception of URM safety.
- Non-English speakers had a different set of challenges to better understand URM; therefore, the messaging should be tailored to be in-language and in-culture for non-English speakers.
- Preferred communication methods varied depending on the target audiences. E-mail is a highly preferred (52%) communication method by business owners while others preferred e-mail, mail and public meeting. These preferred communication methods should be taken into account to effectively disseminate URM messaging to the target audience.

# INTRODUCTION

## Background and Purpose

The City of Seattle has a significant number of unreinforced masonry buildings (URMs), many of which are located in areas that are especially vulnerable to ground motion during an earthquake. The Department of Planning and Development (DPD) is creating a URM retrofit program that will address the need to reduce the number of hazardous structures in the City. DPD has completed research and analysis of URM retrofit programs in California, a survey of existing URMs in the City, and, with the assistance of a URM Technical Committee, developed a proposed standard for retrofits. A URM Policy Committee has prepared preliminary recommendations for the City to consider in creating a mandatory URM retrofit program.

In order to better understand the target audience for developing a successful URM outreach program, T.D. Wang Advertising Group (T.D. Wang) collaborated closely with Site Story to develop the 2013 Unreinforced Masonry Building (URM) Survey aimed at exploring URM awareness and earthquake perception among Columbia City residents, workers, small business owners, visitors and other stakeholders. Some questions that we aimed to answer from the survey results include:

- What is the current awareness level of URM among Columbia City residents, workers, small business owners and visitors?
- How does earthquake experience influence URM perception?
- What motivational factors would help support URM retrofits?
- How can messages be tailored for property owners vs. non-property owners?
- Do non-English speakers need different messages? This audience is anticipated to be multicultural, ethnically and socio-economically diverse, and include traditionally underserved populations.
- What are some lessons learned from the California URM programs?

Based on the survey results, the next step will be to develop messages tailored for the target audiences of the Seattle URM programs.

## California URM Programs

The State of California and local cities within the state have implemented a number of URM programs dating as far back as the 1930s<sup>1</sup>. Below is an overview of programs in California with a brief description of unique program components:

Location	Program Description	Key Components
State of CA	<ul style="list-style-type: none"> <li>- In 1933, CA passed legislation designating schools as high priority for retrofit and prevented building additional URM schools.</li> <li>- In 1986, CA passed legislation requiring local governments in zones with the highest seismicity to inventory URMs, establish a risk reduction program, and report to the state.</li> </ul>	<ul style="list-style-type: none"> <li>- The 1933 legislation targeted on specific building types and usage as a high safety risk and mandated retrofit.</li> <li>- Following the 1986 legislation, the state government created framework for local governments to address URMs and develop programs in their communities.</li> </ul>
Berkeley	<ul style="list-style-type: none"> <li>- Program provided financial tax incentives to property owners to retrofit</li> <li>- Waived building permit fees for seismic upgrades</li> <li>- Zoning benefits such as increase in density or exception of non-conforming parking</li> </ul>	<ul style="list-style-type: none"> <li>- City of Berkeley levies at 1.5% tax on the selling price of real estate. This tax was leveraged to refund a portion of the tax.</li> <li>- Providing both incentives and building requirements is more effective than incentives alone<sup>2</sup>.</li> </ul>
Los Angeles	<ul style="list-style-type: none"> <li>- Passed the largest URM retrofit or demolition mandate in the US.</li> <li>- Program included the support of City Council and LA Departments of Building and Safety</li> </ul>	<ul style="list-style-type: none"> <li>- Engaged local government officials in passing laws mandating retrofit</li> <li>- Consulting engineers familiar with the safety risk submitted building evaluations and identified non-compliant owners.</li> </ul>
San Luis Obispo	<ul style="list-style-type: none"> <li>- In 1992, the city passed a law for mandatory retrofit with specific deadlines.</li> <li>- Categorized buildings into based occupancy</li> <li>- Higher occupancy buildings were required to retrofit at earlier deadlines</li> </ul>	<ul style="list-style-type: none"> <li>- The business community was opposed to the requirements</li> <li>- The City obtained an Economic Development Manager that worked individually with building owners to provide technical assistance and explain financial incentives for retrofit.</li> <li>- The City took the approach of highlighting economic development over building safety enforcement.</li> </ul>

Table 1: California URM Program Overview

Many of the above programs share certain characteristics in their approach and distinct features specific to the community environment. Overall, these successful URM programs have three consistent components:

- 1) Inventory of buildings: In order to properly implement a URM retrofit program, an assessment must be performed to identify the number of buildings. Inventory methods include records from the insurance industry, building departments, and tax assessors. Key information for the inventory include:
  - Building location
  - Ownership
  - Physical characteristics
- 2) Sustained support from individuals and organizations: Successful URM programs require sustained leadership from individuals and organizations that value earthquake protection and are willing to advocate for the issue<sup>3</sup>. Sustained support may also include:
  - Staffing resources
  - Credible advocates
  - Consistent communication among partners, organizations, and departments
  - Creating messaging that links URM safety risk with other issues such as economic development
- 3) Combining incentives and mandates to encourage URM retrofit: Reviewing the local government approaches to URM retrofit, voluntary retrofits alone have been ineffective<sup>4</sup>. A combination of mandates and providing support and incentives to building owners has been successful in cities such as Los Angeles, San Luis Obispo and Berkeley.
  - Mandates: Establish building requirements, a compliance timeline and penalties
  - Support: Dedicated staffing resources, local and federal tax incentives, grants, and the engagement of public officials

## Methodology

The following methodology was developed for the 2013 URM Survey in order to reach a diverse audience in Columbia City including residents, workers, small business owners and visitors to generate responses from a diverse audience group.

- Face-to-face Approach: In-person Questionnaire via Street Team  
In-language surveyors went out to the Columbia City neighborhood on one weekday and one weekend day to capture commercial and residential tenants. Property owners and managers were identified beforehand based on limited City data prior to the outreach.
- Community Based Organization (CBO) Outreach: Online Questionnaire  
The questionnaire was made available online and shared with CBOs. CBOs were targeted to support community outreach and identify survey routes that had the highest potential to capture underserved and immigrant populations within Columbia City. CBOs were

selected based on their interaction and service to the various ethnic groups targeted by the in-language survey team. Social services were considered an ideal fit because they provide direct in-language services to the Columbia City community. In addition, CBOs have strong connections to the geographic neighborhood and provided valuable insight on the outreach plan. The following organizations were contacted for support and outreach for the survey:

Organization Name	Description
Asian Counseling and Referrals Services (ACRS)	ACRS is one of the largest social service providers to the Asian Pacific Islander and immigrant community in Seattle. Social services include mental health services, English classes, and a food bank.
Columbia City Business Improvement Area (CCBIA)	The CCBIA is a subset of the CCBA. A BIA provides an annual budget to fund services and improvements in neighborhood business districts by assessing property and/or business owners who benefit from the improvements. CCBA BIA circulated the online survey to its dues participating members.
Columbia City Business Association	The Columbia City Business Association (CCBA) is a vibrant organization of business owners, property owners, and residents dedicated to making Columbia City a “great place”. CCBA circulated the online survey to its members.
Filipino Community Center (FCC)	A cultural hub to South Seattle Filipino and Asian community located in Columbia City. FCC hosts cultural festivals and gatherings, youth programming, and senior services.
Neighborhood House (NH)	NH provides wide range of social services serving low-income immigrant communities working closely with Seattle Housing Authority to bring services to low-income residents in public housing.
Rainier Valley Chamber of Commerce	The Rainier Valley Chamber is a non-profit membership organization dedicated to advancing the commercial, industrial, educational, civic & social economic interests of SE Seattle. CCBA circulated the online survey to its members.

*Table 2: Community-based Organization Overview*

### **Sample Size and Participants**

A total of 99 surveys were collected -- 92 were completed in person and conducted by in-language surveyors through the face-to-face approach or street team outreach; 7 were completed online through community-based organization outreach. Special attention and extra effort were put into diversifying the participants in terms of numbers of years connected to



Columbia City, balancing age distribution and gender breakdown, as well as including ethnic representation with different language preferences.

Connection to Columbia City	# of Participants	% of Total	Role	% of Total
I live in Columbia City and own my residence.	25	23%	Residents	48%
I live in Columbia City, but I don't own my residence.	27	25%		
I work in Columbia City.	20	18%	Workers	18%
I operate a business in Columbia City and I own the business property.	8	7%	Business Owners	20%
I operate a business in Columbia City, but I don't own the business property.	11	10%		
I don't live or work in Columbia City, but I own a property there.	3	3%		
I don't live/work in Columbia City, but I shop, dine or visit here regularly.	10	9%	Visitors	9%
Other	6 - food bank (2); happened to be in Columbia City for visit/work (2); used to live in Columbia City (1); board member of a nonprofit that owns a property in Columbia City (1)	5%	Other	5%
<b>Total</b>	<b>110</b>			

Table 3: Participants – Relationship or Connection to Columbia City

# of Years Connected to Columbia City	# of Participants	% of Total
Less than 1 year	15	15%
1-5 years	27	28%
5-9 years	17	17%
9+ years	39	40%
Total	98	

Table 4: Participants – Number of Years Connected to Columbia City

Age	# of Participants	% of Total
Under 18	0	0%
18-24	10	10%
24-44	38	39%
45-64	41	42%
65+	9	9%
Total	98	

Table 5: Participants – Age Distribution

Gender	# of Participants	% of Total
Male	50	52%
Female	47	48%
Total	97	

Table 6: Participants – Gender Breakdown

Language	# of Participants
English	85
Amharic	5
Cantonese	3
Mandarin	2
Khmer	3
Spanish	4
Tagalog	4
Tigrinya	1
Other: Vietnamese	4
Other: Somali	2
Other: Visayan	1
Other: Hmong	1
Other: Senegalese	1
Other: French / African	1

Table 7: Participants – Language Preference

## OVERALL FINDINGS

Twenty-seven percent (27%) of the surveyed participants were aware of what a URM was prior to the surveyors sharing the definition of URM. After sharing the definition of URM, 40% of the participants were able to identify that they currently live/work/shop in a URM.

URM Awareness Before URM Definition	# of Participants	% of Total
Yes	27	27%
No	63	64%
Don't know	9	9%
Total	99	
Currently live/work/shop in a URM (URM Identification Post URM Definition)		
Yes	40	40%
No	36	36%
Don't know	23	23%
Total	99	

Table 8: URM Awareness Before and Post URM Definition

A majority of the participants (80%) indicated that they would continue to live/work/shop as usual if their building was identified as a URM—of the 80%, 44% of them would feel safe, whereas the other 36% would feel unsafe. Only 6% of the participants indicated feeling very safe without any concerns. Approximately 11% of the participants would vacate immediately because safety was most important to them. Over half (58%) of all participants thought that a URM should be retrofitted immediately or as soon as possible.

If your building is identified as a URM, how safe would you feel?	# of Participants	% of Total
Very safe, I don't have any concerns	6	6%
Safe enough to live/work/shop as usual	44	45%
Not safe, but I would still live/work/shop as usual	36	37%
I would vacate immediately because safety is most important	11	11%
Total	97	
Once a building is identified as a URM, when do you think the building should be retrofitted?		
Immediately or as soon as possible	56	58%
Within the next 5-7 years	16	16%
Within the next 7-10 years	5	5%
Within the next 10-13 years	4	4%
Within the next 15 years	4	4%
Probably not for a long while	12	12%
Total	97	

Table 9: URM Concern and Number of Years to Retrofit URM

## FINDINGS BY GROUP

### URM Awareness: Yes vs. No

Participants with no URM awareness were slightly more concerned about earthquakes. More participants with URM awareness were able to identify that they currently live/work/shop in a URM. Having URM knowledge also raised participants' confidence level that the URM building that they live/work/shop in can withstand an earthquake. A significantly fewer number of participants with URM knowledge would feel unsafe or vacate a URM immediately. This implies a challenge in educating the public about URM while keeping their confidence level in check by emphasizing the importance of safety.

	URM Awareness: Yes (27)	URM Awareness: No (72)
Very much concerned about earthquakes	22%	33%
Currently live/work/shop in a URM (Yes)	<b>59%</b>	<b>33%</b>
Think the building they live/work/shop in can withstand an earthquake (Yes)	<b>59%</b>	<b>43%</b>
Would not feel safe or would vacate immediately if building is identified as URM	<b>22%</b>	<b>57%</b>

Table 10: URM Awareness

### Earthquake Experience: Negative vs. Non-negative vs. No Earthquake Experience

Participants that experienced an earthquake previously, whether the experience was negative or non-negative, were more aware about URM. For participants without earthquake experience, it is important to raise their low awareness level (12%), though they were equally very much concerned (42%) about earthquakes as participants with negative earthquake experience (47%). Sixty-eight percent (68%) of the participants with negative earthquake experience and fifty-five percent (55%) of the participants with no earthquake experience indicated that they would not feel safe or would vacate a URM immediately. However, only 34% of the participants with non-negative earthquake experience would feel unsafe and vacate a URM immediately. This implies a challenge in educating individuals with non-negative earthquake experience and changing their perceptions about URM safety.

	Negative Earthquake Experience (19)	Non-negative Earthquake Experience (47)	No Earthquake Experience (33)
URM awareness (Yes)	<b>37%</b>	<b>34%</b>	12%

Very much concerned about earthquakes	<b>47%</b>	15%	<b>42%</b>
Think the building they live/work/shop in can withstand an earthquake (Yes)	<b>47%</b>	<b>60%</b>	30%
Currently live/work/shop in a URM (Yes)	53%	40%	33%
Would not feel safe or would vacate immediately if building is identified as URM	<b>68%</b>	34%	<b>55%</b>

Table 11: Earthquake Experience – Negative vs. Non-Negative vs. No Earthquake Experience

### Language Preference: English vs. Non-English

Participants that preferred non-English languages to learn about the topic of URM were significantly less knowledgeable about URM at 11% compared to 29% for their English counterparts. They were also more concerned about earthquakes (41% vs. 28%), even though their earthquake experience was similar to their English counterparts. Language preference did not seem to affect the participants’ ability to identify a URM or their perception that the building that they live/work/shop in can withstand an earthquake. Half of both English and non-English participants would not feel safe or would vacate immediately if their building is identified as a URM. Both English and non-English participants have similar preferences in communication methods and motivational factors that would help support property owners.

	English (85)	Non-English (27)
URM awareness (Yes)	<b>29%</b>	<b>11%</b>
Very much concerned about earthquakes	<b>28%</b>	<b>41%</b>
Earthquake experience (Yes)	67%	63%
Currently live/work/shop in a URM (Yes)	40%	48%
Think the building they live/work/shop in can withstand an earthquake (Yes)	46%	48%
Would not feel safe or would vacate immediately if building is identified as URM	48%	52%

Communication methods	E-mail (33%) Mail (29%) Public meetings (29%) Website (26%)	Mail (33%) E-mail (30%) Public meeting (30%)
Motivational factors that would help support property owners	Financial Support (81%) Education (53%) Tax Incentives (52%) Professional Support (41%) Tenant Safety (28%)	Financial Support (63%) Education (52%) Tax Incentives (37%) Professional Support (37%) Tenant Safety (26%)

Table 12: Language Preference – English vs. Non-English

### Property Ownership: Property Owners vs. Non-property Owners

Property owners tended to be more knowledgeable about URM at 51% compared to only 15% of non-property owners. In general, property owners were not as concerned about earthquakes as non-property owners. They were also more likely to think that the building they live/work/shop in can withstand an earthquake and less likely to feel unsafe or vacate a URM immediately. Once a building is identified as a URM, 37% of the property owners would retrofit the URM immediately, whereas 64% of non-property owners thought the URM should be retrofitted immediately. Up to 34% of the property owners would probably not retrofit a URM for a long while due to cost and low concern about earthquakes. According to the property owners, the top motivational factors or resources that would help support property owners are: financial support (86%), tax incentives (63%), education (37%) and professional support (37%). A few participants pointed out that city or legal enforcement should not be on the list. Preferred communication methods to reach property owners include: e-mail (37%), mail (29%), public meeting (29%) and website (20%).

	Property Owners (35)	Non-property Owners (67)
URM awareness (Yes)	<b>51%</b>	<b>15%</b>
Earthquake experience (Yes)	74%	63%
Very much concerned about earthquakes	<b>14%</b>	<b>37%</b>
Think the building they live/work/shop in can withstand an earthquake (Yes)	<b>66%</b>	<b>37%</b>
Would not feel safe or would vacate immediately if building is identified as URM	<b>26%</b>	<b>58%</b>

Currently live/work/shop in a URM	40%	39%
Once a building is identified as a URM, when do you think the building should be retrofitted?	<p><b>Immediately or as soon as possible (37%)</b></p> <p>Within the next 5-7 years (11%)  Within the next 7-10 years (6%)  Within the next 10-13 years (6%)  Within the next 15 years (9%)</p> <p><b>Probably not for a long while (26%)</b></p>	<p><b>Immediately or as soon as possible (64%)</b></p> <p>Within the next 5-7 years (19%)  Within the next 7-10 years (6%)  Within the next 10-13 years (3%)  Within the next 15 years (3%)</p> <p><b>Probably not for a long while (4%)</b></p>
If you are a property owner, how long would you wait to retrofit a URM?	<p>Immediately or as soon as possible (34%)</p> <p>Within the next 5-7 years (9%)  Within the next 7-10 years (0%)  Within the next 10-13 years (0%)  Within the next 15 years (6%)</p> <p><b>Probably not for a long while (34%)</b></p>	<p>Immediately or as soon as possible (36%)</p> <p>Within the next 5-7 years (10%)  Within the next 7-10 years (4%)  Within the next 10-13 years (3%)  Within the next 15 years (15%)</p> <p><b>Probably not for a long while (7%)</b></p>
Motivational factors that would help support property owners	<p>Financial support (86%)  Tax incentives (63%)  Education (37%)  Professional support (37%)</p>	<p>Financial support (75%)  Education (52%)  Tax incentives (45%)  Professional support (40%)</p>
Communication methods	<p>E-mail (37%)  Mail (29%)  Public meeting (29%)  Website (20%)</p>	<p>Mail (31%)  Public meeting (30%)  Website (25%)  E-mail (24%)</p>

Table 13: Property Ownership – Property Owners vs. Non-property Owners

### **Residents vs. Workers vs. Business Owners vs. Visitors**

Sixty-one percent (61%) of business owners had knowledge of URM. Business owners were more likely to be knowledgeable about URM than residents, workers and visitors. However, only 23% of the residents and 26% of the business owners were very much concerned about earthquakes. Particularly, only 22% of the business owners would feel unsafe or vacate immediately if a building is identified as a URM. Twenty-six percent (26%) of the business owners would retrofit a URM immediately, though a significantly higher percentage of the residents (63%), workers (60%) and visitors (50%) felt that a URM should be retrofitted immediately. Another 26% of the business owners indicated that they probably wouldn't retrofit a URM for a long while. More than half of the property owners indicated e-mail as a preferred communication method.

	Residents (52)	Workers (20)	Business Owners (23)	Visitors (10)
URM awareness (Yes)	25%	15%	<b>61%</b>	20%
Very much concerned about earthquakes	<b>23%</b>	45%	<b>26%</b>	50%
Currently live/work/shop in a URM (Yes)	44%	35%	39%	30%
Think the building they live/work/shop in can withstand an earthquake (Yes)	<b>52%</b>	35%	<b>65%</b>	40%
Would not feel safe or would vacate immediately if building is identified as URM	42%	55%	<b>22%</b>	80%
Once a building is identified as a URM, when do you think the building should be retrofitted?	Immediately (63%) 5-7 years (13%) 7-10 years (6%) 10-13 years (2%) 15 years (2%) Not for a long while (10%)	Immediately (60%) 5-7 years (25%) 7-10 years (5%) 10-13 years (5%) 15 years (5%) Not for a long while (0%)	<b>Immediately (26%)</b> 5-7 years (26%) 7-10 years (4%) 10-13 years (4%) 15 years (13%) <b>Not for a long while (26%)</b>	Immediately (50%) 5-7 years (20%) 7-10 years (10%) 10-13 years (10%) 15 years (10%) Not for a long while (0%)
Communication methods	Mail (35%) E-mail (27%) Public meeting (27%) Website (25%)	E-mail (35%) Mail (20%) Website (20%)	<b>E-mail (52%)</b> Mail (30%) Public meeting (26%)	Website (40%) Public meeting (40%) Small workshop (30%)

Table 14: Residents vs. Workers vs. Business Owners vs. Visitors



## APPENDIX: RESULT SUMMARIES BY QUESTION

Note:

For any total greater than 99, some respondents selected multiple answers.

For any total smaller than 99, some respondents omitted the question.

### 1. How are you connected with Columbia City?

I live in Columbia City and own my residence.	25	23%	Residents	48%
I live in Columbia City, but I don't own my residence.	27	25%		
I work in Columbia City.	20	18%	Workers	18%
I operate a business in Columbia City and I own the business property.	8	7%	Business Owners	20%
I operate a business in Columbia City, but I don't own the business property.	11	10%		
I don't live or work in Columbia City, but I own a property there.	3	3%		
I don't live/work in Columbia City, but I shop, dine or visit here regularly.	10	9%	Visitors	9%
Other	6 - food bank (2); happened to be in Columbia City for visit/work (2); used to live in Columbia City (1); board member of a nonprofit that owns a property in Columbia City (1)	5%	Other	5%
Total	110			

2. How long have you been connected with Columbia City?

Less than 1 year	15	15%
1-5 years	27	28%
5-9 years	17	17%
9+ years	39	40%
Total	98	

3. Do you know what an unreinforced masonry building, or URM, is?

Yes	27	27%
No	63	64%
Don't know	9	9%
Total	99	

4. Have you experienced an earthquake previously (in any city or country)?

Yes	66	67%
No	33	33%
Total	99	

4a. If yes, what was that experience like?

Negative (e.g., scary, nerve racking, frightening)	19	29%
Non-negative (e.g., minor, mild, fun, interesting, weird, omitted)	47	71%
Total	66	

5. How concerned are you about earthquakes?

Very much concerned	30	31%
Concerned, but it doesn't bother me	44	45%
Not concerned	21	21%
Don't know	3	3%
Total	98	

6. Would you say that the building you live/work/shop in can withstand an earthquake?

Yes	47	47%
No	18	18%
Maybe	20	20%
Don't know	14	14%
Total	99	

7. Do you live/work/shop in an URM?

Yes	40	40%
No	36	36%
Don't know	23	23%
Total	99	

8. If your building is identified as a URM, how safe would you feel?

Very safe, I don't have any concerns	6	6%
Safe enough to live/work/shop as usual	44	45%
Not safe, but I would still live/work/shop as usual	36	37%
I would vacate immediately because safety is most important	11	11%
Total	97	

9. Once a building is identified as a URM, when do you think the building should be retrofitted?

Immediately or as soon as possible	56	58%
Within the next 5-7 years	16	16%
Within the next 7-10 years	5	5%
Within the next 10-13 years	4	4%
Within the next 15 years	4	4%
Probably not for a long while	12	12%
Total	97	

10. If you are a property owner, how long would you wait to retrofit a URM?

Immediately or as soon as possible	37	54%
Within the next 5-7 years	9	13%
Within the next 7-10 years	3	4%
Within the next 10-13 years	2	3%
Within the next 15 years	2	3%
Probably not for a long while	16	23%
Total	69	

11. If you are a tenant/renter would you like to anonymously provide us with your landlord's contact information? (Optional)

Ora Skinner 4206 South Angeline St Seattle, WA 98118
Filipino Community of Seattle 5740 Martin Luther King Jr Way S Seattle, WA 98118 (206) 722-9372

12. Do you foresee any challenges in retrofitting a URM? (Open question)

Cost / financial support (28)
Awareness
Busy to put effort, money, and time (3)
Permits, time, and economy
Closing of business during retrofit / Keeping business operations running during retrofit / Foot traffic during construction would affect business (2)
Maintaining original structures, red tape
Cost, current leases, impact on businesses, effect on neighborhood during vacancy
Preserve history of buildings / Historic landmark buildings / Maintaining historical value (3)
Government's budget
Cost, access to the area, maintaining the city's look
Cost, vacate building
Expensive cost, disrupt tenants
Across the property line
No because funding is going to be there
Occupants - some people might not be able to afford to live elsewhere
Yes, it seems impossible to reinforce the whole building
Cost, taxes
Isolation, expensive
Yes, Change is always a challenge
Not easy to do
Yes, This is a very difficult challenge to retrofit occupied buildings
Many. In our one case, the necessary work would significantly reduce the usable rentable space and severely affect the ambiance of the space (and thus the rents it could command).
Yes...it would be a major disturbance to the businesses occupying the building during the time that the work is occurring. Some businesses occupying these structures are already struggling to pay rent and pay their employees. Since these businesses would be forced to shut down during the time of the retrofit and eventually pay the costs of this work through increased rent, this would undoubtedly cause some businesses to fail and cause long term damage to some business districts and significant unemployment.
Yes. Retrofit is expensive and disruptive and provides uncertain benefits beyond a certain point.
Yes - I don't think it is compatible to our old historic buildings in most areas - Columbia City in particular
Cost and availability of reasonable financing. Length of time to complete repairs.
Any URM in a landmark district will face the challenge of satisfying the requirements of the preservation board. Also most retrofit jobs require the gutting of the building, so any tenant will have to be relocated.

13. If your building is identified as mandatory for a retrofit, is there anything you would like to let The City know? (Open question)

Financial support / Provide financial/ tax incentives / Finance the fixing / Can't afford the retrofit (5)
Maybe my landlord would bill
Let them know the situation of the building
Give support
Timeline, consequences
Worrying about prejudice
I fix as soon as possible
Subsidy
Government needs to give instruction
Let the public media knows it
How they make that decision and how they define as mandatory
Federal program
If it's required to upgrade, funds need to be identified
City should check for mortgage & income to determine financial support
Interest free loans
I would ask [The City] to provide help / Expect the city to help (2)
Help to find a new location till the construction is done
Complete as soon as possible
There are many tenants where are they going to stay?
Yes, the economic impacts to the businesses that are housed in the building, possible business failure and job loss.
Yes. I have done voluntary retrofits on two buildings in Columbia City. Both experiences went fine and allowed us to change use to Assembly. However, I own other URM buildings that I would tear down rather than retrofit because market rents do not support the added retrofit cost. The land residual would drive value in that case, leading to demolition as the "highest and best use".
I don't think the rents will be able to justify the expense.
Because of the age and size of our present building, and the fact that we are a non-profit organization supported by an aging and decreasing membership base, a mandatory retrofit would mean the end of our organization.

14. What would help support property owners to retrofit a URM? (Check all that apply)

Financial support	76
Tax incentives	49
Education	48
Professional support	38
Tenant safety	26
City or Legal enforcement	26

Recognition program	16
Other: City support	4
Other: Permits	1
Other: An earthquake	1
Other: Community unity	1
Other: Insurance policy	1
Other: Risk and feasibility assessment	1

15. What is the best way to keep you informed about URM?

Mail	31
E-mail	30
Public meeting	29
Website	23
Small workshop	11
Other: News / traditional media / TV / Newspaper	8
Other: Social media / Facebook	1
Other: Fliers	1
Other: Door-to-door for URMs	1

16. If mail or e-mail, would you like to be added to the City's mailing list?

vilmerdg@yahoo.com	Yes
aprilmatsui@gmail.com	Yes
Emanuel Mendes, 3560 S Brandon St, Seattle WA 98118	Yes
Jesse Dinkins, 4717 32nd Ave S, Seattle WA 98118	N/A
PO Box 28383, Seattle, WA 98118	Yes
Jerry-ted@yahoo.com	Yes
senoramy@yahoo.com	Yes
marathm@atlanticstreet.org	Yes
4567 Rainier Ave S; info@columbiafuneralhome.com	No
info@retroactivekid.com	No
Wellness Acupuncture Care, 4630 MLK, Seattle WA 98108	N/A
QiaXin Chen, 1711 23rd Ave Apt 412, Seattle WA 98144	Yes
4820 Rainier Ave S, Seattle WA 98118	Yes
tianagarrett21@gmail.com	Yes
bjoaquin-63@yahoo.com	Yes
2508 S Willow St, Seattle WA 98108	Yes
7363 Beacon Ave S, Seattle WA 98108	Yes
eldontam@gmail.com	Yes
3953 S Hudson St Seattle, WA 98118	No
joseph.pursley@gmail.com	Yes

5004 43rd Ave S Seattle, WA 98118	No
5017 42nd Ave S Seattle, WA 98118	Yes
3909 S Hudson St Apt B, Seattle WA, 98118	Yes
8th Ave NE Seattle, WA 98115	Yes
david90@hotmail.com	Yes
rebecca.ann.parker@gmail.com	Yes
dabidaiken80@yahoo.com	Yes
4270 S Mead St Seattle 98118	Yes
3911 S Angeline St Seattle WA 98118	No
romante@gmail.com	Yes
ebonyp206@gmail.com	No
2355 16th Ave S Seattle, WA 98144	Yes
toneik@beautifulhotmail.com	No
5303 Rainier Ave S Seattle, WA 98118	Yes
franjk@makensay.com	Yes
peterclamb@gmail.com	Yes
tgreid@hotmail.com	Yes
sharp@greatwllc.com	Yes
pmarkhannum@msn.com	Yes
jshcarsrock@gmail.com	Yes
PO Box 28343, Seattle WA 98118	Yes

17. Which language will help you learn about the topic of URM? (Check all that apply)

English	85
Amharic	5
Cantonese	3
Mandarin	2
Khmer	3
Spanish	4
Tagalog	4
Tigrinya	1
Other: Vietnamese	4
Other: Somali	2
Other: Visayan	1
Other: Hmong	1
Other: Senegalese	1
Other: French / African	1

18. If you have lived in other cities or countries, were there URM buildings or earthquake?

Yes	42	46%
No	49	54%
Total	91	

19. What is your age?

Under 18	0	0%
18-24	10	10%
24-44	38	39%
45-64	41	42%
65+	9	9%
Total	98	

20. Gender

Male	50	52%
Female	47	48%
Total	97	

21. Home zip code

22101 (1), 91118 (1), 94605 (1), 98006 (1), 98028 (1), 98037 (1), 98040 (1), 98043 (1), 98101 (1), 98102 (1), 98103 (2), 98104 (1), 98105 (1), 98108 (9), 98112 (1), 98115 (3), 98118 (52), 98119 (2), 98122 (1), 98133 (1), 98144 (7), 98170 (1), 98186 (1), 98188 (2), 98284 (1), 98424 (1), 98502 (1)

22. Work zip code

94605 (1), 98005 (1), 98071 (7), 98102 (3), 98104 (5), 98106 (1), 98108 (3), 98116 (1), 98118 (38), 98121 (1), 98125 (1), 98134 (1), 98144 (3), Kent (1), Renton (1), Seattle (1), Tacoma (2), Tacoma (1), Tukwila (1)

23. Any other comments?

Look, the economy isn't going hot and rentals are high, I'm a liberal, but let's just not push this
Racism is a serious problem here
I had many concerns about earthquakes in our area
Glad we are doing survey / Thank you / Thank you for asking (3)
What is the purpose
Hope it brings result
I'd love to know about your survey
Risky houses should not be built and the URM should be retrofitted soon
The old houses and buildings need to be reinforced
This could cause buildings to be vacant, abandoned, or small owners to sell and lose value if force to quickly.
This should be a carefully targeted program, not a blind mandate, and if the cost is uneconomic



the City should dictate to the Landmark Board that the building be allowed to be torn down.

Questions 5, 6, 9 and 10 are particularly misleading and uninformative, in my opinion. You are asking people to make judgments they are not qualified to make and proposing arbitrary time frames. I'm curious why Columbia City's ethnic diversity was identified as a criteria for the pilot study? What is the relevance between ethnic diversity and URM retrofit? I'm strongly opposed to mandatory URM retrofit because it will lead to the loss of interesting old buildings and the risk exposure lacks sophistication. Why is Columbia City, which has no history of EQ damage, treated the same as SODO, where liquefaction is likely in an EQ?

I DON'T think Columbia City is a good choice for this project. It has only recently regained its economic viability

The potentials for this program to become a giant boondoggle are huge.

## REFERENCES

<sup>1,2</sup> FEMA, Unreinforced Masonry Buildings and Earthquakes Developing Successful Risk Reduction Programs, October 2009, Page 25.

<sup>3</sup> FEMA, Unreinforced Masonry Buildings and Earthquakes Developing Successful Risk Reduction Programs, October 2009, Page 20.

<sup>4</sup> Seismic Safety Commission, 2006 Progress Report to the Legislature SSC 2006-04, November 2009, Page 9.