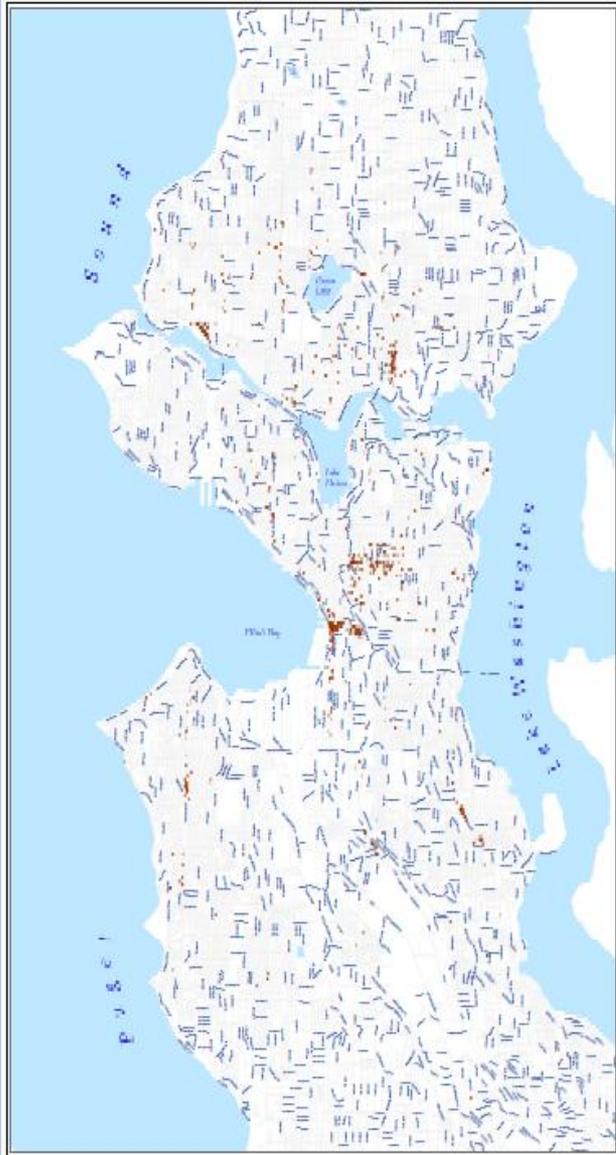


2012 URM Survey Report



Prepared by Department of
Planning and Development (DPD)

Merged Survey Data

Previous Studies:

- Cynthia Hoover (1994);
- EQE International (1995); and,
- Reid Middleton (2007).

DPD's "windshield" survey:

- Initial computer "fly-overs" conducted with Visual Earth to identify potential URM buildings.
- DPD engineering staff subsequently visited the site to visually observe whether a building appeared to be URM construction evidenced by the presence of tie/header courses, arches over windows, etc.

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

Updating the List of URMs

DPD has a process for applicants to challenge the URM identification and to update the URM list

Upon applicant/owner request, DPD will review an engineer's report to reach a determination that

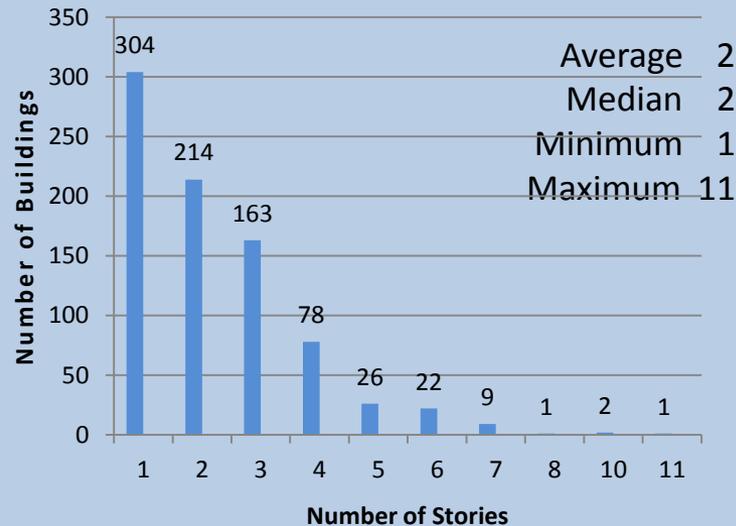
- The building is not a URM bearing wall building,
- or*
- The building retrofit does or does not comply with the proposed technical standard

The list will then be updated.

NOTE: Buildings with URM bearing walls that have been retrofitted will be listed as URMs regardless of whether the building meets appropriate standards.

Average Number of Stories

URM Survey Data: *Number of stories*

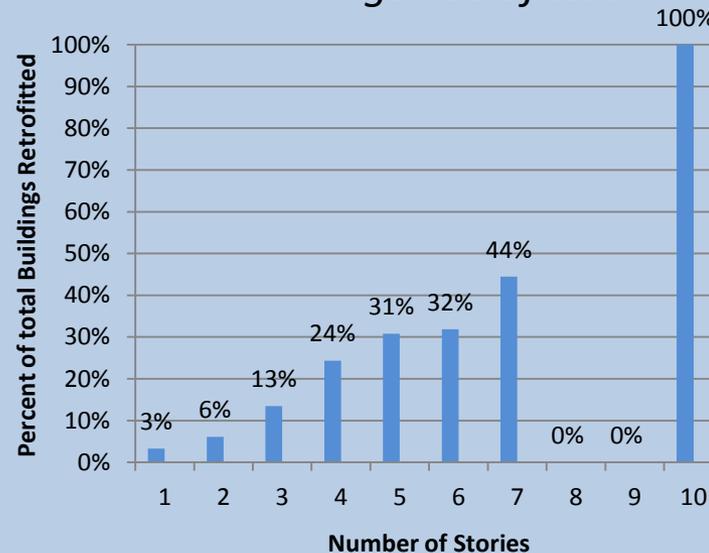


Of the 819 identified URM buildings in the survey, the majority of these are less than 3 stories, with an average of 2 stories.

The database indicates that 118-144 or around 14% of the buildings appear to have been retrofitted to some degree as evidenced by the presence of rosettes or braces.

Percent of Buildings Retrofitted to some degree

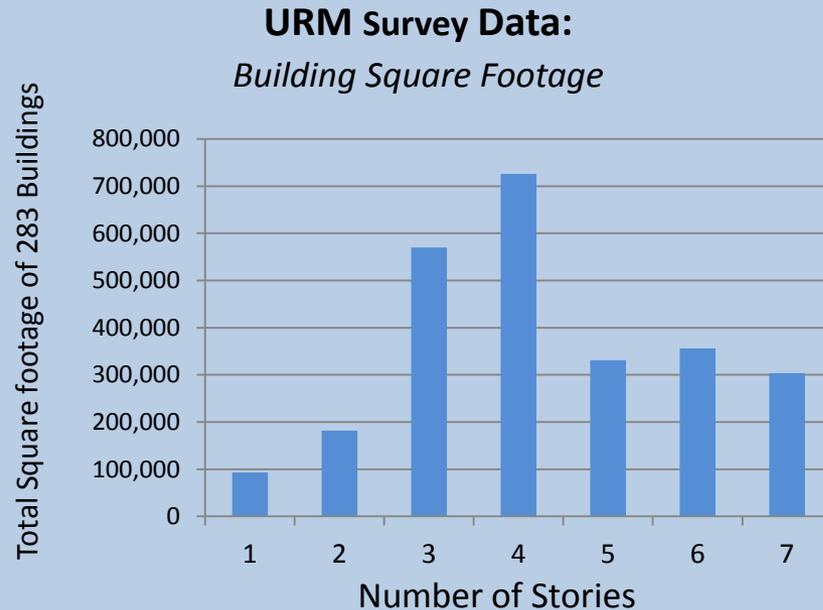
URM Survey Data: *Percent of Buildings Retrofitted*



One and two story buildings are those that are least likely to have been retrofitted.

Square Footage

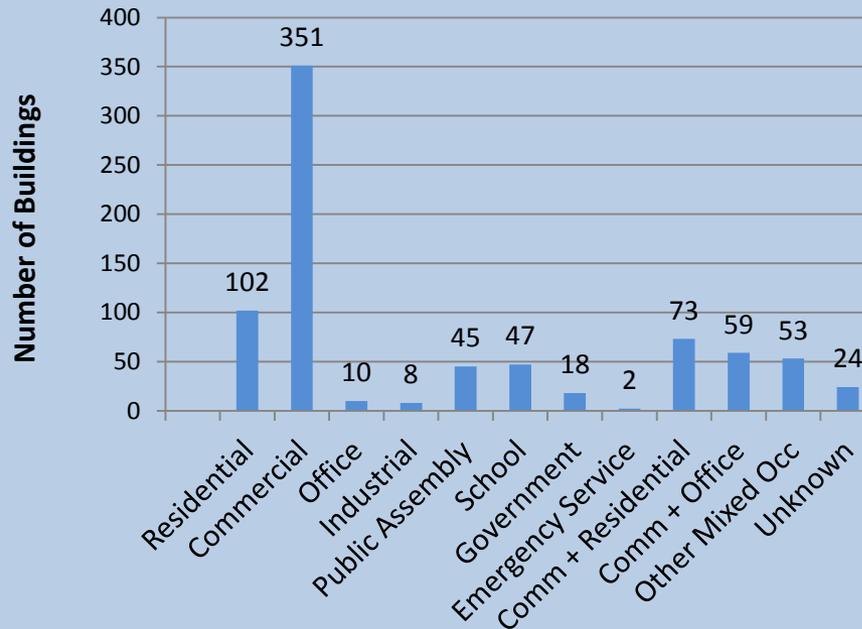
283 Building Subset



- The survey yielded square footage information for 283 or about one third, of the 819 URMs identified.
- Of these 283 buildings it is estimated that 9.15 million square feet have been retrofitted to some degree.

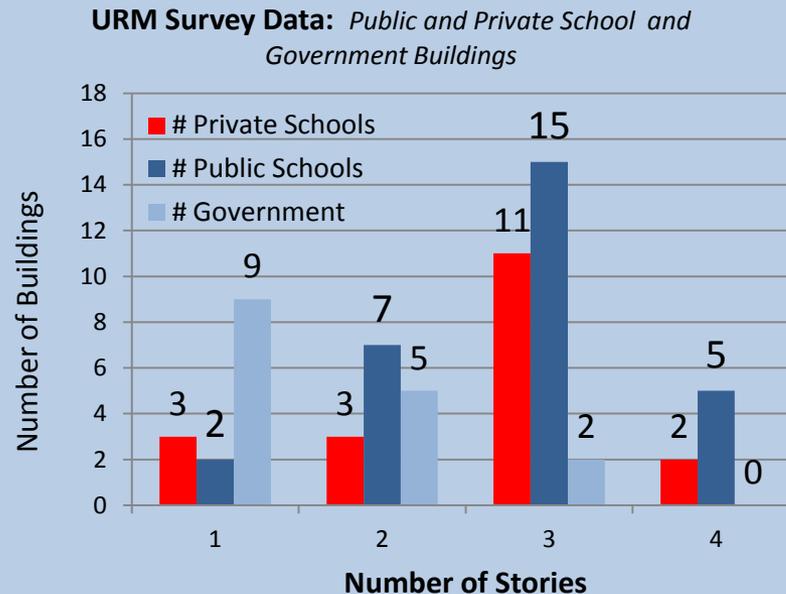
Occupancy Type

URM Survey Data: *Occupancy Type*



- The majority of the occupancies observed in the URM survey are commercial, office and residential
- The majority of commercial uses are in one-story buildings
- The majority of residential uses are in 3 story buildings.
- FEMA 154 Rapid Visual Screening of Buildings for Potential Seismic Hazard occupant load estimates are in three broad groups: 0-10, 11-100 and >100 occupants.

Schools and Government Buildings



There are a total of 50 schools on the URM survey list; 30 of them are public schools including colleges.

It has not yet been determined whether these retrofits would meet the standard proposed in the Technical Report

