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BUILDING AND SAFETY  
201 NORTH FIGUEROA STREET  
LOS ANGELES, CA 90012

RAYMOND S. CHAN, C.E., S.E.  
SUPERINTENDENT OF BUILDING  
INTERIM GENERAL MANAGER

November 22, 2013

Planning and Land Use Management Committee  
200 North Spring Street  
Los Angeles, CA 90012

CF# 13-0964

**RE: DEPARTMENT OF BUILDING AND SAFETY'S REPORT TO LOS ANGELES CITY COUNCIL REGARDING MOTION DATED JULY 31, 2013 FOR IDENTIFYING AND ACCOUNTING WOOD-FRAME SOFT STORY RESIDENTIAL BUILDINGS**

This report is in response to the motion introduced by Council Member Tom Labonge at the City Council meeting on July 31, 2013 (Exhibit A). This motion instructed the Department of Building and Safety (LADBS) to provide to the City Council a comprehensive proposal for how the Department can identify and account for wood-frame soft-story multi-residential buildings, with two or more stories, and five or more units, built prior to 1978 that exist in the City, and resources such a survey would require. By definition, typical wood-frame soft-story buildings are two or more stories buildings with large openings in exterior wall(s) at the ground level mainly because of parking garages or other similar open floor space that causes a soft and/or weak story.

**Methodology of Establishing A Wood-Frame Soft-Story Residential Buildings List**

**Step 1- Establish a Base List by Using Housing Department's Data**

LADBS started to use the "Plan Check and Inspection System (PCIS)" computer program to issue building permits and capture permit data in 1996. Therefore, LADBS does not have a database to identify multi-unit residential buildings that exist prior to 1978 and cannot create a list of such buildings.

However, the Los Angeles housing Department (LAHD) maintains data of all apartment buildings as part of the Systematic Code Enforcement Program. Based on LAHD's data, LADBS has identified 29,226 apartment buildings within the City built prior to 1978 with five or more units (see Exhibit B for sample).

**Step 2- Narrow Down the Base List By Utilizing Mapping Programs and LADBS Records**

LADBS will narrow down the base list by utilizing the Google map and other similar available mapping programs along with researching the Department's records to categorize these 29,226 apartment buildings into three groups: (1) non-soft story buildings, (2) soft-story buildings, and (3) buildings that cannot be identified as either (1) or (2). To complete this step, one Structural Engineering Associates III will require 244 working days (approximately one year).

Based on our guesstimation, 40% of the buildings are non-soft story which are not under the scope of this motion (Group 1). Twenty percent (20%) of the buildings can be identified as soft-story (Group 2), and the remaining 40% of the buildings cannot be identified by this method (Group 3).

Group	Type of Apartment Building Groups	Approximate % of Buildings	Number of Buildings
1	Non-soft-story buildings	40%	11,690
2	Soft-story buildings	20%	5,846
3	Buildings that cannot be identified in Group 1 or 2	40%	11,690

The Group 3 buildings (11,690) will need further field inspection by inspectors to determine whether buildings are soft-story buildings or not.

**Step 3- Finalize the List by Performing Site Inspections**

LADBS estimates that one inspector will be able to inspect 30 buildings in one day. If two inspectors are assigned for the site inspection, it will take approximately 195 working days (approximately one year) to complete the inspection. An additional few weeks will be needed by the inspectors to prepare the final soft-story apartment buildings list.

In order to create consistency among inspectors during the surveys of buildings, LADBS has created an inspection survey checklist (Exhibit C) to be used by the inspectors who will inspect these remaining buildings.

**Cost**

A Structural Engineering Associate III and two Building Inspectors salaries are shown in the following table. Based on one year of salary for the Structural Engineering Associate III and two Building Inspectors, the total required funding will be as follows:

Classification	No. of positions	Annual Salary	Annual Salary Plus Fringe Benefits (45.9%)
Structural Engineering Associate III (7957-3)	1	\$105,699	\$154,215
Building Inspector (4211)	2	\$90,788	\$264,919
Total	3		\$419,134

The estimated timeline of steps 2 and 3 can be shortened by increasing the number of positions to perform respective tasks accordingly. For questions regarding this report, please contact Ken Gill, Assistant Engineering Bureau Chief, at (213) 482-0440.

Sincerely,



**IFA KASHEFI, Ph. D., S.E.**  
Engineering Bureau Chief

13-0964

JUL 31 2013

PLANNING & LAND USE MANAGEMENT

# MOTION

EXHIBIT A

According to FEMA, recent earthquakes have proven the vulnerability of wood-frame residential buildings with weak first stories, commonly known as soft-story buildings. Soft-story buildings built before 1978 are particularly at risk during an earthquake because their ground floors generally have perimeter walls that lack adequate strength. Hence, during an earthquake, lateral forces become concentrated within that story, instead of being distributed efficiently over the height of the structure. Consequently, the building is liable to "pancake" and collapse.

Approximately 200 soft-story buildings, containing thousands of residential units, were severely damaged or destroyed during the 1994 Northridge earthquake. The Northridge Meadows apartment complex, which was a soft-story building, saw 16 deaths during the 1994 earthquake - the heaviest concentration of deaths from the quake.

Earthquake preparation is an important matter of public safety in the City of Los Angeles. The danger is not just the damage accrued during an earthquake, but also that the buildings are unusable after an earthquake, leaving people homeless and forcing the City to deal with further problems.

Currently, the City of Los Angeles has a voluntary retrofitting ordinance in place. However, the City of Los Angeles Department of Building and Safety does not have a database that documents the precise number or locations of such structures (soft-story, wood-frame, multi-unit residential buildings).

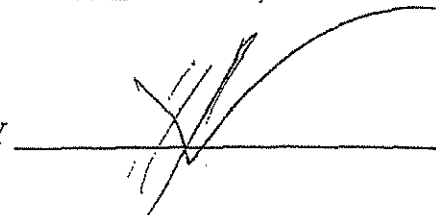
I THEREFORE MOVE that the Department of Building and Safety be instructed to provide to the City Council a comprehensive proposal for how the Department can identify and account for wood-frame soft-story residential buildings (with two or more stories, and five or more units) built prior to 1978 that exist in the City, and what resources such a survey would require.

PRESENTED BY



TOM LABONGE  
Councilmember, 4<sup>th</sup> District

SECONDED BY



JUL 31 2013

ORIGINAL

LAHD DATA- Sample PAGE

APN	Council District	Unit Count	LUPAMS Year Built	Address	City/Neighborhood	ZIP
2120002030	12	6	0	17725 W SATICOY ST	Los Angeles	91335
2163001006	3	12	0	19327 W VENTURA BLVD	TARZANA	91356
2327004029	2	13	0	13219 W BARBARA ANN ST	Los Angeles	91605
2327004032	2	26	0	13218 W BARBARA ANN ST	NORTH HOLLYWOOD	91605
2328005006	2	9	0	7228 N ALLOTT AVE	VAN NUYS	91405
2328006026	2	13	0	7236 N WOODMAN AVE	VAN NUYS	91405
2328006027	2	6	0	13602 W WYANDOTTE ST	VAN NUYS	91405
2328006028	2	6	0	13606 WYANDOTTE ST	VAN NUYS	91405
2328010001	2	23	0	6958 N WOODMAN AVE	VAN NUYS	91405
2328012041	2	10	0	13645 W HARTLAND ST	VAN NUYS	91405
2328013040	2	10	0	13545 W VANOWEN ST	VAN NUYS	91405
2328013051	2	6	0	13627 W VANOWEN ST	VAN NUYS	91405
2328013053	2	14	0	13611 W VANOWEN ST	VAN NUYS	91405
2328014044	2	12	0	13463 W VANOWEN ST	VAN NUYS	91405
2328022044	2	16	0	6865 N FULTON AVE	Los Angeles	91605
2328031010	2	16	0	13423 W VANOWEN ST	VAN NUYS	91405
2328035004	2	33	0	7416 N WOODMAN AVE	VAN NUYS	91405
2332001012	2	6	0	6322 N COLDWATER CANYON AVE	Los Angeles	91606
2332001015	2	6	0	6308 N COLDWATER CANYON AVE	NORTH HOLLYWOOD	91606
2333001023	2	5	0	6707 N WILKINSON AVE	NORTH HOLLYWOOD	91606
2333001024	2	5	0	6701 N WILKINSON AVE	NORTH HOLLYWOOD	91606
2333001025	2	9	0	6700 N WHITSETT AVE	NORTH HOLLYWOOD	91606
2333001026	2	5	0	6708 N WHITSETT AVE	NORTH HOLLYWOOD	91606
2333001027	2	5	0	6716 N WHITSETT AVE	NORTH HOLLYWOOD	91606
2333002023	2	5	0	12420 W ARCHWOOD ST	NORTH HOLLYWOOD	91606
2333002026	2	5	0	6658 N WILKINSON AVE	Los Angeles	91606
2333002029	2	5	0	6642 N WILKINSON AVE	NORTH HOLLYWOOD	91606
2333002030	2	5	0	6636 N WILKINSON AVE	NORTH HOLLYWOOD	91606
2333002032	2	5	0	6643 N RHODES AVE	NORTH HOLLYWOOD	91606
2333002034	2	5	0	6655 N RHODES AVE	NORTH HOLLYWOOD	91606
2333002035	2	5	0	6661 N RHODES AVE	NORTH HOLLYWOOD	91606



# Evaluation Form for Soft-Story

EXHIBIT C

## Inspection

Inspector ID: \_\_\_\_\_

Inspection date and time: \_\_\_\_\_  AM

LADBS Office: \_\_\_\_\_

Areas Inspected:  Exterior Only  Exterior and Interior

## Building Description

Building Name: \_\_\_\_\_

Address: \_\_\_\_\_

Building Contact Phone: \_\_\_\_\_

Number of stories above ground: \_\_\_ below ground: \_\_\_

Council District (CD #): \_\_\_\_\_

Number of Residential Units: \_\_\_\_\_

## Type of Construction

- Wood Frame
- Steel Frame
- Tilt-Up Concrete
- Concrete Frame
- Concrete Shear Wall
- Unreinforced masonry
- Reinforced masonry
- Other: \_\_\_\_\_

## Primary Occupancy

- Dwelling
- Other residential
- Public Assembly
- Emergency Services
- Commercial
- Offices
- Industrial
- Other: \_\_\_\_\_
- Government
- Historic
- School

## Evaluation

Investigate the building for the conditions below and check the appropriate column.

### Observed Conditions:

	Yes	No
1. Open parking garage with exterior openings at the ground level	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the length of shear walls at the ground level less than 70% of the length of shear walls at the level above	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the length of shear walls at the ground level less than four feet	<input type="checkbox"/>	<input type="checkbox"/>
4. Building cantilevers more than 25 feet at the ground level	<input type="checkbox"/>	<input type="checkbox"/>

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date