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SHR and City-BORP Update
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City and County of San Francisco

January 22, 2018

CAPITAL PLAN HIGHLIGHTS:

Resiliency & Capital Planning Initiatives

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Seismic Evaluation Methodology

- ▣ Evaluation Criteria
 - ASCE 41-06: *Seismic Evaluation and Retrofit of Existing Buildings*

- ▣ Seismic Performance Levels
 - Life Safety at BSE-1 (10%/50 yr)
 - Collapse Prevention at BSE-2 (2%/50 yr)



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Seismic Hazard Ratings

SHR	Description
SHR-1	Minor damage (good performance). Some structural or nonstructural damage and/or falling hazards may occur, but these would pose minimal life hazards to occupants. The damage can be repaired while the building is occupied and with minimum disruptions to functions.
SHR-2	Moderate damage (fair performance). Structural and nonstructural damage and/or falling hazards are anticipated which would pose low life hazards to occupants. The damage can be repaired while the building is occupied.
SHR-3	Major damage (poor performance). Structural and nonstructural damage are anticipated which would pose appreciable life hazards to occupants. The building has to be vacated during repairs, or possibly cannot be repaired due to the extent and/or economic considerations.
SHR-4	Partial/total collapse (very poor performance). Extensive structural and nonstructural damage, potential structural collapse and/or falling hazards are anticipated which would pose high life hazards to occupants. There is a good likelihood that damage repairs would not be feasible.

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Seismic Performance Levels

Seismic Performance Level	SHR*	Definition
Immediate Occupancy	SHR-1	Building performance that includes damage to both structural and nonstructural components during a design earthquake, such that the damage is not life-threatening, so as to permit immediate occupancy of the building after a design earthquake and the damage is repairable while the building is occupied.
Life Safety	SHR-2	Building performance that includes damage to both structural and nonstructural components during a design earthquake, such that partial or total structural collapse does not occur and damage to nonstructural components is non-life-threatening.
Collapse Prevention	SHR-3	Building performance that includes damage to both structural and nonstructural components during a design earthquake, such that the building is on the verge of partial or total collapse.

* Approximate equivalent SHR for seismic performance levels at BSE-1.

SHR Updates

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Facility	Year Built	SHR	Collapse Potential	Safety Risk
City Hall	1915	1	Low	Moderately Low
911 Communications Center	1998	1	Low	Low
1 South Van Ness Avenue	1958	3	Moderate	Moderately High
30 Van Ness Avenue	1908	3	Moderately Low	Moderately High
Hall of Justice	1959	3	Moderately Low	Moderately High
DPW Building A	1949	2	Low	Moderately Low
DPW Buildings B & C	1949	3	Moderate	Moderate
SFFD HQ/Pump Station #1	1912	3	Moderately Low	Moderately Low
McLaren Lodge	1896	4	Moderately High	High
McLaren Annex	1950	3	Moderately High	Moderately High

SHR Updates

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Facility	Year Built	SHR	Collapse Potential	Safety Risk
County Fair Building/Hall of Flowers	1960	2	Low	Moderate
YGC Administration Building	1950	3	Moderate	Moderate
Animal Care and Control	1938	3	Moderately Low	Moderately High
101 Grove Street	1917 1932	4	High	High
SFGH Building 5	1969	4	Moderately High	High
SFGH Buildings 10/20	1908	4	High	High
SFGH Buildings 80/90	1934	3	Moderately High	High

SHR Updates

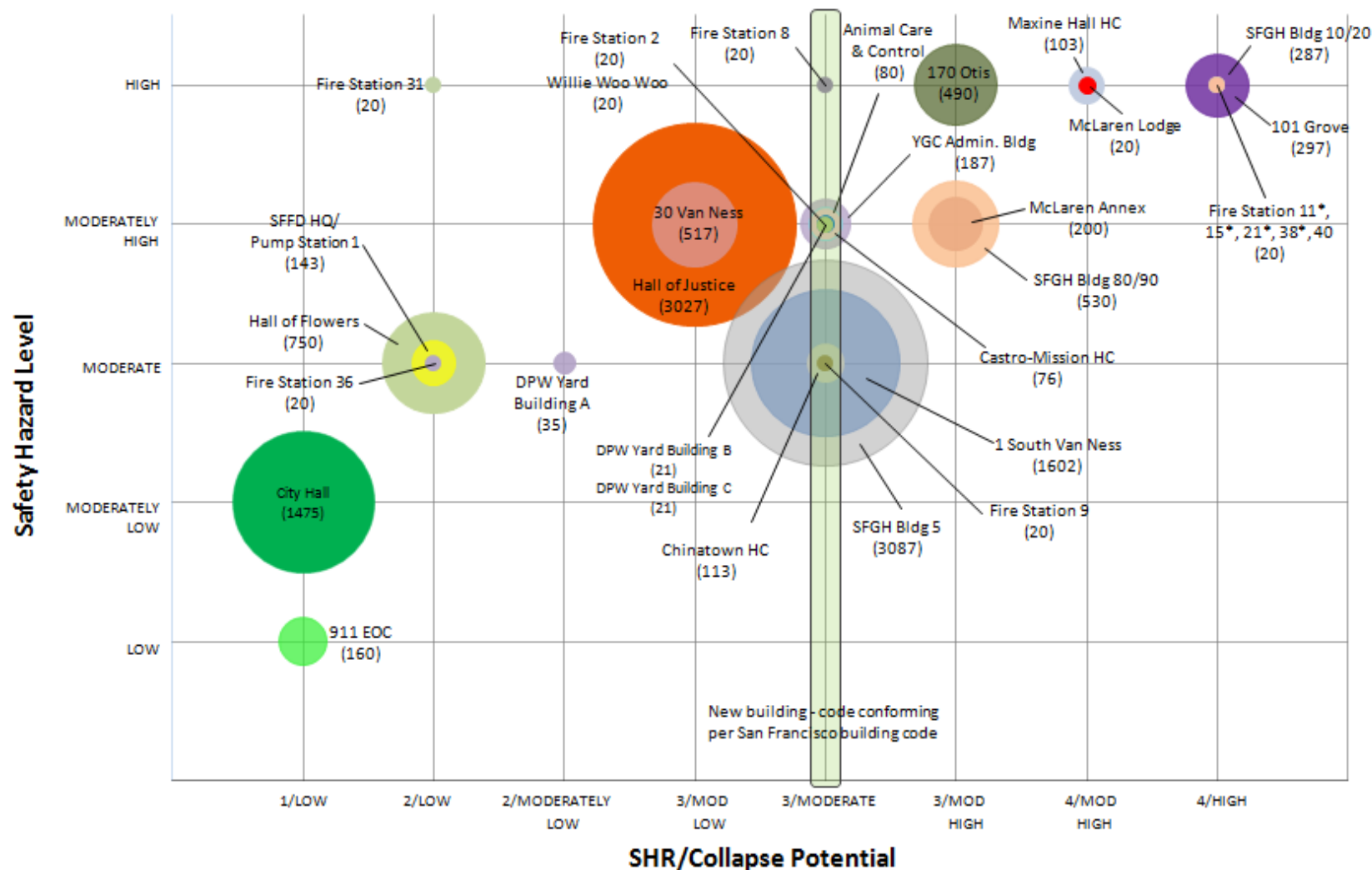
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Facility	Year Built	SHR	Collapse Potential	Safety Risk
Fire Station 2		3	Moderate	Moderately High
Fire Station 8		3	Moderate	High
Fire Station 9		3	Moderate	Moderately High
Fire Station 11		4*	Moderate	Moderate
Fire Station 15		4*	High	High
Fire Station 21		4*	High	High
Fire Station 31		2	Low	
Fire Station 36		2	Low	Moderate
Fire Station 38		4*	High	High
Fire Station 40		4	High	High

* Collapse hazard due to existing hose tower. If hose tower is removed, SHR is anticipated to be 3.

Seismic Hazard Rating Matrix (draft)

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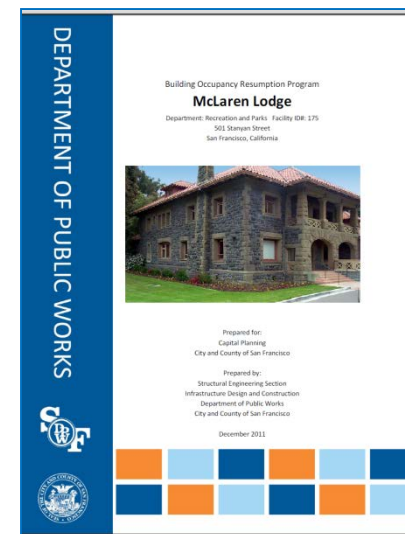
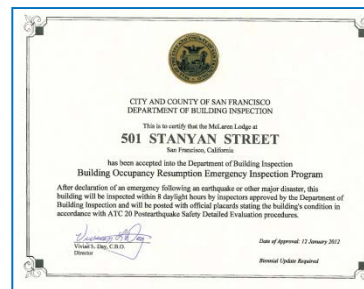
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BORP Documentation

- ▣ Building description
- ▣ Seismic vulnerabilities
- ▣ Emergency inspection plan
 - Trigger for activation
 - Evaluation procedure
 - Damage assessment
- ▣ Pre-assigned and pre-deputized inspectors
 - Structural, building, elevator, life-safety system
- ▣ Posting of placards



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City BORP

- ▣ Hall of Justice
- ▣ 1 South Van Ness
- ▣ 30 Van Ness
- ▣ SFFD HQ/Pump Station #1
- ▣ DPW Buildings A, B, C
- ▣ McLaren Lodge and Annex
- ▣ County Fair Building/Hall of Flowers
- ▣ YGC Admin Building
- ▣ City Hall
- ▣ Emergency Operations Center

