



SEISMIC RISK IN TALL BUILDINGS

URBC – September 22, 2020

Carlos Molina Hutt, PE, CEng
carlos.molinahutt@civil.ubc.ca

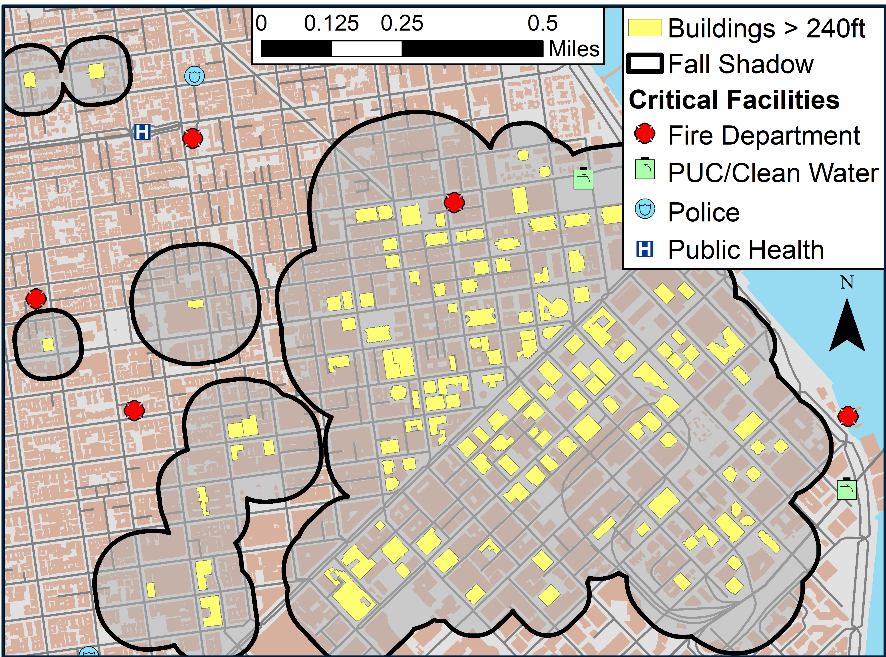
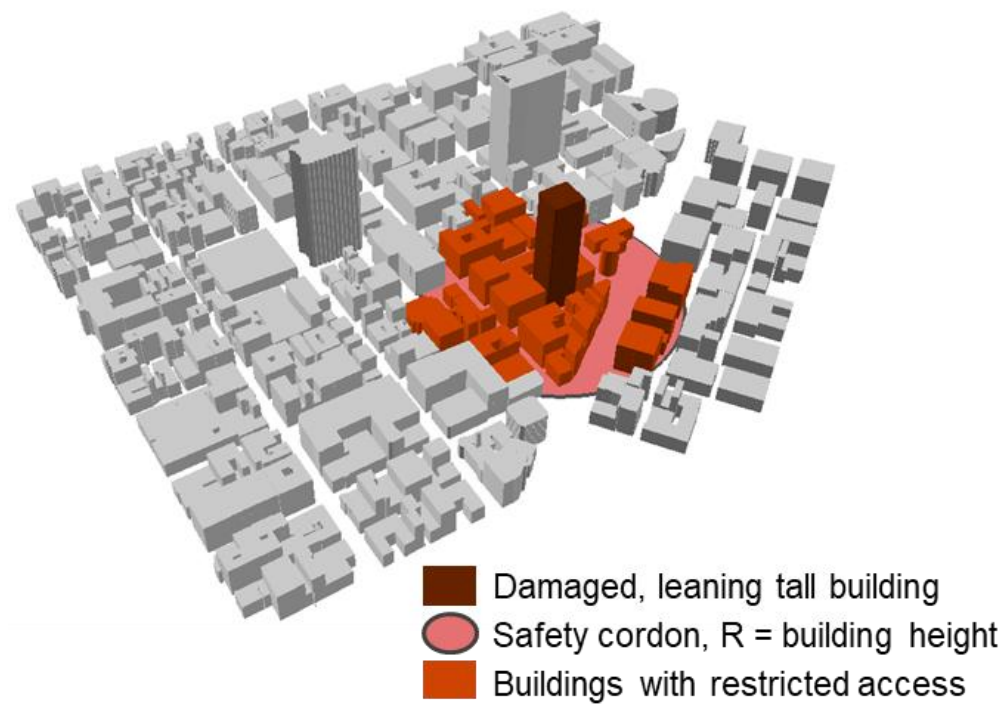
ESR LAB @ UBC



www.esrlab.org

WHY TALL BUILDINGS?

Although not the only earthquake risk, tall buildings are of special concern due to their size and large occupant loads, where earthquake **damage to one tall building can have disproportionate effects** on its occupants, its neighbours, and the community at large.

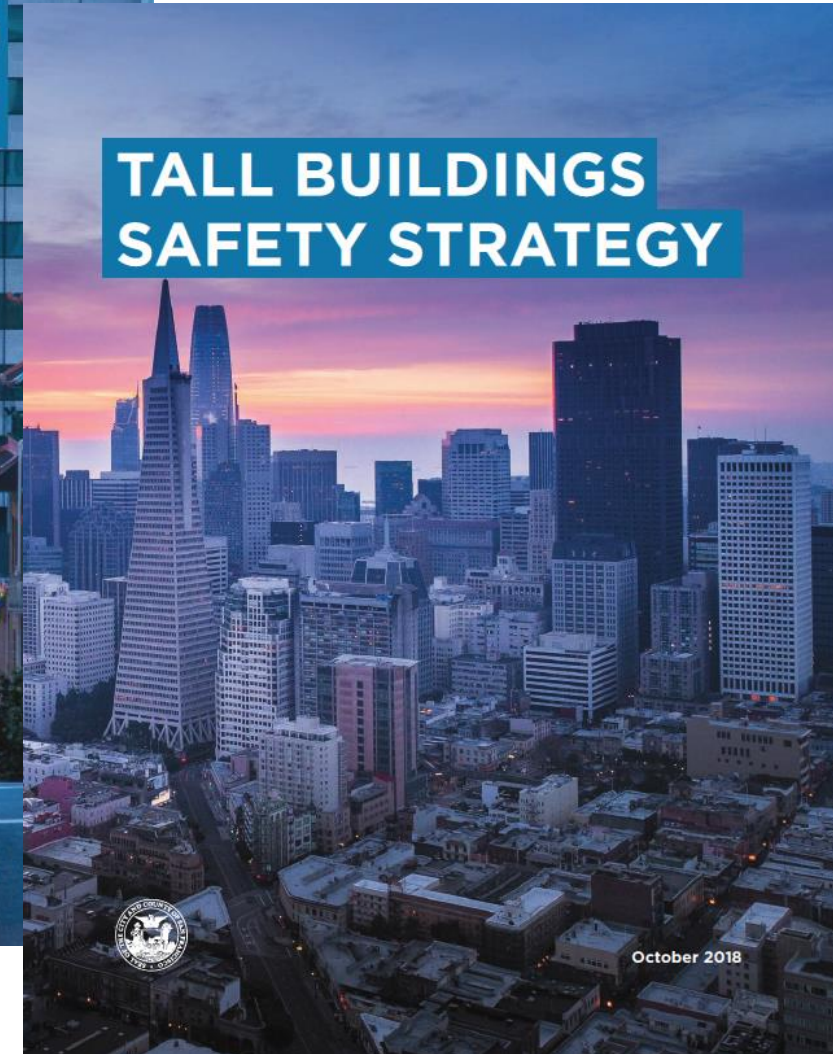
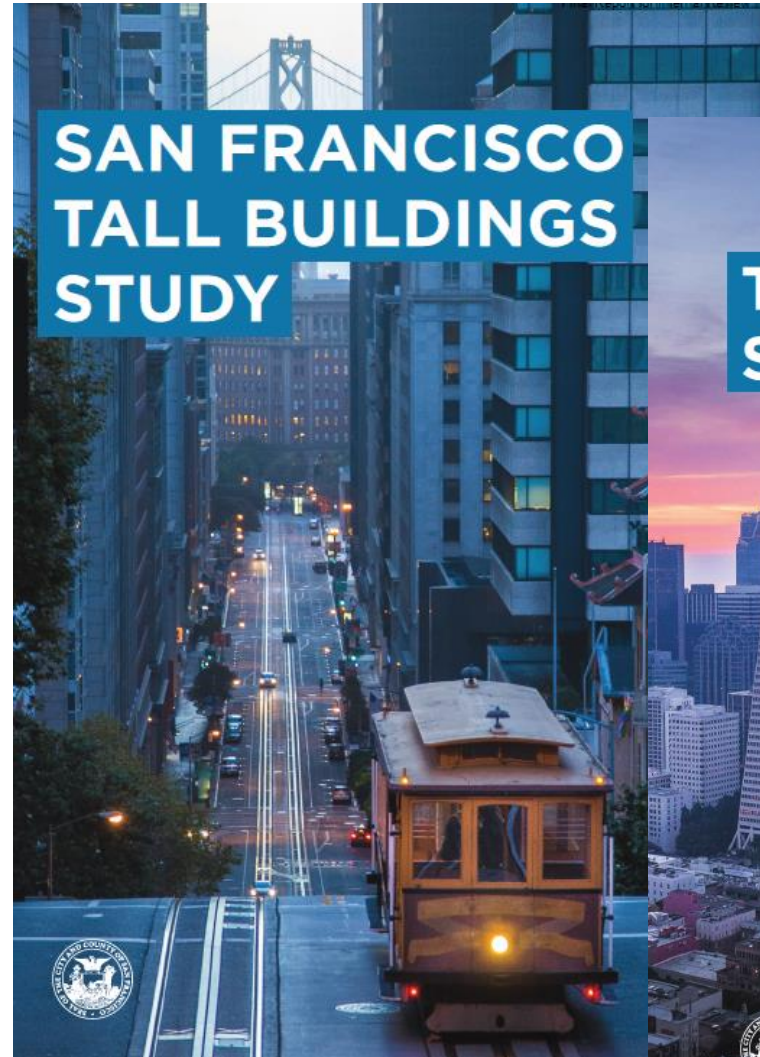


SAN FRANCISCO - TALL BUILDINGS STUDY



Objectives and Scope:

Examine the seismic performance of San Francisco's tall buildings and **develop recommendations** to address building code requirements, policies and practices for the design of new buildings, assessment and retrofit of existing buildings, and post-earthquake inspection and response **to promote the earthquake resilience of San Francisco.**



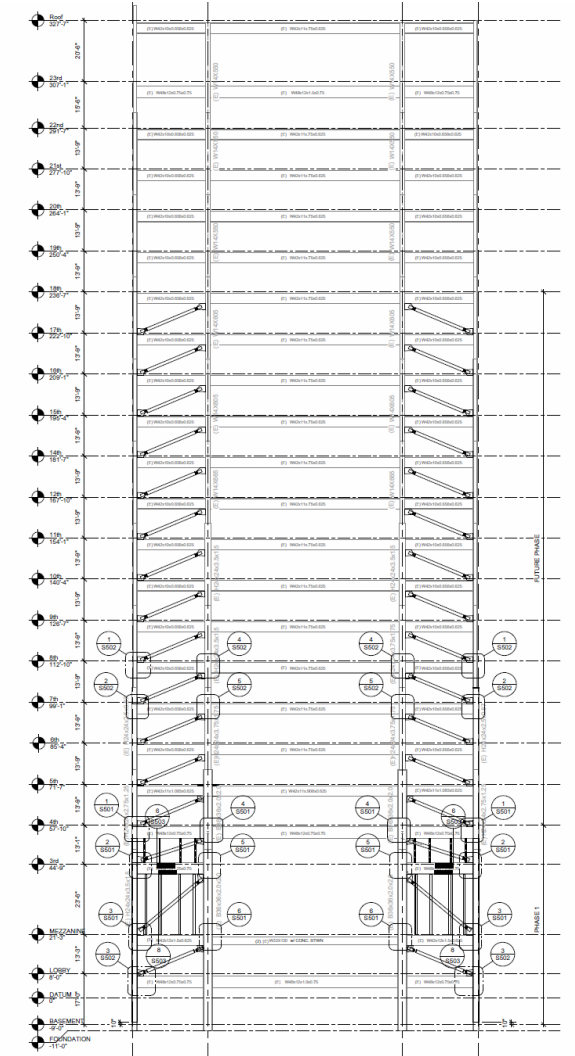
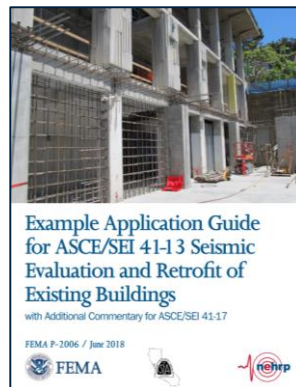
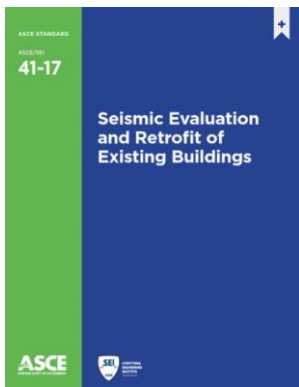
www.onesanfrancisco.org/resilient-sf

OBSERVATIONS FROM VOLUNTARY SEISMIC RETROFIT



Seismic Evaluation and Retrofit:

- Major long-term investment
- Minimize intervention/disruption
- High-fidelity modelling
- Collection of field data
- Building uniqueness



(Courtesy of Degenkolb Engineers)

