

# Improving Community Resilience Through Public-Private Partnerships: The BORP Strategy

## BORP: Building Occupancy Resumption Program

Matthew Bogaard, CBCP

Global Security Consultant, DreamWorks Animation SKG

Bogaard Group International, LLC



# Loma Prieta Earthquake 1989

- **4** days after EQ before Mutual Aid/OES Inspectors started inspections
- **14** days for San Francisco & Mutual Aid inspectors to inspect all major buildings, & **months** to get to ALL
- Average **21** days for Owners to find & engage a Structural Engineer
- **Months for** follow-up decisions & actions on **360** Red-tagged buildings in S. F.



# Are building owners ready to be shut down for an indefinite period?

- There is no guarantee of when the city's inspectors will come by to inspect your building
  - City does **not** automatically show up to post every building
  - They only respond when requested or notified
- There is no guarantee of how well your building will perform
- Even if a new building is designed and constructed to new building code, how long will it take to get it reopened?

**INSPECTED**  
LAWFUL OCCUPANCY PERMITTED

This structure has been inspected (as indicated below) and no apparent structural hazard has been found.

Inspected Exterior Only  
 Inspected Exterior and Interior

Report any unsafe condition to local authorities; reinspection may be required.

Inspector Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Facility Name and Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

(Caution: Aftershocks since inspection may increase damage and risk.)

This facility was inspected under emergency conditions for: \_\_\_\_\_  
(Jurisdiction)

Inspector ID / Agency: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do Not Remove, Alter, or Cover this Placard until Authorized by Governing Authority

- If your building is fine, don't you want a Green tag ASAP?

# Case Study: DreamWorks Animation Glendale, CA: B2B Program

## Phase 1

- Site visit
- Basic life safety evaluation
- Potential damage locations
- Building Assessments
- Response protocols

## Phase 2

- Building Manuals
- Proactive Improvement
- Training for First Responders
- Emergency drills
- Emergency supplies
- Logistics and Operations

## Phase 3

- Engagement with Engineering Firm
- Approval of Qualifications
- City/County Agreement Signed
- Response protocols
- Final Deputization

## Phase 4

- Post-Event Crisis Response
- Site Visit
- Review Findings
- Tag Buildings
- Determine Next Steps

# Steps to a Comprehensive Plan

- Inventory & rapid evaluation of all buildings
- Select buildings to include
  - Safety
  - Critical use
  - Evacuation
  - Shelter

Rapid Evaluation Conclusions



Location Name	Location Number	Other Identifier	Location Type	Street Address	Structural System	Approx. Date Constr or Retrofit	Description	Building Vulnerability Level of Expected
<b>Main Lot Buildings</b>								
Exterior Sets				4000 Warner Boulevard	HWF			Low
Exterior Sets (Houses)				4000 Warner Boulevard	LWF			Moderate
Building 1	B1		Building	4000 Warner Boulevard	LWF	1930	2-story	Moderate
Building 2	B2		Building	4000 Warner Boulevard	LWF	1926	2-story	Moderate
Building 3	B3		Building	4000 Warner Boulevard	LWF	1926		Moderate
Building 5	B5		Building	4000 Warner Boulevard	LWF	1940		Moderate
Building 8	B8		Building	4000 Warner Boulevard	LWF	1960?		Moderate
GDMX	WB1058	GDMX	Building	5432 W. 102nd St., Los Angeles	TU			High

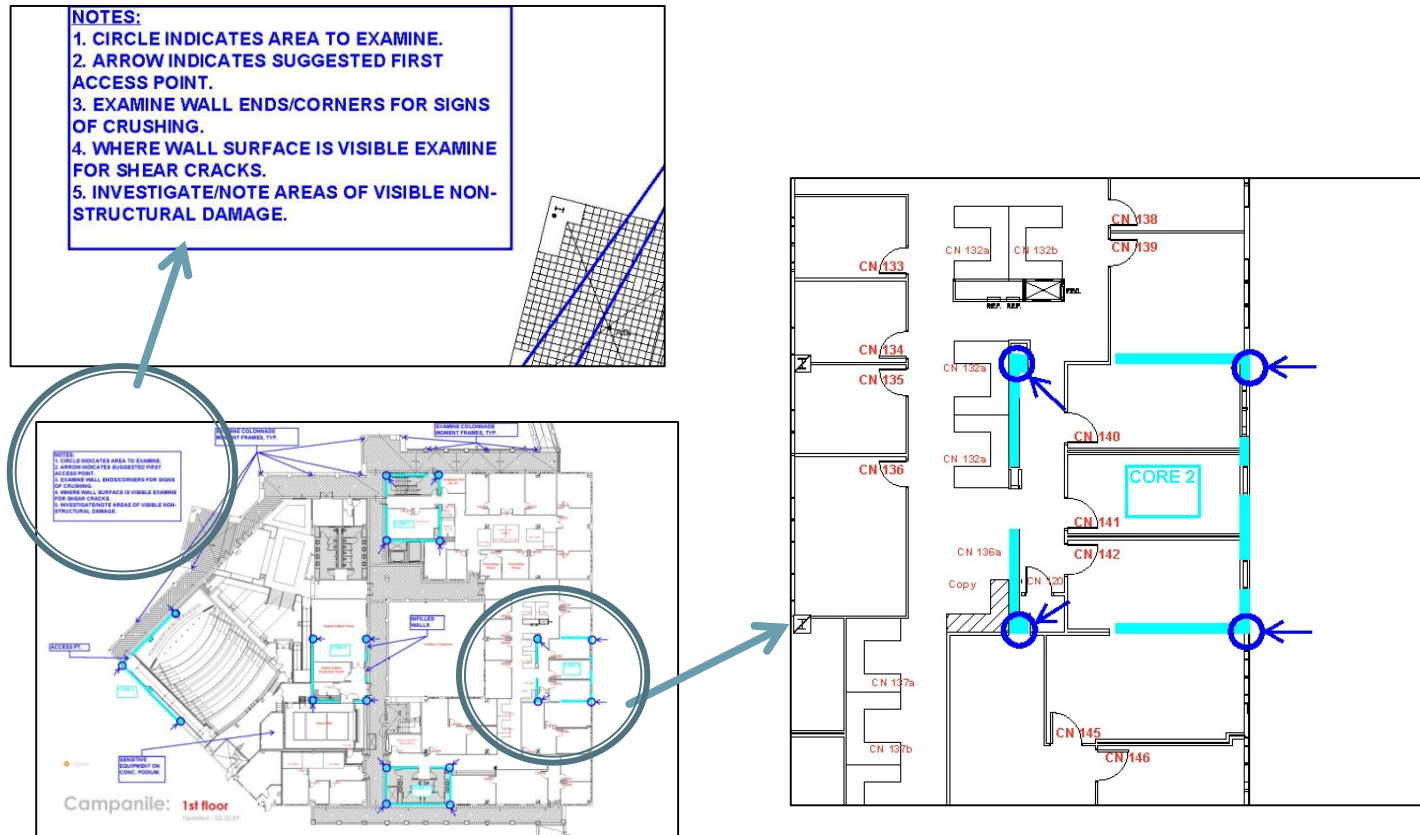
Structural Systems
LWF - Light Wood Frame
HWF - Heavy Wood Frame
M - Reinforced Masonry
C - Reinforced Concrete
TU - Tilt-Up Concrete Panels
SS - Structural Steel Frame
LSS - Light Structural Steel
Temp - Portable/Trailer
URM - Unreinforced Masonry

Building Vulnerability
High - more damage
Moderate - some damage expected
Low - less damage to none expected

- Tier 1 Seismic Evaluation of selected buildings

# Building Schematics with Critical Points

- Prepare notebooks and reference materials for selected buildings



# Inspections are more effective with a BORP

- A designated Engineer is committed to respond right away
- Already has studied the building – knows where the vulnerabilities are, as well as critical functions and exits
- Will not be overly conservative while posting
- Can help train owner's staff to be more effective
- BORP works even if communications are down
- Will not leave the building to inspect other buildings, will follow up with actions needed to reoccupy as soon as possible
- Will be there to re-inspect after an aftershock

# A BORP Reduces Danger

- Delays in inspection increase the likelihood of people re-entering an unsafe building
- Relieves the uncertainties associated with Inspectors unfamiliar with the buildings
  - A much more informed and accurate inspection
- Minimizes the wait for an Inspection after an Earthquake



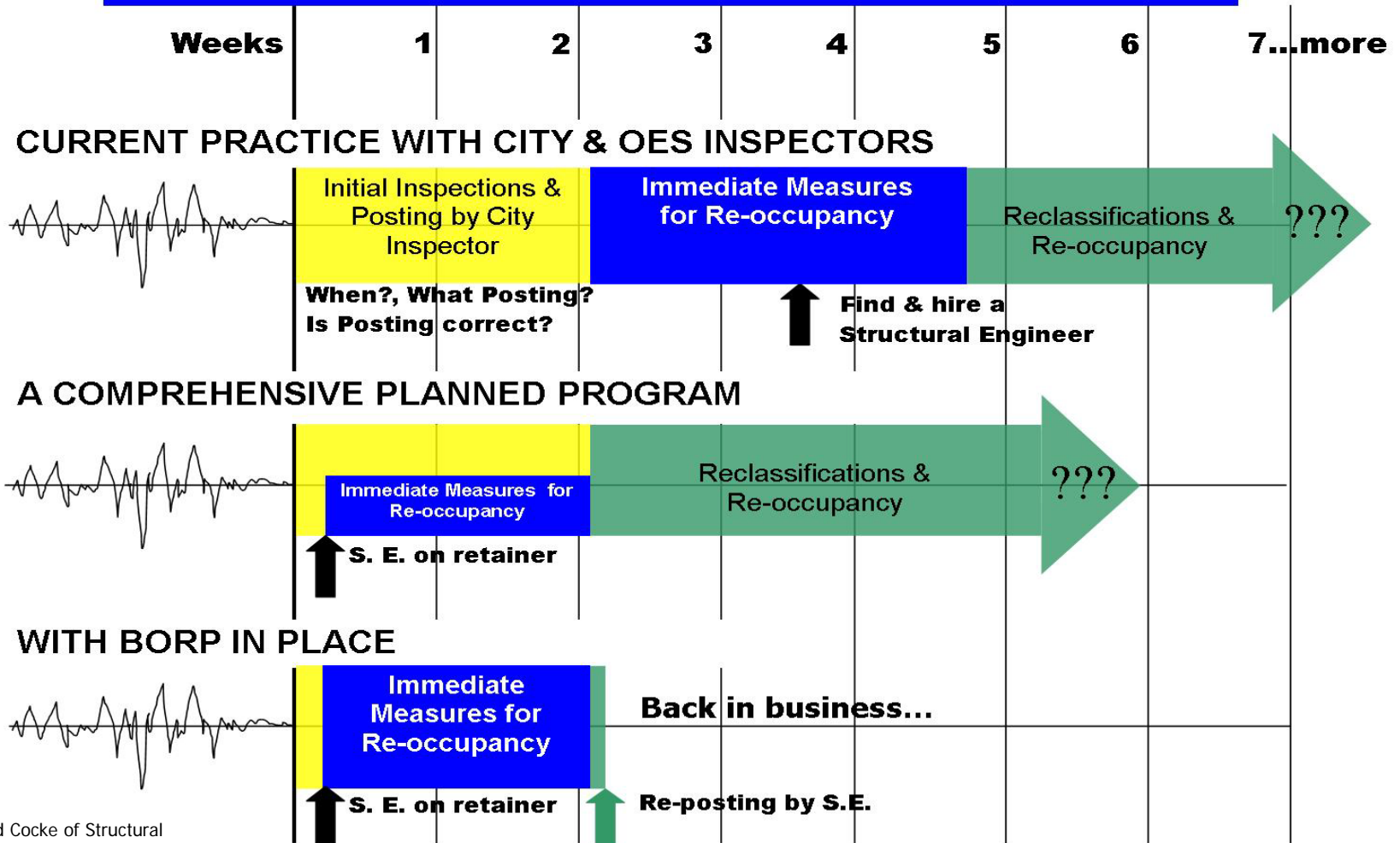


# A BORP Reduces Damage

- Assess the critical buildings as part of the preparation
  - May lead to some pro-active retrofitting of more critical and/or vulnerable structures
- Response is faster and actions can be taken faster to mitigate further damage from aftershocks....
- Re-inspections after aftershocks are immediate

# A BORP Reduces Downtime

## For A Hypothetical **Yellow**-Tagged Building



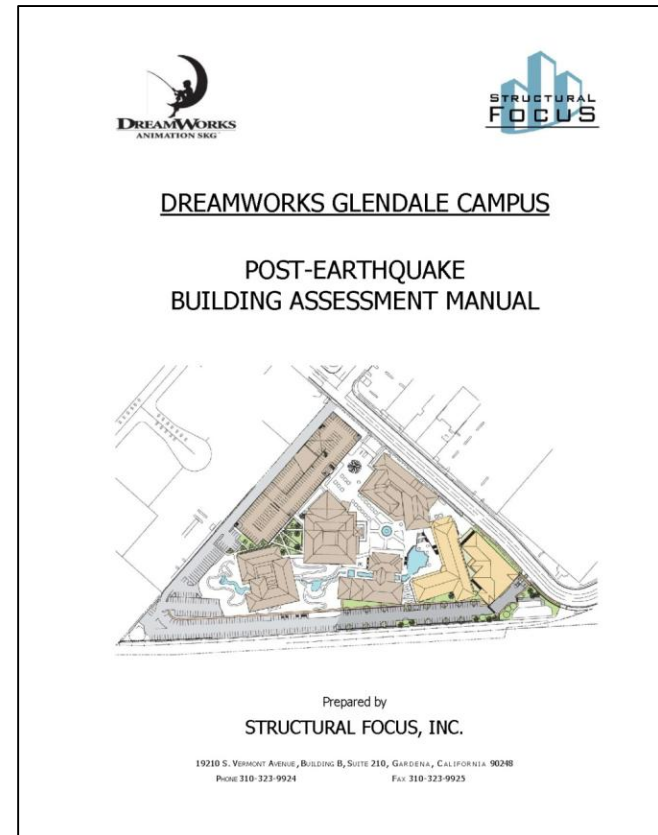
# BORP benefits Building Owners

- Insures occupants' SAFETY reoccupying building
- Will result in faster response for inspections
- Reduces chance of an overly conservative posting
- Increased "control" of building's re-occupancy
- More aware of vulnerabilities before the event and have a chance to reduce them
- Can be assured of shorter response and recovery time
- An Owner wants a Green tag on the building ASAP to show to his/her tenants and the public!

# A facility would lose ??? everyday without access to the building

## Steps to enroll in a BORP

1. Formalize retainer agreement with an experienced consultant to create a program
2. Select the buildings to be included
3. Complete building surveys and BORP Building Applications
4. Submit Applications
5. Building Department will review and approve Applications
6. Organize annual updates to meet the Building Department's and owner's requirements



# Emergency Shoring & Repairs?

- Currently
  - A Permit is required for emergency work
  - Requires completed documents and application at Building and Safety office
- Is this realistic?
- Does this really help to speed up occupancy resumption?



# Emergency Shoring & Repairs

## Two Ideas:

1. Provide authorization to City Inspectors to issue permits on-site based on recommendations of Deputized BORP Inspector

or

2. Allow emergency work without permit and require permit within a deadline
  - Safety first
  - Owner's financial risk if more work or re-do is required later
  - Apply to all buildings



# BORP inspires confidence

- **Owners** know that they have reduced their risks
- **Clients** know that the facility will be up and running sooner to service them
- **Tenants** feel safer and are confident because of their reduced business risks
- **Employees** feel safer and confident their jobs will be secure
- **Increases Citizens'** confidence in City government

# Improving Community Resilience Through Public-Private Partnerships:

## The BORP Strategy

Matthew Bogaard, CBCP  
Global Security Consultant, DreamWorks Animation SKG  
Bogaard Group International, LLC  
[matt@bogaardgroup.com](mailto:matt@bogaardgroup.com)  
Matt.Bogaard@dreamworks.com

