

# Repurposing Hospital Buildings

**A One-Day Seminar** 

## **Your Hospital Building Safety Board**

#### HOSPITAL BUILDING SAFETY BOARD MEMBERSHIP

MEMBERSHIP CATEGORIES	NAMES	APPOINTMENT DATE	TERM EXPIRATION DATE	TERM OF SERVICE			
Appointed Members (Appointed by OSHPD Director)							
2 structural engineers	Maryann Phipps Rami Elhassan	7/2016 8/2013	7/2020 8/2021	1 <sup>st</sup> term 2 <sup>nd</sup> term			
2 architects	Deepak Dandekar Bruce Macpherson	5/2015 8/2013	5/2019 8/2021	1 <sup>st</sup> term 2 <sup>nd</sup> term			
1 engineering geologist	Lou Gilpin	10/2011	10/2019	2 <sup>nd</sup> term			
1 geotechnical engineer	Marshall Lew	5/2015	5/2019	1 <sup>st</sup> term			
1 mechanical engineer	Louise Belair	6/2017	6/2021	1 <sup>st</sup> term			
1 electrical engineer	Roy L. Lopez	6/2018	6/2022	1 <sup>st</sup> term			
1 hospital facilities manager	Carl Scheuerman	11/2010	11/2018	2 <sup>nd</sup> term			
1 local building official	Y. Henry Huang	5/2012	5/2020	2 <sup>nd</sup> term			
1 general contractor	Pete Kreuser	7/2016	7/2020	1 <sup>st</sup> term			
1 fire/life safety representative	Scott L. Jackson	6/2018	6/2022	1 <sup>st</sup> term			
1 hospital inspector of record	Mike Hooper	5/2015	5/2019	1 <sup>st</sup> term			
3 public members	Enid K. Eck David Bliss D. Michael Foulkes	10/2011 5/2016 6/2017	10/2019 5/2020 6/2021	2 <sup>nd</sup> term 1 <sup>st</sup> term 1 <sup>st</sup> term			
TOTAL	16						





#### **Your Education and Outreach Committee**

#### **EDUCATION AND OUTREACH COMMITTEE**

#### **Board Members:**

Mike Hooper, Chair

Pete Kreuser, Vice-Chair

Louise Belair

Scott Jackson

Joe Labrie

Bruce Macpherson

#### Consulting Members:

Bert Hurlbut





## FDD's Hospital Building Safety Board Staff

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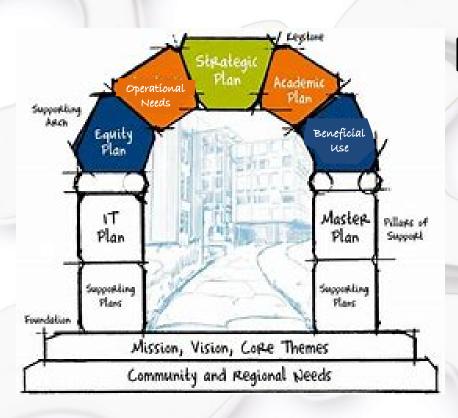
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## Repurposing SPC-1 & 2 Buildings

in alignment with
Proposed

2019 California Building
Standards Code

Provisions for turning nonconforming hospital buildings into alternative uses



# California Administrative Code Chapter 6, Section 1.4.5.1.5

A hospital building from which acute care services and beds have been removed or a nonconforming hospital building without SPC or NPC rating shall not provide general acute care services unless it has been modified to comply with the requirements of...

appropriate SPC and NPC ratings.





# Evolution of a Hospital

Potential Vacated GACH Services:

- Nursing
- Surgical
- Anesthesia/PACU
- Clinical Lab
- Radiology
- Pharmacy
- Dietary
- Support
- Supplemental Services

**Original Hospital** Replacement SPC-1 Hospital (Pre-1973 CBSC) SPC-5 Nursing Tower Addition SPC-2

- All GACH Services
Relocated to
Conforming
Building(s)
per
California
Administrative Code
Chapter 6



**Nursing Tower** 

Addition

SPC-5



# Planning for the Future

Nursing Tower
Addition
SPC-5

Rebuild or Repurpose or Upgrade

Original Hospital SPC-1

Replacement
Hospital
SPC-5

Future Hospital Expansion

Rebuild
or
Repurpose
or
Upgrade

Nursing Tower Addition SPC-2



#### **Agenda**

**❖ SESSION ONE:** Introduction to "OSHPD 1R"

**❖ SESSION TWO:** Proposed 2019 Code Changes

**❖ SESSION THREE:** Case Studies





## SESSION ONE: Introduction to OSHPD 1R

- > What is it?
- > "Freestanding" Determination and Implications
- > Process for Removal from Acute Care Services



## OSHPD 1R – What is it?

#### REMOVED FROM ACUTE CARE SERVICE [OSHPD 1R]

Buildings that previously provided basic and/or supplemental services, as defined in Section 1224.3, that have

- ✓ been removed from acute care service in compliance with Part 10 California Existing Building Code Chapter 3A,
- ✓ and remain under the jurisdiction of the Office of Statewide Health Planning & Development (OSHPD).





## **OSHPD 1R – Deadlines**

#### TABLE 2.5.3—STRUCTURAL PERFORMANCE CATEGORIES (SPC)

	SPC	DESCRIPTION		
	SPC 1	Buildings posing significant risk of collapse and a danger to the public. These buildings must be brought up to the SPC 2 level by January 1, 2008, or be removed from acute care service.		
11/202		Where the Office has performed a collapse probability assessment, buildings with Probability of Collapse greater than 1.20% shall be placed in this category.		
11/12030		Buildings in compliance with the pre-1973 <i>California Building Standards Code</i> or other applicable standards, but not in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Safety Act. These buildings do not significantly jeopardize life, but may not be repairable or functional following strong ground motion. These buildings must be brought into compliance with the structural provisions of the Alquist Hospital Facilities Seismic Safety Act, its regulations or its retrofit provisions by January 1, 2030, or be removed from acute care service.		
11/1/2		Where the Office has performed a collapse probability assessment, buildings with Probability of Collapse less than or equal to 1.20% shall be placed in this category.		
•	SPC 3	Buildings in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Safety Act, utilizing steel		

**Exception: Assembly Bill 2190** 

Enacted 9/22/2018
Effective 1/1/2019





## OSHPD 1R – Implications

- ➤ The removal of General Acute Care Hospital (GACH) services from a building may result in a change of:
  - ☐ Use
  - Occupancy
  - ☐ Function
  - ☐ Licensure
  - ☐ A combination of the above for all or a part of the building
- ➤ It may also involve a change of the authority having jurisdiction from OSHPD to the local enforcement agency if the SPC Building meets specified seismic separation and fire protection criteria (i.e. "Freestanding")



## **OSHPD 1R - Required Analysis**

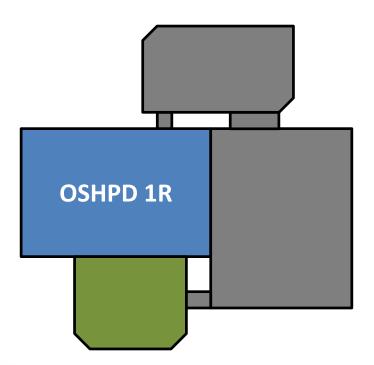
- ✓ General Acute Care Hospital (GACH) Services are removed from SPC Building
- ✓ Utility Infrastructure Services not permitted to traverse or provide services from SPC Building to support GACH (see SPC-2 Exceptions)
  - Mechanical
     Electrical
  - ☐ Plumbing ☐ Fire Suppression & Alarm
  - ☐ Medical Gasses
    ☐ Other
- ✓ Exiting through SPC Building not permitted as "Means of Egress" from GACH





## OSHPD versus Local Jurisdiction

#### **NOT Freestanding**



#### "FREESTANDING"

means...

Structural and Fire
Separation
per California Building

Code

(CAC 7-111)

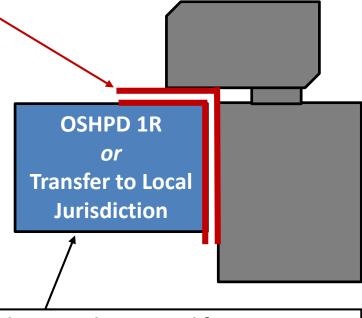
and within

Height/Area

**Limits on** 

Same Lot

#### **Freestanding**



Building must have a qualifying service per Part 10, Chapter 3A to remain as "OSHPD 1R" under OSHPD jurisdiction



## "Freestanding" Determination – Seismic

- Building
- SPC Building
- SPC Seismic Separation
- Structural Separation
- Freestanding Nonhospital Building
- Detached Hospital Building





- There are diverse definitions of the terms "building" and "hospital building" in the Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983 and the CBSC
- For the purposes of removing a building from general acute care service, terms have been defined in Part 10 CEBC (or CAN 1-6-1.4.5.1.4) to clarify the process
- See the CAN 1-6-1.4.5.1.4 for detailed explanations and or illustrations



- BUILDING: is defined by the area included within surrounding exterior walls or any combination of exterior walls and fire walls. A *Building* will consist of one or more *SPC Buildings*. (Based on the definition of AREA, BUILDING, 2016 California Building Code (CBC), Section 502.1)
- SPC BUILDING is defined as a structure with an independent vertical and lateral load resisting system and a seismic performance category assigned by OSHPD.





- **SPC SEISMIC SEPARATION** means a building separation in accordance with the California Administrative Code Chapter 6 Section 3.4.
- **STRUCTURAL SEPARATION** means a separation gap between adjacent structures sufficient to avoid damaging contact, complying with the current structural provisions of the CBC.





SPC SEISMIC SEPARATION means a building separation in

3.4 Adjacent buildings. There is no immediately adjacent hapter 6 accorda Section structure that is less than half as tall or has floors/levels that do not match those of the building being evaluated. A neighboring

structure is considered to be "immediately adjacent" if it is

within 2 inches times the number of stories away from the

 STRUCT adjacen

act, building being evaluated.





etween

- **SPC SEISMIC SEPARATION** means a building separation in accordance with the California Administrative Code Chapter 6 Section 3.4.
- **STRUCTURAL SEPARATION** means a separation gap between adjacent structures sufficient to avoid damaging contact, complying with the current structural provisions of the CBC.





• SPC SEI accorda Section Adjacent buildings on the same property shall be separated by a distance not less than  $\delta_{MT}$ , determined by Equation 16A-45.

ation in e Chapter 6

• STRUCT adjacer comply

• STRUC 
$$\delta_{MT} = \sqrt{(\delta_{M1})^2 + (\delta_{M2})^2}$$

(Equation 16A-45)

where:

comply  $\delta_{MI}$ ,  $\delta_{M2}$  = The maximum inelastic response displacements of the adjacent buildings in accordance with Equations 16A-44A or 16A-44B for OSHPD.

betweenntact,the CBC.



**FREESTANDING NONHOSPITAL BUILDING**: means a *Building* that does not contain any *general acute care services* and meets the following criteria:

- 1. Structural separation shall comply with the applicable provisions of the California Building Code.
- 2. Fire-resistive-rated construction separations shall comply with the applicable provisions of the California Building Code.
- Buildings on the same lot shall comply with the height and area limitations of the California Building Code.





**DETACHED HOSPITAL BUILDING**: means a *Building* containing general acute care services that meets the following criteria:

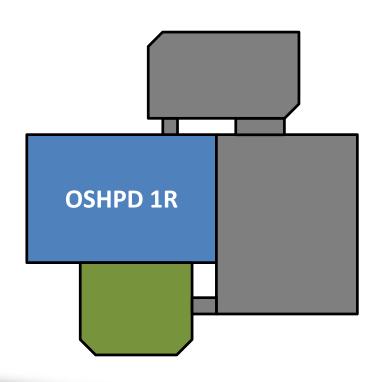
- 1. Structural separation shall comply with the applicable provisions of the California Building Code
- 2. Fire-resistive-rated construction separations shall comply with the applicable provisions of the California Building Code
- Buildings on the same lot shall comply with the height and area limitations of the California Building Code





## "Freestanding" Determination – Fire

#### **NOT Freestanding**



## NOT Freestanding =

## **Fire Barrier**

Separation between occupancies constructed as Fire Barriers per CBC 707 and Table 508.4







- FIRE BARRIER. A fire-resistance-rated wall assembly of materials designed to restrict the spread of fire in which continuity is maintained.
- Section 707
- May be 1, 2, 3 or 4-hour fire-resistance rated.

## **Local Jurisdiction**

#### **Freestanding**

"FREESTANDING" =

Structural and Fire Separation

per California Building

Code

OSHPD 1R

or

Transfer to Local

Jurisdiction

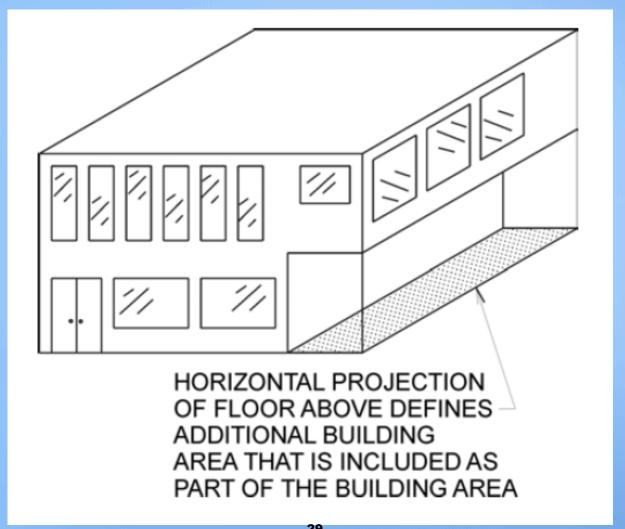
Freestanding = Fire Wall





- AREA, BUILDING. The area included within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.
- The building area is the "footprint" of the building; that is, the area measured within the perimeter formed by the inside surface of the exterior walls. This excludes spaces that are inside this perimeter and open to the outside atmosphere at the top, such as open shafts and courts.
- When a portion of the building has no exterior walls, the area is defined by the projection of the roof or floor above.
- A roof overhang on portions of a building where there are exterior enclosure walls does not add to the building area because the area is defined by the exterior walls.

AREA, BUILDING



The code allows for buildings to be viewed as one, if area, height and story limitations are met, or the buildings are regulated as two separate buildings.
 However, the code never considered buildings on the same lot under different jurisdictions.

Buildings are defined as noted in the slide above, surrounded by exterior walls or fire walls. In order to have two buildings under different jurisdictions the building walls shall be defined as exterior walls or fire walls in accordance with CBC.

■ **706.1 General.** Each portion of a building separated by one or more fire walls that comply with the provisions of this section shall be considered a separate building. The extent and location of such fire walls shall provide a complete separation. Where a fire wall also separates occupancies that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply.

\*Creates two separate buildings for purposes of allowable area and type of construction requirements. NO horizontal offsets.



706.2 Structural stability. Fire walls shall be designed and constructed to allow collapse of the structure on either side without collapse of the wall under fire conditions. Fire walls designed and constructed in accordance with NFPA 221 shall be deemed to comply with this section.



For masonry walls, the NCMA TEK Bulletin 5-8B contains helpful information.

The Gypsum Association's Fire Resistance Design Manual contains construction details for area separation walls (party wall/fire walls) which have been accepted as fire walls.



Fire



■ **706.3 Materials.** Fire walls shall be of any approved noncombustible materials.

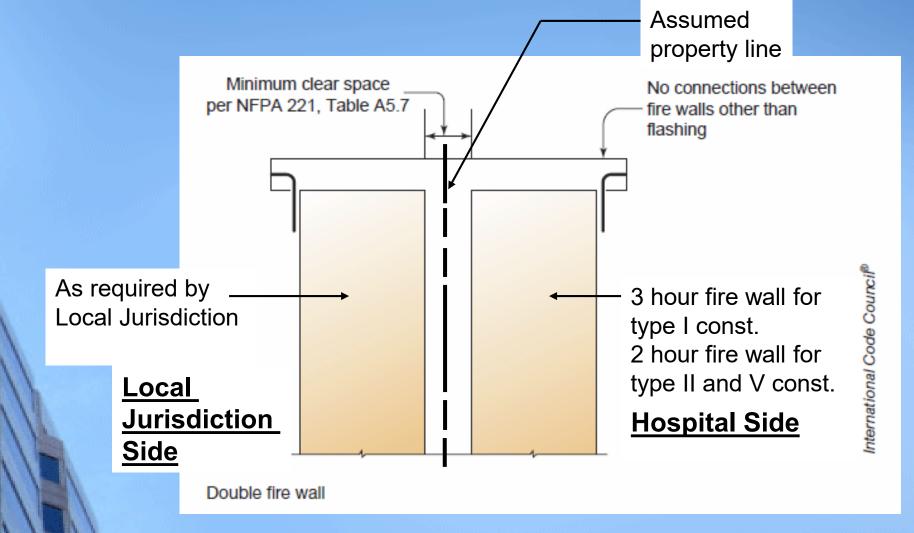
**Exception:** Buildings of Type V construction.

706.4 Fire-resistance rating. Firewalls shall have a fire-resistance rating of not less than that required by Table 706.4

## TABLE 706.4 FIRE WALL FIRE-RESISTANCE RATINGS

GROUP	FIRE-RESISTANCE RATING (hours)
A, B, E, H-4, I, R-1, R-2, <i>R-2.1</i> , U, <i>L</i>	$3^{\mathrm{a}}$
F-1, H-3 <sup>b</sup> , H-5, M, S-1	3
H-1, H-2	$4^{\mathrm{b}}$
F-2, S-2, R-3, R-4	2

- a. In Type II or V construction, walls shall be permitted to have a 2-hour fire-resistance rating.
- b. For Group H-1, H-2 or H-3 buildings, also see Sections 415.6 and 415.7.





Double fire walls are required where the intent is to regulate as separate buildings under the fire wall provisions in order to have the buildings under different jurisdictions



# High Rise Hospitals – CMS Requirement

- New high rise AND <u>existing high rise</u> healthcare shall be fully sprinklered.
- This is required to be in place by <u>2028</u>. This exceeds the CBSC and California State Law for some hospital buildings
   \*Note-Existing high rises taken out of acute care services by 2030 + will be required to meet this standard.\*
- NFPA 101-11.8, 11.8.1.1
- CMS

# **General Overview for Removal**

Local AHI

**Flow Chart** 



Decide on the future AHJ for the SPC Building Applies only to "Freestanding", SPC Buildings

Complete projects to remove GAC services and modify infrastructure, fire life safety features, and/or structure as needed

Complete projects to remove GAC services, modify infrastructure and provide separations to achieve "Freestanding"



Submit OSHPD
application and
"project" to remove
SPC Building from
GACH service



Consult Local AHJ for added requirements and acceptance verification

Evidence of Local AHJ Acknowledgement



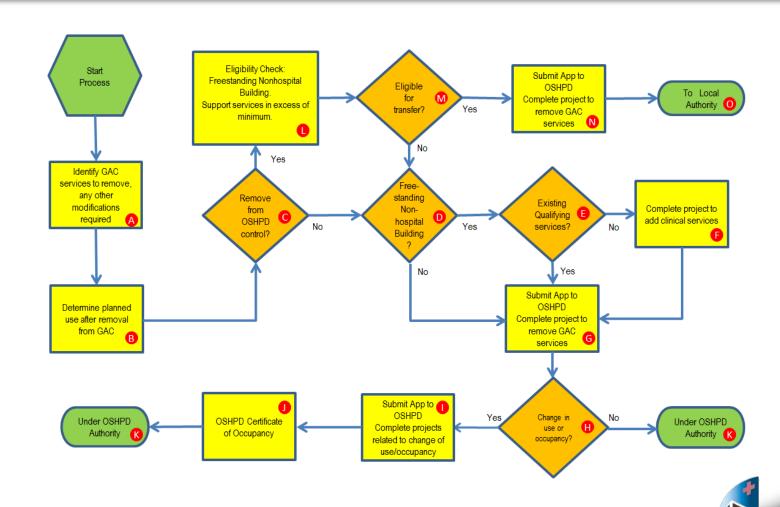


# **Detailed Process for Removal**

#### **2012 OSHPD Presentation**

How to Remove Acute Care Services from an SPC-1 Hospital Building

https://oshpd.ca.gov/ml/v1 /resources/document?rs:p ath=/Construction-And-Finance/Documents/Resou rces/Training-and-Education/How-to-Remove-a-Bldg-2012-08-29-(2012-09-12).pdf







# Process for Repurposing SPC-1 Buildings

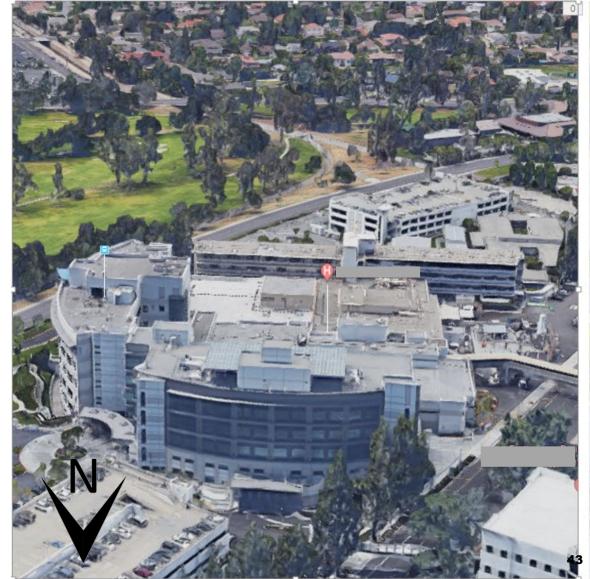
Removal of Acute Care Services (RACS)

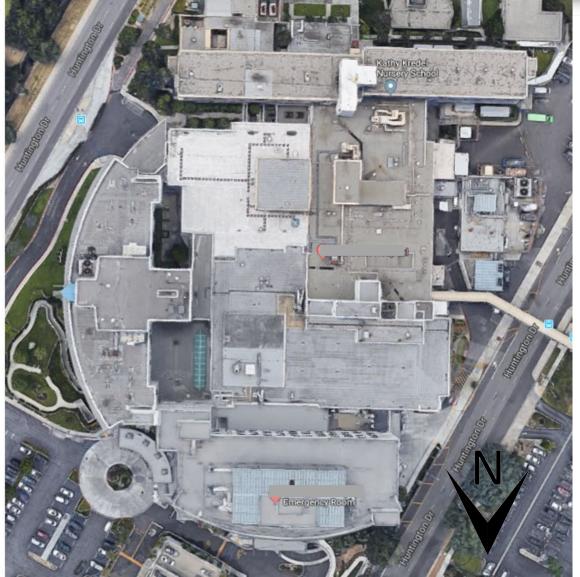
November 8, 2018 November 14, 2018



### **Case Study Outline**

- HOSPITAL ORIENTATION
  - Southern California
  - High Ground Motion Potential
  - 2- SPC-1 Buildings Require Resolution
  - 1- SPC-2 Building Requires Resolution
  - All Buildings are NPC-3 Exempt
  - Building Between 1955 and 2011
  - Utilities Routing
  - Current Use
- EVALUATION OF OPTIONS
  - Removal of Acute Care Services (RACS)
  - Demolish / Upgrade / Repurpose







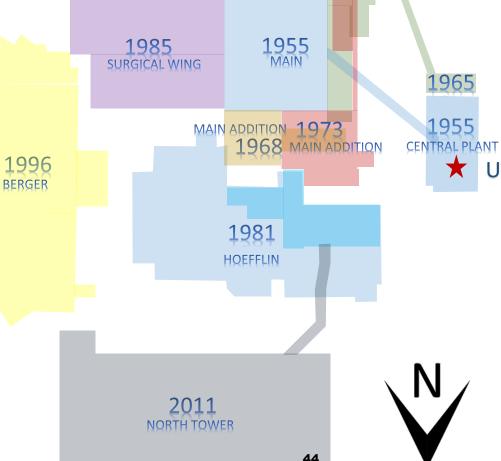
# UTILITIES INSTALLED BETWEEN 1955 AND 2011 ★

#### **EAST WING CURRENT USE**

- Cardiac Rehab
- HBO
- Wound Care
- Storage
- Office Space
- No Licensed Patient Beds



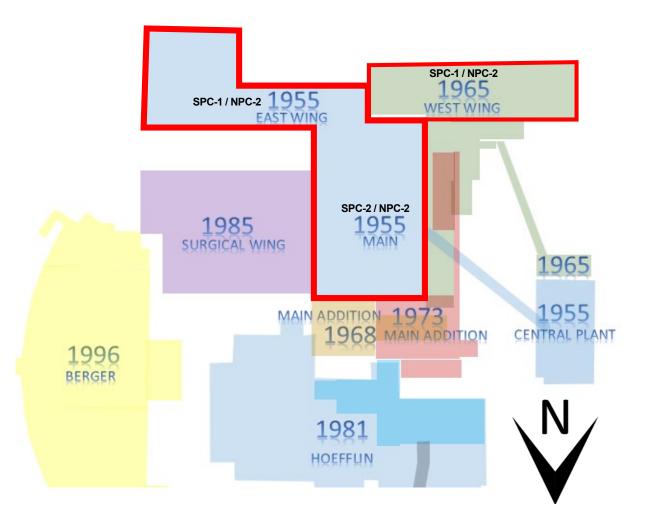
- Storage
- Office Space
- Education
- No Licensed Patient Beds

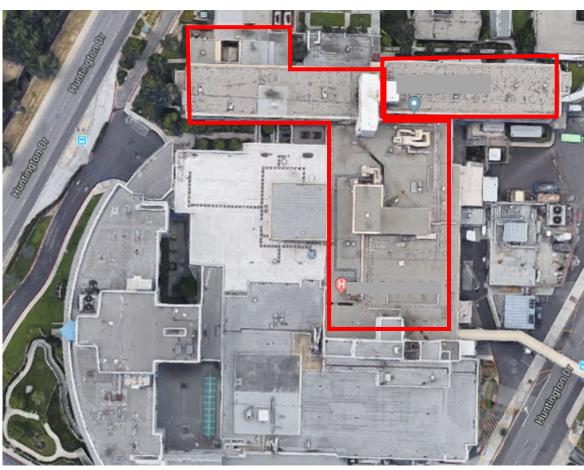


UTILITIES UPGRADED IN 2011

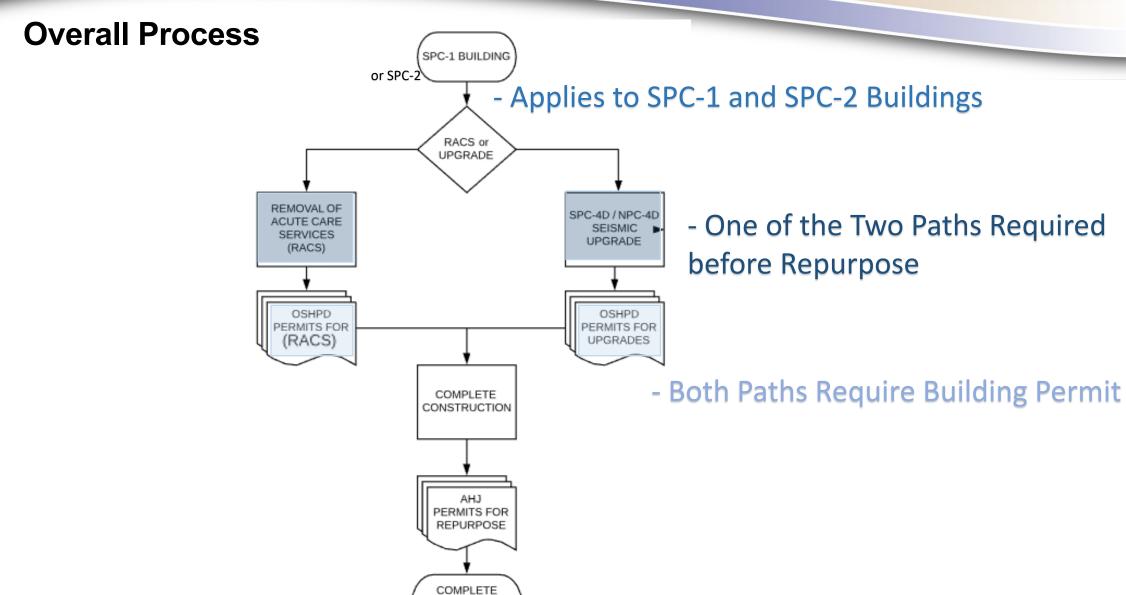


## **Focus of Case Study Outlined in Red**





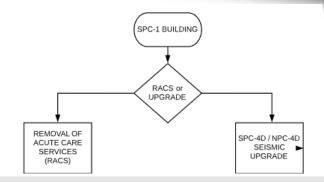




REPURPOSE CONSTRUCT**46** 



#### **Decide on Best Option**



#### **CONSIDERATIONS**

Less Restricted Use of Building Spaces

Mitigated Earthquake Vulnerability to Occupants

Cheaper Option

Offers Greater Flexibility for Future Development

Improved Infrastructure Conditions (Utilities)

Less Disruptive

#### **ADVANTAGES**

RACS

**UPGRADE** 







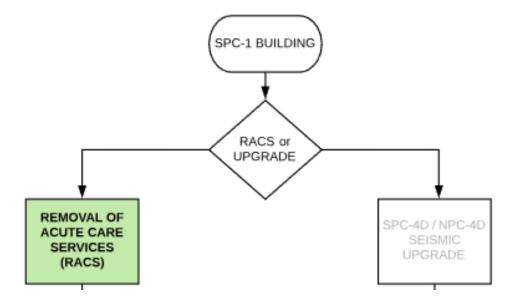








## Removal of Acute Care Services (RACS)





#### **RACS** Requires

That You Pay Close Attention to the ...



... And Address
All Related Details
& Conditions.

There are no shortcuts!

Fire Protection and Detection

**Utilities Isolation** 

Seismic Separation

Egress

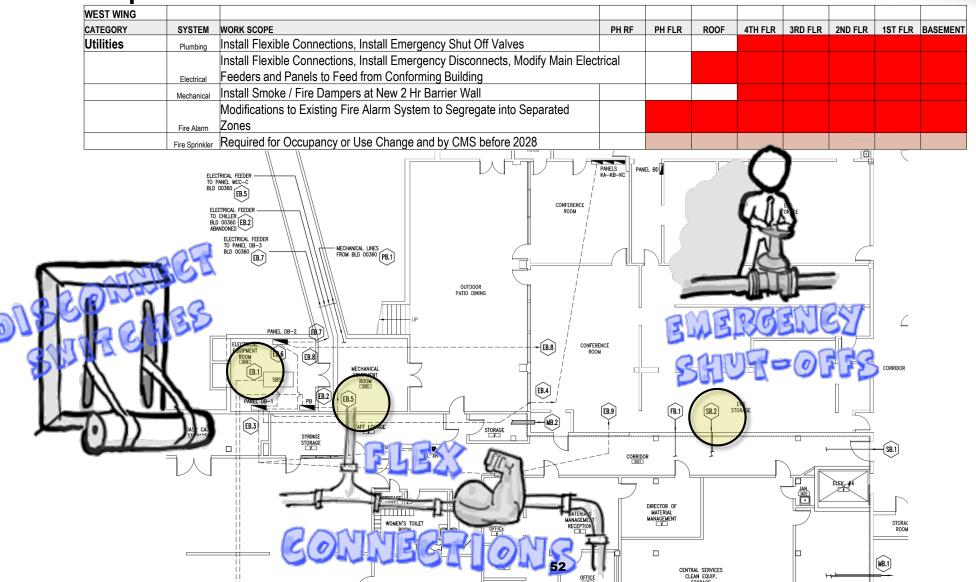




#### Removal of Acute Care Services (RACS) Scope Summary for West Wing (1965)

WEST WING										
CATEGORY	SYSTEM	WORK SCOPE	PH RF	PH FLR	ROOF	4TH FLR	3RD FLR	2ND FLR	1ST FLR	BASEMENT
Utilities	Plumbing	Install Flexible Connections, Install Emergency Shut Off Valves								
		Install Flexible Connections, Install Emergency Disconnects, Modify Main Electrical Feeders and Panels to Conforming Building	Feed from							
	Mechanical	Install Smoke / Fire Dampers at New 2 Hr Barrier Wall								
	Fire Alarm	Modifications to Existing Fire Alarm System to Segregate into Separated Zones								
	Fire Sprinkler	Required for Occupancy or Use Change and by CMS before 2028								
Egress	Corridors	Modifications to Main Building Existing Egress to Prevent Exiting through a Non-Conforming Building								
Services (Occupancy / Use)	Vacant	Vacant Building to be Made Safe and Secured Against Entry, Storage Prohibited								
	Change	Compliance with Current Code (Access for People with Disabilities and All Other Systems)								
Seismic Separation	Structural	Install NEW Seismic Separation								
	Fire & Life Safety	Install Fire Rated Wall, Floor, Ceiling Joint Covers Install Fire Barrier Walls, Install / Modify Cross Corridor Doors, Modify Existing Elevator No. 4 to Allov		Total Control of the	<b>)</b> .					
Fire Barrier Walls	Fire & Life Safety	Separation			<u> </u>					
Smoke			7							
Compartments	Fire & Life Safety	Remodel Main Building for Smoke Compartments		Paper A COLUMN	/					
Legend:		Required for Removal of Acute Care Services Project Scope	Key I	Plan						
		Required for Future Projects 51	V		2.					







**Key Plan** 



WEST WING										
CATEGORY	SYSTEM	WORK SCOPE	PH RF	PH FLR	ROOF	4TH FLR	3RD FLR	2ND FLR	1ST FLR	BASEMENT
Utilities	Plumbing	Install Flexible Connections, Install Emergency Shut Off Valves								
		Install Flexible Connections, Install Emergency Disconnects, Modify Main Elect	ons, Install Emergency Disconnects, Modify Main Electrical							
	Electrical	Feeders and Panels to Feed from Conforming Building								
	Mechanical	Install Smoke / Fire Dampers at New 2 Hr Barrier Wall								
		Modifications to Existing Fire Alarm System to Segregate into Separated								
	Fire Alarm	Zones	, , ,							
	Fire Sprinkler	Required for Occupancy or Use Change and by CMS before 2028	Use Change and by CMS before 2028							
			•							



I.D. NO.	(E) NON-COMPLYING CONDITION	(N) OSHPD PROJECT WORK SCOPE
1	(E) FIRE ALARM PANEL MONITORS BLDG. 01, BLDG. 02, & BLDG. 05 AS A SINGLE ZONE	SEGREGATE DEVICES OF EACH BUILDING & RECONFIGURE ALARM PANEL TO MONITOR EACH BUILDING S SEPARATE ZONE.





**Key Plan** 



WEST WING										
CATEGORY	SYSTEM	WORK SCOPE	PH RF	PH FLR	ROOF	4TH FLR	3RD FLR	2ND FLR	1ST FLR	BASEMENT
Services										
(Occupancy /		Vacant Building to be Made Safe and Secured Against Entry, Storage								
Use)	Vacant	Prohibited								3
		Compliance with Current Code (Access for People with Disabilities and All								- 5
	Change	Other Systems)							_	
\/ <b>-</b>			1	1					$\forall$	0

#### **Vacant Spaces**

CBC § 116.1 Conditions. Structures or existing equipment that are or hereafter become unsafe, insanitary or deficient because of inadequate *means of egress* facilities, inadequate light and ventilation, or which constitutes a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the *building official* deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

- Storage use over 100 square feet require 1-hour fire barrier
- Locks/security
  - Secured against entry
  - Illegal or improper occupancy
- Sewer gases
  - · Trap primers
  - Waste system isolated with valves
- Ventilation systems use and maintenance
- Fire protection systems
  - Maintenance of systems
  - Non-sprinklered building may require a 24/7 Fire Watch in accordance with PIN #14







#### **Vacant Spaces:**

#### **Require Building Permit to Address:**

- Unsafe, Insanitary
- Deficiencies from Inadequate:
  - Means of Egress
  - Lighting
  - Ventilation
- Fire Hazards
- Dangers to:
  - Human Life
  - Public Welfare
- Unsafe Conditions Due To:
  - Illegal Occupancy
  - Improper Occupancy
  - Inadequate Maintenance
  - Unsecured Against Unauthorized Entry



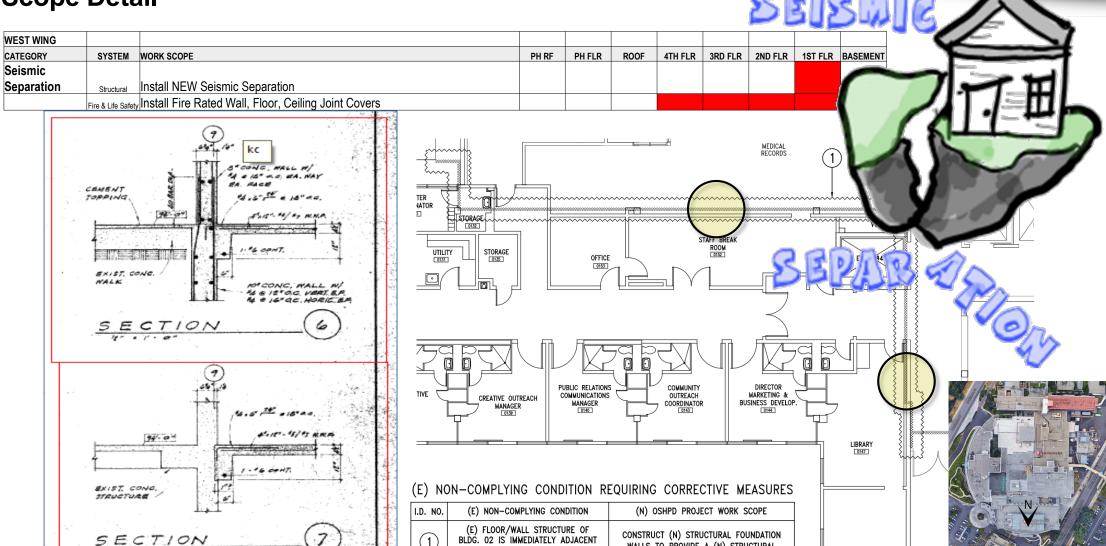


**Key Plan** 



**Key Plan** 

#### Removal of Acute Care Services (RACS) **Scope Detail**



AND OR STRUCTURALLY ATTACHED TO

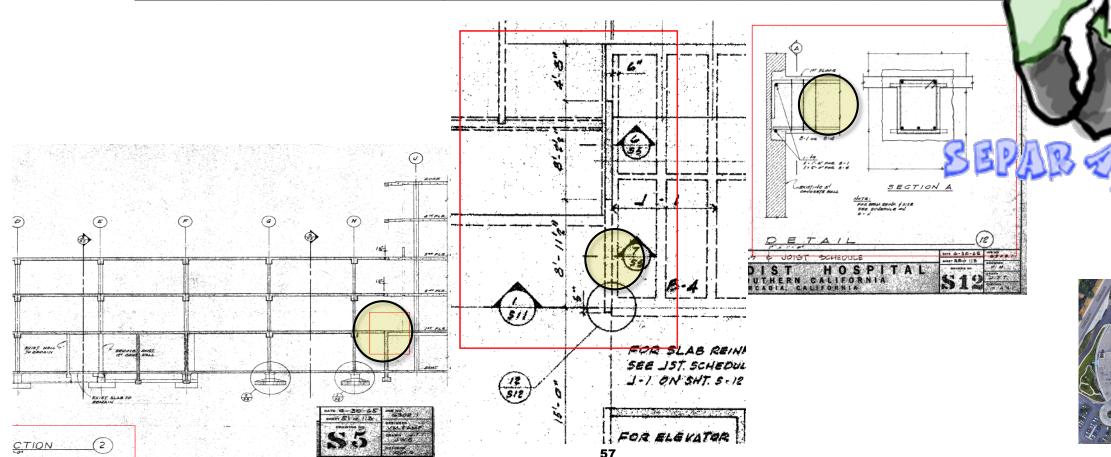
BLDG. 01

WALLS TO PROVIDE A (N) STRUCTURAL

SEPARATION

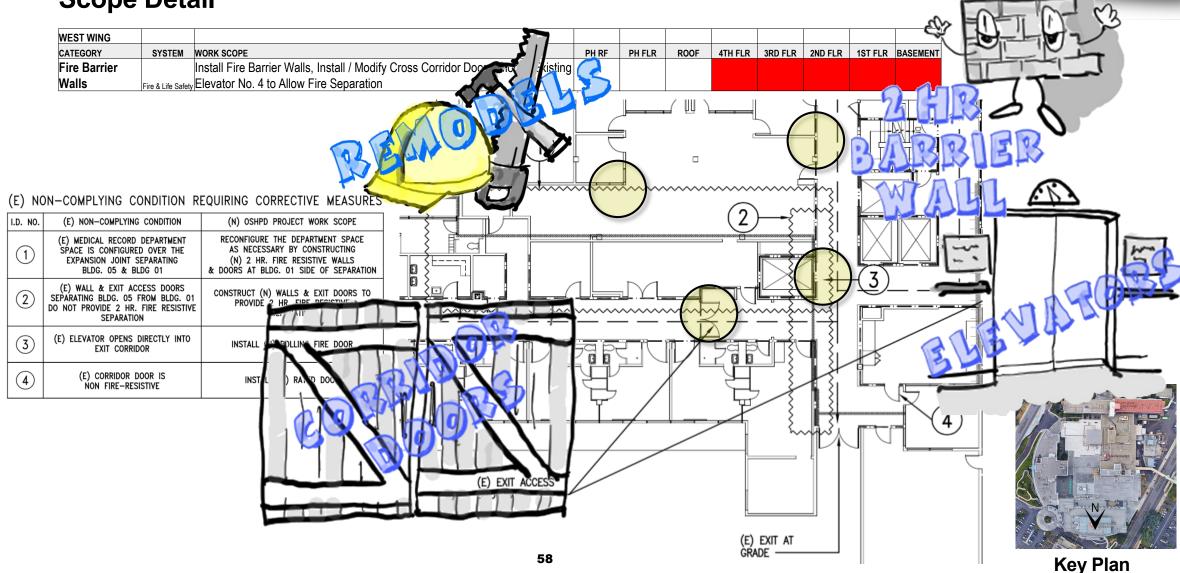


WEST WING											7
CATEGORY	SYSTEM	WORK SCOPE	PH RF	PH FLR	ROOF	4TH FLR	3RD FLR	2ND FLR	1ST FLR	BASEMENT	ſ
Seismic											
Separation	Structural	Install NEW Seismic Separation								- 4	ø
	Fire & Life Safet	Install Fire Rated Wall, Floor, Ceiling Joint Covers									



**Key Plan** 







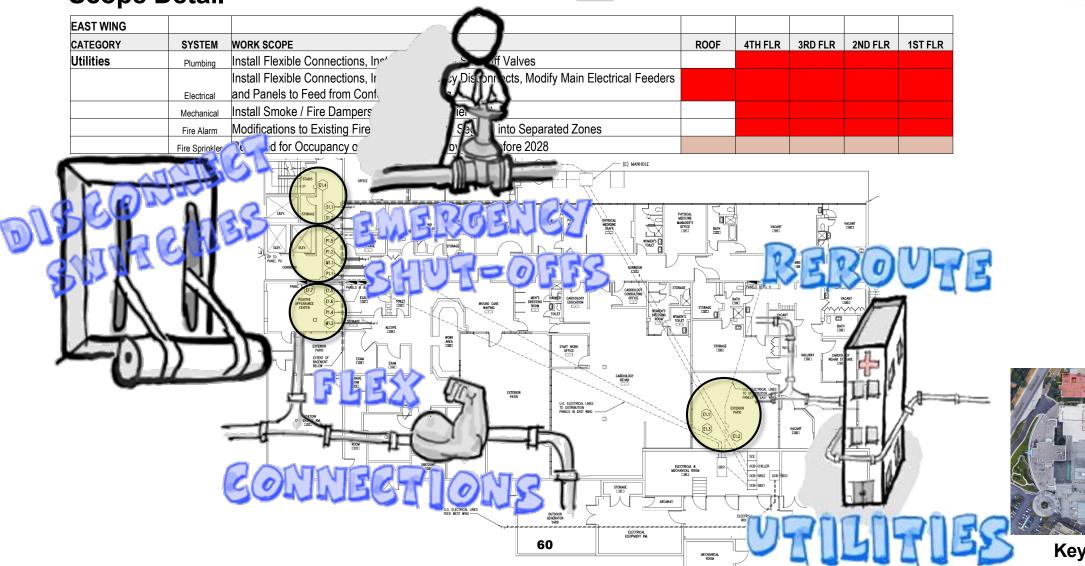
#### Removal of Acute Care Services (RACS) Scope Summary for East Wing (1955)

	•						
EAST WING							
CATEGORY	SYSTEM	WORK SCOPE	ROOF	4TH FLR	3RD FLR	2ND FLR	1ST FLR
Utilities	Plumbing	Install Flexible Connections, Install Emergency Shut Off Valves					
	Electrical	Install Flexible Connections, Install Emergency Disconnects, Modify Main Electrical Feeders and Panels to Feed from Conforming Building					
	Mechanical	Install Smoke / Fire Dampers at New 2 Hr Barrier Wall					
	Fire Alarm	Modifications to Existing Fire Alarm System to Segrate into Separated Zones					
	Fire Sprinkler	Required for Occupancy or Use Change and by CMS before 2028					
Egress	Corridors	Modifications to Main Building Existing Egress to Prevent Exiting through a Non-Conforming Building					
Services (Occupancy / Use)	Vacant	Vacant Building to be Made Safe and Secured Against Entry, Storage Prohibited					
	Change	Compliance with Current Code (Access for People with Disabilities and All Other Systems)					
Seismic Separation	Structural	Install NEW Seismic Separation					
	Fire & Life Safety	Install Fire Rated Wall, Floor, Ceiling Joint Covers					
Fire Barrier Walls	Fire & Life Safety	Install Fire Barrier Walls, Install / Modify Cross Corridor Doors					
Smoke Compartments	Fire & Life Safety	Remodel Main Building for Smoke Compartments					
Legend:		Required for Removal of Acute Care Services Project Scope					
		Required for Future Projects					



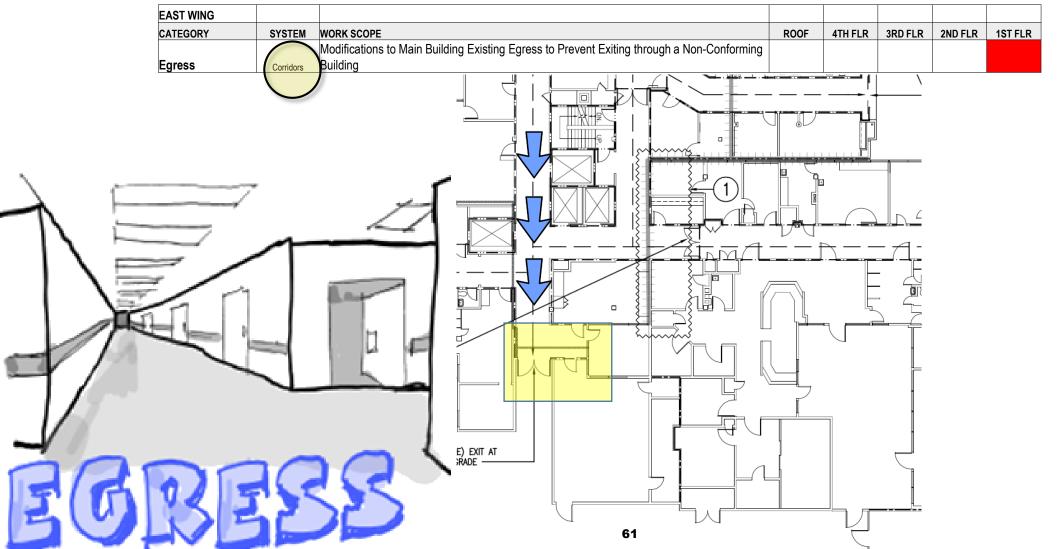
Removal of Acute Care Services (RACS)

**Scope Detail** 



**Key Plan** 







**Key Plan** 



EAST WING CATEGORY

Services

(Occupancy / Use) Vacant Building to be Made Safe and Secured Against Entry, Storage Prohibited Compliance with Current Code (Access for People with Disabilities and All Other Systems) Deficiencies from Inadequate: - Unsafe, Insanitary - Means of Egress \_ Lighting Ventilation - Fire Hazards - Dangers to: - Human Life - Public Welfare Unsafe Conditions Due To: - Illegal Occupancy Improper Occupancy Unsecured Against Unauthorized Entry Inadequate Maintenance

**WORK SCOPE** 

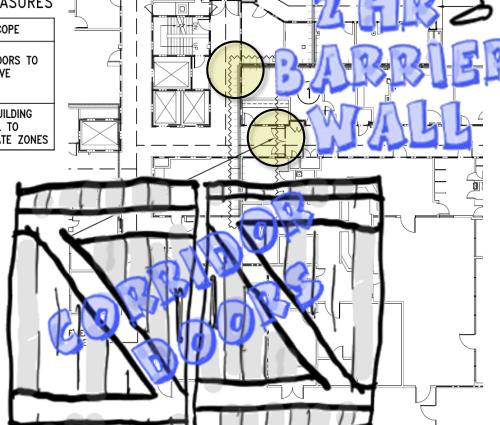




EAST WING						2
CATEGORY	SYSTEM	WORK SCOPE	ROOF	4TH FLR	3RD FLR	2ND FLR
Fire Barrier Walls	Fire & Life Safety	Install Fire Barrier Walls, Install / Modify Cross Corridor Doors				

(E)	NON-COMPLYING	CONDITION	REQUIRING	CORRECTIVE	MEASURES
-----	---------------	-----------	-----------	------------	----------

I.D. NO.	(E) NON-COMPLYING CONDITION	(N) OSHPD PROJECT WORK SCOPE
1	(E) WALL & EXIT ACCESS DOORS SEPARATING BLDG. 02 FROM BLDG. 01 DO NOT PROVIDE 2 HR. FIRE RESISTIVE SEPARATION	CONSTRUCT (N) WALLS & EXIT DOORS TO PROVIDE 2 HR. FIRE RESISTIVE SEPARATION
2	(E) FIRE ALARY PANEL MONITORS BLDG. 01, BLDG. 02, & BLDG. 05 AS A SINGLE ZONE	SEGREGATE DEVICES OF EACH BUILDING & RECONFIGURE ALARM PANEL TO MONITOR EACH BUILDING AS SEPARATE ZONES

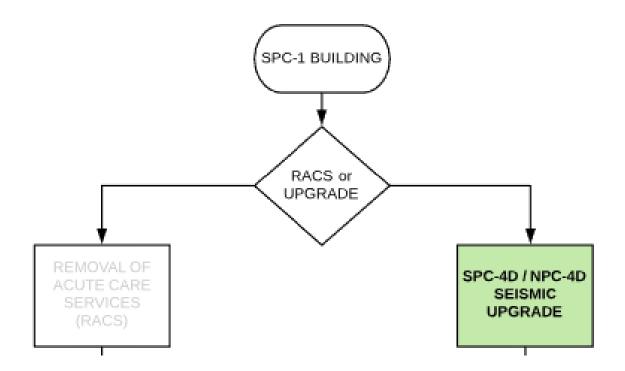




**Key Plan** 



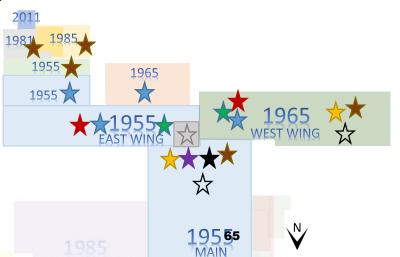
## Seismic Upgrade SPC-4D / NPC-4D





## PROJECT PHASES

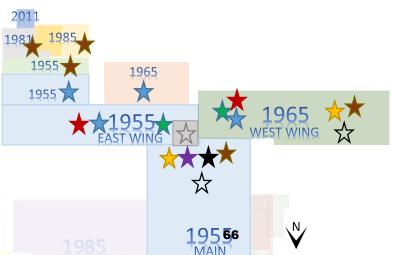
- THASE 1: Remove and Relocate existing hospital functions and / or departments into existing vacant spaces located on the hospital campus
- ★ PHASE 2: Install shut off valves and electrical disconnects that assure the complete isolation
- **PHASE 3: Demolish the building** structure
- THASE 4: Build a three story elevator tower to replace the existing elevator tower
- **THASE 5:** Install shut off valves and electrical disconnects that assure the complete isolation
- ★ PHASE 6: **Demolish the building** structure from the roof down to the third floor level
- ★ PHASE 7: Renovate and Remodel existing building exteriors and spaces.
- **★** PHASE 8: SPC-4D & NPC-4D Upgrades
- **☆** PHASE 9: **Repurpose Upgraded Buildings**





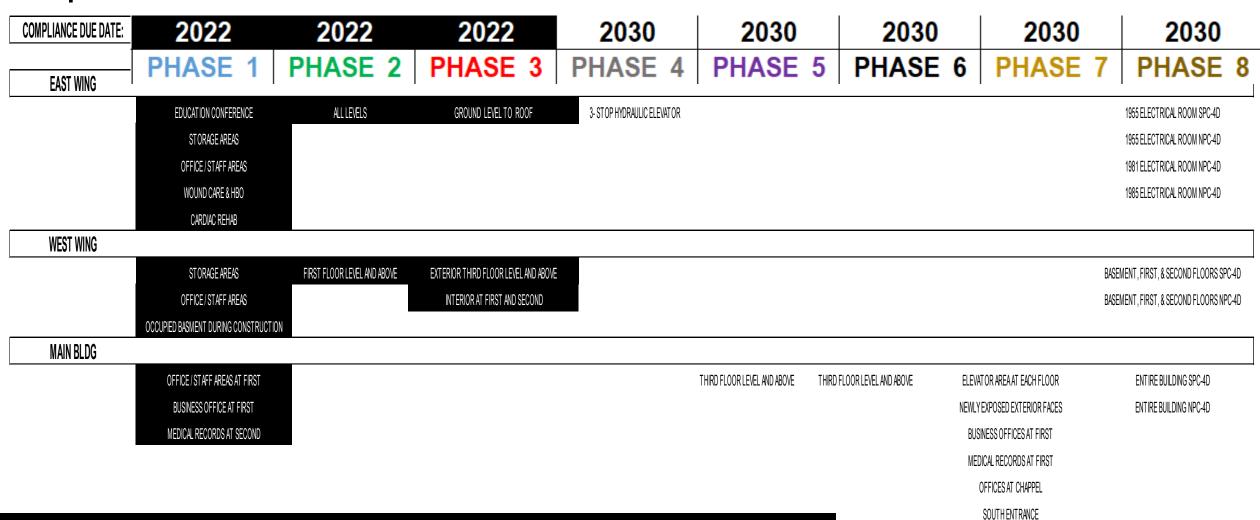
## PROJECT PHASES

- THASE 1: Remove and Relocate existing hospital functions and / or departments into existing vacant spaces located on the hospital campus
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- **★** PHASE 8: SPC-4D & NPC-4D Upgrades
- **☆** PHASE 9: **Repurpose Upgraded Buildings**





# Seismic Upgrade SPC-4D / NPC-4D Scope Detail



Shaded area indicates ROM funds needed between now and July 01, 2022











# SESSION TWO: Proposed 2019 Code Changes

### **⋄** OSHPD 1R, 2 & 5

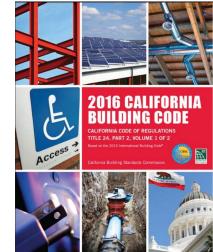
- > Structural Updates
- > OSHPD 1R Allowable Uses
- > Selective Parts 2, 3, 4 and 5
- **→** Part 10 Existing Building Code
- **>** Part 6 Energy Code

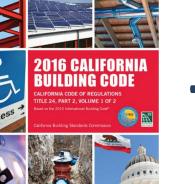
- Special Provisions for SPC-2 Buildings
  - ➤ Utilities Traversing SPC-1 Buildings
  - > Introduction to NPC 4D



# **Proposed CBSC 2019 Amendments**









#### OSHPD 01/18: California Administrative Code, Part 1, (Chapters 6 and 7), Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 02/18: California Building Code, Part 2 Volume 1, Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 03/18: California Building Code, Part 2, Volume 2, Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 04/18: California Mechanical Code. Part 4. Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 05/18: California Plumbing Code, Part 5, Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 06/18 California Existing Building Code, Part 10, Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)

#### OSHPD 01/17 California Electrical Code, Part 3, Title 24

- Notice of Proposed Action (NOPA): (PDF)
- Initial Statement of Reasons (ISOR): (PDF)
- Express Terms (ET): (PDF)
- Matrix Table, CAC recommendations: (PDF)





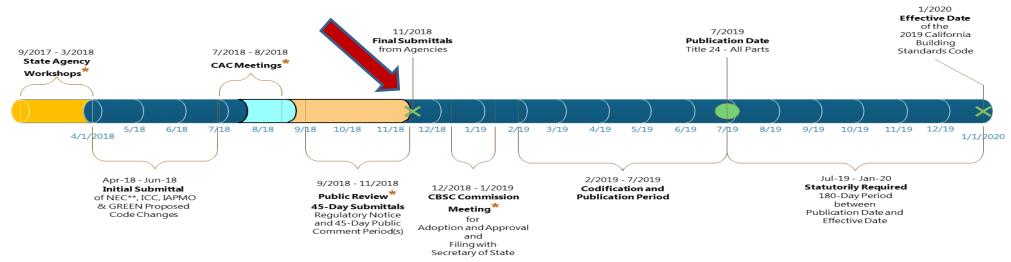


## **2019 CBSC Timeline**

2019 California Building Standards Code, Title 24

#### 2018 Triennial Code Adoption Cycle

Effective Date: January 1, 2020



#### Code Advisory Committees (CAC):

SDLF – Structural Design/Lateral Forces
PEME – Plumbing, Electrical, Mechanical & Energy
HF – Health Facilities
GREEN – Green Building
BFO – Building, Fire & Other
ACCESS - Accessibility

\*Public Participation Opportunity
\*\*NEC resubmittal if necessary

All dates are subject to change







### OSHPD 1, 1R, 2 and 5 Alignment

#### [OSHPD 1] = Chapter 1224

General Acute-Care Hospitals including those that provide Rehabilitation Services



#### [OSHPD 1R] = Varies per Intended Use

Hospital Building removed from General Acute-Care services

#### [OSHPD 2] = Chapter 1225

Skilled Nursing Facilities and Intermediate Care Facilities

#### [OSHPD 3] = Chapter 1226

Clinics, including those under H&S Code Section 1200 and Hospital Outpatient Clinical Services provided in a freestanding building un H&S Code Section 1250

#### [OSHPD 4] = Chapter 1227

**Correctional Treatment Centers** 



**OSHPD 5] = Chapter 1228** 

Acute Psychiatric Hospitals





# Legislative Mandate for Hospitals



Alfred E. Alquist Hospital Facilities Seismic Safety
Act of 1983

**APPLICATION:** 



It is the intent of the Legislature that <u>hospital buildings</u>
<u>that house patients</u> who have less than the capacity of
normally healthy persons to protect themselves, <u>and</u> that
must be reasonably capable of <u>providing services to the</u>

<u>public after a disaster....</u>





# **Alquist Act - Application**

California Administrative Code (CAC) Chapter 6 (SB 1953 regs)

**GENERAL ACUTE CARE HOPITAL**, as used in Chapter 6, Part 1 means a hospital building as defined in Section 129725 of the Health and Safety Code and that is also licensed pursuant to subdivision (a) of **Section 1250** of the Health and Safety Code, **but does not include these buildings if...** 

... provide <u>skilled nursing</u> or <u>acute psychiatric</u> services only.





# Legislative Mandate for Hospitals



Alfred E. Alquist Hospital Facilities Seismic Safety
Act of 1983

**STANDARDS:** 

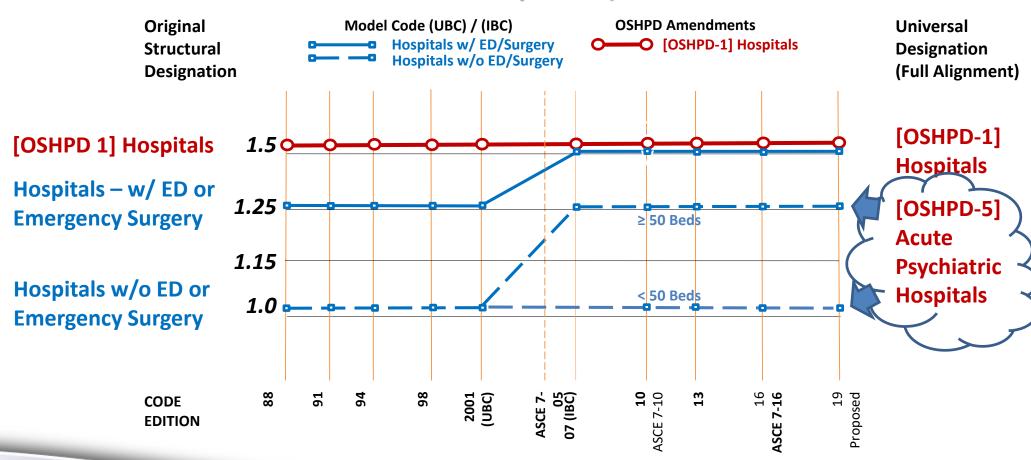


shall be designed and constructed to resist, insofar as practical, the forces generated by earthquakes, gravity, and winds. In order to accomplish this purpose, the office shall propose proper building standards for earthquake resistance based upon current knowledge, and provide an independent review of the design and construction of hospital buildings.



# History of Structural Importance Factors

#### **OSHPD Hospital Importance Factors**

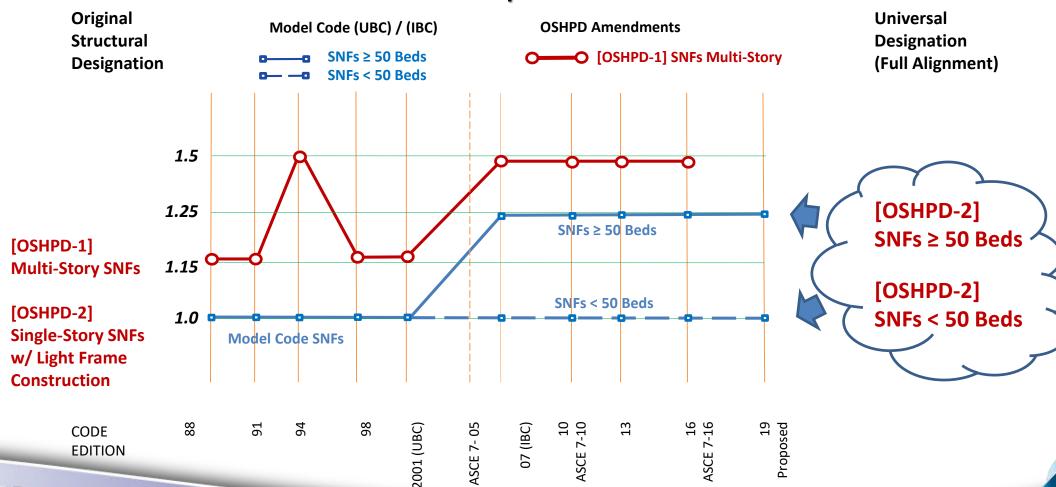






# History of Structural Importance Factors

#### **OSHPD SNF Importance Factors**





# California Building Standards Law

#### California Health & Safety Code Subsection 18930(a) Nine-Point Criteria Analysis of Proposed Building Standards:

7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.



(A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a <u>statement</u> <u>defining the inadequacy shall accompany the proposed building</u> <u>standard</u> when submitted to the commission.

**OSHPD** is **obligated to use model code** whenever and wherever possible, unless model code can be shown to be inadequate.



### **Model Code Standard for....**

#### Buildings that do not .....

House patients who have less than the capacity of normally healthy persons to protect themselves

#### nor

Provide services to the public after a disaster

Model code may apply to any use other than required [OSHPD 1] General Acute Care Services...

where appropriate





### **Model Code Standard for....**

[OSHPD 1R] =

Model Code =

No SPC/NPC Ratings





### **OSHPD 1R - Allowable Services**

#### **OSHPD Services permitted in OSHPD 1R Buildings:**

- ➤ OSHPD 1 Section 1224 Duplicative Hospital Services (in excess of those required for GACH Basic and Supplemental Services)
- **➤ OSHPD 1 Section 1224.39 Outpatient Hospital Services**
- **→** OSHPD 2 Section 1225 Skilled Nursing
- > OSHPD 5 Section 1228 Acute Psychiatric Hospital and/or Related Services

Other Services are also permitted in accordance with model code provisions

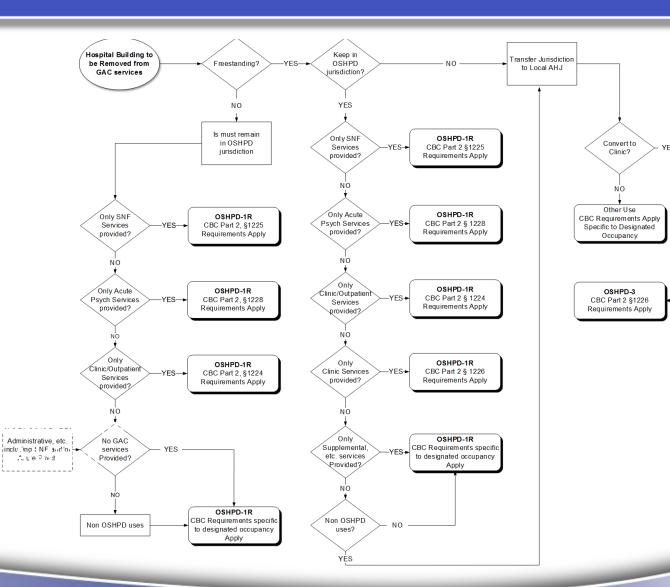




### OSHPD 1R – Flowchart of Uses

Mixed
"Use" and "Occupancy"
Permitted
in accordance with
Model Code

- ✓ Non-GACH OSHPD Program Uses (1224/1225/1228)
- ✓ Other Uses





# **CDPH Licensing Perspective**

#### **Considerations for OSHPD 1R Buildings:**

- Duplicative Services are permitted providing that required hospital support features are within conforming hospital construction
- Outpatient Observation acuity may be restricted in the absence of acceptable evacuation provisions and protocols
- Multiple provider arrangements will require additional provisions to demonstrate:
  - Separate entrancing
  - Required support services cable of being provided outside of hospital services





# **DSA Accessibility Perspective**

#### **Accessibility Provisions for OSHPD 1R Buildings:**

- > 50% SNF Accessible Patient Room ratio is per room versus per patient bed
- Existing non-accessible toilets within nursing units converted to staff offices and clinic exam rooms will not need to be removed, provided that:
  - ☐ A minimum of 10% are made to be accessible
  - Separate accessible common-use toilets are provided
  - ☐ Nursing unit conversions to family lodging suites will be required to meet the provisions of "transient lodging"





# Repurposing - Other New Items

#### > Part 1

Adoption of Part 6 California Energy Codes

#### > Part 2

I-2 (with restraint): Class I Flooring

Sharing of Nursing Unit Support Spaces

Surgical Suite Staff Changing Areas – Flow Improvement

**Outpatient Observation Units** 

#### Parts 3, 4 and 5

**Outpatient Observation Provisions** 

Mechanical Ventilation Table 4A Alignment with ASHRAE 170





# Part 1 – Application of Part 6

#### **Chapter 7, Article 1 General**

**7-103. Jurisdiction.** The following are within the jurisdiction of Office of Statewide Health Planning and Development:

. . .

(c) For hospital buildings, skilled nursing facilities and intermediate care facilities, the Office shall also enforce the regulations of the California Building Standards Code as adopted by <a href="mailto:the California Energy">the California Energy</a>
<a href="mailto:Commission">Commission</a>, the Office of the State Fire Marshal and the Division of the State Architect/Access Compliance Section, for <a href="mailto:Energy Conservation">Energy Conservation</a>, fire and life safety and accessibility compliance for persons with disabilities, respectively.





### Part 2 – Section 804 Floor Finishes

#### Floor Finish Where Restraint is Used

- > 2016 CBC Supplement (Effective July 1, 2018)
  - Group I-3 redefined as incarceration only
  - Psychiatric Facilities now Group I-2 (with restraint)
  - Noncombustible floor finish and floor coverings where restraint is used
- > 2019 CBC
  - Floor finish may be Class I where restraint is used, under certain conditions





# Part 2 - Nursing Support Space

#### Required vs. shared Support Areas for Nursing Service

- Required in each Nursing Unit
  - Administrative area / Nurse Station
  - Nurse/Supervisor Office
  - Separate Clean and Soiled Utility Rooms, Clean linen storage
  - Medication Station
  - Equipment & Emergency Storage, gurneys & wheelchairs
  - Nourishment area & Ice Machine

- > Shared between Nursing Units
  - Staff toilet rooms
  - Housekeeping rooms
  - Special bathing facilities
- Optional or may be shared with other service spaces
  - Exam &/or treatment rooms are optional
  - Multipurpose rooms may be shared with other departments

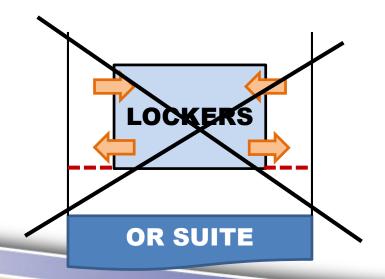


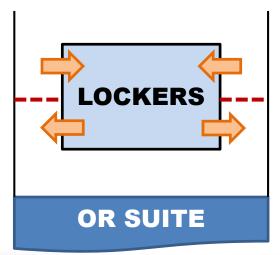
# Part 2 - Surgical Service Space

#### **Staff Clothing Change Areas**

#### Arranged to ensure a traffic pattern so that personnel can:

- ✓ Enter the staff change area from non-restricted space
- ✓ Change their attire
- ✓ Move directly into the semi-restricted surgical service corridor.







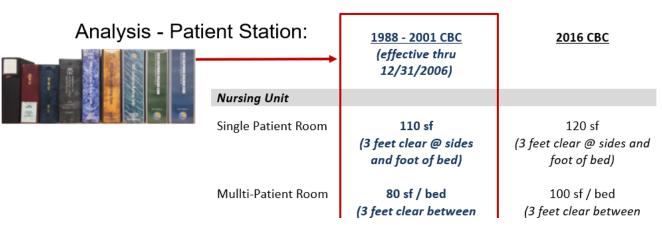


# Part 2 – Outpatient Observation Units

Senate Bill 1076 (Health and Safety Code section 1253.7)

Defines "observation services" as "outpatient services... to those patient who have unstable or uncertain conditions potentially serious enough to warrant close observation, but not so serious as to warrant inpatient admission to the hospital."

New Code Section 1224.39.6





### Part 4 – Table 4A

#### **California Mechanical Code**

#### Revised Table 4-A

# Non-Patient Areas may be per Section 403 (ASHRAE 62.1):

- Administrative
- Dining Room
- Dishwashing Room
- Multipurpose Room
- Staff Sleep Room

VENTILATION AIR  TABLE +A  PRESSURE RELATIONSHIP AND VENTILATION AIR UNREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKALLED NURSHING FACILITE FACILITIES, AND LOCENSED CLINICS  THEATMENT CENTERS, OUTPATIENT FACILITIES, AND LOCENSED CLINICS  THEATMENT CENTERS, OUTPATIENT FACILITIES, AND LOCENSED CLINICS.										
FUNCTION OR SPACE	PRESSURE RELATIONSHIP TO ADJACENT AREAS (I) (n)	MINIMUM OUTDOOR ACH	MINIMUM TOTAL ACH	MINIMUM TOTAL ACH IF 100% O.A.	ALL ROOM AIR EXHAUSTED DIRECTLY TO OUTDOORS (j)	AIR RECIRCULATED BY MEANS OF ROOM UNITS (a)	DESIGN RELATIVE HUMIDITY(k).	DESIGN TEMPERATU (I),°F/°C		
Administrative	NR	2	4	2	NR	NR	NR	NR		
Airborne infection isolation anteroom (u)	(e)	NR	10	10	Yes	No	NR	NR		
Airborne infection isolation room (u)	Negative	2	12	12	Yes	No	max 60	70-75/21-2		
Airborne infection isolation treatment/exam room	Negative	2	12	12	Yes	No	NR	NR		
Angiography room	Positive	5	15	12	NR	NR	NR	NR		
Bathing room	Negative	NR	10	NR	Yes	No	NR	70-75/21-2		
Bathroom	Negative	NR	10	10	Yes	No	NR	72-78/22-2		
Bedpan room	Negative	NR	10	10	Yes	No	NR	NR		
Blood bank/tissue storage	NR	2	6		NR	NR	NR	NR		
Blood draw/phlebotomy	NR.	2	- 6	- 6	NR/	NR	NR	NR		
Bronchoscopy, sputum collection, and pentamidine administration (n)	Negative		-12	12	Yes	No	NR	68-73/20-2		
Cardiac catheterization lab	Positive	5	20		NR	No	max 60	70-75/21-2		
Clean linen storage	Positive	NR	2	2	NR	NR	NR	72-78/22-2		
Clean workroom (central medical and surgical supply space)	Positive	2	1-41	4	NR	No	max 60	72-78/22-2		
Clean workroom or clean holding (support)	Positive	2	4	1	NR	NR	NR	NR		
Critical and intensive care	NR	2	6	6	NR	No	30-60	70-75/21-2		
CT Scan	NR	2	6	6	NR	NR	max 60	NR		
Darkroom (g)	Negative 1	WW/W	10-	n 12, c	Yes	No	NR	NR		
Delivery room (caesarean) (m), (n), (o)	Positive	4	20	12	NR	No	20-60	68-75/20-2		
Dialysis treatment area	NR	2	6	6	NR	NR	NR	72-78/22-2		
Dialyzer reprocessing room	Negative	NR	10	NR	Yes	No	NR	NR		
Dietary storage	NR	NR	2	2	NR	No	NR	72-78/22-2		
Dining room	NR	2	10	10	NR	NR	NR	NR		
Dishwashing room Electroconvulsive therapy	N P	NR	10	NR	Yes	NR	NR	NR		
procedure room Emergency department		3	15	10	NR	NR	NR	NR		
exam/treatment room (p) Endoscope cleaning	NR Negative	2	6	10	NR Yes	NR No	max 60 NR	70-75/21-2 NR		
ER decontamination	Negative	2	12	4	Yes	No	NR NR	NR		
ER waiting rooms	Negative	2	12	12	Yes (q)	NR	max 65	70-75/21-2		
Examination room	NR	2	6	6	NR	NR	max 60	70-75/21-2		
Fast track room	NR	2	6	2	NR	NR	NR	NR		
Fluoroscopy room	Negative	2	6	6	Yes	No	NR	NR		





# Part 6 – California Energy Code (CEC)

#### **Applications to Building Envelope**

OSHPD versus CEC Definition of "Addition"

What's the Difference?

#### **OSHPD**:

[A] ADDITION. An extension or increase in floor area or height of a building or structure. [DSA-AC] An expansion, extension or increase in the gross floor area or height of a building or facility.





# Part 6 – Applications to Building Envelope

#### **CEC:**

**ADDITION** is any change to a building that increases conditioned floor area and conditioned volume. See also, "newly conditioned space." Addition is also any change that increases the floor area and volume of an unconditioned building of an occupancy group or type regulated by Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Part 6.

NEWLY CONDITIONED SPACE is any space being converted from unconditioned to directly conditioned or indirectly conditioned space. Newly conditioned space must comply with the requirements for an addition. See Section 141.0 for nonresidential occupancies and Section 150.2 for residential occupancies.



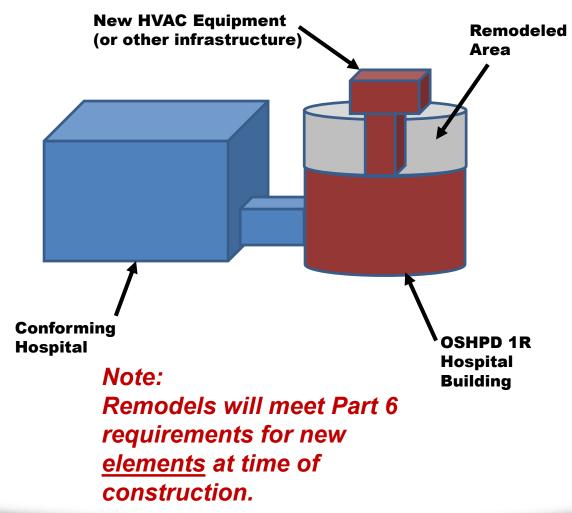


# Part 6 – Applications to Remodels



#### **OSHPD 1R Remodel**

- New Lighting & Controls
  - Meets Part 6
- New HVAC Equipment (units, chillers, etc.)
  - ☐ Meets Part 6 (SEER)
- New Ventilation Shaft (for future build-out)
  - Meets Part 6 (duct testing)





### Part 6 – Enforcement

#### **Required Verifications**

- **□** LED Lighting
- ☐ Equipment Efficiency Ratings
- **☐** Building Envelope
  - Insulation/Leakage
  - Fenestration
    - √ Glazing Type
    - √ % Fenestration
    - ✓ Orientation

2019 Nonresidential Appendices

Appendix NA7-1

#### Nonresidential Appendix NA7

#### Appendix NA7 – Installation and Acceptance Requirements for Nonresidential Buildings and Covered Processes

overeu	Processes	
A7.1	Purpose and Scope	
NA7.2	Introduction	
NA7.3	Roles and Responsibilities.	
NA7.	3.1 Responsible Person	
NA7.	3.2 Field Technician	
NA7.	3.3 Documentation Author	
NA7	3.4 Enforcement Agency	
NA7.4	Building Envelope Acceptance Tests	
NA7	4.1 Fenestration	
NA7.	4.2 Window Films	
NA7.	4.3 Dynamic Glazing	
NA7.	4.4 Clerestories for PAF	
NA7.	4.5 Interior and Exterior Horizontal Slats for PAF	
NA7	4.6 Interior and Exterior Light Shelves for PAF	
NA7.5	Mechanical Systems Acceptance Tests	
NA7	5.1 Outdoor Air	
NA7.	5.2 Constant-Volume, Single-Zone, Air Conditioners and Heat Pumps	
NA7.	5.3 Air Distribution Systems	
NA7.	5.4 Air Economizer Controls	
NA7.	5.5 Demand Control Ventilation (DCV) Systems	
NA7.	5.6 Supply Fan Variable Flow Controls	
NA7.	5.7 Valve Leakage Test	
	5.8 Supply Water Temperature Reset Controls	
	5.9 Hydronic System Variable Flow Controls	
	5.10 Automatic Demand Shed Control Acceptance	
	5.11 Fault Detection and Diagnostics (FDD) for Packaged Direct-Expansion Units	
	5.12 Automatic Fault Detection and Diagnostics (FDD) for Air Handling Units and Zone Terminal	
		11,
NA7	5.13 Distributed Energy Storage DX AC Systems Acceptance Tests	

Appendix NA7- Installation and Acceptance Requirements for Nonresidential Buildings and Covered Processes





### Part 6 – Enforcement

#### **OSHPD Systems**

#### **Plan Review:**

- ✓ Exterior Assemblies & Detailing
- ✓ Electrical Lighting Design & Specifications
- ✓ Mechanical Systems Design & Specifications
- ✓ Energy Code Modeling

#### **Construction:**

- ✓ Continuous Inspection & Observation
- ✓ Verified Reports
- √ Commissioning & Occupancy

#### **CHAPTER 10**

#### ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC)

#### ARTICLE 1 ENERGY BUILDING REGULATIONS

10-101, Scope

(a) This article contains administrative regulations relating to the energy building regulations in Title 24, Part 6. This article applies to all residential and nonresidential buildings.

(b) Nothing in this article lessens any necessary qualifications or responsibilities of licensed or registered building professionals or other designers or builders, or the duties of enforcement agencies, that exist under state or local law.

(c) If any provision of the regulations in this article or the Building Energy Efficiency Standards, Title 24, Part 6, of the California Code of Regulations is found invalid by a court of competent jurisdiction, the remainder of these regulations shall remain in effect.

Authority: Sections 25402 and 25402.1, Public Resources Code.

Reference: Sections 25402 and 25402.1, Public Resources Code.

HISTORY.

- New Article 1 (Section 1401) filed 5-3-76; effective thirtieth day thereafter (Register 76, No. 19).
- Amendment filed 8-17-77; designated effective 3-11-78 (Register 77, No. 34).
- Repealer of Article 1 (Section 1401) and new Article 1 (Sections 1401-1408, not consecutive) filed 12-9-81; designated effective 7-1-82 (Register 81, No. 50).
- Amendment filed 12-27-84; designated effective 1-1-85 pursuant to Government Code Section 11346.2 (d) (Register 84, No. 52).

10-102. Definitions. In this article the following definitions

ACCEPTANCE REQUIREMENTS are "acceptance requirements for code compliance" as defined in Section 100.1(b) of Part 6.

ACCEPTANCE TEST TECHNICIAN is a Field Technician as defined in Section 10-102 who is certified by an authorized Acceptance Test Technician Certification Provider pursuant to the requirements of Section 10-103.1 or 10-103.2

LICHTING CONTROLS ACCEPTANCE TEST

TECHNICIAN is a professional certified by an authorized Lighting Controls Acceptance Test Technician Certification Provider to perform nonresidential lighting controls acceptance tests and complete the documentation required for nonresidential lighting controls acceptance tests as required by the Building Energy Efficiency Standards.

MECHANICAL ACCEPTANCE TEST TECHNI-CIAN is a professional certified by an authorized Mechanical Acceptance Test Technician Certification Provider to perform nonresidential mechanical acceptance tests and complete the documentation required for nonresidential mechanical acceptance tests as required by the Building Energy Efficiency Standards.

ACCEPTANCE TEST EMPLOYER is a person or entity who employs an Acceptance Test Technician and is certified by an authorized Acceptance Test Technician Certification Provider.

LIGHTING CONTROLS ACCEPTANCE TEST EMPLOYER is a person or entity who is the employer of a Lighting Controls Acceptance Test Technician and is certified by an authorized Lighting Controls Acceptance Test Technician Certification Provider.

MECHANICAL ACCEPTANCE TEST EMPLOYER is a person or entity who is the employer of a Mechanical Acceptance Test Technician and is certified by an authorized Mechanical Acceptance Test Technician Certification Provider.

ACCEPTANCE TEST TECHNICIAN CERTIFICA-TION PROVIDER is an agency, organization or entity approved by the Energy Commission to train and certify Acceptance Test Technicians and Acceptance Test Employers according to the requirements of Section 10-103.1 or 10-

LIGHTING CONTROLS ACCEPTANCE TEST

agency, organization or entity approved by the Energy Commission to train and certify Lighting Controls Acceptance Test Technicians and Lighting Controls Acceptance Test Employers according to the requirements of Section 10-103.1.

MECHANICAL ACCEPTANCE TEST TECHNI-CIAN CERTIFICATION PROVIDER is an agency, organization or entity approved by the Energy Commission to train and certify Mechanical Acceptance Test Technicians and Mechanical Acceptance Test Employers according to the requirements of Section 10-103.2.

NOTE: Authority cited: Sections 25402, 25402.1, and 25213, Public Resources Code. Reference: Sections 25007, 25402(a)-(b), 25402.1, 25402.4, 25402.5, 25402.8 and 25910. Public Resources Code.

ACM means ALTERNATIVE CALCULATION METHOD are compliance software, or alternative component packages, or exceptional methods approved by the Commission under Section 10-109. ACMs are also referred to as Compliance Software.

ACM APPROVAL MANUALS are the documents establishing the requirements for Energy Commission approval of Compliance Software used to demonstrate compliance with the Building Energy Efficiency Standards for Residential and Nonresidential Buildings currently adopted by the Energy Commission.

2016 CALIFORNIA ADMINISTRATIVE CODE



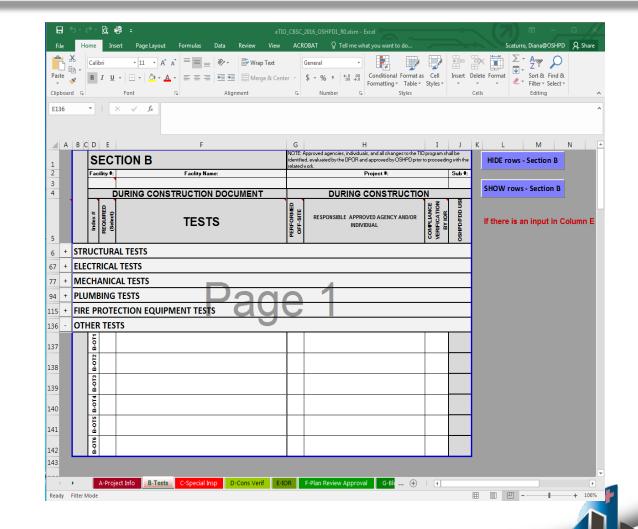


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### **Part 6 - Enforcement**

#### *e*TIO Next Steps:

- Analyze Final Adopted Language
- Perform Detailed Comparison of CEC Acceptance Testing Methods versus OSHPD Practices
- Provide Training to Office Staff, Field Staff & IORs
- ➤ Modify *e*TIO





### Part 6 – CEC Resources

# OSHPD Documents will refer to...

#### 2019 CEC updates

- > Energy Standards
- > Forms
- > Manuals
- > Training Information

https://www.energy.ca.gov/title24/orc/





# Other New Items – Introducing Part 10

#### Part 10 – California Existing Building Code

Relocation of Chapter 34A to new CEBC "A" Chapters:

#### **Exception:**

SPC-1 and SPC-2 (OSHPD 1R) Additions, Alterations, Repairs & Voluntary Seismic Improvements...

Adopt IEBC Chapters 2, 3, 4 and 5 at the life safety performance level.

2016 CBC Chapter 34A		2019 CEBC	
Description	Section	Section	Notes
Additions, alterations and repairs	3401A.1.1	301A.1	Modify 301
Maintenance	3401A.2	302A.7	Modify 302
Compliance	3401A.3	302A.3	Modify 302
Building material, equipment and Systems	3401A.4	302A.4	Modify 302
Existing seismic force resisting systems	3401A.4.3	302A.4.1	Modify 302
Definitions	3402A	202A	Modify 202
Additions	3403A	502A	Modify 502
Alterations	3404A	503A	Modify 503
Repairs	3405A	405A	Modify 405
Glass Replacement	3407A	402A.1	Modify 402
Change of Occupancy/Function	3408A	506A	Modify 506
Seismic Retrofit Pre-1973 buildings	3411A	303A.3	Modify 303.3
Compliance Alternatives for Seismic Retrofit	3412A	303A.3	Modify 303.3





# Part 10 – Signage for OSHPD 1R

#### Part 10 – California Existing Building Code

310A.4 Non-General Acute Care Building (non-GAC building)
Access. All access points into SPC-1 buildings/non-GAC buildings
from General Acute Care buildings shall prominently display signage at
entrances/corridors, on each floor with access into the SPC-1 building
stating "NO GENERAL ACUTE CARE SERVICES BEYOND THIS
POINT"





### Part 10 - Provisions for Removal

# SECTION 3419A310A HOSPITAL BUILDINGS REMOVED FROM GENERAL ACUTE CARE SERVICES (Relocated from CBC 3419A)

<u>310</u>3419A.1 General. The requirements of this section and Section <u>309</u>3418A shall apply to buildings removed from general acute care services that remain under OSHPD jurisdiction.

<u>310</u>3419A.2 Non-GAC buildings. Non-GAC buildings shall conform to the requirements of Section 1.10.1 [OSHPD 1R].

<u>310</u>3419A.3 Freestanding buildings. Application and enforcement of freestanding buildings removed from general acute care services but remaining under OSHPD jurisdiction shall be in accordance with Section 1.10.1 [OSHPD 1R].



# Part 10 – Repurposing OSHPD 1R Uses

#### Part 10 - California Existing Building Code

**506.1.2 Change in function. [OSHPD 1R, 2, 4 and 5]** A change in function shall require compliance with all the functional requirements for new construction in the California Building Code, including requirements in Sections 1224, 1225, 1226, 1227 and 1228.

**Exception [OSHPD 1R]**: Hospital buildings removed from acute care service adapted for re-use as skilled nursing facilities, acute psychiatric hospitals, or out-patient services of a hospital may be permitted to meet the minimum room clearances, areas, and dimensions **of the 2001 California Building Code** for existing rooms re-used for a similar purpose, subject to the approval of OSHPD.





### **Proposed 2019 Code Changes for...**

**♦ OSHPD 1R, 2 & 5** 

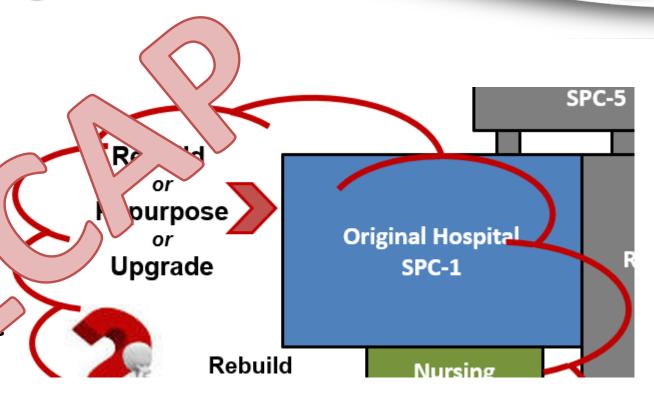
Structural Updates for

OSHPD 1R, 2 & 5

➤ Selective Parts 2, 3, 4 € 5

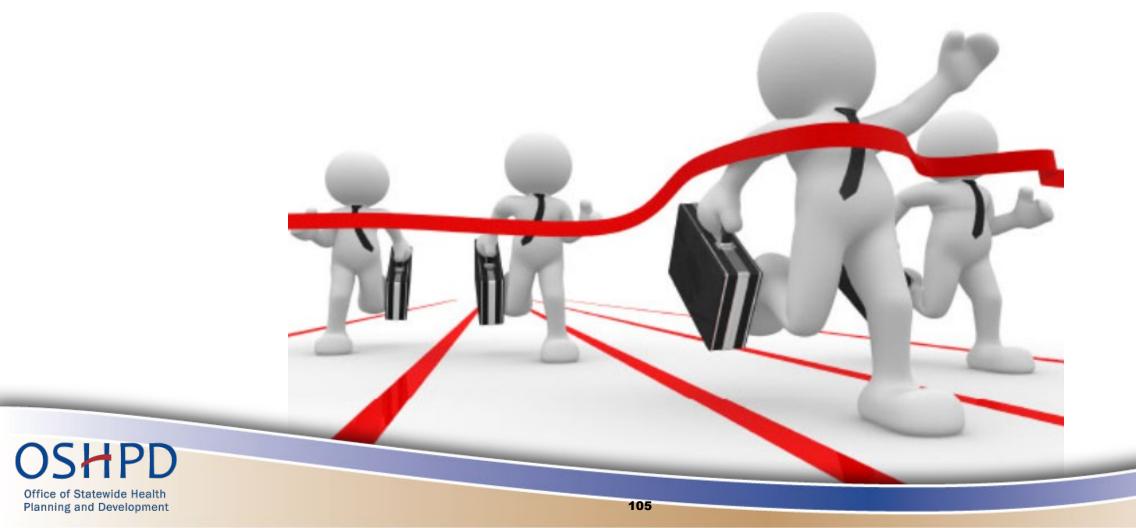
> Part 10 - Exist P (10) g C

Part 6 - Energy Co.





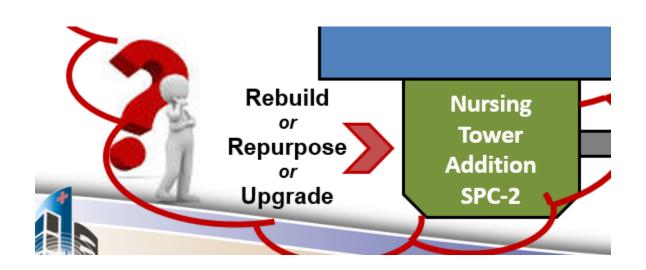
# Almost There...





### **Proposed 2019 Code Changes for...**

### Special Provisions for SPC-2 Buildings



- ➤ Utilities Traversing SPC-1 Buildings
- > Introduction to NPC 4D



# **SPC-2 Strategies and Impacts**

#### **SPC and NPC Compliance**

Requirements per 2016 California Administrative Code, Chapter 6:

After January 1, 2030, any general acute care hospital building which continues acute care operation must, at a minimum, meet the structural requirements of SPC 3, 4, 4D or 5, as defined in ... and the nonstructural requirements of NPC 5, as defined in... or shall no longer provide acute care services.



# **Currently NPC Compliant?**

#### **NPC Compliance Deadlines**

Without SB 499 Extension by 2008

**Seismic Design Category D** 

NPC-3 or NPC-3R by 2030

**Seismic Design Category F** 

NPC-3 or NPC-3R by 2020

Allowable NPC-2 Status

**OVERDUE** 



**OVERDUE** 

Allowable NPC-1 Status









With SB 499 Extension

# **NPC - 1 Compliance Restrictions**

## **Status and Impacts**



141 buildings at 28 facilities are NPC-1

NPC-2 status was required by January 1, 2002

- 16 years, 10 months overdue

If a building is less than NPC-2 compliant...

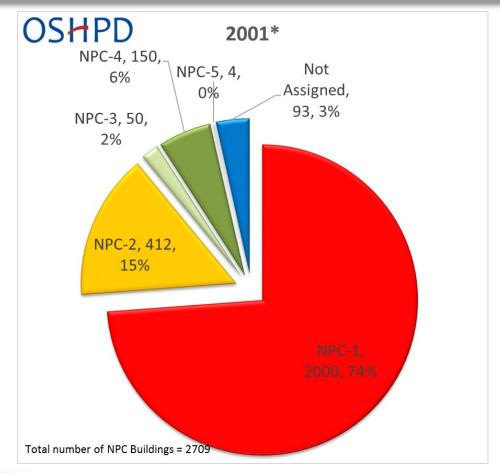
No building permit after January 1, 2020 except:

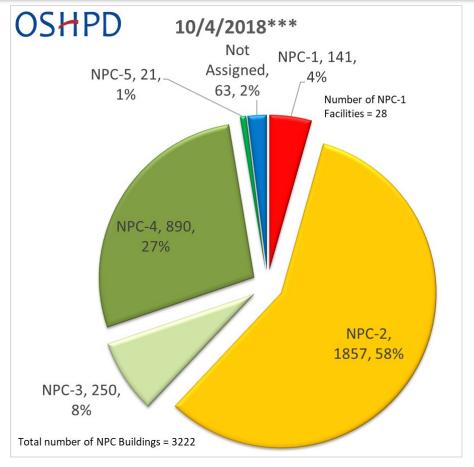
- ☐ Seismic Compliance
- **☐** Maintenance
- **☐** Emergency Repairs





## **NPC Status**





<sup>\*\*\*</sup>Includes buildings under construction, tunnels and equipment yards

For NPC - "Not Assigned" are for buildings and nonbuilding structures either under construction or where the nonstructural performance category has not been verified

Buildings under construction or just built are assigned a preliminary NPC of 4





## For Buildings Intended to Complete SPC Upgrades

#### **NPC Deadlines**

- ➤ By January 1, 2024, the hospital owner shall submit to the Office a complete nonstructural evaluation up to NPC-4 / NPC-4D and NPC 5, for each building to remain in acute care service beyond January 1, 2030
- ➤ By January 1, 2026, the hospital owner shall submit to the Office construction documents for NPC-4 / NPC-4D and NPC 5 compliance, that are deemed ready for review by the Office, for each building to remain in acute care service beyond January 1, 2030





- ➤ By January 1, 2028, the hospital owner shall obtain a <u>building permit</u> to begin construction for NPC-4 / NPC-4D and NPC-5 for each building to remain in acute care service beyond January 1, 2030. Hospitals not meeting this deadline shall not be issued a building permit except for:
  - ☐ Seismic compliance
  - Maintenance
  - Emergency repairs
- ➤ Hospitals must be NPC-4 / NPC-4D and NPC 5 compliant by 2030





#### NPC work to be included in remodels/renovations

➤ After January 1, 2028, buildings with NPC rating less than 4, all remodels/renovations, or other construction work, shall include anchorage and/or bracing of all equipment and services within the boundary of the scope of work that is not in compliance with NPC 4

## Don't forget the exceptions!





- Exception 1: Remodels/renovations, or other construction work, that remove a room or space from service use or occupancy for less than 24 hours
- Exception 2: Where 20% or less of the affected existing construction, such as ceilings, walls, ducts, but independent of finishes, is removed to access equipment and services for anchorage/bracing may be reinstalled as it pre-existed prior to the NPC work, as long as it was in compliance with the code at the time it was installed/constructed
- Exception 3: Buildings that have been removed from general acute care service, or have projects to remove the building from acute care services by 2030





## Part 1 – What is this NPC-4D?

#### NPC-4D is...

- ➤ A <u>new seismic nonstructural performance category</u> for hospital buildings upgraded to this level to provide acute care functions beyond 2030
  - ☐ New dates associated with new category
  - ☐ Three levels...
  - **□ Operational Plan** required:

Nonstructural Performance Category 4D Operational Plan (Operational Plan) for Levels 1, 2, and 3 areas required for continuous operations. For minimum compliance with NPC 4D the facility must prepare an owner-approved Operational Plan specifying how it will repair nonstructural damage and bring systems and services back on line, or provide them in an alternative manner to accommodate continuation of critical care operations.



## Part 1 – What is this NPC-4D?

#### Level 1:

All systems and equipment required to comply with NPC-3 (as revised) + Operational Plan

#### Level 2:

Includes Level 1, and all services and utilities from the source to Level 1 areas necessary to accommodate continuation of operations after an event. These services are anchored and braced, and shall include elevator(s) selected to provide service to patient, surgical, obstetrical, and ground floors during interruption of normal power needed

#### Level 3:

<u>Includes Level 2, and all systems and equipment are anchored and braced so that</u> <u>additional services, as determined by the hospital</u> in its Operational Plan, are functional and available to the public after a seismic event



## Part 1 – Revisions to NPC-3

#### **Revisions to NPC-3**

- ➤ Bracing of ceilings less than 300 sq. feet not in critical care spaces is exempt. Use of preapproved details for bracing is permitted
- Wall or floor mounted cabinets need not be braced unless they are in a patient care vicinity or could block a means of egress
- > Supports for elevator guide rails need not comply with the requirements of Part 2, Title 24
- Tanks and vessels should be adequately strapped and have flex connections capable of 12" movement, instead of rigid anchorage
- ➤ Load path check may be limited to the connection of equipment to support if magnitude of load less than certain limits





# Part 1 – Remove GACH Post-2030

## For Buildings Intended to Remain at SPC-2

#### NPC permitted to remain at NPC-2 if:

- ➤ By January 1, 2024, the hospital owner shall submit to the Office an updated <u>seismic compliance plan</u> for each building to be removed from acute care service beyond January 1, 2030
- ➤ By January 1, 2028, the hospital owner shall submit to the Office a <u>RACS</u> <u>project</u> which includes <u>construction documents</u> deemed ready for review by the Office for remaining work required to meet conditions indicated in Part 10, Chapter 3A for Removal of Acute Care Services.



# Part 1 – Services, Systems and Utilities Exception

#### **Remove GACH Services Post-2026**

- > Services/systems and utilities for SPC-1 or SPC-2 hospital buildings are permitted to pass through or under a building that has been removed from acute care hospital service only if:
  - ☐ The building removed from GAC service remains under the jurisdiction of OSHPD
  - ☐ The Services/system and utilities only support SPC-1 or 2 Buildings where no critical care hospital functions occur
  - ☐ SPC 1 or SPC 2 buildings must be NPC 2 and be served with **essential power** from a conforming building or source which does not pass through or under a building removed from acute care services
  - ☐ The SPC 2 building must be removed from acute care service no later than January 1, 2026



# **NPC Compliance Deadlines**

Seismic Compliance Deadline  SPC Rating	January 1, 2020	January 1, 2024	January 1, 2030
or o matring		SDC F Only	SDC D and F
SPC -1	NPC-2, Remove GAC Services by 2020		
SPC-2 (Remove Acute Care Services by 2030)		NPC-2	
SPC-2 (Upgrade to SPC-4D or 5 by 2030)	NPC-2	NPC-3	NPC-4 or 4D & 5
SPC-4D	NPC-2	NPC-3	NPC-4 or 4D & 5
Pre-83 SPC-3 & SPC-4	NPC-2	NPC-3	NPC-4 or 4D & 5
Post 83 SPC-3, SPC-4 & SPC5	NPC-2	NPC-3	NPC-4 or 4D & 5









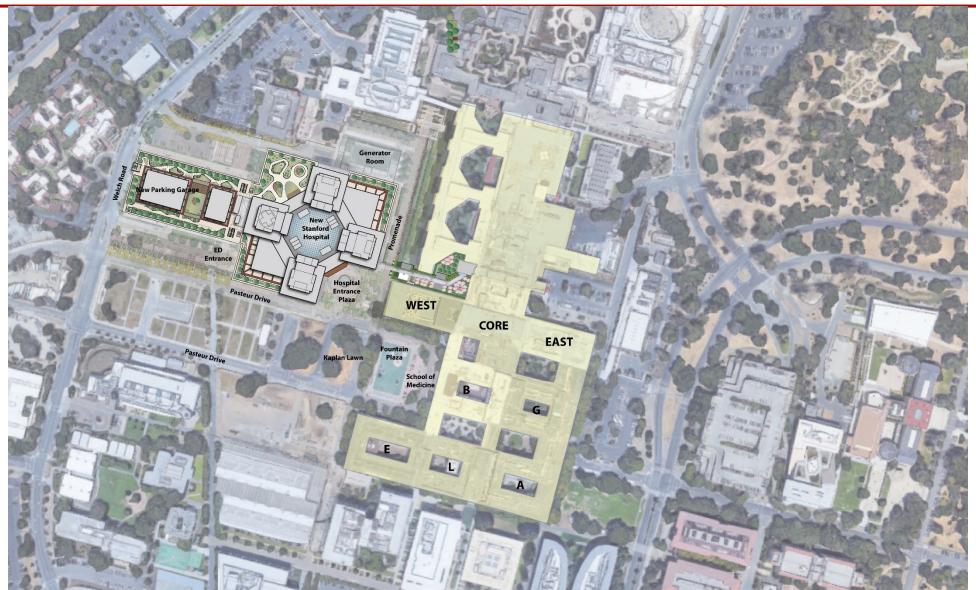
## **OSHPD 1R**

November 2018
Bert Hurlbut, VP of Construction



- OSHPD is updating regulations for the 2019 California Building Code (CBC)
- New CBC will be effective 1/1/2020
- California amendments reflect revised seismic safety requirements, as well as new definitions for hospital buildings removed from acute care service
- Specific amendments requested by SHC enable a focused approach to separating compliant from non-compliant buildings, and also extend dates for compliance to align with the SHC master plan



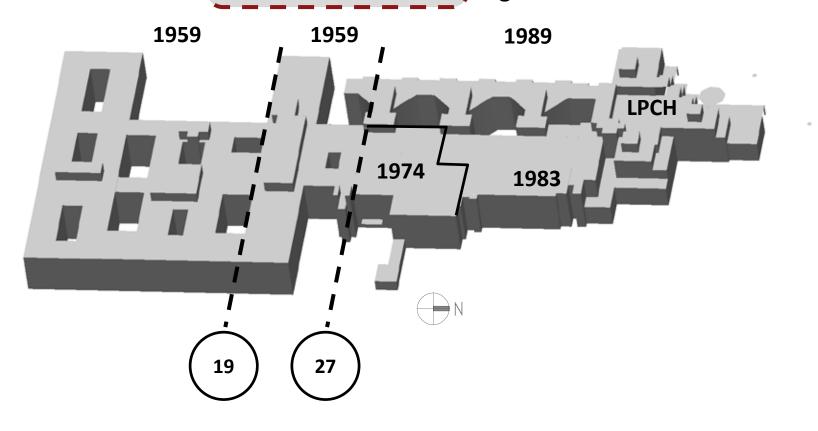




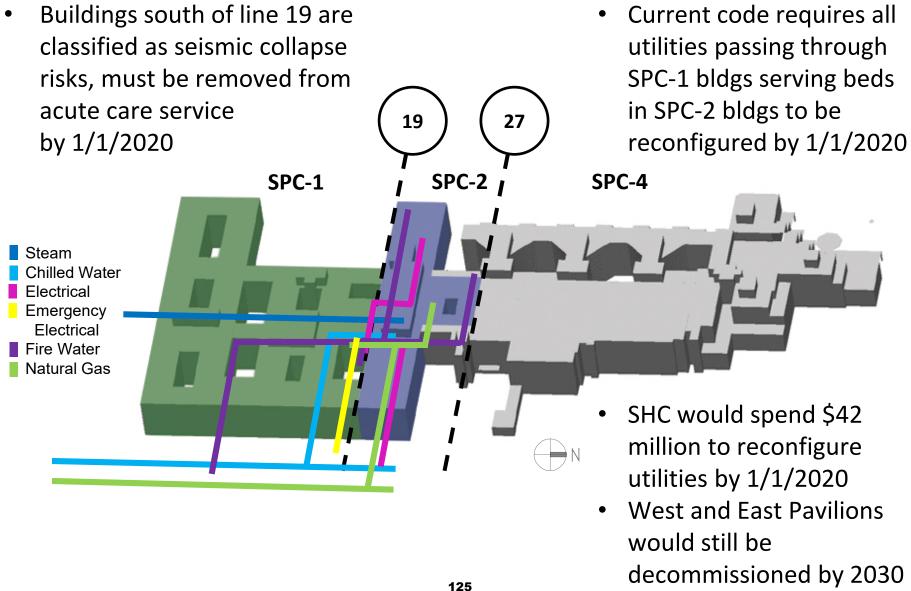
Currently entire facility is classified as a hospital – OSHPD
 1 requirements

New Stanford Hospital 368 Beds Opening 2019

- All seismic requirements apply
  - all nonstructural retrofits required
  - all requirements for hospital grade construction









Revised regulations will exempt E-power is due 1/1/2020 most non-compliant utility Nonstructural retrofits connections, except for complete by 1/1/2024 There are certain tradeemergency power 19 **27** offs for the diminished scope SPC-1 SPC-2 SPC-4 Vacate all inpatient nursing units in West and East Pavilions by 1/1/2026 No acute care south of line 27 by 1/1/2030



Exceptions allows SHC to focus Target completion of bed capital on building bed extension is end of CY extensions and vacating SPC-2 2024 bldgs sooner than 2030 All work must be 19 **27** complete end of calendar 2025 SPC-2 SPC-1 SPC-4











## **SESSION THREE:**

### **Inpatient Services to Outpatient Services**

Surgery/Radiology/Emergency Department

#### **Duplicative Hospital Services**

- Clinical Lab
- Dietary

#### **Nursing Unit Re-use**

- Acute Psychiatric and/or Skilled Nursing
- Business Office
- Outpatient Clinics
- Physician Sleep & Other Uses

### **❖ Scenario 1** (Stanford):

Nursing Unit Reuse

#### **❖ Scenario 2** (LLUMC):

- Nursing Unit Reuse
- > IP to OP Perioperative Suite

#### **Scenario 3** (CPMC Davies):

- Nursing Unit Reuse
- Duplicative Lab
- > OP Clinics

#### **Scenario 4** (Final Thoughts):

- > Various Considerations
- > Trust the Process



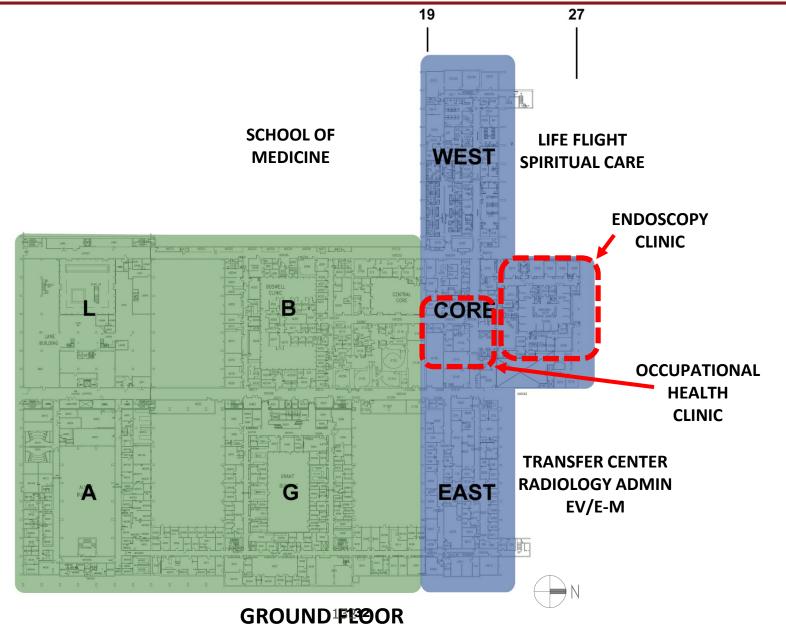




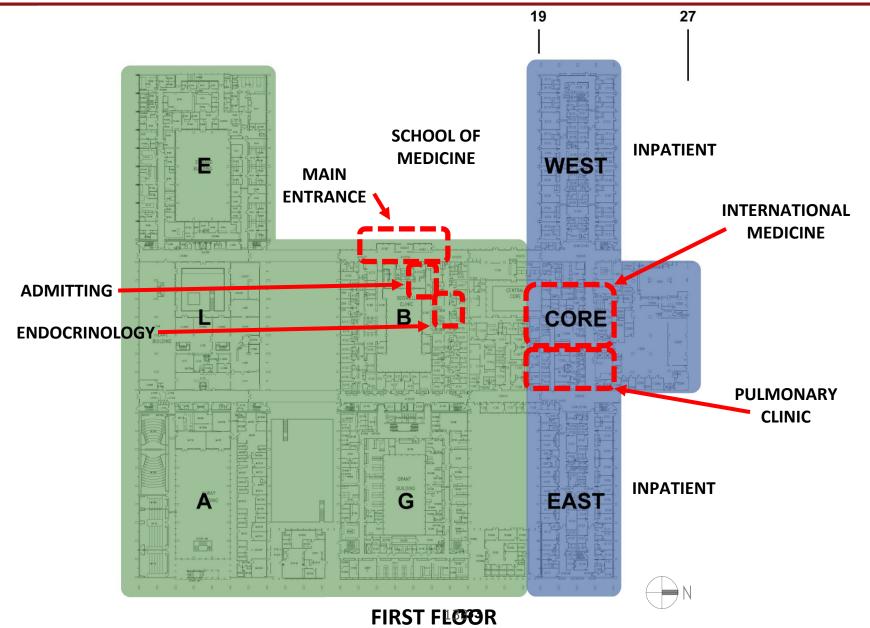
## **OSHPD 1R**

November 2018
Bert Hurlbut, VP of Construction

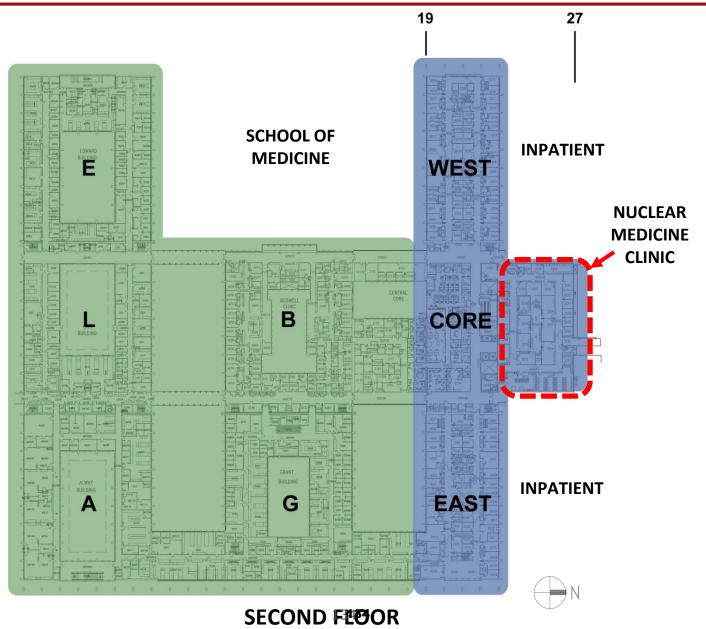




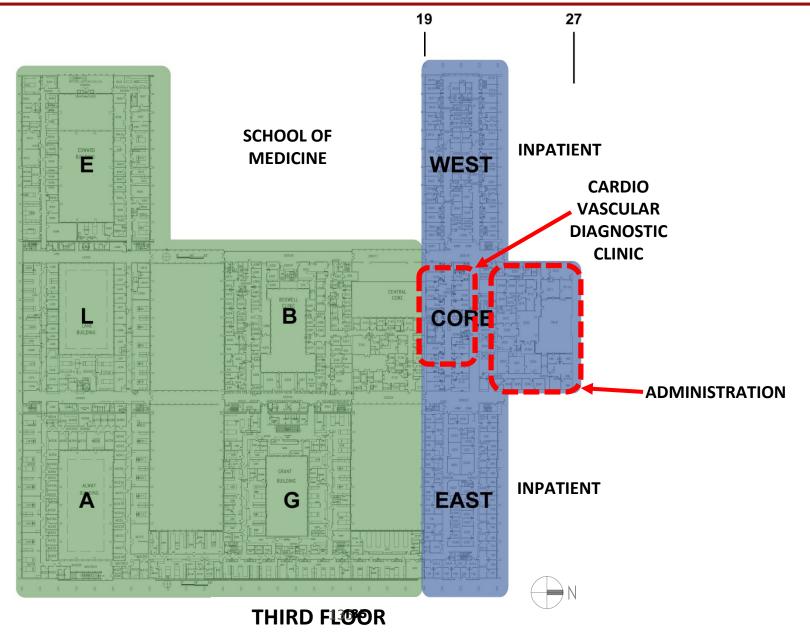




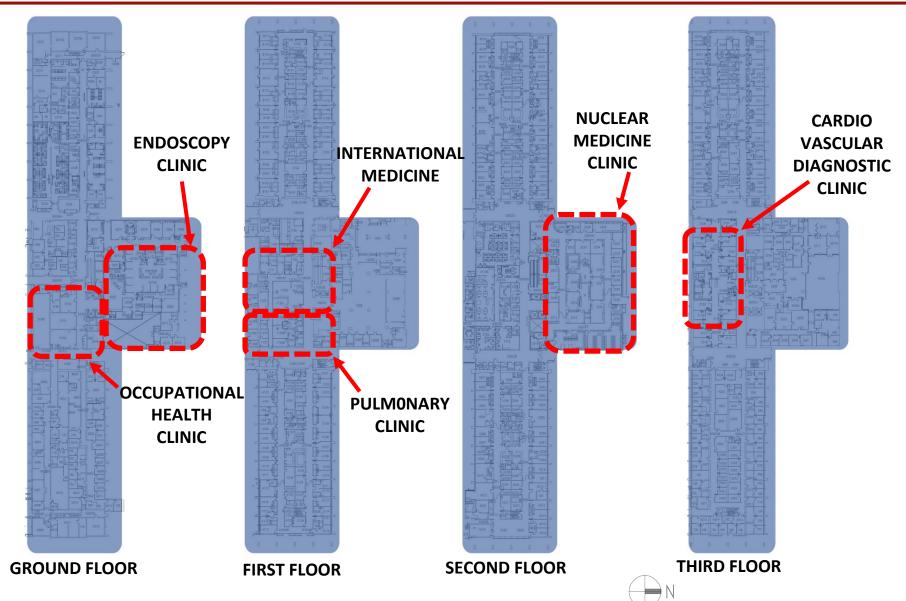




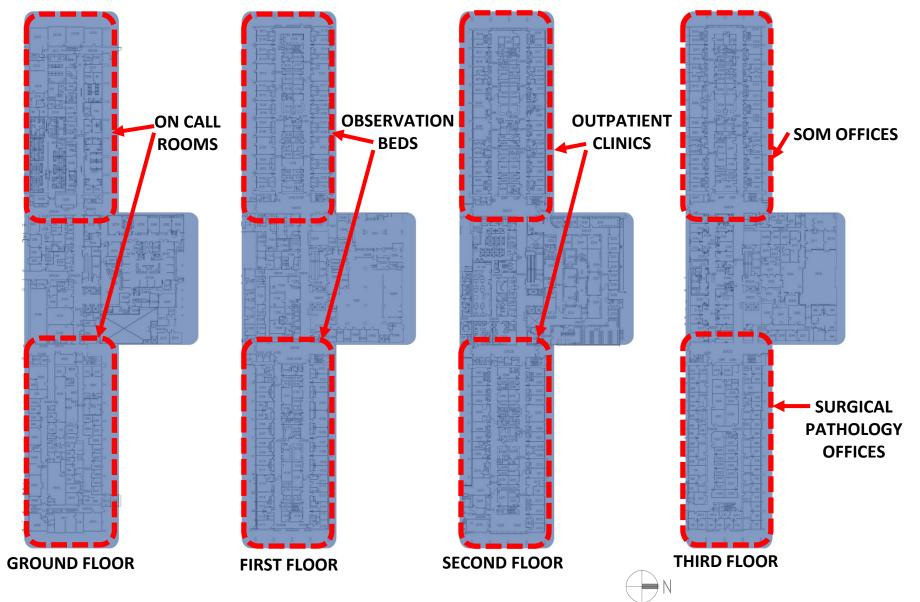




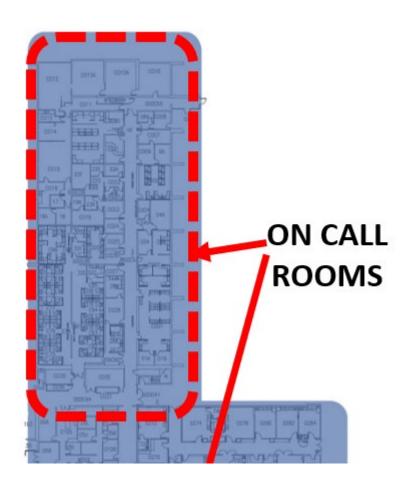








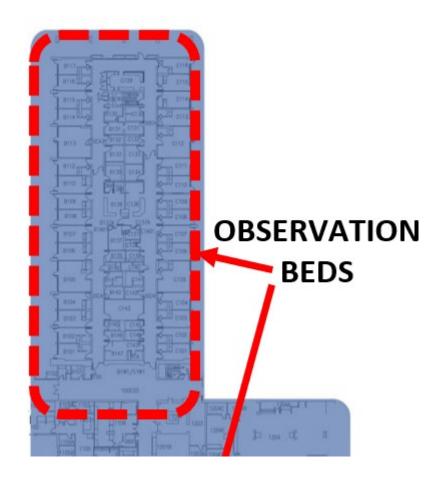




- 10% of Rooms to be Accessible (including adjacent Toilets)
  - Single-Bed
     Rooms to have 3' aisle access each side of bed
  - Dual-Bed Rooms may have one 3' access aisle between the beds



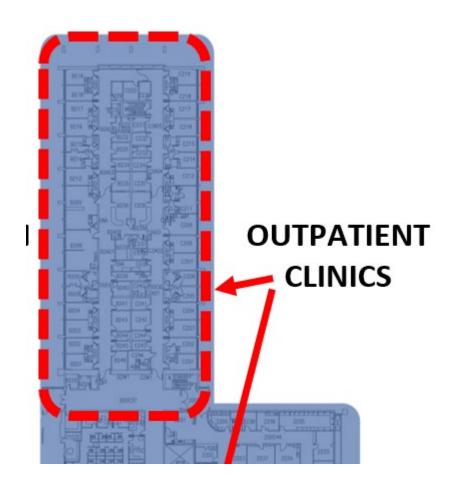




- Patient Stations/Rooms may meet size requirements of 2001 CBC
- Minimum of one accessible Patient Toilet Room shall be provided in or immediately accessible to the unit
- Handwash Stations shall be provided at each Nurse Station



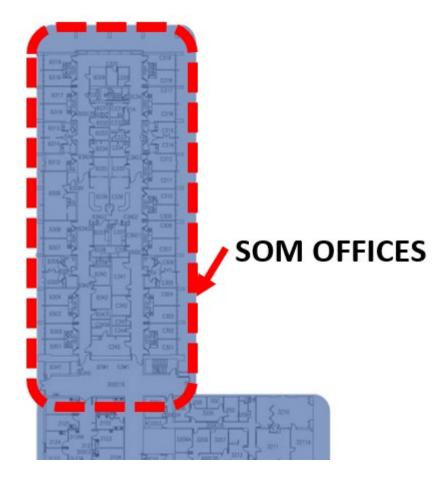




- Exam Rooms may meet size requirements of 2001 CBC
- Minimum of one accessible Patient Toilet Room shall be provided in or immediately accessible to the unit
- Handwash Stations shall be provided at each Nurse Station and each Exam Room







- For Staff Offices a minimum of 10% adjacent Toilet Rooms to be Accessible
- 90% of existing non-Accessible Toilets may be allowed to remain if "Technically Infeasible" to remove
- Toilets serving public shall be Accessible
- Conversion to "B" Occupancy with appropriate fire separation and fire provision amenities





# Conversion from Inpatient Nursing to Physician Sleep Rooms (Stanford)

## **OSHPD Plan Review Questions (Sample)**

- Physician Sleep Rooms Change In Occupancy Group?
  - "I-2" to "R-2" (Dormitories) Occupancy Separations
  - CBC Chapter 10 Egress, Corridors, Door Closers, etc.
  - No longer Section 407, No Smoke Compartments
- > Accessible Toilets and Bathing (CBC Chapter 11-B)
  - "Required" Common-use Toilets and Bathing accessible
  - (E) "Non-required" non-accessible may remain under "Infeasible" to remove Dead legs on water supply
  - Required to make 10% of the (E) private facilities accessible





# Conversion from Inpatient Nursing to Outpatient Clinical Services (Stanford)

- > Outpatient Clinics Change in Occupancy Group?
  - "I-2" to "B" Occupancy Separations
- > "Outpatient" Requirements per CBC Section 1224.39
  - Outpatient Access not traversing nursing units
  - Patient Changing areas
  - Waiting areas, Public Toilets, Telephone, and Drinking Fountain









# Loma Linda University Medical Center SPC-1 Repurposing - Options

LOMA LINDA UNIVERSITY MEDICAL CENTER

LOMA LINDA, CALIFORNIA

NOVEMBER, 2018











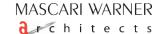
# Background

- Loma Linda University Medical Center and Children's Hospital is in the midst of construction on a replacement building for its primary adult in-patient building
- Over the last few years LLUMC has been exploring several options for extending the useful life of the SPC 1 building for support and outpatient services on its campus



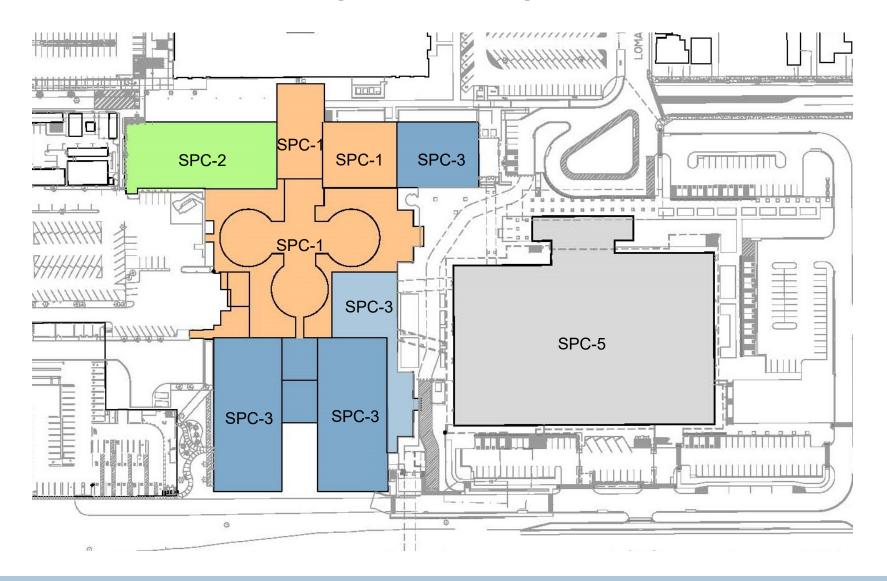
# LLUH Campus

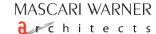






# LLUH Campus – Expanded view







# Background

- The existing SPC 1 buildings are approximately 500,000 sq. ft., most of which is expected to be vacated or underutilized with the opening/completion of the new building.
- The first step in considering repurposing options was to establish the plan for which AHJ the building would be under. Due to the age of the buildings, immediate adjacency of other GAC buildings, desired plan for clinical spaces and concerns over local jurisdiction's view of this as a new building, LLUMC decided the best option was to keep the building in OSHPD's jurisdiction.
- A primary driver in the strategy of the options studied was using the remaining spaces for clinical purposes that could support our patient needs while maximizing the use of spaces already designed/used for clinical functions.



#### Studies

- OR/Perioperative Suite from IP to OP
- ED Observation to Cancer Center Infusion
- IP Med/Surg beds to SNF beds
- IP ICU or Med/Surg beds to IP Psych

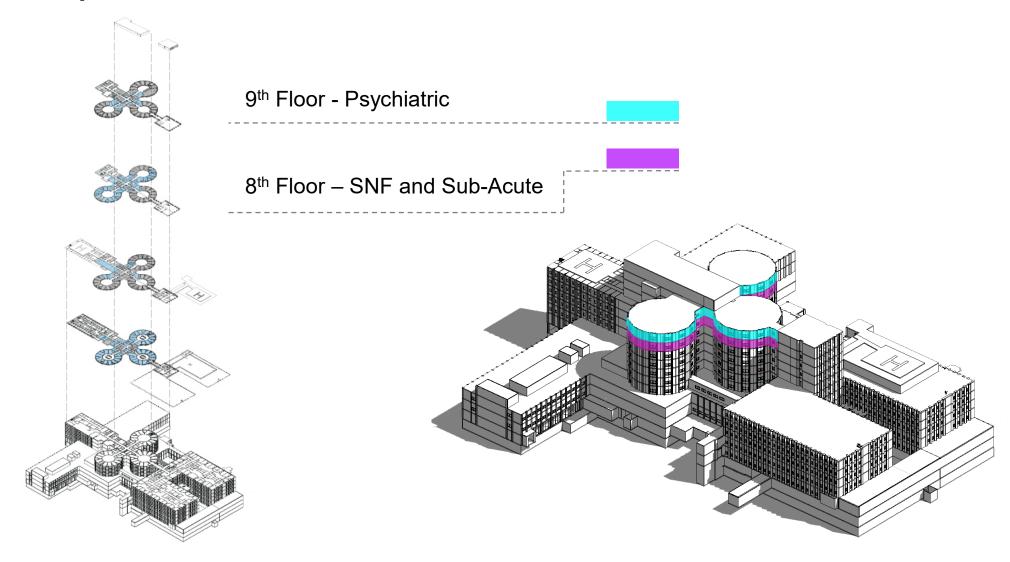
# Proposed Use Case Study 1: Re-Use of Existing Acute Inpatient Beds

#### Options:

- Skilled Nursing Facility and Sub-Acute Option
- IP Psych



# Proposed Patient Floor Conversions







# Single Floor Program area summary – Two Options

### Private-room bed count option

FLOORS	PRIVATE ROOMS	ISOLATION ROOM (PRIVATE)	TOTAL BEDS
8TH Floor	31	2	33

# Semi-private bed count option

FLOORS	SEMI-PRIVATE ROOMS	ISOLATION ROOM (PRIVATE)	TOTAL BEDS
8TH Floor	62	2	64





# Single Floor (8th Floor)

#### **EIGHTH FLOOR PROGRAMS:**

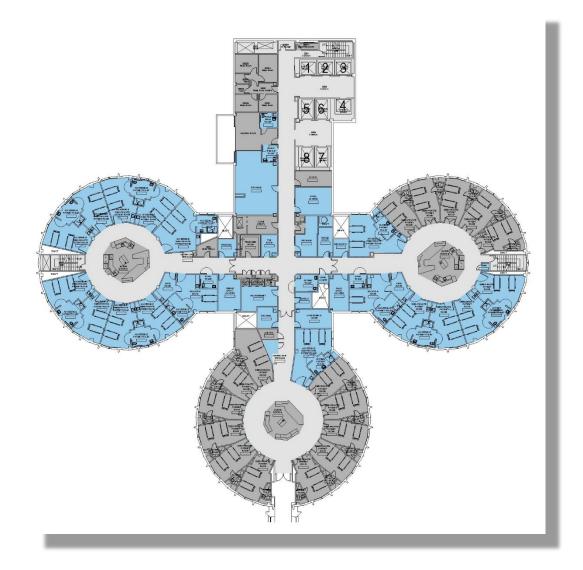
- 33 PRIVATE OR 64 SEMI-PRIVATE BEDSSUPPORT SERVICES
- Existing Areas To Remain Remodeled Areas





# and SUB-ACUTE

# Single Floor (8th Floor)



- Existing Areas To Remain
- Remodeled Areas

#### **Current Deficiencies:**

- 50% Accessible Patient Rooms
- Accessible support spaces
- Program support spaces





# Psychiatric Program area summary

## Private-room bed count option

FLOORS	PRIVATE ROOMS	ISOLATION ROOM (PRIVATE)	TOTAL BEDS
9TH Floor	31	1	<b>32</b>

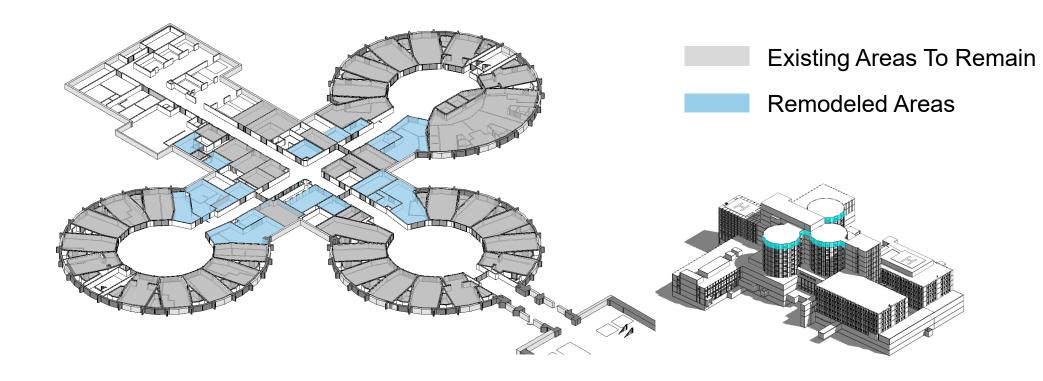




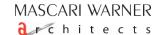
# Proposal—9<sup>th</sup> Floor Psychiatric

#### **NINTH FLOOR PROGRAMS:**

- 32 PRIVATE ROOMS OR BEDS
- SUPPORT SERVICES



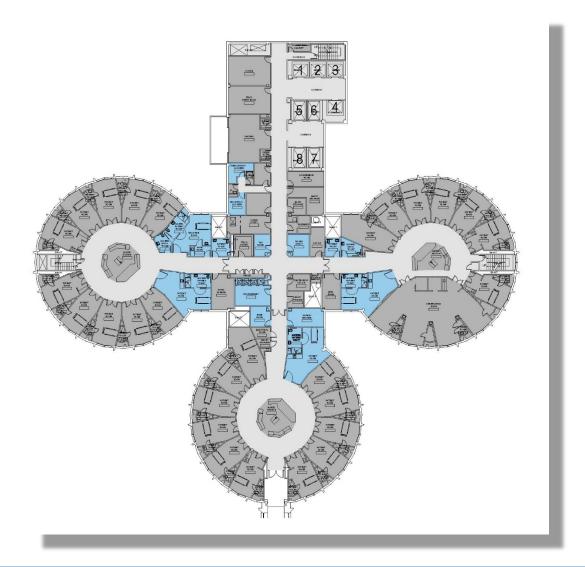
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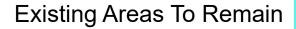




# SPYCH OPTION

# Proposal— 9<sup>th</sup> Floor Psychiatric





Remodeled Areas

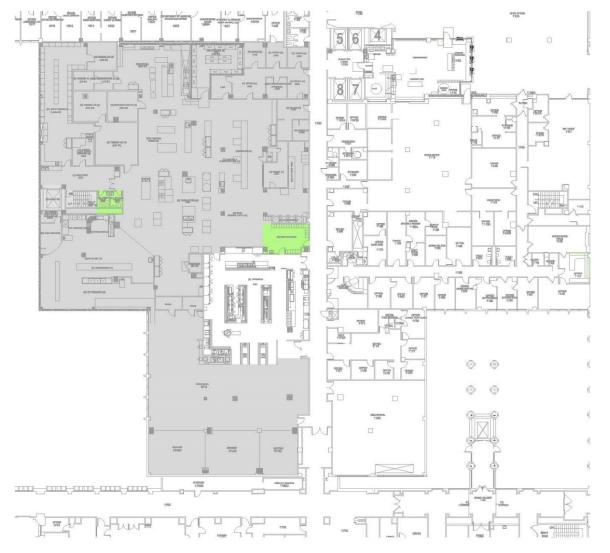
#### **Current Deficiencies:**

- 10% Accessible Patient Rooms
- Accessible support spaces
- Operational/safety solution not reviewed/looked at



# **PROGRAM** SUPPORT

# Proposed Support Program – 1<sup>st</sup> Floor (required for all Programs)





Remodeled Areas



# Challenges

- Unforeseen conditions This review is high level. Practical implementation of significant change may make accurate budget and schedule forecasting a challenge.
- Capital investment Significant construction is required for to upgrade the patient restrooms for ADA compliance. This contradicts the premise of lower capital investment and few modifications to take advantage of spaces as they are currently configured.
- Regulatory oversight What have we me missed regarding CDPH and OSHPD expectations/requirements that may not be encountered until midway through the project?



## Proposed Use Case Study 2: Re-Use of Existing Acute Inpatient Beds

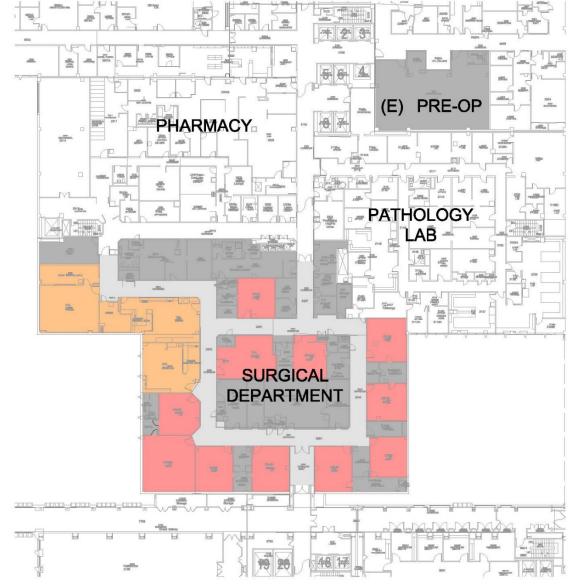
Operating Room/Perioperative Services from Inpatient to Outpatient

-



# OR/PERIOP OUTPATIENT

# Existing – 2<sup>nd</sup> Floor Inpatient OR/Periop





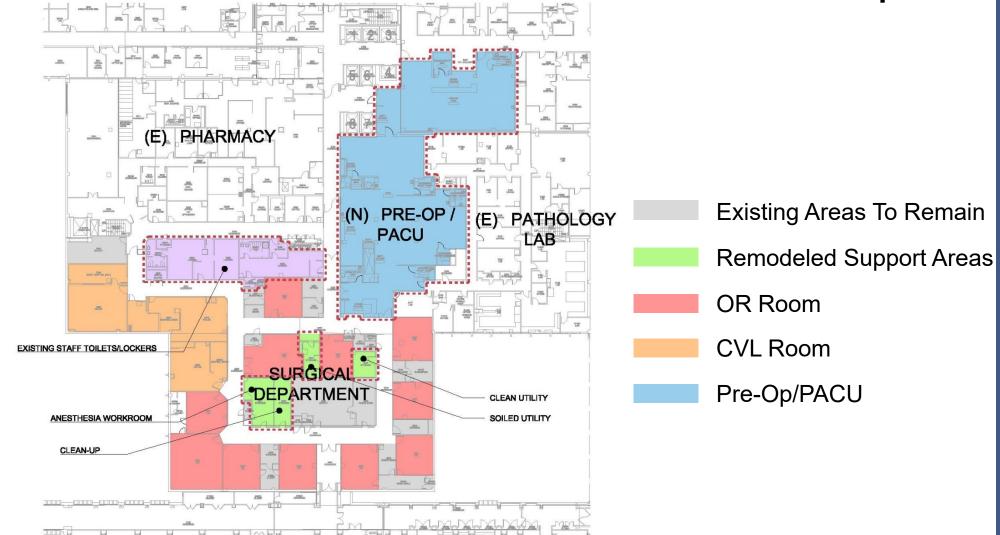
Existing OR Room

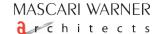
Existing CVL Room





# Proposal – 2<sup>nd</sup> Floor Outpatient OR/Periop







# Challenges

- Unforeseen conditions This review is high level. Practical implementation of significant change may make accurate budget and schedule forecasting a challenge.
- Capital investment Significant construction is required to create a new PACU/PRE-OP. This contradicts the premise of lower capital investment and few modifications to take advantage of spaces as they are currently configured.
- Regulatory oversight What have we me missed regarding CDPH and OSHPD expectations/requirements that may not be encountered until midway through the project?



# Proposed Use Case Study 3: Re-Use of Existing Acute Inpatient Beds

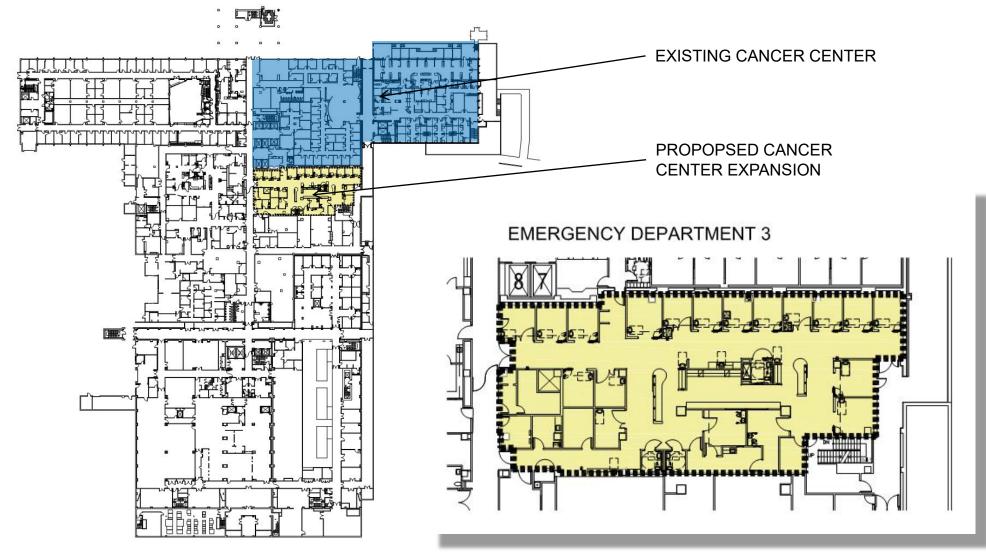
**Emergency Department Observation to Outpatient Infusion** 

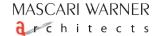
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# Existing – 1<sup>nd</sup> Floor Emergency/Observation

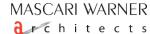






# Proposed – Outpatient Cancer Infusion









# Conversion from Inpatient to Outpatient Surgical Services (LLUMC)

# **OSHPD Plan Review Questions (Sample)**

- Change In Occupancy Group?
  - CBC Chapter 3 (e.g. "I-2" to "I-2.1")
  - Still under Section 407 now as "I-2.1"
- > "Outpatient" Requirements per CBC Section 1224.39
  - Outpatient Access not traversing nursing units
  - Waiting & Changing areas, Public Toilets, Telephone, & Drinking Fountain





# Conversion from Inpatient to Outpatient Surgical Services (LLUMC)

- > "Outpatient Surgery" Requirements per CBC Section 1224.39.2
  - Verify all program requirements are met (2001 allowance for exist rooms of similar nature)
  - Access & Support to and from Sterile Supply per pointer to Section 1224.15.3
  - Staff Changing Traffic flow from unrestricted space through Staff Changing to Semi-restricted corridor (as clarified in 2019 CBC)
  - Access & Support of Pre-Op and PACU per pointer to Section 1224.16 (direct access to semi-restricted corridor)



# Conversion from Inpatient to Outpatient Surgical Services (LLUMC)

- > "Outpatient" Requirements per CPC & Existing Building Code
  - Separation of Medical Gas manifolds & shut-offs
- > "Outpatient" Requirements per CEC & Existing Building Code
  - Emergency Power Separation, transfer switches, shut-offs
  - Segregation 3 branches?
  - 4-hr "Ambulatory Surgery" vs 72-hr "Hospital"









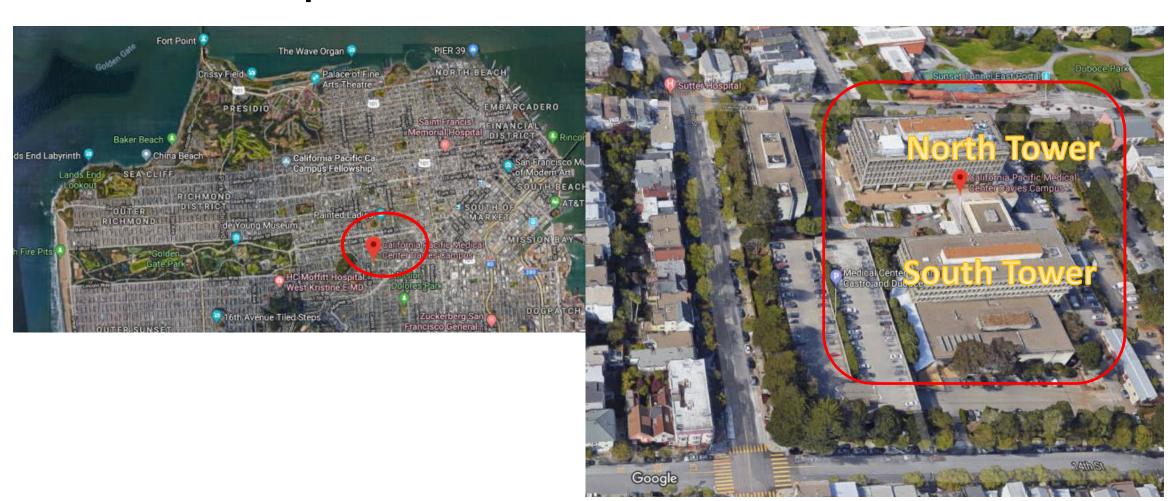


# SPC-1 Repurposing Example:

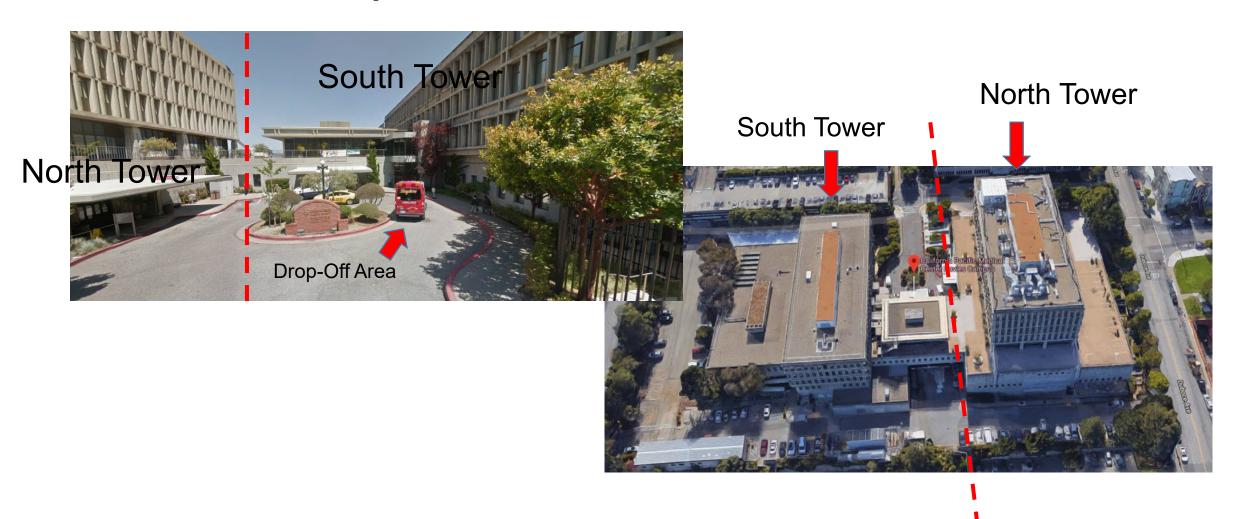
# Sutter - California Pacific Medical Center Davies Campus



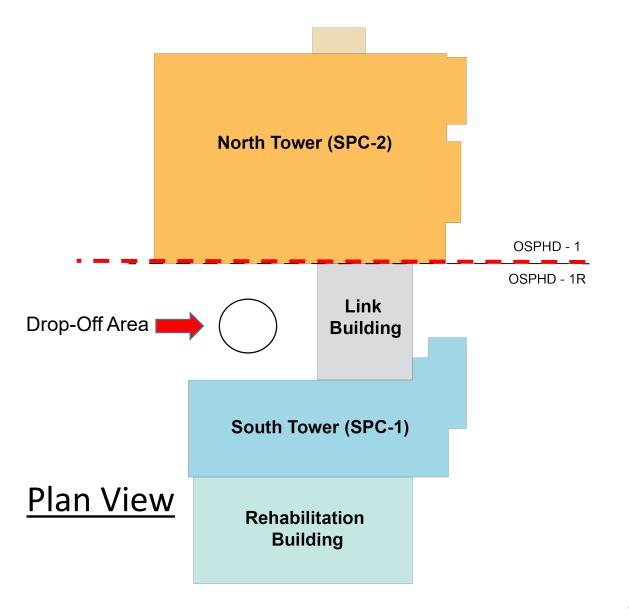
# Sutter - California Pacific Medical Center Davies Campus



# Sutter - California Pacific Medical Center Davies Campus



# Building Areas & Functions



# **DECISION:**

North Tower: Keep as an Acute Care Hospital (OSHPD-1)

South Tower & Link: Convert to Non-Acute Care (OSHPD-1R)

#### Seismic Upgrade of North Tower:

- 1. Original Construction: <u>1968</u>
- 2. Upgrade North Tower Building from SPC-1 to SPC-2
- 3. Allows Hospital to Continue Operation until 2030
- 4. OSHPD Approval of Seismic Upgrade 2001
- 5. Construction Completed <u>2007</u>

2001 2007

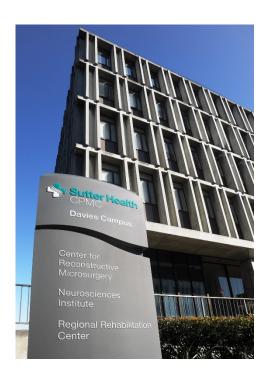
Consolidation of Services in North Tower: (Removal of Acute Care Services – R.A.C.S.)

- 1. Build New Loading Dock at North Tower
- 2. Build New <a href="Exit Corridor">Exit Corridor</a> from Lower Level ('Bunker')
- 3. Move Storage from South Tower to North Tower
- 4. Move <u>Staff Shower / Locker Rooms</u> from South Tower to North Tower
- 5. New Canopy at Emergency Department
- 6. Other Minor Changes

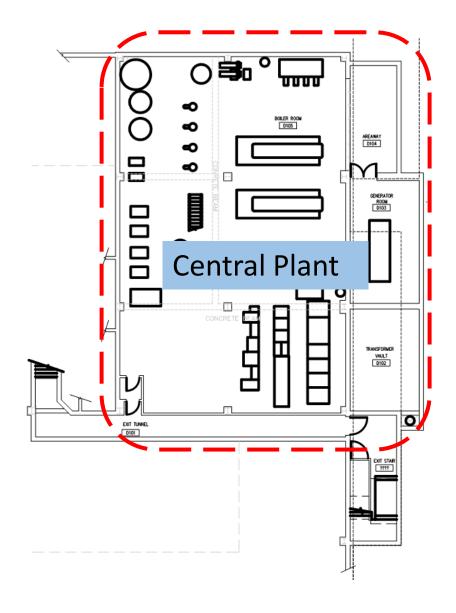
2019

# Removal of Acute Care Services (RACS):

(North Tower - Consolidation of Required Services)



### North Tower Level D



#### **HOSPITAL BASIC SERVICES:**

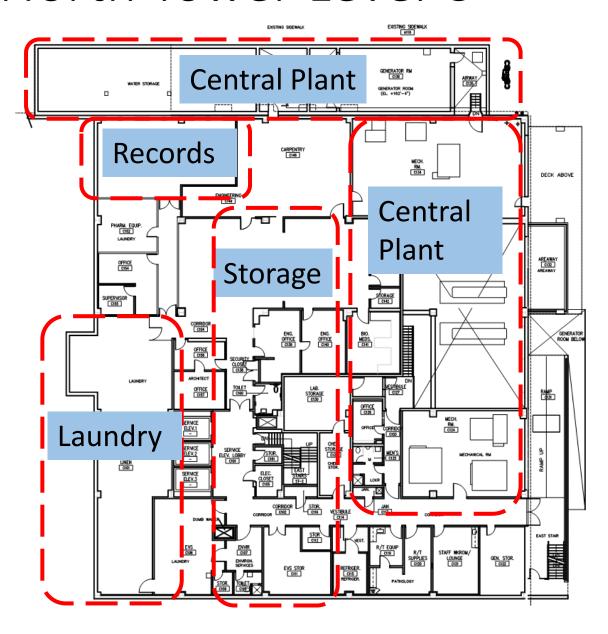
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant

### North Tower Level C



#### **HOSPITAL BASIC SERVICES:**

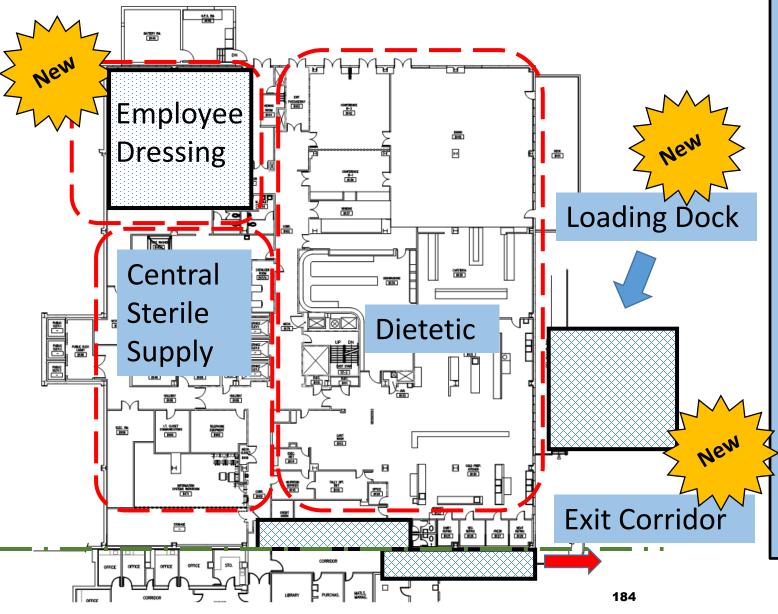
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant

## North Tower Level B



#### **HOSPITAL BASIC SERVICES:**

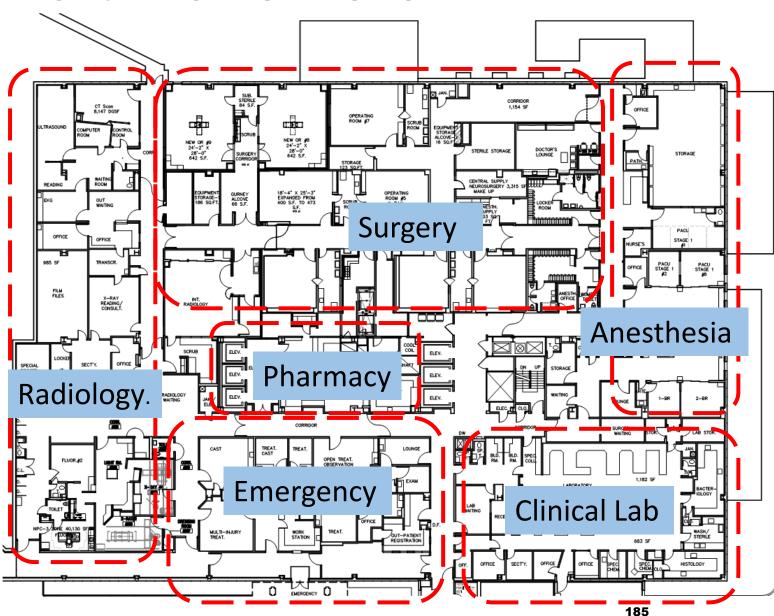
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 5. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant

### North Tower Level A



#### **HOSPITAL BASIC SERVICES:**

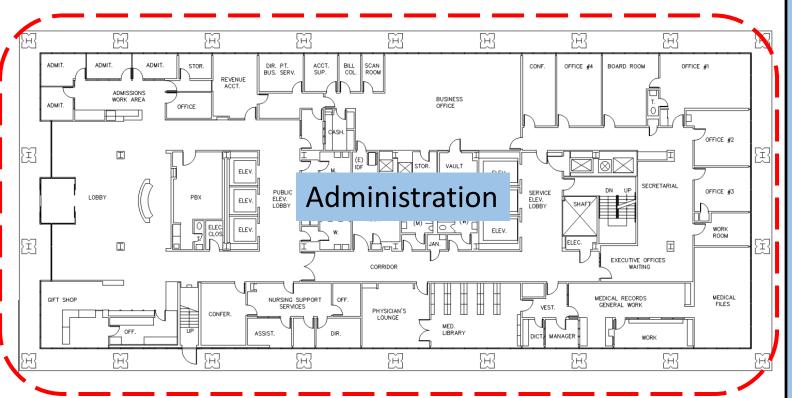
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant
- H. Emergency Service

# North Tower – Lobby Level



#### **HOSPITAL BASIC SERVICES:**

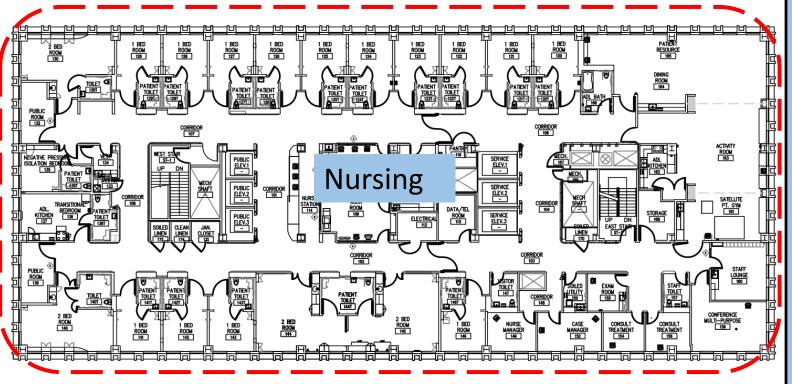
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant
- H. Emergency Service

# North Tower Levels 1,2 and 3



#### **HOSPITAL BASIC SERVICES:**

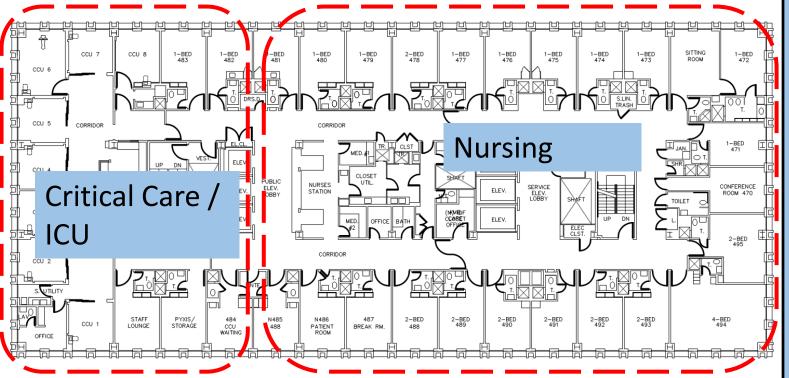
- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant
- H. Emergency Service

### North Tower Level 4



#### **HOSPITAL BASIC SERVICES:**

- 1. Nursing
- 2. Surgical Service
- 3. Anesthesia
- 4. Clinical Lab
- 5. Radiology / Diagnostics
- 6. Pharmacy
- 7. Dietetic

#### **SUPPORT SERVICES:**

- A. Administrative
- B. Central Sterile Supply
- C. Storage
- D. Employee Dressing Rooms / Lockers

- F. Loading Dock
- G. Central Plant
- H. Emergency Service

# Re-Purposing South Tower: (OSHPD-1R)



# Allowed Uses / Proposed Uses

#### **OSHPD-1R Allows:**

- 1. <u>Duplicative</u> Hospital Services
- 2. <u>Outpatient</u> Hospital Services
- 3. Skilled Nursing
- 4. Acute Psych
- 5. Offices, Storage Etc.

#### Proposed Uses for <u>South</u> Tower (OSHPD 1R)

- 1. <u>Duplicative</u> Hospital Services
  - Laboratory
  - Staff Offices
  - Staff Lockers
  - Hospital Storage
- 2. <u>Outpatient</u> Hospital Services
  - Oncology
  - Physical Therapy
  - Occupational Therapy
  - Outpatient Clinic
- 3. Skilled Nursing (W/ 17 Subacute Beds)
- 4. Acute Psych (Behavioral Health)
- 5. Offices, Storage, Etc.

## South Tower Level B North Link / South Existing Outpatient **Loading Dock** Oncology **Duplicative** WOMEN'S LOCKERS Lab **Duplicative** Staff Lockers 191

#### **Duplicative Loading Dock:**

 Continue to use in <u>addition</u> to <u>new</u> loading dock in N. Tower

#### **Outpatient Oncology:**

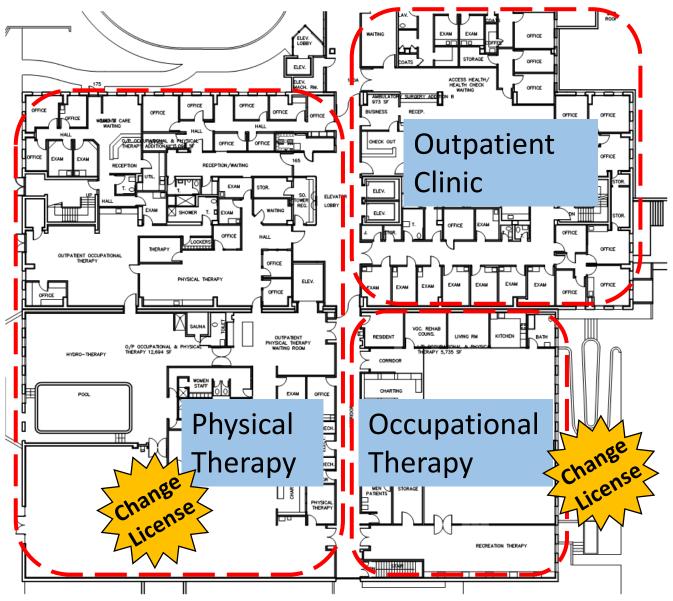
- Continue as an 'Outpatient' service on the hospital license
- (Only 25% of patients may be inpatient)

#### **Duplicative Lab Services:**

Continue as a duplicative service

#### **Duplicative Staff Lockers:**

Continue as a duplicative service



#### **Outpatient Clinic:**

 Continue operation as an 'Outpatient' clinic

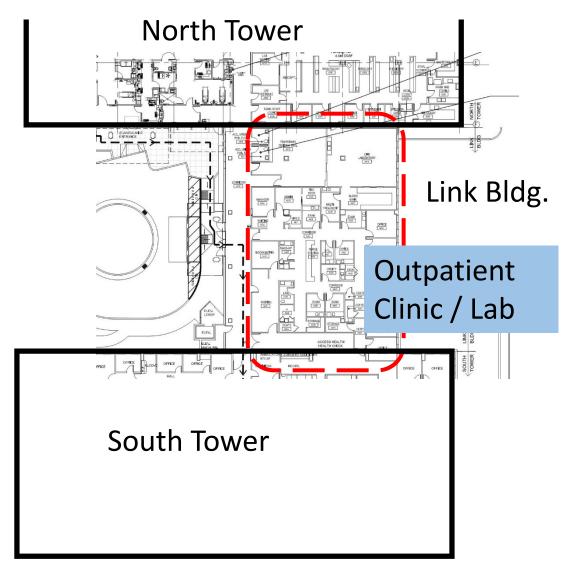
#### **Physical Therapy:**

 Change License from 'Inpatient and Outpatient' to 'Outpatient' only

#### Occupational Therapy:

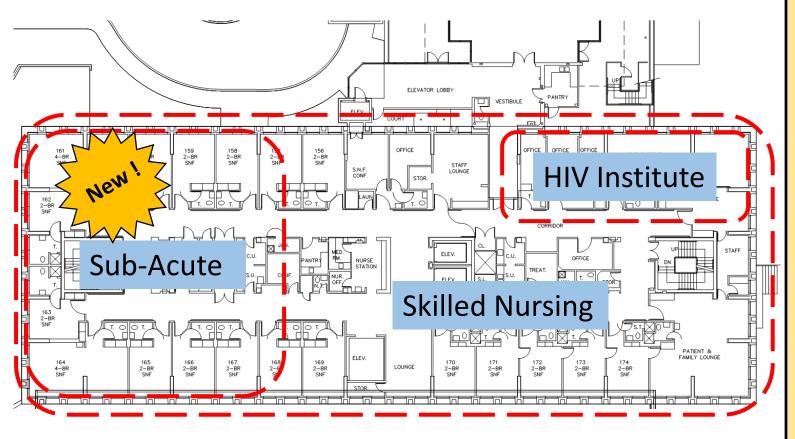
 Change License from 'Inpatient and Outpatient' to 'Outpatient' only

# Link Building Level A



#### Outpatient Clinic / Lab:

Continue as Outpatient Clinic and Lab services only.



#### **Skilled Nursing:**

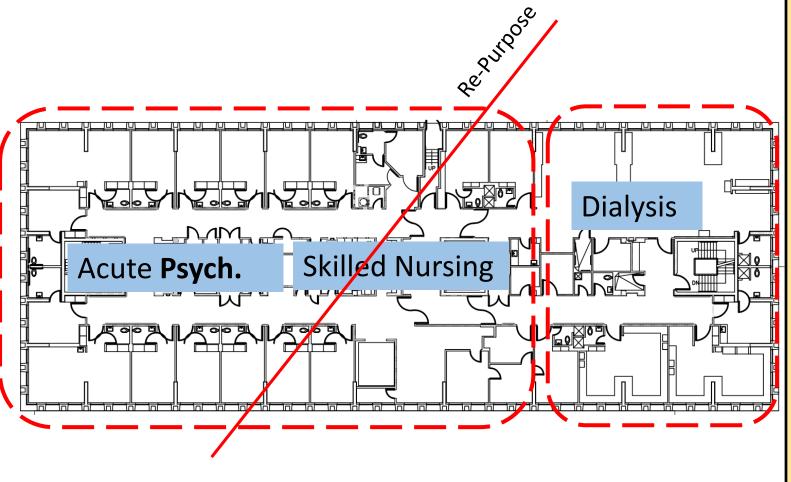
Existing Skilled Nursing to remain 'As-Is',

#### Sub Acute:

2018 – Converted 17 Beds to 'Sub-Acute'

#### HIV Institute:

Existing Infusion Services to Remain 'As-Is'



#### **Existing Dialysis:**

Existing Dialysis (Infusion) to Remain As-Is

#### **Existing - Skilled Nursing:**

Existing Skilled Nursing to be remodeled to **Acute Psych** (Behavioral Health)
See next slide.

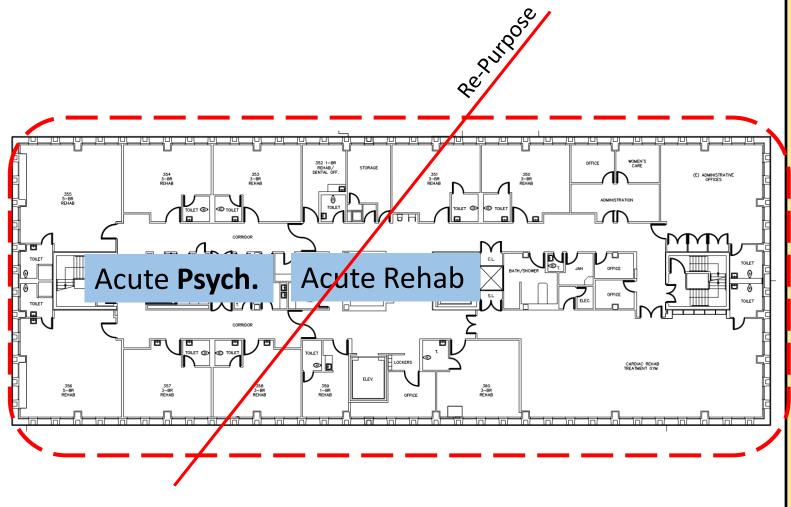


#### New – Acute Psych:

Existing Skilled Nursing to be remodeled to:

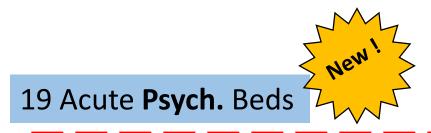
- Acute Psych (Behavioral Health)
- Outpatient Services Shaded Green
- Staff Support Areas Grey
- Outpatient Dialysis to Remain 'As-is'

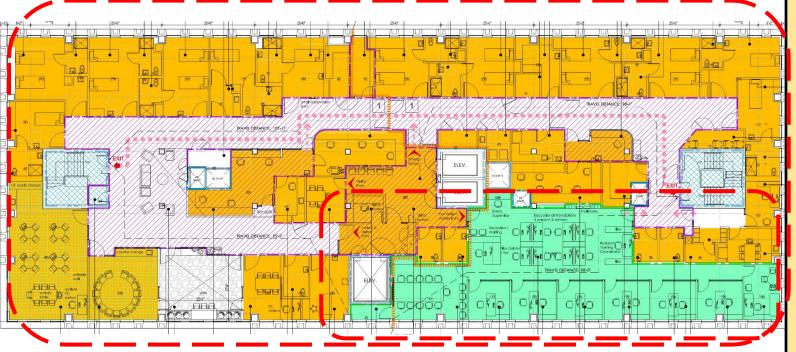
196



#### **Existing - Acute Rehab:**

Alteration Project to Convert Acute Rehab to **Acute Psych.** (See next slide)





**Staff Support Areas** 

#### **Acute Psych:**

Alteration Project to Convert Acute Rehab to **Acute Psych.** 

- 19 Beds Acute Psych. (Orange Area)
- Staff Support Areas (Green)
- Complete Demo and Reconstruction for this entire floor, thus no limitations to provide ADA compliance



# Conversion from Nursing to SNF & Acute Psychiatric Services (Sutter CPMC)

#### **OSHPD Plan Review Questions (Sample)**

- ➤ No Change In Occupancy Group (e.g. "I-2" to "I-2")
  - Still under Section 407 Egress, Smoke Compartments, etc.
  - SNF "I-2"
  - Acute Psych "I-2 with Restraint" not "I-3"

#### > Type of Facility

- Distinct Part under the Hospital License, Dietary, Support Services
- Separate Provider Entrance, Dietary, Supporting Services





# Conversion from Nursing to Skilled Nursing Facility Services (Sutter CPMC)

- > "SNF" Requirements per CBC Section 1225
  - 50% Accessible Rooms (Chapter 11B)
  - Maximum of 2 beds per room, dedicated toilet per room
  - Ambulatory Patient Dining Area (Section 1225.4.2.1.2)
  - Recreation (Day) Room per Section 1225.5.1.4
  - Removal of (E) Med Gas & Essential Power @ Patient Rooms (non sub-acute)
  - Emergency Power Separation, transfer switches, shut-offs
  - Segregation 2 branches? 3 branches at sub-acute?
  - 6-hr "Skilled Nursing" vs 72-hr "Hospital"





# Conversion from Nursing to Acute Psychiatric Services (Sutter CPMC)

- > "Acute Psych" Requirements per CBC Section 1228 (not 1224.31/14)
  - Functional Program w/ Patient Safety Risk Assessment
    - Ligature resistant furnishings & fixtures; Sally ports?
  - 10% Accessible Rooms (Chapter 11B)
  - Maximum of 2 beds per room, toilet shared up to 2 rooms
  - Patient Dining Area(s) (Section 1228.20.1)
  - Indoor Activity Space per Section 1228.13
  - Outdoor Activity Space per Section 1228.13
  - Group Therapy Room





# Conversion from Nursing to Acute Psychiatric Services (Sutter CPMC)

- > "Acute Psych" Requirements per CBC Section 1228 (continued)
  - Airborne Infection Isolation (AII) Room 1 per 50 beds
  - Seclusion Room (locked) 1 per 24 beds
  - Quiet Room (not locked) 1 per Psych Nursing Unit
  - Conference Room (staff, patient evaluation, progress reports)
  - Outpatient Access, Waiting, Toilets, Telephone, Drink. Fount.
  - Removal of (E) Med Gas & Essential Power @ Patient Rooms
  - Emergency Power Separation, transfer switches, shut-offs
  - Segregation 2 branches?
  - 6-hr "Acute Psych" vs 72-hr "Hospital"











#### **Scenario 4:**

## Final Thoughts...



## **Mixed-Use Considerations**

- Access Public versus Patient versus Multiple Providers
  - Outpatient Services cannot traverse Inpatient Nursing Units
  - Separate Entrancing if Separate Providers versus Distinct Part
  - New Front Door???
  - Emergency Egress
  - Elevators Use Limitations/Security based upon Use (i.e. Acute Psych)
- Zoning/Land Use
  - Permitted Uses
  - Parking Demand
- Vacated Spaces
  - Fire Separation
  - Smoke Detection
  - Security





## **General MEP Considerations**

#### Opportunity to remove loads from compliant OSHPD 1 infrastructures:

- Chilled Water
- Steam / Heating Hot Water
- Emergency Power
- Medical Gasses









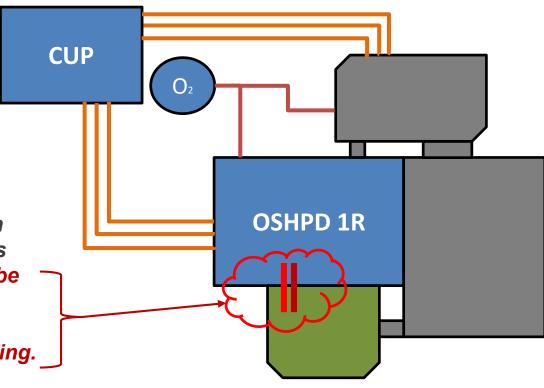
## **General MEP Considerations**

#### **Utility Isolation from OSHPD 1**

- Bulk Oxygen
- Med Gasses
- Chilled Water
- > Steam
- Domestic Water
- Sewer/Sanitary

- Essential Power
- Nurse Call
- > Fire Alarm
- > Fire Suppression
- **Communications**
- Data Systems

Services from a conforming building shall be permitted to serve a nonconforming building with prior approval of the Office. The services/systems and utilities in the nonconforming building shall be equipped with fail safe valves, switches, or other equivalent devices that allow the nonconforming building to be isolated from the conforming building.





# **Emergency Power Considerations**

#### **Fuel Requirements**

#### **GACH Services**

- CEC 700.12(b)(2) Ex 1 24 hours
- NPC-5 72 hours

#### **Non-GACH Services**

- CEC Ambulatory Surgery 4 hours
- CEC Skilled Nursing 6 hours
- CEC Acute Psych 6 hours

#### **Segregation of Electrical Systems**

- Retroactive Segregation CAN 2-102.6 Remodel
- Required Branches
  - SNF & Acute Psych 2
  - SNF Subacute 3

#### **Electrical Service Source**

- CEC 517.30(B)(3) Optional Loads Supplied by a Separate Transfer Switch
- Part 10 Section 307A Utilities supplying the OSHPD 1R building
- CEC 225.30 Disconnecting means for each branch of the electrical system

where conductors enter the building

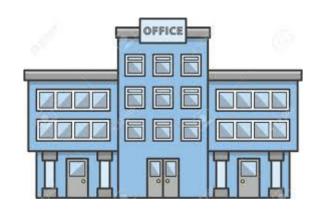




## **General MEP Considerations**

#### **Energy Savings Opportunities:**

- Revisit HVAC loads based on new occupancy:
  - Air Changes per Hour vs Actual Loads
  - Ventilation Rates
- Review Filtration Requirements
- Consider converting to Variable Volume
- Determine Lighting Levels





**Evaluate overall impact of Part 6 compliance for new occupancy.** 







# How to Remove Acute Care Services From an SPC-1 or SPC-2 Building





# **Determine the Repurposed Use**

#### Some Items to Consider

- Ingress
- Egress required exits
- Utilities shutoffs/disconnects, rerouting
- Smoke Compartments
- Functional Uses SNF, Acute Psych, etc.
- Fire Alarm panel, zones, etc.
- Fire Sprinklers non-sprinklered, main riser, branches/zones, etc.
- Fire Wall/Fire Barrier Separations occupancy(ies), jurisdiction, etc.

- As-built/condition assessment
- Accessibility based on function, construction. etc.
- Is Use or Occupancy Less Restrictive
- Jurisdiction OSHPD or Local
- Licensing under hospital license new license (Hospital Within a Hospital, etc.)
- Local zoning requirements/restrictions
- Time/Cost





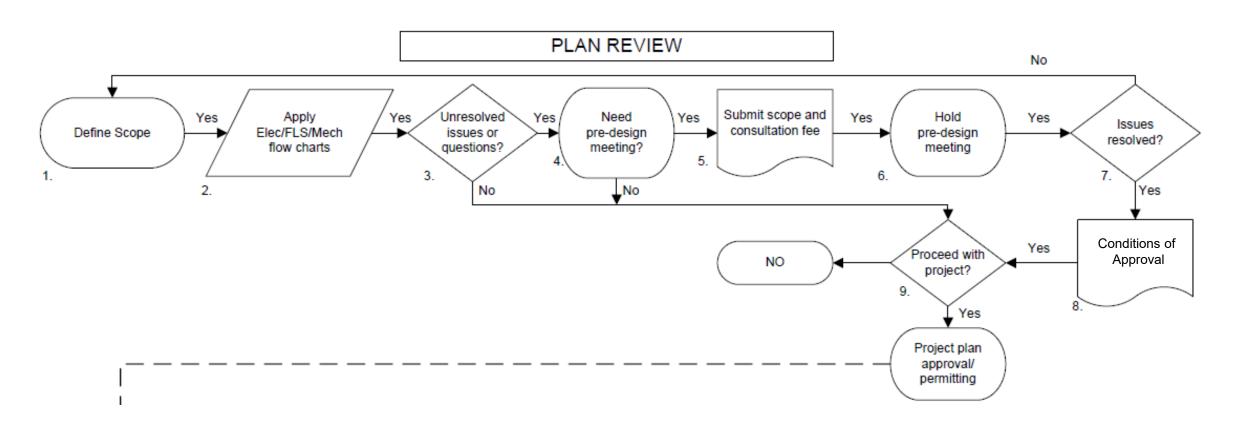
## **Trust the Process**

### Steps to a Successful Repurposing Project:

- ☐ Do your homework
  - Determine the repurposed use by considering the impacts/items to consider
- ☐ Do a "Remove From Acute Care Services" project
  - Required to reclassify SPC-1 or SPC-2 building to OSHPD 1R
- ☐ Follow the remodel C.A.N. 2-102.6
  - Schedule Pre-design Meeting with OSHPD Repurposing Task Force
  - Documented decisions to become "Conditions of Approval"
  - Plan reviews to be conducted in the appropriate region in accordance with the Conditions of Approval



## **Go With The Flow**







# **Go With The Flow**

