ARTICLE 3. Approval of Plans And Specifications

.....

7-117. Site Data.
(a) The site data reports shall be required for all proposed construction except:

1. As provided in the Part 2, Title 24.

2. One-story, wood-frame or light steel frame buildings of Type II or V construction and 4,000 square feet or less in floor area not located within Earthquake Fault Zones or Seismic Hazard Zones as shown in the most recently published maps from the California Geological Survey (CGS).

3. Nonstructural alterations.

4. Structural repairs for other than earthquake damage.

5. Incidental structural additions or alterations.

(b) Three copies of site data reports shall be furnished to the Office for review and evaluation prior to the submittal of the project documents for final plan review. Site data reports shall comply with the requirements of these regulations and Part 2, Title 24. Upon the determination that the investigation of the site and the reporting of the findings was adequate for the design of the project, the Office will issue a letter stating the site data reports are acceptable.

... .

7-125. Final Review of Plans and Specifications.

(a) One copy of the final plans and specifications and site data reports shall be submitted to the Office.

1. Two copies must be submitted if additions, structural alterations or new buildings are included.

2. The plans and specifications shall include: architectural, mechanical, electrical, structural seismic restraint, and fire and life safety details.

(b) Plans and specifications are to be completely and thoroughly checked by the responsible architect or engineer before submission to the Office. Plans and specifications which are incomplete or incorrect will be returned to the applicant.

1. Where a portion of the construction cannot be fully detailed on the approved plans because of variations in product design and manufacture, the approval of the plans for such portion may be deferred until the material suppliers are selected provided the following conditions are met:

A. The plans clearly indicate that a deferred approval by the Office is required for the indicated portions of the work prior to fabrication and installation.

B. The plans and specifications fully describe the performance and loading criteria for such work.

C. The deferred approval submittals are made in conformance with Section 7-153.

Exception: Seismic Force Resisting System (SFRS), Primary Gravity Load Resisting System (PGLRS), and stairs shall not be deferred.

2. Due to the difficulty of anticipating every unsatisfactory condition that might exist in connection with the existing work where alteration or reconstruction work is proposed, the following clause or one of similar meaning shall be included in all specifications to which the Office gives approval in connection with either reconstruction or alteration work: "The intent of the plans and specifications is to reconstruct the hospital building in accordance with the California Building Standards Code, Titles 19 and 24, California Code of Regulations. Should any conditions develop not covered by the approved plans and specifications wherein the finished work will not comply with Title 24,

California Code of Regulations, a change order detailing and specifying the required work shall be submitted to and approved by the Office before proceeding with the work."

... ...

Article 20. Repair of Earthquake Damage

7-300. Plan Review and Approval.

(a) All repair projects are subject to prior plan review, plan approval and construction permit by the Office except as noted in subsection (b).

(b) For emergency repairs carried out without the Office plan review and permit the aftermath of an earthquake, an application for plan review must be submitted with construction documents, fees and letter of transmittal stating the reasons for emergency repairs. Photographs, if available, and reports of damage and repairs should also be submitted with the application. Additional repairs may be required if the emergency repairs do not comply with the code. For alternate fee payment methodology, see Section 129787 of the Health and Safety Code.

(c) Plan reviews for earthquake damage repairs will be performed on a priority basis. The application for plan review should clearly state that the scope of the project is to repair the damage from the earthquake. Where possible, reviews will be made over the counter.

(d) Plan review fees shall be payable for all damage repair projects per the following:

1. 1.64 percent of estimated construction costs for hospitals.

2. 1.50 percent of estimated construction costs for skilled nursing facilities (SNF) or intermediate care facilities (ICF).

3. For alternate fee payment methodology, see Section 129787 of the Health and Safety Code.

4. An examination fee where review of existing plans is required. The fee will be calculated on a time and material basis at the prevailing hourly rates applicable for the review personnel.

7-301. Appeals. The Hospital Building Safety Board shall act as a board of appeals with regard to disagreements between the Office and hospital/SNF/ICF authorities on interpreting the repair policy or the establishment of the degree of damage. (Section 7-159 of Administrative Regulation for the Office)

7-302. Pre-1973 Structures.

These hospital buildings were approved for construction by local building departments prior to March 7, 1973.

(a) All structural repairs shall be made to conform to vertical load requirements of the California Building Code (CBC).

(b) Where lateral load resisting capacity of the building at any level is reduced by 5 percent or less due to earthquake damage, the repairs may be made with the same construction as before, subject to structural detailing requirements of the CBC.

(c) Where lateral load resisting capacity of the building at any level is reduced by more than 5 percent but not more than 10 percent due to earthquake damage, the repairs shall be made in accordance with Section ~~1635B.3.2.2~~ 3411A.3.2.2 of the CBC. ~~The repaired/reconstructed structural elements shall meet structural requirements using an importance factor of I = 1.0. The building after repairs shall be in reasonable compliance with the CBC using an importance factor, I, equal to 0.75.~~

(d) Where lateral load resisting capacity of the building at any level is reduced by more than 10 percent due to earthquake damage, the repairs shall be made such that the primary structural system and the seismic bracing of other components and systems shall conform to the requirements of Section ~~1635B.3.2.3~~ 3411A.3.2.3 of the CBC.

(e) Where earthquake repairs consist of alterations which involve removal of one or more entire stories, permission for repairs will be granted if lateral load resisting capacity of the remaining structure is not reduced. (Section ~~1635B.3.3~~ 3411A.3.2.4. CBC)

(f) Repair/reconstruction of structures should comply with the design and detailing requirements of engineering materials stated in Chapters ~~19~~ 19A, 20, ~~21~~ 21A, 22A and 23, as applicable, and applicable fire-resistive requirements of the CBC.

(g) Epoxy injection repairs shall require submittal of backup information per section 104.11, Appendix Chapter 1 of the CBC. ~~Chapter 16B, Section 1603B.7.~~

(h) Repair of damage to seismic anchorage of equipment and nonstructural items shall comply with Section 3403A.2.3 ~~1644B.13.1~~ of the CBC.

7-303. Post-1973 Structures.

These hospital structures were approved for construction by the Office of the State Architect or Office after March 7, 1973. They are also referred to in the regulations as approved existing buildings.

(a) Repairs to the damage shall be made to restore the load carrying capacities of the affected elements per Section 3411A.3.1 ~~1635B.3.1~~ of the CBC.

(b) Repair of damage to seismic anchorage of equipment and nonstructural items shall comply with Section 3403A.2.3 ~~1630B~~ of the CBC.

7-304. Type V Single Story SNF or ICF.

(a) All structural repairs shall be made to conform to vertical load requirements of the CBC.

(b) Repair of damage of seismic anchorage of equipment shall comply with the CBC.

(c) Where damage has reduced the lateral load capacity by more than 10% in any one line of the lateral force resisting system in the building, repairs of structural elements shall conform to Section 3403.2.3 of the CBC.

.....

NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129850 & 130005(g)*

EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

REGARDING PROPOSED CHANGES TO
CALIFORNIA BUILDING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 2

LEGEND FOR EXPRESS TERMS
1. Existing California amendments or code language being modified: All such language appears in *italics*, modified language is underlined.
2. New California amendments: All such language appears *underline and in italics*.
3. Repealed text: All such language appears in ~~strikeout~~.

EXPRESS TERMS:

Chapter 16*A* - Structural Design

SECTION 1601*A* - GENERAL

1601*A*.1 Scope. The provisions of this chapter shall govern the structural design of buildings, structures and portions thereof regulated by this code.

.....

SECTION 1607*A* - LIVE LOADS

1607*A*.1 General. Live loads are those loads defined in Section 1602*A*.1.

.....

1607*A*.7 Loads on handrails, guards, grab bars, *shower seats, dressing room bench seats,* and vehicle barriers. Handrails, guards, grab bars and vehicle barriers shall be designed and constructed to the structural loading conditions set forth in this section.

1607*A*.7.1 Handrails and guards. Handrail assemblies and guards shall be designed to resist a load of 50 plf (0.73 kN/m) applied in any direction at the top and to transfer this load through the supports to the structure. Glass handrail assemblies and guards shall also comply with Section 2407.

Exceptions: 1. For one- and two-family dwellings, only the single concentrated load required by Section 1607*A*.7.1.1 shall be applied.
2. In Group I-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an occupant load less than 50, the minimum load shall be 20 pounds per foot (0.29 kN/m).

1607*A*.7.1.1 Concentrated load. Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds (0.89 kN), applied in any direction at any point along the top, and have attachment devices and supporting structure to transfer this loading to appropriate structural elements of the building. This load need not be assumed to act concurrently with the loads specified in the preceding paragraph.

1607*A*.7.1.2 Components. Intermediate rails (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds (0.22 kN) on an area equal to 1 square foot (0.093m^2), including openings and space between rails. Reactions due to this loading are not required to be superimposed with those of Section 1607*A*.7.1 or 1607*A*.7.1.1.

~~***1607A.7.1.3 Stress increase.*** *Where handrails and guards are designed in accordance with the provisions for allowable stress design (working stress design) exclusively for the loads specified in Section 1607A.7.1, the allowable stress for the members and their attachments are permitted to be increased by one third.*~~

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SECTION 1614A - MODIFICATIONS TO ASCE 7

1614A.1 General. *The text of ASCE 7 shall be modified as indicated in sections 1614A.1.1 through 1614A.1.31.*

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1614A.1.3 ASCE 7, Table 12.2 -1. *Modify ASCE 7 Table 12.2-1 as follows:*

A. BEARING WALL SYSTEMS

14. Light-framed walls with shear panels of all other materials – Not permitted by OSHPD and DSA-SS.

B. BUILDING FRAME SYSTEMS

2. Steel eccentrically braced frames, non-moment-resisting connections at columns away from links - Not permitted by OSHPD.

4. Ordinary steel concentrically braced frames – Not permitted by OSHPD.

24. Light-framed walls with shear panels of all other materials – Not permitted by OSHPD and DSA-SS.

25. Buckling-restrained braced frames, non-moment-resisting beam-column connections – Not permitted by OSHPD.

27. Special steel plate shear wall – Not permitted by OSHPD.

C. MOMENT RESISTING FRAME SYSTEMS

2. Special steel truss moment frames – Not permitted by OSHPD.

3. Intermediate steel moment frames – Not permitted by OSHPD.

4. Ordinary steel moment frames – Not permitted by OSHPD.

Exception:

1) Systems listed in this section can be used as an alternative system when pre-approved by the enforcement agency.

2) Rooftop or other supported structures not exceeding two stories in height and 10 percent of the total structure weight can use the systems in this section when designed as components per ASCE 7 Chapter 13.

3) Systems listed in this section can be used for seismically isolated buildings when permitted by Section 1613A.6.2.

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NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

Chapter 17*A* - Structural Tests and Special Inspections

1701*A*.1 Scope. The provisions of this chapter shall govern the quality, workmanship and requirements for materials covered. Materials of construction and tests shall conform to the applicable standards listed in this code.

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1704*A*.4 Concrete construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1704*A*.4.

TABLE 1704*A*.4 - REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD[a]	*CBC* REFERENCE
1. Inspection of reinforcing steel, including prestressing tendons, and placement.	—	X	ACI 318: 3.5, 7.1-7.7	1913*A.4*
2. Inspection of reinforcing steel welding in accordance with Table 1704*A*.3, Item 5b.	—	—	AWS D1.4 ACI 318: 3.5.2	—
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased *or design is based on Section 1912A .*	X	—	*ACI 318: Appendix D*	1911*A*.5 , *1912A*
4. Verifying use of required design mix.	—	X	ACI 318: Ch. 4, 5.2-5.4	1904*A*.2.2, 1913*A*.2, 1913*A*.3
5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913*A*.10
6. Inspection of concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 5.9, 5.10	1913*A*.6, 1913*A*.7, *1913A*.8
7. Inspection for maintenance of specified curing temperature and techniques.	—	X	ACI 318: 5.11-5.13	1913*A*.9
8. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic-force-resisting system.	X X	—	ACI 318: 18.20 ACI 318: 18.18.4	—
9. Erection of precast concrete members.	—	X	ACI 318: Ch. 16	—
10. Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 6.2	—
11. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 6.1.1	—
12. Post-installed anchors.	*X*	—	—	—

For SI: 1 inch = 25.4 mm.

a. Where applicable, see also Section 1707*A*.1, Special inspection for seismic resistance.

NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

Chapter 18*A* - Soils and Foundations

1801*A*.1 Scope. The provisions of this chapter shall apply to building and foundation systems in those areas not subject to scour or water pressure by wind and wave action. Buildings and foundations subject to such scour or water pressure loads shall be designed in accordance with Chapter 16*A*.

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SECTION 1813A - PRESTRESSED ROCK AND SOIL FOUNDATION ANCHORS

1813A.1 General. *The requirements of this section address the use of vertical rock and soil anchors in resisting seismic or wind overturning forces resulting in tension on shallow foundations.*

1813A.2 Adoption. *Except for the modifications as set forth in Sections 1813A.3 and 1813A.4, all Prestressed Rock and Soil Foundation Anchors shall be designed in accordance with PTI Recommendations for Prestressed Rock and Soil Anchors.*

1813A.3 Geotechnical Requirements. *Geotechnical report for the Prestressed Rock & Soil Foundation Anchors shall address the following:*

1. *Minimum diameter and minimum spacing for the anchors including consideration of group effects.*
2. *Maximum unbonded length and minimum bonded length of the tendon.*
3. *Maximum recommended anchor tension capacity based upon the soil or rock strength / grout bond and anchor depth / spacing.*
4. *Allowable bond stress at the ground / grout interface and applicable factor of safety for ultimate bond stress.*
5. *Anchor axial tension stiffness recommendations at the anticipated anchor axial tension displacements, when required for structural analysis.*
6. *Minimum grout pressure for installation and post-grout pressure.*
7. *Class I Corrosion Protection is required for all permanent anchors. Geotechnical report shall specify the corrosion protection recommendations for temporary anchors.*
8. *Preproduction tests, Performance tests, Proof test and Creep test protocol, frequency and acceptance criteria. Performance test shall be at a minimum of 1.6 times the design loads. There shall be a minimum of two preproduction test anchors. Preproduction test anchors shall be tested to ultimate load or 0.80 times the specified minimum tensile strength of the tendon. A Creep test is required for all prestressed anchors with greater than 10 kips of lock-off prestressing load.*

9. *Lock-off prestressing load requirements.*

10. *Acceptable Drilling methods.*

11. *Geotechnical observation and monitoring requirements.*

1813A.4 Structural Requirements.

1. *Tendons shall be thread-bar anchors conforming to ASTM A 722.*

2. *The anchors shall be placed vertical.*

3. *Design Loads shall be based upon the load combinations in Section 1605A.3.1 and shall not exceed 60 percent of the specified minimum tensile strength of the tendons.*

4. *Ultimate Load shall be based upon Section 1614A.1.10 and shall not exceed 80 percent of the specified minimum tensile strength of the tendons.*

5. *The anchor shall be designed to fail in grout bond to the soil or rock before pullout of the soil wedge by group effect.*

6. *Foundation design shall incorporate the affect of lock-off loads.*

7. *Design shall account for as-built locations of soil anchors considering all the acceptable construction tolerances.*

8. *Design shall account for both short and long term deformation.*

9. *Enforcement agency may require consideration of anchor deformation in evaluating deformation compatibility or building drift where it may be significant.*

NOTATION:
- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

Chapter 22*A* – Steel

2201*A*.1 Scope. The provisions of this chapter govern the quality, design, fabrication and erection of steel used structurally in buildings or structures.

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2205A.4 [For OSHPD 1 & 4] MODIFICATIONS TO AISC 341

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2205A.4.1.5 Part I, Section 13. Special Concentrically Braced Frames (SCBF) modifications

2205A.4.1.5.1 Part I, 13.2 Members, Add a new section as follows.

AISC 341, 13.2f. Member Types

The use of rectangular HSS are not permitted for bracing members, unless filled solid with cement grout having a minimum compressive strength of 3000 psi at 28 days. The effects

of composite action in the filled composite brace shall be considered in the sectional properties of the system where it results in the more severe loading condition or detailing.

2205A.4.1.5.2 Part I, Section 13: Add Section 13.7 as follows.

13.7 Beam to Column Connections.

SCBF frames shall have moment-resisting beam-column connections that can resist a moment equal to the lesser of the available flexural strength of the beam or the column in the SCBF bays. The connection shall include CJP welds from the beam flanges to the column flange, or to a plate in the case of column weak axis connections.

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NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

CHAPTER 34 - EXISTING STRUCTURES

3401.1 Scope. The provisions of this Chapter shall control the alteration, repair, addition and change of occupancy of existing structures, *including state-regulated structures in accordance with Sections 3401.1.1 and 3401.1.2.*

.....

SECTION 3403 - ADDITIONS, ALTERATIONS OR REPAIRS

3403.1 Existing buildings or structures. Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any provisions of this code. An existing building plus additions shall comply with the height and area provisions of Chapter 5. Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure.

.....

3403.2.3.3 Adoption [For OSHPD 2]: *All additions, alterations, repairs and seismic retrofit to the existing structures or portions thereof may be designed and constructed in accordance with the provisions of ~~FEMA 356~~ ASCE 41, as modified herein.*

3403.2.3.3.1 Referenced Standards. *All Reference Standards listed in ~~FEMA 356~~ ASCE 41 shall be replaced by Referenced Standards listed in Chapter 35 of this code and shall include all amendments to the reference standards in this code.*

3403.2.3.3.2 ~~FEMA 356~~ ASCE 41 Section ~~1.5~~ 1.4 – ~~Target Building Performance~~ Rehabilitation Objectives. *Target building performance level shall be Life Safety Building Performance Level (3-C) as defined in Section 1.5.3.3~~, with Structural performance level S-3 as defined in Section 1.5.1.3 and Non-structural performance level N-C as defined in Section 1.5.2.3.~~ at Basic Safety Earthquake 1 (BSE-1) Seismic Hazard Level as defined in section 1.6.1.2 for Occupancy Category II Structures and Building Safety Objective (BSO) Level as defined in Section 1.4.1 for Occupancy Category III Structures.*

3403.2.3.3.3 ~~FEMA 356~~ ASCE 41 Section 1.6 - Seismic Hazard. *~~The ground motion characterization shall be based on ground shaking having a 10 percent probability of exceedance in 50 years.~~*

~~*Ground shaking having a 10 percent probability of exceedance in 50 years need not exceed 2/3 of the maximum considered earthquake.*~~

Response spectra and acceleration time histories shall be constructed in accordance with sections 1613, 1802.7 & 1802.8.

3403.2.3.3.4 Analysis Procedure. *The selection of a particular analysis procedure from ~~FEMA 356~~ ASCE 41 may be subject to the approval of the enforcement agent.*

3403.2.3.3.5 Design Criteria. *Prior to implementation of ~~FEMA 356~~ ASCE 41 non-linear dynamic procedures – the ground motion, analysis and design methods, material assumptions and acceptance criteria proposed by the engineer shall be reviewed by the enforcement agent.*

~~***3403A.2.3.3.6 Enforcement Agency Approval.*** *The analysis, conclusion and design decisions shall be reviewed and accepted by enforcement agent.*~~

3403.2.3.3.6 ~~3403A.2.3.3.7~~ Structural observation, testing and inspections. *Construction testing, inspection and structural observation requirements shall be as required for new construction.*.....

NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129850 & 130005(g)*

Chapter 34A - Existing Structures

3401A.1 Scope. The provisions of this chapter shall control the alteration, repair, addition and change of occupancy of existing structures *for applications listed in Sections 110.1 (OSHPD 1), and 110.4 (OSHPD 4) regulated by the Office of Statewide Health Planning and Development (OSHPD).....*

SECTION 3402A DEFINITIONS

3402A.1 Definitions. The following term shall, for the purposes of this chapter and as used elsewhere in the code, have the following meaning. *Definition provided in section 1613A.2, ASCE 7 section 11.2 and ~~Chapter 6 of Title 24 Part 1 - Building Standards Administrative Code~~ ASCE 41 shall apply when appropriate in addition to terms defined in this section:*

APPROVED EXISTING BUILDING. *Any building originally constructed in compliance with the requirements of 1973 or subsequent edition of California Building Code.*

ASSOCIATED STRUCTURAL ALTERATIONS *means any change affecting existing structural elements or requiring new structural elements for vertical or lateral support of an otherwise nonstructural alteration.*

~~***DESIGN*** *is the procedure that includes both the evaluation and retrofit design of an existing element and design of new element.*~~

~~***DESIGN EARTHQUAKE*** *is the earthquake ground motion defined in section 3413A.2.2.*~~

~~***ESSENTIAL LIFE SAFETY*** *is the retrofit or repair of a structure to a goal of essential life safety as a level of expected structural performance taken to mean that occupants will be able to exit the structure safely following an earthquake. It does not mean that they will be uninjured or not be in need of medical attention. A structure is presumed to achieve this level of performance where, although significant damage to the structure may have occurred, some margin against either total or partial structural collapse remains, even though damage may not be economical to repair; major structural elements have not become dislodged or fallen so as to pose a life safety threat; and, nonstructural systems or elements, which are heavy enough to cause severe injuries either within or outside the building, have not become dislodged so as to pose a life safety threat. This level of structural performance is equivalent to SPC 2.*~~

GENERAL ACUTE CARE HOSPITAL *as used in this chapter 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 the beds licensed*

pursuant to subdivision (a) of Section 1250 of the Health and Safety Code, as of January 1, 1995, comprise 10 percent or less of the total licensed beds of the total physical plant, and does not include facilities owned or operated, or both, by the Department of Corrections. It also precludes hospital buildings that may be licensed under the above mentioned code sections, but provide skilled nursing or acute psychiatric services only.

INCIDENTAL STRUCTURAL ALTERATIONS OR ADDITIONS *are alterations or additions which would not reduce the story lateral shear force-resisting capacity by more than 5 percent or increase the story shear by more than 5 percent in any existing story.*

~~***IMMEDIATE OCCUPANCY*** *- The retrofit or repair of a structure to a goal of immediate occupancy as a level of expected performance is taken to mean the post-earthquake damage state in which limited structural and non-structural damage has occurred. The original strength and stiffness of structure is substantially retained, with minor cracking and yielding of structural elements. Basic access and life safety systems, including doors, stairways, elevators, emergency lighting, fire alarms and suppression systems, remain operable, provided that utilities are available. It is expected that occupants could safely remain in the building, although normal use may be impaired and some clean-up, inspection and limited structural and non-structural repairs may be required. This level of expected structural performance is equivalent to SPC-3 through SPC-5.~~

MAJOR STRUCTURAL ALTERATIONS OR ADDITIONS *are those alterations or additions of greater extent than minor structural alterations or additions.*

MINOR STRUCTURAL ALTERATIONS OR ADDITIONS *are alterations or additions of greater extent than incidental structural additions or alterations which would not reduce the story shear lateral-force-resisting capacity by more than 10 percent or increase base shear by more than 10 percent.*

NONREQUIRED STRUCTURAL ALTERATION *is any alteration of existing structural element or provision of new structural elements which is not necessary for vertical or lateral support of other work and is initiated by the applicant primarily for the purpose of increasing the vertical or lateral load-carrying strength or stiffness of an existing building.*

NONSTRUCTURAL ALTERATION *is any alteration which neither affects existing structural elements nor requires new structural elements for vertical or lateral support and which does not increase the lateral shear force in any story by more than 5 percent.*

NPC 1, NPC 2, NPC 3 / NPC 3R, NPC 4 and NPC 5 ~~***NONSTRUCTURAL PERFORMANCE CATEGORY (NPC)***~~ *are the building nonstructural performance categories for Hospital Buildings defined in Table 11.1of California Building Standards Administrative Code (Part 1, Title 24 CCR), Chapter 6.*

PEER REVIEW *refers to procedure contained in Section 3414A.*

PRIMARY FUNCTION. A primary function is a major activity for which the facility is intended. Areas that contain a primary function include, but are not limited to, the customer service lobby of a bank, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public accommodation or other private entity using the facility are carried out. Mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors and restrooms are not areas containing a primary function.

RECONSTRUCTION *means rebuilding of any existing building to bring it into full compliance with these regulations..*

REPAIR *as used in this division means all the design and construction work affecting existing or requiring new structural elements undertaken to restore or enhance the structural and nonstructural load resisting system participating in vertical or lateral response of a structure primarily intended to correct the effects of deterioration or impending or actual failure, regardless of cause.*

SPC 1, SPC 2, SPC 3, SPC 4 and SPC 5 ~~***STRUCTURAL PERFORMANCE CATEGORY (SPC)***~~ *are the building structural performance categories for Hospital Buildings defined in Table 2.5.3 of California Building Standards Administrative Code (Part 1, Title 24 CCR), Chapter 6.*

TECHNICALLY INFEASIBLE. An alteration of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

SECTION 3403*A* ADDITIONS, ALTERATIONS OR REPAIRS

3403*A*.1 Existing buildings or structures. Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any provisions of this code. An existing building plus additions shall comply with the height and area provisions of Chapter 5. Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure.

3403*A*.1.1 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612*A*.3, any additions, alterations or repairs that constitute substantial improvement of the existing structure, as defined in Section 1612*A*.2, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

3403*A*.2 Structural. Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5 percent, unless the increased forces on the element are still in compliance with the code for new structures, nor shall the strength of any structural element be decreased to less than that required by this code for new structures. Where repairs are made to structural elements of an existing building, and uncovered structural elements are found to be unsound or otherwise structurally deficient, such elements shall be made to conform to the requirements for new structures.

3403*A*.2.1 Existing live load. Where an existing structure heretofore is altered or repaired, the minimum design loads for the structure shall be the loads applicable at the time of erection, provided that public safety is not endangered thereby.

3403*A*.2.2 Live load reduction. If the approved live load is less than required by Section 1607A, the areas designed for the reduced live load shall be posted in with the approved load. Placards shall be of an approved design.

3403*A*.2.3 Seismic. Additions, alterations or modification or change of occupancy of existing buildings shall be in accordance with this section for the purposes of seismic considerations.

3403*A*.2.3.1 Additions to existing buildings. An addition that is structurally independent from an existing structure shall be designed and constructed with the seismic requirements for new structures. An addition that is not structurally independent from an existing structure shall be designed and constructed such that the entire structure conforms to the seismic-force-resistance requirements for new structures unless the following conditions are satisfied:

1. The addition conforms with the requirements for new structures,
2. The addition does not increase the seismic forces in any structural element of the existing structure by more than *5* percent cumulative since the original construction, unless the element has the capacity to resist the increased forces determined in accordance with ASCE 7, and
3. Additions do not decrease the seismic resistance of any structural element of the existing structure by more than *5* percent cumulative since the original construction, unless the element has the capacity to resist the forces determined in accordance with ASCE 7. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

3403*A*.2.3.2 Alterations. Alterations are permitted to be made to any structure without requiring the structure to comply with Section 1613A, provided the alterations conform to the requirements for a new structure. Alterations that increase the seismic force in any existing structural element by more than *5* percent cumulative since the original construction or decrease the design strength of any existing structural element to resist seismic forces by more than 5 percent cumulative since the original construction shall not be permitted unless the entire seismic-force-resisting system is determined to conform to ASCE 7 for a new

structure. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

Exception: Alterations to existing structural elements or additions of new structural elements that are not required by ASCE 7 and are initiated for the purpose of increasing the strength or stiffness of the seismic-force-resisting system of an existing structure need not be designed for forces conforming to ASCE 7, provided that an engineering analysis is submitted indicating the following:

1. The design strength of existing structural elements required to resist seismic forces is not reduced.
2. The seismic force to required existing structural elements is not increased beyond their design strength.
3. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16A.
4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16A.
5. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.
6. The alterations do not result in the creation of an unsafe condition.

3403A.2.3.3 Adoption. *Except for the modifications as set forth in Sections 3411A through 3413A ~~3414A~~ all additions, alterations, repairs and seismic retrofit to existing structures or portions thereof may be designed and constructed in accordance with the provisions of ~~FEMA 356~~ ASCE 41.*

3403A.2.3.3.1 Referenced Standards. *All Reference Standards listed in ~~FEMA 356~~ ASCE 41 shall be replaced by Referenced Standards listed in Chapter 35 of this code and shall include all amendments to the reference standards in this code.*

3403A.2.3.3.2 ASCE 41 Section 1.4 –Rehabilitation Objectives. *Target building performance level shall be as follows:*

a. ***For general acute care hospitals along with all structures required for their continuous operation and access*** *- Immediate Occupancy Structural Performance Level (S-1) as defined in Section 1.5.1.1 at Basic Safety Earthquake 1 (BSE-1) Seismic Hazard Level as defined in Section 1.6.1.2 and Collapse Prevention Structural performance level (S-5) per Section 1.5.1.5 at Basic Safety Earthquake 2 (BSE-2) Seismic Hazard Level as defined in Section 1.6.1.1. The nonstructural performance level shall satisfy the requirements of this code for new hospital buildings.*

   Exceptions: *Buildings satisfying requirements of Sections 3403A.2.3.4, 3411A.2 or 3411A.3.*

b. ***For pre-1973 Buildings which will not be used for general acute care services after January 1, 2030*** *- Building Safety Objective (BSO) Level as defined in Section 1.4.1. BSO level includes Life Safety Building Performance (3-C) Level as defined in Section 1.5.3.3 at the Basic Safety Earthquake 1 (BSE-1) Seismic Hazard Level as defined in section 1.6.1.2 and Collapse Prevention building performance level (5-E) per section 1.5.3.4 at the Basic Safety Earthquake 2 (BSE-2) Seismic Hazard Level as defined in section 1.6.1.1.*

   Exceptions: *Buildings satisfying requirements of Sections 3403A.2.3.4, 3411A.3.2.1 and 3411A.3.2.2.*

c. ***All Others*** *- Immediate Occupancy Building Performance Level of (1-B) as defined in Section 1.5.3.2 at Basic Safety Earthquake 1 (BSE-1) Seismic Hazard Level as defined in Section 1.6.1.2 and Collapse prevention building performance level (5-E) per Section 1.5.3.4 at Basic Safety Earthquake 2 (BSE-2) Seismic Hazard Level as defined in Section 1.6.1.1.*

3403A.2.3.3.3 ~~3403A.2.3.3.2~~ Material Testing Required. *Use of Material Properties based on Historical Information as default values shall not be permitted.*

3403A.2.3.3.4 ~~3403A.2.3.3.3~~ Analysis Procedure. *The selection of a particular analysis procedure from ~~FEMA 356~~ ASCE 41 shall be subject to the approval of the enforcement agent.*

3403A.2.3.3.5 ~~***3403A.2.3.3.4***~~ ***Design Criteria.*** *Prior to implementation of ~~FEMA 356~~ ASCE 41 Nonlinear Dynamic Procedure, the ground motion, analysis and design methods, material assumptions and acceptance criteria proposed by the engineer shall be peer reviewed in accordance with Section 3414A and ~~/ or~~ reviewed by the enforcement agent.*

~~***3403A.2.3.3.5 Enforcement Agency Approval.*** *The analysis, conclusion and design decisions shall be reviewed and accepted by the peer reviewer(s) and / or enforcement agent.*~~

3403A.2.3.3.6 Structural observation, testing and inspections. *Construction testing, inspection and structural observation requirements shall be as required for new construction.*

3403A.2.3.4 Seismic Evaluation and Retrofit of General Acute Care Hospitals. *Not withstanding any other requirements of this code, all existing general acute care hospitals shall comply with the requirements specified in Chapter 6, Part 1,Title 24.*

3403A.2.3.4.1 SPC5 and NPC 4 / NPC5. *Structures and nonstructural components and systems satisfying the requirements of this Code for new buildings for Occupancy Category IV shall be considered to satisfy the requirements of SPC 5 and NPC 4. NPC 4 buildings satisfying operational requirements for NPC 5 of Table 11.1, Chapter 6, Part 1, Title 24, shall be placed in non-structural performance category NPC 5.*

3403A.2.3.4.2 SPC 5 using ASCE 41. *Structures satisfying the requirements of immediate occupancy structural performance level (S-1) per Section 1.5.1.1 of ASCE 41 at BSE-1, Collapse prevention performance level S-5 per section 1.5.1.5 of ASCE 41 at BSE-2 and items identified in Chapter 10, Part 1, Title 24, satisfying the requirements of Immediate Occupancy Nonstructural performance level (N-B) per section 1.5.2.2 of ASCE 41 at BSE-1 shall be considered to comply with SPC 5 requirements of Table 2.5.3, Chapter 6, Part 1, Title 24.*

3403A.2.3.4.3 SPC 2 using ASCE 41. *Structures satisfying the requirements of life safety structural performance level (S-3) per section 1.5.1.3 of ASCE 41 at BSE-1 and items identified in Chapter 10, Title 24, Part 1 satisfy the requirements of life safety Nonstructural performance level (N-C) per section 1.5.2.3 of ASCE 41 at BSE-1, shall be considered to comply with SPC 2 requirements of Table 2.5.3, Chapter 6, Part 1, Title 24.*

3403A.2.4.4 NPC. *Non-structural components for Immediate Occupancy Nonstructural performance level (N-B) in section 1.5.2.2 shall meet the requirements of this Code for new buildings. Non-structural components for Operational Nonstructural performance level (N-A) in section 1.5.2.1 shall meet performance level N-B and Section 3413A.1.30. Building satisfying the requirements of non-structural performance level N-A and N-B as described in this section shall be considered to satisfy the requirements of NPC 5 & NPC 4 of Table 11.1, Chapter 6, Part 1, Title 24 respectively.*

Immediate Occupancy Nonstructural performance level (N-B) in Section 1.5.2.2 and Life Safety Nonstructural performance level (N-C) in section 1.5.2.3 of ASCE 41 at BSE-1 shall be considered equivalent to NPC 3 / NPC 2 and NPC 3R requirements respectively of Table 11.1, Chapter 6, Part 1, Title 24. For NPC 3 / NPC 3R / NPC 2, only components listed in Table 11.1, Chapter 6, Part 1, Title 24,for NPC 3 / NPC 3R / NPC 2 need to satisfy the requirements specified above.

> *Exceptions: 1) Evaluation procedure in Article 11, Chapter 6, Part 1, Title 24 shall be used for seismic evaluation of NPC 2, NPC 3 / NPC 3R, NPC 4 and NPC 5, where specific procedure is not outlined in ASCE 41. Administrative and permitting provisions outlined in Article 11, Chapter 6, Part 1, Title 24 shall apply.*
>
> *2) Anchorage and bracing of nonstructural components in buildings in seismic performance categories SPC 1 and SPC 2 with a performance level of NPC 3R may comply with the provisions of Section 1630A of the 1995 California Building Code using an importance factor I_p=1.0. The capacity of welds, anchors and fasteners shall be determined in accordance with requirements of this Code.*
>
> *3) Anchorage and bracing of nonstructural components in buildings in seismic performance categories SPC 1 or SPC 2 with a performance level of NPC 3 or higher, and SPC 3 or SPC 4, may comply with the provisions of Section 1630B of the 1998 California Building Code using an*

importance factor Ip=1.5. The capacity of welds, anchors and fasteners shall be determined in accordance with requirements of this code.

A continuous load path of sufficient strength and stiffness between the component and the supporting structure shall be verified. Local elements of the supporting structure shall be verified for the component loads where they control the design of the elements or their connections. Increases in F_p due to anchorage conditions (for example shallow anchors) need not be considered. For NPC 3R, the adequacy of load path for nonstructural elements need only be verified when the total reaction at the point of support (including the application of F_p) exceeds the following limits:

1. *250 pounds for components or equipment attached to light frame walls. For the purposes of this requirement, the sum of the absolute value of all reactions due to component loads on a single stud shall not exceed 250 pounds.*
2. *1,000 pounds for components or equipment attached to roofs, or walls of reinforced concrete or masonry construction.*
3. *2,000 pounds for components or equipment attached to floors or slabs-on-grade.*

***Exception:** If the anchorage or bracing is configured in a manner that results in significant torsion on a supporting structural element, the effects of the nonstructural reaction force on the structural element shall be considered in the anchorage design.*

***3403A.2.3.5 Repair of Earthquake Damage.** Repair of Earthquake Damage shall comply with Article 20, Chapter 7, Part 1, Title 24,.*

.....

SECTION 3411A - ADDITIONS, ALTERATIONS, REPAIRS AND SEISMIC RETROFIT TO EXISTING BUILDINGS OR STRUCTURES

Existing hospital buildings (as defined in Section 7-111 Part 1, Title 24, Building Standards Administrative Code).

***NOTE:** Alterations to lateral shear force-resisting capacity and story lateral shear forces shall be considered to be cumulative for purposes of defining incidental or minor alterations or additions. The percentage of cumulative changes shall be based on as built conditions existing on March 7, 1973 or since the original construction if built after March 7, 1973.*

***3411A.1 Alterations.** For this section, alterations include any additions, alterations, repairs, and / or seismic retrofit to a hospital building or portions thereof. The provision of Section 3403A shall apply for Hospital Buildings.*

***3411A.2 Seismic Retrofit.** Any seismic retrofit of hospital building required by Article 2 and Article 11, Chapter 6, Part 1, Title 24, shall meet the requirements of Sections 3403A.2.3.4. ~~3412A through 3414A~~.*

***EXCEPTION:** Hospital buildings evaluated to SPC 1 due to deficiencies identified by Article 10, Chapter 6, Part 1, Title 24, may be upgraded to SPC 2 by altering, repairing or seismically retrofitting these conditions in accordance with the requirements of Sections 3403A.2.3.,~~3412A through 3414A.~~*

3411A.3 Alterations, additions and repairs to existing buildings or structures not required by Chapter 6, Part 1, Title 24.

***3411A.3.1 Approved existing buildings.** Structural alterations or repairs may be made to approved building provided the entire building, as modified, including structural alterations or repairs, conform to Sections 3403A.2.3, ~~3412A through 3414A~~ except that requirements for the seismic structural performance category (SPC) of the building as determined by Chapter 6, Part 1, Title 24 shall apply. Additions shall conform to the requirements of these regulations for new construction.*

3411A.3.2 Pre-1973 buildings.

***3411A.3.2.1 Incidental structural alterations, additions or repairs.** The existing structural elements affected by the alteration, addition or repair shall conform or shall be made to conform to the vertical load*

requirements of these regulations. Incidental structural additions will be permitted provided the additions meet these regulations for new construction using importance factor, I, equal to or greater than 1.0. Alterations or repairs to the existing lateral load-resisting system must meet the requirements of Sections 3403A.2.3., ~~3412A through 3414A.~~

3411A.3.2.2 Minor structural alteration, additions or repairs. *Minor structural alterations, additions or repairs shall be permitted provided they meet the following: Alterations to existing gravity and / or lateral load-resisting systems shall be made to conforms to the requirements of Sections 3403A.2.3, ~~3412A through 3444A~~; and ~~or~~ additions shall meet all of the requirements of these regulations for new construction using an importance factor, I, equal to or greater than 1.0.*

3411A.3.2.3 Major structural alteration, additions or repairs. *Major structural alterations, additions or repairs shall be permitted provided the entire building, as modified, including the structural alterations or repairs, conforms to the requirements of Sections 3403A.2.3, ~~3403A, 3412A through 3414A for no less than SPC 2~~. Additions shall meet the requirements of these regulations for new construction.*

It shall also be demonstrated by a written report submitted by the structural engineer, acceptable to the enforcement agency, that an investigation of the existing building structure shows it to be constructed in a reasonable conformance with the submitted drawings and specifications.

3411A.3.2.4 Removal of Stories. *An alteration which involves the removal of one or more entire stories will be permitted if the lateral-load-resisting capacity of the remaining structure is not reduced.*

An alteration which involves the removal of other than one or more entire stories will be permitted provided that entire building conforms to ~~in accordance with~~ Sections 3403A.2.3., ~~3412A through 3414A~~.

SECTION 3412A RESERVED ~~EARTHQUAKE EVALUATION AND DESIGN FOR RETROFIT OF EXISTING HOSPITAL BUILDINGS~~

~~3412A.1 Purpose.~~ *~~All modifications, alterations, and / or repairs to existing structures or portions thereof shall, at a minimum, be designed and constructed to resist the effects of seismic ground motions as provided in this section. When applicable, the structural system shall be evaluated by the design professional of record and, if not meeting or exceeding the minimum seismic design requirements of this section, shall be retrofitted in compliance with these requirements.~~*

~~3412A.1.1 Minimum seismic design.~~ *~~The purpose of this section is to provide a minimum level of seismic performance. At this essential life safety level (seismic performance category, SPC - 2), in general, persons in and around the building will be able to safely exit or be evacuated from the building or its vicinity following an earthquake. It does not mean that persons will not be injured or not be in need of medical attention. This level of seismic performance is presumed to be achieved when a) the building has some margin against either total or partial collapse of the structural system even though significant damage may have occurred that may not be economical to repair; b) major structural elements have not fallen or been dislodged so as to pose a life safety threat; and c) nonstructural systems or elements that are heavy enough to cause severe injuries either within or outside the building have not been dislodged so as to pose a life safety threat. For buildings in seismic performance categories SPC - 3 through SPC – 5, the purpose of this section is to provide the immediate occupancy level of seismic performance. At this level, the building and essential non-structural systems will be reasonably capable of functioning following an earthquake.~~*

~~3412A.2 Applicability~~

~~3412A.2.1~~ *~~The requirements of this section apply to hospital building where Chapter 6, Part 1, Title 24 Building Standard Administrative Code, so requires, wherever the structure is to be retrofitted, repaired, or modified and; 1) there is change in occupancy; or 2) changes to structural elements that reduce the lateral load capacity by more than 5% at any story; or 3) repair of structural elements where the damage has reduced the lateral load capacity by more than 10% at any story; or 4) changes in live or dead load that increase the story shear by more than 5%; or 5) where required by Sections 3403A, 3411A or Chapter 6, Part 1, Title 24, Building Standard Administrative Code. Changes in items 2), 3), and 4) are cumulative for past alterations to the building.~~*

~~Where items 1 through 5 are not applicable, the alteration, retrofit or repair shall meet the requirements of this section, but upgrade of the whole structure is not required.~~

~~**3412A.2.2 Evaluation required.** If the criteria in Section 3412A.2.1 apply to the project under consideration, the design professional of record shall provide an evaluation in accordance with FEMA 356, as modified herein, to determine the seismic performance of the building in its current configuration and condition. If the structure seismic performance is evaluated as satisfactory and enforcement agent concur, then no structural retrofit is required.~~

~~**EXCEPTION:** In some cases a technical review and evaluation may be waived under the exception of Section 3413A.1, where the life safety threat posed by building is clearly minimal.~~

~~**3412A.2.3 Retrofit required.** Where the evaluation indicates the building does not meet the SPC performance objective of this section, the owner shall take appropriate steps and either 1) undertake the seismic retrofit as part of the modifications, alterations and / or repairs; or 2) provide a plan, acceptable to the enforcement agent, to complete the seismic retrofit in a timely manner.~~

~~**3412A.3** The modification to any existing building may be prepared in accordance with the requirements of a new building in this Code.~~

~~**3412A.4** The structural system allowances of Sections 3403A.2.1 & 3403A.2.2 do not apply to any building to which Sections 3411A through 3414A apply.~~

SECTION 3413A ~~SEISMIC REHABILITATION OF BUILDINGS~~ MODIFICATIONS TO ASCE 41

3413A.1 GENERAL. ~~The existing or retrofitted structure shall be demonstrated to have the capability to sustain the deformation response due to the specified earthquake ground motions. The engineer shall provide an evaluation of the response of the existing structure in its current configuration and condition to the ground motions specified. If the building's seismic performance is evaluated as satisfactory and the enforcement agent concurs, then no further engineering work is required. When the evaluation indicates the building does not meet the objective of safety goals of this chapter and the applicable structural seismic performance (SPC) and nonstructural seismic performance (NPC) requirements, then a retrofit and / or repair design shall be prepared that yields a structure that meets the life safety and operational performance objectives of Section 3412A and reflects the appropriate consideration of existing conditions. Any approach to analysis and design may be used that yields a building of reliable stability in the prescribed design earthquake loads and conditions. The approach shall be rational, shall be consistent with the established principals of mechanics, and shall use the known performance characteristics of materials and assemblages under reversing loads typical of severe earthquake ground motions.~~

~~**EXCEPTION:** Further consideration of the structure's seismic performance can be waived by the Enforcement Agent if both the engineer of record and Enforcement Agent conclude that the structural system can be expected to perform at least as well as required by the provisions of Section 3403A, 3412A through 3414A without completing an analysis of the structure's conformance to these requirements. A detailed report shall be submitted to the responsible Enforcement Agent that presents the reasons and basis for this conclusion. This report shall be prepared by the engineer of record. Enforcement Agent shall concur in this conclusion and affirm to it in writing.~~

~~**3413A.2 Modifications to FEMA 356.** This section is applicable to seismic evaluation, analysis and design using the provisions of FEMA 356 per section 3403A.2.3.3.~~ The text of ~~FEMA 356~~ ASCE 41 shall be modified as indicated in sections ~~3413A.2.1~~ 3413A.1.1 through ~~3413A.2.37~~ 3413A.1.32.

Reference to sections of International Building Code (IBC) in ASCE 41 shall comply with requirements of Sections 110.1 & 110.4.

3413A.1.1 ASCE 41 Section 1.1. Modify ASCE 41 Section 1.1 with the following:

Seismic evaluations shall be performed using procedure and criteria of ASCE 41 except for general acute care hospitals, which shall be evaluated per Chapter 6, Part 1, Title 24 when required per provision of that chapter.

~~**3413A.2.1 FEMA 356 Sections 1.3, 1.4, 1.5.** Replace FEMA 356 Sections 1.3, 1.4 and 1.5 as follows:~~

~~**Seismic Rehabilitation Process and Objective.** Seismic evaluation procedure, building performance level and rehabilitation objectives for Hospital Buildings shall be per California Building Standards Administrative Code (Part 1, Title 24 CCR), Chapter 6.~~

~~**3413A.2.2**~~ **3413A.1.2** ~~**FEMA 356**~~ **ASCE 41 Section 1.6 Seismic Hazard.** ~~Replace FEMA 356~~ Modify ASCE 41 Section 1.6 with the Following:

~~The ground motion characterization shall be based on ground shaking having a 10 percent probability of exceedance in 50 years for category SPC-2 at the essential life safety performance level. For SPC-3 through SPC-5, the ground motion characterization shall be based on ground shaking having a 10 percent probability of exceedance in 50 years at the immediate occupancy performance level and the maximum considered earthquake at the collapse prevention performance level.~~

~~Ground shaking having a 10 percent probability of exceedance in 50 years need not exceed 2/3 of the maximum considered earthquake.~~

Response spectra and acceleration time histories shall be constructed in accordance with Sections 1613A, 1614A and 1802A.6. Basic Safety Earthquake 2 (BSE-2) in ASCE 41 shall be same as Maximum Considered Earthquake (MCE) in ASCE 7.

~~**3413A.2.3**~~ **3413A.1.3** ~~**FEMA 356**~~ **ASCE 41 Section 2.2.6.** Modify ~~FEMA 356~~ ASCE 41 Section 2.2.6 with the Following:

Data Collection Requirements. The extent of data collection shall be at ~~Usual level for SPC-2 and~~ Comprehensive level for all structures except that data collection at Usual level shall be permitted for structures with BSO or lower target performance objective. ~~SPC-3 through SPC-5 per FEMA 356 Table 2-1.~~ Materials properties testing program shall be pre-approved by the Enforcement Agent.

For building, built under an OSHPD permit based on 1976 or later edition of CBC, where materials properties are shown on design drawings and original materials test data are available, no materials testing shall be required when approved by the enforcement agent.

~~**3413A.2.4**~~ **3413A.1.4** ~~**FEMA 356**~~ **ASCE 41 Section 2.4.1.1.** Modify ~~FEMA 356~~ ASCE 41 Section 2.4.1.1 with the Following:

~~**Method to Determine Limitations on Use of Linear Procedures.** The applicability of linear procedures shall be determined as follows:~~

- ~~If all component DCRs ≤ 1.5 for SPC-3 through 5 buildings or 2.0 for SPC-2 buildings, then linear procedures are applicable.~~
- ~~If up to 10% of the component DCRs exceeds 1.5 and no irregularities described in Sections 2.4.1.1.1 through 2.4.1.1.4 are present, then linear procedures are applicable.~~

~~3~~1. If one or more component DCRs exceed 1.5 for the Immediate Occupancy Structural Performance Level (S-1) or 2.0 for the Life Safety Structural Performance level (S-3) and any irregularity described in Section 2.4.1.1.1 through 2.4.1.1.4 is present, then linear procedures are not applicable and shall not be used.

~~4~~2. Linear procedures are not applicable to moment resisting frames where plastic hinges do not form in either the beam at the face of column or in the column panel zone.

~~**3413A.2.5**~~ **3413A.1.5** ~~**FEMA 356**~~ **ASCE 41 Section 2.4.2.1** Modify ~~FEMA 356~~ ASCE 41 Section 2.4.2.1 with the following:

Nonlinear Static Procedure. If higher mode effects are significant, ~~either~~ the Nonlinear Dynamic Procedure ~~or Modal Pushover Analysis procedure, subject to the approval of the enforcement agent,~~ shall be used.

~~**3413A.2.6**~~ **3413A.1.6** ~~**FEMA 356**~~ **ASCE 41 Section 2.4.4.5.** Modify ~~FEMA 356~~ ASCE 41 Section 2.4.4.5 by the Following:

Material Properties. Expected material properties are not permitted to be determined by multiplying lower bound values by the assumed factors specified in Chapters 5 through 8.~~-~~

~~**3413A.2.7**~~ **3413A.1.7** ~~**FEMA 356**~~ **ASCE 41 Section 3.2.10.1.** *Modify ~~FEMA 356~~ ASCE 41 Section 3.2.10.1 with the Following:*

Linear Procedures. *Equation ~~3-6~~ 3-5 is not permitted by OSHPD.*

~~**3413A.2.8 FEMA 356 Section 3.3.1.3.1.** *Modify FEMA 356 Section 3.3.1.3.1 by the Following:*~~

~~***Pseudo Lateral Load.***~~

~~*C_2 = Modification factor to represent the effects of pinched hysteresis shape, stiffness deterioration and strength deterioration on maximum displacement response. Values of C_2 for different framing systems and Structural Performance Levels shall be obtained from Table 3-3. For linear procedures, C_2 may be taken as 1.0 if all DCRs are less than 1.5.*~~

~~**3413A.2.9**~~ **3413A.1.8** ~~**FEMA 356**~~ **ASCE 41 Section 3.3.1.3.5.** *Replace ~~FEMA 356~~ ASCE 41 Section 3.3.1.3.5 as follows:*

Unreinforced Masonry Buildings. *Unreinforced Masonry not permitted by OSHPD.*

3413A.1.9 ASCE 41 Section 3.3.3.2.2 *Modify ASCE 41 Section 3.3.3.2.2 with the following:*

Simplified NSP Analysis. *Not permitted by OSHPD.*

~~**3413A.2.10 FEMA 356 Section 3.3.3.2.4.** *Modify FEMA 356 Section 3.3.3.2.4 by the Following:*~~

~~***Idealized Force-Displacement Curve.*** *The effective yield strength, V_y, and yield displacement of the building shall not be used to determine acceptance criteria based on displacement ductility or strength beyond the provisions without approval of the enforcement agent.*~~

~~**3413A.2.11 FEMA 356 Section 3.3.3.3.2.** *Modify FEMA 356 Section 3.3.3.3.2 by the Following:*~~

~~***Target Displacement.***~~

~~*C_2 = Modification factor to represent the effects of pinched hysteresis shape, stiffness deterioration and strength deterioration on maximum displacement response. Values of C_2 for different framing systems and Structural Performance Levels shall be obtained from Table 3-3.*~~

~~**3413A.2.12 FEMA 356 Table 3-3.** *Modify FEMA 356 Table 3-3 by the Followings:*~~

~~***Values for Modification Factor C_2:***~~
~~*Footnote 1. Structures in which more than 30% of the story shear at any level is resisted by any combination of the following components, elements, or frames: ordinary moment resisting frames, concentrically braced frames, frames with partially restrained connections, tension only braces, unreinforced masonry walls, shear critical piers and spandrels of reinforced concrete or masonry, flexurally controlled reinforced concrete and masonry walls without boundary elements and welded steel special moment resisting frames with Pre-Northridge connections.*~~

~~**3413A.2.13**~~ **3413A.1.10** ~~**FEMA 356**~~ **ASCE 41 Section 3.4.2.2.** *Modify ~~FEMA 356~~ ASCE 41 Section 3.4.2.2 with the Following:*

Acceptance Criteria for Linear Procedures – Drift Limitations. *The interstory drift ratio shall not exceed the ~~following values for the specified systems for the performance level under consideration~~ drift limits for Occupancy Category IV in ASCE 7 Table 12.12-1due to forces corresponding to BSE-1, except that buildings designed to BSO or lower performance levels are permitted to meet the drift limits for Occupancy Category II. For dual systems, the least interstory drift ratio shall control.*

> ***EXCEPTION:*** *Larger interstory drift ratios shall be permitted where justified by rational analysis that both structural and non-structural elements can tolerate such drift and approved by the enforcement agent.*

~~Seismic Force~~	~~IO~~	~~LS~~	~~CP~~

~~Resisting System~~			
~~Moment Frames~~	~~0.015~~	~~0.020~~	~~0.025~~
~~Braced Frames~~	~~0.010~~	~~0.015~~	~~0.020~~
~~Shear Walls~~	~~0.007~~	~~0.010~~	~~0.015~~

~~3413A.2.14~~ 3413A.1.11 ~~FEMA 356~~ ASCE 41 **Section 3.4.3.2.1.** *Modify ~~FEMA 356~~ ASCE 41 Section 3.4.3.2.1 with the following:*

Deformation-Controlled Actions. *For any building required to meet the ~~SPC-3 through SPC-5~~ Operational Building Performance level, 1-A or Immediate Occupancy Building Performance Level, 1-B, primary components shall be within the acceptance criteria for primary components and secondary components shall be within the acceptance criteria for secondary components.*

~~3413A.2.15~~ 3413A.1.12 ~~FEMA 356~~ ASCE 41 **Section 4.4.** *Modify ~~FEMA 356~~ ASCE 41 Section 4.4 with the followings:*

Foundation Strength and Stiffness. *Foundation and soil strength shall be used to evaluate potential overturning, uplift and sliding for fixed base assumptions, and stiffness for flexible base assumptions, including deformations associated with those actions.*

~~3413A.2.16~~ 3413A.1.13 ~~FEMA 356~~ ASCE 41 **Section 4.4.1.1.** *Replace ~~FEMA 356~~ ASCE 41 Section 4.4.1.1 as follows:*

Presumptive Capacities. *Not permitted by OSHPD*

~~3413A.2.17~~ 3413A.1.14 ~~FEMA 356~~ ASCE 41 **Section 4.4.1.2.** *Replace ~~FEMA 356~~ ASCE 41 Section 4.4.1.2 as follows:*

Prescriptive Expected Capacities. *Not permitted by OSHPD.*

~~3413A.2.18~~ 3413A.1.15 ~~FEMA 356~~ ASCE 41 **Section 4.4.3.2.2.** *Modify ~~FEMA 356~~ ASCE 41 Section 4.4.3.2.2 with the following:*

Flexible Base Assumption. *The soil strength shall be evaluated.*

~~3413A.2.19~~ 3413A.1.16 ~~FEMA 356~~ ASCE 41 **Section 4.5.** *Modify ~~FEMA 356~~ ASCE 41 Section 4.5 with the following:*

Seismic Earth Pressure. *Where the grade difference from one side of the building to another exceeds one-half story height, the seismic increment of earth pressure shall be added to the gravity lateral earth pressure to evaluate the building overturning and sliding stability and the lateral force resisting system below grade in combination with the building seismic forces .*

~~3413A.2.20~~ 3413A.1.17 ~~FEMA 356~~ ASCE 41 **Table 5.6.** *Modify ~~FEMA 356~~ ASCE 41 Table 5.6 with the following:*

Acceptance Criteria for Nonlinear Procedures - Structural Steel Components.
For fully and partially restrained moment connections designed to 1989 or prior edition of Part 2, Title 24 shall be verified for the presence of welds using E70T-4 electrodes. Where E70T-4 electrodes are present, the plastic rotation angles and residual strength ratios used shall be substantiated by the statistical analysis of three or more applicable cyclic test results subject to the approval of the enforcement agent. ~~, except when connections satisfy requirements of AISC 358.~~

~~3413A.2.21~~ 3413A.1.18 ~~FEMA 356~~ ASCE 41 **Section ~~6.8.1.1~~ 6.7.1.1.** *Modify ~~FEMA 356~~ ASCE 41 Section ~~6.8.1.1~~ 6.7.1.1 with the following:*

Monolithic Reinforced Concrete Shear Walls and Wall Segments. *For nonlinear procedures, shear walls or wall segments with axial loads greater than 0.35 P_o shall be included in the model as primary elements with appropriate strength and stiffness degrading properties assigned to those components subject to the approval of the enforcement agent. For linear procedures, the effects of deformation compatibility shall be investigated using moment-curvature section analyses and cyclic testing results of similar components to*

determine whether strengthening is necessary to maintain the gravity load carrying capacity of that component.

~~**3413A.2.22 FEMA 356 Section 6.8.2.3 6.7.2.3.** Modify FEMA 356 Section 6.8.2.3 6.7.2.3 with the following:~~

~~***Strength.** The effective tension and compression flange widths for shear walls or wall segments shall be taken as one half of the distance to the next wall web or 25% of the total wall height, whichever is less.~~

~~**3413A.2.23** **3413A.1.19** **FEMA 356**~~ **ASCE 41 Section ~~7.4.2~~ 7.3.2.** *Replace ~~FEMA 356~~ ASCE 41 Section ~~7.4.2~~ 7.3.2 as follows:*

***Unreinforced Masonry Walls and Piers In-plane.** Not permitted by OSHPD.*

~~**3413A.2.24** **3413A.1.20** **FEMA 356**~~ **ASCE 41 Section ~~7.4.3~~ 7.3.3.** *Replace ~~FEMA 356~~ ASCE 41 Section ~~7.4.3~~ 7.3.3 as follows:*

***Unreinforced Masonry Walls Out-of-plane.** Not permitted by OSHPD.*

~~**3413A.2.25** **3413A.1.21** **FEMA 356**~~ **ASCE 41 ~~7.4.4.2.2~~ 7.3.4.2.2. Shear Strength of Walls and Piers.** *Modify ~~FEMA 356~~ ASCE 41 Section ~~7.4.4.2.2~~ 7.3.4.2.2 with the following:*

The spacing of shear reinforcing, S, shall be less than or equal to the wall pier clear height divided by 2 or the story height divided by 2, whichever is smaller.

~~**3413A.2.26 FEMA 356 Section 8.3.2.5.** Modify FEMA 356 Section 8.3.2.5 with the following:~~

~~***Default Properties.** Component construction in the building shall be verified to meet the material properties, including fastener size and spacing used in the test assemblies establishing the expected strength and stiffness values given in Tables 8-1 and 8-2.~~

~~**3413A.2.27 FEMA 356 Sections 8.5.4.3, 8.5.5.3, 8.5.6.3, 8.5.7.3, 8.5.8.3, 8.5.9.3, 8.5.10.3, 8.5.11.3, 8.5.12.3, 8.5.13.3, 8.5.14.3, 8.5.15.3, 8.5.16.3, 8.5.17.3, 8.6.3.3, 8.6.4.3, 8.6.5.3, 8.6.6.3, 8.6.7.3, 8.6.8.3, 8.6.9.3, 8.6.10.3, 8,7.2, 8.8.1.3.** Modify FEMA 356 Sections listed by the following:~~

~~***Acceptance Criteria.** Component construction in the building shall be verified to meet the material properties, including fastener size and spacing used in the test assemblies establishing the m-factors and displacement ductility values given in Tables 8-3 and 8-4.~~

~~**3413A.2.28** **3413A.1.22** **FEMA 356**~~ **ASCE 41 Section 9.2.4.** *Modify ~~FEMA 356~~ ASCE 41 Section 9.2.4 with the following:*

***Linear Procedures.** Verification of the interstory lateral displacements, isolator displacements, the strength adequacy of the seismic force resisting system and isolation system, and anchorage to the foundation shall be accomplished using the Nonlinear Dynamic Procedure.*

~~**3413A.2.29** **3413A.1.23** **FEMA 356**~~ **ASCE 41 Section 9.2.5.1.** *Modify ~~FEMA 356~~ ASCE 41 Section 9.2.5.1 with the following:*

***Nonlinear Static Procedure.** Verification of the interstory lateral displacements, isolator displacements, the strength adequacy of the seismic force resisting system and isolation system, and anchorage to the foundation shall be accomplished using the Nonlinear Dynamic Procedure.*

~~**3413A.2.30** **3413A.1.24** **FEMA 356**~~ **ASCE 41 Section 9.2.9.** *Modify ~~FEMA 356~~ ASCE 41 Section 9.2.9 with the following:*

***Isolation System Testing and Design Properties - Production Tests.** Production testing and associated acceptance criteria shall be as approved by the enforcement agent.*

~~**3413A.2.31** **3413A.1.25** **FEMA 356**~~ **ASCE 41 Section 9.2.9.2.9.** *Modify ~~FEMA 356~~ ASCE 41 Section 9.2.9.2.9 with the following:*

Testing Similar Units. *The testing exemption shall require approval by the enforcement agent.*

~~***3413A.2.32***~~ ***3413A.1.26*** ~~***FEMA 356***~~ ***ASCE 41 Section 9.3.4.*** *Modify ~~FEMA 356~~ ASCE 41 Section 9.3.4 with the following:*

Linear Procedures. *Verification of the interstory lateral displacements, damper relative velocities and displacements, the strength adequacy of the seismic force resisting system and damping system, and anchorage to the foundation shall be accomplished using the Nonlinear Dynamic Procedure.*

~~***3413A.2.33***~~ ***3413A.1.27*** ~~***FEMA 356***~~ ***ASCE 41 Section 9.3.5.1.*** *Modify ~~FEMA 356~~ ASCE 41 Section 9.3.5.1 with the following:*

Nonlinear Static Procedure. *Verification of the interstory lateral displacements, damper relative velocities and displacements, the strength adequacy of the seismic force resisting system and damping system, and anchorage to the foundation shall be accomplished using the Nonlinear Dynamic Procedure.*

~~***3413A.2.34***~~ ***3413A.1.28*** ~~***FEMA 356***~~ ***ASCE 41 Section 9.3.8.*** *Modify ~~FEMA 356~~ ASCE 41 Section 9.3.8 with the following:*

Required Tests of Energy Dissipation Devices - Production Tests. *Production testing and associated acceptance criteria shall be as approved with the enforcement agent.*

~~***3413A.2.35***~~ ***3413A.1.29*** ~~***FEMA 356***~~ ***ASCE 41 Chapter 10.*** *Replace ~~FEMA 356~~ ASCE 41 Chapter 10 as follows:*

Simplified Rehabilitation. *Not permitted by OSHPD.*

~~***3413A.2.36 FEMA 356 Section 11.1.*** *Modify FEMA 356 Section 11.1 with the following:~~

~~***Scope.*** *The seismic rehabilitations of nonstructural components and system shall satisfy the requirements of Building Standards Administrative Code (Part 1, Title 24 CCR), Chapter 6.~~

~~***3413A.2.37 FEMA 356 Section 11.2.*** *Modify FEMA 356 Section 11.2 by the following:~~

~~***Procedure.*** *The seismic rehabilitations objective shall be to satisfy the Nonstructural Performance Requirements of Building Standards Administrative Code (Part 1, Title 24 CCR), Chapter 6.~~

3413A.1.30 ASCE 41 Section 11.3.2. *Modify ASCE 41 Section 11.3.2 with the following:*

Operational Nonstructural Performance Level (N-A) Requirements. *All Structures shall meet Immediate Occupancy Nonstructural Performance Level (N-B) and facility shall have on-site supplies of water and holding tanks for wastewater, sufficient for 72 hours emergency operations, are integrated into the building plumbing systems. As an alternative, hook-ups to allow for the use of transportable sources of water and sanitary waste water disposal have been provided. An on-site emergency system as defined within Part 3, Title 24 is incorporated into the building electrical system for critical care areas. Additionally, the system shall provide for radiological service and an onsite fuel supply for 72 hours of acute care operation.*

3413A.1.31 ASCE 41 Section 11.9.4.3.1. *Modify ASCE 41 Section 11.9.4.3.1 with the following:*

Ceilings in all Categories shall satisfy requirements for ceilings in Category C specified in this section.

3413A.1.32 ASCE 41 Section 11.10.2.4. *Modify ASCE 41 Section 11.10.2.4 by the following:*

For general acute care hospital, Nonstructural Evaluation shall comply with requirements of Section 11.2, Chapter 6, Part 1, Title 24.

.....

NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

CHAPTER 35 - REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.4, *Appendix Chapter 1*.

.....

American Society of Civil Engineers
Structural Engineering Institute
1801 Alexander Bell Drive
ASCE/SEI Reston, VA 20191-4400

Standard reference number the	Title	Referenced in code section number
41-06	*Seismic Rehabilitation of Existing Buildings*	*3403.2.3, 3403A.13, 3415.5, .415.6, 3415.8, 3417.2, 3417.5, 3417.7, 3417.9*

.....

Federal Emergency Management Agency
Federal Center Plaza
500 C Street S.W.
FEMA Washington, DC 20472

Standard reference number	Title	Referenced in code section number
.....		
~~*FEMA 356*~~	~~*Prestandard and Commentary for the Seismic Rehabilitation of Buildings*~~	~~*3403.2.3.3, 3403A.2.3.3, 3403A.13*~~

.....

PTI Post-Tensioning Institute
1717 W. Northern Avenue, Suite 114
Phoenix, AZ 85021

Standard reference Number	Title	Referenced in code section number
PTI-2004	*Recommendations for Prestressed Rock and Soil Anchors (4th Edition)*	*1813A.1*

.....

NOTATION:

- *Authority: Health and Safety Code Section 130005(g) & 130021*
- *Reference: Health and Safety Code Section 1275, 129790, 129850 & 130005(g)*

Exhibit 2

The Acoustics & Vibration Group
5700 Broadway Sacramento, CA 95820-1852
916-457-1444 FAX: 916-457-1475
Consultants in Acoustics, Vibration & Noise Control

November 16, 2007

Jason Flanders
Kenyon-Yeates, LLP
3400 Cottage Way, Suite K
Sacramento, CA 95625

SUBJECT: Response to Noise Sections and Comments Addressing Noise Impacts in the Final Environmental Impact Report for the Mercy General Hospital and Sacred Heart Parish School Mixed Use Project, Sacramento

Dear Mr. Flanders,

Responses are provided in this letter report in response to the Final Environmental Impact Report (Final EIR) prepared for the expansion of Mercy General Hospital and relocation of Sacred Heart Parish School [1]*. This includes a review of preparers' comments and responses to questions regarding the adequacy of noise impact sections of the Draft EIR [2]. The questions of adequacy of the noise sections of the Draft EIR provided by The Acoustics & Vibration Group, TAVG [3] were glossed over, misrepresented, incorrectly addressed or simply handled in a glib manner without any analysis.

The discussion of the importance of frequency content is an example of the responses in the Final EIR. Without addressing any of the referenced work pointing to the short comings of using only the A-weighted sound levels to evaluate noise impacts, the respondents simply say that this metric has always been used and is commonly employed. As pointed out in the Berkeley citizens versus the Port of Commissions case [4], doing noise impact evaluations the "standard" way is not always acceptable. In the Berkeley case, the 4th Court of Appeals stated that the use of the day-night average, L_{dn}, sound level descriptor was not sufficient to define the noise impacts and that the sound from individual events had to be taken into account. CalTrans in the past has only used the L_{dn} sound level or the Community Noise Equivalent Level, CNEL, to define transportation sound sources. Similarly, the major sound impacts will derive not from transportation sources on public roads, but from non-transportation sound sources and transportation sound sources on private property. The sources will range from children yelling and bouncing balls in the very small play areas, to cars idling in the school queuing yard designed to handle 43 vehicles at the same time. These cars will be idling with some vehicles next to the back yards of residences adjacent to the project site.

The Final EIR states that a requirement to measure sound tonal content does not exist. This is contradicted by their own definition of a pure tone on page 4-52 of the Final EIR and by the City's Municipal Code. The Final EIR says that a pure tone is characterized by the presence of predominant frequency or frequencies. The existence of such tones is simply hearsay without the measurement of the tones to show the presence of a dominant tone. The tones generated by children playing, differ substantially from those of road traffic. The backyard of the homes impacted by the adjacent school playground and traffic queuing area are shielded from road traffic by the house on the lot and presence of many other structures. Section 8.68.190 General noise regulations, paragraph G states the:

* - *Number in brackets refers to references listed at the end of this letter report.*

"The duration of the noise and its tonal informational or musical content"

is to be used when determining whether a violation exists. Thus, the tonal content must be used as part of the evaluation of the noise generated by any non-transportation sound sources or transportation sound source while on private property. This section of the Code was used by the City of Sacramento against Cal Expo when they considered expanding their music amphitheater. Even though the sound levels at the homes south of the American River did not exceed the City's limits defined in the Draft EIR for the current project. As with the Berkeley case, this was an acknowledgment that the A-weighted sound level along was not adequate to address the noise impacts experienced by home owners. Contrary to the responses to comment 10-143, the sources associated with children yelling, cars idling, trucks idling, the operation of truck refrigeration units, and most HVAC equipment include pure tones as easily known when tonal measurements are made with every project.

Perhaps the answer to the short coming of the Draft and Final EIR is given by the respondents comment on page 4-53 of the Final EIR that they relied upon the guidance of CalTrans for the selection of the sound metrics or descriptors. CalTrans, the California Department of Transportation, deals almost exclusively with transportation sound sources. The major sound sources impacting noise-sensitive receptors are not transportation sources operating on public roads. They are non-transportation sound sources and they must be evaluated using the sound descriptors given in the City's Noise Control Ordinance [5].

Local courts have ruled in a similar case involving Hagginwood Community Association versus Calvary Christian School. An existing facility was to be converted to a charter school with up to 300 students. The school opened with about 40 students. The City of Sacramento City Council approved the EIR, but the courts overruled it twice. The second time, the courts required the playground and student loading and unloading area be moved away from the adjacent neighbors after a visit by the Judge because of the noise. The playground was moved more than 150 yards from its original position in the very large open lot.

The respondents show a complete lack of understanding of the theoretical underpinnings of acoustics as seen in the response to comment 10-158 given on page 4-57 of the Final EIR. The difference between the sound level measured at 7 feet and 1 foot is substantial. If the sound for a source was measured at 7 feet, the sound level at 1 foot would be 17 dB higher for a point source under ideal conditions. Thus, if the maximum sound level 7 feet from a person yelling was 70 dB(A), at one foot this would be 87 dB(A). This a clear violation of the City's Noise limits which allow a maximum of 75 dB(A) during the day when measured at least 1foot inside the receiving property. Thus, if the person were standing at the west edge of the playground, they would be only 1 foot from the receiver. Based on observations for the Hagginwood case discussed above, children on the playground will be found next to the boundaries. Because of the small size of the playground, 1/4 of that required by the State for public schools, the likelihood of more students being close to the residential property line increase.

CEQA requires evaluating existing conditions for all noise-sensitive receptors that will be impacted by the project. If the school were built and the neighbors raised a noise complaint to the City about the sound generated at the play ground, the City's noise enforcement officer would not measure the sound in the front yard. Per Code, the officer would find the place with highest sound level that was at least 1-foot inside the receiver's property. To provide existing acoustical conditions, the EIR would have to furnish sound levels at representative positions that would simulate the backyards of the homes adjacent to the school playground or do the tests in the yards. The measurements would have to use the sound descriptors given in the Municipal Code and would have to include representative tonal

content measurements. This was not done, making any evaluation of potential future conditions impossible to analyze.

The authors of the Final EIR admit using guidelines from CalTrans to evaluating noise impacts including the 1998 Technical Note [6]. The respondent glosses over all of TAVG's comments regarding how and where sound measurements according to the Technical Note. The measurements provided in the Draft EIR do not meet the basic requirements given in the Technical Note such as testing where the receiver would be (backyard) and when free of contamination from sound from sources not under study (e.g., children playing on the playground.). During tests for the Hagginwood case, measurements were made in the backyard of several homes in areas that were not visible to the children so that play would not be influenced by outside elements. This provides reasonable examples of the sound children playing freely as they will do when not being observed or coached.

The respondents repeatedly state that the Noise Control Ordinance allows a person to measure any where on the residential property. While that may be true in a general sense, the interpretation is at best misleading and at worse completely wrong. As instructed by the City and their enforcement officer, measurements will be anywhere on the property that is 1-foot or more inside the property line, but tests of compliance are required to be at the position most impacted by the source causing the complaint. Since the source will be adjacent to the backyard of the homes, all testing would have to be done near these positions and corrections made to the measurements if the tests could not be done in the backyard of the impacted noise-sensitive receivers. Common sense would tell you that you would not measure in the front yard next to the street to learn if the sound of cars idling or playing their radios in the school's driveway next to the residential backyard was in compliance with the City's Municipal Code.

On page 4-60, response to comment 10-177, the authors state that the Sacramento Municipal Code does not require measurements of the L_{50}, etc., sound levels when testing for non-transportation source and transportation sources while on private property. This comment can not have been made with a straight face. No legal action can be taken with discerning compliance with the Noise Control Ordinance without measurements using the sound metrics given in the Code. TAVG is involved in numerous legal cases and knows well that using the right noise descriptor and procedures are of paramount importance. The purpose of an EIR is to allow all interested parties to be made aware of all potential impacts, including noise impacts, and to understand existing conditions and future conditions relative to regulatory requirements. In this case, sound generated by sources covered by the City's Noise Control Ordinance are judged based on the L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$ and L_{MAX} sound levels. Of these sound descriptors, only the L_{MAX} sound level was measured, and this was not done in the backyard of the homes or even near the backyard of the homes that could be impacted by activity at the school playground, traffic queuing or mechanical equipment. Measurements of the L_{eq} sound level do not comply with CEQA's requirements that tests be done as required by the local standard, the City of Sacramento Municipal code.

The respondents state that the sound generated by HVAC units at the new residents will comply with the City's Noise code. CEQA requires a more detailed analysis and monitoring program. The same comment could be made regarding sound generated by children in the school's play area. This kind of broad statement is not allowed by CEQA. Once the source is identified as potentially creating a noise impact, mitigation measures must be provided along with the predicted sound levels before and after mitigation. This allows interested parties to evaluate the measures and the resulting impact. Mitigation measures are described for the equipment on the new hospital wing and on the school, similar requirements apply to the residential units.

The Final EIR states that the lack of discussion about playground equipment does not validate the analysis. This is completely incorrect as noted in the Hagginwood Community Association versus Calvary Christian Charter School case showed. The judge required the relocation of all climbing equipment including swings because of the influence in the change in source elevation on the sound received at the neighboring properties. This was a key element documented with video and with sound measurements. This information is a critical component just as having background sound levels at the receptors to permit a prediction of compliance with the City's Noise Control Ordinance. Both pieces of information are lacking from the Final EIR and from the draft EIR.

This EIR remains fatally flawed because of the lack of a proper evaluation of existing conditions and the impact of sound sources regulated by the City's Noise Control Ordinance. Measurement procedures were flawed and do not comply with the CalTrans guide supposedly used to complete the noise impact analysis. The Final EIR remains incomplete and inadequate to permit a complete evaluation of the noise impacts of the proposed project.

Please call if you have any questions or comments regarding the statements made about the noise impact sections of the Final EIR for the Mercy Hospital and Sacred Heart Parish School mixed use project. Let me know if any other information is needed.

Sincerely,

Steve Pettyjohn, Principal
Certified: Institute of Noise Control Engineers-1981

REFERENCES

1. Anon., ***Final Environmental Impact Report: Mercy General Hospital and Sacred Heart Parish School Mixed Use Project, SCH# 2007022104***, for City of Sacramento, by EIP Associates, a Division of PBS&J, Sacramento, October 2007.

2. Anon., ***Draft Environmental Impact Report: Mercy General Hospital and Sacred Heart parish School Mixed Use Project, SCH# 2007022104***, for City of Sacramento, by EIP Associates, division of PBS&J, Sacramento, July 2007.

3. S. Pettyjohn, "Results of a Review of Noise Sections of Draft Environmental Impact Report for Mercy General Hospital and Sacred Heart Parish School Mixed Use project", for Law Office of J. William Yeates, Sacramento, CA, by The Acoustics & Vibration Group, Sacramento, CA, Project No. R07173, August 24, 2007.

4. *Berkeley Keep Jets over the Bay Committee v. Board of Port Commissioners*, 91 California Appeals Court 4th 1344, 1372-1383, 2001.

5. Chapter 8.68 Noise Control, from City of Sacramento Municipal Codes, current through May 2007.

6. R. Hendricks, ***Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol***, California Department of Transportation; Environmental Program; Environmental Engineering-Noise, Air Quality, and Hazardous Waste Management Office; October, 1998.

Exhibit 3

What is Rubberized Asphalt?

Rubberized asphalt has been used for more than 20 years to resurface highways and city streets in Arizona when pavement surfaces reach their normal life expectancy. While it helped reduce the disposal of used tires, it recently has been recognized for its reduction of traffic noise.

1. Description of Rubberized Asphalt

Rubberized asphalt consists of regular asphalt paving mixed with "crumb rubber" -- ground, used tires that would otherwise be discarded or take up space in landfills. Used tires are processed by separating the casings, fabric and steel. The extracted rubber then is ground to the consistency of ground coffee. Rubberized asphalt has the benefit of being smoother and quieter. Noise readings have shown the rubberized asphalt generally reduces tire noise by an average of 4 decibels.

Approximately 1,500 tires are used for every lane-mile of rubberized paving. This can put a major dent in the 2 million used tires are that are generated annually in Maricopa County. Those old tires usually tires end up in landfills or in storage. Landfill space is at a premium, while tires in storage are a great fire threat.

2. Rubberized Asphalt is Temperature Sensitive

Rubberized asphalt cannot be applied during cold weather or very hot weather. The concrete pavement surface needs to be between 85 and 145 degrees Fahrenheit for the material to adhere properly. So rubberized asphalt can only be applied in the Spring and Fall in the Phoenix area – from March 15th to May 31st, and from September 1st to November 15th. Prior to application contractors must repair pavement cracks, chips and joints and prepare the concrete surface for the rubberized asphalt overlay.

3. History of Rubberized Asphalt

ADOT has used rubberized asphalt as a "pavement preservation" strategy on major highways throughout the state. But it was the City of Phoenix that pioneered the use of the product in the mid 1960s – almost 40 years ago. The earliest use of rubberized asphalt by the city was in 1964, when it was incorporated into the "chip seal" program for city streets. A rubberized asphalt chip seal – which used a mixture of rubberized asphalt and gravel – was applied to Indian School Road from Central Avenue to 7th Street in 1971 as a temporary measure. However, it performed so well that the street

was not reconstructed until 20 years later in 1992. Despite the success of the chip seal program, it was discontinued in 1989 because of potential damage to cars by loose chips or gravel. In 1989, the city began using an asphalt rubber hot mix to add a one-inch overlay to prolong the life of streets. This product was shown to have a number of advantages:

- It does not reflect cracks from the existing pavement;
- It is more durable and skid-resistant than conventional asphalt; and,
- It reduces traffic noise and provides a smooth, quiet ride.

Noise Tests on Chip seal and Asphalt Rubber pavements on 7th Street by the City of Phoenix showed a decrease of about 10 decibels, or about 90% reduction in noise level. Research shows reduction in noise levels of 50 to 75% is commonly attained.

During the 1990s, the city resurfaced more than 200 miles of streets with 450,000 tons of rubberized asphalt, which used about 1.1 million old tires. The city reported that rubberized asphalt place on Dobbins Road in 1989 has performed without maintenance for 14 years and has an estimated life span of up to 18 years.

ADOT also is considered a pioneer in the use of rubberized asphalt in paving projects. More than 4.2 million tons of rubberized asphalt has been used on Arizona highways since 1988, at a cost of some $225 million. Those projects have resulted in the recycling of about 15 million old tires.

4. Financing

The Quiet Pavement program was developed by ADOT in cooperation with the Maricopa Association of Governments (MAG) – the regional transportation planning body – and area cities. It will be completed over a three-year period and paid for by using $34 million from other MAG regional transportation funds and projects. The program will not delay the planned completion of the Regional Freeway System by the projected date of 2007.

Exhibit 4

NEIGHBORHOOD RESPONSE TO:

1. REVIEW AND CONSIDERATION OF THE NEIGHBORHOOD ALTERNATIVE SCHOOL LOCATION AND DESIGN

BY

SACRED HEART PARISH SCHOOL,
WILLIAMS AND PADDON ARCHITECTS,
HDR ARCHITECTS, AND
MERCY GENERAL HOSPITAL
(DATED OCTOBER 22, 2007)

&

2. "FULL INDEPENDENT ANALYSIS" OF NEIGHBORHOOD ALTERNATIVE PLAN

BY

CITY PLANNING STAFF
(DATED OCTOBER 25, 2007)

NEIGHBORHOOD RESPONSE

REBUTTAL TO ANALYSIS OF ALTERNATIVE PROPOSAL

INTRODUCTION

In response to the Mercy / Sacred Heart Parish School (SHPS) project's Neighborhood Alternative analysis from the Evan Compton, City of Sacramento memorandum (dated October 25, 2007) as well as Mercy's Review and Consideration document (date October 22, 2007), we offer the following concerns and points in rebuttal to these analyses.

FULL INDEPENDENT ANALYSIS QUESTIONED

During their October 16, 2007 session, the Sacramento City Council directed staff to perform a "full independent analysis" of the Neighborhood Alternative Proposal. To that end, the City Planners have offered a four-page written analysis. We received the document from the City Planners accompanying by a nine-page rebuttal of the alternative by the project applicant.

It is the opinion of the neighborhood group that this apparent collaboration or influence is in direct conflict with council's request for full independent analysis. City staff, with the applicant's rebuttal in hand, dismissed many of the points made in the alternative, and did so with either little or no substantial amount of analysis.

The bulk of the "analysis" is comprised of less than two pages of text (a portion of pages 3 and 4). In these pages, our alternative is dismissed based on circulation issues, relocation of SHPS during construction, the school's proximity to the hospital during construction and funding questions. The analysis makes no effort to suggest ways to implement any portion of the alternative, but rather simply echoes the applicant's rebuttal, writing off the alternative with generalities and unsubstantiated claims.

CONCEPTUAL, HIGH-LEVEL PROPOSAL OFFERED

As presented to the Planning Commission and the City Council, the Neighborhood Alternative Proposal has always been a conceptual, high-level proposal designed to demonstrate an alternative that the neighborhood feels is a reasonable compromise. It was not presented as a rigid and complete counter-proposal with every detail documented, nor was it intended to provide solutions to every implementation challenge.

We have always stressed that the goal is to show the neighborhood's willingness to work with all the stakeholders towards a reasonable compromise. We continue to have serious concerns with the project and this is our good-faith effort to mitigate the negative effects of this project on our neighborhood.

Rather than provide a good-faith effort to judge the feasibility of the alternative, details of the alternative were dismissed or portrayed as unreasonable. While during the course of our analysis, we reviewed and took into account the very counterpoints raised by the applicant, we feel the onus is not on the neighborhood to provide a high level of detail on precisely how the applicant can achieve the alternative.

SHARED CONCESSIONS - REASONABLE COMPROMISES

The applicant is requesting the East Sacramento residents and neighborhood at-large accept a long list of negative impacts during the life of this project. Our Neighborhood Alternative Proposal, which includes the

heart center as currently designed, in addition to a new Sacred Heart School, includes concessions the neighborhood is requesting of the applicant in return.

In the applicant's proposal, irreplaceable homes are being lost – part of the fabric that makes East Sacramento one of the most desirable and livable residential areas in Sacramento. Once these homes are gone, the surrounding area cannot and will not ever be the same. Replacement housing, despite best efforts in design, will never match like-for-like the loss of these diverse vintage residences.

We take offense to the applicant portrayal of our alternative as a diversion. Clearly, the neighborhood continues to have serious concerns with the project. Many people have put in a great deal of hard work and have facilitated many internal negotiations to arrive at this alternative proposal. To dismiss this effort as merely a diversion is an insult to our continued good-faith effort to mitigate the effects of the Mercy expansion on the neighborhood we call home.

THE FOLLOWING SECTIONS PROVIDES SPECIFIC REBUTTALS TO POINTS MADE IN THE CITY AND MERCY'S ANALYSIS.

TRAFFIC AND PARKING

SERIOUS TRAFFIC IMPACTS

We acknowledge that the Neighborhood Alternative Plan does not completely mitigate the serious traffic impacts on our arterial and residential streets. This is a common and critical issue remaining for both the Mercy's plan and the Alternative plan. We continue to stress that both plans will require realistic and earnest traffic impact studies (over and above the LOS benchmarks) and implementation of appropriate and meaningful mitigations (traffic lights, safer crosswalks, traffic management plans, pedestrian and bicycle plans, etc.) We look forward to working together on creative and effective ways to mitigate the environmental impact on traffic.

TRAFFIC FLOW ON SPINE STREET

The analysis states that without access to the I Street, traffic on Spine Street will be forced to make left and right turns at the un-signalized intersections at H and at J streets. This analysis fails to note that currently, left hand turns are **not** allowed from Spine Street onto H and J; these intersections are restricted to right turns only. We would suggest the traffic flow heading east would utilize a right turn on H Street. The traffic headed west would use the right turn on J Street. The traffic can then make use of the signals at 39th Street on both H and J Streets.

It should be noted that if the left turn restrictions are enforced properly, the circulation problems on Spine Street would not be an issue; especially with the removal of School traffic. Historically, Mercy has failed to properly enforce this circulation mitigation from a previous Mercy expansion. Mercy needs to put forth a good-faith effort to enforce the existing circulation via better signage, proper monitoring and permanent diverters on Spine Street.

PARKING IMPACTS

The applicant claims that the loss of the 153 space surface parking lot will create prohibitive parking issues. Based on our parking space requirement analysis, at the end of the project, the site will have more than sufficient parking even without the surface parking lot.

We continue to stress that there are more desirable mitigations to the parking impacts that do not add impervious "heat centers" such as the proposed surface parking lot to the neighborhood. These include:

- Maximize employee use of alternative modes of transportation, increasing incentives to reach 30 - 35% goal
- Expand incentives to Mercy Medical Plaza staff
- Better market the shuttle and include signage at the light rail stations to reinforce the option as viable
- Increase emphasis on effective monitoring of parking policies & issues
- Study of East Sacramento Neighborhood parking needs in general for several blocks around the Medical Complex to include other medical office and business needs, large residential facilities, apartments, single family homes
- Explore increased off-site parking availability & shuttle use

Based on the City Staff's issues surrounding the MercyCare site as a potential park setting, it is reasonable to entertain the retention of a portion of the site to help mitigate some of the parking issues, especially related to Mercy McMahan visits.

FUTURE TRAFFIC AND PARKING ISSUES

The applicant states that their plan better anticipates future increases in traffic and parking issues at the site. According to the EIR, there will, in fact, be an overall reduction of hospital beds. Therefore, it is logical to assume that the traffic and parking issues should decrease rather than intensify.

Based on this contradiction, it is safe to assume that Mercy General Hospital has existing long-term development plans for this campus. These plans have never been made public. For example, we are concerned about the potential impact the construction of the large Mercy Medical Group building an 30th & Q will have on the existing plans for the Mercy Medical Plaza site. It is important for the City Council and the neighborhood to have an understanding of Mercy's long term plans in order to make an informed decision on the current Mercy proposal. If Mercy is as concerned about their impacts to the community as they proclaim, they should value the neighborhood participation in long-range planning discussions rather than locking us out of the critical negotiations.

CONSTRUCTION

PHASING

The applicant claims their plan includes an improved phasing plan for the construction project. Their plan will serialize the construction resulting in an extended construction period. Under the Neighborhood Alternative Plan, there is a unique opportunity for a 15-month window with limited site restrictions. During this time, the school will be temporarily off the construction site and there are no replacement housing requirements. As a result, the school and the heart center can begin construction concurrently. With proper construction planning and project phasing, the most impactful parts of the heart center construction can be completed while the school is being built. Once the children are back on site, the impact of the remaining construction on the heart center could be reduced or mitigated.

STAGING

The applicant asserts that their plan includes a crucial staging area that our plan lacks. We are confused that Mercy finds this staging area to be so critical. Mercy's original builders for their 178K square foot heart center made numerous confident assertions that the construction could have been accomplished with little adverse impacts to the school and traffic. They went on to assure the neighborhood that they would have no problem completing the construction with just-in-time delivery and a limited staging area. We agree with the original builder's idea that staging could still take place in the parking lot fronting J Street.

Furthermore, there have been many commercial construction projects that have occurred on far more challenging sites with laydown and logistics issues. If one tours the midtown and downtown areas right now, the examples are abundant. We feel this concern is not a valid point for dismissing the alternative.

LEARNING ENVIRONMENT

MOVING ACROSS 39TH STREET DOES NOT RESOLVE ISSUES

We are neighbors and parents of school age children, also. We understand the value of a quality learning environment for education. We do not see how simply moving the Sacred Heart children across 39th Street resolves the issue of distraction, noise, dust and disruption. The proximity to the construction site is truly not much different. Qualifying a lesser impact with the school being across 39th Street is difficult to do when it comes to air pollution, noise pollution, construction traffic, etc. All of these nuisances will affect the school regardless.

The proposed new school building borders 39th Street, directly across from the proposed construction staging area. This is the very epicenter of the disruptive construction activity - cranes, concrete trucks, hundreds of material and equipment deliveries, workers gathering, etc. Our solution enables the majority of the most impactful construction for the heart center project to be completed while the students are off site. With proper construction planning and mitigations implemented, the remaining impacts to the learning environment will be reduced once the children return to the new school.

SHPS IS A RESILIENT COMMUNITY - NOT BRICKS AND MORTAR

Sacred Heart Parish School is a destination private parochial school. It is part of a flourishing Catholic community and holds a well earned reputation for excellence. Admittedly, the current SHPS school, while filled with history, is not the most modern of school campuses. Yet parents by the bus loads still clamor to get their children accepted into the school. Even during these uncertain times, there continues to be a waiting list for admittance. In fact, the school has survived other large Mercy expansions including the construction of massive Mercy Medical Plaza directly across I Street which casts a shadow over their playground.

The school is not solely comprised of bricks and mortar; the school is a strong, resilient community, and its excellence in education continues to attract students and faculty. The claims that temporarily relocating the students for a school year is enough to drive away faculty and students, negatively affecting fundraising efforts, forcing the school to close, is in direct conflict with the school's strong history and dedicated and proud parish community.

SCHOOL ACCESS

DROP-OFF AND PICKUP - I STREET FLEXIBILITY

The Neighborhood Alternative Plan utilizes the identical drop-off and pickup traffic mitigation as the applicant's plan. The so-called 'racetrack' stacking or queuing strategy exists in both plans. In fact, our plan adds additional stacking along I Street to help alleviate the problem during these critical times.

Our plan clearly separates the school traffic from the hospital traffic by restricting I Street traffic to the school and Spine Street traffic to the hospital. In fact, the only times this separation is critical is during drop-off and pick-up times. We feel that the utilization of I Street outside of these periods is open for negotiation. It may be more desirable to allow hospital traffic on I Street after school hours. This would result in more flexible traffic flows during the stated PM peak times.

STUDENTS CROSSING 39TH STREET

An incorrect assumption was made regarding use of the open space west of 39th Street to be for all required recess times throughout the day. The use of a larger green space was proposed in the Alternative for specific activity uses such as a sport (soccer) for the older students. Younger students would be kept east of 39th Street during all recess times utilizing the smaller green space and playground areas. It should also be noted that with proper signage, pavement markings, and other simple safety measures (i.e., crosswalk illumination and/or flashing lights upon button activation), a safe crosswalk can be achieved.

HOSPITAL SERVICES

PUBLIC AND EMERGENCY ROOM ACCESS

We strongly disagree with the applicant's claim that public access and emergency room access is adversely affected under our plan. Historically, emergency vehicles use Spine Street rather than I Street, for access to the Hospital. The elimination of school traffic on Spine Street will only serve to improve access for emergency vehicles as well as other hospital traffic.

As stated previously, the use of and restrictions on I Street are negotiable. The exclusive use of I Street for school traffic is critical only during drop-off and pick-up times. We do not see how this simple mitigation will gravely reduce the flexibility of either the Hospital or the Mercy Medical Plaza.

UNDERGROUND STORAGE TANKS, ETC.

Regarding the location of underground fuel tanks, bulk oxygen storage tanks, emergency generator, etc., it is our contention that, just as with the Bunya-Bunya tree issue, with proper guidance from the City, solutions to these issues could be realized.

TEMPORARY RELOCATION

SHORT-TERM COMPROMISE VS. LONG-TERM IMPACT

We acknowledge the impact of relocating the school as covered by the Neighborhood Alternative Plan is less palatable to the Sacred Heart parents than the current plan. We are aware that we are asking for a compromise from all parties. The short-term compromise by the school is offset by the long-term impact to our neighborhood fabric. The homes destroyed are gone forever. The relocation of the school is temporary. In the end, the school will enjoy the benefits of a modern 21st century campus. The homes will be saved and the neighborhood will be brought together.

RELOCATION TIMEFRAME QUESTIONED

In addition, we find it difficult to reconcile the increased number of years the applicants claim are necessary for relocation. Under the applicant's plan, the school construction phase would require only a school year to complete. According to the EIR, the process would "begin in early 2008 and completed by mid- 2009". Based on this, we feel that the impact to relocation would be limited to a single school year.

FUNDING

NEGOTIATIONS REQUIRED

With all due respect for the complexity of the funding issue, it is our contention that the funding issue could be resolved thorough thoughtful negotiations between the two parties that will financially benefit from the project – CHW/MGH and the Sacred Heart Parish.

CHW/MGH, being the originator of these issues, needs to consider the fiscal gains to be realized by the addition of a world class heart center. It must also consider the cost of mitigations for the consequences of their business decision to build the Heart Center at this specific location. Specifically, the must consider the consequences to the neighboring SHPS. Clearly, there is fiscal value to keeping Sacred Heart in support of the project. That value needs to be factored into the calculation of CHW's fair share to mitigate the impacts on the school.

Sacred Heart, while initially an opponent of the Mercy expansion plan, will ultimately be the recipient of a new modern campus. The parish needs to consider the value of their fair share contribution for this modernization. For some time, the parish has had a business objective of modernizing the school. The Mercy project is clearly providing the catalyst for that change. The parish needs to enter into the negotiations with the understanding that a modern campus has a direct value and benefit to their parish organization. While, we strongly agree that they should not have to bear the entire burden, they should be prepared to contribute their fair share.

FINANCIAL ACCOUNTABILITY AND FISCAL COMMON SENSE

We question the applicant's claim that our plan is contrary to financial accountability and fiscal common sense for a nonprofit organization. We contend that the applicant's plan, as stated, is also contrary to those principles.

To illustrate, under their plan, in order to relocate SHPS across 39th Street, CHW will have to:

- Give up use of the 17 residential units and 7 properties along 39th and H Streets;
- Pay for the demolition of the residences;
- Pay for the demolition of the MercyCare site, complete with the mitigating the known environmental issues with the site (mold, asbestos, etc.);
- Contribute $15 million towards the site preparation and construction of the new school;
- Give up use of almost an acre of the vacated SHPS site to accommodate the required replacement housing;
- Construct the 20 unit replacement housing.

For this sizable investment, CHW's gain is limited to the remaining 1.6 acres available from the vacated SHPS land. Even worse, according to their plan, this expensive land is simply slated for surface parking lot. We fail to see the financial accountability and fiscal common sense of spending $15 million to gain a surface parking lot. It calculates out to be almost $100,000 per parking space. Clearly, a good part the funding is, in reality, the value of keeping the influential and extremely vocal Sacred Heart parish in support of the proposed heart center. With the City Council's guidance, we feel confident the two parties could enter into thoughtful negotiations and agree to an equitable funding plan based on perceived value and benefits received.

MISCELLANEOUS

SIZE AND USE RESTRICTIONS MISREPRESENTED

The City's analysis incorrectly contends that conditions placed on our proposal unrealistically restrict the size of the heart center. While there was an initial attempt at basing the size of the building on a percentage of the overall square footage of the campus, the City's calculations are simply incorrect. The size of the heart center was always meant as a negotiable point. There continues to be concerns about the size of the facility, certainly given the applicant's requested variances on the zoning height limit, etc. Even with this concern, it is our contention that accepting the applicant's current square footage proposal for their building is a reasonable compromise.

Furthermore, the previous concerns voiced over the facility being a regional center versus a local acute care facility, is not a part of the current alternative proposal. While the neighborhood continues to have concerns with the reduction of available beds for non-heart related medical care, we are not seeking to limit the categorization of the buildings use.

FULL DETAILS OF PROJECT CONDITIONS NEEDED

We have deep concerns that there is a strategy to place general conditions of approval on the project without providing the public with specific and critical details. We do not feel it is acceptable to postpone specifics on such critical elements as the pedestrian master plans, design reviews, analyses of construction traffic, and construction site logistics plans, until after City Council approval.

This neighborhood has been on the receiving end of many empty promises from Mercy in the past. Much of the existing mitigation work has not been properly implemented or is not enforced. We do not feel effective planning, implementation and enforcement are adequately guaranteed without threat of Council disapproval of the overall project.

ALTERNATIVE SCHOOL DESIGNS

We want to stress that our plan does not limit the school buildings or layout to the existing design. Based on the specifics of the current SHPS site, it is likely that a much more efficient design is likely possible and should be investigated. We do not feel qualified to fully design the site, but rather we were attempting to show that an alternative can be found that mitigated the effects on the neighborhood. We would look forward to working with the school architect to find the most efficient, attractive and useful design for the new school on its existing site.

ALTERNATIVE MERCYCARE USES

The City's indicated reluctance to using the MercyCare site as a city park. In keeping with the goal of giving back to the neighborhood at this location, we offer other alternatives for the site including:

- Community garden;
- General green space;
- Extended learning center;
- Community meeting rooms;
- General purpose auditorium or theater.

Exhibit 5

NEWS

Last updated at 5:44 PM on 25/09/07

Liquid oxygen leak spurs explosion scares at Dartmouth General LATEST NEWS

BY PAUL MCLEOD
The Daily News

A leak in a large liquid oxygen tank at the Dartmouth General Hospital had officials worrying about a possible explosion yesterday.

Fire officials cordoned off Mt. Hope Avenue and part of the Dartmouth General parking lot so no one could turn on their car, as the tank sprayed condensed oxygen between 2:15 and 3:15 p.m.

"The danger is concentrated oxygen can be explosive if it finds an ignition source, and it can increase any burning," said Halifax Regional Fire and Emergency Platoon Chief Brian Gray. "It could cause an explosion if it was concentrated enough and you started your car."

The leak occurred when the relief valve - which relieves pressure on the tank - blew off the hospital's medical oxygen supply tank. Because of the humidity in the air and the extremely cold temperature of the liquid oxygen, the valve froze and could not close again.

Gray said cordoning off the area was a precautionary measure, as the oxygen would have fueled any fire that started near the tank. The leak was eventually sealed and people were allowed to drive away.

(For full story see Wednesday's edition of The Daily News.)

25/09/07

Past **news** :

November 2007 October 2007 September 2007 August 2007 July 2007 June 2007
May 2007 April 2007 March 2007 February 2007