Sutter Medical Center, Sacramento

Final EIR

for the

Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project

Prepared for
City of Sacramento

Prepared by
EIP Associates

October 2005

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1. INTRODUCTION

1.0 INTRODUCTION

PURPOSE OF THIS DOCUMENT

This Final Environmental Impact Report (FEIR) contains public comments received on the Draft Environmental Impact Report (Draft EIR) for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project and written comments received by the City of Sacramento during the public comment period held from July 15, 2005 through September 9, 2005. This FEIR includes written responses to each comment received on the Draft EIR. The responses correct, clarify, and amplify text in the Draft EIR, as appropriate. Also included are text changes made at the initiative of City staff. None of the changes made alter the conclusions of the Draft EIR. This document has been prepared in accordance with the California Environmental Quality Act (CEQA).

BACKGROUND

The SMCS project includes development of six project components: (1) Women's and Children's Center (WCC); (2) Sutter Medical Foundation Building (SMF Building), including the below-grade Energy Center and parking; (3) Community Parking Structure, including first floor commercial/retail space; (4) 32 residential units (with associated parking); (5) St. Luke's Medical Office Building (Future MOB); and (6) associated utility, circulation and other improvements to existing SMCS buildings. The project is located in Midtown Sacramento and includes elements on a total of seven blocks roughly bounded by 26th Street to the west, N Street to the south, K Street to the north, and 30th Street to the east. The entire project area includes development on a total of 6 acres.

The Trinity Cathedral project includes the demolition of the existing cathedral and adjacent multi-use space in order to construct a larger cathedral and multi-purpose space. The project site is located on the northeast portion of the block bounded by 26th and 27th Streets and Capitol Avenue and N Street.

Entitlements requested of the City of Sacramento for the SMCS project include the following:

- General Plan Amendment;
- Community Plan Amendment;
- Rezone;
- Special Permit (Height variance - Alhambra Corridor; Setback variances);
- Lot Line Adjustment/Partial Mergers or Tentative Subdivision map;
- Public Right-of-Way Abandonment/Vacations;
- Alley and Utility Abandonments/Vacations;
- Special Permit - Major Project;
- Special Permit – Helistop;
- Special Permit – Tandem parking; and
- Ministerial level City permits, including building permits.

Entitlements requested of the City of Sacramento for the Trinity Cathedral project include:

- Building Permit(s);
- Special Use Permit – For Use;
- Special Permit – Height
- Special Permit – Off-site parking;
- Encroachment Permit; and
- Sign Variance.

A Notice of Preparation for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project EIR was circulated for both the SMCS project and the Trinity Cathedral project in January 2004 to all responsible and trustee agencies.

The EIR is both a Project EIR, pursuant to Section 15161 of the CEQA Guidelines and a Program EIR, pursuant to Section 15168 of the CEQA Guidelines. A Project EIR examines the environmental impacts of a specific project, whereas a Program EIR evaluates the impacts associated with a project that is not necessarily seeking development entitlements at this time. A Project EIR focuses on the changes in the environment that would result from implementation of the project, including construction and operation.

TYPE OF DOCUMENT

This EIR is an informational document intended to disclose to the City of Sacramento and the public the environmental consequences of approving and implementing both the SMCS project and the Trinity Cathedral project. Preparation of the Final EIR focuses on the responses to comments received from the public and any public agencies in response to the Draft EIR. The Lead Agency (City of Sacramento) must certify that the EIR adequately discloses the environmental effects of the project and has been completed in conformance with CEQA, and that the decision-making bodies independently reviewed and considered the information contained in the EIR (which includes both the Draft and Final) prior to taking action on the project. The Final EIR must also be considered by the Responsible Agencies, which are public agencies that have discretionary approval authority over the project in addition to the Lead Agency. For this project, the Responsible Agencies must consider the environmental effects of the project, as shown in the EIR prior to approving any portion of the project over which they have authority. CEQA Guidelines Section 15132 specifies the following:

The Final EIR shall consist of:

(a) The Draft EIR or revision of the draft.

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary.

(c) A list of persons, organizations, and public agencies commenting on the Draft EIR.

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

(e) And any other information added by the Lead Agency.

This document contains the list of commentors, the comment letters, and responses to the significant environmental points raised in the comments. The Draft EIR is hereby incorporated by reference.

ORGANIZATION OF THIS DOCUMENT

For this Final EIR, comments and responses are grouped by comment letter. As the subject matter of one topic may overlap between letters, the reader must occasionally refer to more than one letter and response to review all the information on a given subject. Cross references are provided to assist the reader. Responses to these comments are included in this document to provide additional information for use by the decision-makers.

The comments and responses that make up the Final EIR, in conjunction with the Draft, as amended by the text changes, constitute the EIR that will be considered for certification by the City of Sacramento.

The Final EIR is organized as follows:

Chapter 1 - Introduction: This chapter includes a summary of the project description and the process and requirements of a Final EIR.

Chapter 2 - Text Changes to the Draft EIR: This chapter lists the text changes to the Draft EIR.

Chapter 3 - List of Agencies and Persons Commenting: This chapter contains a list of all of the agencies or persons who submitted comments on the Draft EIR during the public review period, ordered by agency, organization and date.

Chapter 4 - Comments and Responses: This chapter contains the comment letters received on the Draft EIR and the corresponding response to each comment. Each letter and each comment within a letter has been given a number. Responses are provided after the letter in the order in which the comments were assigned. Where appropriate, responses are cross-referenced between letters.

Chapter 5 - Mitigation Monitoring Plan: This chapter contains the Mitigation Monitoring Plan (MMP) to aid the City in its implementation and monitoring of measures adopted in the EIR.

Appendices: This section contains the appendices that support information contained in the Final EIR.

PUBLIC PARTICIPATION AND REVIEW

The City of Sacramento notified all responsible and trustee agencies and interested groups, organizations, and individuals that the Draft EIR was available for review. The following list of actions took place during the preparation, distribution, and review of the Draft EIR:

- A Notice of Preparation (NOP) for an EIR was filed with the State Clearinghouse on January 7, 2004. A 30-day public review comment period for the NOP was established starting on January 7, 2004 and ending on February 6, 2004.

- A Notice of Completion (NOC) and copies of the Draft EIR were filed with the State Clearinghouse on July 15, 2005. An official 45-day public review period for the Draft EIR was established by the State Clearinghouse, ending on September 9, 2005 and a Notice of Availability (NOA) was distributed by the City to interested groups, organizations, and individuals.
- Copies of the Draft EIR were available for review at the City of Sacramento's Development Services Department, Environmental Planning Services, 1231 I Street, Suite 300, Sacramento, CA 95814. In early September the Environmental Planning Services Department relocated to 2101 Arena Boulevard, Suite 200, Sacramento, CA 95834.

2. CHANGES TO THE DRAFT EIR

2.0 CHANGES TO THE DRAFT EIR

INTRODUCTION

This chapter presents minor corrections and revisions made to the Draft EIR (DEIR) initiated by the public, staff, and/or consultants based on their on-going review. New text is indicated in underline and text to be deleted is reflected by a ~~strike through~~. Text changes are presented in the page order in which they appear in the DEIR.

Chapter 2 Project Description

The city has requested that two additional graphics be included in the DEIR, shown below as Figure 1 and Figure 2. Figure 1 shows the height of the proposed new SMCS buildings in relation to the Old Tavern Building and the freeway. Figure 2 shows a plan view of both the existing public right-of-ways (streets) covered by existing parking or sky bridges and the proposed new sky bridges and spanning structure that would also cover existing streets.

The following changes have been made to the text of the project description as shown below.

The second paragraph under **Project Background** on page 2-1 has been modified to add the following sentence after the first sentence:

> Following relocation of acute care services from SMH to the SMCS project, SMCS would continue existing levels of landscaping and exterior maintenance and security at the SMH campus.

The first sentence in the 2nd paragraph on page 2-25 is revised as follows:

> The existing 18,490 sf Energy Center, located at the northwest corner of Capitol Avenue and 29th Street would be removed and replaced by the new Energy Center below the SMF Building (see Figure 2-10).

The second sentence in the 3rd paragraph on page 2-25 is revised as follows:

> The new 24,644 sf Energy Center would provide power and house emergency generators, chillers, boilers, pumps and associated building systems components for the medical complex, which includes SGH, WCC, SMF Building and the Buhler Building.

The first sentence in the 4th paragraph on page 2-25 is revised as follows:

> ~~Air intakes for combustion air and exhaust stacks from the boilers and generators would be located along the west side of the Energy Center and would extend above grade.~~ Air intakes for combustion air for the boilers and generators would be through grated openings located in the ramp leading to the SMF Building below grade parking garage and flush with the driving surface and through grated areaways located at the southwest and southeast corners of the SMF Building. These areaways extend above grade and are protected by concrete curbs. An additional air intake is located south of the transformer yard, liquid oxygen and parking garage stairwell and forms the protrusion mid-block adjacent to the private driveway connecting Capitol Avenue and L Street.

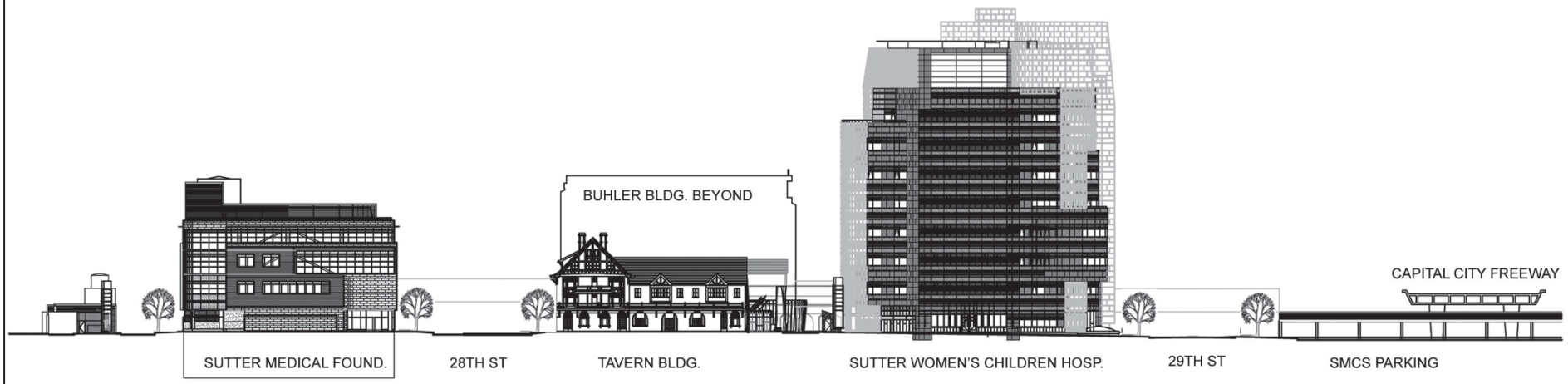

FIGURE **1**

Elevation Perspective

10828-02

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FIGURE **2**
SMCS Plan View

Not to Scale

10828-02

EIP ASSOCIATES

The following text is added after the fifth paragraph on page 2-25:

The existing Energy Center includes a two-story freestanding structure with a basement located at the corner of Capitol Avenue and 29th Street. Chillers, boilers, and emergency generators are located on first (1st) floor. Pumps and a natural gas fired incinerator are located in the basement. Cooling towers are located on the roof. The cooling system includes:

Chillers: Three (3) electric drive water-cooled centrifugal chillers with a total chilled water plant capacity of 1,600 tons of cooling. Space reserved for a fourth (4th) chiller.

- Cooling Towers:

  a) Six (6) cooling towers, 1800 tons of heat rejection.

  b) 52,000 gallons per day (gpd) bleed-off rate (maximum), dumped to sanitary sewer system on peak design cooling day.

  c) 52,000 gpd drift rate during peak design cooling day.

The heating system includes:

- Steam Boilers: Three (3) dual-fuel nominal 400 Boiler Horsepower (bhp) output high-pressure steam generators. 41,400 pounds per hour steam at 125 psig.
- Natural gas is primary fuel source. 50,214 cubic feet per hour (cfh) natural gas input at full load.
- Diesel fuel is back-up fuel source. 360 gallons per hour (gph) fuel oil input at full load.
- Maximum 15 parts per million (ppm) Nitrous Oxide (NOx) emissions each boiler.
- Boiler feed water (domestic water) make-up; 125 gpm maximum at full load.

The diesel fuel storage includes two 13,000 gallon (each) underground tanks. The bulk liquid oxygen includes a 6,000 gallon vertical main tank and a 500 gallon vertical reserve tank located on grade at the north end of the Energy Center (adjacent to the Alley). The main tank is approximately 26 feet tall.

The new Energy Center is designed to occupy two levels below grade area located in the southern portion of the SMF Building. Chillers, boilers, pumps and emergency generators would be located at lowest level (B-2 Level). The cooling towers would be located on the roof of the SMF Building. The cooling system includes the following:

- Chillers: Five (5) electric drive water cooled centrifugal chillers with an initial total chilled water plant capacity of 4,450 tons of cooling with a peak calculated demand of approximately 3,175 tons of cooling. Future total plant capacity of 5,250 tons of cooling with an expected peak demand of approximately 4,200 tons of cooling.
- Cooling Towers:

  a) Five (5) cooling towers, 5,250 Tons of heat rejection.

  b) 101,000 gpd bleed-off rate (maximum), dumped to sanitary sewer system on peak design cooling day.

  c) 101,000 gpd drift rate during peak design cooling day.

The heating system includes the following components:

- Steam Boilers: Four (4) dual-fuel nominal 500 bhp output high-pressure steam generators. 69,000 pounds per hour steam at 125 psig. Calculated peak demand of approximately 49,000 pounds per hour (one unit is totally redundant and the other three will likely never be all on simultaneously at 100% each).
- Natural gas is primary fuel source. 83,700 cfh natural gas input. The secondary, backup fuel source is fuel oil fed by a remote underground storage tank shared with the emergency generators.
- The boilers are equipped with burners and controls to limit the NO_x emission levels to 9 parts per million (PPM) corrected to 3% oxygen.
- The boilers are also equipped with the requisite feed water and condensate removal and transfer systems.

The underground fuel storage includes:

The new fuel storage tank is specified to be 25,000 gallons capacity and shall be a dual wall construction with continuous vacuum monitoring. The sumps and piping are also monitored and the installation shall meet all required regulations for this application. The fuel is transferred on demand to a series of day-tanks installed in the boiler and generator rooms in the interior of the building, which in turn supply locally to the boilers and generators.

Liquid oxygen tanks are located adjacent to the alley/driveway on the west side of the SMF Building. There is a 11,000 gallon liquid capacity main tank and a 3,000 gallon liquid capacity reserve tank with the associated vaporizers to convert the liquid to gas. The bulk supply shall be in accordance with NFPA 50.

The fifth paragraph on page 2-25 is revised as follows:

~~Cooling towers for the new energy plant would be situated on the roof of the new SMF Building. The cooling towers would be approximately 27-feet tall and would be located on the roof of the SMF Building. The cooling towers are designed to minimize the release of steam or vapor.~~ The cooling towers for the new Energy Center are designed to minimize the release of steam vapor and would be situated on the western/middle portion of the SMF Building roof.

A 20-foot tall painted, architectural, louvered metal panel system is designed to conceal the entire length of the cooling towers from the western views below and complement the design elevations that include the glass storefronts, copper and wood composite siding systems, and stucco base.

The five cooling tower units, each approximately 27-feet tall (including the elevated structural frame and supports) are located approximately 12-feet behind the metal panel screen to minimize their visibility. Depending on the actual cooling tower that is installed, it is anticipated that approximately 2 to 5-feet of the uppermost portion of the cooling tower would extend above the metal panel screen and could be visible below from the west.

The cooling towers would not be significantly visible from the northwest or southwest due to a continual metal panel screen wall and deep setback location of the equipment from the north and south roof edges. The cooling towers would not be visible at all along the eastern side from

below due to the deep setback location of the equipment and the same continual metal panel screen.

The first bullet under *Additional TSM/Parking Demand Management Program Elements Added for the Proposed Project* on page 2-47 is revised as follows:

- ~~100% transit subsidy (up to $60 per month) – increased from 50%~~ 75% monthly transit or vanpool subsidy (up to $100) to provide greater subsidies for regional transit and vanpool users (increased from 50%);

The first and eighth bullets under *Potential Future TSM/Parking Demand Management Enhancements* on page 2-48 is revised as follows:

- ~~100~~ 75% monthly transit or vanpool subsidy (up to $~~80~~ 100) – to provide greater subsidies for regional transit and vanpool users;

- Allow per diem employees to participate in ~~100~~ 75% (up to $~~80~~ 100 per month) transit pass program;

Table 2-8, SMCS Project Construction Schedule, on page 2-54 in Chapter 2, Project Description, has been updated per the project applicant. The updated schedule is shown below. The revised schedule does not change the analysis in the DEIR, specifically the air quality analysis. The following is a brief summary of the revisions made to the construction schedule. The updated schedule accelerates the start of construction of the WCC by one year with completion by the end of 2010. The demolition of buildings to construct the SMF Building is slated to begin 5 months earlier with completion in early 2008. The start of construction of the Community Parking Structure does not change with completion 3 months later than originally anticipated. Construction of the housing component does not change; however, completion will be 4 months later than anticipated. Construction of the Future MOB is essentially the same as originally anticipated.

The second and fourth sentences under SMCS Construction Parking Plan on page 2-53 in Chapter 2, Project Description are revised as follows:

According to the construction schedule (see attached Table 2-8), construction of the ~~WCC and the SMF Building would not begin until the~~ Community Parking Structure will be completed before the WCC and the SMF Building are ~~is~~ completed.

As shown in Table 2-9, once construction is complete a total of ~~2,737~~ 2,792 spaces would be available to serve visitors, patients, staff, residents and patrons to the area.

Table 2-9, SMCS Summary of Parking during Construction Activities, on page 2-55 in Chapter 2, Project Description, has been updated by the project applicant as shown below. The change in parking spaces available during construction does not change the analysis in the DEIR.

SMCS Project Construction Schedule
Table 2-8

ID	Task Name	Start	Finish
1	**Women's & Children's Center**	**Fri 2/17/06**	**Fri 11/12/10**
2	Demolish Old Tavern Parking Structure & RAS Medical Office	Fri 2/17/06	Fri 2/27/09
3	Demolish Energy Center	Tue 1/15/08	Mon 4/21/08
4	Construction of the Women's & Children's Center	Fri 10/13/06	Fri 11/12/10
5	**Sutter Medical Foundation Building**	**Fri 5/12/06**	**Thu 1/3/08**
6	Demolish MTI Medical Office Buildings	Fri 5/12/06	Thu 6/22/06
7	Demolish/Remove House of Furs	Fri 5/12/06	Thu 6/22/06
8	Demolish/Remove Dr. Kasch's Medical Office	Fri 5/12/06	Thu 6/22/06
9	Construction of the SMF Building	Fri 6/23/06	Thu 1/3/08
10	**Community Parking Structure**	**Fri 2/17/06**	**Thu 3/29/07**
11	Demolish Trinity Apartments	Fri 2/17/06	Thu 3/30/06
12	Construction of the Community Parking Structure	Fri 3/31/06	Thu 3/29/07
13	**Housing**	**Fri 2/17/06**	**Thu 4/12/07**
14	Demolish St. Luke's Parking Structure	Fri 2/17/06	Thu 4/13/06
15	Construct 32 Housing Units	Fri 4/14/06	Thu 4/12/07
16	**Future Medical Office Building**	**Fri 4/14/06**	**Thu 8/2/07**
17	Demolish St. Luke's Medical Office Building & Asbestos Abatement	Fri 4/14/06	Thu 8/3/06
18	Construct Future Medical Office Building	Fri 8/4/06	Thu 8/2/07
19	Demolish EAP Building	Mon 1/3/11	Fri 2/11/11

Project: Schedule
Date: Tue 10/11/05
Source: SMCS, September 2005.

Task | Split | Progress | Milestone | Summary | Deadline

TABLE 2-9

SMCS – SUMMARY OF PARKING DURING CONSTRUCTION ACTIVITIES

Construction Activity/Existing Parking	Parking to be added/removed	Total Parking Spaces[1]
February 2006		
Construction of the Women's and Children's Center (remove existing surface lot)	(28)	1,849[1]
Demolish Trinity Apartments	(13)	1,836
Demolish Old Tavern Parking Structure	(137)	1,699
Demolish St. Luke's Parking Structure	(30)	1,669
Redesign North Freeway (SMCS staff parking) lot	35	1,704
March 2006		
Construction of the Community Parking Structure (remove existing surface parking)	(142)	1,562
May 2006		
Remove Green Lot (corner of L and 28th Streets)	(32)	1,530
Demolish MTI Buildings	(5)	1,525
Remove/demolish private medical office	(21)	1,504
Remove Pioneer Lot	(32)	1,472
February 2007		
Redesign South Freeway (Visitor) lot	70	1,542
March 2007		
Community Parking Structure completed	1,100	2,642
April 2007		
Residential units complete	40	2,682
Future MOB below grade parking complete	35	2,717
January 2008		
SMF below grade parking complete	90	2,807
January 2011		
Removal of the EAP parking	(15)	2,792[2]

Notes:
1. As shown on Table 2-4, there are a total of 1,877 spaces currently available (including the north and south lots under the freeway).
2. The total number of spaces includes removal of the 15 spaces for the EAP building which would be removed once the theatre begins construction.

Source: SMCS, 2005.

The following text is added to the end of the list of project approvals on page 2-55 in Chapter 2, Project Description:

> Preparation of a Development Agreement (DA) is currently not a project approval being sought at this time; however, in the future a DA may be adopted and this environmental document would be sufficient for the purposes of that approval.

A copy of the new design of Trinity Cathedral is included in the DEIR as Figure 2-26 and included on the following page.

FIGURE **2-26**

Rendering of the Proposed Trinity Cathedral

Not to Scale

10828-02

Source: WMG Architects 2005

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Chapter 4 Land Use

The following text is added to the DEIR Chapter 4, Land Use, on page 4-14:

City of Sacramento Municipal Code

Section 1

The territory described in the attached exhibit(s) which is in the Light Density Multiple Family, R-3A zone(s), established by Ordinance No. 2550, Fourth Series, as amended, is hereby removed from said zone and placed in the General Commercial-Review, C-2-R zone(s).

This action rezoning the property described in the attached exhibit(s) is adopted subject to the following condition:

a. A material consideration in the decision of the City Council to approve rezoning of the applicant's property is the development plans and representations submitted by the applicant in support of this request. It is believed said plans and representations are an integral part of such proposal and should continue to be the development program for the property.

b. The complex shall include the following uses:

1) 9,000 square feet of ground floor commercial;
2) 45,075 square feet of offices;
3) 26 residential units on the top floor of the structure; and
4) Parking garage to accommodate a minimum of 331 parking spaces.

Section 2

The City Clerk of the City of Sacramento is hereby directed to amend the maps which are a part of said ordinance No. 2550, Fourth Series, to conform to the provisions of this ordinance.

Section 3

Rezoning of the property described in the attached exhibit(s) by the adoption of this ordinance shall be deemed to be in compliance with the procedures for the rezoning of property prescribed in Ordinance No. 2550, Fourth Series, as said procedures have been affected by recent court decisions.

Section 6.2 Air Quality

Mitigation Measure 6.2-1 on page 6.2-16 of the DEIR is revised to include the following measures:

(f) All trucks removing demolition debris or excavated soil from the site(s) shall be wetted and covered.

(g) SMCS or contractor shall ensure that buildings are demolished in succession, and that no buildings are demolished simultaneously.

Mitigation Measure 6.2-2 on page 6.2-18 of the DEIR is revised to include the following measure:

(f) All trucks removing demolition debris or excavated soil from the site(s) shall be wetted and covered.

Mitigation Measure 6.2-3(e) on page 6.2-21 of the DEIR is revised to read:

~~(e) *Minimize idling time (10 minute maximum).*~~

(~~f~~ e) *When appropriate, use alternative fueled (such as aqueous diesel fuel) or catalyst equipped diesel construction equipment.*

(~~g~~ f) ~~*When appropriate, replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).*~~*If any diesel-fueled generators are used during construction, one shall be replaced with a propane fueled gen-set. The project applicant or contractor shall coordinate with SMAQMD to ensure this is implemented.*

(g) Catalytic converters shall be installed on gasoline-powered equipment, if feasible.

(h) New technologies to control ozone precursor emissions shall be utilized as they become available and feasible.

The following text is added under the header **Mitigation Measures** on page 6.2-23 as follows:

- Have at least three of the following on site and/or within ¼ mile: Residential Development, Retail Development, Personal Services, Open Space, Office. (1 point)
- Some shaded parking. (0.5 points)

In addition to the six points listed above, as described in the Project Description in Chapter 2 of this DEIR, the following measures are components of the SMCS TSM Plan for the SMCS project. These measures have also been assigned points by the SMAQMD:

- Preferential parking for carpools and vanpools. (0.5 points)
- Provide Guaranteed Ride Home. (0.2 points)
- Provide on-site transportation coordinator. (0.2 points)
- Flextime. (0.2 points)
- Provide showers and clothes lockers. (0.5 points)
- Class I and Class II bicycle parking facilities. (0.5 points)

The SMCS shall also institute the following measures as part of the TSM plan once the project is built. These measures are also found in Chapter 2, Project Description and have been assigned point values by the SMAQMD as well:

- A Kiosk shall be provided displaying transportation information in a prominent area. (0.5 points)
- 100% monthly transit or vanpool subsidy (up to $100). (1.5 points)

Mitigation Measure 6.2-4 on page 6.2-23 is revised to read:

~~*After approval by the SMAQMD, SMCS shall institute the following measures:*~~ In order to achieve the remaining points needed to equal 15, SCMS shall also implement the measures listed below as part of the project. Each measure has been assigned a point value by the SMAQMD. When the points for all measures listed above are combined, it results in a total of 15.1 points. This would fulfill the requirements of the SMAQMD.

6.2-4 (a) *Exceed Title 24 energy standards for cooling energy by ~~50~~25% at non-residential buildings. (1 point)*

(b) *To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks. (1 point)*

(c) *Preferential carpool and vanpool parking will be shaded. (0.5 points)*

(d) *SMCS shall enter into an agreement with the City of Sacramento and the Sacramento Transportation Management Association to continue ongoing membership in the TMA in perpetuity. The transportation demand management measures outlined in the Air Quality Mitigation Plan and the TSM Plan will be implemented. (2.5 points)*

~~(b) *Install low NO_x hot water heaters.*~~

~~(c) *Install ozone destruction catalyst on air conditioning systems in consultation with SMAQMD or local district. (2.5 points)*~~

~~(d) *Provide preferential parking for carpools and vanpools.*~~

~~(e) *To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks.*~~

~~(f) *Provide showers and lockers for use by employees that bike to work. (0.5 points)*~~

~~(g) *Provide secure bicycle storage at public parking facilities. (0.5 points)*~~

~~(h) *The project applicant shall implement permanent TMA membership funding. (2.5 points)*~~

~~(i) *The project applicant shall provide employees with a transit pass subsidy and/or a commute alternative allowance. (1.5 points)*~~

~~(j) *Provide electric vehicle charging facilities. (1 point)*~~

~~(k) *Increase parking lot shading by 20% over code. (1 point)*~~

Mitigation Measure 6.2-5 on page 6.2-29 is revised as follows:

~~6.2-5 *Construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at wwww.sparetheair.org.*~~

Section 6.3 Cultural Resources

The paragraph under Historic Context and Features on page 6.3-20 is revised to read:

The construction of an 8-story hospital building (WCC) to the east and a 4-story, medical office building (SMF Building) to the west across 28th Street from the Old Tavern Building ~~w~~ could alter the setting of the ~~t~~Tavern building and separate it from the historic streetscape and adjacent neighborhood. However, there is no existing historic streetscape in this area. The Old Tavern Building is a single historic structure in a modern setting. Development of the WCC and the SMF Building in this location would change the existing environment through the construction of new buildings, but it would not change an existing historic streetscape or remove any designated historic resources. The design plans for the WCC establish a wide separation between the new construction and the historic Tavern building. This separation is further enhanced by the planned transparency of the first floor/lobby elevation of the WCC minimizing the visual interaction of the two buildings. The SMF Building would replace existing non-historic buildings located along 28th Street with a 4-story structure, similar in height to the Tavern building.

As discussed above, construction activities could adversely impact the Old Tavern Building including the historic cut-stone curb that exists along the east side of 28th Street and/or the Pioneer Congregational Church ~~could be damaged by construction equipment~~. Due to the close proximity of these historic structures to the SMCS project area ~~this would~~ construction activities could result in ~~be considered~~ a ***potentially significant impact***.

Section 6.6 Noise

Mitigation Measure 6.6-1 on page 6.6-24 will be revised to read as follows:

6.6-1 (SMCS/Theatre)

(a) *All construction equipment shall be equipped with factory matching mufflers and in good working order.*

(b) *All staging areas and water tanks shall be located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.*

(c) *A construction schedule shall be clearly posted at the construction site(s).*

(d) *Alternative backup bells shall be used by construction equipment.*

The following mitigation measure will be added to Mitigation Measure 6.6-2 on page 6.6-31 of the DEIR:

6.6-2(b) *SMCS shall include in any contracts with EMS helicopter pilots/operators that pilots adhere to the Helicopter Association International "Fly Neighborly Program."*

Section 6.7 Transportation and Circulation

Impact table 6.7-1 on page 6.7-36 is revised as follows:

Impact 6.7-1: Intersections – The SMCS project and the Children's Theatre would increase traffic volumes at study intersections.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None ~~available~~ required	None ~~available~~ required
Significance After Mitigation	N/A	N/A

The second bullet at the top of page 6.7-70 is revised as follows:

- Alhambra Boulevard and L Street - Operating conditions degrade from LOS "~~B~~ C" to LOS "D" during the p.m. peak hour.

The third bullet at the top of page 6.7-70 is revised as follows:

- Alhambra Boulevard and Capitol Avenue – ~~Operating conditions degrade from LOS "C" to LOS "D" during the p.m. peak hour~~ Operating conditions remain at LOS "D" during the p.m. peak hour, with an increase in average vehicular delay of 10.8 seconds.

Impact Table 6.7-10 on page 6.7-74 is revised as follows:

Impact 6.7-10: Intersections – The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions.

	Cumulative With SMCS Program and Trinity Cathedral Project
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-4
Significance After Mitigation	Less than Significant ~~and Unavoidable~~

The first bullet on page 6.7-74 is revised as follows:

- 27th Street and Capitol Avenue – Operating conditions degrade from LOS "B" to LOS "E" during ~~th~~ the p.m. peak hour;

The first and second sentences on page 6.7-78 is revised as follows:

> With this mitigation, operating conditions would remain at LOS "D" with ~~more~~ less than 5 seconds of delay compared to the No Project condition. This mitigation reduces the impact to a less-than-significant level. This mitigation measure would involve the removal of parking on the west side of 29th Street near the intersection.

Impact table 6.7-12 on page 6.7-81 is revised as follows:

Impact 6.7-12: Intersections – The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	
	Cumulative With SMCS Project With Two-Way Conversion
Significance Before Mitigation	~~Potentially~~ Significant
Mitigation Measures	Mitigation Measure 6.7-6
Significance After Mitigation	Significant and Unavoidable

The last sentence in the first full paragraph on page 6.7-81 is revised as follows:

> Therefore, the impacts are considered ***~~potentially~~ significant*.**

Impact table 6.7-13 on page 6.7-85 is revised as follows:

Impact 6.7-13: Freeway System – The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions.	
	Cumulative With SMCS Project With Two-Way Conversion
Significance Before Mitigation	~~Less than~~ Significant
Mitigation Measures	None required
Significance After Mitigation	~~N/A~~ Significant and Unavoidable

The last sentence on page 6.7-86 is revised as follows:

> Therefore, the impacts are considered ***~~less than~~ significant*.**

Under Mitigation Measure on page 6.7-86 the text is revised as follows:

> ~~None required.~~
>
> No mitigation measures are available to avoid adding more traffic to the freeway system under cumulative conditions. Therefore, the impact would be *significant and unavoidable*.
>
> *None available.*

Mitigation Measure 6.7-9 on page 6.7-90 is revised to read as follows:

6.7-9 (a) *Prior to beginning of construction, a construction traffic management plan shall be prepared by the project applicant to the satisfaction of the City Traffic Engineer and State of California (Caltrans).*

Section 7.3 Air Quality

The text under Mitigation Measures on page 7.2-6 is revised as follows:

The SMAQMD requires standard construction mitigation for all construction projects that demonstrate a significant air quality impact. Because the impact was determined to be less than significant the SMAQMD has indicated no mitigation is required. ~~Therefore, even though the Trinity Cathedral project's construction impact would be *less than significant*, the following mitigation measures would be implemented to reduce NO_x emissions during project construction. These mitigation measures would reduce construction NO_x by approximately 20 percent.~~

Mitigation Measure 7.2-4 on page 7.2-9 is deleted:

~~7.2-1 *Construction contracts shall require that all construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at wwww.sparetheair.org.*~~

3. LIST OF AGENCIES AND PERSONS COMMENTING

3.0 LIST OF AGENCIES AND PERSONS COMMENTING

STATE AGENCIES

1. State of California, Governor's Office of Planning and Research, Terry Roberts, Senior Planner, September 1, 2005.
2. California Department of Transportation, District 3 – Sacramento Office, Katherine Eastham, Chief, Office of Transportation Planning – Southwest, August 29, 2005.

LOCAL AGENCIES

3. Sacramento Metropolitan Air Quality Management District, Jeane Borkenhagen, Mobile Source Division, September 2, 2005.
4. Regional Transit, Taiwo Jaiyeoba, Director of Planning, September 2, 2005.

INDIVIDUALS AND ORGANIZATIONS

5. Sacramento City Taxpayers' Rights League, Mark Whisler, President, [undated] 2005.
6. Marshall School Neighborhood Association, Bill Burgua, Chair, September 12, 2005.
7. Maureen Daly Pascoe, September 9, 2005.
8. Theodore Franklin, Weinberg, Roger & Rosenfeld, September 9, 2005.
9. R. Inman, September 2, 2005.
10. Winn Park/Capitol Avenue Neighborhood Association, Tim Schmelzer, September 12, 2005.

4. COMMENTS AND RESPONSES

Letter 1

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

September 1, 2005

Lezley Buford
City of Sacramento
1231 I Street, Room 300
Sacramento, CA 95814

Subject: Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft EIR
SCH#: 2003102002

Dear Lezley Buford:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on August 29, 2005. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project. 1-1

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2003102002) when contacting this office.

Sincerely,

Terry Ro
Sen

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

COMMENT LETTER 1: State of California Governor's Office of Planning and Research

Response to Comment 1-1:

Comment noted. This letter from the State Clearinghouse at the Governor's Office of Planning and Research confirms the completion of the state-required review period for the DEIR. Caltrans was the only State agency that reviewed the DEIR and prepared a response. Please see Comment Letter 2 for responses to the Caltrans letter.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
VENTURE OAKS, MS 15
P. O. BOX 942874
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August 29, 2005

05SAC0120
03-SAC-50/51
Sutter Medical Center, Sacramento (SMCS)
& Trinity Cathedral Projects (P03-090)
DEIR
SCH#2003102002

Ms. Lezley Buford
City of Sacramento
Development Services Department
1231 I Street, Room 300
Sacramento, CA 95814

Dear Ms. Buford:

Thank you for the opportunity to review and comment on the Sutter Medical Center and Trinity Cathedral Master Plan Projects DEIR. Our comments are as follows:

- We recommend additional freeway improvement language be added to Mitigation Measure 6.7-5, found in Volume I on Page 6.7-81, to accommodate this project's traffic impacts and the build up of cumulative background traffic at additional ramps. If the traffic study shows issues at these ramps, the mitigation should be provided. 2-1

  Please correct the SMCS Mitigation Measure 6.7-5 language from the wording of "SMCS shall pay to implement p.m. peak hour ramp metering on the southbound Business Route 80 entrance ramp from N Street" to read: "(a) SMCS shall pay for complete installation of ramp metering on the southbound Business Route 80 entrance ramp from H Street, N Street, and T Street. This would include all required Traffic Operations System (TOS) elements such as loop detectors, communications lines and equipment, signage, and any necessary signalization and roadway modifications. "

  The E Street on and off ramps could be impacted by this project. Volumes for the E Street ramps are not in any of of the tables. Impacts to the E Street ramps should be studied in this report. 2-2

  The increased traffic volumes generated by the SMCS project will cause increased queuing at the J Street on-ramp, which currently operates at LOS F during the P.M. peak period, and at the E Street onramp to NB Business 80 and at the SB Business 80 onramp from N Street. 2-3

SMCS should make widening, striping and signalization modifications, as needed to help control the queuing at these ramps. Monies should be set aside for this purpose. 2-3 (con't.)

- Please clarify and explain the *significant but unavoidable* aspects of the statement at the top of Page 6.7-81 in Volume 1. Why is ramp metering of the N Street onramp location a questionable option due to a possible build up of traffic at the nearby at-grade intersection? Perhaps the signal phasing requires adjustment at the ramp entrance off N Street at the 29th Street intersection to better regulate the size of traffic platoons affecting intersection operations. 2-4

- The traffic and circulation aspects of this project during construction should be addressed. Due to the close proximity of the project to the SR 51 (Capitol City Freeway) interchange ramp intersections at E, H, J, N and P Streets, a Traffic Management Plan (TMP) should be prepared for Caltrans, as well as the City traffic engineer (per Vol. 1, Page 6.7-96, SMCS Mitigation Measure 6.7-9 (a)), that would indicate work plan strategies to avoid traffic disruption. Construction vehicular trips should be limited during morning (6-9 AM) and evening (3:00 – 6:30 PM) peak traffic periods. The TMP Guidelines are enclosed for your reference. 2-5

- At planned parking garage entrances and exits for this project, in order to limit the size of traffic queues extending back and onto downstream City streets and blocking lanes in the vicinity of any ramp intersections, we recommend the City consider recessed ingress ticket turnstiles for such parking facilities. 2-6

Please provide our office with any further actions regarding this project's traffic mitigation. If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,

KATHERINE EASTHAM, Chief
Office of Transportation Planning - Southwest

Enclosure

c: Scott Morgan, State Clearinghouse

State of California

Department of Transportation

Transportation Management Plan Guidelines

Prepared By:

Division of Traffic Operations

Office of Systems Management Operations

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I. INTRODUCTION

A. BACKGROUND

With the construction of California's state highway system virtually complete, the California Department of Transportation (Department) major emphasis on transportation projects has largely shifted from new construction to reconstruction, operation, and maintenance of existing facilities. As traffic demand steadily increases, Department work activities can create significant additional traffic delay and safety concerns on already congested highways. Planning work activities and balancing traffic demand with highway capacity becomes more critical.

In order to prevent unreasonable traffic delays resulting from planned work, Transportation Management Plans (TMPs) must be carefully developed and implemented in order to maintain acceptable levels of service and safety during all work activities on the state highway system.

B. WHAT ARE TRANSPORTATION MANAGEMENT PLANS?

A TMP is a method for minimizing activity-related traffic delay and accidents by the effective application of traditional traffic handling practices and an innovative combination of public and motorist information, demand management, incident management, system management, construction strategies, alternate routes and other strategies.

All TMPs share the common goal of congestion relief during the project period by managing traffic flow and balancing traffic demand with highway capacity through the project area, or by using the entire corridor. Certain low-impact Maintenance and Encroachment Permit activities do not require the development of individual TMPs. "Blanket" TMPs are developed for those activities. A blanket TMP is a generic list of actions that would be taken to keep delay below the delay threshold when performing activities on highways. Each district Maintenance and Encroachment Permit office should have a list of activities to which blanket TMPs apply.

All Capital projects require individual TMPs. Blanket TMPs are suitable for minor projects. Major TMPs are required for high-impact projects. Generally, major TMPs are distinguished by being:

- Multi-jurisdictional in scope, encompassing the Department of California Highway Patrol (CHP), city, county and regional governments, state DOTs, employers, merchants, developers, transit operators, ridesharing agencies, neighborhood and special interest groups, emergency services, and Transportation Management Associations;
- Multi-faceted, comprised of an innovative mix of traffic operations, facility enhancement, demand-management and public relations strategies, as well as more traditional work zone actions, construction methods and contract incentives, customized to meet the unique needs of the impacted corridor;
- In place over a longer period of time, sometimes implemented up to a year or more prior to the start of actual construction, with specific elements often implemented incrementally to coincide with construction phasing.

C. POLICY

Department Deputy Directive 60 (DD-60) titled Transportation Management Plans (see APPENDIX) requires TMPs and contingency plans for all state highway activities.

Policy Statement:

The Department minimizes motorist delays when implementing projects or performing other activities on the state highway system. This is accomplished without compromising public or worker safety, or the quality of the work being performed.

TMPs, including contingency plans, are required for all construction, maintenance, encroachment permit, planned emergency restoration, locally or specially-funded, or other activities on the state highway system. Where several consecutive or linking projects or activities within a region or corridor create a cumulative need for a TMP, the Department coordinates individual TMPs or develops a single interregional TMP.

TMPs are considered early, during the project initiation or planning stage.

Major lane closures require District Lane Closure Review Committee (DLCRC) approval.

Definitions:

Major lane closures are those that are expected to result in significant traffic impacts despite the implementation of TMPs.

Significant traffic impact is 30 minutes above normal recurring traffic delay on the existing facility or the delay threshold set by the District Traffic Manager (DTM), whichever is less.

Contingency Plans address specific actions that will be taken to restore or minimize effects on traffic when congestion or delays exceed original estimates due to unforeseen events such as work-zone accidents, higher than predicted traffic demand, or delayed lane closures.

II. TMP DEVELOPMENT AND IMPLEMENTATION

A. OVERVIEW

Responsibilities:

The DTM:

- Acts as the single focal point for all traffic impact decisions resulting from planned activities on the state highway system.
- Determines the extent of a TMP.
- Facilitates review and approval of TMP measures and planned lane closure requests.
- Directs the termination or modification of active planned lane closure operations when traffic impact becomes significant, without compromising traveler or worker safety.

The TMP Manager:

- Acts as the single focal point for development and implementation of TMPs.

The Construction Traffic Manager (CTM):

- Serves as a liaison between Construction, the DTM and the TMP Manager.
- Reviews the TMP and traffic contingency plan for constructability issues.
- Act as a resource for the Resident Engineer, DTM and TMP Manager during TMP implementation and reviews the contractor's contingency plan.

The extent of a TMP is determined by the DTM during the preliminary studies of a capital project. For all TMPs, an itemized estimate of the proposed strategies and their respective costs are included in the Project Study Report (PSR) or Project Study Scoping Report (PSSR) for proper funding consideration. The workload required to develop and implement TMPs is estimated in advance and captured in the district work plan.

For major TMPs, a TMP team may need to be formed and led by the TMP Manager. The itemized strategies and costs are further refined in the project report stage as determined by the TMP team and appropriate functional units using the most current geometric information available. Those elements of the TMP not included as part of the main construction contract should be itemized under State Furnished Material and Expenses using the appropriate Basic Engineers Estimate System (BEES) codes in the plans, specifications and estimates. During construction, TMP activities are to be monitored and evaluated by the TMP team and those elements found not to be cost effective should be modified as deemed appropriate or eliminated. The TMP process is explained in detail in the following sections.

B. FUNDING AND PROGRAMMING

When identifying funding for various TMP elements, it is important to distinguish between capital outlay and capital outlay support.

Work done by district staff for the planning and designing of TMP activities for capital projects are a normal part of the project development process and should be captured as capital outlay support. The TMP Manager and each functional manager should work closely with the project manager to ensure that TMP activities are included in all project work plans. TMP support activities to consider include ridesharing programs, Freeway Service Patrol (FSP) contracts, public awareness campaigns, parallel route improvements and the Request for Proposal (RFP) process up to award of the contract. Note that some of these activities may also have a capital component in addition to the support component discussed here. Workload hours for TMP activities must be included in the Capital Outlay Support (COS) project's work plan in order to be resourced (funded) by COS. These activities should then be charged to each project's expenditure authorization (EA), using the appropriate Work Breakdown Structure (WBS) code for that stage of the project. TMP-related work should be charged only to the WBS codes reserved for those activities. These codes can be found on the Department's Division of Project Management's Intranet web page.

Work done by district staff for implementing TMP elements during construction of capital projects are also a normal part of the project development process. Again, workload (hours) for implementing TMP activities must be included in the COS project's work plan in order to be resourced (funded) by COS. These activities should then be charged to the appropriate project's phase three EA, and WBS code 270 (Perform Construction Engineering and Contract Administration).

Some funds necessary to implement TMP elements not done by the Department staff, including consultant contracts, can be sourced from capital outlay funds allocated by the California Transportation Commission (CTC) as itemized in the plans, specifications and estimates. Some TMP elements, such as parallel route improvements and highway advisory radios, could be a phase of the construction contract or separate construction contracts while others such as public awareness campaigns and transit subsidies must be separate contracts or cooperative agreements.

The TMP elements that need to be in place prior to start of construction are identified and funded as stage construction or first order of work under a single package presented to the CTC. If approved, the Division of Budgets may assign specific amounts for each TMP activity. All TMP activities may not necessarily be included under the main contract. Service contracts such as those for freeway service patrols, public service or consultant contracts, information campaigns, or establishing telephone hotlines must be arranged separately with consultants and other providers. For most projects, it takes four to six months to get a service contract in place. This means that all consultant contracts have been advertised, the consultant selected, and the contract ready for signature and award immediately following CTC allocation of funds. Other activities such as parallel route improvements are usually included in the main construction contract and as a first order of work under a cooperative agreement.

In some cases, the CTC can be petitioned to fund a portion of the TMP as an initial phase of the main project. This is usually for a high priority project where plans, specifications, and estimates for the main project are not yet finalized, but early funds are needed to initiate TMP activities such as making transit arrangements with local governments. The petition to fund an initial phase comes from the district, explaining why a portion of the project must proceed before funding for the main project is allocated. These early funds reduce the programmed funds for the main project accordingly.

The Federal Highway Administration (FHWA) supports the TMP concept and views major reconstruction projects as an excellent opportunity to initiate continuing traffic management strategies that provide improved traffic operations long beyond the completion of work. Examples include: installation of permanent Changeable Message Sign (CMS), full structural section shoulders, continuing auxiliary lanes, and wider shoulders for incident management during construction if cost-effective in the long term. All cost-effective transportation management activities that address the problem of delay or safety are eligible for 100 percent Federal Aid funding.

TMPs and contingency plans for Encroachment Permit projects are developed by the permittee or by Department staff. Staff time for development, review and implementation of TMPs for Encroachment Permits is charged to the permit. Maintenance normally develops TMPs for its projects; Maintenance and staff from other functional areas that expend time on Maintenance TMP charge to the designated Maintenance EA.

C. TMP IN PROJECT INITIATION DOCUMENT

The TMP is part of the normal project development process and must be considered in the Project Initiation Document (PID) or planning stage (project K phase). Since projects are generally programmed, budgeted, and given an Expenditure Authorization (EA) upon PID approval, it is important to allow for the proper cost, scope and scheduling of the TMP activities at this early stage of development. TMPs that are retrofitted to projects already programmed must be handled on a case by case basis and may require a contract change order.

Prior to PID approval, the initiating unit sends conceptual geometrics to the district Division of Operations for evaluation. The DTM estimates the extent of the TMP required and determines whether potential traffic delays are anticipated that cannot be mitigated by traditional traffic handling practices or well-planned construction staging. The TMP Manager must sign-off on the TMP DATA SHEET in the PID. A TMP cost estimate should be developed for each alternative being considered. An estimate should not be based only on the project cost. The cost of a TMP could range from a small percentage of project cost to 20 percent or more. Further guidance can be obtained from the following publications "Wilbur Smith & Associates TMP Effectiveness Study" and Frank Wilson & Associates "A Traffic Management Plan Study for State Route 91" located in Headquarters Traffic Operations, Office of System Management Operations.

TMP Elements

A list of potential TMP strategies with their respective elements is categorized in TABLE 1. As many different elements as are feasible should be considered for the proposed project's preliminary TMP.

When developing a preliminary TMP at this early stage, use the most current layout of the roadway (geometrics) information available and consider:

Contingency Plans
Lane closure policies and procedures
TMC coordination
Multi-jurisdictional communication and buy-in
CHP and local law enforcement involvement
Emergency closures
Clearance of alternate routes for STAA and oversized
Special training or workforce development
Duration of construction (months)
Length of project (miles)
Number of major construction phases
Urbanization (urban, suburban, or rural)
Traffic volumes
Expected vehicle delay (from data sheet)
Public/media exposure
Political or environmental sensitivity
Business impacts and affected activity
Percent trucks
Potential increase in accidents
Permit issues
Conflicting construction projects
Percent reduction in vehicle capacity
Special factors (if any)
Impact on Transit/Railroad services
Viability of alternative routes

Wilbur Smith Associate's TMP Effectiveness Study and Frank Wilson & Associate's A Traffic Management Plan Study for State Route 91 During Construction of HOV Lanes (both available from Headquarters Division of Traffic Operations, Office of System Management Operations) are excellent sources for guidance on selecting the most cost-effective TMP elements. The district Public Information office is also an experienced source for estimating the effectiveness of public information campaign options, and can help the TMP Manager estimate their cost and effectiveness in reducing traffic demand through the project area.

Public information campaigns serve two main purposes in TMPs. They inform the public about the overall purpose of the project to generate and maintain public support; and they encourage changes in travel behavior during the project to minimize congestion. Because they give travelers the information they need to make their own travel choices, public information campaigns can be the single most effective of all TMP elements.

The FSP is a congestion relief program of roving tow trucks operating in most metropolitan and some rural areas. The FSP program is operated by Regional Transportation Planning Agencies (RTPAs) with funding from the Department. The Department also reimburses the CHP for training and supervisory services provided for the FSP. The RTPAs contract with tow companies

for commute time service and some weekend and mid-day service to assist motorists with simple repairs (i.e. flat tire, one gallon of gas) or tow the automobile from the highway.

FSP is available for incident management during construction. However, construction-related FSP service needs to be funded as part of the TMP. A cooperative agreement with the RTPA is required, outlining the services provided and the fund transfer. An interagency agreement with the CHP is required for any support services (field supervision and dispatch operator services). These agreements should be initiated with the RTPA and the CHP as soon as it is determined that FSP should be in the project TMP.

The Department's HQ Traffic Operations is currently working on Master Agreements with the RTPAs for future FSP services. This process will simplify the process for both the Department and the RTPAs by eliminating the need for a cooperative agreement for each project. Only a task order form will be needed for each project. A similar agreement is being created with the CHP. Please contact HQ Traffic Operations, Freeways Operations Branch for more information.

TABLE 1

TMP STRATEGIES AND THEIR ELEMENTS

A. Public Information	Off peak/Night/Weekend Work
Brochures and Mailers	Planned Lane/Ramp Closures
Media Releases (including	Project Phasing
Minority Media Sources)	Temporary Traffic Screens
Paid Advertising	Total Facility Closure
Public Information Center	Truck Traffic/Permit Restrictions
Public Meetings/Speaker's Bureau	Variable Lanes
Telephone Hotline	Extended Weekend Closures
Visual Information (videos, slide shows, etc.)	Reduced Speed Zones
Local cable TV and News	Coordination with Adjacent Construction
Traveler Information Systems (Internet)	Traffic Control Improvements
Internet	Total Facility Closure
B. Motorist Information Strategies	**E. Demand Management**
Electronic Message Signs	HOV Lanes/Ramps
Changeable Message Signs	Park-and-Ride Lots
Extinguishable Signs	Parking Management/Pricing
Ground Mounted Signs	Rideshare Incentives
Commercial Traffic Radio	Rideshare Marketing
Highway Advisory Radio (fixed and mobile)	Transit Incentives

Planned Lane Closure Web Site	Transit Service Improvements
The Department's Highway Information Network (CHIN)	Train or Light-Rail Incentives
Radar Speed Message Sign	Variable Work Hours
	Telecommute
C. Incident Management	Shuttle Service Incentives
Call Boxes	
Construction or Maintenance Zone Enhanced	**F. Alternate Route Strategies**
Enforcement Program – COZEEP or MAZEEP	Ramp Closures
Freeway Service Patrol	Street Improvements
Traffic Surveillance Stations (loop detectors and CCTV) Closures	Reversible Lanes
911 Cellular Calls	Temporary Lanes or Shoulder Use
Transportation Management Centers	
Traffic Control Officers	**G. Other Strategies**
CHP Officer in TMC during construction	Application of new technology
Onsite Traffic Advisor	Innovative products
CHP Helicopter	Improved specifications
Traffic Management Team	Staff Training/Development
D. Construction Strategies	
Incentive/Disincentive Clauses	
Ramp Metering	
Lane Rental	

If the DTM determines that a major TMP is required, the TMP Manager forms a TMP development team. The team's membership will vary according to the TMP elements proposed and the project's impacts. At a minimum, it should include representatives from Construction, Public Affairs, Project Development, Traffic Operations (including Transportation Permits), the CHP and local agencies. Others to be considered as the plan gets refined are Rideshare, Transportation Planning, Public Transportation, Maintenance, Structures, CHP, local law enforcement, local transit agencies, emergency services, and FHWA. Local Maintenance field staff familiar with conditions in the project area should be team members or should be consulted as needed as the TMP develops.

D. TMP IN PROJECT REPORT

As more information becomes available during the project report phase the preliminary scope and cost of the overall TMP and the individual elements should continue to be refined. The TMP team will coordinate the TMP strategies with the project engineer and appropriate units, with

each team member handling their area of expertise. For major projects, subcommittees or task forces may be formed to handle the planning, implementation, monitoring, and evaluation details of some elements. The TMP Manager will keep the Project Manager and district Construction Coordinator updated and must sign-off on the TMP data sheet of the project report.

It is appropriate at this point to develop a timeline schedule for major TMPs keeping in mind that many elements of the TMP have to begin prior to the start of construction. Many TMP elements listed in Table 1 need to be developed separately but concurrently with the project plans. They may be bid and constructed or initiated separately from the project or be included in the project plans and be installed or implemented as the first order of work.

Some tasks may take a long time depending on the complexity of the major project and the type of transportation management necessary. For example, if building new park-and-ride lots are necessary for the Ridesharing element, the planning phase would have to be extended for several months and a design phase added.

An additional activity involves analyzing the existing traffic volume in the corridor, both on the freeway and surface streets. This will provide a basis for establishing the goal of the TMP, i.e., the number of vehicles that should be removed from the freeway, and in determining the capability of the surrounding surface streets to handle the additional traffic demand. It can also provide a database for evaluating the overall effectiveness of the TMP.

E. TMP IN PS&E

Those TMP elements that are not part of the main contract, but are identified as capital outlay costs tied to the main project, should be itemized as State Furnished Materials and Expenses using the appropriate BEES item cost (see TABLE 2). The Project Engineer should consult with the TMP Manager to ensure that the appropriate "Maintaining Traffic" Standard Special Provisions (SSP) are included in the PS&E. The SSPs should always require the contractor to submit a contingency plan.

The TMP and PS&E should address oversize and overweight vehicles traveling under a transportation permit. Additional construction area signs should be provided that restrict travel to overwidth vehicles whenever the lateral clearance drops to 15 feet or less.

The DTM must concur with the PS&E and with Encroachment Permit and Maintenance TMPs.

TABLE 2

TMP BEES ITEM CODES
066003 State Furnished Materials
066004 Miscellaneous State Furnished Materials
066005 Concurrent Work
066006 Miscellaneous Concurrent Work
066008 Incentive Payment
066009 Utility Expense

066010 Work by Others
066060 Additional Traffic Control
066061 CHP Enhanced Enforcement
066062 COZEEP Contract
066063 Traffic management plan – public Information
066064 Specter Radar Unit
066065 Freeway Service Patrol
066066 Public Transit Support
066069 Rideshare Promotion
066070 Maintain Traffic
066072 Maintain Detour
066074 Traffic Control
066076 Temporary Traffic Control
066077 Install Traffic Control Devices
066578 Portable Changeable Message Signs
066825 Temporary Striping
066872 Service Contract
128602 Traffic Control System (One Way)
128650 Portable Changeable Message Signs
129150 Temporary Traffic Screen
861793 Telephone Service (Location 1)
860811 Detector Loop
860925 Traffic Monitoring Station (Count)
860926 Traffic Monitoring Station (Speed)
860927 Traffic Monitoring Station (Incident)
860930 Traffic Monitoring Station
861088 Modify Ramp Metering System
861985 Travelers Information system
869070 Power and Telephone Service
991046 Public Address System
991047 Telephone Facility
994920 Bicycle Parking Rack

995000 Bus Shelter
995002 Bus Passenger Shelter (Type S-1)
995004 Bus Passenger Shelter (Type SM-1)
995005 Bus Passenger Shelter (Type LM-1

F. TMP DURING CONSTRUCTION AND MAINTENANCE OPERATIONS

During construction, those TMP elements that are part of the main contract or Encroachment Permit are implemented under the general direction of district Construction or Encroachment Permits. Those separate contracts/agreements such as for rideshare and transit activities and public awareness campaigns will be under the direction of their respective contract managers.

Special effort should be given to assure that Changeable Message Sign (CMS), Highway Advisory Radio ()HAR) and other media tools provide accurate and timely information to motorists regarding lane closure times and

TMP elements must be carefully monitored for cost effectiveness. The TMP team should determine whether the implemented measures are reaching the predetermined goals for cost effectiveness. If an element's predetermined goal is not immediately reached during implementation, but there is a general trend toward meeting that goal, the element can remain in effect and the FHWA will continue to participate. Elements that show no sign of approaching their predetermined goals as determined by the TMP Manager must be modified as deemed appropriate or dropped.

Contractor compliance with lane closure pickup deadlines can be enforced in two ways. A "maintaining traffic" SSP allows a penalty to be assessed to the contractor for value of traffic delay when the contractor exceeds the lane closure window. The minimum penalty is $1,000 per 10 minutes, but it can greatly exceed the minimum, depending on traffic volumes and the highway facility. The DTM calculates the "delay penalty" during PS&E. The second method is for the state representative to suspend the contract work.

A contractor or the Department forces (such as Maintenance) can be ordered to pick up a lane closure early if traffic impacts become significant either due to a project incident or activities outside the project area. Early pickup should only be ordered when traveler and worker safety will not be compromised. The "maintaining traffic" SSPs for capital projects provide for compensating contractors for early pickup. Encroachment Permit provisions require the permittee to pick up a closure early without compensation.

DTM's are to ensure that lane closures will not be terminated early, or may be extended beyond the lane closure window when the activity needs to be completed for the safety of the public or workers. These activities may include structure inspections and repairs, guardrail repairs, culvert replacement.

In order to avoid significant traffic impacts, it is essential to monitor and respond immediately to delay, pick up closures on time, and have solid traffic and contractor contingency plans.

A Department staff member who can make informed decisions about implementing contingency plans and modifying, terminating or extending approved lane closures should be available to respond to significant delays and other unexpected events whenever lane closures are in place.

The designated employee(s) may be Traffic Operations, Construction, or TMC staff, depending on the district.

At the end of the project a post-TMP evaluation report must be completed by the TMP Manager for all major TMPs and for TMPs where the actual delay exceeded the threshold set by the DTM. Post-TMP meetings with the CHP and other partners can be held to identify what went well and what could have been done differently. Samples of past TMP reports can be obtained from headquarters' Traffic Operations, Office of System Management Operations and from the DTM.

Contingency Plan

Both traffic and contractor contingency plans are required for all planned work. Both blanket and individual TMPs must include contingency plans. The traffic contingency plan, prepared by the Department or a consultant, addresses specific actions that will be taken to restore or minimize affects on traffic when the congestion or delay exceeds original estimates due to unforeseen events such as work-zone accidents, higher than predicted traffic demand, or delayed lane closures. The contractor contingency plan addresses activities under the contractor's control in the work zone. After the contractor's contingency plan is submitted and approved, it becomes part of the TMP contingency plan.

The TMP contingency plan should include, but is not limited to the following:

- Information that clearly defines trigger points which require lane closure termination (i.e., inclement weather, length of traffic queue exceeds threshold;
- Decision tree with clearly defined lines of communication and authority;
- Specific duties of all participants during lane closure operations, such as, coordination with CHP or local police, etc.;
- Names, phone numbers and pager numbers for the DTM or their designee, the Resident Engineer (RE), the Maintenance Superintendent, the Permit Inspector, the on-site traffic advisor, the CHP Division or Area Commander, appropriate local agency representatives, and other applicable personnel;
- Coordination strategy (and special agreements if applicable) between DTM, RE, on-site traffic advisor, Maintenance, CHP and local agencies;
- Contractor's contingency plan;
- Standby equipment, State personnel, and availability of local agency personnel for callout (normally requires a Cooperative Agreement);
- Development of contingencies based on maintaining minimum service level.

G. RETROFITTING PROGRAMMED PROJECTS

Usually the extent of the TMP is to be determined prior to programming (PID approval). However, it may sometimes be necessary to retrofit a TMP to a project that is already programmed due to project changes, policy changes, emergencies or unforeseen conditions. These projects must be handled on a case by case basis since the course of action will depend on how far along the project development process is and how extensive the TMP needs to be. Retrofitted TMPs may require a TMP team and TMP Manager and involvement from all functional units as discussed earlier in these guidelines. The project manager is responsible for

initiating a TMP investigation since they are most knowledgeable of project status. Some suggestions for funding retrofitted TMP are:

Use of Minor Funds

Minor A and B money has been used to pay for TMP measures that total less than $1,000,000. The districts will not usually be reimbursed for this even though the FHWA agrees to participate (it is not economically feasible for the Department to process minor funds for reimbursement). There have been exceptions however, and that decision is at the discretion of the Federal Resources Branch in headquarters Budgets Program.

Charge to Other Project Phase 4 (Construction) Funds

Funds from other construction contracts in the district may be used if those projects are in the vicinity of, or will be affected by, the project requiring TMP funds. At the discretion of the Deputy District Director for Construction a list of chargeable project EAs may be submitted to headquarters Accounting for prorated charging. Very few Accounting staff are aware of the process required and headquarters Traffic Operations, Office of System Management Operations should be contacted for assistance.

Project Cost or Scope Changes

The CTC has delegated to the Director of the Department the authority to increase a project's cost by up to 20 percent without prior commission approval. This authority has been delegated to other Department managers as described in Project Management Directive PMD6. This increase can be used for TMP implementation and will be 100 percent reimbursable by the FHWA. The increased costs must be absorbed by other projects in the district since the total capital outlay allocation remains the same.

H. LOCAL INVOLVEMENT

The TMP Deputy Directive 60 applies to all projects on state facilities, including those not funded by the state. District Directors are responsible for assuring local compliance. Since many measure projects are split funded, the Department and local entities must work cooperatively to develop an effective TMP. The Department is responsible for approving all PSRs and it is at this point that agreements should be reached concerning the costs and scope of TMP measures.

III. CORRIDOR, REGIONAL AND MULTI-FUNCTIONAL AREA TMPS

When multiple or consecutive projects are within the same general corridor, the cumulative impact can result in excessive traffic delays and detour conflicts. These may be multiple capital projects, the involvement of more than one district, or a combination of capital projects and Encroachment Permit and/or Maintenance activities. Corridor or regional coordination will minimize or eliminate these impacts and reduce inconvenience to the motoring public.

When multiple projects are in the same corridor or on corridors within the same traffic area, it may be possible to develop a single corridor or regional TMP. In other cases, individual TMPs are developed and funded from their own sources, and a bare-bones corridor or regional TMP addresses the cumulative impact. Each project covered by corridor and regional TMP contributes resources in proportion to its traffic impact. During TMP implementation, the TMC serves as an information clearinghouse and coordinates operations. The TMC helps identify conflicts and recommends appropriate action. When provided with accurate and up-to-date lane closure information the TMC provides real-time traffic information via electronic media, CMS, and HAR.

The TMP Manager coordinates the development and implementation of corridor and regional TMPs. The TMP Manager forms a TMP team including, as a minimum, representatives from Construction, Maintenance, Public Affairs and Traffic Operations for each of the affected districts. The initial meeting is held several months in advance of the construction season to set milestones, and allow time to gather project information and prepare and distribute information.

The corridor/regional TMP may need elements in addition to those provided by the individual TMP for each project. Those elements may include changeable message signs at key locations outside individual project limits, the establishment of an information hot line and web-sites for all projects involved. The use of the statewide Caltrans Highway Information Network (CHIN) number (1-800-427-ROAD), and particularly the use of TMCs as a central reporting hub. The Northern Valley TMC in District 3 has established reporting procedures specifically for interregional TMPs that are obtainable from headquarters Traffic Operations.

IV. MAJOR LANE CLOSURE APPROVAL PROCESS

This process applies to all major lane closures on the state highway system. Major lane closures are those lane closures that are expected to result in significant traffic impacts despite the implementation of TMPs. A "significant traffic impact" is defined in DD-60 as (a) 30 minutes above normal recurring traffic delay on the facility, or (b) the delay threshold set by the DTM, whichever is less. When a planned lane closure is expected to have a significant traffic impact, Headquarters District Lane Closure Review Committee (DLCRC) review and approval is required. The functional unit directly involved in the work must submit the major lane closure request to the DLCRC for approval as detailed below.

A traveler's trip should not be increased by more than 30 minutes due to planned Department activities. The DTM may set a lower maximum if the economic impact of a delay over 20 minutes would be high. The lesser of these delay limits is the maximum delay threshold allowed for any activity. Only the DLCRC can approve a higher delay threshold for a project.

Additionally, it should be noted that TMP activities are comprehensive, and involve actions in addition to traffic management through the work zone, as detailed in these TMP Guidelines. All lane closure operations and other planned activities should be evaluated at the earliest possible developmental stage for potential impacts and mitigation strategies. Pre-implementation meetings and contingency plans remain important aspects of all lane closure operations to minimize impacts of unforeseen events.

A. THRESHOLD CRITERIA FOR LANE CLOSURES REQUIRING APPROVAL OF THE DLCRC

DLCRC review and approval is required when planned activities are expected to result in a traffic delay that exceeds 30 minutes or the delay threshold set by the DTM, which ever is less.

DLCRC review and approval is not required for emergency closures due to natural events or incidents. However, the DTM must be notified, and every effort must be made to minimize traveler delay and reopen traffic lanes as soon as practical.

Applicability

The DLCRC, comprised of the CHP, District Public Information Officer, and Deputy District Directors of Construction, Design, Maintenance and Operations, approves all requests for major lane closures that meet the above threshold criteria. The criteria are applicable for moving or static lane closure operations. The DLCRC will decide when to submit lane closure requests that

are of an interregional, statewide, environmental, or otherwise sensitive nature to the Headquarters Lane Closure Review Committee (HQLCRC) for their approval.

The DLCRC is responsible for determining when HQLCRC approval is required. The HQLCRC is comprised of the Division Chiefs for Construction, Maintenance, Design and Local Programs, and Traffic Operations along with the Headquarters Public Information Officer, and a representative from the CHP. The HQLCRC may review the closure or leave the decision to the DLCRC. The HQLCRC should be advised of all planned lane closures that exceed the above threshold criteria. All planned lane closures that exceed the above threshold criteria and are of an interregional, statewide, environmental, or otherwise sensitive nature, as determined by the district LCRC, may also require approval of the HQLCRC.

Contents of Major Lane Closure Request Submittal

The functional unit requesting the lane closure and responsible for its performance prepares a proposed lane closure submittal. Sufficient information is provided to ensure complete understanding of the proposal. The submittal is sent through the DTM for review before sending it on to the LCRC. If additional TMP efforts can reduce the expected additional delay to less then 30 minutes, then the closure does not have to go to the LCRC. The DLCRC/HQLCRC may require additional information during its review. At a minimum, the following information is recommended initially:

1. Location and vicinity maps showing the state highway(s), local street network, and other adjacent lane closures or nearby work that may affect traffic during the same period, including special events;
2. Dates, times and locations of the lane closure(s);
3. Brief description of the work being performed during the lane closure(s);
4. Brief description of each lane closure and its anticipated affect on traffic;
5. Amount of expected delay and corresponding queue length for each lane closure;
6. Summary of TMP strategies that will be used to reduce delay and motorist inconvenience during the lane closure(s) (refer to Table 1). A copy of the approved TMP for the project, if available;
7. Contingency plan (see "Contingency Plan" below).

B. EVALUATION

The LCRC is responsible for approving major lane closures and will use the items below for evaluating lane closure operations. In its evaluation of the proposal, the LCRC will give consideration to the accuracy, reliability, and completeness of information provided as well as other reliable sources of information available to the LCRC.

Proposals will be evaluated on the basis of effectiveness in the following areas:

- Promoting motorist and worker safety;
- TMP strategies;
- Plans for coordination with adjacent construction, maintenance, encroachment permits, and special events;

- Plans for coordination with TMC and field personnel;
- Plans for coordination with public media;
- Plans for use of existing field elements such as traffic surveillance loops, changeable message signs, highway advisory radio, and Closed Circuit Television cameras;
- Lines of communication and authority (top to bottom);
- Plans for monitoring delay (or corresponding queue length) during lane closure operations;
- Alternatives to proposed closures;
- Viability of contingency plans;

C. Post-Closure Evaluation Statement

A Post-Closure Evaluation statement will be submitted to headquarters' Traffic Operations Program, Office of System Management Operations, on all projects that exceed expected delay or run outside of the closure window. No more than one page is suggested. The functional unit performing the lane closure will prepare the statement within five working days of the date the lane closure exceeded the threshold criteria. The statement should explain:

- The cause and impact of delays;
- Either actions taken or to be taken to avoid or mitigate an occurrence or recurrence;
- Why the expected delay was exceeded and/or why it was necessary to exceed the closure window;
- How the situation can be avoided in the future.

Post-closure evaluation statements are only for closures formally approved by the District LCRC under this process (i.e. exceed the lesser of 30 minutes or the DTM limit).

COMMENT LETTER 2: Department of Transportation, District 3 – Sacramento Office

Response to Comment 2-1:

The comment asks for ramp metering at two additional ramps which are not primary routes from this project. Please note, the H Street ramp entrance did not show an impact, and the T Street ramp was not evaluated since it is not considered to be a primary route associated with the project.

Response to Comment 2-2:

E Street ramp was not included in the traffic analysis conducted for this project since it is not considered to be a primary route associated with the project and Caltrans did not request to analyze this ramp.[1]

Based on the request of the commenter, the E Street entrance and exit ramp junctions were evaluated. The following table summarizes the results of the analysis. Both ramp junctions currently operate at LOS "F" conditions – the entrance ramp during both a.m. and p.m. peak hours, and the exit ramp during the a.m. peak hour. The project and alternatives would add volume to these locations. As discussed in the document, the impact of the project on the freeway system is potentially significant and unavoidable.

Freeway Ramp Junction Operating Conditions - E Street Ramps

Direction	Scenario	Peak Hour	Ramp Volume	LOS
Northbound Single Lane On Ramp	Existing Conditions	AM	442	F
		PM	727	F[1]
	Existing Plus Sutter Project	AM	457	F
		PM	767	F[1]
	Existing Plus Trinity Project	AM	442	F
		PM	746	F[1]
	Cumulative Without Project	AM	465	F
		PM	747	F
	Cumulative With Sutter Project	AM	475	F
		PM	783	F
	Cumulative With Trinity Project	AM	461	F
		PM	750	F
	Cumulative With Sutter Program and Trinity Project	AM	474	F
		PM	765	F
	Cumulative Without Project With Two-Way Conversion	AM	373	F
		PM	528	F
	Cumulative With Sutter Project With Two-Way Conversion	AM	373	F
		PM	532	F
	Cumulative With Sutter Program and Trinity Project With Two-Way Conversion	AM	373	F
		PM	527	F

1 Caltrans letter, dated October 29, 2003, containing comments on the NOP.

Southbound Single Lane Off Ramp	Existing Conditions	AM	600	F
		PM	528	E
	Existing Plus Sutter Project	AM	599	F
		PM	530	E
	Existing Plus Trinity Project	AM	596	F
		PM	529	E
	Cumulative Without Project	AM	617	F
		PM	577	E
	Cumulative With Sutter Project	AM	615	F
		PM	581	E
	Cumulative With Trinity Project	AM	617	F
		PM	576	E
	Cumulative With Sutter Program and Trinity Project	AM	613	F
		PM	579	E
	Cumulative Without Project With Two-Way Conversion	AM	623	F
		PM	580	E
	Cumulative With Sutter Project With Two-Way Conversion	AM	622	F
		PM	580	E
	Cumulative With Sutter Program and Trinity Project With Two-Way Conversion	AM	622	F
		PM	580	E

1. LOS "F" conditions due to queuing from downstream bottleneck.
Source: DKS Associates, 2005.

Response to Comment 2-3:

The commenter is requesting additional improvements in the area of the northbound J Street and E Street ramps, and the southbound N Street ramp. The northbound J Street and E Street ramps currently operate at LOS "F" due to limited capacity on the freeway mainline north of the railroad overpass. Ramp metering was proposed as mitigation for the N Street ramp. Widening the J Street and E Street ramps would require additional right-of-way which is not available and is not considered a feasible mitigation measure to the proposed project.

Response to Comment 2-4:

Without detailed design and operations analysis, it is not possible to conclude that metering of the N Street on-ramp will not result in operational difficulties at the adjacent intersection of 28th and N Streets. If the ramp meter limits the number of vehicles accessing the freeway via the ramp, then excess vehicular demand could extend into the adjacent intersection. For these reasons, the city does not consider ramp metering at the N Street onramp location to meet the CEQA standards for feasible mitigation.

Implementation of Mitigation Measure 6.7-5 would ensure traffic flows would be metered onto the highway; however, because there would be an increase in vehicles, the impact is considered significant and unavoidable.

The changes in freeway system operating conditions under year 2025 conditions with the addition of project-generated traffic would add traffic to a freeway system that is currently operating at LOS "F" which would exceed the level of significance.

No mitigation measures are available to avoid adding more traffic to the freeway system under cumulative conditions. Therefore, the impact would be significant and unavoidable.

Response to Comment 2-5:

The comment is noted. Mitigation Measure 6.7-9 on page 6.7-90 will be revised to read as follows:

> 6.7-9 (a) *Prior to beginning of construction, a construction traffic management plan shall be prepared by the project applicant to the satisfaction of the City Traffic Engineer and State of California (Caltrans).*

Response to Comment 2-6:

Please refer to Section 6.7 in the DEIR pages 6.7-96 through 6.7-98 where local circulation effects are addressed. Queuing analyses were conducted to determine whether typical peak hour operations of the parking garages would cause queuing onto adjacent sidewalks or onto the City street system. Adequate off-street inbound queuing space is necessary to avoid queuing onto sidewalks and city streets. As described in the DEIR, the current design for the parking garage queuing space would allow a 95-percent probability that traffic will queue without backing onto adjacent sidewalks or city streets.

September 2, 2005

Ms. L.E. Buford
City of Sacramento
Planning and Building Department
1231 I Street, Room 300
Sacramento CA 95814

RE: P03-090 and P03-0135
SAC200400061

Dear Ms. Buford:

Thank you for sending the Draft EIR for the Sutter Medical Center Master Plan and Trinity Cathedral Project to the Sacramento Metropolitan Air Quality Management District (SMAQMD). Staff comments follow.

This Draft EIR includes analyses of several distinct projects: among them, The Sutter Medical Center (SMCS), the Children's Theater and the Trinity Cathedral. The document treats these projects as if they are discreet and their construction activities would not overlap. Our concern is that the analysis may underestimate potential daily emissions if the projects overlap. There should be a disclosure of the possible highest impacts in the event the projects overlap. In addition, the air quality analysis of these projects does not include an analysis of the demolition activities. This should be included in the document. 3-1

For projects which exceed the construction thresholds, SMAQMD recommends standard construction mitigation. With regard to the SMCS, the EIR identifies a significant impact and incorporates measure 6.2-3 (a)-(c) which is District standard construction mitigation. However, the document also adds several other submeasures to this standard measure. Submeasure 6.2-3 (e) on minimizing idling time is covered by the City ordinance on idling and does not need to be specified as a mitigation measure. We recommend submeasure 6.2-3(g) be rewritten to say "if any diesel fueled generators are used during construction, replace one of them with a propane fueled gen-set. Coordinate with SMAQMD on this measure." 3-2

In the discussion of the Trinity Cathedral (pg 7.2-6), the DEIR states "*The SMAQMD requires standard (construction) mitigation for all construction projects."* This is an error. The District only requires the standard construction mitigation when the air quality analysis demonstrates the project has significant air quality impacts. On page 7.2-5, the DEIR states that air quality impacts for the Cathedral are insignificant. Therefore, we recommend mitigation measure 7.2-3 be removed <u>if it can be assured</u> that construction of The Cathedral will occur at a different time from construction of the SMCS. 3-3

In the discussion of cumulative impacts for both the SMCS and the Trinity Cathedral, the DEIR includes a mitigation measure related to halting construction activities because of Spare the Air Day forecasts. (Measures 6.2-6 and 7.2-4) We recommend these measures be removed as they may be infeasible to implement. Oftimes, the AQI cannot be forecast a full two days in advance. 3-4

The DEIR states that through analysis, it was found the operational emissions for the SMCS will be significant. As appropriate mitigation, the DEIR presents a list of measures in Mitigation Measure 6.2-4. The measures are intended to lead to a reduction of operational emissions by 15%. According to the document, "**After approval by the SMAQMD, SMCS shall institute the following measures.**" Our first concern is to find out **when** the District is expected to endorse this list. As the list stands now, we do not endorse it. We suggest the proponent or the proponent's representative meet with us to refine and revise the list. **This revision and endorsement should occur prior to the certification of the EIR.**

For example, in the operational mitigation 6.2-4, submeasure ("a," exceeding Title 24 rating) may be infeasible to achieve. We believe a 15-20% increase in Title 24 would be more realistic. Submeasure ("c," ozone destruction catalysts on air conditioning units) usually applies to residential units only. The proponent should discuss this with us. Submeasure ("e," loading dock electrification): we'd like to explore this in more detail with the proponent to determine feasibility. Submeasure ("I," transit subsidy) needs to specify how much the subsidy is for. Submeasure ("j," electric vehicle charging facilities) needs to specify if it's referring to Neighborhood Electric Vehicles (NEVs) or Electric Vehicles (EVs). If the submeasure is referring to EVs, we believe the measure should be omitted as EVs are no longer marketed.

3-5

Finally, the project is very close to Business 80. The California Air Resources Board (CARB) recently adopted the "Air Quality and Land Use Handbook: A Community Health Perspective" to provide guidance to local planners and decision-makers about land use compatibility issues. The Handbook suggests that, at a minimum, the siting of residential uses should not occur within 500 feet of a freeway. Traffic-related studies referenced in the Handbook reflect that the additional health risk attributable to the proximity effect was strongest within 1,000 feet. Other studies conducted near Southern California freeways indicate a dramatic drop off in the concentration of ultra-fine particulates beyond 300 feet. We urge the City to consider the most recent CARB guidance on air quality and land use prior to making a decision on this project. If City approves this project, we urge the City to consider locating sensitive uses in the parts of the project area furtherest from the freeway, minimizing impacts on sensitive receptors. Mitigation measures, such as development guidelines that orient buildings away from the freeway or providing appropriate setback or buffer zones should be included.

3-6

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. Please see the attached document describing SMAQMD Rules which may apply to this project.

3-7

If you have any questions, please contact me at (916) 874-4885.

Sincerely,

Jeane Borkenhagen
Mobile Source Division

Cc: Ron Maertz, SMAQMD

SMAQMD Rules & Regulations Statement

*The following statement is recommended as standard condition of approval or construction document language for **all** construction projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

COMMENT LETTER 3: Sacramento Metropolitan Air Quality Management District

Response to Comment 3-1:

Cumulative impacts from the combined effects of the two projects, along with the effects of other construction included in the cumulative context (SMCS and Trinity Cathedral), are evaluated at the end of the air quality section(s). As stated in the DEIR in Chapter 1, Introduction, on page 1-1, the EIR is analyzing two distinct projects; the SMCS project and the Trinity Cathedral project. The SMCS project and the Trinity Cathedral project are addressed on a project level because the applicants are seeking development entitlements at this time. The B Street Theatre/Children's Theatre of California (Theatre project) is analyzed on a program level because the applicant has not yet submitted any formal development application to the city at this time. For the purposes of the EIR, the SMCS project and the Theatre project are analyzed as one project, and the Trinity Cathedral project is analyzed as a separate project. Consequently, there are separate construction impact analyses for each project (see Section 6.2, Air Quality for the SMCS project and Section 7.2, Air Quality for the Trinity Cathedral project).

Since the SMCS project and the Theatre project are considered one project, the overlapping impacts of building demolition and site clearing/grading for each are discussed in the SMCS air quality section (Section 6.2, Air Quality). Page 6.2-15 discusses the timing and overlap of building demolition associated with both the SMCS and Theatre project. Page 6.2-17 clarifies that grading for both the SMCS project and the Theatre project would be completed in one grading operation. The entire impact of this grading process is evaluated in Impact 6.2-2. Page 6.2-19, specifically the second and third paragraphs, addresses potential overlap in building construction activities associated with the SMCS project and the Theatre project and calculates peak emissions for all construction activities during the overlapping period. The commentor is referred to Section 6.2 for more general detail pertaining to the air quality analysis conducted for the SMCS project. The Trinity project addressed as a separate project with its own set of impacts. The combined impact of Trinity and other development, including the SMCS and Theatre are addressed in the cumulative impacts section.

Response to Comment 3-2:

In response to the SMAQMD comment, Mitigation Measure 6.2-3 (e) will be removed from the DEIR and Mitigation Measure 6.2-3 (g) will be replaced with the language "if any diesel fueled generators are used during construction, the applicant shall ensure that one of the generators is replaced with a propane fueled gen-set. Coordinate with SMAQMD on this measure".

Mitigation Measure 6.2-3 on page 6.2-21 of the DEIR is revised to read:

~~(e) *Minimize idling time (10 minute maximum).*~~

(~~f~~ e) *When appropriate, use alternative fueled (such as aqueous diesel fuel) or catalyst equipped diesel construction equipment.*

(~~g~~ f) ~~*When appropriate, replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).*~~*If any diesel-fueled generators are used during construction, one shall be replaced with a propane fueled gen-set. The project applicant or contractor shall coordinate with SMAQMD to ensure this is implemented.*

Response to Comment 3-3:

In response to the SMAQMD comment, the existing language on page 7.2-6 of the DEIR that reads "The SMAQMD requires standard (construction) mitigation for all construction projects" will be changed to read "The SMAQMD requires standard construction mitigation for all construction projects that demonstrate a significant air quality impact."

As discussed above in Response to Comment 3-1, the SMCS project and the Theatre project are being evaluated as one project that is separate and distinct from the Trinity Cathedral project. Consequently, whether the construction of the Cathedral occurs simultaneously with construction of the SMCS project is not at issue when evaluating project-specific construction impacts. However, to address the concern raised by the SMAQMD and because construction will overlap between the two projects, Mitigation Measure 7.2-3 will not be removed. Cumulative construction impacts of the SMCS and other construction in the SVAB, including the Trinity Cathedral are addressed in the cumulative impact discussion in Impact 6.2-7 and 7.2-7.

Response to Comment 3-4:

In response to the SMAQMD comment, Mitigation Measures 6.2-5 and 7.2-4 will be removed from the DEIR because the SMAQMD indicates that the measures may be infeasible due to the inability to forecast the Air Quality Index 40 hours in advance..

Mitigation Measure 6.2-5 on page 6.2-29 is revised as follows:

~~6.2-1 *Construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at wwww.sparetheair.org.*~~

Mitigation Measure 7.2-4 on page 7.2-9 is revised as follows:

~~7.2-2 *Construction contracts shall require that all construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at wwww.sparetheair.org.*~~

Response to Comment 3-5:

To address concerns raised in this comment, EIP Associates met with the SMAQMD to revise the list of currently-implemented and proposed measures that can be used to comply with the SMAQMD's 15 percent operational emissions reduction requirement. The following changes will be made to the text found on pages 6.2-23 and 6.2-24 in Section 6.2, Air Quality, in the DEIR. These changes reflect compliance with the SMAQMD requirement and have been reviewed and approved by the SMAQMD. Each measure is assigned a point value by the SMAQMD. The points must total 15.

The following underlined text is added under Mitigation Measures on page 6.2-23 as follows:

- Project site is located within ½ mile of an existing Class I or Class II bike land and provides a comparable bikeway connection to that existing facility. (1 point)
- Bus service provides headways of 15 minutes or less for stops within ¼ mile. (1 point)
- High density residential, mixed, or retail/commercial uses within ¼ mile of existing transit, linking with activity centers and other planned infrastructure. (1 point for bus only)
- Office floor area ratio is 0.75 or greater within ¼ mile of an existing transit stop (1.5 points for bus only)
- Have at least three of the following on site and/or within ¼ mile: Residential Development, Retail Development, Personal Services, Open Space, Office. (1 point)
- Some shaded parking. (0.5 points)

In addition to the six points listed above, as described in the Project Description in Chapter 2 of this DEIR, the following measures are components of the SMCS TSM Plan for the SMCS project. These measures have also been assigned points by the SMAQMD:

- Preferential parking for carpools and vanpools. (0.5 points)
- Provide Guaranteed Ride Home. (0.2 points)
- Provide on-site transportation coordinator. (0.2 points)
- Flextime. (0.2 points)
- Provide showers and clothes lockers. (0.5 points)
- Class I and Class II bicycle parking facilities. (0.5 points)

The SMCS shall also institute the following measures as part of the TSM plan once the project is built. These measures are also found in Chapter 2, Project Description and have been assigned point values by the SMAQMD as well:

- A Kiosk shall be provided displaying transportation information in a prominent area. (0.5 points)
- 100% monthly transit or vanpool subsidy (up to $100). (1.5 points)

Mitigation Measure 6.2-4 on page 6.2-23 is revised to read:

6.2-4 ~~*After approval by the SMAQMD, SMCS shall institute the following measures:*~~ In order to achieve the remaining points needed to equal 15, SCMS shall also implement the measures listed below as part of the project. Each measure has been assigned a point value by the SMAQMD. When the points for all measures listed above are combined, it results in a total of 15.1 points. This would fulfill the requirements of the SMAQMD.

6.2-4 (a) *Exceed Title 24 energy standards for cooling energy by ~~50~~25% at non-residential buildings. (1 point)*

(b) *To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks. (1 point)*

(c) *Preferential carpool and vanpool parking will be shaded. (0.5 points)*

(d) *SMCS shall enter into an agreement with the City of Sacramento and the Sacramento Transportation Management Association to continue ongoing membership in the TMA in perpetuity. The transportation demand management measures outlined in the Air Quality Mitigation Plan and the TSM Plan will be implemented. (2.5 points)*

~~(b) *Install low NO_x hot water heaters.*~~

~~(c) *Install ozone destruction catalyst on air conditioning systems in consultation with SMAQMD or local district. (2.5 points)*~~

~~(d) *Provide preferential parking for carpools and vanpools.*~~

~~(e) *To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks.*~~

~~(f) *Provide showers and lockers for use by employees that bike to work. (0.5 points)*~~

~~(g) *Provide secure bicycle storage at public parking facilities. (0.5 points)*~~

~~(h) *The project applicant shall implement permanent TMA membership funding. (2.5 points)*~~

~~(i) *The project applicant shall provide employees with a transit pass subsidy and/or a commute alternative allowance. (1.5 points)*~~

~~(j) *Provide electric vehicle charging facilities. (1 point)*~~

~~(k) *Increase parking lot shading by 20% over code. (1 point)*~~

Response to Comment 3-6:

It is true that, ideally, no sensitive receptors would be located in close proximity to sources of airborne toxics such as freeways. The existing Sutter General Hospital and Sutter Cancer Center are both located within 500-feet of the Capital City Freeway, as well as numerous other medical offices located along K Street and 30th Street and along Alhambra Boulevard from Stockton Boulevard to L Street. However, any health risks to patients of the new Women's and Children's Center, as well as the SMF Building, would be expected to be much less than those experienced by other sensitive receptors, such as schools or residences, because most patient visits are short-term. The CARB has found that long-term exposure to diesel TAC (the TAC that would be generated by trucks on Capital City Freeway) is much more likely to produce adverse health risks than any short-

term exposure. Patients receiving services at the new Center would not be expected to stay for any significant length of time. Therefore, there would be no substantial increase in health risk due to short-term exposure from this source. The concerns raised by the SMAQMD are noted and will be forwarded to the decision-makers for their consideration.

Response to Comment 3-7:

Comment noted. The applicable SMAQMD rules have been incorporated in the mitigation measures for both projects.

Regional Transit

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A Public Transit Agency and Equal Opportunity Employer

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Letter 4

September 2, 2005

Leslie Buford, Principal Planner
City of Sacramento
Environmental Planning Services
1231 I Street, Room 300
Sacramento, CA 95814

SUBJECT: Sutter Medical Center – Comments on Proposed Changes

Dear Ms. Buford:

Regional Transit (RT) staff has reviewed the Draft Environmental Impact Report (DEIR) for the expansion of Sutter Medical Center and would like to provide the following comments:

- Generally, RT supports the proposed project and consider it beneficial to the neighborhood. We support the proposed mix of offices, housing and retail uses in close proximity to good bus and light rail service. We also appreciate the efforts made by the applicant to coordinate with RT on a continuous basis. 4-1

- In a letter responding to the Notice of Preparation (NOP) for the DEIR, sent to City staff dated January 10, 2005, RT staff identified areas that should be further analyzed in the DEIR for their impacts on transit. These areas include *Traffic, L Street conversion, Construction Management Plan, Project Design, Bus Service, RT's Emergency procedures, pedestrian and bicycle access* and *Sutter's Transportation Management Plan*. The DEIR has addressed a number of these issues. 4-2

- However, there are further areas of concerns for RT in reviewing the DEIR. RT staff is of the opinion that the document adequately addresses:

  a. The impacts of traffic from the proposed community parking structure/commercial block on bus traffic to/from the bus maintenance facility. RT buses typically back out onto 28th Street and also access the maintenance facility via 28th street coming from N Street and Capitol Avenue. The potential for vehicular conflicts on 28th Street should be addressed properly. 4-3

b. The proposed L Street Conversion from one-way to two-way, and narrowing it down to two lanes from three lanes. Although the document states that the City of Sacramento is pursuing a study of the street conversion, it's impacts on RT's future transit movements on L Street is of critical importance. Additionally, Please be aware that a previous Bus Rapid Transit (BRT) study has identified L Street as a "power corridor" where L Street will have an exclusive bus lane. Issues such as road medians and turning radii for RT buses need to be adequately addressed. 4-4

c. Further, the DEIR should document how the Medical Center will work with RT to develop a construction management plan for the project. The plan should address at a minimum: deliveries, (during construction and long term), truck staging locations, parking for construction vehicles and vehicles of employees, noise, vibration, street cleaning, trash control, blockage of streets and sidewalks and other similar elements. The plan should also consider any interference to bus stops, bus ingress/egress to the bus maintenance facility and bus parking areas. 4-5

d. The DEIR should take into consideration any impacts of the proposal on RT's emergency procedures and vice versa. 4-6

In conclusion, RT staff appreciates the opportunity to comment. If there are any questions regarding these comments, please contact me at 556-0507, or by e-mail at tjaiyeoba@sacrt.com.

Sincerely:

Taiwo Jaiyeoba
Director of Planning

c. Mike Wiley, AGM of Planning and Transit System Development
Mike Cooke, Director of Maintenance, RT
Don Smith, Senior Planner, RT
Collette Johnson-Schulke, Government Affairs Manager, Sutter Medical Center

COMMENT LETTER 4: Regional Transit

Response to Comment 4-1:

Comment noted. The commentor's support of the project is noted. The referenced response to the Notice of Preparation is included in Appendix A of the DEIR. The issues raised in the NOP response, as noted by the commentor, have been addressed in the DEIR.

Response to Comment 4-2:

Comment noted. The commentor's request that specific areas be evaluated in the DEIR is noted. The referenced response to the Notice of Preparation is included in Appendix A of the DEIR. The issues raised in the NOP response, as noted by the commentor, have been addressed in the DEIR.

Response to Comment 4-3:

RT buses backing up onto 28th Street and accessing the maintenance facility via 28th Street coming from N Street and Capitol Avenue is considered a momentary operational impact and is not considered as an impact of the project. Operations at the existing RT facility would be taken into consideration during preparation of the required Traffic Control Plan before construction is started on this project.

Response to Comment 4-4:

The potential conversion of L Street from one-way to two-way operations has been considered in the DEIR because it may occur in the future. However, no decision to convert the street has been made by the City of Sacramento. Conversion of L Street is not a part of the SMCS project.

Although a previous Bus Rapid Transit (BRT) study has identified L Street as a "power corridor" where L Street could have an exclusive bus lane, the BRT plan and the exclusive bus lane have not been adopted by either Regional Transit or the City of Sacramento. The changes to L Street proposed by the SMCS project do not result in a significant impact to transit. However, this information is forwarded to the decision-makers for their consideration.

Response to Comment 4-5:

Comment noted. The project applicant is required to prepare and submit a Construction Management Plan (Traffic Control Plan) to the City of Sacramento for review and approval. The City of Sacramento Traffic Engineer requires the applicant to coordinate with all agencies affected with the project and request that all affected agencies review and approve the Construction Management Plan before its final approval by the City of Sacramento Traffic Engineer.

Response to Comment 4-6:

Comment noted. RT emergency procedures and Sutter Health emergency procedures should be coordinated between the two parties since this is considered a public safety issue.

Sacramento City Taxpayers' Rights League
2509 Capitol Ave. Suite 100
Sacramento, Ca 95816
916-446-6666

"Without sunlight on government actions, there can be no democracy"

City of Sacramento
Planning and Building Department
Environmental Planning Services
1231 I Street, Room 300
Sacramento, Ca 95814

RE: Sutter EIR

The EIR appear inadequate for a project of this size. This is one of the largest projects in the Cities history and the entitlements to be granted are enourmous and cannot be lightly undone. 5-1

The EIR needs redone on several levels to meet the minimum CEQA levels and resolve ongoing neighborhood concerns. Impacts on the neighborhood were not properly studied and will result in substantial harms to the neighborhood unless they are studied, anayalzed and properly mitigated. The EIR is inadequate for a project of this size. It's mitigations are a joke and are inadequate. The EIR needs substantial work, on several levels, to meet the minimum CEQA levels. 5-2

The limited study area begets a complete lack of study of existing neighborhood business, residential, historic, and tourist impacts. Parking ignores street parking. Water ignores water pressure. Lack of parking talks about developer's problems only, not communities problems because of the development. Etc. 5-3

Further comments include:

Sewer and Water

The sewer lines and water lines in the area are already severely impacted and the stress of high-rise buildings on the existed system needs to be carefully studied and mitigated. 5-4

This was not studied or included. No City report included on water pressure and sewage capacity based on intended building usages.

Parking & Traffic

The impact of new customers, staff, service people, visitors, and others needs very careful study and mitigation. Parking, traffic patterns, through traffic, CalTrans projects, neighborhood and regional traffic issues will need extensive study. Funding for traffic calming in nearby neighborhoods should 5-5

be studied as on possible mitigation. The affect and needs outlined in the central city traffic calming study should be incorporated. The city's policy of converting one way to two-way streets should be incorporated.

5-5 (con't.)

This was not studied or included.

Historic Preservation

All impacts will affect the Historic viability of this rather fragile Historic neighborhood. All design and projects impacts should be studied and analyzed to their affects on existing Historic structures, National Registry neighborhood statuses (actual or pending) State Registries (actual or pending) and City Registries (actual or pending). The study must not be superficial or causal, and list impacts and views from and to specific registry (or potential registry) properties, and the neighborhoods.

5-6

While studied the conclusion was incorrect. Mitigation, needed, importance- critical.

St Lukes Medical Center

The application should include any proposed, reviewed or approved plans for St Luke medical center that City staff have knowledge of in all cumulative impacts for the project.

5-7

This was not studied or included.

Fort Sutter

The NOP must address the impact on Fort Sutter. Specifically, parking for visitors, loss of attendance, impacts on tourism, impacts on the facility, parking for tour buses, parking and access for Horse drawn daily tours, access for schools tours, etc.

5-8

The study was inadequate.

Sutter Medical Center Campus in East Sacramento

The closure of the Sutter Medical Center Campus in East Sacramento should be studied as part of this NOP. The transfer of the facilities, patients, staff and visitors from one neighborhood and the re-use of that facility is one project, and should not be separated into two projects. There are serious impacts on both neighborhoods that should be studied and mitigated together as they are a single project. To divide them into two projects limits the cities ability to assess and mitigate the adverse impact on both neighborhoods (which will be the largest project in both neighborhoods in the history of the city).

5-9

This was not studied or included.

Linkage

It is critical that the linkages for mitigation in this project be careful spelled out and sufficiently detailed so that (for example) the housing mitigation project never gets built while all the other projects are completed. All onsite and offsite mitigations must be a condition of each separate building and not separated, lost, amended or ignored when futures building change, run out of funding, etc etc. 5-10

This was not studied or included.

Employees

We are highly skeptical of the increase in number of SCMA employee chart in the NOP (it appears low and is unsupported). In addition it does not consider, customers, visitors, service employees, trade people and other who visit these facilities on a regular basis. The city should provide the EIR staff the analysis of H and J street traffic in East Sacramento and the high number of vehicles that clog those crowed streets that are hospital related traffic. 5-11

This was not studied or included.

Entitlements

The entitlements mentioned in the NOP on page 10 for the expansion of Sutter general have long ago expanded and must be included in this NOP. 5-12

This was not studied or included.

Helipad

The helipad proposed must be carefully studied for noise, time of day, volume of use and other impacts. Mitigation measure considered should include: flight limits on hours and numbers of flights, cash payments to nearby property owners such as those the City required from the UC Med Center helipad installation. 5-13

The study was inadequate. Mitigation needed, importance critical.

Project Area

The area for study must include the affected residential neighborhoods, i.e. the distance from the projects that a person might park their car and walk for services must be studied. Realistically that means (at a minimum) 23rd street on the west, K Street on the east, and P on the south. 5-14

This was not studied or included.

Streetlights

Applicants should pay for and install 6 historic streetlights per block in the enhanced area described above to match existing city policy, needs for their customers and members at night, and as a potential project mitigation. This was includes pedestrians from their project, guests and residents affected. 5-15

This was not studied or included.

Sidewalks

All sidewalks the visitors or staff would walk across (i.e. expanded project area above) should be repaired as mitigation for the expanded usage of the neighborhoods and cut down on the number of injuries from tripping hazards from people visiting the neighborhood who are unfamiliar with its many tripping hazards. 5-16

This was not studied or included.

Declarative Statements

The NOP contains many declarative statements about what is and what requirements City Policy has for the projects. The NOP is not City Policy and future documents must contain a statement that what is required by City policy and rules is to be studied in the EIR and not limited by the rather lengthy legal rulings in the NOP about what is and is not required. An NOP is to describe the project and discuss areas expected to be studied but only the General Plan, City Planning Commission, City Rules, Procedures, laws and finally the City Council set or interpret requirements. 5-17

This was not studied or resolved.

Church Cathedral

It is difficult to tell with the preliminary design for the Cathedral how it could ever fit, or be approved, with the Historic nature of the neighborhood. 5-18

This was not studied or resolved.

Housing

The project impact on Housing needs detailed study. The City has a long-standing goal of increased housing downtown. Many of these large empty parcels could have large numbers of housing units on them. The loss of that opportunity needs study. 5-19

This was not studied or resolved.

Study Area

On further analysis the study area must be expanded north to I Street. This is to specifically include parking and traffic impacts on those neighborhoods. 5-20

This was not studied or resolved.

Parking and Traffic

The study must analysis the projects impact on the parking and traffic impacts on the Eastern Star Temple, State Indian Museum, Hart Senior Center, and Sutter's Fort. The EIR should analyze these facilities types of uses, hours of demand, and age of users (and their special needs) and discuss what long-term impacts the project creates. Special care should be taken to analyze senior's limited mobility and special parking needs and the impact the lack of parking will have on those facilities. The affects on the viability of surrounding neighborhoods staying residential should also be studied (as well as the short and long term impacts on the residents of those neighborhoods). Street parking was never studied in the EIR. 5-21

This was not studied or resolved.

Construction Vibration

The affects of any construction vibration should be carefully studied for impacts on Sutter's Fort, State Indian Museum, the Eastern Star Temple, and two building on L Street that are sinking (multi story apartment building at 27th and L and the nursing home at 26th and L). 5-22

This was partially studied and partially resolved.

Energy Center

It is unclear from your letter where the energy center is going to be placed and its exact functions. The center should not be visible from, or heard from either Capitol or L Street. Its impact on ambient temperatures and emission should be studied. No options where present and there in not enough information in the December letter to prepare proper NOP comments 5-23

This was not studied or resolved.

Cooling Tower

A 20-foot (3 stories) tower on top of an 8-story building seems excessive and violates the height limits for the area. It should be not be used for signage. It is unclear why other similar buildings do not require these types of towers. No options where present and there is not enough information in the December letter to prepare proper NOP comments. 5-24

This was not studied or resolved.

Sincerely Yours

Mark Whisler
President
Sacramento City Taxpayers Rights League

COMMENT LETTER 5: Sacramento City Taxpayers' Rights League

The comment letter references the Notice of Preparation that was prepared for the SMCS project and the Trinity Cathedral project in January 2004 (please see Appendix C in the DEIR). The following responses attempt to answer the questions raised in the comment letter.

Response to Comment 5-1:

The comment is noted. The DEIR addresses all of the environmental issues noted in the Initial Study (includes Appendix A in the DEIR).

Response to Comment 5-2:

Specific responses to comments on the adequacy of the DEIR are presented below.

Response to Comment 5-3:

The analyses contained in the DEIR extend well into the adjacent neighborhoods, and includes an analyses of cumulative issues of a neighborhood, community, and regional scale. The study area for cultural resources looks at historic structures within a four to five block radius of the project site while the study area for traffic addresses a total of 35 intersections up to ten blocks from the project site.

The DEIR describes on-street parking in the project area on page 6.7-27 of the DEIR; on-street parking occupancy in the area is currently approximately 55 percent. The analysis of parking for the SMCS project assumes that no on-street parking is available, assuming that all parking demand must be met with off-street parking spaces. As shown in the analysis, the SMCS project would provide adequate off-street parking to accommodate the project through a combination of the structure parking as well as a Transportation Systems Management Plan.

The issue of water pressure, noted in the comment, is affected by the adequacy of the water distribution infrastructure in the project vicinity. The adequacy of water distribution infrastructure to support the proposed project is addressed in Impact 6.8-3, page 6.8-15 of the DEIR.

Response to Comment 5-4:

A discussion of impacts to the city's water and wastewater infrastructure for the SMCS project is addressed in the DEIR in Section 6.8, Utility Systems and for the Trinity Cathedral project in Section 7.8, Utility Systems. As addressed in Impact 6.8-3 on page 6.8-15 of the DEIR, there are a series of water lines that serve the SMCS project area. As part of the SMCS project new water lines including three additional 8-inch water lines and two 12-inch water lines are proposed to serve the project. The addition of these new water lines in combination with the city's existing infrastructure would ensure that adequate water distribution capacity is available to serve the SMCS project without adversely impacting existing water service to adjacent areas. No mitigation was required.

Impact 6.8-6 on page 6.8-25 of the DEIR addresses wastewater infrastructure. As discussed under Impact 6.8-6, the city is constructing a new combined 78-inch sewer and storm drain line in 29th Street which would serve the SMCS project as well as other adjacent development. The amount of wastewater generated by the SMCS project was quantified based on each building, as shown in Table 6.8-5. In addition, the City requires all new development to comply with the City's Combined System Development Fee, which would ensure adequate wastewater infrastructure is provided to serve the project. Because the SMCS project would contribute the required fees and has been

designed to address any impacts the impact was determined to be less than significant and no mitigation was required.

Response to Comment 5-5:

Transportation and circulation issues associated with the SMCS project are discussed in detail in the DEIR in Section 6.7, Transportation and Circulation. For the Trinity Cathedral project transportation and circulation issues are addressed in Section 7.7 in the DEIR. Both Section 6.7 and Section 7.7 describe the potential impacts to parking, traffic circulation, intersections, transit, and bicycles associated with proposed development. The prospect of converting L Street from one-way to two-way traffic associated with the city's Two-Way Conversion project was also addressed. The commentor is referred to Section 6.7 and Section 7.7 for a discussion of traffic impacts associated with both the SMCS and Trinity Cathedral projects.

Regarding the traffic calming measures mentioned by the commentor, the City adopted the Neighborhood Preservation Transportation Plan (NPTP) in the early 1990s to address speed in the midtown residential streets, improve pedestrian and bicycle safety, and to maintain good access for the midtown merchants. To address these concerns, the NPTP was developed with a variety of measures to slow traffic throughout the midtown area. It includes traffic circles, half-street closures, and intersection portals or corner bulbs. The City approved the plan and has also approved a plan for on-going monitoring. Residents are encouraged to contact the City if they want to see traffic calming measures implemented in their neighborhood. In addition, the City recently approved the SMART Plan for the south Midtown area that considers the conversion from 3-lanes one-way to 2-lanes one-way on L, N, P and Q Streets from 16th Street to 29th Street. Lastly, the City is still evaluating the Central City Two-Way Conversion Study that includes conversion from 2-lanes one-way to 2-lanes two-way on portions of L and N Streets in the vicinity of the SMCS project site. The City oversees all the traffic calming projects throughout the city. The area around the SMCS project site has not been identified either by the City or local residents for traffic calming measures at this time.

Response to Comment 5-6:

A complete analysis of historic issues was addressed in the DEIR in Section 6.3, Cultural Resources for the SMCS project and in Section 7.3, Cultural Resources for the Trinity Cathedral project. The SMCS project site is not located in a designated historic district and it was determined that development of the project would not affect the historic viability of the nearby historic districts. A historic analysis was prepared by Roland-Nawi Associates, which addresses all the historic resources in the project area (see DEIR Appendix G). The commentor is referred to Section 6.3 and Section 7.3 for a discussion of historic resources and any potential impacts associated with development of either the SMCS or Trinity Cathedral projects.

Response to Comment 5-7:

Part of the SMCS project involves the demolition of the existing St. Luke's Medical Office Building, and thus the future use of this site is part of the SMCS project, not a cumulative project (please see the discussion of St. Luke's in the DEIR in Chapter 2, Project Description, page 2-33). Plans to demolish the existing St. Luke's Medical Office Building and re-build a smaller medical office building (Future MOB) on the same site are addressed in the DEIR. The demolition, construction, and operation of the Future MOB is addressed throughout the DEIR in the technical sections. The cumulative effects of SMCS Project which includes the Future MOB, have been fully addressed in all the technical sections of the DEIR.

Response to Comment 5-8:

The comment refers to the assessment of effects of the SMCS project on Sutter's Fort required to be addressed in the NOP. The NOP (see Appendix C in the DEIR) notes that cultural and historic issues will be addressed in the DEIR. This response addresses how effects on Sutter's Fort were addressed in the DEIR that was prepared for the SMCS project. The DEIR evaluates how the SMCS project would change the current existing environment and analyzes changes in aesthetics, air quality, cultural resources, public safety, hydrology, noise, traffic, and utility systems. The impact analysis takes into account how the project could adversely impact adjacent uses, including Sutter's Fort (see DEIR Section 6.3). The traffic section (see DEIR Section 6.7) addresses how the SMCS project would increase traffic in the area and clearly identifies any impacts. In addition, the traffic section addresses parking demand associated with the SMCS project and outlines a specific plan to address parking associated with the project. It is speculative to assume that development of the SMCS project would affect attendance at Sutter's Fort. The current SMCS facilities, including SGH and the Buhler Building, do not negatively affect attendance at Sutter's Fort, so it is highly speculative to assume development of the new SMCS components would result in any effect on attendance. In addition, CEQA requires that the impacts of the project be addressed, which the DEIR does for this project. The commentor is referred to the discussion of the environmental setting on pages 6.3-1 through 6.3-5 and Impact 6.3-1 on page 6.3-16 of the DEIR.

Response to Comment 5-9:

As indicated in the DEIR, SMCS is proposing to construct a new Women's and Children's Center (WCC) and medical office building (SMF Building) in order to consolidate all of their medical facilities into a fully integrated medical complex. Due to seismic safety requirements the existing Sutter Memorial Hospital (SMH) would no longer be used as an acute care facility. A majority of the facilities currently located at SMH would be moved to the new WCC. It is anticipated that SMH would be closed as an acute care facility. Portions of SMH could be used for administrative or other uses, including non-acute care.

SMCS has not planned for any long-term reuse of the SMH site. In the future, as the SMCS project proceeds in phases, SMCS would determine future options, which could include future reuse of the site by SMCS or sale to a future owner. Because the future use of the site is not known or currently foreseeable, such reuse could not be and is not part of the SMCS project. Any future use of the SMH site not presently authorized would be required to go through subsequent CEQA review and City approval process whether proposed by SMCS or a future landowner. SMCS has publicly stated that prior to sale of the site to a third party or filing of an application to redevelop the site it will engage in an assessment of reuse options for the site in a public consultation process that would include the neighbors, the City, and other interested parties.

Because the future use of SMH is unknown, any impacts from such uses are too speculative to be addressed in this EIR (see State CEQA Guidelines Section 15145). The relocation of medical uses from SMH to the proposed SMCS project, in and of itself, would result in less activity at the SMH site, including fewer employees, patients, visitors and vendors; therefore, during the interim there would be a lower level of impact than currently exists at and in the vicinity of the SMH site.

All of the reasonably foreseeable direct and indirect impacts of the SMCS project are fully evaluated in the EIR.

Response to Comment 5-10:

The 32 residential units is not mitigation for the SMCS project. The housing is another component of the SMCS project. SMCS is committed to constructing the housing component. A separate

Mitigation Monitoring Plan (MMP) has been prepared for the SMCS project and the Trinity Cathedral project (see Chapter 5 of this Final EIR) to ensure that the mitigation measures are tied to the appropriate project. The project applicant would be required to carry out all mitigation measures. The mitigation measures identified in the DEIR for the SMCS project differentiate between each building, if appropriate. In some instances, the mitigation would apply to each building regardless of when it is constructed. Please see the analysis contained in the DEIR for more specifics.

Response to Comment 5-11:

In this comment, the commentor refers to the estimates of project employees in the NOP. This response addresses employee estimates in the DEIR.

Table 2-7 in the DEIR in Chapter 2, Project Description, provides a breakdown of the number of existing and proposed SMCS employees. As stated in the DEIR, in 2003 the average number of visitors and patients accessing the parking structures between 7:00 a.m. and 4:00 p.m. for SGH was approximately 880 vehicles entering the parking structures with over 640 vehicles exiting. On average, over 150 patients per day used the hospital drop off.[2]

The traffic analysis includes all forms of vehicular traffic associated with the SMCS project, including employees, patients, visitors, service employees, trades people, and others. The number of trips associated with the SMCS project is based upon data collected at SMH in East Sacramento. Traffic counts at SMH included the vehicular trips of all users of the facility.

Response to Comment 5-12:

In this comment the commentor refers to the description of entitlements for Sutter General Hospital in the NOP. These have not yet been granted and, therefore, have not expired. This response addresses the description of entitlements for the SMCS project addressed in the DEIR.

It appears as though the commentor could be referencing the statement made at the bottom of page 10 in the January 2004 NOP that refers to internal renovation of SGH and new building square footage that was to be added based on previous approvals. When SGH was constructed in the mid-1980s the City approved a much larger floorplate than what was constructed. SMCS wanted to preserve the option to expand the hospital as healthcare needs changed. As a separate project, SMCS is currently expanding a portion of the north side of SGH to construct space for a new MRI facility. This is a separate project that was previously reviewed and approved by the City.

In addition, the project entitlements currently sought for the SMCS project are included in the DEIR on pages 2-55 and 2-56 in Chapter 2, Project Description. The list of requested project entitlements or approvals for the SMCS project are listed below.

- General Plan Amendment;
- Community Plan Amendment;
- Rezone;
- Special Permit (Height variance - Alhambra Corridor; Setback variances);
- Lot Line Adjustment/Partial Mergers or Tentative Subdivision map;
- Public Right-of-Way Abandonment/Vacations;

2 Memo from Bob Grandy to Steve Pyburn, City of Sacramento, June 13, 2003.

- Alley and Utility Abandonments/Vacations;
- Special Permit - Major Project;
- Special Permit – Helistop;
- Special Permit – Tandem parking;
- Ministerial level City permits, including building permits.

Response to Comment 5-13:

The DEIR analyzes the public safety and noise issues associated with the proposed SMCS helistop in Section 6.4, Hazardous Materials and Public Safety and Section 6.6, Noise. A helistop is different from a helipad in that a helistop is only designed for infrequent and occasional use for quick landings and take-offs, while a helipad can accommodate a wider variety of helicopters and is designed to allow helicopters to remain on-site for longer periods of time. A description of the proposed helistop is included in Chapter 2, Project Description, on page 2-20 of the DEIR. SMCS anticipates no more than 200 helicopter flights per year would be required. In addition, the proposed flight paths are included on page 6.4-34. The commentor is referred to Response to Comments 6-2 and 6-3 as well as the DEIR for more detail on the proposed helistop. It is within the City's purview to determine if the helicopter operations would present a nuisance to the surrounding community and if additional measures are required. The U.C. Davis Medical Center is a level 1 trauma center which provides emergency helicopter operations at any time of the day or night. The helicopter operations at U.C. Davis are very different than what is being proposed as part of the SMCS project.

Response to Comment 5-14:

For the purposes of a CEQA analysis the general scope of the study area is defined by the specific boundaries of the project site. However, the context of the analyses varies depending on the nature of the analysis. There is no evidence of impacts other than traffic outside the site boundaries. As discussed in the DEIR, each of the technical sections define what issues associated with the project will be evaluated based on the standards of significance and the impacts being evaluated. In terms of the traffic analysis the scope of the study area was expanded to include a total of 35 intersections requested for analysis by city staff (please see Figure 6.7-3 in Section 6.7, Transportation and Circulation). The Transportation and Circulation section of the DEIR contains a detailed review of traffic impacts within the larger study area. The commentor is referred to the DEIR for more detail on the traffic analysis conducted for the SMCS project.

Response to Comment 5-15:

As discussed in the DEIR on page 2-42 in Chapter 2, Project Description, the SMCS project would install streetlights in conformance with the city's lighting standards. At this time it is assumed the streetlights would be the acorn style lights found throughout midtown. A total of approximately 31 new street lights are proposed along Capitol Avenue, 28th Street, L Street, and 29th Street in conjunction with the new SMCS buildings. In addition, the Trinity Cathedral project would also install new streetlights (see DEIR page 2-61) along Capitol Avenue and 27th Street. The streetlights are elements included as part of the project and not required for mitigation.

Response to Comment 5-16:

As discussed in the DEIR on page 2-40 in Chapter 2, Project Description, as part of the SMCS project, existing street curb, gutters, and sidewalks adjacent to new structures and site parking would be reconstructed to meet current City of Sacramento standards. In general, existing streets and related curbs, gutters, and sidewalks not affected by construction and not damaged during construction, would not be repaired or replaced. Operation of the project would not result in any impacts to sidewalks, gutters, and related curbs.

Response to Comment 5-17:

It appears as though the commentor is referring to information contained in the Notice of Preparation that was prepared for the SMCS and Trinity Cathedral projects. The commentor is referred to the DEIR for a complete review of both the SMCS project and the Trinity Cathedral project. The commentor is correct the purpose of the NOP is to provide a general description of the project so that responsible and trustee agencies as well as interested members of the public have an opportunity to comment on issue areas to be analyzed in the DEIR. It is within the purview of the decision-makers to decide if the project is consistent or inconsistent with any adopted plans or policies.

Response to Comment 5-18:

The DEIR contains an analysis of the historic resources present in the project area and Section 7.3, Cultural Resources, specifically addresses Trinity Cathedral. The commentor is referred to Chapter 2, Project Description pages 2- 57 through 2-66 of the DEIR for more detail on this issue. The Trinity Cathedral project is also required to go before the City's Design Review and Presentation Board for review and approval. The project is tentatively scheduled to go before the Design Review Board in early November 2005.

Response to Comment 5-19:

The SMCS project would include development of 32 residential units along N Street between 26th and 27th Streets. With the exception of western portion of the block bounded by N Street, Capitol Avenue, 27th and 28th Streets, the other parcels are not zoned or designated for residential uses by the City. In order to address neighborhood concerns, SMCS has included a housing component as part of the SMCS project.

Response to Comment 5-20:

It appears from the comment that the commentor is requesting parking and traffic impacts to neighborhoods north of I Street be addressed. As discussed in Response to Comment 5-14, in terms of the traffic analysis the scope of the study area was expanded to include a total of 35 intersections requested for analysis by city staff (please see Figure 6.7-3 in Section 6.7, Transportation and Circulation). This includes the area as far north as J Street. City staff did not feel it was warranted to study intersections along I Street due to the distance to the project site.

Response to Comment 5-21:

The traffic and parking analyses fully analyzed all potential impacts of the project and followed accepted standard practices for the determination of impacts in accordance with the City's standards of significance. The traffic and parking analyses considered all users of transportation facilities, including senior citizens. A change in roadway operating conditions or parking availability is applicable to all facility users, including senior citizens. As noted in the DEIR, cumulative (long-term)

traffic operation impacts are considered potentially significant and unavoidable. Parking impacts are also considered potentially significant and unavoidable. These impacts apply to all transportation facility users, including senior citizens and users of the Eastern Star Temple, State Indian Museum, Hart Senior Center, and Sutter's Fort. The traffic analysis evaluated the change in traffic patterns associated with the SMCS project and availability of parking and identified all impacts of the project. The potential effects on residential neighborhoods is addressed in Impacts 6.7-1 through 6.7-7 in the traffic section. Impacts associated with an increase in traffic volumes, changes to pedestrian and transit facilities and parking are all addressed. On-street parking is considered in the document, for example, on page 6.7-27. The potential parking shortfall identified in the document includes consideration of on-street parking effects and effects in residential areas (see DEIR page 6.7-45).

Response to Comment 5-22:

Construction vibration associated with project construction is addressed in the DEIR in Section 6.6, Noise. Impact 6.6-2 on page 6.6-24 addresses construction vibration and based on the analysis there would be no impact to adjacent buildings. The commentor is referred to Section 6.6, Noise, for more detail on this issue.

Response to Comment 5-23:

As discussed on page 2-25 in Chapter 2, Project Description, the Energy Center would be located below-grade below the Sutter Medical Foundation building located between L Street and Capitol Avenue along 28th Street. The air intakes for combustion air and exhaust stacks from the boilers and generators would be located along the west side of the Energy Center and would extend above grade. Cooling towers for the new energy plant would be situated on the roof of the new SMF Building. The cooling towers would be approximately 27-feet tall and are designed to minimize the release of steam or vapor. The cooling towers are located in such a way so they would not be visible from the pedestrian level. Due to the design of the cooling towers and the size of the facility, the amount of steam or vapor released would not be of a level that would affect ambient temperatures. Please see also Response to Comment 8-3 for more specific design detail of the Energy Center.

Response to Comment 5-24:

As discussed above, the DEIR describes the proposed Energy Center and cooling towers (see page 2-25 in Chapter 2 as well as Response to Comment 8-3). The cooling towers would be located on the roof of the proposed SMF Building and not on the Women's and Children's Center. The cooling towers would not be used for signage. As discussed in the DEIR, the Energy Center is used to provide heating and cooling to the existing and proposed SMCS facilities. An existing Energy Center is located on the corner of Capitol Avenue and 29th Street and currently provides heating and cooling to Sutter General Hospital and the Sutter Cancer Center. The commentor is referred to Chapter 2 in the DEIR for more detail on this issue as well as Response to Comment 8-3.

In regards to the commentor's statement that "no options were presented" it is not clear what the commentor is asking. However, if the commentor is referring to alternatives, there are no alternatives presented for these features because they do not create impacts that would be avoided or mitigated by the "option".

Letter 6

Marshall
School
Neighborhood
Association

September 12, 2005

Lezley Buford, AICP
2100 Arena Blvd., Room 200
Sacramento, CA

Dear Ms. Buford:

Attached is the section on helicopter noise impact for the Sutter Medical Center DEIR. This is part of the neighborhood coalition on Sutter expansion. This will be consolidated and endorsed by the member associations at a later date. This is per a conversation with Bruce Holmes (WPCANA) 6-1

Sincerely,

Bill Burgua

Bill Burgua,
Chair, Marshall School Neighborhood Association
903 28th Street
Sacramento, CA 95816-4305

(916) 539-4150

Marshall
School
Neighborhood
Association

September 12, 2005

Lezley Buford, AICP
2100 Arena Blvd., Room 200
Sacramento, CA

Dear Ms. Buford:

This is in regards to the helistop and transportation of non-emergency patients by helicopter section of the Sutter Medical Center DEIR. There is nothing in the DEIR regarding the safety issues relating to this issue. There is a growing concern being voiced by publications such as the New York Times about the safety record and cost effectiveness of the companies providing helicopter patient transport. This unfortunately brought home in Sacramento by the recent crash of the Sheriffs Department helicopter. This was a new, highly maintained helicopter with a very experience crew. One small improperly installed part caused the crash. The only thing that prevented a larger loss of life and property damage was that it crashed into an unoccupied area. This is not the case in Midtown. Several hours a day the Capitol City Freeway lying directly under the flight path is completely packed with vehicles. The Flight path is also over one of the most densely populated areas of the region. 6-2

The risk level to the residents, disaster response and liability are some of the issues that need to be addressed. 6-3

To file this response in a timely manner it is being submitted without full MSNA Board approval. Approval will be given at the next board meeting September 13, 2005.

Sincerely,

Bill Burgua

Bill Burgua,
Chair, Marshall School Neighborhood Association
903 28th Street
Sacramento, CA, 95816-4305

(916) 539-4150

COMMENT LETTER 6: Marshall School Neighborhood Association

Response to Comment 6-1:

Comment noted.

Response to Comment 6-2:

A discussion of helicopter safety is included in the DEIR on page 6.4-32 in Section 6.4, Hazardous Materials and Public Safety. The DEIR contains considerable technical data and information relating to Emergency Medical Service (EMS) helicopter safety. The DEIR identifies the numerous agencies charged with safety oversight, which include the Federal Aviation Administration (FAA), the California Department of Transportation (Caltrans), and the Airport Land Use Commission (ALUC). The DEIR discusses the regulatory responsibilities of each agency for preserving public safety during the helistop process and describes the governmental reviews required prior to project approval. Based on the research and the statistical data presented it appears that while some risk exists with EMS helicopter operations at a hospital rooftop helipad (or helistop), the risk is not considered substantial. A detailed discussion is included on page 6.4-31 through 6.4-35 of the DEIR under Impact 6.4-5, which clearly explains why the risk is not considered substantial due to a number of factors. The commentor is referred to pages 6.4-31 through 6.4-35 in Section 6.4 in the DEIR for a more detailed discussion of helicopter safety issues, as well as the proposed helistop operations.

It also important to note that law enforcement helicopter operations are different from EMS helicopter operations due to different equipment and different requirements/duties.

Response to Comment 6-3:

The DEIR addresses the issue of helicopter safety and risk with an analysis of EMS helicopter accident rates, recent trends, comparisons to general aviation accident rates, and an assessment of "where" and "when" EMS helicopter accidents occur (DEIR page 6.4-32). The DEIR does not contain specific information regarding "disaster response" to a mishap at the proposed SMCS helistop or "liability" associated with a helistop mishap. There are various regulatory and design standards that are being incorporated into the building plans and specifications to facilitate emergency response. It is anticipated that SMCS will establish detailed emergency response procedures in the event of a helicopter mishap in consultation with local first responders. Although liability is not an environmental effect, SMCS maintains extensive insurance which includes coverage for liability associated with helistop operations and EMS helicopter operators also maintain extensive liability insurance for their flight operations.

September 9, 2005

LE Buford
Planning Department
New City Hall
915 I Street
Sacramento, CA 95814

RE: Comments on Sutter Medical Center Project DEIR

Project Description

Both the project description and the applicant's objectives for the project include the statement that all acute care facilities presently at Sutter Memorial Hospital (SMH) are to be consolidated in the new facility. The DEIR also makes numerous references to relocation of medical offices from SMH to the new project. This implies profound changes at SMH. This is also suggested in the alternatives analysis; the No Project/No Action Alternative description states that "SMH would not be closed," suggesting that it will be closed if the project goes ahead. Is the closure of or substantial change at Sutter Memorial a logical consequence of the proposed project? Has the DEIR adequately considered the physical effects of that change? In particular, was the potential for causing urban decay by the closure or substantial change in a major medical facility adequately evaluated?

7-1

7-2

7-3

General and Community Plan Policies

Transportation goals of the general plan call upon us to "maximize alternatives to single-occupant vehicle use, such as public transit," "maintain a desirable quality of life," "create and maintain a street system that protects residential neighborhoods," "increase the use of the pedestrian mode as a mode of choice," "develop bicycling as a major transportation and recreational mode." The Community Plan goals are even more explicit about optimizing the bicycle and pedestrian environment and protecting residential areas from traffic impacts.

It is unfortunate that the art of traffic impact analysis has not caught up with these ideals. Instead, the emphasis is on intersection analysis, using standards of significance that don't relate to the goals, and mitigation measures that are focused on moving vehicles through intersections.

7-4

It's quite possible to have a lousy level of service at an intersection and yet maintain a livable street. Or to accomplish great free flow of traffic but accommodate excessive speeds and volumes that make a street unsafe and unpleasant to live or walk or bike on.

We need to work towards a different set of indicators to measure the impact of traffic on the livability of our neighborhoods. We need to use significance

thresholds that are directly related to the goals of making walking or bicycling not just safe, but also pleasant and desirable and convenient – and logical choices.

It takes more than just having a seat available for transit to be an attractive choice; it also needs to be convenient, frequent, reliable and cost effective (measured in both time and money) compared to driving. Transit capacity is an inadequate measure impact. If buses get rerouted or frequently delayed so they are inconvenient to use or unreliable, then there is a negative impact. They will have loads of capacity because no one will use them. This is not the desired outcome.

7-4 (con't.)

Measurement of Traffic Impact

It is very gratifying to see that trip generation and parking demand rates were based on a survey conducted at SMH, rather than just relying on ITE data. Using the real world to check and augment the ITE rates is a great improvement. However, I am concerned that the SMH surveys may have underestimated actual traffic and parking for following reasons:

- The trip screen was set up at a point internal to the SMH campus. While this screened out trips made to the adjacent medical office building and other destinations, it means that pass by trips, all vehicle trips that ended by parking on the surrounding streets or in the front parking areas, and trips using the main drop off area at the main F Street entrance were not counted.
- Parking demand was estimated by counting parked cars in the lots at the rear of the campus. Cars parked on-street and in the three parking lots on the F Street side of the campus were not counted.
- The parking survey was conducted in a one-hour period on a single day although there is substantial variation in parking demand by time of day and day of week.

7-5

7-6

7-7

Trip Reduction Measures

The project description (at page 2-48) states that "additional TSM measures… would be added to the TSM Plan if it is determined, through the monitoring program, that further steps are required to reduce vehicle trips…" Who will make that determination? What quantitative limits will trigger these additional measures? Is there a time limit for implementing the additional measures after it is determined they are necessary? Since Sutter includes SMH in its definition of SMCS (see the Sutter website) will these TSM measures apply at SMH? Will the parking supply at SMH be included in the calculation of total supply? Would shifting parking to SMH and providing a shuttle be a means to reduce parking demand at the main facility? Would that require additional environmental evaluation?

7-8

Some of the trip reduction measures identified in the project description as already part of an adopted TSM Plan are similar to or items identified in

Mitigation Measure 6.2-4. How can these measures be used to mitigate impacts if they are already in place? Since trip generation rates were derived from a survey at SMH, where these measures are already in place, how will the identified mitigation measures further reduce the projected number of trips? 7-8 (con't.)

Impact on Bicycle and Pedestrian Environment

The mitigations for traffic impacts that call for intersection modifications usually involve removing on street parking and bike lanes. On-street parking is an important feature of the pedestrian environment, providing a buffer from fast moving and high volume traffic. And eliminating bike lanes near intersections makes the streets less safe for bicyclists, harder to navigate, and more of a challenge. While individually not very significant, the cumulative effects of these mitigation measures on the quality of the pedestrian and bike environment add up – it's death by a thousand paper cuts. Was this considered? 7-9

Thank you for the opportunity to comment.

I am supportive of this project; I think Sutter provides outstanding service and is an important part of the community. My concerns are with the way we measure and analyze and mitigate for the impacts of the proposed project. 7-10

Sincerely,

Maureen Daly Pascoe
680 53rd Street
Sacramento, 95819

COMMENT LETTER 7: Maureen Daly Pascoe

Response to Comment 7-1:

As the SMCS project proceeds, use of the SMH facilities would be substantially reduced and the facility may be entirely closed. Regarding potential future uses of the SMH site, please see Response to Comment 5-9.

Response to Comment 7-2:

Regarding the effects of the potential future use of the SMH site, please see Response to Comment 5-9.

Response to Comment 7-3:

There is no evidence to suggest that closure of SMH would result in urban decay. To the contrary, SMCS has committed to continuation of present levels of landscaping and exterior maintenance and security at the SMH campus to ensure the building exterior and grounds are well maintained.

To recognize this commitment, the Project Description has been modified to add the following text to page 2-1. In addition, this will be included as a condition of project approval:

> Following relocation of acute care services from SMH to the SMCS project, SMCS would continue existing levels of landscaping and exterior maintenance and security at the SMH campus.

Response to Comment 7-4:

Comment noted. The concerns raised by the commentor regarding the City's general plan and community plan transportation goals and policies are noted and forwarded to the decision-makers for their consideration. In Section 6.7 of the DEIR Impacts 6.7-3 through 6.7-5 address impacts to bicyclists, pedestrians and transit. According to the City's standards of significance (see DEIR page 6.7-35) a significant impact to bikeways would occur if the project would hinder or eliminate a bikeway or interfere with the implementation of a bikeway, or result in any unsafe conditions for bicyclists. The standard of significance for pedestrians would be is any unsafe conditions were created by the project. For transit, the standard of significance is if the project would generate an increase in ridership which exceeds existing or planned system capacity. The transportation analysis in the DEIR is based upon accepted methodologies and standards of significance adopted by the City of Sacramento in accordance with CEQA and the CEQA Guidelines. These standards adequately measure and describe impacts of the project. The mitigation strategy identified in the DEIR focuses on removing cars from streets in the neighborhood through implementation of the TSM program, rather than simply accommodating the maximum number of cars through providing additional parking. In Chapter 2 of the DEIR on pages 2-46 through 2-49 there is a detailed discussion of the TSM program. The commenter focuses on changes to the standards of significance. Such changes are beyond the control of the preparers of this document.

Response to Comment 7-5:

The preparers of the traffic analysis recognize that it is difficult in an urban environment to capture every trip. However, the level of trip generation established by the data collection at Sutter Memorial Hospital is considered representative of the new hospital use. The resultant rate is within the range of rates reported by the Institute of Transportation Engineers, and is supported by limited traffic volume data available at the Sutter General Hospital. As discussed on page 6.7-31 of the DEIR, it is

likely that trip generation will be lower than assumed in the analysis due to implementation of the TSM plan and project consolidation and internalization of uses. It should be noted that the SMCS project results in potentially significant and unavoidable transportation impacts; use of a different (higher) trip generation rate would not change that conclusion.

As a correction to the comment, the main drop off area at the main F Street entrance was included in the counts.

Response to Comment 7-6:

As mentioned by the commenter, on-street parking was not included in the parking count, due to the difficulty in determining which parked vehicles are associated with the hospital. However, cars parked in the three parking lots on the F Street side of the campus were counted. To determine how parking demand for the WCC was calculated the traffic consultants counted parking lots at SMH and calculated the total amount of square feet at SMH that was occupied. Using that information a rate of 2.09 spaces per 1,000 square feet was developed to assess parking demand associated with the WCC. A different analysis was conducted for the medical office buildings because they generate a different type of use. The parking demand rate of 2.09 spaces per 1,000 square feet was compared to the ITE parking demand rate for hospitals which was significantly higher. Because actual numbers were used the traffic consultant felt the rate of 2.09 spaces per 1,000 sf was more realistic than the higher rates used in the ITE manual. Pages 2-43 through 2-49 in Chapter 2, Project Description provide a summary of the existing parking demand and the proposed parking demand associated with the SMCS project along with the proposed TSM program to address alternative transit modes and parking availability. The use of on-street parking was not included as available parking to accommodate the parking demand associated with the SMCS project.

Response to Comment 7-7:

The parking data collection was intended to capture the peak number of cars parked on-site on a typical day. The time of day was selected by observations of parking levels over time, three days of traffic counts, and a review of past data collection on-site, and through discussions with SMCS staff. Based on this information, the time of the data collection was scheduled to coincide with the previously observed peak time period. Random, one-time counts is the industry standard for such studies, just like traffic counts are done on a one-time basis. The parking studies were done consistent with the approach dictated and used by the City on other projects.

It should be noted that the SMCS project results in potentially significant and unavoidable parking impacts; use of a different (higher) parking demand rate would not change that conclusion.

Response to Comment 7-8:

The determination would be made by the City in coordination with SMCS. If a parking shortfall is identified SMCS is responsible for providing adequate parking for their patients, visitors, and employees.

Day to day implementation of the SMCS TSM program would be handled by the on-site Employee Transportation Coordinator. Monitoring would be accomplished by an annual employee commute survey to determine the level and rate of alternative commute use. Other monitoring would include tracking of transit pass sales, TransitCheck vouchers, bicycle locker registrations, and carpool permit applications. Each quarter, an audit would be conducted of carpool registrants to confirm eligibility status of participants. In addition, an annual audit would be conducted to determine the status of parking and if there is a parking shortfall. Based on previous surveys conducted by SMCS in regards to transit issues, a 70 percent response rate was captured.

The TSM program prepared for the SMCS project does not include SMH because it is the intention to move all acute care patients and facilities from SMH to the new WCC. The existing parking supply at SMH was not included in the parking analysis conducted for the SMCS project. As noted in the Project Description on page 2-49, if additional parking is required for the project, off-site lots along Highway 99 would be acquired and shuttles provided. If additional environmental review is required for improvements to off-site lots or operation of parking shuttles, it would be conducted when specific off-site parking sites are proposed.

The trip generation rates used in the transportation analysis does not assume any TSM measures beyond those that currently exist. Similarly, the parking sufficiency analysis does not assume any reduction in parking due to additional TSM measures.

Nelson/Nygaard, a firm from the Bay Area conducted an analysis of the proposed TSM program and their findings are included in Appendix A of this FEIR. Based on their review,

> …there will be sufficient parking at the proposed SMCS to accommodate full SMCS project parking demand. Parking demand will fall to 2,650 spaces due to the increased parking fee, generating an excess parking supply of 87 parking spaces. It is difficult to determine the precise number of spaces that could be reduced as a result of other factors, such as improved transit, increased transit subsidy, internalization and other TDM measures, but together these measures should provide SMCS with a sufficient vacancy rate to ensure that patients, visitors and staff can easily find a parking space at all times of day.

The commentor is referred to Appendix A of this FEIR for more detail.

Response to Comment 7-9:

The potential elimination of bicycle lanes near intersections is reported in the DEIR where such elimination could potentially result from implementation of mitigation measures. Impact 6.7-8 on page 6.7-67, addresses the increase in traffic volumes under 2025 conditions. The standard of significance for impacts to bikeways is to hinder or eliminate an existing designated bikeway, or if the project interferes with implementation of a proposed bikeway; or result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Mitigation Measure 6.7-3 on page 6.7-71 requires restriping of intersections which may eliminate bicycle lanes. However, this restriping of intersections to include a right or left turn lane is an accepted practice throughout the city. Such elimination is not considered to be a significant impact in accordance with the City's standards of significance.

Response to Comment 7-10:

The commentor's support of the SMCS project is noted and forwarded to the decision-makers for their consideration.

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DAVID A. ROSENFELD
WILLIAM A. SOKOL
VINCENT A. HARRINGTON, JR.
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CAREN P. SENCER

•• Admitted in Hawaii
••• Also admitted in Nevada

PATRICIA M. GATES, Of Counsel
PENELOPE S. PAHL Of Counsel
ROBERTA D. PERKINS, Of Counsel

September 9, 2005

VIA E-MAIL AND FIRST CLASS MAIL

City of Sacramento
Environmental Planning Services, L.E. Buford
1231 I Street, Room 300
Sacramento, CA 95814

Re: Draft Environmental Impact Report
Sutter Medical Center and Trinity Cathedral Project, Sacramento, California

Dear Mr. Buford:

On behalf of Service Employees International Union, United Healthcare Workers - West ("SEIU-UHW"), we provide these comments ("Comment Letter") on the joint Draft Environmental Impact Report[1] ("Draft EIR") prepared by the City of Sacramento ("City") for the Sutter Medical Center, Sacramento, Project ("SMCS Project" or "Project") and the Trinity Cathedral Project. The Trinity Cathedral Project is located within the area covered by the SMCS Project, and both projects are addressed by the Draft EIR. This Comment Letter, however, addresses only the impacts of the SMCS Project and those effects of the Trinity Cathedral Project that contribute to the cumulative impacts of the SMCS Project.

Although SEIU-UHW recognizes the important role Sutter Medical Center, Sacramento ("SMCS") plays in providing necessary and essential services to the community, there are serious deficiencies in the Draft EIR that need to be addressed before the Project proceeds further. The Draft EIR does not comply with the requirements of the California Environmental Quality Act ("CEQA")[2], as explained more fully below. The City may not approve the Project or grant any permits for the Project until an adequate EIR is prepared and circulated for public review and comment. 8-1

Along with many thousands of members of the general public, SEIU-UHW members live, work, and pay taxes in the area affected by the Project. They are concerned about sustainable land use and development in the City of Sacramento and the development of health care facilities that embody sound environmental principles. Poorly planned and environmentally detrimental

[1] City of Sacramento, Draft Environmental Impact Report for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project, July 2005.

[2] Public Resources Code §§ 21000 et seq.

projects may jeopardize future jobs by inspiring a backlash against necessary and appropriate expansion of health care facilities that may employ SEIU-UHW's members. Additionally, SEIU-UHW's members live in the communities that suffer the impacts of environmentally detrimental projects. Union members breathe the same polluted air, encounter the same traffic congestion, endure the same noise pollution, and suffer the same health impacts as other members of the nearby community. Furthermore, SEIU-UHW members are also patients and caregivers in the Sacramento community. SEIU-UHW wishes to ensure that expanded medical facilities are constructed in a manner that safeguards the health and safety of patients and employees.

Acting on these concerns of SEIU-UHW's members, SEIU-UHW undertook a review of the Draft EIR. This Comment Letter presents the results of our review. Supported by reports from environmental scientist Dr. Petra Pless on air quality and noise, professional engineer Daniel T. Smith, Jr. on traffic, and acoustical consultant Dr. James T. Nelson on noise, this Comment Letter establishes that the Draft EIR fails to meet CEQA requirements in three ways: (1) the project description is inadequate; (2) the Draft EIR does not adequately analyze the impacts that the Project will have on air quality, traffic, and noise; and (3) the Draft EIR fails to identify or analyze alternatives and mitigation measures that would avoid and/or mitigate the Project's significant impacts. Each of these failings is a violation of CEQA. Each of these failings is alone sufficient to bar the City's adoption of the Draft EIR and granting of the development and entitlement approvals sought by the applicant. As a result, SEIU-UHW asks that the City of Sacramento prepare a revised draft of the EIR that addresses the numerous deficiencies identified in this Comment Letter and the accompanying expert reports. The revised draft should be recirculated for public review in accordance with the mandates of CEQA. 8-2

PROJECT PROPOSAL

The SMCS Project consists of six components, (1) the Women's and Children's Center ("WCC"); (2) the Sutter Medical Foundation ("SMF") building, which includes the below-grade Energy Center and parking; (3) the Community Parking Structure, which includes first floor commercial and retail space; (4) 32 residential units with associated parking; (5) the Future Medical Office Building ("Future MOB"); and (6) associated utility, circulation, and other improvements to existing SMCS buildings. The Draft EIR also analyzes on a program level the Children's Theater of California, which will be located adjacent to the Community Parking Structure. The Trinity Cathedral Project, which is analyzed separately from the SMCS Project in the Draft EIR, includes demolition of the existing Trinity Cathedral and construction of a new, larger cathedral building and adjacent new multi-purpose space on the site. (Draft EIR pp. 2-1 and 2-57.) 8-3

LEGAL FRAMEWORK

CEQA generally requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR"). (Pub. Res. Code § 21100.) The EIR is the very *heart* of CEQA.[3] "The 'foremost principle' in interpreting CEQA is that the

[3] *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.

Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[4]

CEQA has two basic purposes, neither of which the Draft EIR satisfies. First, CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project.[5] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'"[6] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[7]

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.[8] The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced."[9] Public agencies must deny approval of a project with significant adverse effects when feasible alternatives and mitigation measures can substantially lessen such effects.[10] CEQA section 21002 requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts of a proposed project.[11] To effectuate this requirement, EIRs must set forth mitigation measures that decision makers can adopt at the findings stage of the process.[12] For each significant effect, the EIR must identify specific mitigation measures. Where several potential mitigation measures are available, each should be discussed separately and the reasons for choosing one over the other should be stated.[13] Mitigation measures should be capable of "avoiding the impact altogether," "minimizing impacts," "rectifying the impact," or "reducing the impact."[14] An EIR must respond to specific suggestions for mitigating a significant impact unless the suggested mitigation is

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[4] *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

[5] 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1).

[6] *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

[7] *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("Berkeley Jets"); County of Inyo v. Yorty (1973) 32 Cal.App.3d 795, 810.

[8] CEQA Guidelines § 15002(a)(2) and (3). *See also, Berkeley Jets, supra*, 91 Cal. App. 4th, at p. 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal.3d 376, 400.

[9] CEQA Guidelines § 15002(a)(2)

[10] *Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.

[11] *See also*, Pub.Res.Code § 21081(a); CEQA Guidelines § 15370.

[12] CEQA Guidelines § 15126(c).

[13] CEQA Guidelines § 15126(c).

[14] CEQA Guidelines § 15370.

"facially infeasible."[15] The response need not be exhaustive, but it should evince good faith and a reasoned analysis.[16]

Decision-makers must fulfill the state's policy that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects."[17] Each public agency is required to "mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so."[18]

The remainder of this Comment Letter provides an analysis of the Draft EIR's failure to meet these basic requirements of CEQA for the SMCS Project and its failure to propose adequate mitigation. The Draft EIR should be revised to address these issues and recirculated for public review. 8-4

I. THE PROJECT DESCRIPTION IS INADEQUATE UNDER CEQA

An accurate and complete project description is the foundation of an EIR and is necessary for an intelligent evaluation of the potential environmental impacts of a project. As explained in the discussion following Section 15124 of the CEQA Guidelines,[19] an EIR must describe the proposed project "in a way that will be meaningful to the public, to the other reviewing agencies, and to the decision-makers." The state court of appeal has declared that "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally adequate EIR."[20] In contrast, "[a] curtailed, enigmatic or unstable project description draws a red herring across the path of public input." The court further concluded that "[o]nly through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental costs, consider mitigation measures, assess the advantage of terminating the proposal (*i.e.*, the 'no project' alternative) and weigh other alternatives in the balance."[21] As the leading treatise on California environmental law has noted: 8-5

> The adequacy of an EIR's project description is closely linked to the adequacy of the EIR's analysis of the project's environmental effects. If the description is inadequate because it fails to discuss the complete project, the environmental analysis will probably reflect the same mistake.[22]

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[15] *Los Angeles Unified School Dist. V. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1029 (" Under the CEQA statute and guidelines a mitigation measure is 'feasible' if it is 'capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (citations).")

[16] *Ibid.*

[17] Pub. Res. Code § 21002.

[18] Pub. Res. Code § 21002.1(b)

[19] California Code of Regulations, Title 14, Secs. 15000 *et seq.* ("CEQA Guidelines").

[20] *County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 192.

[21] *Id.*, at 197–98; *see also*, CEQA § 15124; *City of Santee v. County of San Diego* (1989) 263 Cal. Rptr. 340.

[22] Kostka and Zischke, "Practice Under the California Environmental Quality Act," p. 474 (8/99 update).

Here, the Draft EIR fails to provide an adequate and complete project description, and therefore fails to meet the requirements of CEQA. The following comments address some of these shortcomings. 8-5 (con't.)

A. The Project's Construction Schedule, Equipment, And Workforce Are Not Adequately Described

The Draft EIR fails to include any description of the construction equipment and workforce needed during the various stages of Project construction. (Draft EIR, pp. 2-53/54.) According to Dr. Pless, "Without knowledge of the number and type of construction equipment (including horsepower, loading factor, hours of operation per day, etc.) and the number of construction workers employed during each of these stages, it is impossible to accurately determine emissions of fugitive dust and criteria pollutant emissions from construction equipment and vehicle exhaust." (Comments on Air Quality and Noise by Petra Pless, D.Env. ("Pless Report"), attached hereto as Appendix A, Comment II.B.) Similarly, the Draft EIR only contains a list of construction equipment and typical noise levels but no itemization of the type and size of each piece of equipment that will be present at different times during the construction of the Project. (See Draft EIR, p. 6.6-21; Table 6.6-7.) This makes computation of sound levels around the construction site impossible. (Pless Report, Comment V.1.) 8-6

B. The Description of the Future Energy Center Is Not Adequate

The SMCS Project will involve the demolition of the existing Energy Center and its replacement by a larger, below-grade Energy Center at a different location within the Project area. Despite the fact that the Energy Center is the fuel-burning powerhouse for the entire SMCS complex, the Draft EIR's description of the new 24,644-sqft replacement Energy Center is extremely limited. The Draft EIR states that the new below-grade Energy Center "would be located beneath the SMF building adjacent to the below grade parking" and "provide power and house emergency generators, chillers, boilers, pumps, and associated building systems components for the medical complex. Air intakes for combustion air and exhaust stacks from the boilers and generators would be located along the west side of the Energy Center and would extend above grade." Further, the Draft EIR describes the general location of the new oxygen tank and the new below-grade fuel tanks, an 11,000 gallon tank and a 3,000 gallon reserve tank. The five evaporative cooling towers for the Energy Center are described to be about 27 feet tall and located on top of the SMF building, 86 feet above street level. (Draft EIR, pp. 2-15, 2-25, and 6.2-21). Elsewhere, the Draft EIR indicates that the "horsepower and capacity of some of the equipment may be increased to account for the larger size of the expanded SMCS facilities." (Draft EIR, p. 6.2-21.) 8-7

This description is far too sketchy to support proper CEQA review. As Dr. Pless explains:

> "This limited description is entirely inadequate to determine the environmental impacts from either construction or operation of the proposed Energy Center, and by extension, those of the SMCS Project. A complete and accurate project description must include the nominal capacity of the existing and proposed Energy Centers; the number, type, and throughput rating for the boilers; the number and capacity for the diesel-fueled backup generators; the type and efficiency of pollution

> control equipment; the TDS content of the cooling water; the drift rate of the cooling towers; and so forth. Without knowledge of these specific characteristics, it is impossible to accurately determine emissions, and, consequently, to determine the adequacy of any proposed mitigation measures. In fact, it appears that *emissions from the Energy Center were not included in the operational emissions estimates for the Project at all.*" (Pless Report, Comment II.B.) (Emphasis added.)

8-7 (con't.)

The Draft EIR should be revised to provide a full description of the Energy Center which is a central component of the Project and, without doubt, will be, in the operational phase of the Project, a major source of the environmental impacts that require disclosure, analysis, and mitigation.

II. THE ENVIRONMENTAL IMPACTS OF THE PROJECT ARE NOT ADEQUATELY DISCLOSED.

In addition to providing an accurate project description, an EIR must disclose all potentially significant adverse environmental impacts of a project.[23] CEQA requires that an EIR not only identify the impacts, but also provide "information about how adverse the impacts will be."[24] The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding.[25] In the absence of adequate disclosure, the public agency cannot fulfill its obligations under CEQA. "[T]he ultimate decision of whether to approve a project, be that decision right or wrong, is a nullity if based upon an EIR that does not provide the decision-makers and the public with the information about the project that is required by CEQA."[26].

Here, the disclosures regarding environmental impacts are wholly inadequate.

A. The Draft EIR Provides an Inadequate Analysis of the Key Air Pollutants That Will Be Generated by the Project.

The Project, like most projects, has several distinct phases, namely, demolition, grading, construction, and operation. Each of these phases involves a number of separate components, such as the demolition of a building, the construction of a parking garage, or the operation of a medical facility. Table 1, which also appears as Table 1 in Dr. Pless's report, presents Dr. Pless's analysis of how the Draft EIR characterizes the impact of each component of each phase of the Project on each of several key categories of air pollutants. Shockingly, most of the squares in the grid are empty, meaning that the Draft EIR fails to analyze them at all.

8-8

As Table 1 illustrates and as is discussed in detail in Dr. Pless's report, the Draft EIR fails to analyze all impacts associated with Project construction or operation (*see* Pless Report,

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[23] Pub. Res. Code § 21100(b)(1). CEQA Guidelines section 15126(a); *Berkeley Jets*, 91 Cal. App. 4th 1344, 1354.

[24] *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831.

[25] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.

[26] *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 829.

Comment III.B), improperly piecemeals the air quality impact analysis (*see* Pless Report, Comment III.C), underestimates the magnitude of impacts (*see* Pless Report, Comments III.D and III.E), and provides an inadequate cumulative impacts analysis (*see* Pless Report, Comment III.F). As a result, the Draft EIR fails to satisfy the requirements of CEQA to disclose all potentially significant adverse environmental impacts of the Project.

These gaps in the Draft EIR's analysis are not harmless errors. A few examples will illustrate the seriousness of the omissions.

Table 1: Construction emissions analyzed in the Draft EIR and findings of significance before/after mitigation[1]

Phase	Pollutant					
Component	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Demolition						
Old Tavern Parking Structure						
RAS Medical Office						
Energy Center						
Buhler Building Surface Parking Lot						
MTI Office Buildings						
House of Furs						
Third Party Medical Office Building						
Surface Parking Area						
St. Luke's Medical Office Building					SS/LS	
St. Luke's Parking Structure						
Grading					SS/LS	
Construction						
WCC		SS/SU[2]				
SMF Building		SS/SU[2]				
Residential Units		SS/SU[2]				
Future MOB		SS/SU[2]				
Community Parking Structure and Commercial/Retail						
Operation						
WCC	S/SU[3]	S/SU[3]				
SMF Building	S/SU[3]	S/SU[3]				
Residential Units	S/SU[3]	S/SU[3]				
Future MOB	S/SU[3]	S/SU[3]				
Community Parking Structure and Commercial/Retail	S/SU[3]	S/SU[3]				
Energy Center						
Project-related traffic			LS/LS			

[1] SS = short-term significant; LS = less than significant; SU = significant unavoidable; S = significant; LS = less than significant

[2] Significant short-term unmitigated impact and significant unavoidable mitigated impact for combined NOx emissions from WCC, SMF Building, Residential Units, and Future MOB.

[2] Significant unmitigated impact and significant unavoidable mitigated impact for combined ROG and NOx emissions from WCC, SMF Building, Residential Units, Future MOB, and Community Parking Structure.

8-8 (cont.)

Particulate Matter

The Draft EIR fails to provide critical information regarding the Project's emissions of particulate matter because the Draft EIR overlooks or misstates the State of California's published standards with respect to particulate matter, thus dooming the Draft EIR's analysis to inadequacy from the start.

As explained in Dr. Pless's report, particulate matter is emitted from two sources, engine exhaust and fugitive dust. (See Pless Report, Comment I) The health impacts of particulate matter depend on its size, and the size depends on its source. Combustion sources, such as vehicle exhaust, predominantly emit particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers ("PM2.5"), while fugitive dust consists predominantly of particulate matter less than 10 micrometers ("PM10").

Historically, health impacts due to particulate matter were regulated through ambient air quality standards for PM10. However, a substantial amount of important new research has been published, documenting new health impacts at much lower concentrations and for different size fractions of particulate matter than was previously known and reflected in ambient air quality standards. (Pless Report, Comment I.)

As summarized in the Pless Report, this new research documents that the inhalation of particulate matter, particularly the smallest particles, causes a variety of health effects, including premature mortality, aggravation of respiratory (*e.g.*, cough, shortness of breath, wheezing, bronchitis, asthma attacks) and cardiovascular disease, declines in lung function, changes to lung tissues and structure, altered respiratory defense mechanisms, and cancer, among others. (Pless Report, Comment I.) Particulate matter is a non-threshold pollutant, which means that there is some possibility of an adverse health impact at any concentration.[27] This new information led the U.S. Environmental Protection Agency ("U.S. EPA") and the State of California to adopt new ambient air quality standards for PM2.5. These standards are *not* subsets of the old PM10 standards, but new standards for a separate pollutant with distinguishable impacts. 8-9

The Draft EIR's air quality section fails to disclose the existence of the State ambient air quality standard for PM2.5. The new annual PM2.5 standard of 12 $\mu g/m^3$ was adopted by the California Air Resources Board ("CARB") on June 20, 2002 and became effective on July 5, 2003, two years before the Draft EIR was published. At the same time, California lowered its annual PM10 standard from 30 $\mu g/m^2$ to 20 $\mu g/m^3$. (CARB 09/05[28].) The Draft EIR also fails to acknowledge this new, lower standard for PM10. (Draft EIR, p. 6.2-3, Table 6.2-1.) Consequently, the Draft EIR fails to accurately characterize the regulatory setting for the Project.

PM2.5 emissions are created by boilers, water heaters, cooling towers, vehicle exhaust, helicopter exhaust, and entrained road dust from increased traffic. The Draft EIR fails to estimate

[27] *See American Trucking v. EPA:* Unjustified Revival of the Nondelegation Doctrine, 23-SPG Environs Envtl. L & Pol'y J. 17, 26.

[28] California Air Resources Board, Review of the Ambient Air Quality Standards for Particulate Matter and Sulfates, http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm, accessed September 8, 2005.

PM2.5 emissions and fails to assess whether Project construction or operation would cause a violation of the State or federal ambient air quality standards for PM2.5. While the Sacramento region has not yet been classified for PM2.5 attainment status, review of PM2.5 monitoring data shows that PM2.5 background concentrations in the Project area are already high enough for emissions from Project construction or operation to potentially cause a violation of the State and federal ambient air quality standards for PM2.5. The Draft EIR failed to analyze whether the Project complies with these standards. In light of the undisputed potential adverse health effects that can result from PM2.5 emissions, the Draft EIR should have evaluated the potential impacts of PM2.5 but did not.[29]

8-9 (con't.)

Sulfur Dioxides

The Draft EIR fails *entirely* to address SO_2 emissions from Project construction and operation or to discuss the resulting air quality impacts. (See Pless Report, Comment III.B.2.) SO_2 causes a wide variety of health and environmental impacts because of the way it reacts with other substances in the air. SO_2 irritates the respiratory system of animals and humans and injures many plant species as well. SO_2 reacts with other chemicals in the air to form tiny sulfare particles. When these are breathed, they gather in the lungs and are associated with increased respiratory symptom and disease. Particularly sensitive groups include people with asthma who are active outdoors and children, the elderly, and people with heart or lung disease. Haze produced by sulfate particles is a major cause of reduced visibility. SO_2 combines with other compounds to produce acid rain which damages plants and buildings downwind. The Draft EIR simply ignores the SO_2 emissions despite the prominence of SO_2 among pollutants targeted by every agency that deals with air quality.

8-10

Reactive Organic Gases (ROGs)

The Draft EIR's construction impact analysis fails to discuss emissions of reactive organic gases ROGs from Project construction. It is inconceivable that the Project will produce no ROGs. (*See* Pless Report, Comment III.B.3.) ROGs will be emitted with combustion exhaust from construction equipment, haul trucks, and construction worker vehicles. (*Id.*) ROGs are also released in large quantities from architectural coatings. (*Id.*)

ROGs, also known as volatile organic compounds (VOCs), can cause cancer, birth defects, nerve damage and kidney and heart disease. ROGs also pose a danger as ozone precursors. Ozone, the principal element of smog, is a secondary pollutant produced when two precursor air pollutants — ROGs and nitrogen oxides ("NOx") — react in sunlight.[30] ROGs and NOx are emitted by a variety of sources, including cars, trucks, industrial facilities, petroleum-based solvents, and diesel engines.

8-11

[29] *See In the Matter of Uprose v. Power Authority of State of New York*, 2001 NY App. Div. (Sup. Ct. of NY, A.D., 2nd Dept. July 23, 2001).

[30] *American Petroleum Institute v. Costle*, 665 F.2d 1176, 1181 (D.C. Cir. 1981).

The human health and associated societal costs from ozone pollution are extreme. In proposing a new rulemaking limiting emissions of NOx from certain diesel engines, EPA summarized the effects of ozone on public health:

> "A large body of evidence shows that ozone can cause harmful respiratory effects, including chest pain, coughing and shortness of breath, which affect people with compromised respiratory systems most severely. When inhaled, ozone can cause acute respiratory problems; aggravate asthma; cause significant temporary decreases in lung function of 15 to over 20 percent in some healthy adults; cause inflammation of lung tissue, produce changes in lung tissue and structure; may increase hospital admissions and emergency room visits; and impair the body's immune system defenses, making people more susceptible to respiratory illnesses."[31]

Moreover, ozone is not an equal opportunity pollutant, striking hardest the most vulnerable segments of our population: children, the elderly, and people with respiratory ailments. (*Id.*) Children are at greater risk because their lung capacity is still developing, because they spend significantly more time outdoors than adults—especially in the summertime when ozone levels are the highest, and because they are generally engaged in relatively intense physical activity that causes them to breathe more ozone pollution. (*Id.*)

Ozone has severe impacts on millions of Americans with asthma. While it is as yet unclear whether smog actually causes asthma, there is no doubt that it exacerbates the condition.[32] Moreover, as EPA observes, the impacts of ozone on "asthmatics are of special concern particularly in light of the growing asthma problem in the United States and the increased rates of asthma-related mortality and hospitalizations, especially in children in general and black children in particular."[33] In fact:

8-11 (con't.)

> "[A]sthma is one of the most common and costly diseases in the United States. . . . Today, more than 5 percent of the US population has asthma [and] [o]n average *15 people died every day* from asthma in 1995. . .. In 1998, the cost of asthma to the U.S. economy was estimated to be $11.3 billion, with hospitalizations accounting for the largest single portion of the costs."[34]

The health and societal costs of asthma are wreaking havoc in California. There are currently 2.2 million Californians suffering from asthma.[35] In 1997 alone, nearly 56,413 residents, including 16,705 children, required hospitalization because their asthma attacks were so severe. Shockingly, asthma is now the leading cause of hospital admissions of young children in

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[31] 66 Fed. Reg. 5002, 5012 (Jan. 18, 2001).

[32] *See* 66 Fed. Reg. 5002, 5012 (Jan. 18, 2001) (EPA points to "strong and convincing evidence that exposure to ozone is associated with exacerbation of asthma-related symptoms").

[33] 62 Fed. Reg. at 38864.

[34] 66 Fed. Reg. at 5012.

[35] *California Department of Health Services*, California County Asthma Hospitalization Chart Book, August 1, 2000.

California.[36] Asthma hospitalizations reflect massive human suffering and also impose a huge financial drain on the state's health care system. The most recent data indicate that the statewide financial cost of these hospitalizations was nearly $350,000,000, with nearly a third of the bill paid by the State Medi-Cal program.[37]

8-11 (con't)

The Draft EIR does not provide any discussion or explanation whatsoever why its authors chose not to analyze emissions of ROGs despite their key role as ozone precursors.

Carbon Monoxide

The Draft EIR does not include a carbon monoxide (CO) emissions analysis for the construction phase of the Project. For the operational phase of the Project, the Draft EIR only analyzes emissions created by Project traffic. (Draft EIR, p. 6.2-24/25.) The Draft EIR fails to address, let alone provide an estimate for, any other sources of CO from Project operations. Such sources are certain to be present both in the construction and operational phases of the Project. CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. Although motor vehicles contribute about 56 percent of all CO emissions nationwide; other non-road engines and vehicles (such as construction equipment) contribute about 22 percent of all CO emissions nationwide. In order to comply with CEQA, the Draft EIR must be revised to disclose and analyze impact of CO emissions beyond those generated by traffic in operational phase of the Project.

8-12

Toxic Air Contaminants ("TACs") From Diesel-Fueled Equipment

The Draft EIR provides no estimate of the combustion emissions of toxic air contaminants ("TACs") from diesel-fueled equipment for both the construction and operational phases of the Project. These unanalyzed emissions are significant and require a health assessment. (See Pless Report, Comment III.B.5.) As explained in the Pless Report, the Draft EIR is faulty in concluding that TAC emissions from construction equipment are not significant because they would be only temporary and short-term. (See *id.*, Comment III.B.5.a.) The Pless Report also demonstrates the Draft EIR's error in concluding that stationary TAC sources will be minimal during the operational phase since there will be a multitude of diesel exhaust sources, including boilers and backup generators at the new Energy Center, and additional exhaust emissions from traffic generated by the Project. (See *id.*, Comment III.B.5.b.) The Draft EIR must be revised to provide full disclosure regarding the production of TACs and resultant impacts.

8-13

Other Emissions Omitted from the Draft EIR

The Draft EIR also failed to evaluate and include in its emissions analysis emissions from helicopter operations, motorists searching for parking places and idling within the seven-story parking structure, motorists searching for parking on the street, and internal traffic. (See Pless Report, Comment III.B.6.) Each of these omissions should be corrected in a revision of the Draft EIR.

8-14

[36] *Id.*, at 1.

[37] *Id.*, at 4.

The Heat Island Effect

The Project will reduce landscaped area and increase impervious surface area thus producing increased local ambient temperatures and accelerated formation of ozone. (Pless Report, Comment III.B.7.) Because the Lower Sacramento Valley is already not in compliance with existing federal and State ozone standards (*id.*), the Project would directly contribute to existing exceedances of these standards. Under CEQA, this is per se a significant impact.[38] This is a significant impact that was not discussed in the Draft EIR and is feasible to mitigate as discussed below in section IV. The Draft EIR must be revised to provide an adequate discussion of this effect. 8-15

B. The Traffic Impacts of the Project Are Not Adequately Disclosed or Analyzed.

1. The Draft EIR Underestimates Traffic Generation of the Hospital Component of the SMCS Project.

A key step in traffic analysis is estimating how many trips will be generated by a project on an hourly basis. Except when analyzing the "hospital" component of the SMCS Project, the Draft EIR relies on data from Trip Generation, 7th Edition, a recognized standard technical reference in the field. (See Report of Daniel T. Smith, Jr. ("Smith Report"), Appendix C, pp. 1-3.) In the case of the SMCS "hospital" component, the Draft EIR relies upon observations at the current SMCS hospital facility, which results in significantly lower estimates of traffic generation. (*Id.*, at p. 2.) Although it may be argued that rates based on the current facility capture some unique quality of the Sutter-managed hospital facilities, it is also possible, and perhaps probable, that the lower traffic generation rates may be based on other factors, for example, that the current facility is partially obsolescent and consequently underutilized. (*Id.*, at pp. 2-3.) Further frustrating the disclosure function of the EIR, the details of the data supporting the trip generation rates used in the Draft EIR are missing. This makes it impossible for the public to review and determine whether the observations conducted in preparation of the Draft EIR are flawed. (*Id.*, at p. 2.) Without further disclosures and in the absence of a coherent explanation for the unusually low rates of trip generation reportedly observed at the existing facility, it is unacceptable for the Draft EIR, evaluating the traffic-generating potential of a new state-of-the-art medical facility, to rely on trip generation rates lower than those generally assumed by transportation engineers. The Draft EIR should be revised to reflect industry standard reference rates of trip generation or thorough documentation of the observation methodology, data, and assumptions that support the use of lower alternative rates. 8-16

2. The Draft EIR's Traffic Analysis Fails to Consider the Consequences of Queuing at Intersections

As explained in the Smith Report, traffic queues or "stacking" occurs when lines of vehicles standing or moving at a crawl back up while waiting for the right of way at an intersection, upstream of bottleneck conditions, behind freeway ramp meters, and at other traffic flow 8-17

[38] *See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.

obstructions such as parking lot entry and exit control administration points. (*See* Smith Report, at pp. 3-4.) Although the Draft EIR does consider queuing in its evaluation of impacts on freeway mainlines, freeway ramp junctions, and at parking garage entry control points, it fails to assess the consequences of traffic queues at signalized intersections, event though such analysis could have been performed with minimal additional effort. (Smith Report, at p. 3.) Failure to analyze this phenomenon may lead to underestimation of the severity of traffic problems that will be generated by the Project. (*See* Smith Report, at p. 4.) Accordingly, the Draft EIR should be revised to include an analysis of queue impacts at signalized intersections. 8-17 (con't.)

3. The Draft EIR Improperly Analyzes the City's Plan to Convert One-Way to Two-Way Streets As an Event in the Distant Future

The Draft EIR indicates that the SMCS Project is expected to begin construction and be completed by 2010. The City is currently considering a plan to convert some one-way streets in the project area to two-way streets. (*See* Smith Report, at p. 4.) It is quite possible that the conversion will take place before the construction of the Project is done, yet the Draft EIR only analyses the SMCS Project in relation to the altered two-way streets network in the cumulative condition analysis 20 years from now. (*Id.*) In the professional opinion of transportation engineer Smith, "as a matter of fairness to the public and a matter of due diligence in a good faith effort to disclose impact, the consequences of the combined effects of the two-way streets plan and the SMCS project, which both could be completed by Year 2010, should be analyzed." (*Id.*) The Draft EIR, by contrast, misrepresents the combined effects of the SMCS Project and the two-way streets project as "a time-distant and hence improbable and unimportant scenario." (*Id.*) Misrepresentation of the probable impacts of a project is not merely a violation of principles of fairness and diligence; it violates the fundamental requirement of CEQA that the EIR provide "information about how adverse the impacts will be."[39] The Draft EIR must be revised to correct this flaw. 8-18

4. Some Traffic Estimates in the Draft EIR Are So Clearly Erroneous That the Reliability of the Traffic Analysis Is In Doubt

The Smith Report establishes that there are computational errors in the traffic model for a key intersection, 29th and J. (See Smith Report, at pp. 5-7.) The Draft EIR makes the "incomprehensible" assertion that traffic in one scenario will actually decrease as a result of the Project. (Smith Report, at p. 6.) Since there is no plausible explanation for this anomalous conclusion, it appears clear that a calculation error has corrupted the Draft EIR's traffic analysis. According to transportation engineer Smith, the projections for each intersection are linked to those of other nearby intersections so the problem may be more widespread than miscalculations regarding a single intersection. (*Id.*, at pp. 6-7.) If the error is not isolated to 29th and J, the Draft EIR should be revised to include a complete recomputation of the quantitative traffic analysis. 8-19

[39] *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831.

5. The Draft EIR Fails to Disclose the Project's Likely Failure to Meet the City's 35 Percent Alternative Transit Goal and the Probability that the Full Parking Supply Alternative Will Be Required

Based on the characteristics of the medical center workforce, the Smith Report projects that the SMCS Project is unlikely to meet the City's 35 percent alternative transit policy goal, even with a good faith effort to implement the Transportation System Management/Parking Demand Management ("TSM/PDM") plan described at length in the Draft EIR. (Smith Report, at pp. 7-8.) In particular, Smith points to highly-paid doctors' resistance to using mass transit and pooling and their need to work at more than one location in a day. (*Id.*) He also identifies the difficulty of getting evening and late-night shift workers, and those who rotate shifts periodically, to use transit or pooling. (*Id.*) In addition to a resistant traveling population, the TSM/PDM is not supported by infrastructure. The nearest station on the regional light rail system is fully six blocks away from the nearest medical facility on the Project campus. (*Id.*, at p. 7.) 8-20

Transportation engineer Smith concludes on a basis of these factors that failure of the TSM/PDM program to meet alternative transportation policy goals is probable and that, as a result, the proposed Community Parking Structure will need to be expanded by several levels to make up for the 562-stall parking shortfall that the Draft EIR discloses. (*Id.*.) A project description must include all relevant parts of a project, including reasonably foreseeable future expansion. Since a larger Community Parking Structure is the most likely outcome, the Draft EIR should be revised to disclose to the public that this expanded Community Parking Structure will likely be needed to meet the parking deficit caused by the Project. 8-21

C. The Noise Impacts of the Project Are Not Adequately Disclosed or Analyzed.

1. The Draft EIR Fails to Adequately Analyze Noise That Will Be Generated by Project Construction

The Draft EIR does not contain an adequate construction noise analysis. As explained in section I.A above, the foundation for such an analysis is not present here as there is no itemization of the equipment that will be expected to be present on site during particular time frames. According to the Pless Report, "An equipment schedule identifying the type and size of each piece of equipment that will be present by month on the Project site should be used to calculate sound levels around the construction site." (Pless Report, Comment V.1.)

The Pless Report also notes that the Draft EIR's construction noise assessment fails to include noise from demolition and erroneously suggests that such noise need not be considered simply because it is exempt from regulation by the Sacramento Municipal Code. (*Id.*) The Draft EIR provides no explanation why such an exemption would block enforcement of CEQA. The Draft EIR also omits analysis of backup bells, a frequent source of noise complaints at construction sites. (*Id.*) Finally, ignoring nightshift workers and hospital patients who may be sleeping during the day, the Draft EIR incorrectly concludes that vibration from construction will not be significant because it will not be conducted during recognized sleep hours. (*Id.*) Each of these construction noise impacts should be analyzed in a revision of the Draft EIR. 8-22

2. The Draft EIR Fails to Analyze Sleep Disturbance That Will Be Caused by Helicopter Noise

The Draft EIR concedes that the impact of helicopter noise will be significant. (Draft EIR, p. 6.6-29.) However, the Draft EIR does not adequately describe or analyze the impact of helicopter noise. (See Letter Comment of James T. Nelson ("Nelson Report'), Appendix E, pp. 1-3.) The Draft EIR provides no analysis of the degree that helicopter traffic will result in sleep disturbance to members of the community within the flight path of the helicopters. Without great additional expenditures, the authors of the Draft EIR could have developed an appropriate significance criterion for awakening and incorporated a disclosure of the likely sleep disturbance that will be caused by operation of the helipad. (*See* Nelson Report, at p. 3.) As will be shown in section III.B.3, this failure to analyze an impact that may be quite significant leads to a failure to discuss feasible mitigation. The Draft EIR should be revised to analyze the probable effects of helicopter noise on the sleep of SMCS's neighbors. 8-23

3. The Draft EIR Fails to Analyze Cooling Tower Noise

The Draft EIR states that several large 27-foot cooling towers will be located on the roof the SMF Building (Draft EIR, p. 2-25.) The noise from such cooling towers can be significant if not properly controlled, and the size of the towers will make them difficult to shield from the community. (Nelson Report, p. 3.) The Draft EIR does not adequately describe and analyze the noise impact of these towers. The Draft EIR should be revised to provide a full analysis of cooling tower noise. 8-24

D. The Draft EIR's Emissions Analysis Is Piecemealed

As discussed in section II.A and shown graphically in Table 1, the Draft EIR has taken a hodge-podge approach to emissions analysis. "Rather than analyzing the worst-case emissions for the construction phase and the operational phase for each pollutant, as is customary, the Draft EIR only analyzed emissions from select Project components and phases." (Pless Report, Comment III.C.) 8-25

This approach unlawfully piecemeals analysis of the impacts associated with this Project, and is not permitted under CEQA. The court of appeal has stated, "CEQA forbids "piecemeal" review of the significant environmental impacts of a project. This rule derives, in part, from section 21002.1, subdivision (d), which requires the lead agency to "consider[] the effects, both individual and collective, of all activities involved in [the] project."[40] Under the CEQA Guidelines, the term "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably indirect physical change in the environment."[41] The Draft EIR does not follow this guidance. 8-26

As the Pless Report points out, nowhere in the Draft EIR is there a requirement for demolition and grading to be conducted at different times, nor is there any mitigation measure requiring

[40] *Berkeley Keep Jets Over the Bay v. Port of Oakland*, 91 Cal. App. 4th 1344, 1355.

[41] CEQA Guidelines §15378(a).

staggering of demolition, grading, or construction. Yet, "the Draft EIR discusses emissions of fugitive dust PM10 from demolition of existing buildings (Impact 6.2-1) and fugitive dust PM10 during grading of construction sites (Impact 6.2-2) as if they would occur at different times." (Pless Report, Comment III.C.) This approach impermissibly fails to disclose the full potential impacts from Project construction. By making assumptions for the sake of calculation that minimize impacts without embodying those assumptions in mandates that will be imposed on the Project, the Draft EIR misleads the public with respect to foreseeable impacts of the Project. 8-26 (con't.)

Similarly, the Pless Report notes that the Draft EIR analyses ROG and NOx emissions from the operational phase of the Project only for five components, the WCC, the SMF Building, the residential units, the Community Parking Structure and Commercial Retail. The Draft EIR fails to analyze and include in its emissions estimate ROG and NOx emissions from Project-related traffic and declines to analyze any emissions resulting from operation of the Energy Center. (Pless Report, Comment III.C.) Segregating operational emissions in this fashion is piecemealing and not allowed under CEQA. All operational emissions must be analyzed and aggregated in order to determine and adequately mitigate the full impact of the Project. 8-27

E. The Project's Construction Emissions Are Significant and Unmitigated

As discussed in section II.A and shown graphically in Table 1, the Draft EIR provides limited emission estimates for a few pollutants and select Project components only. As shown in the Pless Report, these few emissions estimates are considerably underestimated and, thus, the Draft EIR fails to disclose the full impact of Project construction on air quality. (See Pless Report, Comment III.D.) 8-28

1. Construction PM10 Emissions Are Significant and Unmitigated

The Draft EIR's air quality analysis quantifies impacts from fugitive dust PM10 emissions only for the demolition of St. Luke's Medical Building. Dr. Pless was unable to review the City's emissions estimate for even this component because the relevant modeling runs were not included in the Draft EIR's appendix. (See Pless Report, Comment III.D.1) The Pless Report points out that the Draft EIR does not require the staggered demolition of the ten buildings and parking structures shown in the Project's construction schedule. (*Id.*) Therefore, several or all of these ten structures slated for demolition could be demolished simultaneously, resulting in considerably larger fugitive dust PM10 emissions than are disclosed in the Draft EIR. (*Id.*) Some areas could be also be graded or under construction at the same time as the demolition of St. Luke's Medical Building. The Draft EIR did not quantify fugitive dust emissions potentially associated with grading nor did it quantify fugitive dust emissions from construction of Project components. 8-29

Isolating the impact of a single component and dismissing it as less than significant is violates a key precept of CEQA, which is to look at the project as a whole. "The requirements of CEQA cannot be avoided by chopping up a proposed project into bite-sized pieces which, individually considered, might be found to have no significant effect on the environment."[42] The EIR's 8-30

[42] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 716 (citation omitted).

failure to estimate PM10 emissions for anything but the demolition of St. Luke's Medical Building leaves the true possibilities of maximum PM10 emissions unexplored. 8-30 (con't.)

Even so, and despite other serious methodological errors discussed in Comment III.D.1 of the Pless Report, the Draft EIR provides sufficient information to refute the Draft EIR's conclusion that with mitigation proposed in the Draft EIR the impacts from demolition and grading would be less than significant.

Specifically, because the Sacramento Valley Air Basin is in nonattainment of the federal and State PM10 standards (see Draft EIR, p. 6.2-6), the Draft EIR's 8-31

> "conclusion of insignificance after mitigation is inconsistent with another significance threshold proffered by the Draft EIR, the net increase of any criteria pollutant, for which the project region is in non-attainment under an applicable federal or State ambient air quality standard. (Draft EIR, p. 6.2-14.) The mitigated demolition PM10 emissions would certainly not be zero. Therefore, there will be a net increase, the emissions are significant, and all feasible mitigation must be required." (Pless Report, Comment III.D.1.)

2. Construction NOx Emissions Are Significant and Unmitigated

The Draft EIR claims to have analyzed NOx emissions from construction activities for the WCC, the SMF Building, the residential units, and the Future MOB with the URBEMIS 2002 emissions modeling program and presents the results in the description of Impact 6.2.3. (Draft EIR, p. 6.2-19.) The Draft EIR states that total maximum NOx emissions in spring of 2007 resulting from the concurrent construction of these four Project components would total 323.86 lb/day. However, as Dr. Pless points out, the results of the URBEMIS 2002 runs shown in Appendix F of the Draft EIR show that the correct total for three of the buildings is 670.02 lb/day and the correct total for all four buildings may be higher than 900 lb/day. (Pless Report, Comment III.D.2.) 8-32

> "Given that the Lower Sacramento Valley is designated a serious non-attainment area for ozone [see Draft EIR, p. 6.2-4], the Draft EIR should have made every effort to accurately estimate emissions of the ozone precursor NOx and require all feasible mitigation to mitigate the significant impacts resulting from Project construction." (*Id.*)

The Draft EIR imposes several mitigation measures and concludes that the impact will remain significant and unavoidable. Thus, all feasible mitigation should have been required but was not. The Draft EIR claims that "[m]itigation in addition to that listed below, and that would achieve substantially more NOx reduction is not available at this time." (Draft EIR, p. 6.2-20.) This is incorrect. As discussed in section III, additional feasible mitigation measures exist—measures required in other projects. 8-33

3. Construction ROG and CO Emissions Are Significant and Unmitigated

As discussed in section II.A, the Draft EIR's construction impact analysis failed to discuss ROG and CO emissions from Project construction. Review of the URBEMIS 2002 modeling files contained in Appendix F of the Draft EIR reveals substantial ROG and CO emissions—the estimated emissions from simultaneous construction of five Project components (without construction of the 7-story parking structure) would be almost 800 lb/day of ROG and about 880 lb/day of CO. (See Pless Report, Comment III.D.3.)

ROG emissions would be an order of magnitude higher than emissions significance thresholds set by other air districts and CO emissions would be almost twice the emissions significance threshold. (*Id.*). Yet the Draft EIR fails to even discuss ROG and CO emissions. Given that the Lower Sacramento Valley is designated a serious non-attainment area for ozone, the Draft EIR should have made every effort to estimate emissions of the ozone precursor ROG and impose all feasible mitigation. 8-34

The Draft EIR imposes several mitigation measures to mitigate NOx emissions, some of which also reduce ROG emissions. However, these mitigation measures will be insufficient to reduce ROG and CO emissions to less than significance. As discussed in section III, additional feasible mitigation exists and should be evaluated and required for the Project.

F. Project Operational Emissions Are Significant And Unmitigated

As demonstrated below, the emissions estimates presented in the Draft EIR are considerably underestimated and therefore the Draft EIR fails to disclose the full impact of Project operations on air quality.

1. Operational ROG and NOx Emissions Are Significant And Unmitigated

The only emissions analyzed for the operational phase, are ROG and NOx emissions from operation of the WCC, the SMF Building, the residential units, the Community Parking Structure and Commercial Retail. (Draft EIR, pp. 6.2-21 – 6.2-24.) The Draft EIR fails to analyze and include ROG and NOx emissions from Project-related traffic in its operational ROG and NOx emissions estimate. 8-35

Further, the Draft EIR declines to analyze any emissions resulting from operation of the Energy Center arguing that equipment at the new Energy Center would, for the most part, replace older equipment at the existing Energy Center, which would require a permit from the SMAQMD prior to operation and that "[c]onsequently, the newer equipment may actually be held to more stringent emission standards than existing equipment." (Draft EIR, p. 6.2-21.) This is erroneous for a number of reasons. First, the substantially larger size of the new medical facilities will likely require a considerably increased output of the new Energy Center compared to the old Energy Center (*see* Comment II.B.) Second, absent any determination of baseline emissions from the old Energy Center, it is impossible to determine whether emissions from the new 8-36

Energy Center will or will not constitute a net increase. And third, the Draft EIR improperly assumes that a permit would ensure that utility equipment, *e.g.*, boilers, would achieve the lowest achievable emission rate. Draft EIR, p. 6.2-21.) This is not necessarily true and depends on the magnitude of the emissions and the specific pollutant, *e.g.*, only for non-attainment pollutants. If the emissions do not exceed certain permitting thresholds, they will not be held to the lowest achievable emission rate. The EIR should be revised to include emission calculations for utility equipment and to identify regulations that would apply and control technology that would be required.

8-36 (con't.)

The Draft EIR imposes a number of mitigation measures designed to reduce ROG and NOx emissions but concludes operational emissions would remain significant after mitigation. An EIR can not conclude that emissions are significant and unavoidable without imposing all feasible mitigation. As discussed in Comment IV, a large number of additional feasible mitigation measures is available and should be required for the Project.

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2. Operational PM10 Emissions Are Significant And Unmitigated

The EIR does not analyze the increase in PM10 from project operation. There would be an increase, resulting in a significant impact according to the EIR's significance criteria. The EIR appears to dismiss PM10 emissions based on an unsupported claim that they are "not typically produced in high amounts by project operations." (Draft EIR, p. 6.2-21.) According to Dr. Pless, this is incorrect. (Pless Report, Comment III.D.2.) PM10 and PM2.5 emissions will be created by a number of sources including the boilers and cooling towers of the Energy Center, water heaters, diesel generators, auto exhaust, and entrained road dust from the increase in traffic. (*Id.*)

8-38

Further, as Dr. Pless points out, the Draft EIR alleges that the SMAQMD sets no standards for PM10 for the long-term operational phase of a project. This claim is incorrect and contradicted by the EIR itself, which elsewhere specifies the SMAQMD's operational threshold of 50 $\mu g/m^3$ for determining the significance of project emissions. (*Id.*; see Draft EIR, p. 6.2-14.)

G. The Draft EIR's Cumulative Impact Analysis Is Inadequate And Cumulative Impacts Are Significant And Unmitigated

An EIR must discuss a cumulative impact if a project's incremental effect combined with the effects of other projects is "cumulatively considerable."[43] This determination is based on an assessment of the project's incremental effects "viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[44] The purpose of cumulative impacts analysis is to avoid considering projects in a vacuum, because failure to consider cumulative harm may risk environmental disaster.[45]

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[43] 14 Cal. Code Regs. § 15130(a).

[44] 14 Cal. Code Regs. § 15065(c).

[45] *Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397, 408. (citing *Natural Resources Defense Council, Inc. v. Callaway* (2nd Cir. 1975) 524 F.2d 79.

The Pless Report finds the cumulative impact analyses for both the construction and operational phases of the Project to be "fatally flawed." (Pless Report, Comment III.F.) Dr. Pless explains some of the flaws in the cumulative impact analyses as follows:

> "The construction analysis concludes, for example, that mitigated PM10 emissions would be small enough that they would not be cumulatively significant. (Draft EIR, p. 6.2-28.) It similarly concludes that construction TAC emissions are short-term and declines to analyze them. (Draft EIR, p. 6.2-29.) This defeats the purpose of a cumulative impact analysis, whose purpose is to aggregate all emissions from all past, present, and future projects with the project itself. If the total of all emissions exceeds any significance thresholds, 100 percent of a project's emissions must be mitigated or all feasible mitigation must required. The construction emissions from all of the projects covered by the Draft EIR, *i.e.* the SMCS Project, the Trinity Cathedral Project, and the Children's Theater, are cumulatively significant, requiring all feasible mitigation, as discussed in Comment IV. 8-40
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> "The operational cumulative analysis, on the other hand, relies on a change in land use to classify an impact as cumulatively significant. (Draft EIR, p. 6.2-30.) This is inconsistent with case law, which requires that impacts from all past, present, and future projects be evaluated together. A change in land use does not capture the impacts of increases in emissions from past, present, and future projects. This significance threshold was used by the Draft EIR to conclude that air quality impacts from the Theater were not cumulatively significant when they likely are." (*Id.*) 8-41

III. THE DRAFT EIR FAILS TO REQUIRE FEASIBLE MITIGATION WHERE CEQA REQUIRES IT

CEQA section 21002 requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts of a proposed project.[46] To implement this requirement, an EIR must set forth mitigation measures that decision-makers can adopt at the findings stage of the process.[47] For each significant effect, the EIR must identify specific mitigation measures. Where several potential mitigation measures are available, each should be discussed separately and the reasons for choosing one over the other should be stated.[48] Mitigation measures should be capable of "avoiding the impact altogether," "minimizing impacts," "rectifying the impact," or "reducing the impact."[49]

By the Draft EIR's own admission and as shown in this Comment Letter and the accompanying reports, "significant unavoidable impacts" from construction and operation of the Project remain after implementation of the Draft EIR's proposed mitigation measures. Therefore, in order to comply with CEQA, the City must impose all feasible mitigation measures to mitigate these

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[46] *See also,* Pub. Res. Code §21081(a); CEQA Guidelines § 15370.

[47] CEQA Guidelines § 15126(c).

[48] CEQA Guidelines § 15126(c).

[49] CEQA Guidelines § 15370.

significant impacts, which the City has not done. The comments below discuss the specific inadequacies of the Draft EIR's proposed mitigation and propose mitigation measures that should be implemented to lessen or eliminate the significant adverse effects of Project construction and operation.

A. Additional Construction Mitigation Is Feasible and Should Be Required

1. Additional Fugitive Dust Mitigation Should Be Required

The Pless Report provides an extensive list of examples of fugitive dust mitigation measures that were not considered in the Draft EIR, appear to be feasible, and ought to be required under CEQA Guidelines sections 15126.4 and 15091.[50] (See Pless Report, Comment IV.A.1.) These measures include:

- Prewet surface soils where equipment will be operated; maintain live perennial vegetation and desert pavement; stabilize surface soil with dust palliative; and use water or dust palliative to form a crust on soil immediately following clearing/grubbing;
- Grade each phase separately as needed, or grade entire project at one time, but apply chemical stabilizer or ground cover to areas where construction will be delayed;
- Construct a paved (or dust palliative treated) apron onto the project site prior to grading, earth moving, or site preparation;
- Prewater during cut and fill activities;
- Control dust during backfilling by watering backfill material, applying dust palliatives, and other measures;
- Protect disturbed land by fencing, ditches, vegetation, berms, or other barriers; by installing wind barriers; by planting perimeter vegetation; and by stabilizing with dust palliative, vegetation, pavement, or surface rock;
- Establish barriers adjacent to roadways to keep windblown material for leaving construction sites.

8-42

2. Additional Diesel Exhaust Mitigation Should Be Required

The Draft EIR finds significant unavoidable impacts for ROGs and NOx. Under CEQA, these must be mitigated with all feasible mitigation measures. The Pless Report provides an extensive list of examples of diesel exhaust mitigation measures that were not considered in the Draft EIR,

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[50] This list and others in this Comment Letter do not include the extensive annotations that Dr. Pless provides for many of the measures proposed in this Comment Letter. Those annotations establish that the vast majority of the suggestions listed in section III of this Comment Letter have been required by other agencies as conditions for approval of projects with environmental impacts similar to those of the SCMS Project.

appear to be feasible, and ought to be required under CEQA Guidelines sections 15126.4 and 15091. (See Pless Report, Comment IV.A.2.) These measures include:

- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use;
- Convert to cleaner engines;
- Use leaner (reduced sulfur) fuel;
- Add on control devices, *e.g.*, particulate traps, catalytic oxidizers;
- Set up a buffer zone between facility and sensitive receptors;
- Install high-pressure injectors on diesel construction equipment;
- Restrict engine size of construction equipment to the minimum practical size;
- Electrify construction equipment;
- Substitute gasoline-powered for diesel-powered construction equipment;
- Use alternatively fueled construction equipment, using, *e.g.*, compressed natural gas, liquefied natural gas, propane, or biodiesel;
- Implement activity management techniques including a) development of a comprehensive construction management plan designed to minimize the number of large construction equipment operating during any given time period; b) scheduling of construction truck trips during non-peak hours to reduce peak hour emissions; c) limitation of the length of construction work-day period; and d) phasing of construction activities;
- Install catalytic converters on gasoline-powered equipment, if feasible;
- Minimize construction worker trips by requiring carpooling and by providing for lunch onsite;
- Lengthen construction period during smog season (May through October), so as to minimize the number of vehicles and equipment operating at the same time;
- Utilize new technologies to control ozone precursor emissions as they become available and feasible;
- Use electricity from power poles rather than temporary diesel power generators; and
- Emission offsets if ROG or NOx emissions exceed 6.0 tons/quarter.

8-43 (con't.)

3. Use of CARB-certified Construction Equipment, Post-Combustion Controls, and Ultra-low Sulfur or PuriNOx™ Diesel Fuel Should Be Required

The Pless Report establishes that it would be feasible to minimize diesel exhaust emissions generated by this Project by requiring the use of CARB-certified low-emission construction equipment, post-combustion controls such as oxidation catalysts and particulate filters, and the use of ultra-low sulfur or PuriNOx™ diesel fuel. (See Pless Report, Comments IV.A.1.a-IV.A.1.d.) Each of these measures involves proven technology and has been required to mitigate construction emissions by other agencies engaged in CEQA review. (*Id.*) 8-44

4. Additional Construction Noise Mitigation Should Be Required

The construction noise analysis concludes that construction noise will remain significant and unavoidable after mitigation. Sensitive receptors live immediately across the street from Project construction. (Draft EIR, p. 6.6-23.) However, the Draft EIR does not require all feasible mitigation. Other feasible mitigation measures exist and should be required to mitigate the significant noise impacts from Project construction. For example, the following mitigation measures could be implemented to further reduce noise impacts: (1) notify affected parties of the proposed construction schedule and provide assistance with relocation if an affected party requests it; (2) establish a noise hotline that is continuously manned with someone with authority to seek out and solve the noise problem and shutdown the project if warranted; (3) install sound walls and barriers; (4) require the use of equipment that meets noise levels of 85 dB at a distance of 50 feet; and (5) the use of alternative backup bells. 8-45

B. Additional Operational Mitigation Is Feasible and Should Be Required

1. Additional Operational Traffic Mitigation Measures Should Be Required

According to the Pless Report, the following traffic mitigation measures have been routinely required to mitigate significant impacts from other projects and should be required here to mitigate the Project's significant NOx, ROG, and PM10 impacts:

- Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.;
- Provide on-site child care or contribute to off-site child care within walking distance; 8-46
- Provide secure, weather-protected bicycle parking for employees;
- Provide direct safe, direct bicycle access to adjacent bicycle routes;
- Provide showers and lockers for employees bicycling or walking to work;
- Provide short-term bicycle parking for retail customers and other non-commute trips;

- Provide neighborhood-servicing shops and services within ½ mile of residential areas;
- Connect bicycle lanes/paths to city-wide network;
- Design and locate buildings to facilitate transit access, *e.g.*, locate building entrances near transit stops, eliminate building setbacks, etc.;
- Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.;
- Provide shuttle service to food service establishments/commercial areas;
- Provide shuttle service to transit stations/multimodal centers;
- Implement parking fee for single-occupancy vehicle commuters;
- Implement parking cash-out program for non-driving employees;
- Provide direct, safe, attractive pedestrian access from project to transit stops and adjacent development;
- Implement compressed work week schedule;
- Implement home-based telecommuting program;
- Provide electric vehicle ("EV") and compressed natural gas ("CNG") vehicles in vehicle fleets;
- Install EV charging facilities;
- Install CNG fueling facility;
- Provide preferential parking locations for EVs and CNG vehicles; and
- Charge reduced or no parking fee for EVs and CNG vehicles.

8-46 (con't.)

The Pless Report clearly documents that many of these mitigation measures have been required for projects in California and elsewhere. (Pless Report, Comment VI.B.1.) These measures should be assumed feasible in the absence of a reasoned analysis demonstrating otherwise, and used by this Project to reduce traffic emissions to a less than significant level.

2. Additional Operational Area Mitigation Measures Should Be Required

In addition to the mitigation measures proposed by the Draft EIR, operational area emissions can also be mitigated by controlling other sources of emissions from the Project, including exhaust emissions from landscaping equipment, emissions from natural gas combustion for heating/air-

8-47

conditioning, increased ozone production from the heat island effect, and indirect emissions from electricity generation. (see Pless Report, Comment IV.B.2) In addition, the CEQA Guidelines of other air districts identify numerous other feasible measures for commercial/industrial operations. Some of these additional measures, which are routinely required as mitigation in other EIRs include:

- Use electric lawn and garden equipment for landscaping;
- Use electrically or CNG-powered specialty equipment, *e.g.*, utility carts;
- Use propane-powered specialty equipment, *e.g.*, forklifts, utility carts, etc.;
- Increase walls and attic insulation beyond Title 24 requirements;
- Orient buildings to maximize standard heating and cooling and include passive solar design, *e.g.*, day-lighting;
- Plant shade trees in parking lots to reduce evaporative emissions from parked vehicles;
- Plant shade trees along southern exposures of buildings to reduce summer cooling needs;
- Use energy-efficient and automated controls for air conditioning;
- Use lighting controls and energy-efficient interior lighting and built-in energy-efficient appliances;
- Use double-paned windows;
- Use energy-efficient low sodium parking lot and street lights;
- Use light-colored roof materials and paint to reflect heat;
- Install solar cooling/heating;
- Install solar water heater for at least 25% of the building floor area;
- Substitute materials, *e.g.*, use water-based paint;
- Modify manufacturing processes, *e.g.*, reduce process stages, closed loop-systems, materials recycling;
- Install resource recovery systems that redirect chemicals to new production processes;
- Use solar or low-emission water heaters;
- Use centralized water-heating systems;

8-47
(con't.)

- Use concrete or other non-pollutant materials for parking lots instead of asphalt;
- Pay an air quality mitigation fee;
- Secure emission offsets;
- Landscape with drought-resistant species, and use groundcovers rather than pavement to reduce heat reflection;
- Provide electric maintenance equipment;
- Use ozone-destruction catalyst on air condition systems; and
- Reduce standard paving by 20%.

Further, some air districts recommend that large projects that cannot be fully mitigated with on-site measures should implement off-site mitigation measures, for example:

- Retrofit existing homes and businesses in the project area with approved energy conservation devices;
- Replace/repower school/transit bus with cleaner vehicles;
- Construct satellite work stations;
- Fund a program to buy and scrap older, high-emission vehicles;
- Contribute to an off-site TDM fund;
- Repair smog-check waived vehicles;
- Introduce electric lawn and garden equipment exchange program; and
- Retrofit/purchase clean heavy-duty trucks, construction equipment, diesel locomotives, and marine vessels.

These off-site measures may be appropriate if the Project's operational impacts cannot be reduced by on-site mitigation to a less than significant level. Dr. Pless concludes that "the traffic-related measures proposed by the Draft EIR to mitigate the Project's operational impacts are clearly inadequate to reduce its operational emissions to a less than significant level." (Pless Report, Comment IV.B.2.) There are many additional feasible measures that should be evaluated and required for this Project. The Draft EIR should be revised to include these additional measures and recirculated for public review.

8-47
(con't.)

3. Additional Helicopter Noise Abatement Measures Should Be Required

CEQA provides that it is the policy of the State of California to "[t]ake all action necessary to provide the people of this state with ... freedom from excessive noise.[51] The Draft EIR fails to meet this standard. The Draft EIR concedes that helicopter noise will be significant even after factoring in the one mitigation measure it requires, namely, that helicopters follow a flight path along the freeway, approach the medical center from one direction, and depart in the other direction.

Again, the Draft EIR simply fails to do its job of identifying , discussing, and requiring feasible mitigation measures to substantially lessen or avoid a significant impact.

The Nelson Report identifies several possible mitigation measures that are not required or even discussed by the Draft EIR (see Nelson Report, p. 3): 8-48

- Upgrade windows and doors with glazing rated for sound transmission loss;
- Use "piloting techniques" promulgated by the Helicopter Association International; and
- Prohibit non-emergency use of the helipad between 10 p.m. and 7 a.m.

The Pless report suggests that, at minimum, financial assistance should be provided to noise-proof homes and other structures within the 70 dB noise contour. (Pless Report, Comment V.3.)

The Helicopter Association International has developed an extensive "Fly Neighborly" program—a voluntary noise reduction program designed to be implemented worldwide by local helicopter operators, large and small. Further information about this program,[52] including the availability of a guide that identifies helicopter noise abatement procedures, is attached hereto as Appendix G. The Los Angeles International Aiport's Rules and Regulations require that all helicopter operators with contracts at LAX maintain Fly Neighborly programs.[53] The LAX helicopter noise abatement rules suggest additional mitigation requirements that would be appropriate mitigation of SMCS-related helicopter noise:

- Require helicopters to maintain an altitude of 2,000 feet, weather, traffic, and safety permitting; 8-49
- Require the use of noise abatement approach and departure flight techniques;
- Prohibit the use of the hospital heliport in any training exercises such as touch-and-go, stop-and-go, and low approach;

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[51] Pub. Res. Code § 21001(b).

[52] http://www.rotor.com/printfeature.php?artid=1 (last accessed 9/9/05)

[53] http://www.lawa.org/AirOps/pdf/WholeDoc.pdf , at p. 5-7(last accessed 9/9/05)

- Require an identification symbol that is readily visible from the ground on each of the rotorcraft used in regularly scheduled visits to SMCS; and

- Require operators to develop, implement, and file with SMCS a "Fly Neighborly Program" that emphasizes noise abatement and community compatibility through actions in at least the following areas:

    1. Pilot awareness;
    2. Pilot training and flight operations planning;
    3. Noise abatement techniques;
    4. Public information/helicopter identification;
    5. Approach and departure routes; and
    6. Hours of operations.

The Draft EIR should be revised to incorporate all feasible methods of reducing the significant impact of helicopter noise that is predicted in the current draft.

8-49 (con't.)

CONCLUSION

As this Comment Letter and the accompanying reports demonstrate, the Draft EIR does not provide the City's decision-makers with sufficient information to properly decide whether to approve the Project. Approval without adequate information compromises the environmental protection process envisioned by CEQA and risks court nullification. Where the public has not received adequate information about the likely effects of a project and numerous feasible mitigation measures have been overlooked, the better course is to require revisions to the Draft EIR.

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The Project will have numerous highly significant impacts that are not adequately disclosed, analyzed, or mitigated in the Draft EIR. Based on the severity of the Draft EIR's errors and omissions, a new draft EIR should be prepared to address the issues identified above and recirculated to allow for public review. Without these revisions, the Draft EIR is inadequate under CEQA and cannot be relied upon by the City of Sacramento for approval of the Project.

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Thank you for considering our comments.

Sincerely,

Theodore Franklin

TF/x: 110216/395861

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Comments

on

Air Quality and Noise

Draft Environmental Impact Report

SUTTER MEDICAL CENTER AND TRINITY CATHEDRAL PROJECT SACRAMENTO, CALIFORNIA

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September 6, 2005

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COMMENTS

The City of Sacramento ("City") as the Lead Agency under the California Environmental Quality Act ("CEQA") has prepared a joint Draft Environmental Impact Report[1] ("Draft EIR") for the Sutter Medical Center, Sacramento, Project ("SMCS Project" or "Project") and the Trinity Cathedral Project. The Trinity Cathedral Project is located within the area covered by the SMCS Project and both projects are being prepared concurrently by two separate project applicants, *i.e.* SMCS and Trinity Cathedral.

The SMCS Project consists of six components, (1) the Women's and Children's Center ("WCC"); (2) the Sutter Medical Foundation ("SMF") building, which includes the below-grade Energy Center and parking; (3) the Community Parking Structure, which includes first floor commercial and retail space; (4) 32 residential units with associated parking; (5) the Future Medical Office Building ("Future MOB"); and (6) associated utility, circulation, and other improvements to existing SMCS buildings. The Draft EIR also analyzes on a program level the Children's Theater of California, which will be located adjacent to the Community Parking Structure. The Trinity Cathedral Project, which is analyzed separately from the SMCS Project in the Draft EIR, includes demolition of the existing Trinity Cathedral and construction of a new, larger cathedral building and adjacent new multi-purpose space on the site. (Draft EIR pp. 2-1 and 2-57.)

This comment letter only discusses impacts on air quality and noise associated with the SMCS Project and discusses impacts related to the Trinity Cathedral Project and the Children's Theater only in the context of a cumulative impacts analysis for the SMCS Project.

Purpose of CEQA

CEQA has two basic purposes, neither of which the Draft EIR for the SMCS Project satisfies. A Draft EIR is first and foremost a public information document, which should "facilitate both public input and the decisionmaking process." (*Russian Hill Improvement Assoc. v. Board of Permit Appeals*, 44 Cal. App. 3d 158, 168 (1975).) CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. CEQA Guidelines §15002(a)(1).) A Draft EIR is the "heart" of this requirement. (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 84 [118 Cal. Rptr. 34].) The EIR has been described as

[1] City of Sacramento, Draft Environmental Impact Report for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project, July 2005.

"an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." (*County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810 [108 Cal. Rptr. 377].)

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. (CEQA Guidelines § 15002(a)(2) and (3). *See also Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 [276 Cal.Rptr. 410, 416]; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal.3d 376, 400 [253 Cal. Rptr. 426, 436]).) Public agencies must deny approval of a project with significant adverse effects when feasible alternatives and mitigation measures can substantially lessen such effects. (*Sierra Club v. Gilroy City Council*, 222 Cal.App.3d 30, 41 (1990).) CEQA section 21002 requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts of a proposed project. (*See also*, Pub.Res.Code §21081(a); CEQA Guidelines §15370.) To effectuate this requirement, EIRs must set forth mitigation measures that decision makers can adopt at the findings stage of the process. (CEQA Guidelines §15126(c).) For each significant effect, the EIR must identify specific mitigation measures. Where several potential mitigation measures are available, each should be discussed separately and the reasons for choosing one over the other should be stated. (CEQA Guidelines §15126(c).) Mitigation measures should be capable of "avoiding the impact altogether," "minimizing impacts," "rectifying the impact," or "reducing the impact." (CEQA Guidelines §15370.)

The comments below provide an analysis of the Draft EIR's failure to meet the above discussed requirements of CEQA for the SMCS Project and its failure to propose adequate mitigation. The Draft EIR should be revised to address these issues and be recirculated for public review.

AIR QUALITY

I. THE DRAFT EIR FAILS TO ACCURATELY CHARACTERIZE THE REGULATORY SETTING FOR THE PROJECT

Particulate matter is emitted from two sources, engine exhaust and fugitive dust. The health impacts of particulate matter depend on its size, and the size depends on its source. Combustion sources, such as vehicle exhaust, predominantly emit particulate matter with an aerodynamic diameter of less than or equal to

2.5 micrometers ("PM2.5"), while fugitive dust consists predominantly of particulate matter less than 10 micrometers ("PM10").

Historically, health impacts due to particulate matter were regulated through ambient air quality standards for PM10. However, a substantial amount of important new research has been published, documenting new health impacts at much lower concentrations and for different size fractions of particulate matter than was previously known and reflected in ambient air quality standards. (U.S. EPA 04/96;[2] U.S. EPA 03/01.[3])

This new research documents that the inhalation of particulate matter, particularly the smallest particles, causes a variety of health effects, including premature mortality, aggravation of respiratory (*e.g.*, cough, shortness of breath, wheezing, bronchitis, asthma attacks) and cardiovascular disease, declines in lung function, changes to lung tissues and structure, altered respiratory defense mechanisms, and cancer, among others. (U.S. EPA 04/96; 61 FR 65638.4) A recent article linked long-term exposure to combustion-related fine particulate air pollution to cardiopulmonary and lung cancer mortality.[5] Particulate matter is a non-threshold pollutant, which means that there is some possibility of an adverse health impact at any concentration. (*See American Trucking v. EPA:* Unjustified Revival of the Nondelegation Doctrine, 23-SPG Environs Envtl. L & Pol'y J. 17, 26.) This new information led the U.S. Environmental Protection Agency ("U.S. EPA") and the State of California to propose new ambient air quality standards for PM2.5. These standards are *not* subsets of the old PM10 standards, but new standards for a separate pollutant with distinguishable impacts.

The Draft EIR's air quality section fails to disclose the existence of the State ambient air quality standard for PM2.5[6]. The new annual PM2.5 standard of 12 $\mu g/m^3$ was adopted by the California Air Resources Board ("CARB") on June 20, 2002 and became effective on July 5, 2003, a year before the Draft EIR was published. (Voting on the proposed 24-hour-average PM2.5 standard of 25 $\mu g/m^3$

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[2] U.S. Environmental Protection Agency, Air Quality Criteria for Particulate Matter, Report EPA/600/P-95-001aF through 001cF, April 1996.

[3] U.S. Environmental Protection Agency, Air Quality Criteria for Particulate Matter, Second External Review Draft, March 2001.

[4] National Ambient Air Quality Standards for Particulate Matter: Proposed Decision, Federal Register, v. 61, no. 241, December 13, 1996, pp. 65638-65675.

[5] A.A. Pope *et al.*, Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution, Journal of the American Medical Association, v. 287, no. 9, pp. 1132-1141.

[6] Particulate matter with an aerodynamic diameter smaller or equal to 2.5 micrometers

has been deferred by CARB.[7]) At the same time, California lowered its annual PM10 standard from 30 $\mu g/m^2$ to 20 $\mu g/m^3$. (CARB 09/05[8].) The Draft EIR also failed to acknowledge this new, lower standard for PM10. (Draft EIR, p. 6.2-3, Table 6.2-1.) Consequently, the Draft EIR failed to accurately characterize the regulatory setting for the Project.

II. THE PROJECT DESCRIPTION IS INADEQUATE

An accurate and complete Project description is the heart of an EIR and is necessary for an intelligent evaluation of the potential environmental impacts of a project. As explained in the discussion following Section 15124 of the CEQA Guidelines,[9] an EIR must describe the proposed project "in a way that will be meaningful to the public, to the other reviewing agencies, and to the decision-makers... The state court of appeal declared that "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally adequate EIR." (*County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 192 [139 Cal. Rptr. 396, 401].) In contrast, "[a] curtailed, enigmatic or unstable project description draws a red herring across the path of public input." The court further concluded that "[o]nly through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental costs, consider mitigation measures, assess the advantage of terminating the proposal (*i.e.*, the "no project" alternative) and weigh other alternatives in the balance." (*Id.*, at 197–98; *see also*, CEQA §15124; *City of Santee v. County of San Diego*, 263 Cal. Rptr. 340 (1989).) As one analyst has noted:

> The adequacy of an EIR's project description is closely linked to the adequacy of the EIR's analysis of the project's environmental effects. If the description is inadequate because it fails to discuss the complete project, the environmental analysis will probably reflect the same mistake. (Kostka and Zischke, "Practice Under the California Environmental Quality Act," p. 474 (8/99 update).)

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[7] California Air Resources Board (CARB) and Office of Environmental Health Hazard Assessment (OEHHA), Draft Proposal to Establish a 24-hour Standard for PM2.5, Public Review Draft, March 12, 2002.

[8] California Air Resources Board, Review of the Ambient Air Quality Standards for Particulate Matter and Sulfates, http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm, accessed July 13, 2005.

[9] California Code of Regulations, Title 14, Secs. 15000 *et seq.* ("CEQA Guidelines").

Here, the Draft EIR fails to provide an adequate and complete project description, and therefore fails to meet the requirements of CEQA. The following comments address only a few of these shortcomings.

II.A The Project's Construction Schedule, Equipment, And Workforce Are Not Adequately Described

The Draft EIR fails to include any information for the construction equipment and workforce needed during the various stages of Project construction. (Draft EIR, pp. 2-53/54.) Without knowledge of the number and type of construction equipment (including horsepower, loading factor, hours of operation per day, etc.) and the number of construction workers employed during each of these stages, it is impossible to accurately determine emissions of fugitive dust and criteria pollutant emissions from construction equipment and vehicle exhaust.

II.B The Description Of The Future Energy Center Is Not Adequate

The SMCS Project would involve the demolition of the existing Energy Center and replacement with a larger, below-grade Energy Center at a different location within the Project area. The Draft EIR provides only the following sparse description for the existing 18,490-square foot ("sqft") 2-story plus basement Energy Center: "The existing Energy Center currently provides primary and secondary emergency systems, including all heating and cooling, to SGH [Sutter General Hospital], the Buhler Building, and the Radiation, Oncology Center ("ROC"). The Energy Center includes boilers, emergency generators, liquid oxygen, chillers, and electrical transformers for the buildings listed above." (Draft EIR, pp. 2-11 and 2-25.) The description of the new 24,644-sqft replacement Energy Center is equally limited. The Draft EIR states that the new below-grade Energy Center "would be located beneath the SMF building adjacent to the below grade parking..." and "provide power and house emergency generators, chillers, boilers, pumps, and associated building systems components for the medical complex. Air intakes for combustion air and exhaust stacks from the boilers and generators would be located along the west side of the Energy Center and would extend above grade." Further, the Draft EIR describes the general location of the new oxygen tank and the new below-grade fuel tanks, an 11,000 gallon tank and a 3,000 gallon reserve tank. The five evaporative cooling towers for the Energy Center are described to be about 27 feet tall and located on top of the SMF building, 86 feet above street level. (Draft EIR, pp. 2-15, 2-25, and 6.2-21). Elsewhere, the Draft EIR indicates that the "horsepower and capacity of some of the equipment may be increased to account for the larger size of the expanded SMCS facilities." (Draft EIR, p. 6.2-21.)

This limited description is entirely inadequate to determine the environmental impacts from either construction or operation of the proposed Energy Center, and by extension, those of the SMCS Project. A complete and accurate project description must include the nominal capacity of the existing and proposed Energy Centers; the number, type, and throughput rating for the boilers; the number and capacity for the diesel-fueled backup generators; the type and efficiency of pollution control equipment; the TDS content of the cooling water; the drift rate of the cooling towers; and so forth. Without knowledge of these specific characteristics, it is impossible to accurately determine emissions, and, consequently, to determine the adequacy of any proposed mitigation measures. In fact, it appears that emissions from the Energy Center were not included in the operational emissions estimates for the Project at all. (*See* Comment III.B.6.)

III. THE PROJECT'S ENVIRONMENTAL IMPACTS ARE NOT ADEQUATELY DISCLOSED

An EIR must disclose all potentially significant adverse environmental impacts of a project. (Pub. Res. Code §21100(b)(1); CEQA Guidelines section 15126(a); Pub. Res. Code §21000(a).) CEQA requires that an EIR must not only identify the impacts, but must also provide "information about how adverse the impacts will be." *Santiago County Water Dist. v. County of Orange*, 118 Cal. App. 3d 818, 831 (1981). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692 (1990).

Here, the Draft EIR is fatally flawed because it analyzes only a few pollutant emissions resulting from a select few construction components and operational Project components. Table 1 summarizes those emissions analyzed by the Draft EIR including its findings of significance before and after mitigation.

Table 1: Construction emissions analyzed in the Draft EIR and findings of significance before/after mitigation[1]

Phase	Pollutant					
Component	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Demolition						
Old Tavern Parking Structure						
RAS Medical Office						
Energy Center						
Buhler Building Surface Parking Lot						
MTI Office Buildings						
House of Furs						
Third Party Medical Office Building						
Surface Parking Area						
St. Luke's Medical Office Building					SS/LS	
St. Luke's Parking Structure						
Grading					SS/LS	
Construction						
WCC		SS/SU[2]				
SMF Building		SS/SU[2]				
Residential Units		SS/SU[2]				
Future MOB		SS/SU[2]				
Community Parking Structure and Commercial/Retail						
Operation						
WCC	S/SU[3]	S/SU[3]				
SMF Building	S/SU[3]	S/SU[3]				
Residential Units	S/SU[3]	S/SU[3]				
Future MOB	S/SU[3]	S/SU[3]				
Community Parking Structure and Commercial/Retail	S/SU[3]	S/SU[3]				
Energy Center						
Project-related traffic			LS/LS			

[1] SS = short-term significant; LS = less than significant; SU = significant unavoidable; S = significant; LS = less than significant

[2] Significant short-term unmitigated impact and significant unavoidable mitigated impact for combined NOx emissions from WCC, SMF Building, Residential Units, and Future MOB.

[2] Significant unmitigated impact and significant unavoidable mitigated impact for combined ROG and NOx emissions from WCC, SMF Building, Residential Units, Future MOB, and Community Parking Structure.

As Table 1 illustrates and as discussed in more detail in the comments below, the Draft EIR fails to analyze all impacts associated with Project construction or operation (*see* Comment III.B), improperly piecemeals the air quality impact analysis (*see* Comment III.C), and underestimates the magnitude of impacts (*see* Comments III.D and III.E), and provides an inadequate cumulative impacts analysis (*see* Comment III.F.) and, as a result, fails to satisfy the requirements of CEQA to disclose all potentially significant adverse environmental impacts of the Project.

III.A The Project's Staggered Construction Schedule Is Not Required As Mitigation

The Draft EIR contains a proposed construction schedule for the Project beginning in early 2006; Project completion is expected by late 2010. This construction schedule assumes a staggered phasing of the various project construction phases, *i.e.* demolition, grading, and construction of buildings. (Draft EIR, pp. 2-53/54, Table 2.-8.) However, the EIR does not require this staggered staging as mitigation. Therefore, some or all of the Project components could be demolished, graded, and/or under construction simultaneously, resulting in much larger impacts than disclosed in the Draft EIR's construction air quality analysis, which relies on this staggered staging. (*See* Comments III.A and III.D.)

III.B The Draft EIR Fails To Analyze All Pollutants And Fails To Analyze All Emissions Sources

Any project that causes a violation or contributes substantially to an existing violation of an ambient air quality standard results in a significant air quality impact. The Draft EIR failed to determine whether Project construction or operational emissions would cause violations or contribute to existing violations of several State or federal ambient air quality standards for a number of pollutants.

III.B.1 PM2.5 Emissions From Project Construction and Operation Are Not Analyzed

PM2.5 emissions are created by boilers, water heaters, cooling towers, vehicle exhaust, helicopter exhaust, and entrained road dust from increased traffic. The Draft EIR fails to estimate PM2.5 emissions and fails to assess whether Project construction or operation would cause a violation of the State or federal ambient air quality standards for PM2.5 While the Sacramento region has not yet been classified for PM2.5 attainment status, review of PM2.5 monitoring data shows that PM2.5 background concentrations in the Project area are already high enough for emissions from Project construction or operation to potentially cause a violation of the State and federal ambient air quality standards for PM2.5. The Draft EIR failed to analyze whether the Project complies with these standards. In light of the undisputed potential adverse health effects that can result from PM2.5 emissions (*see* also Comment I), the Draft EIR should have evaluated the potential impacts of PM2.5 but did not. (*See In the Matter of Uprose v. Power Authority of State of New York*, 2001 NY App. Div. (Sup. Ct. of NY, A.D., 2nd Dept. July 23, 2001).

III.B.2 SO_2 Emissions From Project Construction And Operation Are Not Analyzed

The Draft EIR fails entirely to address SO_2 emissions from Project construction and operation and to discuss the resulting air quality impacts.

III.B.3 ROG from Project Construction Are Not Analyzed

The Draft EIR's construction impact analysis fails to discuss emissions of ROG from Project construction. Both pollutants are emitted with combustion exhaust from construction equipment, haul trucks, and construction worker vehicles. ROGs, which are ozone precursors, are additionally released in large quantities from architectural coatings. The Draft EIR does not provide any discussion or explanation whatsoever why chose not to analyze emissions of this pollutant.

III.B.4 Operational CO Emissions Are Not Analyzed

The Draft EIR does not include a CO emissions analysis for the construction phase of the Project. For the operational phase of the Project, the Draft EIR only analyzes emissions created by Project traffic. (Draft EIR, p. 6.2-24/25.) The Draft EIR fails to address, let alone provide an estimate, for any other sources of CO from Project operations.

III.B.5 TAC Emissions From Project Construction And Operation Are Not Analyzed, Are Significant, And Require A Health Risk Assessment

The Draft EIR declines to estimate combustion emissions of toxic air contaminants ("TACs") from diesel-fueled equipment for both the construction and operational phases of the Project.

III.B.5.a Temporary Nature Of Construction TAC Emissions Does Not Render Impacts Insignificant

The Draft EIR improperly concludes that combustion emissions of toxic air contaminants from diesel-fueled construction equipment are not significant because they would be only temporary and short-term. (Draft EIR, pp. 6.2-26/27.) However, the duration of an impact is not a rational basis for concluding that it is not significant.

First, the mere fact that a significant impact is "temporary" does not render the impact insignificant. *For example,* in *Oro Fino Gold v. El Dorado,* 225 Cal. App. 3d

872, 882 (1990), noise impacts from percussion drilling were found to be significant even though they were to occur over a limited duration time period. Similarly in *No Slo Transit v. City of Long Beach*, 197 Cal.App.3d 241 (1987), construction impacts of a project were considered significant despite their limited duration nature. Thus, the fact that construction of the Project would occur over a limited time period, does not render its potentially significant adverse impacts on air quality less than significant.

Second, the Project will be built out in phases over four years, hardly a short-term duration.

And third, short-term construction emissions are very often significant because CARB and other agencies require a minimum exposure duration of 70 years for the calculation of increased cancer risks, regardless of the actual length of construction. (Draft EIR, p. 2-53.) Health impacts from diesel exhaust are commonly significant if properly analyzed and can be mitigated by using oxidized particulate traps on construction equipment. (*See* Comment IV.A.2.c.) The Draft EIR should have estimated emissions and performed a health risk assessment[10] to determine the increased health risks resulting from the emissions of diesel exhaust particulate matter from construction equipment during the four-year build-out period of the Project.

III.B.5.b Operational TAC Emissions Are Not Analyzed

The Draft EIR further states that "it is not known whether TAC would actually develop as part of the SMCS Project" and concludes that operational Project emissions are less than significant because "stationary TAC sources are expected to be minimal." (Draft EIR, p. 6.2-27.) This conclusion is not only erroneous it also is contradicted by the Draft EIR's own acknowledgement that particulate matter emitted with combustion diesel exhaust is a TAC. (Draft EIR, p. 6.2-26.) The Project

[10] Health risk assessments are typically based on a lifetime exposure of 70 years. The use of a shorter exposure duration than 70 years is inappropriate because the unit risk factor for diesel exhaust is based on a lifetime exposure of 70 years. Any subdivision below a lifetime risk is inconsistent with the assumptions used to develop the unit risk factor. Public agencies charged with protecting public health do not allow such risk dilution. For example, the CARB's risk management guidance for diesel-fueled engines recommends the use of an exposure duration of 70 years, regardless of the actual duration of a project. (California Air Resources Board, Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, October 2000, p. IV 2.) This policy has been adopted by air pollution control districts charged with implementing diesel exhaust risk reduction policies. This policy is also consistent with the regulations implementing Proposition 65, which require a lifetime exposure. (22 CCR §12707 *et. seq.*)

will have a multitude of diesel exhaust sources, not the least of which is the future Energy Center with its boilers and diesel-fueled backup generators. The Draft EIR's public health analyses further ignored the impact of exhaust emissions from traffic generated by the Project. These impacts were neither disclosed nor analyzed. (Draft EIR, p. 6.2-27.)

III.B.6 Emissions From Helicopter, Parking Structure, Inadequate Parking, Internal Trips, and the Future Energy Center Are Not Analyzed

The Draft EIR failed to evaluate and include in its emissions analysis emissions from a number of sources. First, the Draft EIR anticipates a total of about 200 helicopter trips per yea, *i.e.* about 15 to 20 trips per month. (Draft EIR, p. 2-20.) The helicopter is a part of the Project and, therefore, its emissions must be included in the Project emissions analysis. Second, the Draft EIR fails to evaluate the exhaust emissions from the 7-story parking structure, *e.g.*, from idling due to a net increase of 890 parking spaces. (Draft EIR, p. 2-29.) Third, the Draft EIR fails to estimate additional exhaust emissions created by motorists driving around in the neighborhood due to the inadequate parking provided by the Project. Fourth, it appears that the Draft EIR does not analyze the emissions from internal traffic trips. (For a discussion of internal traffic trips, *see* Draft EIR, p. 6.7-31.) And finally, as discussed in Comment III.B.6, the Draft EIR failed to include emissions from the Energy Center.

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III.B.7 Heat Island Effect Is Not Analyzed

The project would reduce landscaped area from 53,709 sqft to 37,491 sqft and increase impervious surface area from 296,171 sqft to 312,389 sqft. (Draft EIR, p. 6.85-28, Table 6.8-6.) This would increase local ambient temperatures, contributing to the urban heat island effect and increasing the formation of ozone. The Project would add several buildings, parking lots, roads, and roofs, thus increasing the amount of existing blacktop. This can reasonably be expected to increase local ambient temperature and hence local formation of ozone. The Lower Sacramento Valley is not in compliance with either federal or State ozone standards. Thus, the Project would directly contribute to existing exceedances of the federal and State ozone standards, which is a significant impact. *See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692 [270 Cal.Rptr. 650]. This is a significant impact that was not discussed in the Draft EIR and is feasible to mitigate as discussed in Comment IV.

III.C The Draft EIR's Emissions Analysis Is Piecemealed

Rather than analyzing the worst-case emissions for the construction phase and the operational phase for each pollutant, as is customary, the Draft EIR only analyzed emissions from select Project components and phases. This approach unlawfully piecemeals analysis of the impacts associated with this Project, and is not permitted under CEQA.

As the court has stated, "CEQA forbids "piecemeal" review of the significant environmental impacts of a project. This rule derives, in part, from section 21002.1, subdivision (d), which requires the lead agency to "consider[] the effects, both individual and collective, of all activities involved in [the] project." (*Berkeley Keep Jets Over the Bay v. Port of Oakland*, 91 Cal. App. 4th 1344, 1355.) Under the CEQA Guidelines, the term "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably indirect physical change in the environment..." (CEQA Guidelines §15378(a).) The Draft EIR does not follow this guidance.

For example, the Draft EIR discusses emissions of fugitive dust PM10 from demolition of existing buildings (Impact 6.2-1) and fugitive dust PM10 during grading of construction sites (Impact 6.2-2) as if they would occur at different times. Nowhere in the Draft EIR is there a requirement for demolition and grading to not be conducted simultaneously. What's more, as discussed in Comment III.A, the Draft EIR does not require the staggered staging of construction of the various Project components shown in the Project's construction schedule as mitigation. Therefore, some or all of the Project components could be demolished, graded, and/or under construction simultaneously, resulting in considerably impacts than disclosed in the Draft EIR's air quality analysis, which relies on this staggered staging. (The Draft EIR fails entirely to determine PM10 emissions from construction of the various Project components.) By piecemealing the air quality impact analysis in this fashion, the Draft EIR fails to disclose the full potential impacts from Project construction.

Similarly, the Draft EIR analyzes ROG and NOx emissions from the operational phase of the Project only for five components, the WCC, the SMF Building, the residential units, the Community Parking Structure and Commercial Retail. The Draft EIR fails to analyze and include in its emissions estimate ROG and NOx emissions from Project-related traffic and declines to analyze any emissions resulting from operation of the Energy Center. (Draft EIR, pp. 6.2-21 – 6.2-24.) Segregating operational emissions in this fashion is piecemealing and not allowed under CEQA. All operational emissions must be analyzed and aggregated in order to determine and adequately mitigate the full impact of the Project.

III.D The Project's Construction Emissions Are Significant And Unmitigated

As discussed in Comment III.B, the Draft EIR provides limited emission estimates for a few pollutants and select Project components only. As demonstrated below, these few emissions estimates are considerably underestimated and, thus, the Draft EIR fails to disclose the full impact of Project construction on air quality.

III.D.1 Construction PM10 Emissions Are Significant And Unmitigated

The Draft EIR's air quality analysis quantified impacts from fugitive dust PM10 emissions only for the demolition of St. Luke's Medical Building. For demolition of St. Luke's Medical Building, the Draft EIR determined a total of 403.84 $\mu g/m^3$ of fugitive dust PM10 emissions. (The Draft EIR claims to have used the URBEMIS 2002 modeling program yet the City failed to include the model runs in the Draft EIR's Appendix F, thereby precluding a review of this emissions estimate.) As discussed in Comment III.A, the Draft EIR does not require the staggered demolition of the ten buildings and parking structures shown in the Project's construction schedule. Therefore, several or all of these ten structures slated for demolition could be demolished simultaneously, resulting in considerably larger fugitive dust PM10 emissions than disclosed in the Draft EIR. Some areas could be also be graded or under construction at the same time as the demolition of St. Luke's Medical Building. The Draft EIR did not quantify fugitive dust emissions potentially associated with grading nor did it quantify fugitive dust emissions from construction of Project components. 8-53

The Draft EIR's demolition fugitive dust analysis declines to make the calculations required to determine whether the EIR's own significance threshold is exceeded, instead claiming that "no specific model exists for calculating PM10 concentrations from demolition." The Draft EIR further claims that "[t]he SMAQMD does not provide any guidance for calculation PM10 concentrations from demolition activities with a dispersion model." (Draft EIR, p. 6.2-15.) This is incorrect. First, standard air quality models can be used to evaluate air quality impacts of demolition. Typically, emissions from demolition are modeled as an area source. Second, the Guide to Air Quality Assessment published by the Sacramento Metropolitan Air Quality Management District ("SMAQMD") specifically recommends to "determine significance of fugitive dust emissions from construction activities" including "[d]emolition, clearing, grading, excavating, using heavy equipment or trucks on unpaved surfaces, and loading/unloading of trucks" "with an appropriate air pollutant dispersion model, such as ISCST3, to evaluate PM10 concentration." (SMAQMD 07/04, p. 3-11.)

The grading analysis is similarly flawed, but instead of arguing there is no model, it relies on SMAQMD guidance for determining the significance of grading fugitive dust emissions. As discussed in Comment III.C this approach improperly piecemeals the Project's emissions. It is irrelevant if grading emissions by themselves are less than significant. CEQA requires that a project's impacts are evaluated in the aggregate, not as piecemeal.

The Draft EIR then concludes with no analysis whatsoever that both the impacts from demolition and grading would be short-term significant, proposes a number of mitigation measures, and again concludes again with no analysis that the mitigated impacts would not be significant. However, it is impossible to conclude that site-specific impacts have been fully mitigated without performing an appropriate analysis. Such an analysis includes quantifying all emissions, determining the control efficiency of proposed mitigation measures, quantifying controlled emissions, and comparing these controlled emissions to a significance threshold. One can only conclude that the mitigated impacts are not significant if the controlled emissions are lower than the significance threshold. The Draft EIR has leapt to the conclusion that demolition emissions are not significant if five mitigation measures are adopted, without performing any of these essential steps. Thus, its conclusion that fugitive dust PM10 emissions from demolition are reduced to a less than significant level is a hollow promise.

Further, the conclusion of insignificance after mitigation is inconsistent with another significance threshold proffered by the Draft EIR, the net increase of any criteria pollutant, for which the project region is in non-attainment under an applicable federal or State ambient air quality standard. (Draft EIR, p. 6.2-14.) The mitigated demolition PM10 emissions would certainly not be zero. Therefore, there will be a net increase, the emissions are significant, and all feasible mitigation must be required. As discussed in Comment IV, substantial additional mitigation is feasible and should be identified, evaluated, and required in an EIR.

III.D.2 Construction NOx Emissions Are Significant And Unmitigated

The Draft EIR claims to have analyzed NOx emissions from construction activities for the WCC, the SMF Building, the residential units, and the Future MOB with the URBEMIS 2002 emissions modeling program and presents the results in the description of Impact 6.2.3. (Draft EIR, p. 6.2-19.) The Draft EIR states that total maximum NOx emissions in spring of 2007 resulting from the concurrent construction of these four Project components would total 323.86 lb/day. However, these results differ substantially from the actual results of the URBEMIS 2002 air quality modeling outputs contained in Appendix F. Table 2 below summarizes the

results presented in both the Draft EIR's air quality section and the URBEMIS 2002 modeling outputs in Appendix F for the four construction components.

Table 2: Unmitigated NOx construction emissions (lb/day)

Project Component	Draft EIR[1]	Appendix F[2]
SMF Building	107	236.14
WCC	35.97	404.66
Residential Housing Units	73.89	29.40
Future MOB	107	
Total	**323.86**	**670.02**

[1] Draft EIR, p. 6.2-19

[2] Appendix F, URBEMIS 2002 modeling outputs, contains only three model runs for NOx emissions from construction of the WCC, the SMF Building, and the residential housing units. The modeling outputs for the Future MOB are not included.

The Draft EIR claims maximum total NOx emissions from construction of these four components of about 324 lb/day. Total NOx emissions from the URBEMIS 2002 modeling outputs contained in Appendix F for three of the four components, *i.e.* without emissions from the Future MOB, total about 670 lb/day, more than twice the emissions, the Draft EIR claims. Assuming NOx emissions from construction of the Future MOB are the same as those from construction of the SMF Building (as presented in the Draft EIR's discussion of Impact 6.2.3), total NOx emissions for construction of these four components would be about 906 lb/day, a factor of more than 2.5 higher than the emissions disclosed in the Draft EIR. As discussed in Comment III.A, demolition and grading of various Project phases may occur simultaneously and will significantly increase emissions of NOx due to the heavy equipment that is used for these construction phases. In fact, the construction schedule shows that the demolition of the Old Tavern Parking Structure and the RAS Medical Building are scheduled to occur during the construction phase of the above discussed four Project components. Absent any language in the Draft EIR requiring the proposed staggered construction schedule, other components may also be demolished, graded, or constructed at the same time.

Given that the Lower Sacramento Valley is designated a serious non-attainment area for ozone, the Draft EIR should have made every effort to accurately estimate emissions of the ozone precursor NOx and require all feasible mitigation to mitigate the significant impacts resulting from Project construction.

The Draft EIR imposes several mitigation measures and concludes that the impact will remain significant and unavoidable. Thus, all feasible mitigation should have been required but was not. The Draft EIR claims that "[m]itigation in addition to that listed below, and that would achieve substantially more NOx reduction is not

available at this time." (Draft EIR, p. 6.2-20.) This is incorrect. As discussed in Comment IV, additional feasible mitigation exists and is feasible.

III.D.3 Construction ROG and CO Emissions Are Significant And Unmitigated

As discussed in Comments III.B.3 and III.B.4, the Draft EIR's construction impact analysis failed to discuss ROG and CO emissions from Project construction. Review of the URBEMIS 2002 modeling files contained in Appendix F reveals that both ROG and CO emissions are substantial. Table 3 summarizes the ROG and CO emissions from the SMF Building, the WCC, and the Residential Housing Units contained in Appendix F. Table 3 also contains ROG and CO emissions for the Commercial/Retail Space associated with the Community Parking Structure, as estimated with URBEMIS 2002.

Table 3: Unmitigated ROG and CO construction emissions (lb/day)[1]

Project Component	ROG	CO
SMF Building	326.49	262.87
WCC	337.29	503.82
Residential Housing Units	55.75	34.86
Community Parking Structure and Commercial/Retail Space[2]	17.74	30.47
Future MOB[3]	59.69	47.29
Total	**796.96**	**879.31**

[1] Appendix F, URBEMIS 2002 modeling outputs, maximum emissions.

[2] Calculated with URBEMIS 2002 based on 4,500 sqft general office building and 4,500 sqft, supermarket, and construction start June 2006. This calculation does not include construction of the 7-story parking structure itself.

[3] Calculated with URBEMIS 2002 based on 35,000 square feet medical office building, and construction start June 2006.

Table 3 demonstrates that both ROG and CO emissions from construction are substantial. The estimated emissions from simultaneous construction of these five Project components (without construction of the 7-story parking structure) would be almost 800 lb/day of ROG and about 880 lb/day of CO. ROG emissions would be an order of magnitude higher than emissions significance thresholds set by other air districts and CO emissions would be almost twice the emissions significance threshold. (*See for example*, South Coast Air Quality Management District: 75 lb/day ROG, 550 lb/day CO). Yet the Draft EIR fails to even discuss ROG and CO emissions. Given that the Lower Sacramento Valley is designated a serious non-attainment area for ozone, the Draft EIR should have made every effort to estimate emissions of the ozone precursor ROG and impose all feasible mitigation.

The Draft EIR imposes several mitigation measures to mitigate NOx emissions, some of which also reduce ROG emissions. However, these mitigation measures will be insufficient to reduce ROG and CO emissions to less than significance. As discussed in Comment IV, additional feasible mitigation exists and should be evaluated and required for the Project.

III.E Project Operational Emissions Are Significant And Unmitigated

As demonstrated below, the emissions estimates presented in the Draft EIR are considerably underestimated and therefore the Draft EIR fails to disclose the full impact of Project operations on air quality.

III.E.1 Operational ROG and NOx Emissions Are Significant And Unmitigated

The only emissions analyzed for the operational phase, are ROG and NOx emissions from operation of the WCC, the SMF Building, the residential units, the Community Parking Structure and Commercial Retail. (Draft EIR, pp. 6.2-21 - 6.2-24.) The Draft EIR fails to analyze and include ROG and NOx emissions from Project-related traffic in its operational ROG and NOx emissions estimate.

Further, the Draft EIR declines to analyze any emissions resulting from operation of the Energy Center arguing that equipment at the new Energy Center would, for the most part, replace older equipment at the existing Energy Center, which would require a permit from the SMAQMD prior to operation and that "[c]onsequently, the newer equipment may actually be held to more stringent emission standards than existing equipment." (Draft EIR, p. 6.2-21.) This is erroneous for a number of reasons. First, the substantially larger size of the new medical facilities will likely require a considerably increased output of the new Energy Center compared to the old Energy Center (*see* Comment II.B.) Second, absent any determination of baseline emissions from the old Energy Center, it is impossible to determine whether emissions from the new Energy Center will or will not constitute a net increase. And third, the Draft EIR improperly assumes that a permit would ensure that utility equipment, *e.g.*, boilers, would achieve the lowest achievable emission rate. Draft EIR, p. 6.2-21.) This is not necessarily true and depends on the magnitude of the emissions and the specific pollutant, *e.g.*, only for non-attainment pollutants. If the emissions do not exceed certain permitting thresholds, they will not be held to the lowest achievable emission rate. The EIR should be revised to include emission calculations for utility equipment and to identify regulations that would apply and control technology that would be required.

The Draft EIR imposes a number of mitigation measures designed to reduce ROG and NOx emissions but concludes operational emissions would remain significant after mitigation. An EIR can not conclude that emissions are significant and unavoidable without imposing all feasible mitigation. As discussed in Comment IV, a large number of additional feasible mitigation measures is available and should be required for the Project.

III.D.2 Operational PM10 Emissions Are Significant And Unmitigated

The EIR does not analyze the increase in PM10 from project operation. There would be an increase, resulting in a significant impact according to the EIR's significance criteria. The EIR appears to dismiss PM10 emissions based on an unsupported claim that they are "not typically produced in high amounts by project operations." (Draft EIR, p. 6.2-21.) This is incorrect. PM10 and PM2.5 emissions will be created by a number of sources including the boilers and cooling towers of the Energy Center, water heaters, diesel generators, auto exhaust, and entrained road dust from the increase in traffic.

Further, the Draft EIR alleges that the SMAQMD sets no standards for PM10 for the long-term operational phase of a project. (Draft EIR, p. 6.2-21.) This claim is incorrect and contradicted by the EIR itself, which elsewhere specifies the SMAQMD's operational threshold of 50 $\mu g/m^3$ for determining the significance of project emissions. (Draft EIR, p. 6.2-14.)

III.F The Draft EIR's Cumulative Impact Analysis Is Inadequate And Cumulative Impacts Are Significant And Unmitigated

The cumulative impact analyses for both the construction and operational phases of the Project are fatally flawed. The construction analysis concludes, for example, that mitigated PM10 emissions would be small enough that they would not be cumulatively significant. (Draft EIR, p. 6.2-28.) It similarly concludes that construction TAC emissions are short-term and declines to analyze them. (Draft EIR, p. 6.2-29.) This defeats the purpose of a cumulative impact analysis, whose purpose is to aggregate all emissions from all past, present, and future projects with the project itself. If the total of all emissions exceeds any significance thresholds, 100 percent of a project's emissions must be mitigated or all feasible mitigation must required. The construction emissions from all of the projects covered by the Draft EIR, *i.e.* the SMCS Project, the Trinity Cathedral Project, and the Children's Theater, are cumulatively significant, requiring all feasible mitigation, as discussed in Comment IV.

The operational cumulative analysis, on the other hand, relies on a change in land use to classify an impact as cumulatively significant. (Draft EIR, p. 6.2-30.) This is inconsistent with case law, which requires that impacts from all past, present, and future projects be evaluated together. A change in land use does not capture the impacts of increases in emissions from past, present, and future projects. This significance threshold was used by the Draft EIR to conclude that air quality impacts from the Theater were not cumulatively significant when they likely are.

IV. ADDITIONAL MITIGATION IS FEASIBLE

CEQA section 21002 requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts of a proposed project. (*See also,* Pub. Res. Code §21081(a); CEQA Guidelines §15370.) To implement this requirement, an EIR must set forth mitigation measures that decisionmakers can adopt at the findings stage of the process. (CEQA Guidelines §15126(c).) For each significant effect, the EIR must identify specific mitigation measures. Where several potential mitigation measures are available, each should be discussed separately and the reasons for choosing one over the other should be stated. (CEQA Guidelines §15126(c).) Mitigation measures should be capable of "avoiding the impact altogether," "minimizing impacts," "rectifying the impact," or "reducing the impact." (CEQA Guidelines §15370.)

By the Draft EIR's own admission of "significant unavoidable impacts" and as demonstrated in the comments above, impacts from construction and operation of the Project remain significant after implementation of the Draft EIR's proposed mitigation measures. Therefore, the City must impose all feasible mitigation to mitigate these significant impacts, which it did not. The comments below discuss the specific inadequacies of the Draft EIR's proposed mitigation program and propose mitigation measures that should be implemented to lessen or eliminate the significant adverse effects of Project construction and operation.

IV.A Additional Feasible Construction Mitigation

The Draft EIR proposed five mitigation measures for the demolition phase and five mitigation measures for the grading phase of the Project. The Draft EIR further requires seven mitigation measures for the construction phase of the various Project components. The wording "when appropriate" in two of the proposed mitigation measures for construction (use of alternative fuels and replacement of fossil fuels with electrically driven equivalents) renders these two mitigation measures ambiguous and unenforceable. The Draft EIR must include specific criteria for rejection of these two measures. Further, typically idling time is limited to 5 minutes rather than 10 minutes as required by the Draft EIR.

As discussed below, there are numerous other relevant and reasonable fugitive dust and diesel exhaust mitigation measures contained in the CEQA guidelines and rules of air districts and other agencies that should also be required for this Project to mitigate its significant construction impacts.

IV.A.1 Fugitive Dust Mitigation Measures

Several agencies have conducted comprehensive studies of fugitive dust control measures to bring their region into compliance with national ambient air quality standards on PM10. For example, the South Coast Air Quality Management District ("SCAQMD") has sponsored research, passed regulations (*e.g.*, Rule 403[11]), and published guidelines that identify best management practices for controlling fugitive dusts at construction sites. The *Rule 403 Implementation Handbook*[12] contains a comprehensive list of such measures. Clark County, Nevada, has also sponsored research, passed regulations (Rule 94), and published best management practices for controlling fugitive dust from construction activities.[13] Clark County's *Construction Activities Dust Control Handbook* contains a comprehensive list of best management practices.[14] Similarly, Arizona has developed guidance to control fugitive PM10 emissions.[15]

Several of the measures included in these agency guidelines are feasible and therefore should be considered for adoption here under CEQA Guidelines §§15126.4, 15091. Examples of such feasible mitigation measures are listed below:

- During clearing and grubbing, prewet surface soils where equipment will be operated; for areas without continuing construction, maintain live perennial vegetation and desert pavement; stabilize surface soil with dust

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[11] South Coast Air Quality Management District, Revised Final Staff Report for Proposed Amended Rule 403, Fugitive Dust and Proposed Rule 1186, PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations, February 14, 1997.

[12] South Coast Air Quality Management District, Rule 403 Implementation Handbook, January 1999.

[13] P.M. Fransioli, PM10 Emissions Control Research Sponsored by Clark County, Nevada, Proceedings of the Air &Waste Management Association's 94th Annual Conference & Exhibition, Orlando, FL, June 24-28, 2001.

[14] Clark County Department of Air Quality Management, Construction Activities Dust Control Handbook, March 18, 2003.

[15] Arizona Department of Environmental Quality, Air Quality Exceptional and Natural Events Policy PM10 Best Available Control Measures, June 5, 2001.

palliative unless immediate construction is to continue; and use water or dust palliative to form crust on soil immediately following clearing/grubbing. (CCHD)[16]

- Grade each phase separately, timed to coincide with construction phase or grade entire project, but apply chemical stabilizers or ground cover to graded areas where construction phase begins more than 60 days after grading phase ends. (Rule 403 Handbook)
- During initial grading, earth moving, or site preparation, projects 5 acres or greater may be required to construct a paved (or dust palliative treated) apron, at least 100 ft in length, onto the project site from the adjacent site if applicable. (BCAQMD)
- During cut and fill activities, prewater with sprinklers or wobblers to allow time for penetration; prewater with water trucks or water pulls to allow time for penetration; dig a test hole to depth of cut to determine if soils are moist at depth and continue to prewater if not moist to depth of cut; use water truck/pull to water soils to depth of cut prior to subsequent cuts; and apply water or dust palliative to form crust on soil following fill and compaction. (CCHD)
- For backfilling during earthmoving operations, water backfill material or apply dust palliative to maintain material moisture or to form crust when not actively handling; cover or enclose backfill material when not actively handling; mix backfill soil with water prior to moving; dedicate water truck or large hose to backfilling equipment and apply water as needed; water to form crust on soil immediately following backfilling; and empty loader bucket slowly; minimize drop height from loader bucket. (CCHD)
- For large tracts of disturbed land, prevent access by fencing, ditches, vegetation, berms, or other barriers; install perimeter wind barriers 3 to 5 feet high with low porosity; plant perimeter vegetation early; and for long-term stabilization, stabilize disturbed soil with dust palliative or vegetation or pave or apply surface rock. (CCHD)
- Barriers with 50 percent or less porosity located adjacent to roadways to reduce windblown material leaving a site. (Rule 403 Handbook)

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[16] The following acronyms are used in this listing of mitigation measures: ADEQ = Arizona Department of Environmental Quality; BAAQMD = Bay Area Air Quality Management District; BCAQMD = Butte County Air Quality Management District; CCHD = Clark County (Nevada) Health District; MBUAPCD = Monterey Bay Unified Air Pollution Control District; SBCAPCD = Santa Barbara County Air Pollution Control District; SJVUAPCD = San Joaquin Valley Unified Air Pollution Control District; SLOCAPCD = San Luis Obispo County Air Pollution Control District.

- In staging areas, limit size of area; apply water to surface soils where support equipment and vehicles are operated; limit vehicle speeds to 15 mph; and limit ingress and egress points. (CCHD)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. (SJVUAPCD, ADEQ)
- For stockpiles, maintain at optimum moisture content; remove material from downwind side; avoid steep sides or faces; and stabilize material following stockpile-related activity. (CCHD)
- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained. (BAAQMD, SJVUAPCD, Rule 403 Handbook, ADEQ, SLOCAPCD)
- Where feasible, use bedliners in bottom-dumping haul vehicles. (Rule 403 Handbook)
- Empty loader bucket slowly and minimize drop height from loader bucket. (CCHD)
- Clean wheels and undercarriage of haul trucks prior to leaving construction site. (CCHD)
- Gravel pads must be installed at all access points to prevent tracking of mud on to public roads. (SBCAPCD)
- Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect. (CCHD)
- All roadways, driveways, sidewalks, etc., to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. (SLOCAPCD)
- Pave all roads on construction sites. (MBUAPCD)
- To prevent trackout, pave construction roadways as early as possible; install gravel pads; install wheel shakers or wheel washers, and limit site access. (CCHD, SLOCAPCD)
- While clearing forms, use single stage pours where allowed; use water spray to clear forms; use sweeping and water spray to clear forms; use

industrial shop vacuum to clear forms; and avoid use of high pressure air to blow soil and debris from the form. (CCHD)

- Limit fugitive dust sources to 20 percent opacity. (ADEQ)
- Require a dust control plan for earthmoving operations. (ADEQ)
- Prior to land use clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with map, these dust control requirements. All requirements shall be shown on grading and building plans. (SBCAPCD, SLOCAPCD)
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. (SBCAPCD, SLOCAPCD)
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hrs. (BCAQMD, CCHD)

While portions of some of these measures are included in the Draft EIR's proposed fugitive dust mitigation measures, the above measures are far more protective than those recommended for this Project. All of these measures are feasible and various combinations of them are routinely required elsewhere to reduce fugitive PM10 emissions. *See*, for example, the fugitive dust control program for the Big Dig (Kasprak and Stakutis 2000[17]), for the El Toro Reuse Draft EIR[18], and for the Padres Ballpark Final EIR[19]. Because fugitive dust PM10 remains significant after the Draft EIR's proposed mitigation, all of these measures should be required.

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[17] A. Kasprak and P.A. Stakutis, A Comprehensive Air Quality Control Program for a Large Roadway Tunnel Project, Proceedings of the Air & Waste Management Association's 93rd Annual Conference 7 Exhibition, June 18-22, 2000.

[18] County of Orange, Draft Environmental Impact Report No. 573 for the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport, Draft Supplemental Analysis, Volume 1, April 2001, pp. 2-121 to 2-123.

[19] City of San Diego, Final Subsequent Environmental Impact Report to the Final Master Environmental Impact Report for the Centre City Redevelopment Project and Addressing the Centre City Community Plan and Related Documents for the Proposed Ballpark and Ancillary Development Projects, and Associated Plan Amendments, V. IV. Responses to Comments, September 13, 1999, pp. IV-254 to IV-256.

IV.A.2 Diesel Exhaust Mitigation Measures

The Draft EIR finds significant unavoidable impacts for ROG and NOx, thus, must be mitigated with all feasible mitigation measures. A multitude of controls for is available for construction equipment and should be required.

There are a number of additional mitigation measures that are routinely required as CEQA mitigation by air districts and other agencies in California for construction projects, (*e.g.*, the mitigation programs routinely implemented by the SMAQMD and California Energy Commission ("CEC") decisions), including:

- Limiting the hours of operation of heavy duty equipment and/or the amount of equipment in use. (BAAQMD 12/99, p. 53.)
- Conversion to cleaner engines;
- Use of cleaner (reduced sulfur) fuel;
- Add-on control devices, *e.g.*, particulate traps, catalytic oxidizers;
- Buffer zone between facility and sensitive receptors;
- Installation of high pressure injectors on diesel construction equipment;
- Restricting engine size of construction equipment to the minimum practical size;
- Electrification of construction equipment;
- Substitution of gasoline-powered for diesel-powered construction equipment;
- Use of alternatively fueled construction equipment, using, *e.g.*, compressed natural gas, liquefied natural gas, propane, or biodiesel;
- Implementation of activity management techniques including a) development of a comprehensive construction management plan designed to minimize the number of large construction equipment operating during any given time period; b) scheduling of construction truck trips during non-peak hours to reduce peak hour emissions; c) limitation of the length of construction work-day period; and d) phasing of construction activities;
- Installation of catalytic converters on gasoline-powered equipment, if feasible;
- Minimization of construction worker trips by requiring carpooling and by providing for lunch onsite;

8-54

- Lengthening of construction period during smog season (May through October), so as to minimize the number of vehicles and equipment operating at the same time;
- Utilization of new technologies to control ozone precursor emissions as they become available and feasible;
- Use electricity from power poles rather than temporary diesel power generators; and
- Emission offsets if ROG or NOx emissions exceed 6.0 tons/quarter.

8-54 (cont.)

The following discusses the use and feasibility of construction equipment certified by CARB, post-combustion controls, and the use of low-sulfur fuels or PuriNOx™, an alternative diesel formulation.

IV.A.1.a CARB-certified Construction Equipment

Both the U.S. EPA and CARB have established emission limits on new off-road engines. CARB-certified off-road engines are engines that are 3 years old or less at the time of use and which comply with these new low emission limits. This equipment is widely available in the construction fleet and specified as a control measure in the BAAQMD's Revised Ozone Attainment Plan. Therefore, the use of CARB-certified equipment should be required for this Project in order to conform to the Clean Air Plan as required by CEQA.

8-55

The SMAQMD and other agencies require the use of at least 20 percent CARB-certified off-road engines in the mix of construction equipment operating on-site, or alternatively, setting a NOx, ROG, and/or PM10 emission reduction goal for the construction fleet. A similar measure has been adopted by the Texas Natural Resource Conservation Commission ("TNRCC") for the Dallas/Fort Worth and Houston-Galveston areas. (Rennie *et al.* 2001.[20]) The Arizona Department of Environmental Quality ("ADEQ") has also recommended this measure to address the air quality problems in the Phoenix area. (ADEQ 11/9/00, pp. 19-24.)

IV.A.1.b Post-combustion Controls

Post-combustion controls, such as oxidation catalysts and particulate filters, are devices that are installed downstream of the engine on the tailpipe to treat the

[20] S.G. Rennie, L. Fiffick, D. Huckabay, and B. Ubanwa, Heavy Duty Diesel Engines Retrofit Programs as a Part of Houston SIP, Proceedings of the Air & Waste Management Association's 94th Annual Conference & Exhibition, June 24–28, 2001.

exhaust. These devices are now widely used on construction equipment and are capable of removing over 90% of the PM10, CO, and ROG from engine exhaust, depending on the fuel and specific engine. The most common and widely used post-combustion control devices are particulate traps (*i.e.*, soot filters), oxidation catalysts, and combinations thereof. The many variants of these devices have recently been identified, evaluated, and comprehensively reviewed by CARB[21] and others.[22]

These devices are commonly required as mitigation for construction emissions, which are similar to Project operations. The Massachusetts Turnpike Authority ("MTA") implemented a voluntary program in the fall of 1998 which resulted in retrofitting 70 pieces of construction equipment with oxidation catalysts (Kasprak et al. 2001[23]) at the "Big Dig," the massive, 5-year, $10 billion-plus Central Artery/Tunnel Project in Boston's North End and one of the largest infrastructure construction projects in the country. 8-56

These controls have also been widely required to mitigate construction emissions in California. The CEC, which follows a CEQA-equivalent process in licensing of new power plants larger than 50 megawatts ("MW"), has required these devices on many projects. The Sunrise Power Project was recently constructed using this equipment.[24] No problems were encountered. Several other 500+MW power plants have been licensed and constructed successfully using these controls, including High Desert[25], Elk Hills[26], Pastoria[27], Western Midway-Sunset[28], Mountain

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[21] California Air Resources Board, Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, October 2000; California Air Resources Board, Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, October 2000.

[22] Manufacturers of Emission Controls Association, Demonstration of Advanced Emission Control Technologies Enabling Diesel-Powered Heavy-Duty Engines to Achieve Low Emission Levels, Final Report, June 1999.

[23] Alex Kasprak, Guido Schattanek, and Ping K. Wan, Emission Reduction Retrofit Program for Construction Equipment of the Central Artery/Tunnel Project, Proceedings of the Air & Waste Management Association's 94th Annual Conference & Exhibition, June 24-28, 2001. Also see: www.epa.gov/OMS/retrofit/documents/bigdig_case_01.htm, accessed June 18, 2004.

[24] California Energy Commission, Commission Decision, Sunrise Power Project, December 2000, Condition AQ-C3, p. 120.

[25] California Energy Commission, Commission Decision, High Desert Power Project, May 2000, Condition AQ-3(o), p. 107.

[26] California Energy Commission, Commission Decision, Elk Hills Power Project, December 2000, Condition AQ-C2(3), p. 123.

[27] California Energy Commission, Commission Decision, Pastoria Energy Facility, December 2000, Condition AQ-C3, p. 108.

View[29], and Contra Costa[30], among others. (All of the CEC siting decisions are posted at www.energy.ca.gov under the name of the individual facility.)

Post-combustion controls have also been required as conventional CEQA mitigation in EIRs. The El Toro Reuse Draft EIR[31], page 2-124, AQ-11k and AQ-11l, required the use of particulate traps with a minimum 80% PM10 efficiency and selective catalytic reduction ("SCR") or comparable technology with a minimum 70% NOx reduction on all off-road construction equipment. The Stanford University General Use Permit Application Draft EIR[32], page 4.11-10, AQ-1, required a range of measures to minimize diesel engine exhaust, including catalytic converters and particulate traps. The City of San Diego in the Padres Ballpark Final EIR[33] required the control of 95% of engine exhaust emissions, using, among others, oxidation catalysts, particulate filters, and "Blue Sky" low-emission engines. Similarly, the Port of Oakland required the use of new engines or post-combustion controls on trucks serving its Vision 2000 expansion project. The Port's air quality mitigation program is now partially in place and has been very successful in reducing emissions.[34]

All of these post-combustion controls are feasible for construction of this Project. Therefore, the Draft EIR should be revised be prepared requiring the use of post-combustion controls on off-road equipment specifying target control levels.

IV.A.1.c Ultra-low Sulfur Diesel

The U.S. EPA and CARB have adopted stringent fuel regulations that limit the sulfur content of on-road diesel fuel to 500 parts per million by weight

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[28] California Energy Commission, Commission Decision, Western Midway Sunset Power Project, March 2001, Condition AQ-C2, p. 114.

[29] California Energy Commission, Commission Decision, Mountain View Power Project, March 2001, Condition AQ-C2, p. 34.

[30] California Energy Commission, Commission Decision, Contra Costa Unit 8 Power Project, May 2001, Condition AQC-2, p. 12.

[31] County of Orange, Draft Environmental Impact Report, No. 573 for the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport, April 2001.

[32] Santa Clara County, Draft Environmental Impact Report, EIR Stanford University Draft Community Plan and General Use Permit Application, June 23, 2000.

[33] City of San Diego, Final Subsequent Environmental Impact Report, Ballpark and Ancillary Development Projects, and Associated Plan Amendments, September 13, 1999 and Draft Subsequent EIR, May 12, 1999, , page IV-262, I8.A.89.

[34] Port of Oakland, Summary Report #5, Vision 2000 Air Quality Mitigation Program, February 2002.

("ppmw") at the present. As discussed above, diesel for off-road use sold in California also complies with this limit. This limit will be lowered to 15 ppm in June 2006. However, some California refineries, *e.g.*, the Equilon Refinery in Martinez already comply with the new ultra-low sulfur diesel ("ULSD") requirements and could supply 15-ppm sulfur diesel for Project construction equipment. Ultra-low sulfur diesel enables the use of after-treatment technology such as catalyzed diesel particulate filters and thus considerably reduces PM10 emissions. This fuel not only reduces sulfur emissions, but also NOx, CO, and PM10 emissions and could be adopted here to further reduce construction exhaust emissions, particularly significant NOx emissions.

The 15-ppm sulfur ULSD has previously been required as CEQA mitigation. The CEC has required the use of ultra-low sulfur fuel where available. The CEC follows a CEQA-equivalent process in licensing of new power plants larger than 50 MW. Ultra-low sulfur diesel was, for example, required in the case of the Huntington Beach Generating Station Retool Project.[35]

A number of agencies have also required the use of low-sulfur diesel fuels in construction equipment as CEQA mitigation, including Contra Costa County. The Contra Costa County Board of Supervisors recently required the use of ultra low sulfur diesel with a sulfur content of 15 ppm or less for construction of the Ultramar (now Tesoro) Clean Fuel Project.[36] The El Toro Reuse Draft EIR[37] requires the exclusive use of 15 ppm diesel in "all on-site construction equipment and all construction material delivery trucks." The Port of Oakland Final EIR[38] required the use of CARB low-sulfur diesel.

IV.A.1.d PuriNOx™

Alternate diesel fuels exist that achieve PM10 and NOx reductions. PuriNOx™ is an alternative diesel formulation that was verified by CARB on

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[35] California Energy Commission, Commission Decision, Application For Certification, Huntington Beach Generating Station Retool Project, May 2001, pp. 22.

[36] Contra Costa County Community Development Department, Approved Permit, Ultramar, Inc., Golden Eagle Refinery, Application No. LP012028, April 23, 2003, p. 2-123, AQ-11h, AQ 11i, AQ-11j.

[37] County of Orange, Draft Environmental Impact Report No. 573 for the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport, April 2001.

[38] Port of Oakland, Berths 55-58 Project, Draft Environmental Impact Report, December 11, 1998.

January 31, 2001[39] as achieving a 14% reduction in NOx and a 63% reduction in PM10 compared to CARB diesel. It can be used in any direct-injection, heavy-duty compression ignition engine and is compatible with existing engines and existing storage, distribution, and vehicle fueling facilities. Operational experience indicates little or no difference in performance and startup time, no discernable operational differences, no increased engine noise, and significantly reduced visible smoke. (Hagstrand 6/04[40].)

This fuel has been successfully used in heavy-duty off-road and on-road equipment, including by the Tri-Delta Transit Authority fleet in Contra Costa County, by the County of Sacramento at the Keifer Landfill and North Transfer station, in off-road construction equipment at very large residential construction projects in Sacramento, in truck fleets operated by Pacific Cement in San Francisco and Ramos Oil in Dixon, in yard hostlers at the Port of Long Beach, in off-road equipment operated by Hanson Aggregate in San Francisco, and in yard haulers at the Port of Houston. (Howes 4/00[41] and Hagstrand 6/04) Six yard tractors have been operating on PuriNOx™ at the Port of Houston since April 2000. The Texas Natural Resource Conservation Commission ("TNRCC") has also approved PuriNOx™ fuel for funding under Texas Senate Bill 5.

PuriNOx™ fuel is available from fuel distributors Ramos Oil in Sacramento and R.V. Jensen in Fresno and is competitively priced at a surcharge over regular diesel of about 10 cents per gallon.[42] It has been required as mitigation for construction exhaust emission impacts. For example, the NASA Ames Development Plan DEIS,[43] page 4.4-34, requires "where reasonable and feasible, use alternative diesel fuels. The CARB has verified reductions of NOx by almost 15%, and particulate matter by almost 63%, from use of alternative diesel fuels, describing PuriNOx™. See also construction exhaust mitigation in the Bickford Ranch Final EIR, page 1-24, requiring 10% to 20% NOx emission reductions, to be achieved by

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[39] Letter from Dean C. Simeroth, Chief, Criteria Pollutants Branch, to Thomas J. Sheahan, Lubrizol, Verification of Lubrizol Corp. PuriNOx Fuel, January 31, 2001, http://www.arb.ca.gov/fuels/diesel/altdiesel/altdiesel.htm, accessed June 18, 2004.

[40] Personal communication, Petra Pless/Phyllis Fox with Hep Hepner, Ramos Oil Co., Dixon, CA, (916-371-3289, ext. 242) and Bill Hagstrand, Lubrizol (440-347-6592), March and June 2004.

[41] Peter Howes, An Evaluation of the Effects of PuriNOx™ on Exhaust Emissions from Yard Haulers at the Port of Houston, April 2000.

[42] Personal communication, Petra Pless with Bill Hagstrand, Lubrizol (440-347-6592), June 21, 2004.

[43] NASA Ames Research Center, NASA Ames Development Plan, Draft Programmatic Environmental Impact Statement, November 2001.

both engine selection and fuel selection. ("Includes the use of emulsified fuel in non-certified engines...".)

IV.B Additional Feasible Operational Mitigation

The Draft EIR finds significant unavoidable impacts from operation of the Project, yet it fails to impose all feasible mitigation. The comments below contain a long list of additional feasible mitigation measures that should be required to mitigate the Project's significant operational emissions.

VI.B.1 Operational Traffic Mitigation Measures

The following traffic mitigation measures are routinely required elsewhere to mitigate significant impacts from a project and should be required to mitigate the Project's significant NOx, ROG, and PM10 impacts.

- Encourage carpool/vanpool program;
- Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.;
- Provide on-site child care or contribute to off-site child care within walking distance;
- Provide preferential parking for carpool/vanpool vehicles;
- Provide secure, weather-protected bicycle parking for employees;
- Provide direct safe, direct bicycle access to adjacent bicycle routes;
- Provide showers and lockers for employees bicycling or walking to work;
- Short-term bicycle parking for retail customers and other non-commute trips;
- Provide neighborhood-servicing shops and services within ½ mile of residential areas;
- Connect bicycle lanes/paths to city-wide network;
- Design and locate buildings to facilitate transit access, *e.g.*, locate building entrances near transit stops, eliminate building setbacks, etc.;
- Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.;
- Provide shuttle service to food service establishments/commercial areas;
- Provide shuttle service to transit stations/multimodal centers;

- Implement parking fee for single-occupancy vehicle commuters;
- Implement parking cash-out program for non-driving employees;
- Provide direct, safe, attractive pedestrian access from project to transit stops and adjacent development;
- Implement compressed work week schedule;
- Implement home-based telecommuting program;
- Provide electric vehicle ("EV") and compressed natural gas ("CNG") vehicles in vehicle fleets;
- Install EV charging facilities;
- Install CNG fueling facility;
- Provide preferential parking locations for EVs and CNG vehicles; and
- Charge reduced or no parking fee for EVs and CNG vehicles.

The Lent Ranch Final EIR[44], for example, requires most of these measures. The NASA Ames Development Plan Draft Environmental Impact Statement ("EIS")[45] would implement an aggressive transportation demand management program ("TDM") to reduce trip generation by at least 22 percent. The Stanford University Draft Community Plan and General Use Permit Draft EIR[46] adopts all applicable Bay Area TDMs. The Bickford Ranch Specific Plan Final EIR[47] requires that emissions be reduced by 40% by implementing many of these measures. The Old Greenwood Planned Development Draft EIR[48] requires, among others, paying an air quality mitigation fee to offset PM10 emissions from vehicle exhaust and re-entrained road dust to zero. Therefore, the above-listed measures should be assumed feasible unless otherwise demonstrated, and used by this Project to reduce traffic emissions to a less than significant level.

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[44] City of Elk Grove, Lent Ranch Marketplace, Draft Environmental Impact Report, for example Table 4.3-21, page 3.0-96, and Table 12-2, October 2000.

[45] NASA Ames Research Center, NASA Ames Development Plan, Draft Programmatic Environmental Impact Statement, pp. O-11 to O-16, November 2001.

[46] Santa Clara County, Draft Environmental Impact Report, Stanford University Draft Community Plan and General Use Permit Application, Table 4.11-6, June 23, 2000.

[47] County of Placer, Bickford Ranch Specific Plan Final Environmental Impact Report, Section 8.3.2 and 8.4, November 13, 2000.

[48] City of Truckee, Draft Environmental Impact Report, Old Greenwood Planned Development, pp. 4.5-10 to 4.5-13, February 2002.

IV.B.2 Operational Area Mitigation Measures

In addition to the mitigation measures proposed by the Draft EIR, operational area emissions can also be mitigated by controlling other sources of emissions from the Project, including exhaust emissions from landscaping equipment, emissions from natural gas combustion for heating/air-conditioning, increased ozone production from the heat island effect (see Comment III.B.7), and indirect emissions from electricity generation. In addition, the CEQA Guidelines of other air districts identify numerous other feasible measures for commercial/industrial operations. Some of these additional measures, which are routinely required as mitigation in other EIRs[49] include:

- Use electric lawn and garden equipment for landscaping (BAAQMD);
- Use electrically or CNG-powered specialty equipment, *e.g.*, utility carts (BAAQMD);
- Use propane-powered specialty equipment, *e.g.*, forklifts, utility carts, etc. (BAAQMD);
- Increase walls and attic insulation beyond Title 24 requirements (SLOAPCD[50], SCAQMD[51]);
- Orient buildings to maximize standard heating and cooling (SLOAPCD) and include passive solar design, *e.g.*, day-lighting (SCAQMD, SBAPCD[52], BCAQMD[53]);
- Plant shade trees in parking lots to reduce evaporative emissions from parked vehicles (SLOAPCD, SCAQMD, SBAPCD, BCAQMD);
- Plant shade trees along southern exposures of buildings to reduce summer cooling needs (SLOAPCD, SCAQMD, SBAPCD);

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[49] For example: City of Elk Grove, Lent Ranch Marketplace, Draft Environmental Impact Report, Table 4.3-5, p. 3.0-96, October 2000; County of Placer, Bickford Ranch Specific Plan Final Environmental Impact Report, pp. 8-20 to 8-22, November 13, 2000; Sacramento County, East Franklin Specific Plan, Final Environmental Impact Report, Table ES-1; and Appendix D, February 2000; City of Truckee, Draft Environmental Impact Report, Old Greenwood Planned Development, pp. 4.5-10 to 4.5-13, February 2002.

[50] San Luis Obispo Air Pollution Control District, CEQA Air Quality Handbook, August 1997.

[51] South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993.

[52] Santa Barbara Air Pollution Control District, Scope and Content of Air Quality Sections in Environmental Documents, September 1997.

[53] Butte County Air Quality Management District, Indirect Source Review Guidelines, March 1997.

- Use energy-efficient and automated controls for air conditioning (SCAQMD, BCAQMD);
- Use lighting controls and energy-efficient interior lighting (SLOAPCD, SCAQMD, SBAPCD, BCAQMD) and built-in energy-efficient appliances (SLOAPCD);
- Use double-paned windows (SLOAPCD, SCAQMD);
- Use energy-efficient low sodium parking lot and street lights (SLOAPCD, SCAQMD);
- Use light-colored roof materials (SCAQMD) and paint (SBAPCD) to reflect heat;
- Install solar cooling/heating (SBAPCD);
- Install solar water heater for at least 25% of the building floor area (BCAQMD);
- Substitute materials, *e.g.*, use water-based paint (SCAQMD);
- Modify manufacturing processes, *e.g.*, reduce process stages, closed loop-systems, materials recycling (SCAQMD);
- Install resource recovery systems that redirect chemicals to new production processes (SCAQMD);
- Use solar or low-emission water heaters (SCAQMD);
- Use centralized water-heating systems (SCAQMD, VCAPCD[54]);
- Use concrete or other non-pollutant materials for parking lots instead of asphalt (SBAPCD);
- Pay an air quality mitigation fee;
- Secure emission offsets;
- Landscape with drought-resistant species, and use groundcovers rather than pavement to reduce heat reflection;
- Provide electric maintenance equipment;
- Use ozone-destruction catalyst on air condition systems; and
- Reduce standard paving by 20%.

[54] Ventura County Air Pollution Control District, Ventura County Air Quality Management Plan, Appendix G-94, Guidelines for the Preparation of Air Quality Impact Analyses, October 1989.

Further, some air districts recommend that large projects that cannot be fully mitigated with on-site measures, should implement off-site mitigation measures, for example:

- Retrofit existing homes and businesses in the project area with approved energy conservation devices (SLOAPCD);
- Replace/repower school/transit bus with cleaner vehicles (SLOAPCD);
- Construct satellite work stations (SLOAPCD);
- Fund a program to buy and scrap older, high-emission vehicles (SLOAPCD);
- Contribute to an off-site TDM fund (VCAPCD);
- Repair smog-check waived vehicles (SLOAPCD);
- Introduce electric lawn and garden equipment exchange program (SLOAPCD); and
- Retrofit/purchase clean heavy-duty trucks, construction equipment, diesel locomotives, and marine vessels (SLOAPCD).

In sum, the traffic-related measures proposed by the Draft EIR to mitigate the Project's operational impacts are clearly inadequate to reduce its operational emissions to a less than significant level. There are many additional feasible measures that should be evaluated and required for this Project. The Draft EIR should be revised to include these additional measures and recirculated for public review.

NOISE

The following comments provide a brief discussion of the failure of the Draft EIR's noise impact assessment to satisfy the requirements of CEQA.

V. THE NOISE IMPACT ASSESSMENT IS INADEQUATE

As discussed in the following comments, the Draft EIR's noise impact assessment fails to adequately analyze and mitigate noise from Project construction.

V.1 The Draft EIR Fails To Adequately Analyze Noise From Project Construction

The Draft EIR's construction noise assessment fails to include noise from demolition, noting only that the Sacramento Municipal Code, Title 8 – Health and Safety, Chapter 8.68, Noise Control, exempts this activity "as long as the activity takes place between certain hours." (Draft EIR, pp. 6.6-23.) However, such an exemption does not exempt the analysis of demolition noise from CEQA review. The Draft EIR's noise analysis also fails to include the noise from backup bells, which frequently are a major source of noise complaints at construction sites.

The Draft EIR does not contain an adequate construction noise analysis and only supplies a few conclusory summary remarks. The Draft EIR only contains a list of construction equipment and typical noise levels and makes no attempt to estimate additive sound levels from multiple pieces of equipment. (Draft EIR, p. 6.6-21, Table 6.6-7.) An equipment schedule identifying the type and size of each piece of equipment that will be present by month on the Project site should be used to calculate sound levels around the construction site. (*See* also Comment II.A.)

The Draft EIR concludes that vibration from construction will not be significant because construction will not occur during recognized sleep hours. However, this ignores the fact that nightshift workers and hospital patients may be trying to sleep during normal construction hours. (Draft EIR, pp. 6.6-24/25.)

V.2 Additional Construction Noise Mitigation Is Feasible And Required

The construction noise analysis concludes that construction noise will remain significant and unavoidable after mitigation. Sensitive receptors live immediately across the street from Project construction. (Draft EIR, p. 6.6-23.) However, the Draft EIR does not require all feasible mitigation. A number of additional feasible

mitigation measures exists and should be required to mitigate the significant noise impacts from Project construction. For example, the following mitigation measures could be implemented to further reduce noise impacts: (1) notify affected parties of the proposed construction schedule and provide assistance with relocation if an affected party requests it; (2) establish a noise hotline that is continuously manned with someone with authority to seek out and solve the noise problem and shutdown the project if warranted; (3) install sound walls and barriers; (4) require the use of equipment that meets noise levels of 85 dB at a distance of 50 feet; (5) and the use of alternative backup bells.

V.3 The Draft EIR Fails To Adequately Analyze And Mitigate Noise From Project Operation

The Draft EIR evaluates the impact of helicopter noise based on 24-hour average metrics, arguing that the noise will only occur over a short period and, thus, would not affect a 24-hour average. (Draft EIR, pp. 6.6-28 – 6.6-31, Impacts 6.6-4, 6.6-5, and 6.6-6.) The Draft EIR argues that since the noise created by the helicopter is only short term, it will not have much of an effect on the 24-hour average. However, the Draft EIR cannot rely exclusively on these long term average metrics as in the City's General Plan. The Draft EIR must evaluate the impact of helicopter flights on exteriors and interiors the way the noise is experienced by people and as it occurs in real time. The noise impact arguably could be significant on patients in the hospital worshippers, children, those recreating in their yards, and so forth. Adequate mitigation should be required, at a minimum, providing financial assistance to noise-proof homes and other structures within the 70 dB noise contour.

VI. CONCLUSION

As detailed in the comments above, the Draft EIR is patently inadequate and fails to meet the most basic requirements of CEQA. The Draft EIR fails to adequately identify the Project's regulatory setting and fails to provide an adequate project description. The Draft EIR's air quality impact analysis is fatally flawed for a number of reasons: the Draft EIR did not analyze all pollutants or sources of emissions, the emissions analyses are piecemealed, and the emissions are underestimated. As a result, the Draft EIR fails to disclose all significant impacts and fails to disclose the full magnitude of all impacts. The Draft EIR further did not require all feasible mitigation to mitigate the significant impacts from both Project construction and mitigation. The Draft EIR's noise impact analysis is similarly flawed: construction and operational noise impacts are not adequately analyzed and not all feasible construction noise mitigation has been required to mitigate the significant construction and operational noise impacts.

Therefore, the Draft EIR should be revised to address these issues, additional mitigation should be incorporated, and the Draft EIR should be recirculated for public review.

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EDUCATION

Doctorate in Environmental Science and Engineering (D.Env.), University of California, Los Angeles, 2001

M.S. Biology (with focus on botany/ecology/limnology), Technical University of Munich, Germany, 1991

PROFESSIONAL HISTORY

Leson & Associates (previously Leson Environmental Consulting), Kensington, CA, Environmental Scientist/Project Manager, 1997-present

University of California Los Angeles, Graduate Research Assistant/Teaching Assistant, 1994-96

ECON Research and Development, Environmental Scientist, Ingelheim, Germany, 1992-93

Biocontrol, Environmental Projects Manager, Ingelheim, Germany, 1991-92

REPRESENTATIVE EXPERIENCE

Air Quality and Pollution Control

Projects include CEQA/NEPA review; attainment and non-attainment new source review ("NSR"), prevention of significant deterioration ("PSD") and Title V permitting; control technology analyses (BACT, LAER, RACT, BARCT, MACT); technology evaluations and cost-effectiveness analyses; criteria and toxic pollutant emission inventories; emission offsets; ambient and source monitoring; analysis of emissions estimates and ambient air pollutant concentration modeling. Some typical projects include:

- Critically reviewed and prepared technical comments on the air quality, biology, noise, water quality, and public health and safety sections of CEQA/NEPA documents for numerous commercial, residential, and industrial projects (*e.g.*, power plants, airports, residential developments, retail developments, refineries, quarries and mines).
- Critically reviewed and prepared technical comments on the air quality and public health sections of the Los Angeles Airport Master Plan (Draft, Supplement, and Final Environmental Impact Statement/Environmental Impact Report) for the City of El Segundo. Provided technical comments on the Draft and Final General Conformity Determination for the preferred alternative submitted to the Federal Aviation Administration.
- For several California refineries, evaluated compliance of fired sources with Bay Area Air Quality Management District ("BAAQMD") Rule 9-10. This required evaluation and review of hundreds of source tests to determine if refinery-wide emission caps and compliance monitoring provisions were being met.
- Critically reviewed and prepared technical comments on Draft Title V permits for several refineries and other industrial facilities in California.
- Evaluated the public health impacts of locating big-box retail developments in densely populated areas in California and Hawaii. The impacts of diesel exhaust emissions and noise on surrounding residential communities were measured and evaluated.
- In conjunction with the permitting of several residential and commercial developments, conducted studies to determine baseline concentrations of diesel exhaust particulate matter using an aethalometer.
- For an Indiana steel mill, evaluated technology to control NOx and CO emissions from fired sources, including electric arc furnaces and reheat furnaces, to establish BACT. This required a comprehensive review of U.S. and European operating experience. The lowest emission levels were being achieved by steel mills using selective catalytic reduction ("SCR") and selective non-catalytic reduction ("SNCR") in Sweden and The Netherlands.
- For a California petroleum coke calciner, evaluated technology to control NOx, CO, VOCs, and PM10 emissions from the kiln and pyroscrubbers to establish BACT and LAER. This required a review of state and federal clearinghouses, working with regulatory agencies and pollution control vendors, and obtaining and reviewing permits and emissions data from other similar facilities. The best-controlled facilities were located in the South Coast Air Quality Management District ("SCAQMD").
- For a Kentucky coal-fired power plant, identified the lowest NOx levels that had been permitted and demonstrated in practice to establish BACT. Reviewed operating experience of European, Japanese, and U.S. facilities and evaluated continuous emission monitoring data. The lowest NOx levels had been permitted and achieved in Denmark and in the U.S. in Texas and New York.
- In support of efforts to lower the CO BACT level for power plant emissions, evaluated the contribution of CO emissions to tropospheric ozone formation and co-authored report on same.
- Critically reviewed and prepared technical comments on applications for certification ("AFCs") for several natural-gas fired and geothermal power plants in California permitted

by the California Energy Commission ("CEC"). The comments addressed construction and operational emissions inventories and dispersion modeling, BACT for turbines, etc.

- Critically reviewed and prepared technical comments on draft PSD permits for several natural-gas fired power plants in California, Indiana, and Oregon. The comments addressed emission inventories, BACT, case-by-case MACT, compliance monitoring, cost-effectiveness analyses, and enforceability of permit limits.
- For a California refinery, evaluated technology to control NOx and CO emissions from CO Boilers to establish RACT/BARCT to comply with BAAQMD Rule 9-10. This required a review of BACT/RACT/LAER clearinghouses, working with regulatory agencies across the U.S., and reviewing federal and state regulations and State Implementation Plans ("SIPs"). The lowest levels were required in a SCAQMD rule and in the Texas SIP.
- In support of several federal lawsuits filed under the Clean Air Act, prepared cost-effectiveness analyses for SCR and oxidation catalysts for simple cycle gas turbines and evaluated opacity data.
- Provided comprehensive environmental and regulatory services for an industrial laundry chain. Facilitated permit process with the SCAQMD. Developed test protocol for VOC emissions, conducted field tests, and used mass balance methods to estimate emissions. Reduced disposal costs for solvent-containing waste streams by identifying alternative disposal options. Performed health risk screening for air toxics emissions. Provided permitting support with SCAQMD. Renegotiated sewer surcharges with wastewater treatment plant. Identified new customers for shop-towel recycling services.
- Designed computer model to predict performance of biological air pollution control (biofilters) as part of a collaborative technology assessment project, co-funded by several major chemical manufacturers. Experience using a wide range of environmental software, including air dispersion models, air emission modeling software, database programs, and geographic information systems ("GIS").

Water Quality and Pollution Control

Experience in all phases of water quality and pollution control, including surface water and ground water quality and supply studies, evaluating water and wastewater treatment technologies, and identifying, evaluating and implementing pollution controls. Some typical projects include:

- For a homeowner's association, reviewed a California Coastal Commission staff report on the replacement of 12,000 linear feet of wooden bulkhead with PVC sheet pile armor. Researched and evaluated impact of proposed project on lagoon water quality, including sediment resuspension, potential leaching of additives and sealants, and long-term stability. Summarized results in technical report.
- For a 500-MW combined-cycle power plant, prepared a study to evaluate the impact of proposed groundwater pumping on local water quality and supply, including a nearby stream, springs, and a spring-fed waterfall. The study was docketed with the CEC and summarized in a journal article.
- Evaluated impacts of on-shore oil drilling activities on large-scale coastal erosion in Nigeria.

- For a 500-MW combined-cycle power plant, identified and evaluated methods to reduce water use and water quality impacts. These included the use of zero-liquid-discharge systems and alternative cooling technologies, including dry and parallel wet-dry cooling. Prepared cost analyses and evaluated impact of options on water resources. This work led to a settlement in which parallel wet dry cooling and a crystallizer were selected, replacing 100 percent groundwater pumping and wastewater disposal to evaporation ponds.

Applied Ecology, Industrial Ecology and Risk Assessment

Experience in applied ecology, industrial ecology and risk assessment, including human and ecological risk assessments, life cycle assessment, evaluation and licensing of new chemicals, and fate and transport studies of contaminants. Experienced in botanical, phytoplankton, and intertidal species identification and water chemistry analyses. Some typical projects include:

- For the California Coastal Conservancy, San Francisco Estuary Institute, Invasive Spartina Project, evaluated the potential use of a new aquatic pesticide for eradication of non-native, invasive cordgrass (*Spartina spp.*) species in the San Francisco Estuary with respect to water quality, biological resources, and human health and safety. Assisted staff in preparing an amendment to the Final EIR.
- Evaluated likelihood that measured organochlorine pesticide concentrations at a U.S. naval air station are residuals from past applications of these pesticides consistent with manufacturers' recommendations. Retained as expert witness in lawsuit.
- Prepared human health risk assessments of air emissions from several industrial and commercial establishments, including power plants, refineries, and commercial laundries.
- Managed and conducted studies to license new pesticides. This work included the evaluation of the adequacy and identification of deficiencies in existing physical/chemical and health effects data sets, initiating and supervising studies to fill data gaps, conducting environmental fate and transport studies, and QA/QC compliance at subcontractor laboratories. Prepared licensing applications and coordinated the registration process with German licensing agencies. This work led to regulatory approval of several pesticide applications in less than six months.
- Designed and implemented database on physical/chemical properties, environmental fate, and health impacts of pesticides for a major European pesticide manufacturer.
- Designed and managed toxicological study on potential interference of delta-9-tetrahydro-cannabinol in food products with U.S. employee drug testing; co-authored peer-reviewed publication.
- Critically reviewed and prepared technical comments on AFCs for several natural-gas fired and geothermal power plants and transmission lines in California permitted by the CEC. The comments addressed avian collisions and electrocution, construction and operational noise impacts on wildlife, risks from brine ponds, and impacts on endangered species.
- For a 180-MW geothermal power plant, evaluated the impacts of plant construction and operation on the fragile desert ecosystem in the Salton Sea area. This work included baseline noise monitoring and assessing the impact of noise, brine handling and disposal, and air emissions on local biota, public health, and welfare.

- Designed research protocols for a coastal ecological inventory; developed sampling methodologies, coordinated field sampling, determined species abundance and distribution in intertidal zone, and analyzed data.
- Designed and conducted limnological study on effects of physical/chemical parameters on phytoplankton succession; performed water chemistry analyses and identified phytoplankton species; co-authored two journal articles on results.
- Conducted technical, ecological, and economic assessments of product lines from agricultural fiber crops for European equipment manufacturer; co-authored proprietary client reports.
- Developed life cycle assessment methodology for industrial products, including agricultural fiber crops and mineral fibers; analyzed technical feasibility and markets for thermal insulation materials from plant fibers and conducted comparative life cycle assessments.
- Conducted and organized underwater surveying and mapping of plant species in several lakes and rivers in Sweden and Germany as ecological indicators for the health of limnological ecosystems.

PRO BONO ACTIVITIES

- Management of "SecondAid," a non-profit organization providing tsunami relief for the recovery of small family businesses in Sri Lanka. (www.secondaid.org)
- Technical consulting for Lakota Village Fund, a non-profit organization for environmental improvement and economic development projects for the Pine Ridge Reservation in South Dakota. (www.lakota-village.de)

PROFESSIONAL AFFILIATIONS

American Chemical Society
American Institute of Chemical Engineers
Association of Environmental Professionals

SELECTED PUBLICATIONS

Fox JP and Pless P, Cost-effectiveness of catalytic oxidation for the control of VOCs and CO from power generation facilities, to be submitted to Journal of the Air & Waste Management Association.

Fox JP and Pless P, Fuel and energy penalties associated with catalytic pollution control systems used in power generation, to be submitted to Power Engineering.

Fox JP, Rose TP, Sawyer TL, and Pless P, Isotope hydrology of a spring-fed waterfall in fractured volcanic rock, to be submitted to Journal of Hydrology.

Leson G and Pless P, Hemp seeds and hemp oil, in: Grotenhermen F and Russo E (eds), Cannabis und Cannabinoids, Pharmacology, Toxicology, and Therapeutic Potential, The Haworth Integrative Healing Press, New York, 2002.

Appendix B

Leson G, Pless P, Grotenhermen F, Kalant H, and ElSohly M, Evaluating the impact of hemp food consumption on workplace drug tests, Journal of Analytical Toxicology, vol. 25 (11/12), pp. 1-8, 2001.

Pless P, Technical and environmental assessment of thermal insulation materials from fiber crops, doctoral dissertation in Environmental Science and Engineering, University of California, Los Angeles, 2001.

Leson G and Pless P, Assessing the impact of THC uptake from hemp oil cosmetics on work-place drug testing, Report to the Agricultural Research and Development Initiative ("ARDI"), Morris, MB, 2001.

Leson G and Pless P, Hemp Foods and Oils for Health, Your Guide to Cooking, Nutrition and Body Care, HempTech, Sebastopol, CA, 1999.

Leson G and Pless P, What variety? Hemp cultivars for Canada, Commercial Hemp, Fall 1998, pp. 7–8.

Leson G and Pless P, Farming and processing: Technology status, Commercial Hemp, Summer 1998, pp. 5-6.

Center for Waste Reduction Technologies in the American Institute of Chemical Engineers, Collaborative Biofilter Project, Technical Report, co-author with Leson G of sections 'Compound Database,' 'Design Manual,' and 'Literature Database,' 1998.

Hantke B, Domany I, Fleischer P, Koch M, Pless P, Wiendl M, and Melzer M, Depth profiles of the kinetics of phosphatase activity in hardwater lakes of different trophic level, Arch. Hydrobiologia, vol. 135, pp. 451-471, 1996.

Hantke B, Fleischer P, Domany I, Koch M, Pless P, Wiendl M, and Melzer M, P-release from DOP by phosphatase activity in comparison to P-excretion by zooplankton: studies in hardwater lakes of different trophic level, Hydrobiologia, vol. 317, pp. 151-162, 1996.

Pless P, Untersuchungen zur Phytoplanktonentwicklung im Herrensee (investigations on phytoplankton succession in an oligotrophic hardwater lake), Masters thesis in biology with focus on botany/ecology/limnology, Technical University of Munich, Germany, 1991.

Appendix B

SMITH ENGINEERING & MANAGEMENT

September 8, 2005

Mr. Ted Franklin
Weinberg, Roger & Rosenfeld
1001 Marina Village Parkway, Suite 200
Alameda, CA 94501-1091

Subject: Sutter Medical Center and Trinity Cathedral Projects, Sacramento, Draft Environmental Impact Report Review

P05010

Dear Mr. Franklin:

Per your request I have reviewed the Draft Environmental Impact Report for the Sutter Medical Center, Sacramento Project and the Trinity Cathedral Project that has been prepared for the City of Sacramento. Hereinafter, the subject report is referred to as "the DEIR", the Sutter Medical Center, Sacramento Project is referred to as "the SMCS project", the Trinity Cathedral project is referred to as "the Cathedral project" and the two projects in combination are referred to as "the project". My review has concentrated on the transportation/traffic issues posed by the DEIR.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California, 36 years of professional transportation/traffic engineering consulting practice in California including preparation and review of transportation/traffic components of environmental documents. My resume is attached herewith. This letter documents comments and conclusions resultant from my review.

The DEIR Underestimates Traffic Generation Of the Hospital Component of the SMCS Project

For estimating the traffic generating characteristics of all other components of the combined projects, the DEIR relies on a data from a technical reference source normally recognized as authoritative by transportation professionals, the publication of the Institute Of Transportation Engineers entitled *Trip Generation, 7th Edition*. However, in the case of the "hospital" component of the SMCS project, the DEIR relies upon trip generation rates based upon observations at the current SMCS hospital facility. The DEIR traffic estimate for the hospital is based on rates of 1.02 trips per thousand square feet of hospital building area in the AM peak commute hour and .83 trips per thousand square feet in the PM peak commute hour. By contrast, *Trip Generation, 7th* Edition indicates that a hospital use would have a trip generation of

1.20 trips per thousand square feet in the AM peak commute hour and 1.18 trips per thousand square feet in the PM peak commute hour.[1] With the hospital in the SMCS project sized at 504,176 gross square feet, the differential in trip generation rates results in the DEIR reporting 90 less trips in the AM peak and 176 less trips in the PM peak than it would have had it relied upon rates from *Trip Generation, 7th Edition* in a manner consistent with the rest of its analysis. These differentials respectively comprise 17.5 and 42 percent increments to the hospital's AM and PM contribution to traffic and 10.6 and 19.1 percent increments to the overall SMCS project's respective AM and PM traffic generation.

In addition, the DEIR's analysis of the directional distribution of the hospital traffic assumes a more even directional distribution (inbounds versus outbounds) than indicated in *Trip Generation, 7th Edition*. The DEIR assumes that AM peak traffic would be 53% inbound and 47% outbound while *Trip Generation, 7th Edition* indicates it would be 67 percent inbound, 33 percent outbound. Similarly, the DEIR assumes that PM peak traffic would be 37% inbound and 63% outbound while *Trip Generation, 7th Edition* indicates it would be 33% inbound, 67% outbound. When the higher directional split percentages of *Trip Generation, 7th Edition* are considered in combination with the higher trip generation rate, the entire SMCS project's traffic contributions in the critical peak directions would be 11.4 percent higher in the AM peak (inbound) and 20.3 percent higher in the PM peak (outbound) than reported in the DEIR. 8-57

Although in estimating the traffic generation characteristics of the hospital component the DEIR has relied upon its own unique data set that indicates considerably less traffic than the most normally relied upon data resource, it has not published any of the details of the studies and observations that underlie the assumed trip generation rates. This lack of documentation deprives the public of the opportunity to review and determine whether the underlying studies simply missed a component of the current hospital traffic, might have been conducted on an anomalous day or in an anomalous season of the year, or are truly reflective of the characteristics of the current SMCS hospital. The DEIR must be recirculated with an inclusion of the details of the data supporting the trip generation rates. Moreover, even if the data as reported prove representative of the present Sutter General Hospital traffic characteristics, the project applicant's own statement of objectives (DEIR page 2-9, bullets 5 through 9) leads to the logical conclusion that the current hospital's traffic generation rates may be less than normal because the current hospital does not support the latest diagnosis and treatment technologies and patient care processes and philosophies. It would be logical to assume that at the conclusion of the expansion and upgradings that are a key element of the SMCS project, the hospital component would have traffic

[1] *Trip Generation, 7th Edition*, Land Use Category 620, pages 1102 and 1103

characteristics more comparable to other hospitals rather than to those of the existing, apparently somewhat obsolescent and perhaps consequently underutilized facility. In these circumstances, for the DEIR to be consistent with the good faith effort to disclose impact required by CEQA, the traffic analysis should be redone using trip generation information for the hospital component based on *Trip Generation, 7th Edition.* The DEIR should be so revised, in combination with other revisions recommended herein, using the ITE trip generation rate for the hospital component and should be recirculated in draft status if there are any new disclosures of significance as the result of the revised analysis.

As a side note to the discussion of the trip generation analysis, the traffic portion of the DEIR identifies 290 and 294 trips respectively in the AM and PM peak hours on internal roadways within the proposed SMCS complex between pick-up/drop-off points and parking facilities. These internal movements are not of consequence to the external street and highway analysis, but it is unclear whether they have been considered and whether they are of consequence in the Air and Noise components of the DEIR analysis.

Intersection Traffic Analysis Does Not Consider Consequences Of Queuing

Traffic queues or stacking occurs when lines of vehicles standing or moving at crawl speed build while waiting for the right of way at an intersection, upstream of bottleneck conditions, behind freeway ramp meters and at other traffic flow obstructions such as at parking lot entry and exit control administration points. To its credit, the DEIR traffic analysis does consider the consequences of queuing in its evaluation of impacts on freeway mainlines, freeway ramp junctions and at parking garage entry control points. However, it does not assess the consequences of traffic queues at signalized intersections, even though it reasonably could have done so at minimal additional effort.

Analysis of the impacts of queue lengths in relation to available stacking space is critical, particularly in a dense urban street grid, because, if queues exceed the available stacking space (also called queue storage capacity), the actual Level Of Service (LOS) experienced by drivers will be considerably worse than the theoretical signalized intersection LOS projections that are one of the primary tests of impact in the DEIR. For example, if the number of vehicles that build up in a left turn storage lane while awaiting the next green light exceed the length of the left turn storage lane, the extra vehicles will block a through lane, with the consequence that the occasionally blocked through lane will not function as assumed in the theoretical calculations and actual delay and LOS experienced may be considerably worse than predicted in the theoretical calculations. Another common operational situation where queues cause actual conditions to be considerably worse than in the theoretical calculations is where

stacking on the street obstructs the entries to major parking structures or major institutional driveways. This is why it is important that the DEIR analysis consider queue projections in the signalized intersection analysis and whether exceeding available queue storage space creates an LOS condition that is overriding to and worse than the theoretical calculation for the signalized intersection. Such an analysis could have been done at minimal additional effort, since simply toggling an option in the traffic program employed in the DEIR produces a forecast of the projected design queue length for each lane or lane group at each intersection analyzed. In a DEIR that is considering traffic impacts on signalized intersections in a dense downtown grid, the omission of consideration of projected queue lengths and failure to assess their consequences is not consistent with the good faith effort to disclose impact required by CEQA. The DEIR should be revised, in combination with other revisions recommended herein, to include an analysis of queue impacts at signalized intersections and should be recirculated in draft status if there are any new disclosures of significance as the result of the revised analysis.

The 20-Year Time Frame For Consideration of Conversion to a Two-Way Street System Is Inappropriate

The DEIR indicates that the proposed SMCS project is expected to begin construction in 2006 and be completed by 2010. The City is currently considering the possibility of altering the downtown street system to convert some one way streets in the project area to two-way streets. The two-way streets project would significantly alter the traffic capacity of the area traffic network that would be impacted by the SMCS project. If approved, the two-way street conversion could readily be implemented during the same time frame as the proposed SMCS project is constructed – that is, by year 2010. However, the DEIR only analyzes the SMCS project in relation to the altered two-way street network in the context of the cumulative condition analysis – reflective of the year 2025. As a consequence of the choice in the time-frame of the analysis, the public is presented with the impression of the issue as a remote matter of possible consequences 20 years hence, when in reality the consequences of the combination of the two-way streets plan and the SMCS project could easily be experienced in 5 years or less.

In investigating this issue, we compared the various DEIR figures and tables and appendixed calculation sheets indicating the traffic volumes and LOS at key intersections in the project area for the "existing", "existing + SMCS project", "cumulative-no project", "cumulative + two-way streets" and "cumulative + two-way streets + SMCS project" conditions. These comparisons make evident that at some key intersections in the project area where the thresholds of significant impact are exceeded at some levels of cumulative analysis, the incremental traffic changes due to

cumulative traffic, change to two-way streets, and to the SMCS project are of reasonably comparable magnitude. This leads to the logical conclusion that, had the DEIR analyzed the SMCS project in the context of a modified base case of "existing traffic + two-way streets conversion" (that is, the condition of the street network that could reasonably be in place at the time of SMCS project completion in 2010), some of the significant traffic impacts at intersections that emerge only in the cumulative scenarios of the current DEIR would be found to emerge as immediate project impacts.

Whether this time-structure of the alternatives analyzed in the DEIR, wherein the combined effects of the SMCS project and the two-way streets plan, both of which could be completed in the immediate short-range future, are only analyzed as possible cumulative events, is improper as a matter of law under CEQA is outside this analyst's area of responsibility. However, in this analyst's professional opinion, as a matter of fairness to the public and a matter of due diligence in a good faith effort to disclose impact, the consequences of the combined effects of the two-way streets plan and the SMCS project, which both could be completed by Year 2010, should be analyzed in the context of the "existing plus project" scenario, or more descriptively, as the "modified existing plus project scenario". This would avoid inherently characterizing the combined effects of the SMCS project and the two-way streets project as a time-distant and hence improbable and unimportant scenario (as the structure of the current DEIR analysis does) and inform the public about the combined impacts in a time frame in which they might logically occur.

Projected Traffic Volumes At One Critical Location Are Clearly Erroneous Suggesting the Possibility of Systematic Error in the DEIR's Traffic Projections

In carrying out the above analysis, in attempting to quantify, for intersections where significant impacts emerge in the cumulative scenarios, the incremental changes to traffic individually resultant from cumulative growth, the two-way streets plan, and from the project, we found at least one location where the DEIR's traffic projections are completely illogical and may be indicative of a flaw that undermines the results of the DEIR's entire traffic analysis. In comparing the reported traffic volumes for the "existing" and "existing + SMCS project" conditions (data from DEIR Figures 6.7-5 and 6.7-9) for "intersection 17", that of 29th with J and the freeway off ramp, we found that the DEIR reports that the PM peak hour freeway exit ramp volume would decline from 642 in the "existing" condition to 518 in the "existing + project" condition. It is entirely illogical that a project in the immediate area of this intersection that the DEIR projects to add over 900 PM peak hour trips to the street system would cause the subject freeway ramp approach to decline by 124 trips (about 20 percent of its existing traffic). Clearly, something is in error. To determine whether the error was simply one of graphics preparation, we consulted the appropriate computation sheets for this intersection and scenarios that are contained in the DEIR Volume III. The volumes for

the freeway ramp approach in the computation sheet for the "existing + project" scenario correspond to the total for the ramp on Figure 6.7-9. However, the ramp approach volumes in the computation sheet for the "existing" scenario appear to be a duplicate entry of the southbound 29th Street volumes – apparently a completely separate error from that disclosed by the comparison of the two cited figures. As a further check on the situation, we compared the total off-ramp volumes for the subject location as reported in Figures 6.7-5 and 6.7-9 with the PM peak traffic volumes the DEIR reports for this same freeway off ramp in the ramp LOS analysis presented on Tables 6.7-10 and 6.7-17 respectively. For the existing condition situation, the PM peak ramp volume of 642 reported on Figure 6.7-5 is reasonably consistent with the volume of 698 reported on Table 6.7-10 for the same ramp and peak period (the difference of 56 trips could easily be accounted for by slight difference in volume and time of peak on the ramp versus at time of peak of the intersection as a whole or attributed to normal daily variations in traffic if the count of the ramp and the count of the intersection were taken on different days). However, the PM peak ramp volume of 518 reported on Figure 6.7-9 is significantly inconsistent with the ramp volume of 744 reported for the same peak, location and scenario on Table 6.7-17.

In an effort to check whether the apparent error was systematic in the entire analysis or simply confined to the "existing" versus "existing + SMCS project" scenario, we compared the results of the "cumulative" and "cumulative + SCMS project" scenarios for this same intersection and ramp. The results of that comparison seem to confirm the existence of systematic error in the traffic projections on which the analyses are based. In the "cumulative" scenario (Figure 6.7-13) the PM peak volume for the subject ramp is 486, implausibly lower than the "existing" 642 and 698 reported for the same location and peak on Figure 6.7-5 and Table 6.7-10. Moreover, while the PM peak volume for the subject ramp in the "cumulative + SMCS project" scenario as presented of Figure 6.7-15 is more than the "cumulative" alone as might be expected, the increase seems suspiciously low. Furthermore, this PM peak volume for the ramp on Figure 6.7-15 of 526 is also incomprehensibly less than the "existing" volume of 642 reported on Figure 6.7-5. The 526 on the ramp in Figure 6.7-15 is vastly inconsistent with the volume of 753 for the same ramp in the analysis of the corresponding scenario and time period on Table 6.7-31. Clearly, the errors in traffic projections and consequent evaluations of LOS and impact at this location are systematic throughout all the scenarios analyzed in the report.

While the errors might be isolated to the analysis of this particular intersection (which would still necessitate re-computation of the traffic analysis and possibly recirculation of the draft since this is an intersection that exceeds significance thresholds in some scenarios), given the way that traffic forecasts are prepared, the projections at any one intersection are linked to those close by. So the error that seems obvious at the 29th and J intersection may be linked to others at nearby intersections that may be less

obvious in volume comparisons but nonetheless significant in the results of the analysis. In that circumstance, a complete re-computation and re-circulation of the traffic component of the DEIR would be in order.

The DEIR Fails to Disclose the Project's Likely Failure to Meet the City's 35 Percent Alternative Transit Policy Goal and the Probable Emergence of the SCMS Full Parking Supply Alternative As the Actual SCMS Project

Although the DEIR outlines an extensive Transportation System Management/Parking Demand Management (TSM/PDM) plan for SMCS in compliance with related City ordinance and in an effort to meet the City's 35 percent alternative transit policy goal, and although SMCS will no doubt implement the TSM/PDM plan in good faith, transportation professionals recognize that, because of some unique characteristics, hospital/medical center complexes are fairly unresponsive to TSM/PDM programs and are highly unlikely to meet or even approach such ambitious alternative transportation goals. The reasons are numerous. Doctors, typically being high earners, are in a transit- and pooling-resistant economic stratum. In addition, because many have office practices at separate locations or hospital privileges at several hospitals, or a teaching practice elsewhere, travel by auto is their only practical alternative. For staff members, because those on the evening shift and the late-night shift make either their journey to work or homebound journey at a late-night hour, transit or pooling are unattractive or impractical options. Even staff members who are for a period of time on the day shift are unlikely to form transit or pooling habits because so many of them are periodically shifted to the evening or night shifts when transit and pooling is far less practical. Most patients' and visitors' travel to the medical complex is irregular and episodic and as a consequence, they are unlikely to develop transit or pooling habits or be influenced by TSM/PDM incentive programs. Beyond these alternative transportation-resistant characteristics of primary travelers to a medical complex, there are site-specific characteristics that also reduce the likelihood of the SMCS project achieving the City's alternative transportation goals. The nearest station on the regional light rail system is fully six blocks away from the nearest point on the SMCS development site that is not intended to be occupied by a parking garage. Although there are a few conventional bus transit routes that pass within several blocks of the site, the portion of the large region from which people travel to and from SMCS those routes directly serve is very small. So there is actually an insufficient infrastructure as well as a resistant traveling population, making it highly unlikely that the City's alternative transportation goal will be met. Because this is a predictable outcome of the SMCS project, the DEIR should disclose to the public as a significant project impact that it is unlikely that the City's alternative transit policy goal and the DEIR is currently deficient in failing to do so.

Adequacy of the SMCS parking provisions and avoidance of neighborhood parking impacts by the SMCS project is directly related to the issue of achievement of the

City's 35 percent alternative transit policy goal. The DEIR does disclose that the SCMS project could result in a parking shortfall of 537 parking spaces and the combined project result in a 562 space shortfall although it asserts that the TSM/PDM program and certain characteristics of the project that cause parking demands less than norms could reduce the shortfalls to insignificance. It also discloses that potentially significant parking shortfalls could be experienced during construction. But in consequence of the obvious questionability of parking adequacy, the DEIR proposes as a mitigation condition that parking adequacy would be monitored and if shortfalls are identified, additional parking would be developed. While it could be argued that the additional parking might be at a remote site, this would be ineffective because workers and visitors to the medical complex will tend to park in the neighborhoods near the medical complex, causing the neighborhood parking impacts the additional parking is intended to avoid. Given the predictable failure of the TSM/PDM program to meet alternative transportation policy goals, the only effective way to mitigate parking impacts or avoid them in the first place is to implement what is described in the DEIR as the Full Parking Supply Alternative. This expands the proposed Community Parking Structure by several levels to make up the 562 stall parking deficit. Since this form of parking development is most likely, the DEIR should disclose to the public this form of the Community Parking Structure as an integral part of the SMCS project rather than as a lightly analyzed alternative to the SMCS project.

Purported Mitigation Measures Involving Payment of "Fair Share" Contributions Do Not Qualify As Mitigation As Mitigation Unless There Is Certainty The Measures Will Be Implemented In a Timely Manner

In some instances, the DEIR assumes that the significant traffic impacts of the SMCS project that are disclosed will be mitigated through payment of a "fair share" contribution to improvements that would mitigate the impact. However, this involves an underlying assumption that enough "fair share" payers will emerge to fully fund the mitigation measures so that they can be fully funded in a timely manner relative to the incidence of impacts. Unless the DEIR demonstrates that there are other specific committed projects required to make a balance of "fair share" payments to fully fund the measures in a timely manner, or unless the City as lead agency is committed to provide the balance of funds not provided through "fair share" payments to implement the measures in a timely manner, the purported mitigations must be considered speculative and not qualifying as mitigation under CEQA. 8-58

Conclusion

In my opinion, all of the foregoing makes the current DEIR significantly deficient and is grounds for revision and recirculation of the document in draft form. A particular

concern is that several of the deficiencies in the analysis noted above create a compound error in the disclosure of impact.

This completes the summary of my initial comments on this matter. I would be pleased to discuss these comments with you.

Sincerely,

SMITH Engineering & Management
A California Corporation

Daniel T. Smith Jr., P.E.
President

Appendix C

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil)
California No. 938 (Traffic)
Nevada No. 7969 (Civil)
Washington No. 29337 (Civil)
Arizona No. 22131 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutial campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Honnburger *et al.* Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.

Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

Appendix D

WILSON, IHRIG & ASSOCIATES, INC.
ACOUSTICAL CONSULTANTS

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9 September 2005

Mr. Theodore Franklin
Attorney
Weinberg, Roger & Rosenfeld
1001 Marina Village Parkway, Suite 200
Alameda, California 94501-1091

Subject: Sutter Medical Center Master Plan and Trinity Cathedral Project
Draft Environmental Impact Report

Dear Mr. Franklin:

At your request, I reviewed the Draft Environmental Impact Report for the Sutter Medical Center Master Plan and Trinity Cathedral Project with respect to noise impacts.

The following are my comments:

Helicopter Noise Impact

The DEIR characterizes helicopter noise impact on the 24-hour noise environment as less than significant, because the estimated Community Noise Exposure Level is less than the 65 dB standard of the California Division of Aeronautics and the 60dB criterion of the City of Sacramento.[1] The estimated Interior Ldn (or DNL) and CNEL are less than the City of Sacramento standard of 45dB.[2] These 24-hour noise metrics do not adequately address single event noise of relatively high level due to helicopters, as is correctly stated in the DEIR.[3]

A more pertinent descriptor of infrequent events at night would be sleep disturbance. A discussion of sleep disturbance and awakening due to individual helicopter flights is provided in the DEIR, which correctly indicates that people living nearby could potentially be affected during their short duration of exposure to helicopter noise. The DEIR indicates that no significance standards regarding noise impact on sleep disturbance or awakening are available, and thus defers to the City of Sacramento Municipal Code, which indicates that the maximum allowable noise limit is 70dBA during the hours of 10pm to 7am.[4] This limit should probably be reduced

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[1] DEIR, Pg. 6.6-27

[2] DEIR, pg. 6.6-28

[3] DEIR, pg. 6.6-29

[4] DEIR, pg. 6.6-29

Appendix E

by 5 dB to account for the impulsive character of helicopter blade chop noise (this was provided in earlier versions of the code, and may be present in the current code.) Thus, the limit would be 65dB. In any case, the DEIR correctly indicates that the impact relative to the City of Sacramento Municipal Code is significant.

Estimates of the probabilities of sleep disturbance and awakening versus the Single Event Level (SEL) have been developed and are available in the literature.[5,6] (The SEL is the sound energy exposure of the entire noise event normalized to a period of one second.) Extensive measurements of the helicopter noise were conducted for the DEIR, including both the SEL and maximum noise levels. The measured SEL data reported in the DEIR can be used with these curves to predict such probabilities. For example, if the probability of awakening is 50% for a given SEL, one may expect that 50% of the people thus exposed would be awakened. This can be further described in terms of contours of percentage of awakened population (10%, 20% 30%, etc.) along the flight path.

The relationship between the percentage of awakenings versus *interior* SEL is shown in Table 1. The SEL's reported in the DEIR are for the *exterior*, and are as high as 95 to 99 dBA. Assuming a difference between exterior and interior noise levels of 20dB, the data provided in Table 1 suggest that between 25% and 30% of the population would be awakened, not just disturbed, by late night helipad use. The percentage of the population that would experience sleep disturbance would be higher than the percentage awakened.

The DEIR assumes as a worst case that two flights might occur at night, involving two arrivals and two departures.[7] For two flights occurring during the night, a joint probability should be employed for assessment of sleep disturbance and awakening. The binomial distribution[8] can be employed to estimate the percentage of the population that would be awakened by at least one of the flights. For example, if the probability of awakening due to a single flight with a given SEL is 30%, then the probability of not being awakened by the flight is 70%. If two flights occur, the probability of being awakened by both flights is 0.3 x 0.3 = 0.09. The probability of being awakened by the first flight and not the second is 0.3 x 0.7 = 0.21, and the probability of being awakened by the second flight and not the first is 0.7 x 0.3 = 0.21. The sum of these probabilities, 0.51, is the probability of being awakened at by at least one of these flights. Thus, the combined joint probability of being awakened increases with the number of flights, and, in this example, would be in excess of 50%.

8-59

With respect to significance criteria for awakening, a probability of awakening of 1% is probably not significant, as other disturbances occur through the night that might awaken a larger percentage of the population. However, reasonable people might very well consider a 50%

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[5] Cowan, James P., **Handbook of Environmental Acoustics,** Van Nostrand Reinhold, New York, 1994, pp46-48.

[6] FICON, **Federal Agency Review of Selected Airport Noise Analysis Issues,** Washington, D.C., Federal Interagency Committee on Noise, 1992.

[7] DEIR, pg. 6.6-15, bottom paragraph.

[8] There are many statistics texts that can be referred to. The one that I have at hand is Elementary Statistics with Applications in Medicine and the Biological Sciences, by Frederick E. Croxton, Dover Publications, Inc, 1959.

probability of awakening as significant. An appropriate significance criterion for the percentage of people awakened would likely fall between these two values.

Mitigation of helicopter noise is possible to some extent. The DEIR already indicates that flight paths would be confined to highway corridors. A mitigation that has been employed for aircraft and highway noise control is treatment of affected receivers, such as upgrading windows and doors with glazing rated for sound transmission loss. Additional mitigations that can be considered include so-called "piloting techniques" promulgated by the Helicopter Association International.[9] These should be investigated further for possible noise impact mitigation. Finally, the most effective mitigation would be to preclude scheduled late night helipad use between the hours of 10pm and 7am.

8-59 (cont.)

An appropriate significance criterion for awakening should be developed for this DEIR, and contours of the probability of sleep disturbance and awakening should be incorporated into the DEIR to aid interpretation of the SEL contours. This should not require additional field work, as the necessary field data have already been collected, and SEL's have already been developed from the Integrated Noise Model. Some additional search of the literature concerning sleep disturbance and awakening would be required.

Table 1 Relationship between SEL and Probability of Awakening (After Cowan, 1994, pg. 48)

% Awakenings	SEL (dB)
0	20
1	30
3	40
6	50
12	60
20	70
32	80
48	90
69	100
97	110

Cooling Tower Noise

The DEIR indicates that several large cooling towers would be located on roof of the SMF Building.[10] The noise from cooling towers can be significant if not properly controlled. These cooling towers would be 27 feet high, and would thus be difficult to shield from the community. The community noise impact of the cooling towers should be assessed and mitigation recommended if shown to exceed the City of Sacramento Municipal Code limit.

8-60

[9] Fly Neighborly Guide, Helicopter Association International, 1635 Prince Street, Alexandria, VA 22314. (See www.rotor.com)

[10] DEIR, pg. 2-25. See also Figure 2-14 .

Conclusion

I have not completed a review of the DEIR with respect to the Trinity Cathedral Project. I am not aware of any significant issues concerning this aspect of the general plan. If you wish, I can continue with the review.

Please contact me if you have any questions or desire additional information.

Very truly yours:

WILSON, IHRIG & ASSOCIATES

James T. Nelson, Ph.D., P.E.
Vice President

Appendix E

WILSON, IHRIG & ASSOCIATES, INC.
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JAMES T. NELSON, Ph.D., P.E.

Professional Background:

1973 - Present, Wilson, Ihrig & Associates: Noise and vibration control engineering for rail and highway transportation systems, semiconductor manufacturing facilities, aerospace facilities, communities, research laboratories, and industrial plants. Project experience includes ground vibration prediction and control, tunnel/soil interaction, numerical analysis of vibration propagation in layered porous soils and rock, track and rail vehicle dynamics, rail vehicle shock and vibration characterization, subway air pressure transient prediction and control, direct fixation rail fastener specification, long distance sound propagation measurements in complex terrain, HVAC and mechanical equipment, seismic ground disturbance surveys, preparation of noise and vibration elements for environmental impact studies, and design and development of digital and analog instrumentation for data acquisition and analysis. Currently serving as Vice President and Principal Engineer after holding various positions within the firm.

1984-1987 Earth Sciences Division, Lawrence Berkeley Laboratory: Conducted research concerning acoustical phenomena related to hydraulic fracturing. Work included theoretical and numerical modeling of fluid pressure transients and coupled fluid/solid wave propagation in heterogeneous fractured rock of variable porosity.

1992 (Spring), University of California, Berkeley, Department of Mechanical Engineering: Visiting Lecturer, ME173, Fundamentals of Acoustics.

Education:

BA Physics & Mathematics, University of California, Berkeley, 1972
MS Engineering Science, Mechanical Engineering, University of California, Berkeley, 1982
Ph.D. Mechanical Engineering, University of California, Berkeley, 1988

License:

California, Professional Mechanical Engineer, 1979, License No. 019425

Professional Affiliations:

Member, Acoustical Society of America
Member, ASME
Transportation Research Board:
Member, Committee AP080, Rail Transit Design
Member, National Council of Acoustical Consultants
Member, Institute of Noise Control Engineering

Awards:

Pike Johnson Award for Best Paper, Transportation Research Board
Best Paper, Transportation Research Board Committee A1F04

Appendix F

PAPERS

Nelson, J. T., 2000, "Prediction of Ground Vibration Using Seismic Reflectivity Methods for a Porous Soil," **Journal of Sound and Vibration, v231** No. 3, 727-737.

Nelson, J. T., 1998, "Prediction of Ground Vibration Using Seismic Reflectivity Methods for a Porous Nelson, J. T., 2001, "Wheel Squeal Noise Control with Wheel and Rail Vibration Absorbers", Paper 746, **InterNoise 2001 Proceedings**, The Hague, The Netherlands, 27-30 August 2001

Soil," **International Workshop on Railway Noise (IWRN)**, Ile des Embiez, France, November 1998,

Nelson, J. T., 1996, "Recent Developments in Rail Transit Groundborne Noise and Vibration Control," **Journal of Sound and Vibration, v193**, No. 1, Academic Press, pg. 367-376.

Nelson, J. T., 1995, "Recent Developments in Rail Transit Groundborne Noise and Vibration Control," **Proceedings of the Fifth International Workshop on Railway and Tracked Transit System Noise**, Voss Norway, 21-24 June 1995.

Nelson, J. T. & Warren E. Blazier, Jr., 1991, "Foundation Design for Sensitive Manufacturing Equipment," **SPIE Proceedings**, San Jose, California.

Nelson, J. T., 1990, "Steel Elevated Structure Noise Reduction with Resilient Rail Fasteners at the NYCTA," **InterNoise 90 Proceedings**, Gothenburg, Sweden, pp. 395-400.

Nelson, J. T., 1988, "Aerial Structure Noise Reduction Effectiveness of Resilient Rail Fasteners," **InterNoise 88 Proceedings**, Avignon, France, pp. 1431-1436.

Nelson, J. T., H. J. Saurenman, 1987, "Prediction and Control of Groundborne Noise and Vibration from Rapid Transit Systems," **Environmental Issues: Noise, Rail Noise, and High-Speed Rail, Transportation Research Record**, 1143, pp. 26-35.

Nelson, J. T., W. E. Blazier, H. J. Saurenman, 1985, "Site Selection and Building Design for Minimizing Vibration," **Proceedings of the ASCE Symposium on Noise and Vibration Measurement, Prediction, and Control**, Denver, Colorado, pp. 131-141.

Saurenman, H. J., G. P. Wilson, J. T. Nelson, 1983, Control of Groundborne Noise and Vibration, **Journal of Sound and Vibration, v82**, No. 2, pp. 339-350.

Nelson, J. T., 1982, "Mechanical Impedance of Rail Transit Vehicles," **InterNoise 82 Proceedings**, 17-19 May 1982, San Francisco, California, pp. 221-224.

PUBLISHED REPORTS:

Nelson, J. T., **Wheel and Rail Vibration Absorber Testing and Demonstration**, TCRP Project C3A, (Sponsored by the Federal Transit Administration), Transportation Research Board, National Research Council, 2000.

Appendix F

Nelson, J. T., **Wheel/Rail Noise Control Manual**, TCRP Report 23, (Sponsored by the Federal Transit Administration), Transportation Research Board, National Research Council, 1997.

Nelson, J. T., 1990, **Green's Functions for a Heterogeneous Porous Layer with Application to Hydraulic Fracturing**, Ph.D. Thesis, Lawrence Berkeley Laboratory, Earth Sciences Division, University of California, Berkeley, 1988

Nelson, J. T., G. P. Wilson, 1989, **Noise Reduction Effectiveness of Resilient Rail Fasteners on Steel Solid Web Stringer Elevated Structures, Vol. 1&2**. New York City Transit Authority/ Wilson, Ihrig & Associates, Inc., for the U.S. Department of Transportation, Urban Mass Transportation Administration, March 1989, NTIS No. UMTA-NY-06-0087-89-1, 105 p.

Nelson, J. T., H. J. Saurenman, 1984, **Prediction and Control of Groundborne Noise and Vibration from Rapid Transit Systems, State-of-the-Art Review**, Wilson, Ihrig & Associates, Inc., for U.S. Department of Transportation.

Saurenman, H. J., G. P. Wilson, J. T. Nelson, 1982, **Handbook of Urban Rail Noise and Vibration Control**, Wilson, Ihrig & Associates, Inc. for U.S. Department of Transportation, Transportation Systems Center, NTIS No. UMTA-MA-06-0099-82-2.

REPRESENTATIVE PROJECTS

Vibration Sensitive Manufacturing and Research Facilities:

Washoe Medical Center (2004): Subcontractor to HDR to provide A&E design assistance for structural vibration control for a proposed hospital in Reno Nevada.

Stanford Linear Accelerator (2004): Vibration control engineering services for Title I & II design phases of advanced X-Ray source. The project included site vibration surveys, development of criteria, and prediction and control of vibration. This work was performed as a subcontractor to Jacobs Engineering.

Genentech Vacaville Building 10 (2004): Subcontractor to RMW Architects for floor vibration control.

Palo Alto Medical Foundation (2004): Site assessment and design of a vibration isolated base for a 3-Tesla Magnetic Resonance Imaging System

Conexant (2004): Structural floor vibration assessment and recommendations for control of vibration for an HP3000 wafer tester.

University of California, Berkeley (2001-2002): Predicted vibration magnitudes in research laboratories of the Physics Department due to proposed construction work at Le Conte Hall. This project involved circulation of questionnaires concerning researchers' concerns and experiences with respect to vibration, developing criteria for vibration impact on scanning tunneling microscopes and certain highly sensitive instrumentation involving SQUID detectors, documenting ground vibration at nearby sites at which similar construction work was underway, reviewing and

recommending ground-borne and structure-borne noise and vibration control provisions, and preparing a report. A seismic reflectivity was employed to predict ground vibration in soil and rock strata.

University of California, Berkeley (2002): Assessment of mechanical equipment noise and vibration sources in Birge Hall of the Physics Department, including evaluating basement floor and structure vibration for a variety of mechanical equipment and conditions, recommending vibration isolation provisions for new mechanical equipment, and documenting minimum background vibration. Of concern were the vibration exposure of scanning tunneling electron microscopes, atomic force microscopes, and a SQUID detector.

University of Washington (2001): Used seismic reflectivity methods to predict ground vibration for a light rail transit system alignment proposed through the University of Washington.

Palo Alto Medical Foundation (2001): Directed the assessment of ground vibration at a proposed site for a new magnetic resonance imaging system (MRI). Sources of vibration included trains and mechanical equipment.

KCATA Light Rail Project, Kansas City MO (2000): Reviewed laboratory equipment and criteria for medical mice at a cancer research facility in Kansas City, MO. Predicted basement laboratory vibration with a seismic reflectivity model of layer soils. Directed measurements of ground vibration and noise at the site. Provided a summary report.

Cymer CSD4: Laser Calibration Laboratory Floor Vibration Control(1999): Client: McGraw-Baldwyn. Developed design criteria, surveyed existing site vibration, evaluated conceptual structural designs, and recommended structural design approaches for controlling vibration in a sensitive laser calibration facility proposed for the new building. This work also included prediction and control of mechanical vibration.

Stanford Hospital CARDIAC MRI Vibration Control (1998), Client: ESS Architects: Characterized floor vibration due to footfalls and carts, predicted floor vibration reductions with various structural modifications, and recommended floor structure modifications for retro-fit installation of a state-of-the-art GE MRI.

Palo Alto Medical Foundation (1997-1998): Client: RMW Architects. Recommended criteria for floor vibration for medical exam rooms, structural designs to control floor vibration, foundation designs and building isolation to control MRI vibration caused by trains.

Rockwell Building 503: Semi-Conductor Fabrication Facility (1995-1998): Client: Dames & Moore, Inc. Organized and executed extensive vibration propagation tests of buildings with and without seismic base isolation. Directed finite element modeling effort to estimate floor responses and structure-soil interactions. Predicted construction vibration due to base isolation retrofit work, and changes to existing internally and externally generated vibration.

Rockwell Semiconductor Systems, Inc. Floor Vibration Studies (1996-1998): Client: Rockwell Semiconductor Systems, Inc. A number of floor vibration studies were conducted to determine suitability of floor vibration environments for various sensitive equipment.

Conexant, Inc. Stepper Vibration Control (1998-2002): Client: Conexant, Inc. Assisted facility managers with controlling floor vibration for various semiconductor manufacturing tools, such as state-of-the-art step-and-scan photolithography tools. Recommended modifications to existing floor structures to control floor vibration. Numerical modeling of floor structural design to predict stepper induced vibration. Directed floor vibration surveys for various new tools. Recommended vibration isolation provisions for controlling construction vibration.

Lawrence Berkeley Laboratory SEM Facility (1997): Client: BAE Construction. Recommended floor vibration limits, foundation designs, and building mechanical system vibration control provisions for a new scanning electron microscope research facility.

BEI Motion Systems Company (1992): Developed design recommendations for foundation of optical pointing system. Characterized site vibration environment, including measurement of very low level ground vibration amplitudes and spectral analysis. Predicted optical pointing system angular due to ground vibration with recommended foundation design.

Texas Instruments Semiconductor Manufacturing Facility, Singapore (1992): Provided vibration control recommendations to Pelton, Marsh, Kinsella, Inc. for controlling footfall induced floor vibration at a proposed semiconductor fabrication facility.

University of California at Santa Cruz (1991): (Warren Blazier Associates, Inc.) Characterized ambient floor vibration and floor transfer mobilities for a new biological research facility.

Lawrence Livermore Laboratory DPRF/NTTC Facility (ED2 International) (1989-1994): Principal consultant for noise and vibration control for a state-of-the-art research and development facility for the DOE. Tasks included reviewing construction documents and specifications, predicting floor vibration in clean-room high bay areas, recommending structural design provisions to maintain low levels of footfall induced vibration at an SEM, recommending criteria for floor vibration, evaluating existing site vibration, recommending HVAC, fume hood, and mechanical equipment noise and vibration control provisions, and recommending acoustical provisions for office and laboratory spaces. The building was to be the largest research facility at LLNL.

Lockheed Missiles & Space Company, Heliostat Support Design, Sunnyvale, CA (1989): Principal consultant for designing structural towers supporting two heliostats planned for a new research facility. A particular concern included maintaining image stability over an optical path extending 50 feet from the roof through the building structure to the ground floor.

Motorola Semiconductor Manufacturing Facility Site Characterization, Tianjin, China (1989); Project manager and principal investigator for evaluating existing ground vibration at a site proposed by Motorola, Inc. for a semiconductor manufacturing facility in Tianjin, China. The site included very soft marine sediments of about 60 to 80 feet depth which contributed to substantial low frequency vibration from distant trains and truck traffic. Transfer functions were measured to determine the response of test piles to incident ground vibration. This work was performed with Wilson, Ihrig & Associates, Inc., for Construction Management Technology, Inc.

Nikon Headquarters Showroom Vibration Control (1989): Principal consultant for recommending floor vibration control provisions for the Nikon Headquarters Building Showroom in Belmont, California. The recommendations concerned HVAC vibration control, vertical laminar flow hood vibration control, foundation pier supports for the floor slab, and a follow-up vibration survey. This work was performed with Wilson, Ihrig & Associates, Inc. for Takenaka International, with assistance by Warren Blazier Associates, Inc.

Lawrence Berkeley Laboratory, Rehabilitation of Facilities (1988): Principal consultant for providing noise control recommendations to Kaiser Engineers regarding cooling tower planned as part of general rehabilitation of the original laboratory site. The work included Title I and II phases for preliminary and final design, and construction document review, respectively.

University of California at Los Angeles (1987): (Warren Blazier Associates, Inc.) Characterized floor vibration for research facilities.

Superconducting Super Collider Railroad Vibration Exposure (1986): Principal consultant for measuring ground vibration produced by railroad trains passing over the proposed alignment of the Superconducting Super Collider in the State of Arizona. This work involved identification of low frequency ground motion caused by the moving static load of the train.

Superconducting Super Collider Vibration Prediction (1985): Principal consultant for evaluating the environmental vibration exposure of the proposed Superconducting Super Collider (SSC), and recommending simplified procedures for predicting vibration due to trucks, trains, tractors, and other sources. This work was performed at Wilson, Ihrig & Associates, Inc. for the Central Design Group at Lawrence Berkeley Laboratory, Berkeley, California.

Superconducting Super Collider Vibration Exposure (1985): Principal consultant for predicting the vibration exposure of the Superconducting Super Collider proposed for the Central Valley of California. This work involved assessing vibration produced by farming equipment and estimating low frequency vibration due to moving railroad train static loads.

Toshiba Semiconductor Fabrication Facility (1985): Principal consultant for recommending vibration control provisions for retrofit of an existing building for semiconductor manufacturing. Work included measurement of roof-to-floor transfer functions for air handler vibration prediction, and recommending vibration isolation provisions. Warren Blazier Associates, Inc. assisted in design.

Lockheed Missiles and Space Company, (1983-1988): Project manager and principal investigator for performing a series of triaxial seismic disturbance surveys at various vacuum chamber sites at the Lockheed Missiles and Space Company in Sunnyvale, California. Some of this work was performed in support of the NASA Space Telescope program. The surveys involved day, evening, and night vibration sampling over a frequency range of 0.1 Hz to 300 Hz, with a resolution of 1 micron at 0.3 Hz, using a 400 line dual channel spectrum analyzer. Cross-spectral techniques were used for signal enhancement in some cases. Some measurements were performed under vacuum conditions.

Hewlett Packard, Inc. (1984): (Warren Blazier Associates, Inc.) Characterized ambient vibration and measured floor mobilities for a new state-of-the-art research and development facility.

Memorex Corporation (1976): Vibration analysis and design of foundation and vibration isolation system for SWECO mill.

General Building Noise Control:

Safeway, Inc. (1985): Provided noise control recommendations for computer data processing center.

Lawrence Berkeley Laboratory (1993): Provided recommendations for controlling HVAC noise in the Directors' Conference Room.

United States Post Office Training Center (1988): Developed noise control recommendations for HVAC systems.

Denver International Airport (1996): Provided vibration isolation recommendations and measurement services in connection with floor vibration produced by baggage handling systems.

Rail Transportation Noise and Vibration Control Projects:

Long Island Railroad (2004): Project director for noise and vibration assessment and development of specifications for new track for the ACL Viaduct

Puget Sound Transit Consultants (2004): Ground vibration impact assessment of proposed Sound Transit LRV on University of Washington, including field testing and theoretical modeling of ground vibration propagation.

Long Island Railroad East Side Access (2001): Used a seismic reflectivity model to predict the vibration responses of schist granite and overlying soil layer.

Queensland Rail (2000-2001): Review of wheel/rail noise control procedures employed by the Queensland Rail. Principal issues concerned wheel squeal, lubrication techniques, maintenance issues, rail fastener stiffness, contact conditions, geometrics, track gauge, wheel and rail profiles, humidity, and other factors.

Transit Cooperative Research Program Project C3A (1997-2000): Client: Transportation Research Board. Principal Investigator for procuring, testing and evaluating wheel and rail vibration absorber noise reduction effectiveness at tangent and curved track at two U.S. light rail transit systems.

DM&E Railroad Powder River Expansion (1999): Assisted Burns & McDonnell and SEA with evaluated of vibration impacts related to expansion and upgrade of the DM&E railroad through Minnesota, South Dakota, and Wyoming. This work included review of criteria for sensitive facilities, measurement and prediction of vibration produced by DM&E trains, measurement of ground vibration at Mayo Clinic Magnet Resonance Imaging systems and comparison with machine specifications, and preparation of technical reports.

Conrail Acquisition by CSX/Norfolk Southern (1997-1998): This work involved a peer review of noise impact assessments of the DEIS and FEIS, preparation of reports concerning each phase of the review, and attendance of meetings at the Surface Transportation Board.

Union Pacific/Southern Pacific Merger Environmental Assessment (1996-1997): Provided services DeLeuw, Cather, & Company in connection with assessing the noise impact related to merger of the Union Pacific and Southern Pacific railroads.

Transit Cooperative Research Program Project C3 (1994-1997): Principal Investigator for TCRP Project C3, concerning rail transit wheel and rail noise control. The project involves an extensive literature review and development of a manual for wheel and rail noise control for use by transit systems, supported by limited testing and analysis. The manual is supported by a user-friendly computer program.

Southern California Rapid Transit District (1983-2000): Performance of environmental noise and vibration measurements, measurement and prediction of vibration transfer functions from tunnel invert to multi-story structures, review of trackwork specifications for floating slab vibration isolation systems, measurement of floating slab responses, and prediction and control of subway air pressure transients. Development of specifications for a low stiffness track vibration isolation system.

Bay Area Rapid Transit System (1973-Present): Measurement of subway pressure transients, wheel shock, vibration, and strain, and lateral flange forces, review of direct fixation track fastener, running rail, floating and ballast mat specifications for Dublin/Pleasanton, Pittsburg/Antioch, and Colma Extensions, advisor regarding BART A&B Car Rehabilitation Program, truck component shock and vibration testing and modeling.

Washington Metropolitan Area Transit Authority (1973-Present): Performance of environmental noise and vibration surveys, predictions of groundborne noise and vibration, measurement of transit vehicle noise and ground vibration, prediction and control of subway air pressure transient magnitudes and rates of change, tunnel portal design, measurement of aerial structure noise for various direct fixation fasteners, development of a high frequency direct fixation fastener vibration isolation testing apparatus and procedure, qualification testing of direct fixation fasteners. Current work involves subway pressure transient modeling, measurement, and control of portal boom noise.

Metropolitan Atlanta Regional Transit Authority (1975-1995): Prediction and control of subway air pressure transient magnitudes, prediction of vibration impacts at the Northside Hospital, prediction of pedestrian induced bridge vibration. Designed special low frequency floating slab vibration isolation system for reducing ground vibration from subway trains.

San Francisco Municipal Railway (1990-2001): Assist MUNI engineers with noise control provisions for San Francisco Cable Car, including noise reduction for depression beams. Recent work includes recommending criteria and prediction procedures for ground borne noise and vibration along the 3rd Street Line, and assisting MUNI with wheel squeal control recommendations.

Resilient Rail Fastener Study for Elevated Structure Noise Control, New York City Transit Authority, U.S. Department of Transportation (1984-1988): Project manager and principal investigator for extensive testing in New York to determine the effectiveness of resilient rail fasteners in reducing elevated structure noise. The work included recommending stiffness characteristics, assistance in developing a specification for procurement of rail fasteners, field testing, and laboratory testing. The laboratory testing included development of a high frequency test apparatus and procedure for evaluating fastener isolation characteristics. The procedure has also been used for qualification testing of resilient fasteners at the Washington Metropolitan Transit Authority.

Prediction Procedures for Groundborne Noise and Vibration from Rapid Transit Systems, U.S. Department of Transportation (1980-1984): Researcher and later project manager for developing a comprehensive prediction procedure for groundborne noise and vibration from rail transit systems. The work included a review of the state-of-the-art, preparation of an annotated bibliography, theoretical and experimental studies, and field testing. Developed analytical models for far field seismic responses to point loads directed against the inner surface of a lined hollow tube in an infinite elastic medium. The model was applied to prediction of ground vibration from subway tunnels, and used for determining vibration coupling losses as a function of tunnel wall thickness. The model was implemented in Fortran at Wilson, Ihrig & Associates, Inc. for the U.S. DOT as part of the development of prediction procedures for rail transit systems. Transfer function procedures were developed for measuring dynamic Green's functions for soils. These procedures include a load cell and multiple geophone receivers at various distances. The data allow direct prediction of vibration responses in soils due to point sources, and, using numerical integration procedures, the data are used for prediction of the response due to line sources such as trains. The procedure is applied to surface as well as downhole sources. This work was performed at Wilson, Ihrig & Associates, Inc., for the US DOT.

Transportation Test Center, Pueblo, CO. (1984-1990): Ground vibration propagation testing at the transit test loop, measurement of mechanical impedance of the prototype MARTA C-Car, measurement of ground vibration and trackbed force spectra for the prototype MARTA C-Car, Portland Tri-Met, and the NFTA vehicles.

Toronto Transit Commission (1975): Assisted in reviewing ground vibration data for the purpose of identifying reasons for efficient long distance ground vibration propagation in response to complaints at ranges up to 800 feet from subways. The work included a limited theoretical analysis of tunnel vibration radiation and propagation.

Baltimore Regional Rapid Transit (1985-1988): Vibration propagation testing for predicting surgical theater vibration magnitudes, measurement of groundborne noise and vibration from BRRT vehicles.

Portland Tri-Met Westside Extension, Portland, OR (1989-1999): Project manager and principal investigator for developing a vibration impact element for environmental documents, measuring wayside noise and vibration, analyzing embedded track designs, reviewing rail corrugation mitigation methods, recommending noise and vibration mitigation provisions, and attending public meetings. Reviewing predictions and mitigation measures for the Greensboro route. Laboratory testing of PIP rail boot.

Portland Tri-Met Hillsboro LRT Project FEIS (1992-1994): Project manager and principal investigator for developing noise and vibration impact mitigation report and preparing elements for the final environmental impact statement. Work was performed for Parametrix, Inc.

Portland Tri-Met Hillsboro LRT Project Preliminary Engineering (1992-1994): Project manager and principal investigator for preliminary engineering of noise and vibration mitigation provisions. Work was performed for OTAK.

Subway Air Pressure Transient Prediction and Control (1975-1986): A procedure was developed for predicting subway air pressure transients, using the low frequency acoustic response of the tunnel, friction factors for the tunnel wall and train sides, conservation laws for air flow about the train, and test data collected at various systems. The tunnel is modeled as an acoustic delay line with reflections, and includes effects due to cross passages and flared transitions. The model has been used for predicting pressure transients at the Washington Metropolitan Transit Authority Metro system, the Metropolitan Atlanta Regional Transit Authority, the Baltimore Regional Rapid Transit system, and at the Bay Area Rapid Transit District. The method can be used for assessing the influence of cross-passages and flared entrance transitions for controlling pressure magnitude and rate of rise.

Tunnel Pressure Transient Tests (1974-1980): Tunnel wall and vehicle interior pressure during motion of rail transit trains in subways was measured at the Bay Area Transit Authority. These data were used for validating a computer model developed by Associated Engineers, Inc. Custom instrumentation was designed and developed. Later measurements were performed at the Washington Metropolitan Transit Authority to determine the cause of inter-tunnel CMU wall and cross-passage door failures. Later, measurements were performed at the Bay Area Rapid Transit Authority's transbay tube to determine the cause of death due to smoke inhalation during a fire.

Kamloops Railroad Vibration Study (1988): Analyzed vibration data to determine the cause of excessive ground vibration adjacent to the Canadian National Railway in Kamloops, Canada. Undulation in the rail due to roller straightener wheel runout was identified as the principal cause of high vibration, and replacement of the rail with lower rail height profile perturbation reduced ground vibration velocity levels about 10 to 15 dB. The problem was identified by narrow band analyses which revealed spectral peaks in wayside vibration coincident with profile wavelengths equivalent to roller wheel diameters. This work was performed at Wilson, Ihrig & Associates, Inc., for the Canadian National Railway system.

Centex Cement, Railroad Vibration Study, Beale AFB, Marysville, CA (1992): Principal consultant for predicting vibration due to aggregate trains at the Beale AFB metrology and calibration laboratory. The work included measurement of long-range ground vibration from freight trains.

Highway Noise:

Peters Canyon Highway Noise Study (1988-1990): Project manager and principal investigator for predicting the acoustical impact of the Western Leg of the Eastern Transportation Corridor in Peters Canyon near Tustin, California. The project included numerous community noise surveys, sound propagation tests, highway noise prediction using the FHWA STAMINA and CALTRANS SOUND32 computer models, and presentations at public meetings.

Construction Noise and Vibration:

Sacramento (2004): Review of draft construction vibration prediction and control manual for California Department of Transportation.

San Francisco PUC (2004): Assessment of noise and vibration impacts for the New Crystal Springs Bypass Tunnel construction.

Claremont Tunnel Bypass Environmental Assessment (2003): ESA. Project director for evaluating construction vibration impacts on residential structures due to blasting, tunnel excavation, and muck trains, and evaluating potential for permanent ground displacements due to blasting vibration.

East Bay Municipal Utilities District (2002): Camp Dresser McGee. Walnut Creek/San Ramon Aqueduct. Project director for evaluating noise and vibration impacts on surrounding neighborhoods caused by excavation of two vertical shafts, and impact mitigation design.

Claremont Tunnel Bypass Project, East Bay Municipal Utilities District (2000): PAMF. Evaluated construction noise impacts that would be caused by construction of the Claremont Tunnel bypass. Work was performed for PAM and Jacobs Associates, San Francisco.

North-East Interceptor Sewer (2000-2003): Jacobs Associates. Recommended construction noise and vibration control provisions, review of contractor documents, specifications, and documenting existing conditions. This project involved tunneling construction of a major sewage transport system in Los Angeles over a distance of several miles.

San Francisco Clean Water Project, San Francisco, CA (1990-1999): Project manager responsible for predicting construction equipment noise levels, including backup alarms, in sensitive residential neighborhoods, for the Sunnydale and Islais Creek segments, monitoring of construction noise and vibration due to pile drivers, backhoe excavators, haul trucks, drilling rigs, and other equipment, assisting the S.F. Department of Public Works in addressing concerns of sensitive receivers, and recommending noise mitigation measures. This project involves extensive construction of storm drains and storage facilities in a commercial and industrial area.

Los Angeles Metro (1992): Measurement, prediction and control of vibration produced by construction of Metro rail stations and tunnels, including evaluation of pneumatic vibration isolation tables for supporting sensitive optical equipment. Recommended noise mitigation provisions for recording studios and radio stations.

Mining:

Jamestown Mine Environmental Impact Analysis, Jamestown, CA (1991): Project manager and principal investigator for assessment of environmental noise impacts caused by expansion of the Jamestown Mine in Sonora, California. Work included assessment of existing noise levels, computer modeling of future noise levels using topographical contour data, and preparing a noise element.

Columbia Mine Noise Analysis, North Columbia, CA (1988): Principal consultant for measuring mining equipment noise levels and predicting noise levels at various receivers.

Marine:

Exxon Benicia & Keystone Canyon Tanker Forced Draught and IGS Fan Vibration Study: Measurement and analysis of IGS and forced draught fan vibration to determine cause and prevention of premature bearing failures. Procedures were recommended for preventing bearing failure, including pressure oil lubrication and cycling.

Marin Tug & Barge: Measurement of tugboat deck vibration and identification of cause of excess propeller shaft vibration. Defective main bearing was identified.

Industrial Community Noise:

Morton Salt: Principal consultant for recommending treatments to control community noise caused by blowers.

Shell Oil Martinez Refinery (1992): Recommended treatments to control valve noise at a vapor recovery plant in Martinez, California.

Chevron, USA, Richmond California Refinery: Recommended treatments for controlling employee noise exposure at a gasoline refinery unit.

Exxon, Inc. Benicia Refinery: Predicted community noise levels due to introduction of new process equipment.

Lawrence Berkeley National Laboratory: Rehabilitation of Facilities, (with Kaiser Engineers). Provided noise control recommendations for cooling tower and pump room to control exterior noise in Strawberry Canyon. Performed community noise analyses to determine background sound levels.

Forensic Engineering:

City of Reno (2004-2005): Assisted attorneys for the City of Reno in assessing ground vibration impacts by railroad trains on basement wall cracking (settled).

Seagate Technology (2004): Developed an expert opinion concerning floor vibration at a new semiconductor manufacturing facility (settled).

California Department of Transportation (2002): Testified as an expert witness regarding pile driving noise and vibration impacts on commercial establishment in San Francisco.

California Department of Transportation (2000): Provided an expert opinion concerning vibration impacts on a residential structure by a hoe ram, and assisted Caltrans during arbitration.

San Francisco City Attorney (1991-1992): Testified as an expert witness regarding San Francisco Cable Car noise.

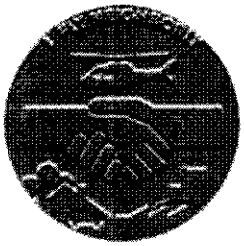
Chemla vs McDonald (1995-1998): Provided engineering support and expert testimony concerning inter-residential noise impacts.

Appendix F

From Helicopter Association International
http://www.rotor.com/

Fly Neighborly Program

25 October 2002



The Fly Neighborly Program is a voluntary noise reduction program designed to be implemented worldwide by local helicopter operators, large and small. The program includes all types of civil, military, and government helicopter operators.

In the fall of 1981, the Federal Aviation Administration (FAA) agreed to withdraw a Notice of Proposed Rulemaking (NPRM) on helicopter noise while technical data were acquired, with the understanding that the helicopter industry would implement a voluntary noise reduction program. We should not, however, consider the Fly Neighborly Program as merely a stop-gap measure, put together to preclude federal regulation. After all, the public commonly asks:

- How is technology advancing to make helicopters quieter?
- When will this technology be in daily use?

Clearly, new technology is creating quieter, more advanced equipment every day, and this equipment will eventually be commercially available. Until then, the Fly Neighborly Program offers the technical information necessary for helicopter operators to use current equipment as quietly as practical, and to communicate to the public their efforts to make helicopter operations compatible with nearly all land uses.

The Helicopter Association International (HAI) Fly Neighborly Committee, composed of members of HAI, the FAA, military, and other associations, launched the Fly Neighborly Program in 1982. It has since gained international acceptance. In the United States, the program has gained the full support of helicopter operators, regional associations, manufacturers, pilots, and communities throughout the country. Federal, state, and local government agencies have embraced the program and taken an active part in sponsoring Fly Neighborly presentations in conjunction with safety seminars and other activities. Worldwide, the helicopter industry and its related communities are being informed about the Fly Neighborly Program.

Objectives

The Fly Neighborly Program addresses noise abatement and public acceptance objectives with programs in the following areas:

- Pilot and operator awareness
- Pilot training and indoctrination
- Flight operations planning
- Public acceptance and safety
- Sensitivity to the concerns of the community

Appendix G

The Fly Neighborly Guide

The *Fly Neighborly Guide* is published under the auspices of the Helicopter Association International to promote helicopter noise abatement procedures. It is intended to serve only as a guide, and is by no means comprehensive.

The guidelines are intended to assist pilots, operators, managers, and designated Fly Neighborly officers to establish an effective, self-sustained Fly Neighborly program. The flight procedures and concepts outlined herein must be further tailored to suit local needs, and to ensure that local or regional organizations cooperate to develop a strong, well-organized and disciplined approach to achieving Fly Neighborly objectives.

The guide is divided into seven sections:

- Pilot training and related noise abatement procedures
- Operator programs and what can be done to promote noise abatement operations
- Public acceptance and community concerns
- Helicopter noise and its causes
- A glossary
- Helicopter manufacturers
- Regional affiliate members of HAI

Administration

HAI solicits new ideas, comments, and recommendations to improve the program, which may be submitted to flyneighborly@rotor.com. The HAI Fly Neighborly Committee, Public Relations Advisory Committee, Safety Committee, and Technical Committee all serve as focal points for their respective areas.

The Fly Neighborly Kit may be obtained at no cost for HAI members (*first kit domestic members free plus $20.00 shipping and handling, first kit international members free plus $30.00 shipping handling; non-members $30.00 plus shipping and handling of $20.00 domestic, $30.00 international).*

You can request The Fly Neighborly Kit by clicking here:

The kit includes the following:

- Fly Neighborly Handbook
- "Fly Neighborly" Video
- "The Helicopter and The Community" Video
- Fly Neighborly Brochure
- Laminated Noise abatement cards for various helicopter models.
- "Fly Higher" Poster

Additional Information

Individuals, operators, or agencies desiring additional

Appendix G

information should contact the HAI Fly Neighborly staff liaison at flyneighborly@rotor.com or by writing to:

Helicopter Association International
1635 Prince Street
Alexandria, Virginia 22314

Appendix G

COMMENT LETTER 8: Theodore Franklin, Weinberg, Roger & Rosenfeld

Note: The technical appendices attached to the letter were also reviewed and in those instances where additional comments were raised in the appendices that were not included in the letter responses were prepared.

Response to Comment 8-1:

The comment states that the DEIR does not comply with CEQA and refers to later comments. Please see Responses to Comments 8-5 through 8-51. As discussed in the following responses, the City believes the DEIR is adequate under CEQA and does not require recirculation.

Response to Comment 8-2:

The comment outlines the remainder of the comments in the letter. Please see Responses to Comments 8-5 through 8-51. As discussed in the following responses, the City believes the DEIR fulfills the CEQA requirements and does not require recirculation.

Response to Comment 8-3:

The comment summarizes the commentor's understanding of the project. No response is required.

Response to Comment 8-4:

As discussed in Responses to Comments 8-5 through 8-51, the City believes the DEIR fulfills the CEQA requirements and does not require recirculation.

Response to Comment 8-5:

The comment presents a discussion of some of the guidance regarding the content of a project description contained in the State CEQA Guidelines and pertinent case law. The comment concludes with a statement that "the Draft EIR fails to provide an adequate and complete project description…". Specific comments on the perceived inadequacies of the project description are contained in subsequent comments, and are addressed in following responses to comments.

To the extent that the regulatory and legal information provided in the comment are various quotes from the State CEQA Guidelines and the California Appellate Court in the case of *County of Inyo v. City of Los Angeles (1977)* are facts, the City notes these comments. A relevant subsection of the State CEQA Guidelines which directly addresses the issue of the level of detail of the project description is Section 15124(c) that states that an EIR's project description must contain:

> A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public facilities.

This requirement for a "general description" of the proposed project is consistent with other CEQA requirements which emphasize that the level of detail contained in a CEQA document is intended to be governed by the rule of reason and presented in a manner that is understandable to a lay reader. For example, State CEQA Guidelines Section 15140 states:

> EIR's shall be written in plain language and may use appropriate graphics so that decision-makers and the public can rapidly understand the documents.

Further, State CEQA Guidelines Section 15151 states:

> An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible….The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

The City believes the 64-page project description contained in Chapter 2, which contains 11 tables and 25 figures, meets the standards of adequacy for a project description under CEQA.

Response to Comment 8-6:

As explained in Response to Comment 8-5, the DEIR includes an extensive description of the SMCS project. However, the project description in Chapter 2 of the DEIR does not include precise details related to the construction equipment and workforce because such details are unnecessary and not required under CEQA. Rather, as is described in Response to Comment 8-5, the EIR must include a "general description" of the physical characteristics of the project. This is in contrast with the requirements for precision in the description of the location of the project, for which CEQA requires "[T]he precise location and boundaries of the proposed project…." to be shown on a map (see State CEQA Guidelines Section 15124(a)). Details of the equipment and workforce to be used for construction is not known at this time, and would typically change through the life of construction based on factors specific to the contractor and other work conditions. The construction air quality analysis is based on standard assumptions about construction equipment and related emissions provided by the Sacramento Metropolitan Air Quality Management District. These emission rates create a conservative analysis based on factors that account for variable use of equipment, location, staffing, etc.

The exact number and type of equipment associated with construction of a project can rarely be known with certainty at the time the environmental document for the project is prepared. This is acknowledged by the SMAQMD in its *Guide to Air Quality Assessment*. The SMAQMD is the local regulatory agency with jurisdiction over air quality issues in Sacramento County.

The SMAQMD *Guide to Air Quality Assessment* states "in the initial planning phase of a project, the exact type and number of equipment may be unknown or unavailable for the construction activity. In this situation, the preferred option is to calculate construction emission impacts using the latest version of the URBEMIS model."[3] In accordance with the SMAQMD guidance, the URBEMIS model was used to calculate construction emissions. The project's construction schedule was known to a certain extent, and this schedule is both discussed in the DEIR and followed in order to estimate construction impacts. This is appropriate, since not all parts of the SMCS project would be built at the same time.

Response to Comment 8-7:

The information regarding the proposed SMCS Energy Center, contained on page 2-25 of the DEIR, represented the most accurate and detailed information available at the time that the DEIR was prepared. Since the DEIR was published additional detail pertaining to the Energy Center has become available. The following information is added to the DEIR project description.

3 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 3-4.

The existing Energy Center includes a two-story freestanding structure with a basement located at the corner of Capitol Avenue and 29th Street. Chillers, boilers, and emergency generators are located on first (1st) floor. Pumps and a natural gas fired incinerator are located in the basement. Cooling towers are located on the roof. The cooling system includes:

- Chillers: Three (3) electric drive water-cooled centrifugal chillers with a total chilled water plant capacity of 1,600 tons of cooling. Space reserved for a fourth (4th) chiller.
- Cooling Towers:
    a) Six (6) cooling towers, 1800 tons of heat rejection.
    b) 52,000 gallons per day (gpd) bleed-off rate (maximum), dumped to sanitary sewer system on peak design cooling day.
    c) 52,000 gpd drift rate during peak design cooling day.

The heating system includes:

- Steam Boilers: Three (3) dual-fuel nominal 400 Boiler Horsepower (bhp) output high-pressure steam generators. 41,400 pounds per hour steam at 125 psig.
- Natural gas is primary fuel source. 50,214 cubic feet per hour (cfh) natural gas input at full load.
- Diesel fuel is back-up fuel source. 360 gallons per hour (gph) fuel oil input at full load.
- Maximum 15 parts per million (ppm) Nitrous Oxide (NO_x) emissions each boiler.
- Boiler feed water (domestic water) make-up; 125 gpm maximum at full load.

The diesel fuel storage includes two 13,000 gallon (each) underground tanks. The bulk liquid oxygen includes a 6,000 gallon vertical main tank and a 500 gallon vertical reserve tank located on grade at the north end of the Energy Center (adjacent to the alley). The main tank is approximately 26 feet tall.

The new Energy Center is designed to occupy two levels below grade area located in the southern portion of the SMF Building. Chillers, boilers, pumps and emergency generators would be located at lowest level (B-2 Level). The cooling towers would be located on the roof of the SMF Building. The cooling system includes the following:

- Chillers: Five (5) electric drive water cooled centrifugal chillers with an initial total chilled water plant capacity of 4,450 tons of cooling with a peak calculated demand of approximately 3,175 tons of cooling. Future total plant capacity of 5,250 tons of cooling with an expected peak demand of approximately 4,200 tons of cooling.
- Cooling Towers:
    a) Five (5) cooling towers, 5,250 Tons of heat rejection.
    b) 101,000 gpd bleed-off rate (maximum), dumped to sanitary sewer system on peak design cooling day.
    c) 101,000 gpd drift rate during peak design cooling day.

The heating system includes the following components:

- Steam Boilers: Four (4) dual-fuel nominal 500 bhp output high-pressure steam generators. 69,000 pounds per hour steam at 125 psig. Calculated peak demand of approximately 49,000 pounds per hour (one unit is totally redundant and the other three will likely never be all on simultaneously at 100% each).
- Natural gas is primary fuel source. 83,700 cfh natural gas input. The secondary, backup fuel source is fuel oil fed by a remote underground storage tank shared with the emergency generators.
- The boilers are equipped with burners and controls to limit the NO_x emission levels to 9 parts per million (PPM) corrected to 3% oxygen.
- The boilers are also equipped with the requisite feed water and condensate removal and transfer systems.

The underground fuel storage includes:

The new fuel storage tank is specified to be 25,000 gallons capacity and shall be a dual wall construction with continuous vacuum monitoring. The sumps and piping are also monitored and the installation shall meet all required regulations for this application. The fuel is transferred on demand to a series of day-tanks installed in the boiler and generator rooms in the interior of the building, which in turn supply locally to the boilers and generators.

Liquid oxygen tanks are located adjacent to the alley/driveway on the west side of the SMF Building. There is an 11,000 gallon liquid capacity main tank and a 3,000 gallon liquid capacity reserve tank with the associated vaporizers to convert the liquid to gas. The bulk supply shall be in accordance with NFPA 50.

The DEIR analyzed the heating and cooling of the SMCS project that would be provided by the new Energy Center. As shown in the URBEMIS outputs in Appendix F, the model calculates emissions associated with heating and cooling of a building under the Area Source heading “natural gas”. This would account for the processes conducted at the energy center to heat and cool buildings associated with the SMCS project. Consequently, energy center emissions are included in the URBEMIS run and added to other SMCS area sources and associated vehicle trips to obtain a total operational emissions number that is then compared to SMAQMD thresholds.

The chillers and boilers that would be part of the new Energy Center would not emit more pollutants than the current energy center. All chillers would be powered by electricity, not run on either natural gas or fossil fuel. This would ensure that emissions would be minimal and not significantly greater than current chiller operations, regardless of the increase in the number of chillers, since electric power is clean and non-emitting technology. The heating system is composed of steam boilers. Under the SMCS project, the number of available boilers would be increased from three to four. However, one boiler would be completely redundant, meaning it would not be used unless one of the other three boilers would be unable to operate. Also, existing boilers are allowed to emit a maximum of 15 parts per million (ppm) of NO_x. The new boilers are required to be more efficient and would be fitted with burners and controls that would limit their emissions to a maximum of 9 ppm of NO_x. Consequently, even if all four boilers were operating at full capacity and emitting their maximum 9 ppm of NO_x, the total NO_x emission would be 36 ppm (9 x 4). This would still be less than the 45 ppm maximum emission rate that could be experienced by the existing three boilers operating at peak capacity (15 x 3).

Response to Comment 8-8:

The DEIR analyzes all impacts associated with construction of the project. While it is true that the project involves multiple activities, the EIR does not analyze each activity separately. Instead, impacts are analyzed by grouping together activities that would occur simultaneously to obtain an estimate of the maximum construction impact. This is the accurate way to determine what would be the impact on any one construction day.

Table 1 provided in the comment letter shows a grid of potential impacts from construction and operation of the proposed SMCS project for the various components of the project. The commentor asserts that most of these impacts were omitted and not adequately examined. The effects of demolition, grading, construction, and operation of the proposed SMCS project and the Trinity Cathedral were analyzed in the DEIR. Please see Responses to Comments 8-9 through 8-15 and 8-28 through 8-38 that address these issues and show why the analysis is complete and in accordance with requirements under CEQA and the methodology and guidance provided by the SMAQMD, the regulatory agency charged with protection of air quality in the region.

Response to Comment 8-9:

It is true that the State and federal air quality agencies have issued new $PM_{2.5}$ standards in addition to the current PM_{10} standards. The SMAQMD chooses to analyze the impacts of all particulate matter emissions, both PM_{10}, and $PM_{2.5}$, together. The SMAQMD *Guide* provides methodologies for evaluating PM_{10} impacts, which would include all particulate matter less than ten microns in diameter. $PM_{2.5}$ consists of particulate matter less than 2.5 microns in diameter, so PM_{10} estimates would also include $PM_{2.5}$. The SMAQMD *Guide* was published in July 2004, one full year after the State $PM_{2.5}$ standard took effect; however, the *Guide* does not make any references to the need for a separated $PM_{2.5}$ analysis, and the SMAQMD does not recommend any method for estimating the impacts of $PM_{2.5}$. Please see also Comment Letter 3 received from the SMAQMD which does not make mention of any deficiency in the DEIR regarding $PM_{2.5}$. In contrast to the commentors characterization that $PM_{2.5}$ background levels are high enough to cause the applicable air quality standards to be exceeded, the most recent monitoring data from the T Street station (the nearest monitoring station to the project site) shows that the federal 24-hour standard has not been exceeded over the past two years. Sacramento County is in compliance with the federal $PM_{2.5}$ standard. As shown in the URBEMIS outputs in Appendix F, the SMCS project does not include any significant stationary sources of PM_{10}, which includes $PM_{2.5}$. Stationary equipment, such as water heaters and boilers, would be under permit and regulated by the SMAQMD. As shown in the DEIR, the project's contribution to overall area traffic would not be substantial. Mobile sources would generate PM_{10} and $PM_{2.5}$, but they would not generate more PM than other mobile sources from other projects. Emissions from these mobile sources would be dispersed throughout the route of a particular vehicle trip, and would not be concentrated in the vicinity of the project site. Please see also Response to Comment 8-8.

The commentor states that the DEIR fails to disclose State PM_{10} and $PM_{2.5}$ standards and that this constitutes a flaw in the document. Both the State PM_{10} and $PM_{2.5}$ standards are presented in Table 6.2-1, page 6.2-3 of the DEIR. The standards to which the commentor refers are all annual standards. Evaluating a construction project against an annual standard is not appropriate, since the activity that would generate particulate matter, namely demolition and grading, would only occur a few hours a day for a portion of a year. The DEIR does display the 24-hour standards for PM. A 24-hour standard is actually more stringent for a construction project because it would examine the worst-case hour whereas an annual standard would average emissions over a year's time. As mentioned above, for construction projects, PM would only be generated for approximately eight hours per day, conceivably not at all on weekends, and the demolition and grading would only occur for a portion of the year. Therefore, annual averages from the project would be expected to be low;

24-hour measurements, however, would account for the worst case day. In essence, one day with high PM_{10} emissions could exceed the 24-hour standards, but its impact would be much less when averaged out when measured against the annual standard over one year. Consequently, annual PM concentrations would be low from a construction project.

Response to Comment 8-10:

There are several criteria pollutants that are not of concern in Sacramento County. Sulfur dioxide (SO_2) is one of these criteria pollutants. While it is true that SO_2 can cause health problems, it is misleading to state that SO_2 is a prominent problem that has been identified by local air districts. There are no SO_2 nonattainment areas in the entire State of California. Sacramento County does not exceed State or National standards for SO_2. In addition, the SO_2 standard has not been exceeded over the past three years in Sacramento County. In fact, the highest monitored concentration of SO_2 in the entire county over the past three years was just 0.009 parts per million (ppm). This is less than 25 percent of the State SO_2 standard and less than 7 percent of the federal SO_2 standard. The highest monitored annual average over the past three years was 0.002 ppm. This is less than seven percent of the federal annual standard (there is no annual State standard).

The SMAQMD *Guide to Air Quality Assessment in Sacramento County* does not even suggest that SO_2 could be a potential impact during construction. Page 3-1 of the *Guide* states, "The types of pollution that construction activities can generate include ROG, NO_x, PM_{10}, CO, and possibly air toxics". The Guide does not mention SO_2.

For operational SO_2, the *SMAQMD Guide* states that development projects below the identified thresholds in Table 4.2 of the *Guide* would not be considered to have significant impacts.[4] For hospital uses, the *Guide* lists 522,000 square feet as the threshold. The hospital uses for the SMCS project (the Women's and Children's Center) would equal 398,362 square feet. For medical office buildings, the *Guide* lists 243,000 square feet. The proposed medical office uses would equal 203,382 square feet for the SMF and 35,000 square feet for the proposed MOB for a total of 238,382 square feet. In both cases, the SMCS project is below the thresholds identified in Table 4.2 of the *Guide*. Also, the SCMS project would not be expected to generate any significant amounts of diesel truck traffic or combust sulfur containing fuel. Calculated SO_2 emissions for operation of the SMCS are shown in the URBEMIS outputs in Appendix F. As shown, according to URBEMIS, the total SO_2 that would be generated (both area and vehicular emissions) from all project components would equal only 0.14 pounds per day. This is a very small amount that would not exceed concentration based thresholds for SO_2.

Response to Comment 8-11:

Reactive organic gases (ROG) are not considered by the SMAQMD to be a major issue during construction activities. The SMAQMD chooses instead to focus on NO_x emissions during construction. In keeping with this, the SMAQMD has not even developed a threshold of significance for construction ROG. The SMAQMD *Guide* states:

> "ROG emissions should be estimated for land use projects, however no ROG emission threshold of significance has been developed for construction emissions within the SMAQMD jurisdiction. Architectural coatings used in construction can be significant contributors of ROG, and wherever possible low-VOC (ROG) architectural coating products should be specified for use. Heavy-duty diesel powered construction equipment emits relatively low

4 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 5-2.

> levels of ROG, and ROG emissions from other construction phases such as architectural coating can also be regulated by District rule."

Consequently, emissions of ROG are not an issue during construction activities, and the SMAQMD does not provide any construction thresholds to address emissions associated with construction. Construction ROG emissions, included in Appendix F of the DEIR, show that ROG emissions from construction equipment is small compared to the NO_x emissions that are produced. The largest ROG impact during construction, according to the URBEMIS outputs, is the application of architectural coatings. The SMAQMD normally recommends that the architectural coating phase be turned off when construction modeling is performed because URBEMIS does not account for the SMAQMD rule that institutes ROG limits on architectural coatings. The SMAQMD believes that their architectural coating rule will minimize ROG emissions from coatings.[5] The rule is enforced by the SMAQMD by monitoring distributors and retailers to ensure that no coatings are being sold that exceed ROG limits. Impact 6.2-4 in Section 6.4, Air Quality, addresses the generation of ROG and NO_x (criteria pollutants) associated with project operation. Please see Comment Letter 3 from the SMAQMD which does not mention any deficiency in the DEIR associated with the lack of a construction ROG analysis.

Response to Comment 8-12:

The SMAQMD *Guide* states on page 5-2:

> "The District considers development projects of the type and size that fall below the significance cut-points in emissions from projects listed in Table 4.2 in Chapter 4 for ROG and NO_x also to be insignificant for CO emissions. CO emissions from projects listed in Table 4.2 would be adequately controlled by state and federal vehicle and engine emission control programs, and CO violations are now associated only with very large concentrations of vehicles."[6]

This guidance in the SMAQMD *Guide* clarifies that CO emissions are an issue only when there may be a large concentration of vehicles. The *Guide* further states on page 5-3 that modeling for CO can be conducted using the CALINE computer model methodology. The traffic report prepared for the SMCS project identified intersections that are most at risk for producing high concentrations of vehicles at certain times. Each of these potentially impacted intersections was modeled for CO concentrations using the CALINE methodology and addressed in Impact 6.2-5 in Section 6.2, Air Quality. This satisfies the SMAQMD's requirement for analyzing CO impacts from a proposed project and is adequate under CEQA.

Response to Comment 8-13:

As shown on page 6.2-26 of the DEIR, the only TAC of any significance associated with construction of the SMCS project would be diesel particulate matter. The DEIR shows that, according to the CARB, the focus of any impact discussion concerning diesel TAC should be long-term health impacts.[7] The DEIR also identifies that construction activities would be temporary, and therefore long-term health impacts would not arise. This would be true no matter what type of construction equipment is being used, so providing an extensive list of equipment and the associated diesel emissions would do nothing to add to the impact assessment.

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5 Conversation with Peter Christiensen, SMAQMD, September 28, 2005.

6 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 5-2.

7 Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, p. 22-23. CARB, October 2000.

For operational impacts, the DEIR states that almost all equipment would be run on fuels other than diesel fuel. Emergency generators would be run on diesel fuel but would operate only very infrequently. The generators would only be run during emergencies and for limited times for testing purposes. In extreme cases, power outages could perhaps occur for a maximum of several days. Emergency operations of diesel generators would not be expected to last any longer than the duration power outage. Consequently, generator use would be temporary and intermittent in nature, not for long-term use. In addition, the DEIR points out that even if there were permanent stationary sources of TACs, they would be regulated by the SMAQMD. No TACs other than diesel particulate matter have been identified. The SMAQMD is required to identify if a risk exists, and would require SMCS prepare a Health Risk Assessment (HRA) to reduce impacts to less than significant if a risk was found to exist. The SMAQMD has only required an HRA from one hospital facility in its jurisdiction, in an instance where the project was proposing to use a certain large sterilizers, a permanent stationary source of TAC. These sterilizers are not proposed to be used for the SMCS project and the SMCS project would not be a stationary source of TAC. Consequently, the SMAQMD would not consider the SMCS to be a high risk to be potentially significant for toxics impact.

Response to Comment 8-14:

As stated in the DEIR, the maximum number of helicopter landings/take-offs would be 200 per year. These events would be intermittent and on an as-needed basis. Also, each landing/take-off event would be of short duration. Because the facility would be a helistop (as compared to a helipad or heliport) the helicopters would not be allowed to park, re-fuel, or idle at this location once a patient has been either removed or placed in the helicopter. Rather, the helicopters would land to drop off a patient and immediately take-off and leave the area.

Emissions generated by motorists, whether they are on the street, parking garage, or internal to the project site, are accounted for in the operational emission URBEMIS calculations.[8]

In response to the comment raised in the accompanying technical report (see Appendix A) regarding emissions associated with the Energy Center and vehicle trips, please see also Response to Comment 8-7 for an explanation of how area sources, including those generated by the energy center were accounted for. Please see Response to Comment 8-36 for an explanation of how vehicle trips associated with the operation of the SMCS project, including those from vehicles using the parking structure, were accounted for. The combined emissions from all of these sources, which represent the operational impact from the SMCS project, are presented in Table 6.2-5 of the DEIR. Table 6.2-5 of the DEIR does not look at different emission sources by themselves and come to separate conclusions based on the emissions from each separate source. Instead, total operational emissions from all significant sources related to the project are analyzed as one impact. It is true that helicopter emissions are not analyzed as part of the operational impact. This is because the applicable operational threshold is a “pounds per day” threshold, and helicopter emissions would be minimal since less than one flight per day would occur. Localized pollutant concentrations from a helicopter flight are not an issue since the helicopter’s approach and landing and subsequent departure, would be of a very short duration

Response to Comment 8-15:

The commentor is incorrect in stating that any contribution, regardless of how minor, results in a per se cumulatively significant impact (*Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120; see also CEQA Guidelines, §§ 15064, subd. (h)(1), 15130,

8 SMCS DEIR, Volume II, Appendix F.

subdivision (a)(2) ("[w]hen the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR").)

In addition, while there has been research into the role of large areas of impervious surfaces in ozone formation, there is no reason to believe that a slight reduction in landscaped area would have any noticeable effect on ozone levels in the Sacramento area. The SMCS project is located in a developed area where little landscaped area currently exists. There would be no large, unshaded, paved areas associated with the SMCS project that are associated with the heat island effect. The SMAQMD has set thresholds of significance for ozone precursors. These thresholds measure a potential ozone impact by the amount of ozone precursors (ROG and NO_x) that are generated by a project. Slightly reducing landscaped area does not generate emissions of ROG or NO_x, and would not exceed any applicable threshold. Consequently, in keeping with the SMAQMD *Guide*, this has been adequately evaluated under CEQA and would not be a significant impact.

Response to Comment 8-16:

The commenter notes that the trip generation rates are "unusually low." For generic projects, the standard procedure is to use average rates reported by ITE. However, when more specific information is available concerning a project, and/or when unique project characteristics exist, the correct procedure is to collect specific data at sites representative of the project. See, for example, ITE Trip Generation Handbook, Chapters 3 and 4. In addition, the City's Traffic Study Guidelines address the use of traffic counts at comparable locations for specific uses. Since this project involves the relocation of Sutter Memorial Hospital uses and personnel to the project site, it is logical and appropriate to consider the existing trip generation characteristics of Sutter Memorial Hospital in the analysis.

During traffic surveys at Sutter Memorial Hospital, a total of 235 entering and 205 exiting trips were recorded during the a.m. peak hour, and 132 entering and 226 exiting trips during the p.m. peak hour. Divided by the facility size of 430,627 square feet, the resultant rates of 1.02 and 0.83 trips per 1,000 square feet were derived for the a.m. and p.m. peak hours, respectively. The rates used in the document, based on data collected at Sutter Memorial Hospital, are 1.02 trips per 1,000 square feet in the a.m. peak hour and 0.83 trips per 1,000 square feet in the p.m. peak hour. According to the Institute of Transportation Engineers' (ITE) *Trip Generation, Seventh Edition*, the range of rates is 0.63 to 5.45 during the a.m. peak hour, and 0.70 to 6.94 during the p.m. peak hour. Thus, the recorded rates used in the DEIR are above the data reported by ITE for the A.M. peak hour and are well within the data reported by ITE for the P.M. peak hour.

In response to the comment raised in the accompanying technical report (see Appendix C) regarding trip generation rates, the comment notes the difference between, but does not question the validity of, the "directional distribution" counted at Sutter Memorial and that found in ITE's Trip Generation 7th Edition (e.g., the comment compares the ITE PM in/out ratio of 33%/67% with the count from Memorial of 37%/63%). This in/out split issue is addressed above in the statement "[S]ince the project involves the relocation of Sutter Memorial personnel to the project site, it is logical that the existing trip generation characteristics of the Sutter Memorial be considered in the analysis."

In response to the comment raised in the accompanying technical report (see Appendix C) regarding fair-share funding of mitigation measures, the City has indicated that the fair share contributions were defined as mitigation measures for impacts of the project in the Cumulative + Project scenario. These mitigation measures were not defined for the Existing plus Project Scenario and are not required to be implemented in the near term. The City of Sacramento has its own mechanism of collecting fair share contributions from all development projects that create an impact on any

transportation facility and the fair share collected from all development projects would be used to implement the defined mitigation measure/s when required.

Response to Comment 8-17:

While not specifically described in the DEIR, queue lengths at signalized intersections were reviewed in the traffic analysis. The Synchro program that was used to evaluate intersections also calculates estimated queue lengths. The lengths of these queues were reviewed, and queues at mitigated or non-impacted intersections would not extend into adjacent intersections. As discussed in Mitigation Measure 6.7-5, the addition of a ramp meter at the southbound Capital City Freeway N Street Entrance Ramp could result in queuing into the adjacent intersection.

Response to Comment 8-18:

The DEIR appropriately evaluated the cumulative traffic effects of the SMCS project in light of reasonably foreseeable probable future projects, including those that would increase traffic volumes (such as other development in the vicinity and region) and those that would affect the traffic capacity of the local and regional roadway network (such as the Central City Two-Way Conversion project currently under study, and other reasonably foreseeable projects presented in the Metropolitan Transportation Plan). These probable future projects are consistent with the CEQA Guidelines requirements for cumulative analysis.

The cumulative analysis includes a 20-year horizon and, as such, represents a conservative analysis of the potential effects of the project (combined with other traffic demand increases) on the roadway network, including as it may be altered by the Two-Way Conversion, if the City Council chooses to implement it. Evaluation of the project-specific impacts in light of the as-of-yet-unapproved Two-Way Conversion would be inconsistent with Section 15125 (a) of the State CEQA Guidelines, which states that the baseline for evaluation should be the conditions that existed at the time that the NOP was published. To artificially decrease the capacity of some nearby streets, as if the Two-Way Conversion project were approved, would presuppose the actions of the City Council in the future. Rather, inclusion of the Two-Way Conversion Study in a future cumulative scenario (the DEIR also includes a cumulative scenario that does not presume the approval of the Two- Way Conversion Study) provides a long-term analysis, consistent with the City's standard approach for cumulative analyses.

Response to Comment 8-19:

The commenter asserts that it is "incomprehensible" that traffic will decrease at one approach to one intersection (the J Street exit ramp approach to the intersection of 29th and J Streets). As discussed in the DEIR (see page 6.7-32), a traffic model was used to determine the volume of vehicles at each study area freeway ramp and intersection. The traffic projection methodology and results were reviewed and no errors were found including the decrease in p.m. peak hour volumes noted in the technical analysis which indicates a decrease of 642 vehicle under Existing Conditions to 518 vehicles under the Existing plus SMCS project at the J Street exit ramp to 29th Street. As shown in the following table, the combined southbound Capital City Freeway exit ramp volumes from E Street, J Street, and P Street increase during the p.m. peak hour under Existing Conditions and Existing Plus SMCS Project conditions. As discussed below in greater detail, the traffic model assigns trips based on travel times on the roadway system, and redistributed traffic from the J Street exit ramp due to the major change in access points with the SMCS project, diversion of non-SMCS traffic to other routes, and to avoid the net overall increase in intersection volume at the 29th/J Street intersection.

As discussed in the document (page 6.7-32), a traffic model was used to determine the volume of vehicles at each study area freeway ramp and intersection. The travel model assigns trips based on travel times on the roadway system. The model assigns not only traffic associated with the project, but also evaluates the diversion of other traffic due to changes in roadway operating conditions (travel times).

Southbound traffic on Capital City Freeway has three options to exit the freeway in the study area – ramps at E Street, J Street, and P Street. The travel model assigns trips to each ramp based on the origin and destination of the trips and operating conditions on the city street system. The reduction of volumes on the J Street exit ramp, including the reduction from 642 to 518 vehicles noted in the technical analysis, is related to the following conditions:

- A major change in the access points of the SMCS project: As shown in Figure 6.7-2, the project includes a new parking garage at N Street, and new valet drop-off/pick-up roadways. The change in the access plan would affect both existing and new SMCS trips, including employees and visitors.

- An increase in traffic volumes at the intersection of 29th and J Streets: Although traffic on the J Street exit ramp may decrease, overall intersection volumes increase, with a corresponding increase of delay at this location.

- Diversion of non-SMCS traffic to other routes: Due to the increase in delay in study area intersections resulting from the SMCS project, some non-SMCS trips will divert to other routes. Because of the extensive grid-system of both Midtown and East Sacramento, diversion can be easily accomplished.

The following table summarizes the southbound Capital City Freeway exit ramp volumes, as well as the total volumes at the intersection of 29th and J Streets. As expected, the total volume of traffic exiting the freeway increases with the project, as do the total volumes at the intersection of 29th and J Streets.

Selected Traffic Volumes

Scenario	Peak Hour	Combined Southbound Capital City Freeway Exit Ramp Volumes – E Street, J Street, P Street	Total Volume – Intersection of 29th and J Streets
Existing Conditions	AM	2,909	2,279
	PM	1,978	2,458
Existing Plus SMCS Project	AM	2,981	2,392
	PM	2,017	2,521
Existing Plus Trinity Project	AM	2,911	2,279
	PM	1,979	2,447
Cumulative Without Project	AM	2,847	2,540
	PM	2,051	2,933
Cumulative With SMCS Project	AM	2,905	2,695
	PM	2,090	3,043
Cumulative With Trinity Project	AM	2,851	2,539
	PM	2,060	3,001
Cumulative With SMCS Program and Trinity Project	AM	2,907	2,661
	PM	2,094	3,020
Cumulative Without Project With Two-Way Conversion	AM	2,914	2,619
	PM	2,092	3,001
Cumulative With SMCS Project With Two-Way Conversion	AM	2,977	2,685
	PM	2,138	3,033
Cumulative With SMCS Program and Trinity Project With Two-Way Conversion	AM	2,981	2,697
	PM	2,136	3,116

Source: DKS Associates, 2005.

Response to Comment 8-20:

Nelson/Nygaard, a firm based in the Bay Area which specializes in preparing alternative commute analysis and Transportation Systems Management Plans, reviewed the SMCS TSM Plan, as outlined in the DEIR in Chapter 2, Project Description (a full copy of their analysis is included in Appendix A of this FEIR). Based on their review of the Plan they have concluded that:

> …there will be sufficient parking at the proposed SMCS to accommodate full SMCS project parking demand. Parking demand will fall to 2,650 spaces due to the increased parking fee, generating an excess parking supply of 87 parking spaces. It is difficult to determine the precise number of spaces that could be reduced as a result of other factors, such as improved transit, increased transit subsidy, internalization and other TDM measures, but together these measures should provide SMCS with a sufficient vacancy rate to ensure that patients, visitors and staff can easily find a parking space at all times of day.

In 2002 SMCS conducted a commute survey of all employees at SGH, SMH and the Buhler Building to determine their employee transit patterns and commute modes and received a 70 percent

response rate. Based on the survey results, SMCS was meeting a 25 percent reduction in single occupant vehicle trips. The project site is located in close proximity to a variety of RT bus routes as well as Amador Regional Transit and Roseville Transit which provide commuter services. In addition, a free shuttle currently provides access between SGH/Buhler Building and the light rail stop at 29th/R Street. The frequency of the shuttle service would increase once the SMCS project is operational to accommodate people's schedules. It is anticipated SMCS would meet the City's 35 percent reduction goal due to implementation of a number of TSM measures, including free transit passes; consolidation of the site to enable greater carpool and vanpool opportunities; better access to more transit options; and an increase in parking rates. It is anticipated that SMCS would be able to meet the City's 35 percent reduction goal without any difficulty. In addition, the annual monitoring will allow SMCS to track the success of the TSMP and make any modifications or changes if necessary to accomplish the goal.

Response to Comment 8-21:

Please see Response to Comment 8-20 and Appendix A of this FEIR.

Response to Comment 8-22:

As discussed in Responses to Comments 8-1 and 8-4 above, it is not possible to know with certainty every piece of equipment that may be operating on any particular day during construction therefore, the DEIR presents typical noise ranges for construction equipment that can be expected to be present on the project site. This provides a reasonable estimate of maximum noise levels that could be experienced during construction. There is no reason to believe that a list of individual pieces of equipment and the times they would operate would provide a more accurate picture of the noise environment during construction. If a list showed that a specific truck or tractor would be present on a particular day, the noise produced by the equipment would be equivalent to those levels already shown in Table 6.6-7 in Section 6.6, Noise.

The DEIR explains that the City's Municipal Code exempts construction activities from complying with Municipal Code noise standards between the hours of 7 a.m. and 6 p.m. Monday through Saturday and 9 a.m. to 6 p.m. on Sundays (see DEIR page 6.6-12); however, nowhere does the DEIR make the claim that this exemption would make project construction noise effects, which would include building demolition, less than significant. In fact, these effects are described, and the DEIR finds that a short-term significant and unavoidable impact would be created by construction activities.

The DEIR does conclude that construction vibration would be less than significant. As stated on pages 6.6-24 and 6.6-25 of the DEIR, even though the vibration-producing activities would occur outside of designated sleep hours, this is not what makes the impact less than significant. Instead, as stated on pages 6.6-24 and 6.6-25, the vibration impact would be less than significant because the activity would occur at distances greater than 50 feet from sensitive receptors, and this would ensure that the threshold of 80 VdB would not be exceeded. In addition, construction vibration would only be an issue during pile-driving, since pile-drivers are the only pieces of impact equipment that produce groundborne vibration levels great enough to create vibration levels that could disturb people sleeping or result in damage to building foundations. Pile-driving would not occur as part of the SMCS project. Instead, the project applicant would use ground-drilling equipment in order to sink piles. The use of alternative backup bells is discussed in Response to Comment 8-45, and in revised Mitigation Measure 6.6-1.

Response to Comment 8-23:

The DEIR provides an extensive analysis of helicopter noise and its potential impact on residences and other uses in the area of the SMCS project (Impacts 6.6-4, 6.6-5, 6.6-6, and 6.6-7 on pages 6.6-27 through 6.6-33). A total of 11 staged helicopter noise measurements were taken to quantify helicopter impacts on nearby receptors. Figures depicting SEL contours are clearly presented in the document (Figures 6.6-5 and 6.6-6 on pages 6.6-19 and 6.6-20; Table 6.-10 on page 6.6-30). As stated in the analysis in Impact 6.6-7, no established criteria exist to determine at what point sleep disturbance would occur. In the absence of specific criteria, the analysis compares helicopter impacts against the most appropriate existing standard, which is the City's Municipal Code. Measured against this standard, sleep disturbance is clearly evaluated. The SCMS would also implement practices to minimize impacts to receptors, such as limiting nighttime landings to emergency situations and requiring helicopters to follow freeway paths during arrivals and departures. The DEIR finds this impact to be significant and unavoidable based on the Municipal Code standards.

Anticipated noise exposure from EMS helicopters using the helistop would be very brief occurrences. Unlike law enforcement helicopters which often hover or patrol in an area at low altitude for an extended period of time, the EMS helicopter would remain at altitude until commencing the approach and then quickly descend to the helistop, land and drop the patient, and quickly take-off and exit the area.

In response to the comment raised in the accompanying technical report (see Appendix E) regarding helicopter noise, the comment states that measuring helicopter noise against a 24-hour standard is not accurate and underestimates potential impacts because helicopters are single-event types of noise sources. The DEIR measures potential helicopter noise against both a 24-hour noise standard and a single event noise standard.

The comment also suggests that the DEIR should have developed a new standard for assessing single-event sleep disturbance impacts. However, the comment admits that no such standard currently exists and attempts to create a standard of a "50% probability of awakening". The City of Sacramento has a standard in its Municipal Code to enforce against excessive noise and protect sensitive receptors from, among other things, being awakened by the excessive noise. The DEIR thoroughly examines helicopter noise and the potential for awakening against this existing standard and finds it to be significant. With the availability of this existing, appropriate standard, there is no reason to create an entirely new standard to assess helicopter noise.

The comment also indicates that a new standard is needed because awakenings could occur due to "late night helipad uses". The comment then states that if two flights occur per night, the percentage of the awakened population could be 50 percent. The DEIR uses two flights on a given night as a worst-case scenario. As discussed in the DEIR project description, nighttime flights would only occur in emergency situations. Otherwise flights would be limited to the daytime. The possibility of two emergency flights becoming necessary during the same night is very low. In fact, as stated in the DEIR, less than one flight overall is expected on any one day. This is in addition to the fact that only one identified sensitive receptor exists within the highest noise contour calculated for helicopter noise.

The DEIR provides a completely adequate analysis of helicopter noise based on existing City standards that are available to assess impacts on individuals that may be sleeping. Even though nighttime helipad use would be limited to emergency situations, because there is one sensitive receptor that may be affected during these rare instances, the DEIR concludes a significant impact. Consequently, it is not the case that the DEIR in any way underestimated potential helicopter noise impacts.

Response to Comment 8-24:

Only four of the new cooling towers could operate simultaneously at the Energy Center. Based on an analysis conducted by Thorburn Associates, Acoustics and Audio Visual consultants, the air intake noise from the cooling towers would generate a noise level of 62 dBA based on 24-hour continuous operation at the western lot line.[9] This could result in noise levels of 68 dBA L_{dn} at the nearby Montessori school. To address this issue, current site design calls for a 22-foot tall architectural screening wall to be constructed along the western edge of the rooftop. The screening wall would reduce noise levels by approximately 10 dBA, resulting in noise levels at the school of approximately 58 dBA L_{dn}. This meets the acceptable noise criterion for schools. Other receptors such as residences or churches are farther from the cooling towers than the school so noise would not be an issue. Since General Plan standards are no more stringent for these uses than for schools, L_{dn} levels would be acceptable for these uses as well.

Response to Comment 8-25:

The DEIR avoids piecemealing or segmenting the project by including in the project description the entire range of projects that are being considered by SMCS and Trinity. Rather than evaluating under CEQA each individual proposal, a process that is typically done when private entities have multiple projects on multiple sites in a community, the DEIR evaluates as a single project a multiple set of projects proposed by SMCS, as well as projects proposed by other entities (such as the California Children's Theater) on SMCS-owned property. The effects of all air emissions that would occur simultaneously are evaluated.

The DEIR properly evaluates a range of environmental effects related to air quality, including those effects that are short-term and would occur during construction of the project and those effects that are long-term and would occur as a result of the ongoing operation of the projects evaluated in the DEIR. These two effects are considered separately because they would occur at different times, and would not be additive. Further, the steps necessary to avoid or mitigate construction effects is substantively different from those measures necessary to avoid or mitigate long-term operational effects. This consideration of short-term and long-term effects is consistent with the State CEQA Guidelines, which recognize that these types of effects are distinguishable.

> Direct and indirect effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. (State CEQA Guidelines Section 15126.2 (a))

Response to Comment 8-26:

Certain patterns are typical for construction activities. A building must be demolished before new grading can occur on the site, and the site must be graded before a new building can be constructed. This typical construction scenario makes it reasonable to assume that demolition and grading will not occur simultaneously, nor will grading and building construction. SMCS has a construction schedule that shows the timing of each new building. Due to existing constraints, SMCS would not be able to construct on multiple sites simultaneously.

9 Sutter Sacramento SMF Building/Energy Center – Mechanical Review, Acoustics and Audio Visual Consultants, Thorburn Associates, March 7, 2005.

Response to Comment 8-27:

The last sentence of the first paragraph on page 6.2-22 of the DEIR clearly states "[O]perational emissions for each new building include emissions from vehicle trips generated by the building occupants." In this case, SMCS would be the occupant of the building, and all SMCS-related trips would be accounted for in the analysis. This is also clearly shown in the URBEMIS outputs in Appendix F, where area source and vehicle emissions are both calculated for each project component. The combined total is then presented in Table 6.2-5 of the DEIR.

The heating and cooling of the SMCS would be provided by the new Energy Center. As shown in the URBEMIS outputs in Appendix F, the model calculates emissions associated with heating and cooling of a building under the Area Source heading "natural gas". This would account for the processes conducted at the Energy Center to heat and cool buildings associated with the SMCS project. Consequently, Energy Center emissions are included in the URBEMIS run and added to other SMCS area sources and associated vehicle trips to obtain a total operational emissions number that is then compared to SMAQMD thresholds.

Response to Comment 8-28:

Please see Responses to Comments 8-10 through 8-14 and 8-28 through 8-39 which address issues related to the analysis of construction emissions, and show why the analysis is complete under CEQA and in accordance with the methodology and guidance provided by the SMAQMD.

Response to Comment 8-29:

Please see Responses to Comments 8-9 and 8-30 for a discussion of the adequacy of the analysis of emissions of fine particulate matter. The SMAQMD does not require any PM modeling for projects whose sites are less than 15 acres in size, as long as certain mitigation measures are implemented. Even if all the different construction sites are totaled, the combined area does not exceed 15 acres. Also, the appropriate mitigation measures are specified in the DEIR and will be implemented by the SMCS. Consequently, no modeling is required and there are no model outputs contained in the appendix.

Based on the revised construction schedule for the SMCS project (see Chapter 2, Text Change), demolition activities would occur in phases. Buildings in proximity to each other would be demolished during the same phase. However, buildings demolished in the same phase would almost certainly not be demolished simultaneously. Equipment used for the demolition during a phase would demolish one building before moving on to the next building that would be demolished in that phase. This is because it is not practical or cost-effective to have multiple pieces of equipment performing the same demolition activity on buildings adjacent to each other. Consequently, the PM_{10} impact from each demolished building would be separate and discrete from the impact from other demolition activity. These PM_{10} emissions would not combine to create a greater impact. Since each building would be demolished separately, the greatest impact would be that which would occur during demolition of the largest building. This impact is described in the DEIR in Impact 6.2-1 and found to be a short-term significant impact. The DEIR also shows how Mitigation Measure 6.2-1 would be implemented to reduce demolition of the largest demolished building (and therefore all other subsequently demolished buildings) to a less-than-significant level. Even though it is highly unlikely that demolition of different building would occur simultaneously, the following measure will be added to Mitigation Measure 6.2-1:

> *(g) SMCS or contractor shall ensure that buildings are demolished in succession, and that no buildings are demolished simultaneously.*

In response to the comment raised in the accompanying technical report (see Appendix A) regarding emissions associated with demolition activities, the comment asserts that standard air quality models can be used to estimate the impact of demolition activities and that these impacts can be modeled as an area source. The comment further states that page 3-11 of the SMAQMD Guide requires the use of a dispersion model for estimating demolition impacts. No language such as that stated by the commentor appears on page 3-11 of the SMAQMD Guide. The SMAQMD Guide does not provide any advice regarding inputs that can be used in a dispersion model to perform such a calculation.

Response to Comment 8-30:

The SMAQMD has not adopted a mass emission threshold for PM_{10}. Instead, the SMAQMD asks that PM_{10} impacts be evaluated against the California Ambient Air Quality Standards (CAAQS) for PM_{10}, which is concentration based. As discussed in Impact 6.2-1, the SMAQMD does not provide a methodology for calculating demolition impacts, and there is no model available that is designed to allow for this kind of calculation. However, pollutant concentrations of directly emitted pollutants are, by definition, located in the area in which they are emitted. Consequently, it makes no sense to combine PM_{10} concentrations from various demolition activities when the activities take place in different locations. As discussed in Response to Comment 8-11, the maximum impact would be that associated with the largest building being demolished. The DEIR implements mitigation measures for the effective control of demolition-related particulate matter as Mitigation 6.2-1. These would be applied to all demolition activities occurring as part of the SMCS project. After mitigation, the impact from each demolition component would be small. Consequently, even if all demolition activities were to be conducted at the same time, dust would be effectively mitigated for each component, and the combined impact would be small as well. Taking into account that proposed demolition activities associated with the SMCS would take place at different locations, PM_{10} concentrations would not combine to cause any existing standards to be exceeded. Please see also Responses to Comments 8-7, 8-8, and 8-9, as well as 8-29 that address the concept of piecemealing a project.

Response to Comment 8-31:

The commentor asserts that because the Sacramento region is in nonattainment of the federal and State PM_{10} standards, any PM_{10} increase, whether it is temporary or not, would be significant. PM_{10} is not a regional pollutant like ozone. Generation of PM_{10} in one location in the nonattainment area will not necessarily affect overall PM_{10} levels outside of the area in which it is generated. This is discussed in Impact 6.2-7 of the DEIR. The discussion under Impact 6.2-7shows that PM_{10} from demolition will be reduced through the implementation of Mitigation Measure 6.2-1. Shown in Table 6.2-3 on page 6.2-5 of the DEIR, overall background levels of PM_{10} in the area of the SMCS project are relatively low; therefore, demolition activities producing this directly-emitted pollutant would not be likely to result in any new violation after mitigation measures have been implemented. As discussed in Impacts 6.2-1 and 6.2-2, in accordance with SMAQMD guidance, the proposed project's construction activities would not produce a significant project-alone PM_{10} impact. Since there would be no project-alone impact, the project's cumulative PM_{10} impact would be less than significant as well. The SMAQMD Guide states "A project will not be considered cumulatively significant for PM_{10}, SO_2 and NO_2 if:

- The project is not significant for project alone emissions"[10]

Since, based on the above guidance, there will be no cumulative impact, there will be no significant net increase in PM_{10}, and no additional mitigation measures are needed.

10 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 7-2.

Response to Comment 8-32:

Appendix F presents estimates of maximum daily emissions for construction activity for all portions of the project. While there would be short periods where the various phases of construction would overlap, the DEIR clearly shows that for each project component, the most intensive construction phases would not overlap. Consequently, it is not the combination of the most intensive phase for each project component that should be totaled to present a reasonably conservative assessment of potential effects. Instead, it is most appropriate to calculate the highest daily construction emissions for each component for each year. The highest daily emission rate represents a reasonably conservative assessment of the effects, or in other words "a reasonable worst-case scenario".

As presented in Impact 6.2-3 of the DEIR, the URBEMIS 2002 program was used to model the portions of each phase that would overlap. It was determined that the highest daily emission rate would occur in Spring of 2007 and would result in approximately 323.86 pounds per day of NO_x. Evidently, to obtain a maximum impact of 900 pounds per day, the commentor is totaling the maximum emissions for each construction component. As stated above, these maximum daily emissions do not overlap.

Response to Comment 8-33:

The DEIR presents those mitigation feasible measures recommended by the SMAQMD *Guide* for avoiding or reducing construction emissions as found in the URBEMIS model, and also recommends implementing the SMAQMD's standard construction mitigation measures. Mitigation Measure 6.2-3 in the DEIR does both, and therefore has fulfilled the requirements for presentation of all feasible mitigation measures as outlined in Section 15126.4 of the State CEQA Guidelines.

Response to Comment 8-34:

Please see Responses to Comments 8-11, 8-12 and 8-13 for a discussion of why construction ROG and CO would not be considered significant and are not further analyzed in the DEIR.

Response to Comment 8-35:

As shown in Appendix F, "Air Quality Model Outputs", vehicle trips were included in the operational emissions calculations. The Appendix shows, for each project component, the area source emissions and the vehicle operation emissions on the following page. The total emissions (area plus vehicle) for each component plus a total for all components combined are shown in Table 6.2-5 of the DEIR.

Response to Comment 8-36:

Please see Response to Comment 8-27 explaining how emissions from the Energy Center were taken into account in the URBEMIS model as part of overall operations of the SMCS project.

The chillers and boilers that would be part of the proposed new Energy Center would not emit more pollutants than the current Energy Center. All chillers would be an electric drive, not run on either natural gas or fossil fuel. This would ensure that emissions would be minimal and not significantly greater than current chiller operations, regardless of the increase in the number of chillers, since electric power is clean and non-emitting technology. The heating system is composed of steam boilers. In the proposed SMCS project, the number of available boilers would be increased from three to four. However, one boiler would be completely redundant, meaning it would not be used unless one of the other three boilers would be unable to operate. Also, current boilers (existing technology) are allowed to emit a maximum of 15 parts per million (ppm) of NO_x. The proposed new

boilers include new technology that would be fitted with burners and controls limiting emissions to a maximum of 9 ppm of NO_x. Consequently, even if all four boilers were operating at full capacity and emitting their maximum 9 ppm of NO_x, the total NO_x emission would be 36 ppm (9 x 4). This would be less than the 45 ppm maximum emission rate that could be experienced by the existing three boilers operating at peak capacity (15 x 3).

The commentor also states that controls would only apply to pollutants for which the county/region is in nonattainment. The SMAQMD permits sources in order to reduce pollutants of concern. With natural-gas fired boilers, NO_x is the pollutant of concern. The other criteria pollutants are not at issue because the County is in attainment for these pollutants, and because they are not emitted in any substantial amounts by boiler operations.

Response to Comment 8-37:

The SMAQMD *Guide*, under the heading "Reducing Significant Operational Emissions", recommends using mitigation measures listed in the *Guide's* Appendix E to reduce operational emissions.[11] The SMAQMD also recommends that the point values associated with each measure in Appendix E total 15. This has been done, and is shown on pages 6.2-23 and 6.2-24 of the DEIR. Consequently, consistent with the SMAQMD *Guide*, the EIR has fulfilled its requirements to disclose all potential feasible mitigation measures as required by the State CEQA Guidelines. Please see Response to Comment 8-43 that specifically addresses the feasibility of mitigation.

Response to Comment 8-38:

For operational PM_{10}, the SMAQMD Guide states that development projects below cutpoints or thresholds indicated in Table 4.2 of the Guide would not be considered to have significant impacts.[12] This is because the SMAQMD realizes that certain uses do not have processes that produce large amounts of particulate matter. For hospital uses, the Guide lists 522,000 square feet as the threshold. The hospital uses for the SMCS project (the Women's and Children's Center) would equal 398,362 square feet. For medical office buildings, the Guide lists 243,000 square feet. The proposed medical office uses would equal 203,382 square feet for the SMF and 35,000 square feet for the proposed MOB for a total of 238,382 square feet. In the case of both, the hospital uses and the medical office buildings, total square feet are below the thresholds outlined in Table 4.2 of the Guide. As shown in the URBEMIS outputs in Appendix F, PM_{10} emissions associated with SMCS operations would be almost exclusively generated by vehicles. These emissions would be generated by each vehicle over the entire vehicle trip. Consequently, only a very small portion of the PM_{10} from each trip would be generated on site or in the vicinity of the SMCS project. According to the URBEMIS model runs, almost no PM_{10} is generated by area sources on-site. Because very small amounts of area source PM_{10} would be generated by project operation, and because only a small percentage of vehicle-related PM_{10} would be emitted in the vicinity of the SMCS project, this project would have PM_{10} impacts typical to other urban development, and would not have the capacity to exceed PM_{10} concentrations. Also, please see Response to Comment 8-9.

Response to Comment 8-39:

The comment reiterates CEQA requirements for cumulative analysis as articulated in the State CEQA Guidelines and the 1979 case of *Whitman v. Board of Supervisors*. The comment is noted.

11 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 4-8.
12 SMAQMD Guide to Air Quality Assessment in Sacramento County, adopted July 2004, page 5-2.

Response to Comment 8-40:

The comment questions the adequacy of the DEIR analysis of cumulative air quality impacts presented in Impact 6.2-7. The comment suggests that where a cumulative impact is found to be significant "100 percent of a project's emissions must be mitigated or all feasible mitigation must be required."

The analysis contained in Impact 6.2-7 evaluates a range of air pollutants. Regarding particulates, Impact 6.2-7 concludes that the project's contribution to cumulative impacts on PM_{10} are less than considerable, thus the cumulative impact is less than significant. Since the impact is less than significant, no mitigation measures are required.

Pertaining to Toxic Air Contaminants, the analysis concludes that "there are no other substantial sources of TACs in the project vicinity that could combine with construction TACs to produce any significant impact." Thus, no further cumulative analysis is required or, in fact, possible.

As it relates to nitrous oxides (NO_x) the analysis concludes that since the project vicinity is in an ozone nonattainment area "[W]hile the project's construction NO_x impact may appear to be small when viewed in context with all other NO_x sources in the region, its impact would be considered cumulatively considerable."

According to Section 15130 (b)(5):

> An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

As is stated above, mitigation measures for significant cumulative impacts need only mitigate or avoid the project's contribution to the significant cumulative impacts, not the entirety of the significant cumulative impact. Mitigation Measures 6.2-5 and 6.2-6 would reduce the contribution of the proposed projects to the cumulatively significant impact on NO_x to a less than considerable level. Thus, no additional mitigation is necessary.

Response to Comment 8-41:

The analysis of cumulative air quality impacts contained in the DEIR is based on methods, standards, and analyses established in the Sacramento Metropolitan Air Quality Management District's *Guide to Air Quality Assessment in Sacramento County*. This document provides guidance for CEQA analyses of air quality impacts and reflects the existing conditions of the Sacramento region as it lies within the Sacramento Federal Ozone Nonattainment Area. In a July 23, 2004 memorandum, Norm Covell, the SMAQMD Air Pollution Control Officer stated:

> The Sacramento Metropolitan Air Quality Management District ("SMAQMD") has recently revised its California Environmental Quality Act ("CEQA") guidance document. The new guidance, entitled, *Guide to Air Quality Assessment for Sacramento County ("Guide"),* provides the basic information needed to analyze the air quality impacts of a proposed project and determine whether it might have a significant effect on air quality. The *Guide* also includes information regarding mitigation measures that may be implemented to reduce air quality impacts.
>
> The Guide supersedes the Air Quality Thresholds of Significance guidance released by SMAQMD in 1994. Please note that the actual CEQA thresholds of significance were adopted by the SMAQMD Board of Directors in March 2002.

Chapter 7 of the *Guide to Air Quality Assessment* addresses cumulative analyses and establishes that:

> Development projects are considered cumulatively significant if the project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NO_x) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

Pertaining specifically to projects that require general plan amendments or zoning amendments, the *Guide* states:

> If the emission estimates are greater for the proposed land use designation, the project will have a significant cumulative air quality impact. This means that the project's incremental contribution will be considered cumulatively significant.

Thus, the analytical approach and standard of significance questioned by the commentor is the approach and standard that is required to be used by the SMAQMD (regulatory agency) that is charged with overseeing air quality in the Sacramento region.

Under Impact 6.2-8, the DEIR concludes that the SMCS project would have a considerable contribution to a significant cumulative impact, and that feasible mitigation measures are not available to reduce the contribution to a less-than-considerable level. Pertaining specifically to the proposed Children's Theatre project, the DEIR concludes that because the project would not require a change in land use designation, and since the proposed use would be no more intensive than the existing land use designation, "the impact is less than significant and would be a less-than-significant cumulative impact."

As such, the cumulative air quality impact analysis is appropriately consistent with the requirements of the SMAQMD and the requirements of CEQA.

Response to Comment 8-42:

Appendix B of the SMAQMD Guide contains Table B.1. – Particulate Matter Screening Levels for Construction Projects, which is a screening table for PM_{10} impacts. The total area of the site to be graded is approximately six (6) acres. As stated in Impact 6.2-2 of the DEIR:

> "The SMAQMD recommends a PM_{10} threshold of significance that is equal to the CAAQS for PM_{10} of 50 µg/m^3. The SMAQMD's *Guide to Air Quality Assessment in Sacramento County* (Guide) specifies a methodology for evaluating whether a project would exceed this PM_{10} standard during construction. Appendix B of the Guide contains Table B.1 – Particulate Matter Screening Level for Construction Projects. This table lists various acreages and mitigation associated with the various acreage ranges which would reduce PM_{10} impacts to less-than-significant levels. As long as a project's maximum acreage graded per day falls into one of the acreage ranges, and the appropriate mitigation measures are applied, the project would be considered to have a less than significant PM_{10} impact during construction, and no concentration modeling is required."

The SMAQMD Guide does not mention the need for any additional PM_{10} mitigation beyond what is specified in Table B.1 for construction projects with acreage between 5.1 and 8 acres. Mitigation Measure 6.2-2 implements the fugitive-dust control measures suggested by the SMAQMD. Mitigation Measure 6.2-2 also goes beyond the requirements of the SMAQMD by implementing additional dust-control measures not specifically recommended by the SMAQMD. The comment states that more dust mitigation should be implemented during grading and construction. The table below assesses each suggested measure identified in the comment individually.

Suggested Mitigation Measure	Discussion
Prewet surface soils where equipment will be operated; maintain live perennial vegetation and desert pavement; stabilize surface soils with dust palliative; and use water or dust palliative to form a crust on soil immediately following clearing/grubbing.	Mitigation Measure 6.2-2 already requires the watering of the project site(s), which is where the equipment would operate. Each graded area is relatively small and once the site is graded construction is slated to commence; therefore, large areas of graded soil would not sit undisturbed for long periods of time. Consequently, it is not feasible or practical to plant perennial vegetation or desert pavement between the grading and construction phases. The use of water to wet the project site is already specified in Mitigation Measure 6.2-2.
Grade each phase separately as needed, or grade entire project at one time, but apply chemical stabilizer or ground cover to areas where construction will be delayed.	As shown in the project description, the project site(s) would be graded in phases. Once grading is complete construction is scheduled to commence; therefore, it would not be necessary to apply chemical stabilizer or ground cover.
Construct a paved (or dust palliative treated) apron onto the project site prior to grading, earth moving, or site preparation.	Paving the project site(s) prior to grading would make it more difficult to grade or prepare the site. It would also require the demolition/excavation of the pavement, which would create additional fugitive dust itself, and would require the use of additional construction equipment that would emit ozone precursors and particulate matter from exhaust. Dust palliative and water are used interchangeably by construction contractors to control dust. Mitigation Measure 6.2-2 already requires the watering of the project site on a daily basis to control dust.
Prewater during cut and fill activities.	Certain areas of the project site would require excavation to create underground levels or underground parking. Mitigation Measure 6.2-2 already requires the project site(s) be watered twice daily. Consequently, soil would already be watered prior to any cut and fill activities.
Control dust during backfilling by watering backfill material, applying dust palliatives, and other measures.	Certain areas of the project site(s) would require excavation to create underground levels or underground parking. Mitigation Measure 6.2-2 already requires the project site to be watered twice daily. This would apply to any backfill material that may be on the project site. This would effectively minimize fugitive dust from any backfill material.
Protect disturbed land by fencing, ditches, vegetation, berms, or other barriers; by installing wind barriers; by planting perimeter vegetation; and by stabilizing with dust palliative, vegetation, pavement, or surface rock.	Using fencing, ditches, vegetation, berms or barriers as suggested by the commentor is appropriate for graded areas that are in large, open, exposed areas. The project site is in an urban location, where many existing buildings shield the site from wind. The site is not located in a greatly exposed area. As stated above, since there would not be only a very short time period between the

Suggested Mitigation Measure	Discussion
	grading and construction phases at any site, perimeter vegetation would not have a chance to be established. The use of water is used interchangeably with dust palliative by construction contractors to stabilize soil. The requirement to wet the project site daily with water is already specified in Mitigation Measure 6.2-2.
Establish barriers adjacent to roadways to keep windblown material from leaving construction sites.	As stated above, the site is not in a large open area that would be exposed and subject to high winds. Also, Mitigation Measure 6.2-2 requires grading activity to cease if winds reach 20 mph. This would keep equipment from raising dust that could be blown off site if high winds were to occur.

Response to Comment 8-43:

Please see Response to Comment 8-7 for a discussion of why the DEIR has specified all the required mitigation for the reduction of NO_x, and why construction ROG calculations or ROG mitigation is not required by the SMAQMD. Therefore, the additional mitigation listed in the comment would not be required.

In response to the comment raised in the accompanying technical report (see Appendix A) regarding additional ROG and NO_x controls for implementation during construction. The table below lists each of the recommended measures and the feasibility of each:

Additional ROG and NO_x Control	Discussion
Limiting the hours of operation of heavy duty equipment and/or the amount of equipment in use	Limiting the amount of equipment or the use of the equipment would mean that the construction period would be extended over a longer period of time. This would mean that other construction-related impacts, such as noise impacts, would be exaggerated. Consequently, the City does not consider the suggested measure to be desirable.
Conversion to cleaner engines	The DEIR specifies Mitigation Measure 6.2-3 (a) which would require the applicant to use vehicles with engines that would achieve a project-wide fleet average of 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average.
Use of cleaner (reduced sulfur) fuel	See Response to Comment 8-44.
Add-on control devices, e.g., particulate traps, catalytic oxidizers	Mitigation Measure 6.2-3 (f) would require the applicant to use alternative fueled equipment or catalyst equipped diesel construction equipment where feasible.
Buffer zone between facility and sensitive receptors	The creation of a buffer zone between the facility and sensitive receptors is not considered feasible. The surrounding area is built out, and neither the project site boundaries nor the existing receptors could be moved farther apart.

Additional ROG and NO_x Control	Discussion
Installation of high pressure injectors on diesel construction equipment	Mitigation Measure 6.2-3 would require the applicant to achieve a fleet-wide average of at least 20% NO_x reduction and 45% particulate reduction compared to the most recent CARB fleet average. High pressure injectors could conceivably be used to meet this requirement.
Restricting engine size of construction equipment to the minimum practical size	Using engines that are an appropriate size is part of typical construction practices, since it is not cost-efficient to use equipment that is unnecessarily large.
Electrification of construction equipment	Mitigation Measure 6.2-4 (g) specifies that, where appropriate, fossil-fueled equipment would be replaced with electrically driven equivalents.
Substitution of gasoline-powered for diesel-powered construction equipment	Mitigation measure 6.2-3 (f) already requires the applicant to use alternative fueled equipment where feasible.
Use of alternatively fueled construction equipment, using, e.g., compressed natural gas, liquefied natural gas, propane, or biodiesel	Mitigation Measure 6.2-3 (f) would require the applicant to use alternative fueled equipment where feasible.
Implementation of activity management techniques including a) development of a comprehensive construction management plan designed to minimize the number of large construction equipment operating during any given time period; b) scheduling of construction truck trips during non-peak hours to reduce peak hour emissions; c) limitation of the length of construction work-day period; and d) phasing of construction activities	a) Limiting the amount of equipment or the use of the equipment would mean that the construction period would be extended over a longer period of time. This would mean that other construction-related impacts, such as noise impacts, would be exaggerated. Consequently, the City does not consider the suggested measure to be desirable. b) Truck trips would be made throughout the day during construction. It is not believed that there would be a higher concentration of truck trips during peak hours. c) Limiting the length of the construction day would mean that the construction period would be extended over a longer period of time. This would mean that other construction-related impacts, such as noise impacts, would be exaggerated. Consequently, the City does not consider the suggested measure to be desirable. d) As stated in the DEIR project description, construction activities would be phased.
Installation of catalytic converters on gasoline-powered equipment, if feasible	This shall be added to the DEIR as Mitigation Measure 6.2-3(h) (see below).
Minimization of construction worker trips by requiring carpooling and by providing for lunch onsite	As shown in the URBEMIS outputs for construction activities contained in DEIR Appendix F, for any construction component of the proposed project, construction worker trips for any phase total less than one pound per day for any ozone precursor or particulate matter. Consequently, requiring

Additional ROG and NO_x Control	Discussion
	carpooling and providing lunch onsite would provide very minimal emission reductions, and would not be considered feasible for this project, especially since many workers will undoubtedly carpool and bring their lunches to the job site without being required to do so.
Lengthening of construction period during smog season (May through October), so as to minimize the number of vehicles and equipment operating at the same time	Lengthening the construction period would mean that other construction-related impacts, such as noise impacts, would be exaggerated. Consequently, the City does not consider the suggested measure to be desirable.
Utilization of new technologies to control ozone precursor emissions as they become available and feasible	This shall be added to the DEIR as Mitigation Measure 6.2-3(i) (see below).
Use electricity from power poles rather than temporary diesel power generators; and	Mitigation Measure 6.2-3 (g) specifies that fossil-fueled equipment would be replaced with electrically driven equipment *provided that they are not run via a portable generator set.*
Emissions offsets if ROG or NO_x emissions exceed 6.0 tons/quarter	The SMAQMD does not have an emissions offsets program in place at this time. The 6.0 tons per quarter emissions threshold is not a threshold that is used by the SMAQMD and would not apply to Sacramento County.

To address some of the concerns raised by the commentor, Mitigation Measure 6.2-3 will be revised to include the following measures:

> 6.2-3 (g) Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
>
> 6.2-3 (h) New technologies to control ozone precursor emissions shall be utilized as they become available and feasible.

Response to Comment 8-44:

Mitigation Measure 6.2-3 requires the applicant to achieve a fleet-wide average of at least 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. This is in keeping with SMAQMD standard construction mitigation language as mentioned in the comment. Mitigation Measure 6.2-3(f) would require the applicant to use alternative fueled equipment or catalyst equipped diesel construction equipment where feasible.

The comment states that both ultra-low sulfur diesel fuel should be used and that PuriNo_x diesel fuel be used. Construction equipment would have to use either one or the other. According to the URBEMIS outputs for construction of the SMCS, emissions of So_x would be minimal. Consequently, use of an aqueous diesel fuel would be preferred.

The DEIR already incorporates the use of low-emission diesel fuel. Mitigation Measure 6.2-3(f) states:

> *When appropriate, use alternative fueled (such as aqueous diesel fuel) or catalyst equipped diesel construction equipment.*

The use of PuriNO_x would fulfill this requirement.

Response to Comment 8-45:

The DEIR concludes that construction noise would be a short-term significant impact. The comment suggests five mitigation measures that could be implemented to further reduce construction noise impacts from the SMCS project. However, not all of the suggested mitigation measures would be feasible for the SMCS project. The mitigation measures recommended by the commentor are discussed in the table below.

Suggested Mitigation Measure	Discussion
Notify affected parties of the proposed construction schedule and provide assistance with relocation if an affected party requests it.	The greatest noise impacts would occur during deconstruction/demolition and grading activities. Notification of a construction schedule is a feasible mitigation and would be incorporated as part of the project, as shown below. It is anticipated SMCS would provide notification to neighbors via a newsletter that has been used throughout the project to keep residents informed about the project. However, relocation of any individuals affected by construction would not be a feasible mitigation measure because construction noise is part of an urban environment and the city has never put the burden on a project to relocate people due to noise concerns
Establish a noise hotline that is continuously manned with someone with authority to seek out and solve the noise problem and shutdown the project if warranted	The City is the regulatory agency with the authority to enforce provisions of the noise ordinance and would be the proper channel to address noise issues. This negates the need for the SMCS to develop its own hotline. However, it is anticipated SMCS would provide a number for residents to contact if there are any issues with the project which the City may also add as a condition of project approval.
Install sound walls and barriers	Because of the dimensions of the SMCS project and the confinements of the project site, it is not possible to have sound walls or barriers installed to reduce construction noise from all project phases, especially the most noise-intensive demolition phase.
Require the use of equipment that meets noise levels of 85 dB at a distance of 50 feet.	Measures that can reduce noise from the most noise intensive construction phases, such as demolition, are very limited. There is technically no way to ensure that noise levels can be reduced to 85 dB at 50 feet throughout the construction of the SMCS project. Consequently, this is not a feasible mitigation.
Use alternative backup bells.	This is a feasible mitigation and could be implemented. See below.

To address some of the concerns raised by the commentor, Mitigation Measure 6.6-1 will be revised to read as follows:

6.6-1 (SMCS/Theatre)

(a) All construction equipment shall be equipped with factory matching mufflers and in good working order.

(b) All staging areas and water tanks shall be located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.

(c) A construction schedule shall be clearly posted at the construction site(s).

(d) Alternative backup bells shall be used by construction equipment.

Response to Comment 8-46:

Please see Response to Comments 8-35 through 8-37 for a discussion of why the mobile and area source mitigation measures included in the DEIR fulfill SMAQMD and CEQA requirements. As discussed in the DEIR in Chapter 2, Project Description and Section 6.7, Transportation and Circulation, the SMCS project would include a comprehensive Transportation Systems Management Plan (TSMP) which would include many of the measures listed by the commentor.

The comment suggests that additional mitigation measures are available for the reduction of operational emissions. The table below presents the mitigation measures suggested in the comment and discusses the feasibility of each. As shown in the table many of the measures are part of the SMCS TSMP, discussed in detail in DEIR Chapter 2, Project Description.

Suggested Mitigation Measure	Discussion
Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc	The SMCS project would be located in an urban environment. Many convenience services and restaurants already exist in the immediate vicinity of the SMCS project. The SMCS project would include a cafeteria and is also proposing a small café in the SMF Building.
Provide on-site child care or contribute to off-site child care within walking distance	SMCS reviewed providing child care on-site and determined it was not feasible at this time.
Provide secure, weather-protected bicycle parking for employees	Bicycle lockers would be provided as part of the SMCS project. Please see page 2-47 of the project description.
Provide direct safe, direct bicycle access to adjacent bicycle routes	The SMCS is in an urban environment. Bike routes exist on streets directly adjacent to the SMCS project.
Provide showers and lockers for employees bicycling or walking to work	This is currently implemented as part of the existing SMCS TSM. Please see page 2-47 of the project description.
Provide short-term bicycle parking for retail customers and other non-commute trips	This would be implemented as part of the existing SMCS TSM. Please see page 2-47 of the project description.

Suggested Mitigation Measure	Discussion
Provide neighborhood-servicing shops and services within ½ mile of residential areas	The SMCS project would be located in an urban environment. Many convenience services and restaurants already exist in the immediate vicinity of the SMCS project.
Connect bicycle lanes/paths to city-wide network	The SMCS project would be in an urban environment. Bike routes exist on streets directly adjacent to the SMCS that are part of the city-wide bike network.
Design and locate buildings to facilitate transit access, e.g., locate building entrances near transit stops, eliminate building setbacks, etc.	The SMCS project would be adjacent to streets with existing bus stops. Bus stops exist within ¼ mile or less of the SMCS project.
Construct transit facilities such as bus turnout/bus bulbs, benches, shelters, etc.	Transit facilities such as those mentioned already exist in areas in close proximity to the SMCS project.
Provide shuttle service to food service establishments/commercial areas	The SMCS would be in an urban environment. Many convenience services and restaurants already exist in the immediate vicinity of the SMCS and are within easy walking distance.
Provide shuttle service to transit stations/multimodal centers	The SMCS currently provides a free shuttle between the R Street light rail stop and SGH.
Implement parking fee for single-occupancy vehicle commuters	The SMCS currently charges for parking and fees for parking would be increased depending upon the market.
Implement parking cash-out program for non-driving employees	This is currently implemented as part of the existing SMCS TSM. Please see page 2-47 and 2-48 of the project description.
Provide direct, safe, attractive pedestrian access from project to transit stops and adjacent development	The SMCS would be adjacent to streets with existing bus stops. Bus stops exist within ¼ mile or less of the SMCS project.
Implement compressed work week schedule	Because nurses, doctors, and other medical professionals work non-traditional work hours (12 hour days three days a week, etc.) SMCS already has a compressed work week schedule.
Implement home-based telecommuting program	Most work would require employees to be on site for patient care, etc. This makes a home-based telecommuting program infeasible for a project such as the SMCS project.
Provide electric vehicle ("EV") and compressed natural gas ("CNG") vehicles in vehicle fleets	The SMCS project would not have a vehicle fleet.
Install EV charging facilities	As stated in the SMAQMD comment letter, EV's are no longer marketed, making this measure infeasible.
Install CNG fueling facility	The very small number of CNG vehicles that could potentially be driven to the SMCS project makes this measure infeasible.
Provide preferential parking locations for EVs and CNG vehicles	As stated in the SMAQMD comment letter, EV's are no longer marketed. It would not be expected that CNG vehicles would be driven to the SMCS project with any frequency, making this measure infeasible.

Suggested Mitigation Measure	Discussion
Charge reduced or no parking fee for EV's and CNG vehicles	As stated in the SMAQMD comment letter, EV's are no longer marketed. It would not be expected that CNG vehicles would be driven to the SMCS project with any frequency, making this measure infeasible.

Response to Comment 8-47:

Please see Response to Comments 8-35 through 8-37 for a discussion of why the mobile and area source mitigation measures included in the DEIR fulfill SMAQMD and CEQA requirements.

For new projects in Sacramento County, the SMAQMD requires that operational mitigation measures be put in place from a list of operational mitigations. Each of the measures on the list is given a point value. The SMAQMD requires that the total point value associated with implemented mitigation measures is a combined 15 points. Pages 6.2-23 and 6.2-24 of the DEIR show how the SMCS would achieve the required 15 points. Also see Response to Comment 3-5 of the SMAQMD letter, which presents new operational mitigation measures that would be implemented based on a meeting with the SMAQMD staff. These mitigation measures would fulfill the requirements of the SMAQMD.

In addition to the mitigation measures listed in the DEIR, the DEIR project description presents other measures that would be implemented by SMCS as part of their TSM plan. While many of these measures do not appear on the SMAQMD's "official" list of mitigation measures, they would still reduce emissions of ozone precursors by reducing vehicle trips. In this respect, SMCS would go above and beyond the mitigation requirements of the SMAQMD.

The comment suggests further measures for the reduction of area source emissions. The following table shows the mitigation measures suggested in the comment and discusses the feasibility of each.

Suggested Mitigation Measure	Discussion
Use electric lawn and garden equipment for landscaping	The SMCS project would have only a small amount of area that is landscaped and would require maintenance with landscaping equipment, so little to no benefit would be realized. Electric outlets would not be available in all locations around the SMCS buildings to make this a feasible option.
Use electrically or CNG-powered specialty equipment, e.g., utility carts	The SMCS project would be a compact, campus-style facility that uses city streets and sidewalks to connect the buildings. In addition, all buildings would be attached, making it unnecessary to use specialty equipment such as utility carts.
Use propane powered specialty equipment, e.g., forklifts, utility carts, etc.	The SMCS project would be a compact, campus-style facility that uses city streets and sidewalks to connect the buildings. In addition, all buildings would be attached, making it unnecessary to use specialty equipment such as utility carts. Forklifts are not expected to be used as part of normal SMCS operations.
Increase walls and attic insulation beyond Title 24 requirements	The SCMS project is already proposed to exceed Title 24 energy standards. See Response to Comment 3-5 and 10-34.

Suggested Mitigation Measure	Discussion
Orient buildings to maximize standard heating and cooling and include passive solar design, e.g., day-lighting	This mitigation measure is designed for residential projects. The orientation of the SCMS project is limited by the orientation, location, and dimensions of the site.
Plant shade trees in parking lots to reduce evaporative emissions from parked vehicles	The SCMS project would create parking garages. As such, there are no traditional parking lots where shade trees could be planted. Most parking spaces would be shaded by virtue of being located in a parking garage.
Plant shade trees along southern exposures of buildings to reduce summer cooling needs	As stated in the project description, street trees would be planted around the SMCS buildings in accordance with City tree planting requirements.
Use energy-efficient and automated controls for air conditioning	The SMCS project design has incorporated significant features in LEED (Leadership in Energy and Environmental Design) criteria. The SMCS project design seeks to reduce the use of energy and materials consumption consistent with the U.S. Green Building Rating System requirements, including automated control for air conditioning. See Response to Comment 10-38 for more information.
Use lighting controls and energy-efficient interior lighting and built-in energy-efficient appliances	Operations of indoor lights do not create emissions of criteria pollutants. Consequently, using energy-efficient lights would produce no direct emission reductions. The mitigation measure referring to energy-efficient appliances is designed for residential projects that would use household appliances.
Use double paned windows	The SCMS project is required to comply with Title 24 requirements, which require windows that reduce ambient heat.
Use energy-efficient low sodium parking lot and street lights	Operation of parking lights do not create emissions of criteria pollutants. Consequently, using energy-efficient parking lot lights or street lights would produce no direct emission reductions. At this time it is not known if SMCS plans on using low sodium parking lot lights.
Use light-colored roof materials and paint to reflect heat	As shown in the project description, the exterior of the SCMS project would be light colored.
Install solar cooling/heating	Solar heating is not considered feasible as it is not reliable enough to be used for medical uses.
Install solar water heater for at least 25% of the building floor area	Solar heating is not considered feasible as it is not reliable enough to be used for medical uses.
Substitute materials, e.g., use water-based paint	As shown in the regulatory setting of the air quality section, the SMAQMD requires compliance with Rule 442 – Architectural Coatings. This would require any architectural coatings applied to be low-VOC coatings.
Modify manufacturing processes, e.g., reduce process stages, closed loop-systems, materials recycling	There are no known manufacturing processes that would occur on site that could benefit air quality by reducing process stages, or instituting closed-loop systems or materials recycling.

Suggested Mitigation Measure	Discussion
Install resource recovery systems that redirect chemicals to new production processes	There are no known production processes that would occur on site that could benefit air quality by having a resource recovery system installed.
Use solar or low-emission water heaters	The SCMS project would already be required to use low-emission water heaters in compliance with SMAQMD rule 411.
Use centralized water-heating systems	There is no reason to believe that using centralized water-heating systems would reduce emissions of any criteria pollutant. However, the SMCS project would include an Energy Center that provides centralized heating and cooling.
Use concrete or other non-pollutant materials for parking lots instead of asphalt	This would not lead to any reductions in operational emissions. The project does not include any large surface parking areas.
Pay an air quality mitigation fee	This is not feasible at this time because the SMAQMD does not have an off-site mitigation fee/ emissions offset program in place for operational emissions.
Secure emission offsets	This is not feasible at this time because the SMAQMD does not have an off-site mitigation fee/ emissions offset program in place for operational emissions.
Landscape with drought-resistant species, and use groundcovers rather than pavement to reduce heat reflection	As shown in the project description, very little open area would exist on the project site. There is no reason to believe that landscaping the small open area with drought-resistant species would do anything to reduce operational emissions of any criteria pollutant.
Provide electric maintenance equipment	The SMCS does not expect to use maintenance equipment that would operate on fossil fuels.
Use ozone-destruction catalyst on air conditioning systems	This mitigation measure is designed for residential projects that would install many smaller residential air conditioners. The measure is not feasible for medical use projects such as the SMCS. Building cooling would be provided by a central Energy Center.
Reduce standard paving by 20%	Paving would not be an operational function of the SMCS project. Parking is provided in a parking structure.
Retrofit existing homes and businesses in the project area with approved energy conservation devices	CEQA requires that mitigation be enforceable. The city cannot require homes and businesses in the project area to install energy conservation devices.
Replace/repower school/transit bus with cleaner vehicles	This would be equivalent to offsite mitigation. The SMAQMD currently has no program in place for operational emissions offsets, and this measure would do nothing to reduce emissions generated by the SMCS project.
Construct satellite work stations	Most work would require employees to be on-site for patient care, etc. This makes satellite work stations infeasible for a project such as the SMCS project.

Suggested Mitigation Measure	Discussion
Fund a program to buy and scrap older, high-emission vehicles	This would be equivalent to offsite mitigation. The SMAQMD currently has no program in place for operational emissions offsets.
Contribute to an off-site TDM fund	This would not be feasible because neither the SMAQMD nor any other local agency has a program in place for operational emissions offsets.
Repair smog-check waived vehicles	This would be equivalent to offsite mitigation. The SMAQMD currently has no program in place for operational emissions offsets, and this measure would do nothing to reduce emissions generated by the SMCS project.
Introduce electric lawn and garden equipment exchange program	This would be equivalent to offsite mitigation. The SMAQMD currently has no program in place for operational emissions offsets.
Retrofit/purchase clean heavy-duty trucks, construction equipment, diesel locomotives, and marine vessels	This would be equivalent to offsite mitigation. The SMAQMD currently has no program in place for operational emissions offsets.

Response to Comment 8-48:

The comment states that there are several additional mitigation measures that can be implemented to further reduce the impact from helicopter noise. As described in Chapter 2, Project Description, the SMCS project has committed to limit nighttime helicopter activity to emergency use only. Upgrading windows and doors for sound transmission loss is not feasible, given the limited impact of the helistop use (less than one flight per day on average, with helicopter flights occurring almost exclusively during the daytime) and the expense associated with upgrading windows and doors in the area with glazing. Also, this mitigation would not be enforceable. Mitigation must be enforceable, as stated in the CEQA Guidelines, Section 15126.4(a)(2). The City cannot require nearby property-owners to make sound-reducing upgrades to their property. Additionally, during the warmer months, residents may sleep with their windows open, in which case there would be no benefit to window glazing for sound-transmission loss.

It is assumed that the EMS helicopter pilots would all follow the piloting techniques set forth by the Helicopter Association International. To ensure these procedures are followed Mitigation Measure 6.6-2(b) will be added to the noise section. A prohibition on non-emergency use of the helistop between 10:00 p.m. and 7:00 a.m. is not warranted for this project because it may be necessary to transport a "critical care" patient during the evening hours due to weather conditions, aircraft availability, or other factors that may have prevented an earlier transfer. The decision to request a helicopter transport is essentially a medical decision based on the condition of the patient.

The following mitigation measure will be added to Mitigation Measure 6.6-2 on page 6.6-31 of the DEIR:

6.6-2(b) *SMCS shall include in any contracts with EMS helicopter pilots/operators that pilots adhere to the Helicopter Association International "Fly Neighborly Program."*

Response to Comment 8-49:

SMCS does not have the authority to establish a specific altitude for helicopters operating in the vicinity of the hospital. Flight altitudes are determined by the FAA and other entities that oversee helicopter operations. Unlike Los Angeles International Airport (LAX) which is staffed with FAA Air

Traffic Controllers and monitoring/communications equipment for "controlling" aircraft near LAX, SMCS is not an airport. It is appropriate to encourage helicopter pilots using the SMCS helistop to maintain an altitude of 2,000 feet MSL or higher until commencing their approach to the helistop all other factors permitting.

Hospital helistops such as the proposed SMCS landing area are "private" facilities and thus may be used only with the permission of the owner. In this context, the SMCS helistop would not be used for "touch and go" or "low approach" training by unauthorized pilots. On occasion SMCS may authorize a familiarization flight into the helistop to acquaint any new EMS pilots with SMCS procedures associated with transporting patients.

SMCS does not own or operate EMS helicopters and therefore cannot "require an identification symbol that is readily visible from the ground on each of the helicopters used in regularly scheduled visits to SMCS." However, most of the EMS helicopter operators in the Sacramento area have adopted a highly distinctive paint schemes which typically include a prominent company "logo" or name.

Please see Response to Comment 8-47 for information on the "Fly Neighborly Program."

Response to Comment 8-50:

Section 15151 of the State CEQA Guidelines addresses the standards for adequacy of an EIR. It states:

> An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

The comment does not specifically make reference to any portions of the EIR that do not meet the standard established in Guideline 15151. The comment generally refers to other portions of Letter 8, including attached reports. The responses to those portions of the letter and reports are responded to in Responses to Comments 8-5 through 8-49.

Response to Comment 8-51:

When "significant new information" is added to an EIR after circulation of the Draft EIR, CEQA requires recirculation to ensure that the decision-makers, agencies and interested public have had the opportunity to review and comment on substantive analyses upon which the EIR's conclusions are based. These circumstances are spelled out in Section 15088.5 of the State CEQA Guidelines, which states that "significant new information" requiring recirculation includes circumstances in which:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043)

As is discussed in specific responses to comments elsewhere in this Final EIR, the above circumstances have not occurred. As such, revision and recirculation of the DEIR is not required.

Response to Comment 8-52:

Please see Response to Comment 8-14.

Response to Comment 8-53:

Please see Response to Comment 8-29.

Response to Comment 8-54:

Please see Response to Comment 8-30.

Response to Comment 8-55:

Please see Response to Comment 8-43.

Response to Comment 8-56:

Please see Response to Comment 8-44.

Response to Comment 8-57:

Please see Response to Comment 8-16.

Response to Comment 8-58:

Please see Response to Comment 8-16.

Response to Comment 8-59:

Please see Response to Comment 8-44.

Response to Comment 8-60:

Please see Response to Comment 8-23.

Letter 9

RAPID MEMO

CITY OF SACRAMENTO
ENVIRONMENTAL PLANNING SERVICES

TO: LE BUFORD, PRINCIPAL PLANNER

DATE: 7 SEPT 05

SUBJECT: DRAFT ENVIRONMENTAL REPORT, SUTTER MEDICAL CENTER

FROM: R. INMAN OWNER, 26TH ST APARTMENTS

I HAVE REVIEWED SUBJECT REPORT AND FOUND IT INTERESTING,

MY MAIN CONCERN WAS WHAT WAS HAPPENING AT NEW MOB ON THE CORNER OF 26TH STREET AND CAPITOL AVE AS I OWN THE APARTMENT BUILDING FACING THE WEST SIDE OF THE EXISTING BUILDING. MY COMMENTS ARE IN THE ATTACHED ENCLOSURE.

THANKS FOR THE CHANCE TO REVIEW THE REPORT AND AND HOPE MY COMMENTS WILL HELP YOUR STAFF IN MAKING THE PROPER DECISIONS ON THE PROJECT.

SINCERELY,

R Inman PE

COMMENTS: DRAFT EIR FOR THE SUTTER MEDICAL CENTER (SMCS) REPORT

I have reviewed the Environmental Impact Report prepared for the city and I have certain concerns which I will address. In addition I have several general comments concerning the study.

We own the apartment building that takes up the quarter block between the alley on 26th street and two older residences that complete the half block between the alley on 26th street and Capitol Avenue.

These buildings together make up the half block on 26th st that directly face the west side of the existing St Lukes Medical Building.

Our building was built in 1922 and the other buildings in the same time frame. These structures are all considered contributory buildings to the Capitol Mansions Historical District and are reflective

9-1

of the type of structures and neighborhoods as they were in the early 20th Century. This portion of 26th Street is still used by the horse drawn sightseeing buggies from old Sacramento in tour of the typical old neighborhoods.

My main concern with the proposed new MOB is that the street and neighborhood will retain the same early characteristics as much as possible and will not be inundated with unnecessary traffic and parking problems.

As shown in the report the preliminary sketch of the new Medical office Building (MOB) will be a two story building of about half the size of the existing MOB. The main entrance appears to be shown on 26th St with an underground garage exiting in the alley at the rear of the building. The garage is to have a capacity

9-1 (con't.)

for 35 cars. An additional 8 4 parking spaces will be provided for in the Community Parking Garage about a block and a half away.

On page 2-5 of chapter 2 in the EIR it is stated that one of the prime objectives of the SMCS project design is to "Complement neighborhood features including places of worship, historic, and cultural sites, etc etc". Also cited in Chapter 4 under Sacramento General Plan is the statement, "Preservation of historical resources and neighborhoods is of prime importance." Again, under Resource Preservation, Goal B, Policy B-2 it states, "The city shall review new developments, alterations/remodeling in design review areas, preservation areas and other areas of historic resources for compatability with the surrounding historical context. 9-2

Similar statements are

are made in the Sacramento Central City Plan (CCCP).

It is clear from the above criteria that it is of prime importance for the city to review new and rehab projects for compatability with the surrounding historical content.

In addition to the above objectives and goals concerning retention of historical resources, providing a street system which protects residential neighborhoods from unnecessary levels of traffic and providing adequate parking is of prime importance. This is reiterated several times in the EIR which is quoting sections of the SGPU.

Under the section in Goals, Policies, actions for Streets and Roads, page 4-7, Goal C is to create and maintain a street system

9-2 (con't.)

which protects residential neighborhoods from unnecessary levels of traffic. Policy 1 of this goal says to wherever possible to design streets and approve development applications in such a manner to eliminate high traffic flows and parking problems within residential neighborhoods also, under Goals, Polices, actions for Parking, Page 4-8, Goal A, states, "Provide adequate off street parking for new development and reduce the impact of on street parking in established areas."

Before the present St Luke medical Building was vacated, parking on 26th street was a problem. To alleviate this problem the city changed the parking on the last side of the street from parallel to diagonal to get more spaces as it

9-3

is now there are 13 diagonal spaces on the east side of the street and 6 parallel spaces on the west side of 26th St. The street was to narrow to change the west side to diagonal. Usually the west side is full and the east partially.

Since the houses on the west side of the street were built back when the use of cars was minimal and horse and buggies were still common, most have garages or off street parking.

Since 26th St is narrow and a transition street from old to new, I have real concern about the preliminary design showing the entrance to the new MOB on 26th Street. This would not only drastically alter the character of the neighborhood by putting a large entrance right across the street

9-3 (con't.)

from the historic area, but would dramatically further reduce parking on 26th Street by allowing a large area for pulling in and out of the entrance. Both of these items would change the neighborhood drastically from what it is now. 9-3 (con't.)

An additional item that would be far worse would be to allow the underground parking to exit on 26th St. This would not only drastically reduce the parking but would have a dire effect on the traffic flow on 26th St. with traffic turning in and out of the parking area. It would increase traffic and change the whole ambience of the neighborhood. This point was raised because the EIR states the possibility still exists for this to happen. Twenty sixth 9-4

is narrow and turning either way would cause all kinds of traffic problems.

9-4 (con't.)

The S&PV along with the CCCP state that of prime importance is the preservation of areas of historic resources for compatability with the surrounding historical context. Also parking and traffic flow in these areas are of prime importance and should be considered in all approvals.

9-5

Hopefully, the approving officials will consider these concerns in the approval process.

I have included the following general comments for your review.

(1) In previous meetings we were led to ~~believe~~ ~~that~~ construction of the replacement ROB would

9-6

(8)

be 4 to 5 years down the road. This report shows the project starting in early 2006 and completing in 2007. This should be clarified in the report. Hopefully, we'll have some final say at exterior design of building. A one year demolish/reconstruct is wishful thinking. 9-6 (con't.)

(2) Figures used in calculating old and new parking spaces are erroneous as they only show 25 autos in old St Lukes Parking. This figure is when St Lukes MOB is empty. When it was open garage was much busier with many more cars. 9-7

(3) None of the site plans show alleys going out of SMCS area. If this is to be by city for other purposes alleys should be continued to edge of map area. 9-8

COMMENT LETTER 9: R. Inman

Response to Comment 9-1:

Development associated with the SMCS project in the area noted in the comment would occur in areas that contain existing structures (St. Luke's Medical Office building and St. Luke's garage), which are not considered historically significant and do not contribute to the historical context in the area. The SMCS project would include the construction of new structures in these areas, but they would not substantially alter the historical context in the area, given the existing uses on the site. While Impact 6.3-2, on page 6.3-18 of the DEIR, found that construction of components of the SMCS project could affect resources in the area (specifically, the Old Tavern building and/or the Pioneer Congregational Church), Mitigation Measures 6.3-2 and 6.3-3 would reduce the potential for damage of those resources during construction to a less-than-significant level. Therefore, although there are portions of these districts within close proximity to the components of the project, with mitigation included in the DEIR, there would be no significant impacts on resources within those districts.

The comment mentions potential traffic and parking problems, but provides no specific comment. For a discussion of traffic and parking impacts, the commentor is referred to Sections 6.7 and 7.7 of the DEIR for more information regarding traffic and parking.

Response to Comment 9-2:

The comment notes the importance of City review of projects for compatibility with surrounding historical context. The comment is correct. The City's Design Review Presentation Board, Planning Commission, and City Council will review the project to ultimately determine the project's compatibility with the surrounding historical context.

Response to Comment 9-3:

The comment states that the entrance to the proposed Future MOB would drastically change the character of the area, but does not state how the effect of an entrance would differ from any other building component. Please see Response to Comment 9-1 regarding the potential to alter the character of the area. The comment also states that the entrance would dramatically reduce parking. Based on the proposed design, the entrance to the below-grade parking is anticipated to be off the alley and therefore would have no effect on existing on-street parking.

Response to Comment 9-4:

Access to the underground parking in the Future MOB would be via Trinity Cathedral Lane with access to 26th and 27th Streets. As shown in Table 6.7-15 on page 6.7-39 of the DEIR, The intersection on the adjacent intersections (26th/Capitol; 26th/N; 27th/Capitol; 27th/N) would all operate at acceptable levels of service of A or B with the SMCS project.

Response to Comment 9-5:

Please see Responses to Comments 9-1 and 9-4 regarding the historical context and traffic circulation, respectively.

Response to Comment 9-6:

The revised schedule for the SMCS project (see Chapter 2, Text Changes, of this FEIR) indicates that demolition of the existing St. Luke's Medical Office Building is slated to begin in mid-April 2006 and be completed by August 2006. Construction of the Future MOB would begin in mid-August

2006 and be completed in a year. The DEIR has indicated that the Future MOB would be constructed along with the other components of the project. The project is scheduled to go before the City's Design Review and Preservation Board in mid-October. However, there may be certain components of the project that have not been finalized in the project design; therefore, those components may go to Design Review at a later date for review.

Response to Comment 9-7:

All of the 249 parking spaces in the St. Luke's parking structure were not counted under existing conditions because the entire parking structure is not used for parking due to safety concerns. The upper two floors are closed and no parking is permitted above the first level. It would not be accurate to count all of the spaces in the parking structure because only a small number on the first level are available. Table 2-4 in Chapter 2, Project Description, identifies a total of 30 spaces available in the parking structure based on a recent parking count that was conducted.

Response to Comment 9-8:

It is not clear what concern is being raised by the commentor. All of the site plan figures in Chapter 2, Project Description, show the alleys connecting to adjacent streets. The comment is therefore, noted.

Date: September 12, 2005

To: City of Sacramento, Environmental Planning Services
Attn: Lezley Buford, AICP
915 I Street, Room 300
Sacramento, CA 95814

From: Winn Park/Capitol Avenue Neighborhood Association (WPCANA)
P.O. Box 162555
Sacramento CA 95816-2555

Re: Comments on Sutter Medical Center/Trinity Cathedral Draft Environmental Impact Report

The following are the comments of WPCANA concerning the impacts of the Sutter Medical Center and Trinity Cathedral Projects.

Construction:

Construction Phasing: Because B St. Theater is not included at this point, concerns remain around the existing buildings on Capitol that would be affected. If the theater is not built, there would be no need to remove the existing housing at this time, creating another empty lot. We are also concerned regarding timing of construction for the housing element. This is a key element for the overall approval of this project. Regardless of market conditions, its inclusion, at 32 units as proposed, is essential. Since the case is being made that its occurrence is midway in the entire process, some type of guarantee (with significant consequences to the contrary) will be appropriate. Running out of or insufficient funds resulting in its exclusion or downsizing will not be tolerated. 10-1

Vibrations: The DEIR indicates that none of the proposed foundation elements will require pile driving or excessive vibration that could be considered harmful to surrounding structures and/or foundations that are either masonry or non reinforced concrete. In the event that a change is mandated to any of the proposed structures due to problems previously unforeseen, and pile driving and/or vibration compaction of fill becomes necessary, a survey of surrounding foundations will be warranted to assure no harm to existing buildings. 10-2

Fugitive Dust/Mud: The DEIR discusses the use of wheel washers to minimize dirt leaving the construction site. No mention is made of hay bale dams and filters around all storm water drains to minimize the potential of storm drain back-ups associated with excessive mud and dirt entering the system from the overall construction project. All loads leaving any site should be watered and covered before entering any city street. 10-3

NOx Emissions: During excavation for all projects, dirt haulers that are parked on the street waiting for their loading time should impact no more than 1 traffic lane and 1 city block. A separate staging ground should be acquired for the vehicles to start from and their engine idling should be no more than 10 min total at a time. Every effort should be made to not have a continuous flow of exhaust into the surrounding neighborhoods from these trucks. 10-4

Mitigation: What penalty will be incurred by the project contractor for violation of not halting construction activity two days prior to and day of an unhealthy air event (AQI of>150)? 10-5

WPCANA Comments on Sutter/Trinity DEIR
September 12, 2005

Construction Times: All standard City of Sacramento allowable construction times must be honored. This includes both weekday and weekend times. Significant fines should be levied to discourage any infraction of these times 10-6

Schedule: We want to ensure that the promised 32 units of housing, 26 of which are mandated as a condition of the rezone that Sutter got in 1983 on the half block between 27th and 28th/ N and the N-Capitol alley (ordinance 83-142) and an additional 5 of which are replacement for housing lost due to the SMCS project, really get built. To that end, we asked that the housing be built first. Our request was ignored and, per the construction schedule shown in the EIR, construction of the housing will begin last. We can understand the need to build the new parking garage first because of the shortage of parking in the project area. However, the housing must begin immediately upon completion of the parking garage and prior to beginning construction on any other part of the SMCS project or a bond must be posted to cover the full cost of the housing. We are unwilling to be put in position of having other parts of the project built and then be told "sorry, there is no money for the housing component". 10-7

Land Use/Planning:

City Ordinance 83-142: This summary from this Section of the DEIR (Chapter 4) fails to make any reference to Ordinance 83-142 dated November 22, 1983 which mandates a minimum of 26 units of housing as a condition of development of the half block where the community parking garage is to be built. This ordinance provides the legal basis for our insistence that housing is part of the SMCS project and it MUST be referenced in the EIR. 10-8

Hazardous Materials:

The following issue should be included under 6.4 Hazardous Materials and was not:

Fuel Storage Tanks: We are concerned about the Safety of these tanks adjacent to the SMF building and request to know what steps will be taken to provide adequate protection from events such as a terrorist attack. 10-9

Aesthetics:

Visual Impacts:

- Impact 6.1-1 states that the visual impact of the SMCS project is less than significant and requires no mitigation. We believe that there are two specific where the visual impacts are significant and can be mitigated. These are:

1. The current design of the parking garage is unacceptable. Sutter must redesign/design the garage so that it is acceptable to the community and the Design Review Preservation Board. 10-10

2. The SMF building, which will be 82 feet high, is slated to have 27 ft. tall cooling towers on its roof. These will be highly visible throughout the neighborhood and an alternate, less prominent, location needs to be found. 10-11

- Impact 6.1-2 deals with ways in which the SMCS project might cause glare and how such glare might be mitigated. We have concerns about two particular causes of glare which need mitigation. However, it says nothing about mitigating the glare from car headlights and overhead lighting in the Community Parking Garage. This issue must be addressed and specific mitigations developed. 10-12

The following issues should have been included under 6.1 Aesthetics and were not:

Trees: Trees are slated to be removed on 28th, 29th, Capitol and L Streets, including up to six heritage trees. Removal of these trees, particularly the heritage trees, will negatively impact the aesthetics of the area. We are opposed to the removal of any of the existing trees unless the City Arborist determines that they are unhealthy and must be removed. Should it prove necessary to remove a tree, we want all trees that are removed replaced. We are particularly disturbed by the plan to remove and not replace four trees on 28th street to "accommodate a better visual and physical connection between SGH and Sutter Fort". This is unacceptable. 10-13

Streetlights: We are pleased that Sutter plans to install acorn streetlights, but concerned that nowhere is there a clear statement as to how many streetlights will be installed and where they will go. We specifically stated that we wanted acorn streetlights installed throughout the entire SMCS project area which means 26th to 29th, both sides of the street and K to N both sides of the street and everything in between those boundaries. 10-14

Cultural Resources:

Reference Maps: The map of historic districts adjacent to the SMCS project (figure 6.3-1) needs to be corrected with regard to the eastern boundaries of both the Capitol Mansions and Winn Park Historic Districts. The Capitol Mansions district includes the entire 2500 block of Capitol on both sides of the street and the entire 2600 block of Capitol on the north side of the street. The Winn Park District includes the 2600 block of N on the south side. On page 6.3-5, the EIR states that the Winn Park District is not discussed in the EIR because there are "no historically significant, contributory buildings in the Winn Park Historic District in close proximity to the SMCS project area". Since the Winn Park District is across the street from the housing component of the SMCS project, this statement needs to be removed. We strongly support the housing component and see it as compatible with the Winn Park District. 10-15

Construction: Impact 6.3-2 deals with the impact of construction on historic resources. We have two comments as follows:

1. Impact 6.3-1 makes reference to several individual landmark structures, but says nothing about impact to contributing structures. Under CEQA, historic resources include both individually listed landmark structures and contributing structures in Historic Districts. Therefore, the term 'contributing structures' must be included in the impact statement and mitigations must apply to them. 10-16

2. Given that construction will be done by drilling and insertion of piles rather than pile driving, the mitigation measures proposed appear to be adequate. However, should construction methods be changed and pile driving used in the construction of any SMCS building or the Theatre, mitigation would need to include a survey of the existing condition of the historic resources (landmark and contributing) in the area around the 10-17

project. The City of Sacramento did such a survey when it constructed the parking garage for the Music Circus. The City would need to be consulted to determine how large the survey area should be and any resources damaged by the pile driving would need to be repaired at the expense of the SMCS project and/or the Theatre. 10-17 (con't.)

Cumulative Impacts: Impact 6.3-6 states that the SMCS project could, in combination with other development in the City, substantially and adversely alter historic resources which would result in a significant cumulative impact. The mitigations listed for this impact apply only to the construction phase of the project and are, therefore, not adequate. Sutter has a history of buying and land banking property in the adjacent neighborhood for future development. Any adjacent land banking to the north, west and/or south of the project (at one point Sutter did try to acquire three parcels on the south side of N in the Winn Park Historic District) has the potential to seriously damage the integrity of one or more Historic Districts and thus put a significant number of historic resources at risk. In our NOP letter we stated the need for mitigation in the form of a permanent, legally binding limit line beyond which Sutter would not be allowed to expand. This issue was ignored in the DEIR. FAILURE TO PROTECT ADJACENT HISTORIC DISTRICTS BY USING A PERMANENT, LEGALLY BINDING LIMIT LINE AS MITIGATION IS A MAJOR OVERSIGHT WHICH MUST BE ADDRESSED IN THE FINAL EIR. 10-18

Historic Buildings: Our coalition is disturbed about the number of older buildings that we have lost over the years due to Sutter's expansion. We are currently threatened with the loss of two older buildings: the House of Furs building and Dr. Kasch's medical office. The EIR states that the House of Furs was built in the 1940's. It is clear from its design that the original bungalow was built in the early part of the 20th century, probably the teens, not the 1940's. It was later raised and an inappropriate commercial structure was added below. We would like to see the original portion of this building moved and saved and have asked repeatedly that Sutter encourage this by offering to pay for moving it as developers Gary Ravel and Scott Rasmussen did with the Traxler House. With regard to Dr. Kasch's building, Dr. Kasch has told us that it was built as the office of the first female dentist in Sacramento. Assuming this is true, it is potentially listable. This should be explored and, if it is listable and can be moved, Sutter should help pay for the move. 10-19

Transportation/Circulation/Parking:

Parking Shortfall: Page 6.7-45 states that even with the new 1,100 space Community Parking Garage, there will still be a parking shortfall of 537 spaces (or combined with Trinity Cathedral and the Theatre 686 spaces). This shortfall could result in parking in residential areas. The analysis states that if all program and efficiencies are realized, this shortfall may be as low as 100. we are extremely alarmed of the potential for a parking shortfall because of the proximity of such a large project to a residential neighborhood that already has difficulty with providing ample parking for its residents. Any parking shortfall could potentially have a significant negative impact upon the neighborhood, creating great difficulty for residents to obtain parking at all, or at least in close proximity to their place of residence. 10-20

- Residential Parking Impact: We raised this issue in our NOP letter and stated that mitigation was required in the form of one hour residential permit parking in the adjacent neighborhood and that enforcement, which is now 8 a.m. to 6 p.m., would need to be extended into the evening hours (given the number of restaurants and bars in the area, probably until midnight). While the problem was acknowledged, our request for mitigation was ignored. 10-21

ONE HOUR RESIDENTIAL PERMIT PARKING FROM 8 A.M. TO MIDNIGHT MUST BE INCLUDED AS A MITIGATION IN THE FINAL EIR. 10-21 (con't.)

- Parking Validation Program: We have also suggested a second mitigation to ensure that the parking garage is used. This mitigation suggested that Sutter, the restaurants, bars and the Theatre validate parking tickets so as to encourage more people to use the Community Parking Garage rather than search for free parking in the adjacent neighborhood. This mitigation was also ignored and must be included in the final EIR. 10-22

- Offsite Parking: Mitigation Measure 6.7-1 states that, if parking demand exceeds available supply, Sutter shall make additional parking available and note that are potentially 15 sites within 5 miles of the facility. We are concerned about where such parking would be, as specific location shave note yet been identified. We would like to know where such off site parking would be located. In addition, Sutter fails to state whether they own entitlements to such off-site parking. Because of the high likelihood (according to Sutter's own analysis) that such parking will be needed, this parking should be identified, and Sutter should demonstrate entitlements to at least 100 additional spaces (the most "optimistic" shortfall number, which could potentially exceed 500). 10-23

School Bus Parking: Impact 6.7-7 deals with school bus parking for the Theatre. The EIR states that no provision for such parking has been identified and mitigation measure 6.7-2 states that the Theatre shall provide off street and/or off site parking. Again, we want to know where such parking is proposed. We do not want to see school buses or other oversized vehicles taking up limited parking space in residential neighborhoods. We are particularly concerned with this issue as the analysis states that the intent is not to displace "occupied" on-street parking. We do not find it acceptable that oversized vehicles use any on-street parking. 10-24

Trinity Cathedral:

This review concentrates on Chapter 7 and in particular on chapter 7.1, Aesthetics.

There is minimal to no comment on areas 7.2 Air Quality, 7.3 Cultural Resources, 7.4 Hazardous Materials and Public Safety, 7.5 Hydrology and Water Quality, 7.6 Noise, 7.7 Traffic and Circulation, 7.8 Utility Systems, Chapter 8 Alternatives, and Chapter 9, CEQA Considerations. These are more technical areas already covered and regulated by numerous city and state agencies. If the report's mitigation efforts are followed (eg., use of water to wash equipment and reduce dust during demolition and grading, drilling piles vs. driving, care taken during excavation to look for artifacts, etc.) then there are no comments to these areas except as noted below. 10-25

URBAN DESIGN

Introductory statements imply that the project site is NOT located in a scenic vista area. While this may be technically correct, Capitol Avenue is the widest street in midtown (100' ROW vs. 80' for others) and as such must be considered unique to the area. The action of walking, bicycling (a major and official bike route) or driving down this tree lined and sheltered street is an urban experience that has not been mentioned. Such static objects as the buildings directly adjacent or across the street as context are inappropriate and inadequate to describe the effect that this project (or the others in the EIR for that matter) will have to the midtown environment. In particular, the report compares the building's "scale" as "fitting in" with the senior housing 10-26

project diagonally across the 27th and Capitol intersection and to the St. Luke's MOB to the West. Poorly designed buildings that do not meet existing design guidelines and standards should not be used as comparison, precedent or context. 10-26 (con't.)

The discussion of design issues should to be left to the purview of the Design Review and Preservation Board (or newly formed Design Review Commission depending on the timing of final review), but some comment will be made at this juncture to state the main issues of the environmental impact of this project on the neighborhood. 10-27

SCALE

While a cathedral with a program such as this can appropriately be of monumental scale, it should not ignore human scale and the contextual residential scale of this neighborhood – hence in effect become a "visual intrusion" on the local environment. The EIR for some reason leaves out an actual rendering of the proposed design itself. For reference, this review is using the drawings presented on the Trinity Cathedral website, www.trinitycathedral.org. When one superimposes the approximate scale of the existing cathedral over the profile shown on the EIR pages following 7.1-14 along with an average large home such as those directly across the street and a human figure, one can see how large and potentially intrusive this project is in comparison. The stepping up effect to the corner is an effective way to mitigate the overall height of the proposed structure, but there are inadequacies to the current design in terms of human scale. 10-28

The use of the lower stained glass windows (presumably those referred to in the EIR as being salvaged from the existing cathedral and placed at street level) is effective at giving the building human scale. Unfortunately, the entrances do not relate as well. A canopy or balcony overhead would provide a more "inviting and clearly defined" (Design Guideline 3.J.1.4, page 7.1-20) entrance that would also provide a more human scale to the entry elements. 10-29

Other mitigating design features to effect scale might be to provide some horizontal material relief at the pedestrian (human) level. Examples include a base or plinth feature with benches and/or planters with wide edges for seating, a "wainscot" effect of materials at 3-4 ft. height, banding at the head height of the lower windows, and the aforementioned canopies or balconies. Such features would allow people inside the building to come to the surface and "soften" it's hard-edged effect and monumental scale. 10-30

PROFILE

The building has a very hard edged profile. This is in contrast to the residential buildings in the area, but consistent with more modern, commercial buildings. One suggestion to mitigate this is to give some kind of relief to the edges of the building where they meet the sky – to step out the brick or stone with a reveal and resulting shadow line that would make the forms less harsh. The rendering also removes the existing tree canopy surrounding the existing building, most likely to allow a better view of the proposed structure. Future depictions need to at least show the tree canopy profile in relation to the building. 10-31

CITY OF TREES

The building as designed may or may not meet the City of Sacramento's design guidelines for protecting and maintaining the health of our trees and tree canopy. To do this, the building 10-32

needs to provide 18 feet of clearance beyond the property line above the 3rd story (approx. 30 ft.) to allow light and air for the trees to thrive (see attachment). The report makes no specific mention of whether the heritage trees along 27th street will be preserved. The neighborhood supports preservation of all existing trees, especially heritage trees, and opposes their removal. The design team and applicant needs to prove that this building will meet these guidelines and be specific about the intent for the existing trees. 10-32 (con't.)

TRAFFIC

Traffic and parking are perhaps the biggest area of complaint from the neighborhood. Adequate and convenient free or validated parking needs to be available for the new Cathedral project if the neighborhood is be spared major impact from weekly services. See also comments from Karen J. regarding traffic and parking. 10-33

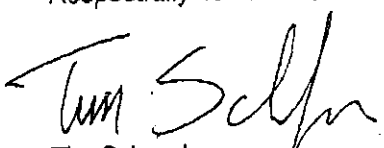
GREEN BUILDING

In order to be appropriate for the resource-stressed 21st century, this building and all future project buildings should meet minimum LEED rating standards for energy efficiency and sustainability. See www.usgbc.org/.

Buildings of this scale in a place like Sacramento can be built to generate as much energy as they use, to capture and recycle water on site to minimize impact on local utility infrastructure and storm water systems, to utilize local and recycled/recyclable materials in both the structure and operations to minimize embodied energy use (transportation, etc.) and to harbor an interior environment free of toxic off-gases and generally to support living systems of plants and people. Buildings around the world are being designed and built this way with little additional first cost and major savings in cost over the life of the buildings. 10-34

On behalf of the Winn Park/Capitol Avenue Neighborhood Association, I thank you for the opportunity to comment, and anxiously await a response.

Respectfully submitted,



Tim Schmelzer
Board Member and Steering Committee Lead for Sutter Project
Winn Park, Capitol Avenue Neighborhood Association

COMMENT LETTER 10: Tim Schmelzer, Winn Park/Capitol Avenue Neighborhood Association

Response to Comment 10-1:

The commentor's concerns regarding construction are noted. As explained in the DEIR, the B Street Theatre/Children's Theatre of California is not seeking development entitlements at this time. Therefore, the analysis contained in the DEIR is done on a program level. It is anticipated in the near future the B Street Theatre/Children's Theatre of California will move forward and submit a formal application with the city to develop the theatre(s). Environmental review could be required for the project.

As discussed in the DEIR, removal of the Trinity Apartments is required to provide construction equipment staging for construction of the Community Parking Structure and some of the other project elements.

SMCS has indicated that construction of the 32 residential units would begin in early spring 2006 with demolition of the existing parking structure and be completed by late spring 2007. The construction of 32 housing units is an integral part of the SMCS project in midtown and a conditional feature in the overall approval of this project. The current schedule calls for construction of housing units to begin in 2007. However, SMCS has indicated they are working with project partners to advance the housing construction schedule to begin in the spring of 2006 and conclude in early 2007. The key factor in SMCS' determination about the feasibility to accelerate the construction of new housing is the ability to create adequate interim parking arrangements to accommodate the operational needs of Trinity Cathedral.

The commentor's request for a guarantee from SMCS to construct the housing component is noted and forwarded to the decision-makers for their consideration.

Response to Comment 10-2:

The commentor is correct. The SMCS project and the Trinity Cathedral project would pre-drill piles instead of using a pile driver to construct the building frame. Please see also Response to Comment 10-17.

Response to Comment 10-3:

The City of Sacramento has a number of requirements in place to address erosion control during project construction. Project construction activities and the use of Best Management Practices (BMPs) to minimize impacts to the city's storm drain system was addressed in the Initial Study (see DEIR Appendix A) that was prepared for both projects. The information on page 30 of the Initial Study pertaining to the required permits and the use of BMPs is included below:

> In accordance with NPDES regulations, to minimize the potential effects of erosion and construction runoff on receiving water quality, the State requires that any construction activity affecting one acre or more must obtain a General Construction Activity Stormwater Permit (General Permit). Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 99-08-DWQ. SWRCB Resolution No. 2001-046 requires permittees to implement specific sampling and analytical procedures to determine whether the Best Management Practices (BMPs) used at permitted construction sites are effective.

General Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP), an Erosion Control Plan, and implement BMPs to reduce construction effects on receiving water quality by implementing erosion control measures. Examples of typical construction BMPs included in SWPPPs include, but are not limited to: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

In addition, the City's Land Grading and Erosion Control Ordinance requires project applicants to prepare erosion, sediment and pollution control plans for both during and after construction of a project, and preliminary and final grading plans.[13] BMPs are required to be approved by the City's Department of Utilities.

To address the concern raised by the commentor regarding fugitive dust, SMCS Mitigation Measures 6.2-1 and 6.2-2 are revised to include the following measure:

> *All trucks removing demolition debris or excavated soil(s) from the site shall be wetted and covered.*

Response to Comment 10-4:

The City of Sacramento requires preparation of a Traffic Construction Management Plan that identifies any temporary lane closures, re-striping of lanes, loss of metered or on-street parking, etc. It is the City's responsibility to review the plan to ensure it would not create any hazardous conditions or result in any public safety issues.

SMCS Mitigation Measure 6.2-3(e) requires that all construction contracts include the requirement that vehicle idle time shall not exceed 10 minutes to minimize the project's contribution of NO_x associated with project construction. However, the Sacramento Metropolitan Air Pollution Control District (see Letter 3) clarifies that Mitigation Measure 6.2-3(e) is covered by an existing City ordinance that addresses vehicle idle time. Therefore, Mitigation Measure 6.2-3(e) has been removed because it is not necessary.

Project construction associated with the Trinity Cathedral project was determined to result in a less-than-significant impact associated with NO_x emissions. However, Mitigation Measure 7.2-3 was required to further minimize the project's contribution of NO_x emissions.

Response to Comment 10-5:

The Sacramento Metropolitan Air Pollution Control District (see Comment 3-4) requested that SMCS Mitigation Measure 6.2-5 and Trinity Cathedral Mitigation Measure 7.2-4 be removed because they may be infeasible to implement. Often the AQI cannot be forecast a full two days in advance. Therefore, as recommended by the Air District, these two mitigation measures have been removed from the DEIR. The removal of this mitigation measure would not change the significance finding.

13 Sacramento County Land Grading and Erosion Control Ordinance, Chapter 16.44. Revised 12-31-95.

Response to Comment 10-6:

Comment noted. All construction contracts would require that the contractor adhere to specific City of Sacramento regulations and ordinances. The commentor's request that fines be required in the event construction activities violate City regulations or ordinances is noted and will be forwarded to the decision-makers. It is important to note that the City is responsible for monitoring construction activities and ensuring that all construction contractors adhere to the City requirements.

Response to Comment 10-7:

Comment noted. As noted earlier in Response to Comment 10-1, construction of the housing component is anticipated to begin in early spring 2006 and be completed by late spring 2007. The commentor's request that the housing be constructed sooner is noted and forwarded to the decision-makers for their consideration.

Response to Comment 10-8:

Ordinance No. 83-142 was adopted by the City Council on November 22, 1983. The ordinance granted a rezone of the property located on the northwest corner of 28th and N Streets (site of the proposed Community Parking Structure) from Light Density Multiple Family, R-3A to General Commercial C-2-R subject to specific conditions outlined in the ordinance. This rezone was requested by a different owner of the subject property for a different project that was proposed in 1983, but never constructed.

The SMCS project is consistent with some of the conditions set forth in Ordinance No. 83-142, specifically construction of 9,000 square feet of ground floor commercial/retail uses and space for 1,100 cars. SMCS evaluated including housing as part of the parking structure but determined it was not feasible due to the size of the parcel and the desire to limit the height of the parking structure as much as possible so as to be sensitive to the scale of surrounding development. To address housing, SMCS proposes to construct 32 residential units in the neighboring block to the west. The SMCS project as currently proposed, specifically the Community Parking Structure, would not comply with the ordinance because the project would not include 45,075 square feet of office uses, nor does the parking structure include 26 residential units. In order to approve the SMCS project, the City must either repeal or amend this ordinance, and it is up to the discretion of the City to determine if this ordinance should be formally repealed or amended as part of this project. The repeal or amendment of this ordinance would not raise any environmental concerns.

The following text is added to the DEIR Chapter 4, Land Use, on page 4-14:

City of Sacramento Municipal Code

Section 1

The territory described in the attached exhibit(s) which is in the Light Density Multiple Family, R-3A zone(s), established by Ordinance No. 2550, Fourth Series, as amended, is hereby removed from said zone and placed in the General Commercial-Review, C-2-R zone(s).

This action rezoning the property described in the attached exhibit(s) is adopted subject to the following condition:

a. A material consideration in the decision of the City Council to approve rezoning of the applicant's property is the development plans and representations submitted by the applicant in support of this request. It is believed said plans and representations are an integral part of such proposal and should continue to be the development program for the property.

b. The complex shall include the following uses:

1) 9,000 square feet of ground floor commercial;

2) 45,075 square feet of offices;

3) 26 residential units on the top floor of the structure; and

4) Parking garage to accommodate a minimum of 331 parking spaces.

Section 2

The City Clerk of the City of Sacramento is hereby directed to amend the maps which are a part of said ordinance No. 2550, Fourth Series, to conform to the provisions of this ordinance.

Section 3

Rezoning of the property described in the attached exhibit(s) by the adoption of this ordinance shall be deemed to be in compliance with the procedures for the rezoning of property prescribed in Ordinance No. 2550, Fourth Series, as said procedures have been affected by recent court decisions.

Response to Comment 10-9:

A discussion of the fuel storage tanks for the SMCS project is included in Section 6.4, Hazardous Materials and Public Safety, Impact 6.4-3 on page 6.4-28. As discussed in the DEIR, two existing fuel tanks are located below-grade on the south side of the existing Energy Center, approximately under the sidewalk. The SMCS project calls for relocating the existing fuel tanks to the new Energy Center. The fuel tanks would be located underground, which would minimize the risk of accident or upset that could release hazardous materials to the environment where people could be directly exposed. In addition, the location and design of the fuel tanks would meet all applicable existing federal, State and local regulations that ensure all potentially hazardous materials are secured, transported, stored, and used properly to protect the public from any mishap from occurring, including any type of terrorist attack.

Response to Comment 10-10:

Comment noted. The commentor's opinion that the design of the parking structure is unacceptable is noted and forwarded to the decision-makers for their consideration. The SMCS project is scheduled to go before the city's Design Review and Preservation Board (DR/PB) in mid-October. At that time the DR/PB will review the parking structure, as well as the entire project, and make a determination as to the acceptability and appropriateness of the project design.

Response to Comment 10-11:

As discussed in the DEIR in Chapter 2, Project Description, the cooling towers would be located on the top of the SMF Building. The cooling towers would be approximately 27-feet tall but would

protrude above the mechanical screen that will encircle the top of the SMF Building by approximately 2 to 5 feet. The height of the SMF Building would be approximately 82-feet to the top of the mechanical screen and 86-feet to the top of the cooling towers. The cooling towers for the new Energy Center are designed to minimize the release of steam vapor and would be situated on the western/middle portion of the SMF Building roof.

A 20-foot tall painted, architectural, louvered metal panel system is designed to conceal the entire length of the cooling towers from the western views below and complement the design elevations that include the glass storefronts, copper and wood composite siding systems, and stucco base.

The five cooling tower units, each approximately 27-feet tall (including the elevated structural frame and supports) would be located approximately 12-feet behind the metal panel screen to minimize their visibility. Depending on the actual cooling tower that is installed, it is anticipated that approximately 2 to 5-feet of the uppermost portion of the cooling tower could extend above the metal panel screen and could be visible below from the west.

The cooling towers would not be significantly visible from the northwest or southwest due to a continual metal panel screen wall and deep setback location of the equipment from the north and south roof edges. The cooling towers would not be visible at all along the eastern side from below due to the deep setback location of the equipment and the same continual metal panel screen.

Response to Comment 10-12:

SMCS has designed the Community Parking Structure in consultation with the neighborhood, incorporating a number of design features to minimize impacts to the neighborhood.

The perimeter of the parking structure is designed to include 3-feet 6-inch high solid spandrels that – coupled with the setback design of the garage along N Street – would ensure that parked cars and light beams from car headlights are less visible from the street and the neighborhood surrounding the garage. These spandrels would act as a barrier to both keep vehicles safely within the building and block the headlights of circulating vehicles from projecting outside the building.

Impact 6.1-2 addresses the increase in light and glare associated with the SMCS project. Mitigation Measure 6.2-1 requires that exterior building light fixtures use a lower intensity light directed downward in order to minimize glare and spillover light on adjacent uses. Compliance with this mitigation would ensure that the exterior building lights used on the parking structure not affect adjacent sensitive receptors.

Response to Comment 10-13:

As discussed in the Initial Study (see DEIR Appendix A) a permit is required from the City in order to remove or trim any street trees. The City Arborist is required to assess the health of any trees slated for removal prior to issuing a permit. In addition, the City requires replacement trees be provided for any trees that are removed. SMCS would be required to comply with the City's requirements. Based on an initial assessment by the City Arborist, there are some heritage trees along Capitol Avenue that may need to be removed because they are unhealthy and may pose a safety hazard. The SMCS project includes the planting of a number of new trees along Capitol Avenue, 28th Street and 29th Street. Please see also Response to Comment 10-32.

Response to Comment 10-14:

The SMCS project proposes to install approximately 42 acorn-style street lights along Capitol Avenue, L Street, 28th and 29th Streets. SMCS would install lights associated with construction of the new facilities. According to City standards the lights would be spaced 80-feet apart. Street lights would be located along the following streets: nine (9) lights are proposed on the north side of Capitol Avenue between 27th and 29th Streets; six (6) lights on each side of 28th Street between Capitol Avenue and L Street (12 total); two (2) lights on L Street near 28th Street; five (5) lights on each side of L Street between 28th and 29th Streets (10 total); six (6) lights along the west side of 29th Street between L Street and Capitol Avenue; and, three (3) lights on the west side of 29th Street north of L Street.

Response to Comment 10-15:

The City's Historic Preservation Director provided the boundaries shown on Figure 6.3-1 in Section 6.3, Cultural Resources. The request that text be removed is noted and forwarded to the decision-makers for their consideration. The DEIR found that there are no historically significant, contributory buildings in the Winn Park Historic District in close proximity to the SMCS project area (page 6.3-5), therefore, there would be no impact on the Winn Park Historic District. Impact 6.3-2, on page 6.3-18, found that construction of components of the SMCS project could affect the Old Tavern building and/or the Pioneer Congregational Church, but Mitigation Measures 6.3-2 and 6.3-3 would reduce the potential for damage during construction to a less-than-significant level. Therefore, although there are portions of these districts within close proximity to the components of the project, with mitigation included in the DEIR, there would be no significant impacts on resources within those districts.

Response to Comment 10-16:

Impact 6.3-1 in the DEIR does not include a reference to any contributing structures because there are no contributing structures in the vicinity of the project that could be impacted. Therefore, the analysis contained in Impact 6.3-1 is correct and should not be revised to include a reference to contributing structures.

Response to Comment 10-17:

As identified in the DEIR, both SMCS and Trinity Cathedral plan on drilling to insert building supports instead of pile driving. It is not anticipated that there would be a need to change the construction methods. However, SMCS Mitigation Measure 6.3-2 requires SMCS to hire a qualified geologist or other professional with expertise in ground vibration effects on existing structures to prepare a study of the potential of vibrations caused by construction activities. Based on the results of the study, this information will be incorporated into contract specifications restrictions on, and monitoring of construction. The project applicant will also be required to incorporate into construction contracts a provision for establishing a training program for construction workers identifying the historical resources and features in the area and emphasizing the importance of protecting historical resources. This mitigation measure is adequate to address the concerns raised by the commentor.

Response to Comment 10-18:

The commentor mistakenly refers to Impact 6.3-6 as addressing the issue of cumulative impacts to historic resources. Impact 6.3-6 refers to cumulative impacts on paleontological resources. Rather, Impact 6.3-5 addresses the issue of cumulative impacts on historic resources, and we interpret the body of the comment as referring to this impact.

Impact 6.3-5 considers whether "[T]he proposed SMCS project could, in combination with other development in the City, substantially adversely alter historical resources, which could result in a significant cumulative impact." This cumulative impact is evaluated in light of the fact that Impact 6.3-2 identified a significant project-specific impact on historic resources due to the potential for damage to historic resources during construction of the proposed SMCS project. The project-specific impacts disclosed in Impact 6.3-2 involve potential damage to historic resources, and potential related effects on nearby historic districts, caused by construction activities, such as pile-driving (which can cause vibration effects) and use of other large construction equipment. Because these construction activities would be the potential cause of effects disclosed under Impact 6.3-2, the measures presented in Mitigation Measures 6.3-2 and 6.3-3 relate to construction activities. Similarly, the evaluation of cumulative effects in Impact 6.3-5 involves the examination of other cumulative construction activities that could add to the potential adverse effects of the project; thus, it is appropriate that the measures identified to mitigate the project's contribution to the cumulative impact involve the same construction mitigation measures presented in Mitigation Measures 6.3-2 and 6.3-3.

The comment suggests that the DEIR was inadequate in not identifying a mitigation measure that would place a "permanent, legally binding limit line" that would prohibit further expansion of Sutter medical facilities into the nearby historic districts. The DEIR did not identify this as a mitigation measure for several reasons. First, is that the DEIR did not identify an impact related to the degradation of the integrity of nearby historic districts due to the implementation of the SMCS project; thus, such a prohibition on expansion is not necessary to mitigate any impact identified in the DEIR.

In response to the comment, the paragraph under Historic Context and Features on page 6.3-20 is revised to read:

> The construction of an 8-story hospital building (WCC) to the east and a 4-story, medical office building (SMF Building) to the west across 28th Street from the Old Tavern Building ~~w~~ could alter the setting of the ~~t~~Tavern building and separate it from the historic streetscape and adjacent neighborhood. However, there is no existing historic streetscape in this area. The Old Tavern Building is a single historic structure in a modern setting. Development of the WCC and the SMF Building in this location would change the existing environment through the construction of new buildings, but it would not change an existing historic streetscape or remove any designated historic resources. The design plans for the WCC establish a wide separation between the new construction and the historic Tavern building. This separation is further enhanced by the planned transparency of the first floor/lobby elevation of the WCC minimizing the visual interaction of the two buildings. The SMF Building would replace existing non-historic buildings located along 28th Street with a 4-story structure, similar in height to the Tavern building.
>
> As discussed above, construction activities could adversely impact the Old Tavern Building including the historic cut-stone curb that exists along the east side of 28th Street and/or the Pioneer Congregational Church ~~could be damaged by construction equipment~~. Due to the close proximity of these historic structures to the SMCS project area ~~this would~~ construction activities could result in ~~be considered~~ a ***potentially significant impact***.

Response to Comment 10-19:

The buildings identified by the commentor, House of Furs and Dr. Kasch's medical office were evaluated and determined to be ineligible for listing in the California Register (see Appendix G). The House of Furs structure was originally built in a craftsman bungalow style circa 1900-1915. The building was significantly altered in the early 1940s and converted to an art deco/modern style building. Neither structure was determined to retain the integrity necessary to provide a good example of either a craftsman bungalow or an art deco/modern commercial building. The Dr. Kasch medical office building was also found to not meet the criteria necessary to be eligible for listing on the California Register. The loss of these two structures was not determined to be of historic significance. As indicated in the DEIR, the House of Furs building is slated for demolition and Dr. Kasch is hoping to relocate his building; if not, the building will also be demolished.

Response to Comment 10-20:

As discussed in the DEIR there could be a parking shortfall of up to 686 spaces with the SMCS project, Trinity Cathedral project and Theatre project combined during peak times (weekdays between 11-1). As discussed in the Transportation section of the DEIR this was determined to be a potentially significant and unavoidable impact of the project. To address transportation issues the City requires projects of a certain size prepare a Transportation Systems Management Plan (TSMP). A TSMP encourages the use of alternate transit modes and provides incentives for employees to use alternative transportation to get to work. The specifics of the SMCS TSMP are outlined in detail in Chapter 2, Project Description. As described in Chapter 2, SMCS would conduct on-going monitoring if additional steps would be required to reduce vehicle trips to either meet the City's 35 percent alternative mode requirement or to reduce parking demand in order to meet available parking supply. The SMCS TSM/Parking Demand Management Monitoring and Reporting program would include annual monitoring and reporting to track program success. An Annual Monitoring Report would be submitted to the City by SMCS each year. The first Annual Monitoring Report would be submitted to the City within 6 months of project approval. The Annual Monitoring Report would be made available for public review through the City of Sacramento, and through the City and SMCS websites.

In addition, Nelson/Nygaard a firm based in the Bay Area that specializes in alternative transportation planning conducted a review of the SMCS project and determined that there would not be a parking shortfall (see Appendix A of the FEIR). However, in the event parking demand is greater than parking supply, SMCS is committed to ensuring adequate parking is available to serve its project. Please also see Response to Comment 8-16.

Response to Comment 10-21:

The analysis contained in the DEIR does not identify inadequate parking resulting in spillover effects in the neighborhood as a significant impact. Therefore, mitigation, such as that suggested by the commentor, was not necessary. The commentor's suggestions are consistent with the City's Central City Parking Master Plan now in development. The request for residential permit time extension should be submitted to the On-street Parking Division of the City of Sacramento for review and approval.

Response to Comment 10-22:

As stated above, the analysis contained in the DEIR does not identify inadequate parking that would cause spillover effects in the neighborhood and result in a significant impact. Therefore, mitigation, such as that suggested by the commentor, was not necessary.

Response to Comment 10-23:

The DEIR analysis of parking represents a conservative assessment of parking demand associated with the SMCS project. Specific locations of offsite parking are not provided, although they are anticipated to be in the Highway 99 corridor south of the SMCS project, as discussed in Chapter 2, Project Description. As is stated on page 6.7-46 of the DEIR, "[T]he resulting estimate of demand is considered conservative, based on typical free-standing hospitals served primarily by automobiles." Subsequent to the publication of the DEIR, the transportation planning firm of Nelson/Nygaard (see Appendix A of this FEIR) conducted a review of the proposed SMCS TSM and Parking Management Program, and evaluated it for the potential to reduce parking demand. The Nelson/Nygaard report reflects the firm's experience with similar programs at such locations as Stanford University (including Stanford University Hospital), Kaiser Permanente Hospital in Oakland, and UC San Francisco Medical Center. The conclusion of the Nelson/Nygaard report is:

> …there will be sufficient parking at the proposed SMCS to accommodate full SMCS project parking demand. Parking demand will fall to 2,650 spaces due to the increased parking fee, generating an excess parking supply of 87 parking spaces. It is difficult to determine the precise number of spaces that could be reduced as a result of other factors, such as improved transit, increased transit subsidy, internalization and other TDM measures, but together these measures should provide SMCS with a sufficient vacancy rate to ensure that patients, visitors and staff can easily find a parking space at all times of day.

Nonetheless, Mitigation Measure 6.7-1 would require the provision of additional parking spaces, either on-site (through increased use of valet parking) or off-site through the acquisition of remote parking locations. A number of parking lots identified were available and it is not anticipated that there would be any problems securing any off-site lots, if necessary. Because the size and timing of needs (if at all) for remote parking cannot be determined at this time, it is not reasonable for SMCS to identify specific future locations for remote parking. However, as is presented on page 2-49 of the DEIR:

> …in an effort to verify the availability of potential off-site parking locations for employee parking, SMCS has researched numerous sites in the Highway 99 corridor south of the project area. Within a distance of less than five miles, SMCS has identified fifteen potential sites that would allow for remote parking, ease of access to Highway 99, and a direct route to the project area by either a shuttle or, in some cases, light rail. The sites range in size from approximately 150 to 200 spaces.

The presence of such a large number of potential sites supports the city's conclusion that this mitigation measure is feasible and can be readily implemented in the future if parking demand requires the provision of additional supply.

Response to Comment 10-24:

As noted previously, the B Street Theatre/Children's Theatre of California project is not requesting project approval or development entitlements at this time. Therefore, the analysis contained in the DEIR is programmatic because the specifics of the project are not known at this time. Once the design is finalized and a formal development application submitted to the city it is anticipated additional environmental review would be required. The B Street Theatre/Children's Theatre of California project will be required to identify the location of bus parking at that time. The

commentor's concern about using on-street parking to accommodate buses is noted and will be forwarded to the decision-makers.

Response to Comment 10-25:

Comment noted.

Response to Comment 10-26:

The City of Sacramento's General Plan and other planning documents that represent the aesthetic values of the community do not indicate that this portion of Capitol Avenue be considered part of a scenic corridor or view corridor. The DEIR analyzes the visual/aesthetic impacts of the SMCS project and the Trinity Cathedral project using the standards of significance provided by the City. The conditions that exist today along this section of Capitol Avenue, including buildings that may or may not comply with the City's existing design standards, constitute the "environmental baseline" against which the effects of the SMCS and Trinity Cathedral project(s) are considered (see CEQA Guidelines Section 15125 (a)). As discussed in the DEIR in Section 7.1, Aesthetics, the buildings along this portion of Capitol Avenue include a mix of one- and two-story structures along with the 4-story St. Luke's medical office building and 6-story senior apartment building. The Trinity Cathedral project would change the visual character of the area relative to the existing environmental baseline; however, based on the City's standards of significance, this would not result in a significant impact. The proposed new cathedral building would be larger and taller than the existing building, but would be visually compatible with the mass, scale, and general character of the existing varied development in the project vicinity.

Response to Comment 10-27:

Comment noted. The Trinity Cathedral project is scheduled to go before the city's Design Review/Preservation Board (DR/PB) in early November. The DR/PB will review the design and visual compatibility of the Trinity Cathedral project with the existing neighborhood and make a final determination on the project at that time.

Response to Comment 10-28:

A rendering of the proposed Trinity Cathedral is included in Chapter 2 of this Final EIR as Figure2-26. As described in the Environmental Setting of Section 7.1 of the Draft EIR, the surrounding character of the project site includes buildings and uses of various kinds, from office uses to single-family and multi-family buildings. In addition to the different types of uses, the neighborhood around the proposed Trinity Cathedral project includes buildings of differing height and massing, from a surface parking lot to the six-story senior housing project at 27th Street and Capitol Avenue. The existing Trinity Cathedral and its associated office and classroom buildings encompass the majority of the block and is a distinguishable building. The bulk of the proposed cathedral and office buildings would be built to a height of 52 to 60 feet, and the dome of the church would be built to approximately 80 feet. While the Cathedral would appear larger than the existing single-family residential units in the vicinity, the new halls and offices would result in construction of a four-story building adjacent to the proposed Future Medical Office Building. In addition, there are other existing churches in the neighborhood (Pioneer Church), which are distinguishable in a residential neighborhood. Although the proposed Trinity Cathedral would differ from adjacent uses, it would not be out of scale with existing buildings and similar uses (churches) in the neighborhood.

In addition to the stepping up effect of the Cathedral design at the corner, and the reuse of the existing Cathedral building stained glass at the ground level walls, the developed Cathedral design incorporates several of the human scale features suggested by the commentor. The suggestion of including a stepping up effect in the corner is noted and will be forwarded to the decision-makers for their consideration.

At the entry ways at both Capitol Avenue and 27th Street, the Cathedral design incorporates the use of canopies over the entrance doors. The canopies would extend beyond the building wall 5 feet, and would slope down to the entrance doors to provide an "inviting and clearly defined" human scale entrance.

The exterior brick walls of the Cathedral would be articulated with horizontal detail at the pedestrian scale level, as well as the entire wall façade. At the base of the walls, at a 4 to 5 foot height level, and at the top of the lower window line, the bricks would be turned out of plane over several courses to create a variegated texture to the face of the wall. At the top of this textured "wainscot", several courses would be recessed from the face of the wall, allowing for future installation of cast bronze artwork panels.

At the corner of Captiol Avenue and 27th Street, an exterior entrance has been provided to the Cathedral chapel space. The main entrance doors of the existing Cathedral, as well as the arched mosaic tile artwork over the doors, would be preserved and reused for this chapel entrance. The existing stained glass windows of the Cathedral, as well as the "Rose" stained-glass window dating from the 1910 original Cathedral that was demolished, would be reused in the exterior walls at the ground level.

The human scale of the building would also be enhanced by the provision of an exterior roof garden at the south side of the building adjacent Trinity Cathedral Lane. The roof garden would step-down the scale of the building and soften the architecture with trees and landscaping at a mid-height of the building elevation.

The landscape design at the perimeter of the building would incorporate human scale elements, as well. At the corner of Capitol Avenue and 27th Street, low brick walls that can be used for seating areas would frame a water feature, as well as enclose the pedestrian ramp down to the chapel entrance at the corner. Several brick benches would be provided in the landscaping along the sidewalk areas on both Capitol Avenue and 27th Street.

The proposed narrowing of 27th Street is also intended to enhance the human scale experience of the building at street level. The street narrowing would provide additional green-space areas and would create a more pedestrian-friendly environment around the Cathedral and the B Street Theatre.

Response to Comment 10-29:

Please see Response to Comment 10-28.

Response to Comment 10-30:

Please see Response to Comment 10-28. The commentor's desire to see more design detail is noted and forwarded to the decision-makers for their consideration.

Response to Comment 10-31:

Comment noted. The Cathedral design provides details that achieve the softening of the hard-edge profiles that the commentor notes. The cornice line of the brick walls surrounding the building – the top of the wall where the building meets the sky - would step back from the face of the wall with a copper coping profile, softening the top edge of the structure. Similarly, the wall edges at the corners of the building would have a stepped-back detail to slightly "erode" the corner and soften the edges of the structure. However, the commentor's recommendations/concerns to soften the building profile are noted and forwarded to the decision-makers for their consideration.

Response to Comment 10-32:

The City of Sacramento has adopted a Tree Preservation Ordinance to protect trees as a significant resource to the community. It is the City's policy to retain trees when possible regardless of their size. When circumstances will not allow for retention, permits are required to remove trees that are within the City's jurisdiction. Removal of, or construction around, trees that are protected by the tree ordinance are subject to permission and inspection by City arborists. The City of Sacramento Tree Service Division reviews project plans and works with City of Sacramento Public Works Department during the construction process to minimize impacts to street trees in the city. The health of the existing trees along Capitol Avenue and 27th Street would be reviewed by the City Arborist prior to construction to determine if the trees are healthy and could be protected or need to be removed. If feasible, the existing trees would be preserved and retained. If the City Arborist determines the trees need to be removed the applicant would be required to obtain the necessary permits for removal. Compliance with the conditions of the permit would ensure a less-than-significant impact.

Response to Comment 10-33:

The Cathedral has a binding contract with SMCS for dedicated use of 500 parking spaces every Sunday (and religious holiday), 150 spaces weekday evening spaces, and 25 weekday spaces for employees in the new Community Parking Structure at 27th Street and N Street. Parking for Trinity Cathedral during Sunday services and evening services (after 5:00 p.m.) would be free in the Community Parking Structure. People attending midweek services would need to either pay for parking in the Community Parking Structure or find on-street parking. The average attendance for weekday services ranges from 2 to 10 people. It anticipated that adequate parking would be available for people attending weekday, weekend and evening services.

Response to Comment 10-34:

During the SMCS project design phase the architectural and project team reviewed and incorporated significant features included as part of the LEED (Leadership in Energy and Environmental Design) criteria. The SMCS project design seeks to reduce the use of energy and materials consumption consistent with the U.S. Green Building Rating System requirements, within the constraints posed by medical necessity.

The elements of the SMCS project that would match the LEED standards include recycling facilities on site, the use of recycled materials such as certified wood and refurbished materials, 'smart growth' elements like proximity to public transit, adequate parking nearby and point/non-point source pollution reduction. The project also would use materials that comply with air quality standards, and incorporate low energy "thermal comfort" design elements. The SMCS project's 'energy and atmosphere' components would match the highest LEED certification process standards for the use of non-CFC refrigerants in HVAC and refrigeration systems and the elimination of HCFC/halon in fire retardants.

Trinity Cathedral is dedicated to the concept of supporting the living systems of plants and people through the design and construction of their project. The Cathedral project would use their best efforts to incorporate materials and building systems to maximize energy efficiency and sustainability. The project would optimize energy performance in system design with a goal of achieving 15 to 20 percent below Title 24 requirements. The project would also seek, where possible, to specify recyclable materials and maximize recyclable materials in the construction and operations of the facility.

5. MITIGATION MONITORING PLAN

5.0 MITIGATION MONITORING PLAN

INTRODUCTION

The California Environmental Quality Act (CEQA) requires review of any project that could have significant adverse effects on the environment. In 1988, CEQA was amended to require reporting on and monitoring of mitigation measures adopted as part of the environmental review process. This Mitigation Monitoring Plan (MMP) is designed to aid the City of Sacramento in its implementation and monitoring of measures adopted from the Draft Environmental Impact Report for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project (DEIR).

MITIGATION MEASURES

All mitigation measures identified in the DEIR and in the Initial Study (included as Appendix A of the DEIR) are included this MMP. The MMP describes the actions that must take place to implement each mitigation measure, the timing of those actions, and the entities responsible for implementing and monitoring the actions. The MMP is divided into two parts: the SMCS Project and the Trinity Cathedral project.

MMP COMPONENTS

The components of each monitoring form are described below.

Impact: This column summarizes the impact stated in the DEIR.

Mitigation Measure: All mitigation measures that were identified in the DEIR are presented and numbered as they are in the DEIR. The mitigation measures from the Initial Study are identified by topic and number.

Action: For every mitigation measure identified, one or more required actions are described. These actions describe the means by which the mitigation measure will be implemented and, in some instances, the criteria for determining whether a measure has been successfully implemented. Where mitigation measures are particularly detailed, the action may refer back to the mitigation measure.

Implementing Party: This item identifies the entity that will perform the required action.

Timing: Each action must take place prior to the time at which a threshold could be exceeded. Implementation of the action must occur prior to or during some part of approval, project design or construction or on an ongoing basis. The timing for each measure is identified.

Monitoring Party: The City of Sacramento is responsible for ensuring that most mitigation measures are successfully implemented. Within the city, a number of departments and divisions will have responsibility for monitoring some aspect of the overall project. Occasionally, monitoring parties outside the city are identified; these parties are referred to as "Responsible Agencies" by CEQA.

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
Initial Study – 4. Biological Resources					
4-a Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<u>SMCS Project</u> 1. To prevent direct impacts on nesting birds, tree removal shall occur between September 16 and February 28. 2. If construction activities occur during the breeding season (approximately March 1 through September 15), the project applicant, in consultation with the CDFG and USFWS, shall conduct a pre-construction, breeding season survey of the specific project site(s) during the same calendar year that construction is planned to begin. The survey shall be constructed by a qualified avian biologist to determine if any birds are nesting on or directly adjacent to the project site. If phased construction procedures are planned, the results of the above survey shall be valid only for the season when it is conducted. A report shall be submitted to the project applicant and the City of Sacramento, following the completion of the nesting survey that includes, at a minimum, the following information: • A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited, and persons contacted; and • A map showing the location(s) of any nests observed within the project site. If the above survey does not identify any nesting bird species on the project site, no further mitigation would be required. However, should any active bird nests be found on or within close proximity of the project site, one of the following mitigation measures shall be implemented.	Verify schedule of any tree removal or demolition; if within the nesting season demonstrate retention of a qualified avian biologist to conduct appropriate nesting surveys and to consult with CDFG and USFWS if active nests are within the project area; obtain permits if nests cannot be avoided.	SMCS / contractor	Prior to tree removal	City of Sacramento Development Services Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	3. The project applicant, in consultation with CDFG and USFWS, shall avoid all active nest sites within the project area while the nest is occupied with adults and/or young. The occupied nest shall be monitored by a qualified avian biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a non-disturbance buffer zone, to be determined in consultation with CDFG, around the nest site, which will be delineated by highly visible temporary construction fencing. Active nest trees that would not be removed but are in close proximity to construction activities shall be monitored weekly to determine if construction activities were disturbing the adult or young birds, until the birds left the nest. 4. If an active nest site can not be avoided and would be destroyed, special permits would be required depending on the bird species. a. For a State-listed bird (i.e., Swainson's hawk), the project applicant shall obtain a Section 2081 permit. Standard mitigation for the loss of an active nest tree generally requires planting 15 trees (a mix of cottonwood, sycamore, and valley oaks) and monitoring the success of the trees for five years with a 55% success rate. b. For any bird covered by the Migratory Bird Treaty Act, the project applicant would consult with the USFWS to determine appropriate mitigation measures.				

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
4-e Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	SMCS Project 5. The project applicant shall remove and/or protect trees from construction activities in accordance with, but not limited to the recommendations in the Revised Arborist Report. This includes recommendations for tree protection during construction, tree removal, and general recommendations to ensure compliance with the City Tree Ordinance.	Verify that all construction bid documents and contracts include tree protection measures in accordance with, but not limited to, the recommendations in the Revised Arborist Report.	SMCS / contractor	Prior to tree removal, excavation, or construction of project; ongoing during project construction.	City of Sacramento Development Services Department
DEIR Section 6.1 Aesthetics					
6.1-2 Implementation of the SMCS project could create light or glare that could affect adjacent properties	(SMCS/Theatre) 6.1-2 (a) The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses. (b) Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades.	SMCS shall design lighting system to avoid lighting of adjacent properties; include exterior building materials that minimize potential for glare.	SMCS	Prior to approval of final development plans and specifications.	City of Sacramento Building Division
	(SMCS) (c) To the extent feasible, the proposed illuminated skyline light on the west side of the WCC Building shall be set back to a position where it is not visible from Sutter's Fort.	Ensure the sign on the west side of the WCC Building is not visible from Sutter's Fort.	SMCS	Prior to approval of final development plans and specifications.	City of Sacramento Building Division
DEIR Section 6.2 Air Quality					
6.2-1 Increase in fugitive dust from demolition of existing buildings.	(SMCS/Theatre) 6.2-1 (a) The project applicant shall require in all construction contracts that the demolition contractors will ensure that all exterior surfaces of buildings are wetted during building demolition activities. The material from any building	Verify that all construction bid documents and contracts include demolition activity measures; periodic field inspections during construction.	SMCS / contractor	Prior to issuance of a grading or building permit; on-going during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site. (b) All piles of demolished material shall be wetted and covered until they are removed from the site. (c) Maintain two feet of freeboard space on haul trucks. (d) All operations shall expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded by sufficient water or chemical stabilizer/suppressant). (e) Wheel washers for exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off. (f) All trucks removing demolition debris or excavated soil from the site(s) shall be wetted and covered. (g) SMCS or contractor shall ensure that buildings are demolished in succession, and that no buildings are demolished simultaneously.				
6.2-2 Fugitive dust during grading of construction site(s).	(SMCS/Theatre) 6.2-2 The following measures are required by the SMAQMD for level one mitigation and shall be implemented during grading at all project sites: (a) Water exposed soil twice daily. (b) Maintain two feet of freeboard space on haul trucks. In addition, the following measures shall be implemented to further reduce the PM10 impact during construction activity:	Verify that all construction bid documents and contracts include construction practices recommended by the SMAQMD; periodic field inspections during construction.	SMCS / contractor	Prior to issuance of a grading or building permit; on-going during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector

SMCS = Sutter Medical Center, Sacramento

TC = Trinity Cathedral

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	(c) All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant.) (d) Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off. (e) Excavation and grading activity shall be suspended when winds exceed 20 mph. (f) All trucks removing demolition debris or excavated soil from the site(s) shall be wetted and covered.				
6.2-3 Increase in NOx emissions generated by construction equipment.	(SMCS) 6.2-3 The following measures shall be incorporated into construction practices, as recommended by the SMAQMD: (a) The project applicant shall require the project developer or contractor to provide a plan for approval by SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction. (b) The project applicant shall require the project developer or contractor to submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include	Verify that all construction bid documents and contracts include construction practices recommended by the SMAQMD; periodic field inspections during construction.	SMCS / contractor	Prior to issuance of a grading or building permit; on-going during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman. (c) The project applicant shall require the project developer or contractor to ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. In addition to the above, the following NO_x reducing measures shall be incorporated in all construction contracts: (d) Construction equipment shall be kept in optimum running condition at all times. (e) When appropriate, use alternative-fueled or				

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	catalyst-equipped diesel construction equipment. (f) If any diesel-fueled generators are used during construction, one shall be replaced with a propane fueled gen-set. The project applicant or contractor shall coordinate with SMAQMD to ensure this is implemented. (g) Catalytic converters shall be installed on gasoline-powered equipment, if feasible. (h) New technologies to control ozone precursor emissions shall be utilized as they become available and feasible.				

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.2-4 Generation of ROG and NOx (criteria pollutants) associated with project operation.	(SMCS) 6.2-4 After approval by the SMAQMD, SMCS shall institute the following measures: (a) Exceed Title 24 energy standards for cooling energy by 25% at non-residential buildings. (1 point) (b) To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks. (1 point) (c) Preferential carpool and vanpool parking will be shaded. (0.5 points) (d) SMCS shall enter into an agreement with the City of Sacramento and the Sacramento Transportation Management Association to continue ongoing membership in the TMA in perpetuity. The transportation demand management measures outlined in the Air Quality Mitigation Plan and the TSM Plan will be implemented. (2.5 points)	Verify that all construction contracts include SMAQMD-approved measures to reduce ROG and NOx (criteria pollutants) associated with project operation; implement measures during project operation.	SMCS	Prior to issuance of a building permit; on-going during project operation.	City of Sacramento Building Division / City of Sacramento Building Inspector / Sacramento County Environmental Management Department.
6.2-7 The SMCS project, in combination with other projects proposed within the SVAB, could result in a significant temporary cumulative impact from construction activities.	(SMCS/Theatre) 6.2-5 Implement Mitigation Measure 6.2-3.	See MM 6.2-3	See MM 6.2-3	See MM 6.2-3	See MM 6.2-3

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.2-8 The SMCS project, in combination with other projects in the SVAB, could result in a cumulative impact on criteria pollutants associated with project operation.	(SMCS) 6.2-7 Implement Mitigation Measure 6.2-4	See MM 6.2-4	See MM 6.2-4	See MM 6.2-4	See MM 6.2-4
DEIR Section 6.3 Cultural Resources					
6.3-1 Construction of the SMCS and Theatre projects could adversely affect known and/or previously unidentified prehistoric or historic archaeological resources.	(SMCS/Theatre) 6.3-1 (a) The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy with regards to sub-surface cultural resources during construction. Testing shall include geophysical mapping of the near-surface, ground-truthing using both the geophysical maps and historic maps, and evaluation of discovered resources for CRHR eligibility. All testing shall be conducted prior to initiation of construction for the project. Based on the results of testing, recommendations shall be provided, which may include additional testing, data recovery, future construction monitoring, etc. All recommendations shall be submitted to the City of Sacramento's Historic Preservation Director for approval.	Provide a research design and field strategy plan for testing and data recovery excavations prepared by a qualified professional.	SMCS / qualified professional archaeologist	Prior to issuance of any grading or demolition permits.	City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director
	(b) The project applicant shall hire a professional archeologist to perform archaeological monitoring during ground-disturbing construction activities for the duration of the project. If resources are discovered during construction, the procedure laid out in the Unanticipated Discovery Plan will be followed.	Perform archaeological monitoring during ground-disturbing construction activities for the duration of the project.	SMCS / qualified professional archaeologist	During ground-disturbing construction activities for the duration of the project.	City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director

SMCS PROJECT
MITIGATION MONITORING PLAN

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.3-2 Construction of the SMCS project could adversely affect the significance of any or all of the following historical resources: Old Tavern, Pioneer Congregational Church, Sutter's Fort, Eastern Star Hall, Capitol Commercial Building, and the residence on the 2600 Block of the Capitol Mansions Historic District.	(SMCS) 6.3-2 (a) The project applicant shall hire a qualified geologist or other professional with expertise in ground vibration effects on existing structures to prepare a study of the potential of vibrations caused by construction activities. Based on the results of the study, incorporate into contract specifications restrictions on, and monitoring of construction. A copy of the study, contract specifications, and monitoring reports shall be provided to the City of Sacramento's Historic Preservation Director.	Hire a geologist to assess ground vibrations; incorporate any recommended measures into construction contracts.	SMCS / qualified geologist / registered structural engineer with a minimum of five years of experience in the rehabilitation and restoration of historic buildings.	Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director
	(b) The project applicant shall incorporate into the construction contract a provision for establishing a training program for construction workers identifying the historic resources and features in the area and emphasizing the importance of protecting historic resources. Included shall be directions on working around and operating equipment near historic buildings and features, taking means to reduce vibrations from demolition and drilling, being aware of and reporting any potential problems that could affect the historic resources in the area. The location of the historic street feature (cut-stone curb) shall be disclosed in the construction contract. Construction crews shall be made aware of this historic street feature location, and the feature shall be flagged or fenced off as to prevent accidental damage or removal. The contract provisions shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.	Include historic resource training program in all construction contracts.	SMCS	Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director
	6.3-3 (a) The project applicant shall hire a registered	Hire a registered	SMCS / registered	Prior to issuance of	City of Sacramento

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	structural engineer, with a minimum of five years of experience in the rehabilitation and restoration of historic buildings, to investigate the existing relationship of the Old Tavern's foundation along the eastern elevation, including at the location of the elevator pit, to the western foundation of the garage. Any required test excavations shall be performed only in the presence of the structural engineer. The structural engineer shall prepare a report of findings, recommendations, and any related design modifications necessary to retain the structural integrity of the Old Tavern. The structural engineer (in consultation with a historic preservation architect, with a minimum of five years of experience in the rehabilitation and restoration of historic buildings, as well as meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, if necessary) shall prepare designs and specifications for protective barriers required to protect the exposed Old Tavern wall from potential damage caused by construction activities. The structural engineer (with geotechnical consultation as necessary) shall also determine, due to the nature of the excavations, soils, and method of soil removal, and given the existing foundation of each building (the Old Tavern and Pioneer Congregational Church), the potential for settlement and whether the buildings would require underpinning and/or shoring. All documents prepared in accordance with this measure shall be reviewed and approved by the City of Sacramento's Historic Preservation Director. Prior to demolition, the project applicant shall hire a historic preservation architect and a structural engineer to undertake an existing condition study of the identified historic resources identified in the Cultural Resources Report. The purpose of the	structural engineer and historic preservation architect to assess and prepare measures to prevent substantial adverse impacts to historic resources related to construction activities.	structural engineer with a minimum of five years of experience in the rehabilitation and restoration of historic buildings / historic preservation architect with a minimum of five years of experience in the rehabilitation and restoration of historic buildings.	grading, demolition, or building permits; periodic site visits.	Development Services Department / City of Sacramento Historic Preservation Director

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	study shall be to establish the baseline condition of the buildings prior to construction. The documentation shall take the form of written descriptions and visual illustrations, including those physical characteristics of the resources that convey their historic significance and that justify their inclusion on, or eligibility for inclusion on, the California Register of Historical Resources and local register. The documentation shall be reviewed and approved by the City of Sacramento's Historic Preservation Director. The structural engineer shall make periodic site visits to monitor the condition of the properties, including monitoring of any instruments, such as crack gauges. The structural engineer shall consult with the historic preservation architect, especially if any problems with character defining features of a historic resource are discovered. If, in the opinion of the structural engineer, in consultation with the historic preservation architect, substantial adverse impacts to historic resources related to construction activities are found during construction, the monitoring team shall so inform the project sponsor or sponsor's designated representative responsible for construction activities. The project sponsor shall adhere to the monitoring team's recommendations for corrective measures, including halting construction in situations where construction activities would imminently endanger historic resources. The monitoring team shall prepare site visit reports. The project applicant shall respond to any claims of damage by inspecting the affected property promptly, but in no case more than five working days after the claim was filed and received by the project sponsor's designated representative. Any new cracks or other changes in the structures will be compared to pre-construction conditions and a				

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused any damage, such damage shall be repaired to the pre-existing condition. Site visit reports and documents associated with claims processing shall be provided to the City of Sacramento's Historic Preservation Director. (b) The historic preservation architect and structural engineer shall specifically include the stained glass windows in their survey and monitoring of historic resources (see Mitigation Measure 6.3-1(a)). Included in the team's evaluation of the windows shall be consideration of whether it would be necessary to remove any of the windows. If such a recommendation is made, it should address methods for removal, transportation, storage, and reinstallation. (c) The project applicant shall hire a historic preservation architect with a minimum of five years of experience in the rehabilitation and restoration of historic buildings as well as meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, to prepare proposed treatments of the Old Tavern wall for conservation purposes and designs for new openings. Such treatments and designs shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.	Include stained glass windows in survey and monitoring of historic resources. Hire a historic preservation architect to prepare proposed treatments of the Old Tavern wall for conservation purposes and designs for new openings; submit treatments and designs to City of Sacramento's Historic Preservation Director for approval.	SMCS / registered structural engineer and historic preservation architect SMCS / historic preservation architect	Prior to issuance of grading, demolition, or building permits. Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director City of Sacramento Development Services Department / City of Sacramento Historic Preservation Director

SMCS PROJECT
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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.3-4 The SMCS project, in combination with other development in the City, could substantially adversely alter archaeological resources, which could result in a significant cumulative impact.	(SMCS/Theatre) 6.3-4 Implement Mitigation Measure 6.3-1.	See MM 6.3-1	See MM 6.3-1	See MM 6.3-1	See MM 6.3-1
6.3-5 The SMCS project could, in combination with other development in the City, substantially adversely alter historical resources, which could result in a significant cumulative impact.	(SMCS/Theatre) 6.3-5 Implement Mitigation Measures 6.3-2 and 6.3-3.	See MMs 6.3-2 and 6.3-3	See MMs 6.3-2 and 6.3-3	See MMs 6.3-2 and 6.3-3	See MMs 6.3-2 and 6.3-3
6.3-6 The SMCS project, in combination with other development in the City, could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.	(SMCS/Theatre) 6.3-6 Implement Mitigation Measure 6.3-1.	See MM 6.3-1	See MM 6.3-1	See MM 6.3-1	See MM 6.3-1
DEIR Section 6.4 Hazardous Materials and Public Safety					
6.4-1 Existing buildings demolished to accommodate the SMCS project are known to contain or may contain asbestos or lead-based	(SMCS/Theatre) 6.4-1 (a) Prior to demolition of the St. Luke's Office Medical Building, MTI Building, EAP Building, and House of Furs building, the project applicant shall provide written documentation to the City that	Provide written documentation to the City that asbestos-containing building materials (ACBM) abatement has occurred.	SMCS	Prior to issuance of demolition permits.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department

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TC = Trinity Cathedral

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paint or other hazardous substances, which could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.	asbestos-containing building materials (ACBM) abatement has occurred in compliance with applicable State and local laws and regulations. (b) Prior to demolition of the RAS Building, Energy Center, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that ACBM testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations. (c) Prior to demolition of the St. Luke's Medical Office Building, MTI Building, EAP Building, RAS Building, Energy Center, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that lead-based paint testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations. (d) Prior to demolition of the RAS Building, St. Luke's Medical Office Building, and private medical office building, the project applicant shall submit a written plan to the Sacramento County Environmental Management Department describing methods to be used to: (1) identify locations that could contain hazardous residues (e.g., mercury in sink traps); (2) remove plumbing fixtures known to contain or potentially containing hazardous substances; (3) determine the waste classification for the debris; (4) package contaminated items and wastes; and (5) identify disposal site(s) permitted to accept such wastes. Demolition shall not occur until the plan has been accepted by SCEMD and all hazardous components have been removed to the satisfaction of SCEMD staff. Prior to demolition, the project applicant shall	Provide written documentation to the City that ACBM testing and abatement has been completed. Provide written documentation to the City that lead-based paint testing and abatement has been completed. Submit a written plan to the Sacramento County Environmental Management Department describing methods to locate, remove, classify, package, and dispose of hazardous materials; retain qualified environmental specialist to inspect buildings subject to demolition for the presence hazardous materials; report to the City findings and measures to mitigate	SMCS SMCS SMCS	Prior to issuance of demolition permits. Prior to issuance of demolition permits. Prior to issuance of demolition permits.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department City of Sacramento Development Services Department / Sacramento County Environmental Management Department City of Sacramento Development Services Department / Sacramento County Environmental Management Department

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	retain a qualified environmental specialist (e.g., a Registered Environmental Assessor or similarly qualified individual) to inspect all existing buildings subject to demolition for the presence of PCBs, mercury, or other hazardous materials. The applicant shall submit the report to the City, together with an explanation of how the project will mitigate any issues identified in the report. If found at levels that require special handling (i.e., removal and disposal as hazardous waste), the applicant shall manage these materials as required by law and according to federal and state regulations and guidelines, including those of DTSC, SCEMD, Cal/OSHA, and any other agency with jurisdiction over these hazardous materials.	issues identified in report.			
6.4-2 Site preparation activities associated with the SMCS project (excavation, grading, trenching) have the potential to encounter previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances.	(SMCS/Theatre) 6.4-2 The following measures shall be implemented at all SMCS project sites (including the proposed theater site): (a) For building locations that have not been subject to Phase I ESAs, before each site is developed under the SMCS project, the project applicant shall ensure that each site is or has been investigated for the possible presence of hazardous materials in soils and buildings. Investigative measures could include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps, review of available city or county records, and consultation with knowledgeable individuals. If the Phase I ESA recommends a Phase II evaluation, the Phase II evaluation shall be completed prior to site preparation. (b) In the event that site inspections find evidence of	Ensure that each site is or has been investigated for the possible presence of hazardous materials in soils and buildings; prepare Phase II ESA evaluation if required. Notify SCEMD if site	SMCS SMCS	Prior to issuance of grading, demolition, or building permits. Prior to issuance of	City of Sacramento Development Services Department / Sacramento County Environmental Management Department City of Sacramento

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	contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project site, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.	inspections find environmental impairment at locations to be developed or in the project; prepare a site remediation plan.		grading, demolition, or building permits.	Development Services Department / Sacramento County Environmental Management Department
	(c) A site health and safety plan that meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. SMCS, through its contractor, shall ensure proper implementation of the health and safety plan.	Prior to commencing work on any contaminated sites, prepare a site health and safety plan that meets the intent of OSHA hazardous materials worker requirements.	SMCS	Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department
	(d) In the event that previously unidentified USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.	Cease construction activity in the immediate area where features or materials that could present a threat to human health or the environment are discovered during excavation and grading.	SMCS / contractor	For the duration of excavation, grading, and construction activity.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.4-5 The SMCS project proposed helistop would not result in substantial safety risks due to helicopter operations. However, the design of the proposed helistop serving the Women's and Children's Center could be inconsistent with Section 12.92.070 of the Sacramento City Code pertaining to helistop design.	Recommended (SMCS) 6.4-3 If Section 12.92.070 of the Sacramento City Code has not been amended prior to action by the Planning Commission recommending City Council approval of a Special Use Permit for the SMCS helistop, the applicant shall request a variance to the City's Helicopter Ordinance requesting approval for the proposed helistop design, which complies with current FAA design criteria set forth in Advisory Circular 150/5390-2B (September 2004).	Request a variance to the City's Helicopter Ordinance requesting approval for the proposed helistop design.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department
6.4-7 The SMCS project, in combination with other development in the City of Sacramento, would result in the demolition of existing buildings. This demolition and other site preparation activities that could result in a release of hazardous materials to the environment thus exposing the public to potential health risks.	(SMCS/Theatre) 6.4-5 Implement Mitigation Measures 6.4-1 and 6.4-2	See MMs 6.4-1 and 6.4-2	See MMs 6.4-1 and 6.4-2	See MMs 6.4-1 and 6.4-2	See MMs 6.4-1 and 6.4-2
DEIR Section 6.6 Noise					
6.6-1 Construction activities would intermittently generate noise levels above existing ambient levels in the project vicinity.	(SMCS/Theatre) 6.6-1 (a) All construction equipment shall be equipped with factory matching mufflers and in good working order. (b) All staging areas and water tanks shall be	Verify that construction bid documents and contracts include construction noise-abatement measures.	SMCS / contractor	Prior to the issuance of a building permit; inspections during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector

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	located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.				
6.6-7 Helicopter activities could contribute to a sleep disturbance in adjacent neighborhoods.	6.6-2 (a) All helicopter operations shall use the flight paths described in the Draft Environmental Impact Report for the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project (July 2005), unless safety precautions require a diversion from the flight paths. (b) SMCS shall include in any contracts with EMS helicopter pilots/operators that pilots adhere to the Helicopter Association International "Fly Neighborly Program."	Provide a flight path diagram to all helicopter operators.	SMCS	Prior to the approval of final development plans and specifications; ongoing during project operation	City of Sacramento Development Services Department
6.6-9 Future traffic noise levels may exceed acceptable noise level criteria at the exterior of the Women's and Children's Center.	(SMCS) 6.6-3 Construction of the proposed Women's and Children's Hospital shall occur only after a detailed analysis of the noise reduction requirements is made and needed noise-insulation features are included in the design.	Prepare a detailed analysis, as specified in the Sacramento County General Plan, of the noise-reduction requirements, and include required noise-insulation features in the project design.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department / City of Sacramento Building Division
DEIR Section 6.7 Transportation and Circulation					
6.7-6 The SMCS project and Children's Theatre would increase demand for parking.	(SMCS/Theatre) 6.7-1 In the event the Transportation Systems Management (TSM) / Parking Management Program monitoring identifies parking demand that exceeds available supply, SMCS shall make additional parking supplies available in an expeditious fashion such that parking	Make additional parking supplies available in an expeditious fashion if the TSM / Parking Management Program monitoring identifies parking demand that exceeds available	SMCS	Upon exceedance of available parking supply, as determined by the TSM / Parking Management Program monitoring.	City of Sacramento Development Services Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	supply is equal to or exceeds demand.	supply.			
6.7-7 The Children's Theatre would increase demand for oversized vehicle parking.	(Theatre) 6.7-2 The Children's Theatre shall provide off-street and/or off-site parking for school buses and other oversized vehicles destined to theatre midday events without displacing occupied on-street parking spaces.	Provide off-street and/or off-site parking for school buses and other oversized vehicles, which does not displace on-street parking spaces.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department
6.7-8 The SMCS project would increase traffic volumes at study intersections under 2025 conditions.	(SMCS) 6.7-3 (a) The SMCS project shall pay its fair share to fund the future construction of a traffic signal at 27th Street and Capitol Avenue intersection. (b) The SMCS project shall pay to restripe the northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane. (c) The SMCS project shall pay to add a northbound left turn lane at Alhambra Boulevard and L Street by restriping the northbound approach to provide one left turn lane and one through – right turn lane. (d) The SMCS project shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane on Alhambra Boulevard and Capitol Avenue.	Pay fair share to fund the future construction of a traffic signal at 27th Street and Capitol Avenue intersection; pay for roadway improvements.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department
6.7-10 The SMCS program and Trinity Cathedral project would increase traffic volumes at study	(SMCS) 6.7-4 (a) The SMCS project shall pay its fair share to signalize the intersection at 27th Street and	Pay fair share to signalize the intersection at 27th Street and Capitol Avenue; pay for roadway	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
intersections under year 2025 conditions.	Capitol Avenue. (b) The SMCS project shall pay to restripe northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane. (c) The SMCS project shall pay to restripe the southbound intersection approach to 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street. (d) The SMCS project shall pay to convert intersection approaches at Alhambra Boulevard and Capitol Avenue to one left turn, one through, and one right turn lane.	improvements.			
6.7-11 The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions.	(SMCS) 6.7-5 SMCS shall pay to implement ramp metering on the southbound Business Route 80 entrance ramp from N Street.	Pay to implement ramp metering on the southbound Business Route 80 entrance ramp from N Street.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department
6.7-12 The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	(SMCS) 6.7-6 (a) SMCS shall pay to restripe the southbound intersection approach to 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane. (b) SMCS shall pay to restripe the southbound intersection approach to 29th and N Streets to	Pay for roadway improvements.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department

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	provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street. (c) SMCS shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane at Alhambra Boulevard and Capitol Avenue.				
6.7-14 The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	(SMCS) 6.7-7 (a) SMCS shall pay to restripe the southbound intersection approach at 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane. (b) SMCS shall pay to restripe the southbound intersection approach at 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street. (c) SMCS shall pay to convert all intersection approaches at Alhambra Boulevard and Capitol Avenue to one left turn, one through, and one right turn lane.	Pay for roadway improvements.	SMCS	Prior to the approval of final development plans and specifications.	City of Sacramento Development Services Department
6.7-15 The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions.	(SMCS) 6.7-8 Implement Mitigation Measure 6.7-4.	See MM 6.7-4	See MM 6.7-4	See MM 6.7-4	See MM 6.7-4

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
6.7-16 Construction of the SMCS program and Trinity Cathedral project would include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, and off-street parking.	(SMCS) 6.7-9 (a) Prior to beginning of construction, a construction traffic management plan shall be prepared by the project applicant to the satisfaction of the City traffic engineer. (b) The project applicant shall monitor parking occupancy on a regular basis during construction, particularly upon the closure of any parking facility. Adequate parking for patients/visitors shall be maintained at all times. As necessary, remote parking (with shuttle service) shall be provided for SMCS employees, including construction workers.	Prepare traffic management plan to the satisfaction of the City traffic engineer; monitor parking occupancy on a regular basis during construction.	SMCS	Prior to issuance of a grading or building permit; ongoing during construction.	City of Sacramento Development Services Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
Initial Study – 4. Biological Resources					
4-a Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<u>Trinity Cathedral Project</u> 1. To prevent direct impacts on nesting birds, tree removal shall occur between September 16 and February 28. 2. If construction activities occur during the breeding season (approximately March 1 through September 15), the project applicant, in consultation with the CDFG and USFWS, shall conduct a pre-construction, breeding season survey of the specific project site(s) during the same calendar year that construction is planned to begin. The survey shall be constructed by a qualified avian biologist to determine if any birds are nesting on or directly adjacent to the project site. If phased construction procedures are planned, the results of the above survey shall be valid only for the season when it is conducted. A report shall be submitted to the project applicant and the City of Sacramento, following the completion of the nesting survey that includes, at a minimum, the following information: • A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited, and persons contacted; and • A map showing the location(s) of any nests observed within the project site. If the above survey does not identify any nesting bird species on the project site, no further mitigation would be required. However, should any active bird nests be found on or within close proximity of the project site, one of the following mitigation measures shall be implemented.	Verify schedule of any tree removal or demolition; if within the nesting season demonstrate retention of a qualified avian biologist to conduct appropriate nesting surveys and to consult with CDFG and USFWS if active nests are within the project area; obtain permits if nests cannot be avoided.	TC	Prior to tree removal	City of Sacramento Development Services Department

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	3. The project applicant, in consultation with CDFG and USFWS, shall avoid all active nest sites within the project area while the nest is occupied with adults and/or young. The occupied nest shall be monitored by a qualified avian biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a non-disturbance buffer zone, to be determined in consultation with CDFG, around the nest site, which will be delineated by highly visible temporary construction fencing. Active nest trees that would not be removed but are in close proximity to construction activities shall be monitored weekly to determine if construction activities were disturbing the adult or young birds, until the birds left the nest. 4. If an active nest site can not be avoided and would be destroyed, special permits would be required depending on the bird species. a. For a State-listed bird (i.e., Swainson's hawk), the project applicant shall obtain a Section 2081 permit. Standard mitigation for the loss of an active nest tree generally requires planting 15 trees (a mix of cottonwood, sycamore, and valley oaks) and monitoring the success of the trees for five years with a 55% success rate. b. For any bird covered by the Migratory Bird Treaty Act, the project applicant would consult with the USFWS to determine appropriate mitigation measures.				

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
4-e Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Trinity Cathedral Project 5. The project applicant shall remove and/or protect trees from construction activities in accordance with, but not limited to the recommendations in the Revised Arborist Report. This includes recommendations for tree protection during construction, tree removal, and general recommendations to ensure compliance with the City Tree Ordinance.	Verify that all construction bid documents and contracts include tree protection measures in accordance with, but not limited to, the recommendations in the Revised Arborist Report.	TC	Prior to tree removal, excavation, or construction of project; ongoing during project construction.	City of Sacramento Development Services Department
DEIR Section 7.1 Aesthetics					
7.1-2 Implementation of the Trinity Cathedral project could create light or glare that could affect adjacent properties.	Recommended: 7.1-1 (a) The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses. (b) Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades.	Design lighting system to avoid lighting of adjacent properties; include exterior building materials that minimize potential for glare.	TC / contractor	Prior to the approval of final development plans and specifications.	City of Sacramento Building Division
DEIR Section 7.2 Air Quality					
7.2-1 Increase in fugitive dust from demolition of existing buildings.	7.2-1 (a) The project applicant shall require in all construction contracts that the demolition contractors will ensure that all exterior surfaces of buildings are wetted during building demolition activities. The material from any building demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site. (b) All piles of demolished material shall be wetted and covered until they are removed from the site. (c) Maintain two feet of freeboard space on haul trucks.	Verify that all construction bid documents and contracts include demolition activity measures; periodic field inspections during construction.	TC / contractor	Prior to issuance of a grading or building permit; on-going during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	(d) All operations shall expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded by sufficient water or chemical stabilizer/suppressant). (e) Wheel washers for exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.				
7.2-2 Increase in fugitive dust during grading of construction site.	7.2-2 The construction contractor shall ensure that the following measures are implemented during construction activities: (a) Water exposed soil twice daily. (b) Maintain two feet of freeboard space on haul trucks. (c) All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant). (d) Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off. (e) Excavation and grading activity shall be suspended when winds exceed 20 mph.	Verify that all construction bid documents and contracts include fugitive dust control measures; periodic field inspections during construction.	TC / contractor	Prior to issuance of a grading or building permit; on-going during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector
DEIR Section 7.3 Cultural Resources					
7.3-1 The Trinity Cathedral project could disturb or destroy unidentified subsurface archaeological resources during project construction.	7.3-1 (a) The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy. Testing shall be conducted prior to initiation of construction for the project. Based on the results of testing recommendations shall be provided, which may include additional	Provide a research design and field strategy plan for testing and data recovery excavations prepared by a qualified professional.	TC / qualified professional archaeologist	Prior to issuance of a grading or building permit	City of Sacramento Development Services Department / City of Sacramento's Historic Preservation Director

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	testing, data recovery, and future construction monitoring. All recommendations shall be submitted to the City of Sacramento's Historic Preservation Director for approval.				
	(b) Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains be encountered during any subsurface development activities, work shall be suspended within 100 feet of the find, and the City of Sacramento shall be immediately notified. At that time, the project proponent in consultation with City staff shall coordinate any necessary investigation of the site with qualified archaeologists as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary for the protection of the cultural resources. In addition, pursuant to section 5097.98 of the State Public Resources Code, and section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.	Suspend work within 100 feet of the location of the discovery of any cultural resources; notify City of Sacramento.	TC / contractor	During ground-disturbing construction activities for the duration of the project.	City of Sacramento Development Services Department / City of Sacramento's Historic Preservation Director
	(c) The project proponent shall ensure that archaeological monitoring is performed by a professional archaeologist during ground-disturbing construction activities for the duration of project construction. If resources are discovered during construction, the procedures laid out in the unanticipated Discovery Plan will be followed.	Perform archaeological monitoring during ground-disturbing construction activities for the duration of the project.	TC / qualified professional archaeologist	During ground-disturbing construction activities for the duration of the project.	City of Sacramento Development Services Department / City of Sacramento's Historic Preservation Director

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
7.3-4 The Trinity Cathedral project, in combination with other development in the Sacramento Valley, could disturb or destroy unidentified subsurface archaeological resources during project construction.	7.3-2 Implement Mitigation Measure 7.3-1	See MM 7.3-1	See MM 7.3-1	See MM 7.3-1	See MM 7.3-1
7.3-6 The Trinity Cathedral project could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.	7.3-3 Implement Mitigation Measure 7.3-1	See MM 7.3-1	See MM 7.3-1	See MM 7.3-1	See MM 7.3-1
DEIR Section 7.4 Hazardous Materials and Public Safety					
7.4-1 Asbestos or lead-based paint may be present in Trinity Cathedral structures. These substances could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.	7.4-1 Prior to demolition of the Trinity Cathedral buildings, the project applicant shall provide written documentation to the City that ACBM and lead testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.	Provide written documentation to the City that ACBM and lead testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.	TC	Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department
7.4-2 Demolition and site preparation activities associated with the Trinity Cathedral project (excavation, grading, trenching) have the potential to encounter	7.4-2 The following measures shall be implemented at the Trinity Cathedral project site: (a) Prior to site preparation, the project applicant shall ensure the Trinity Cathedral site is investigated for the possible presence of hazardous materials in soil and groundwater, including underground tanks. Investigative	Ensure the Trinity Cathedral site is investigated for the possible presence of hazardous materials in soil and groundwater, including underground tank.	TC	Prior to issuance of grading, demolition, or building permits.	City of Sacramento Development Services Department / Sacramento County Environmental Management Department

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previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances	measures shall include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps, review of available city or county records, and consultation with knowledgeable individuals, consistent with ASTM Phase I ESA requirements. A Phase II investigation, if recommended in the Phase I ESA, shall be completed prior to site preparation.				
	(b) In the event that site inspections find evidence of contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project area, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.	Notify SCEMD if site inspections find environmental impairment at locations to be developed or in the project; prepare a site remediation plan.	TC	Prior to issuance of grading, demolition, or building permits.	
	(c) A site health and safety plan, which meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. The project applicant, through its contractor, shall ensure proper implementation of the health and safety plan.	Prior to commencing work on any contaminated sites, prepare a site health and safety plan that meets the intent of OSHA hazardous materials worker requirements.	TC	Prior to issuance of grading, demolition, or building permits.	
	(d) In the event that USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A	Cease construction activity in the immediate area where features or materials that could present a	TC / contractor	For the duration of excavation, grading, and construction activity.	

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Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.	threat to human health or the environment are discovered during excavation and grading.			
7.4-6 The Trinity Cathedral project, in combination with other development in the City of Sacramento, could increase the risk of exposure of people to hazardous materials.	7.4-3 Implement Mitigation Measures 7.4-1 and 7.4-2	See MMs 7.4-1 and 7.4-2	See MMs 7.4-1 and 7.4-2	See MMs 7.4-1 and 7.4-2	See MMs 7.4-1 and 7.4-2
DEIR Section 7.6 Noise					
7.6-1 Construction activities associated with the Trinity Cathedral project would intermittently generate noise levels above existing ambient levels in the project vicinity.	7.6-1 (a) All construction equipment shall be equipped with factory matching mufflers and in good working order. (b) All staging areas and water tanks shall be located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.	Verify that construction bid documents and contracts include construction noise-abatement measures.	TC / contractor	Prior to the issuance of a building permit; inspections during construction.	City of Sacramento Building Division / City of Sacramento Building Inspector
DEIR Section 7.7 Transportation and Circulation					
7.7-6 The Trinity Cathedral project would increase demand for parking.	7.7-1 Implement Mitigation Measure 6.7-1.	See MM 6.7-1	See MM 6.7-1	See MM 6.7-1	See MM 6.7-1

APPENDICES

Appendix A

Validation of SMCS TSM & Parking Management Program

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MEMORANDUM

To: Christine Kronenberg, EIP Associates

From: Jeffrey Tumlin, Jessica ter Schure

Date: September 6, 2005

Subject: Validation of SMCS TSM & Parking Management Program

Introduction

Sacramento Medical Center in Sacramento (SMCS) has contracted Nelson\Nygaard to provide an evaluation and analysis of the parking demand associated with the Sutter Medical Center project and associated developments.

SMCS is an affiliate of the Sutter Health System, a not-for-profit community-based health care system that serves Northern California. The proposed new medical center renovations and expansions would consolidate all acute care facilities currently run by SMCS, adding new and expanded health and healing technologies, services and buildings.

Acute care facilities presently at Sutter Memorial Hospital (SMH) and Sutter General Hospital (SGH) will be consolidated and expanded into a single, fully integrated medical complex. A spanning structure will allow SGH and the new Anderson-Lucchetti Women's and Children's Center to function as one hospital building. Also included in the project are two medical office buildings: the Sutter Medical Foundation Building and a new medical office building to replace St. Luke's medical office building. The new facility at the St. Luke's site will be approximately half the size of the current building (35,000 square feet (sf) versus 70,000 sf). Also included in the SMCS project is a Community Parking Structure with connected neighborhood-serving retail and small-scale commercial office space, a community theatre (B Street Theatre/Children's Theatre of California), and 32 residential units. All these new uses will generate a parking need in the study area. In addition, a total of 36 parking spaces will be allocated for employees of Pioneer Church and 25 parking spaces will be allocated for employees of Trinity Cathedral for use during the week.

DKS Associates has conducted a parking analysis of the project and associated development (please see Volume 1 of the Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft EIR sections 6.7 and 7.7). The traffic analysis prepared for the project as part of the Draft EIR (see Draft EIR section 6.7) identified a parking shortfall at full project build-out of up to 686 spaces. However, the analysis includes a number of measures that are already being

implemented by SMCS and that will be implemented as part of the SMCS project for reducing parking demand. In this memorarandum, Nelson\Nygaard addresses and quantifies the effect of some of the identified measures and other factors that will affect parking demand.

This memorandum will illustrate that there will be sufficient parking at the proposed SMCS at full project build-out to accommodate project demand. The major contributor to reduced parking demand will be an increase in employee parking fees from the current $20 per month to $60 per month. This factor alone will yield a parking surplus at build-out. Other factors, such as improved transit, increased transit subsidy, internalization and other TDM measures should provide SMCS with a sufficient parking vacancy rate to ensure that anyone entering the complex can easily find a parking space.

Experience from Other Medical Facilities

Hospitals present unique challenges in the area of Transportation Demand Management (TDM) planning. They are highly cost conscious, particularly on the operating budget side. They are 24-hour operations, with complex and changing shifts as well as non-traditional peak hours. They need to be competitive in terms of attracting patients, staff and physicians, all of whom have different expectations about parking and access. Parking privileges are oftentimes written into a variety of labor agreements. Many commuters to medical centers have such complex lives that no incentives will attract them out of their cars. In the following section we will briefly describe both larger and smaller medical facilities' TDM programs.

We have tried to obtain trip reduction and parking reduction measures for these facilities without success. Stanford conducts mode split surveys every year, but does not analyze the medical facility separately from the rest of the University. However, it is believed that the alternative mode shift for the medical center is in the range of 20-30%. Kaiser Permanente in Oakland has performed mode split surveys and has determined that approximately 30 percent of the staff at both the medical facility and the regional offices ride transit (BART) to work. It should be noted that Kaiser in Oakland is located very close to a BART station. UCSF will perform mode split surveys in the future but has not conducted any in the past. Nevertheless, the examples below still show that TDM programs do have an appreciable impact on alternative mode usage. Nelson/Nygaard's professional opinion is that these examples are valuable to the project at hand.

Stanford University Medical Center

Stanford University Medical Center has about 6,500 staff. The Center is part of the Stanford University community, which has a daily population of 32,000. Its TDM program is extensive and covers strategies from bicycle workshops to a Clean Air incentive. The following is a list of the TDM-program elements:

- Marguerite Shuttle
- Charter Services
- Parking Fee Program
- Carpools/Vanpools
- Designated Carpool Spaces
- Clean Air Cash ($160 a year)
- Guaranteed Ride Home
- Bicycle Program
- Promotions/Events
- Transit Pass Sales
- Commuter Checks
- Eco-Pass/GO-Pass
- Rideshare Matches
- Commute Planning
- Transit Information
- Car Rental
- Express Bus
- Commute Club

Several of these programs are described below:

Clean Air Cash
Each employee or student who commutes by alternative transportation (i.e., other than single-occupancy vehicle) to the University is rewarded with up to $160 per year in cash if they also meet the following criteria:

- Live outside the Stanford Parking Permit system
- Are required to be on campus during business hours at least half-time for three consecutive months or more

- Would normally be required by Parking & Transportation Services to display a Parking Permit at the your principal place of work or study

Transit
Employees can pay for passes or commuter checks and receive pre-tax savings. EcoPass offers free transit to Hospital employees who work half-time or more. Stickers are applied directly to the Employee ID card, and are valid for transit on Santa Clara Valley Transit Authority (VTA) buses and Light Rail, the Dumbarton Express and the Highway 17 Express. The Go-Pass program is Caltrain's version of a free commuter pass aimed at full-time employees. Employees who receive a Go-Pass or Eco-Pass are eligible for the Clean Air Cash incentive as well.

Shuttle
The Marguerite shuttle system is free to the public and has several routes. The A and B lines meet every train at both the Palo Alto and California Avenue Caltrain stations all day from 6:00 AM to 7:45 PM. The Palo Alto station also serves the Dumbarton Express and other buses from all over the Peninsula. It also brings the riders to the Stanford Shopping Center. The Marguerite Paratransit provides free curb-to-curb service to wheelchair users around campus and to limited off-campus destinations.

Bicycling
Excellent bicycle routes are available to and throughout the Campus. The Parking & Transportation Services office also assists with:

- Bike registration
- Biking Around Stanford brochure
- Stanford Directory bike map (covers San Carlos to Sunnyvale)
- City and County bike maps
- Flyers and brochures
- Full-time campus bicycle coordinator
- Clothes locker, showers and bike storage rentals

Commute Club
The Stanford Commute Club provides an opportunity for commuting Stanford staff, faculty and students to reap the benefits of utilizing alternative transportation and features:

- Clean Air Cash
- Reserved parking spaces for carpools and vanpools
- Complimentary daily parking passes (when the carpooler is unable to use the carpool)
- Vanpool assistance
- Commute planning: Assistance in planning best travel mode and route options
- Commuter Buddy Program: Companionship on first attempt at a new commute mode
- Pretax Deductions: For commuter checks, carpool permits, and transit passes
- Rewards: For recruiting other Commute Club members
- Membership Appreciation Events
- Entries into regular prize drawings

Parking Pricing
The Stanford community charges for all parking. The most accessible parking (called A-permit) costs $486 per year. The least accessible parking (called Z-permit) costs $54 per year. The parking in between the two classes (called C-permit) costs $162.

Outreach

As mentioned above, Stanford invests both time and money in marketing and outreach material and campaigns. The most extensive information is provided on the transportation and parking website[1]. If students or staff have parking-related questions, they are immediately provided with information about the alternatives to driving. The Clean Air Cash strategy is spread across the entire website, including the main parking webpage.

Kaiser Permanente in Oakland

The medical provider Kaiser Permanente has different transportation policies depending on the location of each facility. Some hospitals are located far from high-frequency transit and provide ample parking. On the other hand, the medical facility and the regional offices in Oakland are within a short walking distance from a BART station. According to the transportation system management specialist at Kaiser Permanente in Oakland, about 40 percent of the 7,000 employees in Oakland use public transit at least three days a week. There are 3,500 employees in the regional offices and another 2,500 employees in the Oakland Medical Facility.

Transit Subsidy

Kaiser provides a transit subsidy of $15/month, which is provided to each Oakland regional office employee by a cash reimbursement every two months. There is also a Guaranteed Ride Home program, where Kaiser Permanente in Oakland has contracts with local taxi companies. Vouchers are distributed to the employees who participate in the program. The employees at the Oakland Medical Center who receive the transit subsidy also receive four parking stickers per month, which can be used during days when commuting by car is more convenient.

Parking Pricing

A parking space for an employee in the Oakland Regional Offices costs $18/day or $90/month, fees which are based on the market value. However, to get a monthly parking permit the employee usually has to wait for about 5 years to reach the top of the waiting list. At the Oakland hospital, an employee can either choose between parking in the parking structure at a monthly cost of $40 or at a nearby roof parking for $20/month. Usually there is a three-year wait list. Other employees park in various locations around the hospital and administrative offices.

Shuttle Service

Kaiser provides free shuttles between its Oakland and San Francisco locations. These are highly popular with employees and members as well as patients and visitors. The program is completely funded by Kaiser, and the drivers are contracted with the Parking & Security personnel. Three shuttle vans run continuously between the Oakland Medical Center and the MacArthur BART station, and all are generally full. Between 6 and 8 shuttle vans run continuously from the Civic Center BART station to Geary and O'Farrell, where Kaiser has several different facilities. The frequency is about 12-15 minutes throughout the day.

Commuter Club

All employees in the Oakland regional offices who commute by alternative transportation at least one day a week on a regular basis can become members of the Commuter Club. There are currently around 300 participants. Every month 20 participants win a $20 cash card for use at Macy's, Blockbuster or other stores.

[1] http://transportation.stanford.edu/

The transit subsidy incentives, the shuttles and the parking pricing are believed to contribute to a large extent to the high transit ridership.

UCSF Medical Center

The UCSF Medical Center is located in a densely populated area, as are all UCSF campus sites, which means that access can be difficult. Campus parking facilities are very limited. UCSF has about 4,000 parking spaces and nearly 20,000 faculty, staff, employees and students. There are also a large number of patients and visitors to the medical facilities. Increased utilization of alternative transportation is one of the University's top priorities. In support of the City of San Francisco's "Transit First" policy the University encourages the use of alternative transportation modes including walking, biking and the use of shuttles, light rail, buses and trains as important components in an effort to reduce the noise and pollution associated with traffic congestion and to increase safety. All necessary information about parking and transportation can be found on the recently launched UCSF transportation website.[2] There is also a Guaranteed Ride Home program for those who choose other modes than driving alone to work.

Shuttle Service
UCSF provides free shuttle services to the UCSF community between all major campus locations on a regular schedule Monday through Friday between 7:00 AM and 8:00 PM (excluding campus holidays). Some shuttles pick up after hours and on weekends. The UCSF Shuttle Bus program was established to transport UCSF faculty, staff, students, patients and visitors between primary campus sites and some secondary campus locations throughout the workday. All shuttles also have bicycle racks, which allow bicyclists to bring their bikes between different campus sites for free. In 2004, 1.6 million passenger trips were made with the shuttle system.

Carpool and Vanpool Programs
UCSF provides its own Carpool Matching program, called AlterNetRides, and also refers to the regional Rideshare Service at 511.org. Carpools with at least three people per vehicle receive designated parking spaces at the same cost of $91 per month as a regular parking permit (with no designated spaces). Vanpools are also common on campus. Vanpool dues are deducted pre tax from participating employees' paychecks. There is also a $300 incentive for new vanpools that stay on the road for more than three months. The Marin Commute Club is a commute service founded by UCSF staff in 1971. It provides commuters with regularly scheduled commuter bus transportation from Marin and Sonoma counties to UCSF. Four buses provide service daily, Monday through Friday, with arrival times from 6:15 AM to 8:55 AM. Evening departures times, depending on work location, are at 4:00 PM, 5:15 PM, and 6:30 PM.

Other Programs
UCSF's new website for transportation and parking was posted in the middle of April of 2005 and has already proven to be a success. Earlier anyone who had a question about the shuttle or vanpool service had to call the Parking Office to get information. Now all the information is just a click away. There is also extensive information about biking and walking, with bicycle parking maps and many links to other useful websites. The rideshare coordinator is very positive about the new website, since it allows new users to find information about the shuttle program, vanpool service etc. The coordinator believes that the website will be very important for the future alternative transportation mode split.

[2] http://www.campuslifeservices.ucsf.edu/transportation/

Summary regarding Review of Other Medical Facilities

Location is of course important when it comes to alternative mode usage. Kaiser Permanente in Oakland, for instance, is conveniently located near a BART station, and therefore has a very high transit ridership of 40 percent. However, this is probably also a result of expensive and scarce parking at the location. The effects of marketing and outreach may be considered small. However, these measures can be of crucial importance for a successful TDM program. UCSF is just realizing this and has over the last six months created a complete TDM guide on their website. When staff, patients and students look for parking information, they are immediately informed about the free shuttle system, where bicycle parking is available and how to reach various campus locations by transit. Stanford University has had its Parking & Transportation website for several years, with easy access to information about all the transportation modes and the benefits of not driving alone to campus.

Existing and Proposed TSM/Parking Demand Management Measures at SMCS

Previous Alternative Commute Program Elements

SMCS, which includes SMH, SGH, and the Buhler Building, currently implements an Alternative Commute Program. At the time the SMCS buildings were constructed the City did not have a Transportation Systems Management (TSM) requirement. The current Alternative Commute Program includes the following program elements:

- Free carpool parking (for SMCS employees who carpool together);
- Free occasional parking for those who are full-time alternative commuters;
- Free Compressed Natural Gas (CNG) shuttle program (connecting with SGH and the 29th Street light rail station and SGH and Sutter Memorial Hospital);
- Multiple transportation kiosks (schedules, maps, resources, commute information);
- Employee orientation presentations;
- SMCS Commute Program web page;
- SMCS Employee Rideshare tri-fold brochure;
- SMCS Commute Program Quick Reference Guide for all departments;
- Monthly articles in Sutter Insights employee newsletter;
- Participate with SMCS Wellness Fair and annual Benefits Program.

City-Required SMCS TSM Plan

In compliance with Ordinance 17.184, SMCS prepared a TSM Plan for the SMCS project. The City approved the most recent version of the SMCS TSM Plan in April 2005. The current TSM Plan is designed to encourage other modes of travel including transit, carpools, bicycling and walking thereby reducing the number of automobile trips. The following commute program elements were designated as TSM measures in the TSM Plan required by the City:

- Half-time designated, on-site Employee Transportation Coordinator (ETC);
- Membership in Sacramento Transportation Management Association (TMA);
- 50% subsidy for transit users (Sacramento Regional Transit, Roseville Transit, Capitol Corridor, Yuba-Sutter Transit, San Joaquin Transit, El Dorado Transit, Yolo Transportation, Fairfield/Suisun Transit, Amador Regional Transit, Galt Transit, etc.);
- On-site Transit pass and vanpool vouchers sales at Cashiers Office;
- 50% subsidy for vanpool participants;
- Class I and II bicycle facilities;
- Showers and clothes lockers;
- Personal Matching Assistance (via www.sacregion511.org and SMCS ETC) for carpool/vanpool and bicycle partner matching;
- Flextime;
- Designated carpool/vanpool parking spaces;
- Preferential carpool/vanpool parking locations;
- Guaranteed Ride Home program; and
- On-site amenities (ATM banking, fitness facilities, cafeteria and food vending services, sundry/gift shop, etc.).

Additional TSM/Parking Demand Management Program Elements Added for the Proposed Project

The following additional measures included in the TSM Plan as part of the SMCS project will be implemented after project completion:

- 75% monthly transit or vanpool subsidy (up to $100) – to provide greater subsidies for regional transit and vanpool users (increased from 50%);
- Class I bicycle lockers – 24 lockers provided in north lot and 7 lockers in Community Parking Structure;
- Class II bicycle racks – 31 racks at entrances of WCC, SMF Building and Community Parking Structure;
- Showers and lockers – 11 showers and 136 clothes lockers;
- Preferential Parking – designate 10% (62 spaces) for carpool/vanpool/cleaner fuel vehicles; and
- Annual Employee Commute Survey – one year after occupancy.

Potential Future TSM/Parking Demand Management Enhancements

Additional TSM measures, listed below, would also be available to incorporate into the project as the SMCS project builds out. These additional measures would be added to the TSM Plan if it is determined, through the monitoring program described below, that further steps would be required to reduce vehicle trips either to meet the City's 35 percent alternative mode requirement or to reduce parking demand in order to assure that available parking supply is not exceeded.

- Monthly Cash Commute Alternative Allowance (bicyclists, walkers, roller blades, scooters, etc.);
- Periodic (quarterly) financial incentives or prizes for active alternative commuters (walking shoes, bicycle gear, tune-ups, movie tickets, etc.);
- Adjust/increase parking rates to be flexible and competitive with other hospital market rates;
- Develop electronic in-house ride-matching service for employees to carpool with other employees. Electronic kiosks to be placed at Transportation Information Boards;
- Track shuttle riders via driver-provided punch cards and offer cafeteria, café, coffee, cookie or other on-site discount for every 10th shuttle trip;
- On-site annual comprehensive Transportation (Spare the Air) Fair;
- Allow per diem employees to participate in 75% (up to $100 per month) transit pass program; and
- Provide community telephone hotline for transportation and parking issues.

SMCS TSM Monitoring and Reporting Program

The SMCS TSM/Parking Demand Management Monitoring and Reporting program includes annual monitoring and reporting to track program success. An Annual Monitoring Report will be submitted to the City by SMCS each year. The first Annual Monitoring Report will be submitted to the City within 6 months of project approval. The Annual Monitoring Report will be made available for public review through the City of Sacramento, and through the City and SMCS websites.

The monitoring program will be designed to provide information that will help improve and fine tune the TSM/Parking Demand Management measures and will demonstrate to the City and the community the effectiveness of the SMCS TSM/Parking Demand Management program.

One of the primary goals of the TSM program is to ensure that available parking is provided for users of the SMCS project components. The monitoring program will document the project-related parking demand, available parking in SMCS parking lots, and participation of employees in the TSM Plan. The monitoring program will include the following elements:

- SMCS will monitor and report the total SMCS daytime population, including employees, patients, visitors, vendors, etc. that access SMCS facilities;
- SMCS will monitor and report the available parking supply; and
- SMCS will monitor and report the project parking demand and employee participation in the TSM/Parking Demand Management program (e.g., transit passes, use of vanpools and carpools, etc.).

Parking Resolution

If through the monitoring program it is determined that the SMCS project demand exceeds available supply of parking, measures will be implemented by SMCS to reduce demand and/or increase available supply. Additional TSM/Parking Demand Management measures, described above, will be implemented to reduce parking demand to the extent necessary to meet available supply. In the event that SMCS parking demand exceeds available parking supply after reasonable efforts are undertaken to expand participation in the TSM/Parking Demand Management program, SMCS will increase available parking supply through the acquisition of off-site employee parking that will be connected to SMCS facilities through a shuttle system.

Locations where off-site parking could be provided cannot be specifically identified at this time because the project would be built out over a five to six year period during which the TSM/Parking Demand Management program would be incrementally expanded as necessary. Nonetheless, in an effort to verify the availability of potential off-site parking locations for employee parking, SMCS has researched numerous sites in the Highway 99 corridor south of the project area. SMCS has identified 15 potential sites within a distance of less than five miles that would allow for remote parking, ease of access to Highway 99, and a direct route to the project area by either a shuttle or, in some cases, light rail. The sites range in size from approximately 150 to 250 spaces. If acquiring off-site parking becomes a necessity, SMCS would consult with the City to narrow the number of potential sites. While it is anticipated that existing parking lots would be acquired and used by SMCS for off-site parking (thus continuing an ongoing use of the site), if additional environmental review is required for improvements to off-site lots or operation of parking shuttles, it will be conducted when specific off-site parking sites are proposed.

Summary regarding Existing and Proposed TSM/Parking Demand Management Measures at SMCS

SMCS will have an extensive and effective TSM program after project completion. The SMCS TSM/TDM program compares favorably to the program at Stanford University, which is well known for its inclusive TDM program and high participation rate. SMCS will also monitor parking supply and demand and, if necessary, add TSM measures or parking. This is the ideal way to address the changing situation SMCS faces, ensuring the right amount of parking – not too much and not too little – while emphasizing transportation alternatives. Excess parking might encourage people to

drive, while a shortage may negatively affect access for employees, patients and visitors, and could result in spillover parking into surrounding neighborhoods. The SMCS location and the depth of the TSM program will enable both employees and patients to get to the medical center by other means than driving alone.

One TSM measure that has not been mentioned in the TSM program, but which is already in place, is parking pricing. This is the TSM measure that will have by far the greatest impact on parking demand. As analyzed later in this memo, parking fees for employees will increase from about $20 per month to $60/month in the near future. SMCS has also realized the importance of subsidizing transit passes and vanpool costs as well as providing free car- /vanpool parking.

The following chapter describes the projected parking situation according to DKS Associates. The description is followed by our own analysis of projected parking demand, in which we take parking pricing and other factors into consideration.

Proposed New Parking Supply & Demand

Transportation consultants DKS Associates has conducted a parking analysis of the Sutter Medical Center and associated developments. The following chapter describes the findings in the consultant's analysis.

The SMCS project would increase the demand for and supply of parking. The project proposes to increase the off-street parking supply from 1,847 spaces to 2,737 spaces, an additional supply of 890 spaces (see Figure 1). This calculation of additional parking spaces accounts for replacement of existing parking spaces to be displaced by the project, such as the Paragary's surface lot.

Table 1 Net Difference between Existing and Proposed Parking

Location	Existing Parking Supply (spaces)	Existing Midday Occupied Spaces	Existing Midday Percent Occupied	Existing Midday Vacant Spaces	Proposed Parking Supply (spaces)	Change in Parking Supply (spaces)
Under Freeway North Lot	681	527	77%	154	716	35
Under Freeway South Lot	686	592	86%	94	756	70
SGH	55	39	71%	16	0	(55)
Old Tavern Garage	137	59	43%	78	0	(137)
Buhler Building	28	25	89%	3	0	(28)
Paragary's surface lot	142	79	56%	63	0	(142)
St. Luke's parking garage	0	40		-40	0	0
Green Lot	32	15	47%	17	0	(32)
EAP Building	15	6	40%	9	0	(15)
MTI Buildings	5	5	100%	0	0	(5)
Private medical office	21	14	67%	7	0	(21)
Trinity Apartments	13	23	72%	9	0	(13)
Pioneer Lot	32	3	23%	10	0	(32)
SMF Building	0				90	90
Future MOB	0				35	35
Community Parking Structure	0				1,100	1,100
Residential	0				40	40
TOTAL	**1,847**	**1,427**	**77%**	**420**	**2,737**	**890**

Source: Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft EIR, July 2005, pg. 2-45.

In addition, Sutter General Hospital was previously entitled to develop 71,300 additional square feet of hospital space. Parking occupancy surveys conducted at Sutter Memorial Hospital indicate a parking demand of 2.09 spaces per 1,000 square feet. This results in an additional parking demand of 149 spaces.

Because a hospital project is a very specialized use, and since many characteristics of medical care have changed since the zoning requirements were established, detailed parking analyses were conducted to estimate the parking demand of the SMCS project. These studies include localized parking surveys (e.g., Sutter Memorial Hospital) as well as a review of data compiled by

the Institute of Transportation Engineers (ITE; Parking Generation, Third Edition). The resulting estimate of demand is considered extremely conservative, because it is based on free-standing hospitals served primarily by automobiles, with no transit access, no TDM/TSM programs, and no other uses within walking distance.

As shown in Table 2, the SMCS project could result in an estimated parking demand of 1,427 spaces. Combined with Trinity Cathedral the demand would increase to 1,452 spaces and 1,576 spaces including the Children's Theatre. Taken together, at full buildout the SMCS, the Trinity Cathedral and the Theatre projects could result in a parking shortfall of 686 spaces.

Table 2 Estimated Peak Parking Demand During Weekdays from New Development – Isolated Hospital with no TDM

Land Use	Size	Parking Rate	Source	Parking Need (spaces)
SMCS Project				
Women's and Children's Center	398,362 sf	2.09 / ksf	Survey[1]	833
SMF Building – Medical Office Building	97,223 sf	3.53 / ksf	ITE	343
SMF Building – Ambulatory Surgery	13 suites	5.67 / suite	ITE	74
Future Medical Office Building	35,000 sf	3.53 / ksf	ITE	124
Removal of Existing Medical Office Buildings	(9,652 sf)	3.53 / ksf	ITE	(34)
Apartments	27 du	1 / du	ITE	27
Retail	9,000 sf	2.65 / ksf	ITE	24
Pioneer Church	-	-	EIR	36
Total				***1,427***
Trinity Project				
Trinity Cathedral	-	-	EIR	25
Total				***1,452***
Theatre				
Children's Theatre	-	-	EIR	124
Total				***1,576***

Notes:
1. Based on trip generation and parking occupancy surveys conducted at Sutter Memorial Hospital.

Source: Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft EIR, July 2005, pg. 6.7-46. Institute of Transportation Engineers' *Parking Generation, Third Edition*; DKS Associates, 2005.

Factors Potentially Reducing Parking Demand

Table 2 above informs the reader how DKS Associates has estimated projected parking demand for various land uses by using both local sources (hospital parking generation) and the ITE Parking Generation Manual, 3rd Edition (all other land uses). However, the introduction to the ITE Manual is careful to advise the reader that:

> "This informational report does not provide authoritative findings, recommendations, or standards on parking demand... Most of the data currently available [and presented in the manual] are from suburban sites with isolated single land uses with free parking. More parking data are needed in order to understand the complex nature of parking demand. As future studies are submitted, the findings will provide a basis to assess factors such as the type of the area, parking pricing, transit availability and quality, transportation demand management plans, mixing of land uses, pedestrian friendly design, land use density, trip chaining/multi-stop trip activity, the split between employee and visitor parking, the split between long-term and short-term parking and other issues in more detail."

All the above factors have a very substantial effect on parking demand. It is therefore of utmost importance to use local data where possible, which has been made available for new hospital square footage, and otherwise account for the factors that may impact parking demand at the site.

Reliance on the "average" ITE parking generation rates also glosses over the enormous variation in surveyed rates. For the land use type "Medical Office Building", for example, ITE reported peak parking demand rates ranging from a low of 2.34 vehicles per 1,000 Sq. Ft to 5.35 vehicles per 1,000 Sq. Ft. The average rate (as shown in Table 2 and used by DKS) is 3.53 spaces per 1,000 Sq. Ft. If translated to parking generation at the proposed MOBs, this would generate a range in parking demand between 287 parking spaces and 656 parking spaces, with an average of 433 parking spaces. And again, this number does not take parking pricing, transit availability, TSM measures and location into consideration.

In addition, there will be 13 ambulatory surgery suites in the proposed SMF building. The ITE parking generation rate for these 13 suites is based on "two study sites, one in a rural location and one in a suburban location. Each site had six operating rooms. Information was not available on the building size, number of employees or parking supply at the study sites. Peak period parking demand ratios: 1.67 and 5.67 spaces per operating room at the rural and suburban sites, respectively." The higher rate of 5.67 spaces per suite has been chosen by DKS, since this study is of a suburban location. However, this rate can be questioned since it is only based on one study and is therefore not a representative sample.

Given that the parking demand factors used in the DKS analysis have a wide range of variability and do not provide guidance that can be specifically applied to a project such as SMCS, and in the interests of providing greater accuracy regarding the SMCS project parking demand, Nelson\Nygaard recommends that the most accurate approach is to address projected parking demand based on the change in employee population at SMCS. As described below, some measures that will be implemented will result in quantifiable reductions in parking demand, while others will reduce parking demand to an extent that cannot be quantified.

Parking Demand Based on Change in Employee Population

It is assumed that there is a strong relationship between employee population and the total hospital population, including patients and visitors. As DKS states, future land use will consist of a higher degree of medical office space, which will also result in more employees than hospitals do. There is currently an employee population of 1,239 employees, which will increase to 2,633 employees after full build-out (See Table 3).

Table 3 Existing and Proposed Number of SMCS Employees

Shifts	SGH/BB/Old Tavern	MTI	WCC	SMF	St. Lukes	Total
Existing Number of SMCS Employees						
Day	891	2				893
Evening	221					221
Night	125					125
Total	1237	2	0	0	0	1239
Proposed Number of SMCS Employees						
Day	829		726	280	TBD	1835
Evening	208		320			528
Night	124		146			270
Total	1161	0	1192	280	0	2633

Source: Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft EIR, July 2005, pg.2-50.

We also know from Table 1 that the current midday parking demand (assumed to be the peak parking demand, when the largest number of employees is working (roughly 1,110 employees) and there is the largest number of patients and visitors) is 1,427 parking spaces. If extrapolated into a proposed employee count of 2,633, the future midday parking demand will be 3,027 parking spaces, including both existing uses that will remain and the proposed SMCS buildings. In addition, another 185 parking spaces should be added to this number, to account for parking agreements with the Trinity Cathedral, Pioneer Church and the assumed parking demand of the Children's Theatre; since these latter uses will have peak parking demand at different hours than SMCS, including all these spaces is highly conservative. Parking demand then totals 3,212 parking spaces, assuming no sharing of parking.

The proposed total parking supply will be 2,737 parking spaces, which would result in a potential parking shortfall of 475 parking spaces at full buildout. However, this parking generation does not take changes in parking pricing, transit service, transit subsidy and improved TSM program into consideration. The following sections will discuss the effect of these factors.

Parking Pricing

The transportation research literature consistently finds that an increase in parking price yields a decrease in parking demand. The most frequently cited parking price elasticity for regular

commuters is –0.3, meaning that a 1 percent increase in parking prices leads to a 0.3 percent reduction in parking demand[3].

Nelson\Nygaard strongly recommends that parking pricing is taken into account as a significant factor in determining parking demand, since there is ample evidence that it has a large impact on parking demand. In the case of the proposed SMCS, employee parking fees will increase from $20/month to $60/month. Over a whole year, this will cost each driving employee $480 extra.

SMCS carried out an Internet-based employee transportation survey in May 2005. According to the study, approximately 88% of the employees who answered the questionnaire drove to work (either alone or being the driver in a carpool, excluding the employees who were not at work that day). Assuming that the night shift employees have a slightly higher drive-alone rate, it is estimated that the day- and evening shift employees have an 85% driver rate when the parking fee is $20/month. If we then apply the –0.3 parking price elasticity to account for the increase in parking fee, employee parking demand is reduced. Although patient and visitor parking fees will increase over the coming years as well, we do not expect this to have a significant impact on patient and visitor parking demand.

Figure 1 shows that the increased employee parking fee, from $20 to $60 per month, reduces parking demand from 2,009 employee parking spaces to 1,446 spaces, a reduction of 562 spaces. This will give a parking surplus of 87 spaces instead of shortfall that was earlier predicted.

A large number of employees who previously drove alone to work, will now carpool instead. A smaller portion will turn to transit and other alternative transportation modes. However, it is important to give the employees good information on how to become a carpooler, what the financial benefits are (e.g. no parking costs), and how to get transit subsidies.

[3] Pratt, R. et al. 2000. Traveler Response to Transportation System Changes. Interim Handbook. TCRP Web Document 12. http://www4.nas.edu/trb/crp.nsf/All+Projects/TCRP+B-12/ (accessed August 17, 2005).

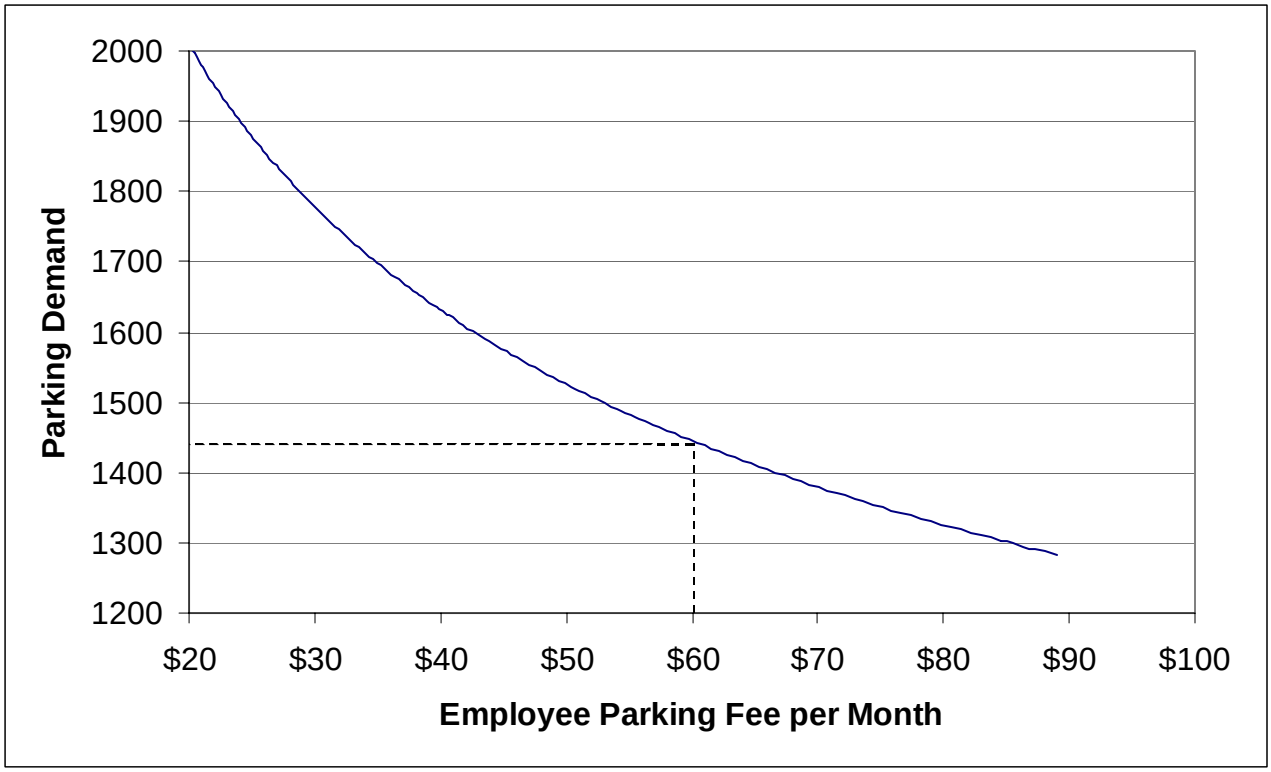

Figure 1 Effect of Increased Employee Parking Fee on Parking Demand

Transit Subsidies

Sutter General Hospital is currently served by a total of 583 transit connections each weekday. Sacramento Regional Transit District provides frequent direct access to the project site via bus routes 30, 31, 67, and 68. Route 36 is also easily accessible within three blocks from the project. The closest light rail station is the 29th Street Light Rail Station, which is located six blocks from the project. Employees can utilize the new Sutter Health free CNG Light Rail Shuttle for travel between the project and the Light Rail Station, which provides roundtrip service every 20 minutes. The recent implementation of the Sutter Health Shuttle program was planned to begin several years in advance of the new campus development in order to attract employees to public transit today, and build ongoing transit ridership in the future. SGH is also well served by Roseville Transit, San Joaquin Regional Transit, and the Amador Regional Transit System (ARTS). These commuter services provide direct access to the project site from the City of Roseville, and Amador, and San Joaquin Counties.

Currently each employee who rides transit more than three days a week receives a 50% subsidy. This will be increased to 100% (up to $60 per month) after project build-out. The existing transit ridership is low, only 2%. However this includes Sutter Memorial Hospital, which has poor transit access compared to SGH. The increase in transit subsidy and the establishment of the shuttle service with the light rail station will likely increase transit ridership. Nonetheless, since transit ridership is so low an increase will not have a large impact on parking demand.

Consolidation and Internalization

One purpose of the SMCS project is to consolidate Sutter General and Sutter Memorial Hospitals onto one medical complex to achieve better and more efficient services at less cost. Anticipated efficiency gains are related to consolidation and reduction in staff levels, and reductions in lost time by doctors and staff traveling between facilities. There will also be reduction in patient travel between facilities. This will lead to a parking demand reduction, since fewer staff and patients will need to bring a car in case of the need for midday traveling. It is, however, difficult to quantify the effects of consolidation on the projected parking demand.

Other Enhancements to the TSM Program

Sixty-two new bicycle lockers and racks will be provided on-site at build-out. Bicycle commuters will also have better access to showers and clothes lockers. Another important marketing tool will be to designate roughly 60 parking spaces to carpool, vanpool and cleaner fuel vehicles. This will show commuters driving to work that there are other options than driving alone and paying the full $720 per year for parking. In addition, vanpool participants will get a 50% subsidy. This will likely encourage more people to commute by vanpool. All these and other measures presented in the TSM program will help reduce parking demand. Again, the effects of these enhancements on parking demand are difficult to quantify.

Conclusion

Taking into account the quantifiable factors discussed above, there will be sufficient parking at the proposed SMCS to accommodate full SMCS project parking demand. Parking demand will fall to 2,650 spaces due to the increased parking fee, generating an excess parking supply of 87 parking spaces. It is difficult to determine the precise number of spaces that could be reduced as a result of other factors, such as improved transit, increased transit subsidy, internalization and other TDM measures, but together these measures should provide SMCS with a sufficient vacancy rate to ensure that patients, visitors and staff can easily find a parking space at all times of day.

Nelson\Nygaard strongly recommends that SMCS does not build more parking than proposed, since this may simply encourage more employees to drive.

Furthermore, the adequacy of parking supply will be analyzed in the monitoring program. If the program shows that the SMCS project demand exceeds the available parking supply, measures will be implemented by SMCS to reduce demand and/or increase the available supply. Additional TSM/Parking Demand Management measures will be implemented to reduce parking demand to the extent necessary to meet available supply. And as described earlier in this memo, if parking demand nevertheless is projected to exceed available parking supply, SMCS will increase available parking supply through the acquisition of off-site employee parking that will be connected to SMCS facilities through the shuttle system.