Architectural Review Board
Staff Report (ID # 7848)

Report Type:	Action Items	**Meeting Date:**	3/16/2017

Summary Title: 240 Pasteur Drive - Biomedical Innovations Building

Title: PUBLIC HEARING / QUASI-JUDICIAL. 240 Pasteur Drive [16PLN-00362]: Recommendation on the Applicant's Request for approval of an Architectural Review to Allow the Construction of the a new Biomedical Innovations Building for the Stanford University School of Medicine. The Approximately 215,000 Square Foot Building was Previously Entitled in 2011. The Proposed Project Includes Architectural Modifications to Reflect Updated Internal Program Needs, Surrounding Pathways, Heritage Trees, and the Architecture of the Adjacent Hospital. Environmental Assessment: An Environmental Impact Report was Previously Certified for This Project Pursuant to the California Environmental Quality Act (CEQA). Zoning District: HD

From: Hillary Gitelman

Recommendation
Staff recommends the Architectural Review Board (ARB) take the following action(s):

1. Recommend approval of the proposed project to the Director of Planning and Community Environment based on findings and subject to conditions of approval.

Report Summary
The subject project was previously reviewed by the ARB. An earlier staff report includes extensive background information, project analysis and evaluation to city codes and policies; that report is available online: http://www.cityofpaloalto.org/civicax/filebank/documents/55208. A copy of the report without prior attachments is available in Attachment D.

City of Palo Alto
Planning & Community Environment
250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2442

The purpose of this report is to restate the comments made by the Board and detail the applicant's response to those comments. The analysis section below builds upon the information contained in the earlier report and modified to reflect recent project changes.

Background

On December 15, 2017, the ARB reviewed the project. A video recording of the Board's meeting is available online: http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=3774&TargetID=319. The Board's comments and the applicant's response are summarized in the following table:

ARB Comments/Direction	Applicant Response
Explore creating a defined entrance to the building at the corner of Pasteur near the Oak tree	Additional detail, views and diagrams have been provided; however, no substantive change to the plans has occurred.
Provide a more complete landscape plan along Pasteur Drive	Additional detail provided; however, no substantive change to the plans has occurred.

The applicant has provided a memorandum included in this report as Attachment A. This document expands upon the conceptual plan and further explains their interest in the design solutions originally presented to the ARB. While staff and the ARB had previously identified areas of plan refinement, the Board's motion at its last meeting focused on the two issues identified above. There remain some minor code compliance details that need to be resolved prior to issuance of a building permit; however, these issues can be addressed through conditions of approval as it is not anticipated to impact the architectural design or setting. In the event there is a significant change to the architecture, setting or landscaping that is not anticipated in the plans, such modification would require ARB review and recommendation to the Director.

Analysis[1]

The proposed project is in substantial compliance with the prior discretionary and legislative approvals, including the governing Development Agreement. This subject building was previously approved and the applicant is now seeking to update the exterior façade and modify elements of the building to reflect changes to the building's internal programing. The overall mass, scale and building form being reviewed with this application is consistent with prior approval. While staff anticipated some design modifications in response to the Board's last discussion, the applicant's response with more detailed information further communicates their design objectives, which is guided by the broader Stanford campus context. The City and Stanford have a shared interest in quality architecture, place-making, and overall urban design. While there may be some refinements that some may suggest could be made to enhance the

[1] The information provided in this section is based on analysis prepared by the report author prior to the public hearing. The Architectural Review Board in its review of the administrative record and based on public testimony may reach a different conclusion from that presented in this report and may choose to take an alternative action from the recommendation in this report.

landscaping or other design features, staff concludes, on balance, that the project meets the required findings[2] for approval.

Environmental Review

An Environmental Impact Report (EIR) and a Mitigation Monitoring and Reporting Program (MMRP) were previously certified by City Council for the Stanford University Medical Center (SUMC) Facilities Renewal and Replacement project pursuant to the California Environmental Quality Act (CEQA). The Mitigation Monitoring and Reporting Program can be found as Attachment F. The Draft and Final Environmental Impact Report can be found on the City's website (http://www.cityofpaloalto.org/gov/topics/projects/landuse/sumc/default.asp). The proposed project includes changes to the exterior building material and some building aspects related to adjustments in floor area and building modulation. However, these changes are minor and contemplated in the prior environmental analysis. The updated architectural style does not require any change to the previously certified environmental documents and no addendum is warranted pursuant to CEQA Guidelines 15164.

Public Notification, Outreach & Comments

The Palo Alto Municipal Code requires notice of this public hearing be published in a local paper and mailed to owners and occupants of property within 600 feet of the subject property at least ten days in advance. Notice of the first public hearing for this project was published in the *Palo Alto Weekly* on December 2, 2016 and the postcard mailing occurred on December 5, 2016. Notice of this second public hearing for the project was published in the *Palo Alto Weekly* on March 3, 2017 and the postcard mailing occurred on March 3, 2017.

Public Comments

As of the writing of this report, no project-related, public comments were received.

Alternative Actions

In addition to the recommended action, the Architectural Review Board may:

1. Approve the project with modified findings or conditions;
2. Continue the project to a date (un)certain; or
3. Recommend project denial based on revised findings.

Report Author & Contact Information
Jonathan Lait, AICP, Assistant Director
(650) 329-2679
jonathan.lait@cityofpaloalto.org

ARB[3] Liaison & Contact Information
Jodie Gerhardt, AICP, Planning Manager
(650) 329-2575
jodie.gerhardt@cityofpaloalto.org

Attachments:

[2] Pursuant to the approved Development Agreement, the 2011 ARB findings are required to be used to evaluate this project, not the more recently updated findings.
[3] Emails may be sent directly to the ARB using the following address: arb@cityofpaloalto.org

- Attachment A Applicant Project Description and Response to ARB Comments (PDF)
- Attachment B Architectural Review Findings (Approved 2011) (PDF)
- Attachment C Conditions of Approval (Approved 2011) (PDF)
- Attachment D Staff Report December 15 2016 (PDF)
- Attachment E Zoning Comparison Table (DOCX)
- Attachment F SUMC Mitigation Monitoring and Reporting Program (PDF)
- Attachment G Project Plans (DOCX)

ZGF
ZIMMER GUNSUL FRASCA ARCHITECTS LLP

1223 SW Washington Street
Suite 200
Portland, OR 97205
T 503 224 3860
F 503 224 2482

Memo

Date March 16, 2017

Project No. P23156.02

Project Name Stanford University - School of Medicine Biomedical Innovations Building - BMI

To Rebecca Atkinson, City of Palo Alto Planner

From Peter van der Meulen, ZGF Architects

Subject ARB Hearing #2 - Response narratives

Project Description

BMI is the first of several planned buildings intended to displace the aging Stone Complex to the north with new research facilities, as allowed for in a City of Palo Alto & Stanford University Development Agreement. The proposed BMI building design draws from the previously designed and approved 2011 ARB Submittal. Using an architectural "kit of parts" vocabulary previously established for the Stanford University School of Medicine, it continues to respect and preserve existing Heritage Trees onsite, and has been further refined to respond to an updated site context with the addition of the new Stanford Hospital immediately to the north. The building is proposed to be 4 stories high above-grade with mechanical penthouse, and a full lower level with a lightwell along the northern exposure and a tunnel connection to the south. Building area, graphically described in the submittal drawings package, is summarized as follows:

▪ Lower Level:	43,541 gsf	35,098 CoPAsf
▪ Level 1:	41,764 gsf	40,360 CoPAsf
▪ Level 2:	43,628 gsf	42,178 CoPAsf
▪ Level 3:	43,628 gsf	42,178 CoPAsf
▪ Level 4:	43,788 gsf	42,338 CoPAsf
▪ Roof (stair):	298 gsf	298 CoPAsf
▪ TOTAL:	216,647 gsf	202,450 CoPAsf

In preparing the new BMI design, a comprehensive tour of existing research labs was made to observe the current range of use and operations. Workshops and interviews were then conducted with School of Medicine research staff, which resulted in a revised internal planning approach for the BMI Building. Plans developed for a series of common, "generic" 24-bench research labs, with associated lab and core building support space. These labs are aligned within the interior of the building, along a central east-west linear equipment corridor to create a central "chassis". Unlike the earlier 2011 internal planning, office workplace now flanks the labs on the building's perimeter on all sides, giving direct daylight and views to the most highly occupied work zones within the building, and indirect daylight into all of the lab

A prominent entry canopy at the east end of the building will signify both a School of Medicine Promenade Gateway and the point of arrival for the BMI building, with reference to the roof elements of the Clark Center, LKC and Lokey. The red entry element is identified in the SoM Master Site Plan as one of several "kit of parts" for new buildings providing a common building vocabulary on the SoM campus.

BMI anticipates the subsequent future development of similar or lesser scale to the north and across Jordan Way, to complete the planned research facility area replacement. A future phase building, as significant building form flanking Jordan Way, is expected to also reinforce this School of Medicine Promenade Gateway. A planning option for a future phase as one building was included in the 2011 ARB submittal; this submittal has been expanded to reflect an alternate approach with two smaller buildings and a connecting landscape quad.

The taller elements of the building massing, such as rooftop exhaust stacks and mechanical equipment, stand back from the building cornice line, and will be screened to minimize the visual impact.

TUNNEL

As this building adds to a network of other research buildings that draw upon the existing School of Medicine central core services tunnel, a lower level tunnel connection will be created from the SE corner of BMI to the south running under Promenade between CCSR and Beckman, infilling a portion of the existing lower level areaway along Beckman's west façade. While only 30' of the tunnel is within the City of Palo Alto, the balance extends into Santa Clara County and on to the existing Stanford Central Loading Facility. As all material and refuse delivery and extraction will occur via this tunnel, BMI will not require or include a street loading service entrance.

EXTERIOR BUILDING FEATURES

The building elevations are composed of 4 primary cladding systems, curtain wall, Stanford French "Rocamat" limestone, precast GFRC arcade elements, and discrete zones with terra cotta clad panels and piers at building entries. With research wetlabs all located within the center of the floorplates, desk and office areas are now located on the building perimeter. These work areas are typically open plan, and articulated volumetrically on the north and south sides of the building, expressed as stone volumes framing curtain wall elements to promote views and natural daylight within the workplace. Circulation spaces along the east and west ends of the north elevation are captured in a re-interpretation of the Stanford arcade, composed primarily of GFRC clad piers and lintels. The piers are expressed in a syncopated rhythm, with curtain wall infill. The building language utilizes and re-interprets the standard Stanford School of Medicine kit of parts, with an intent to relate to the current architecture of the campus while continuing to evolve the architectural vocabulary of new construction on campus.

Aluminum and glass curtainwall system with incorporate vision glass to match that used for Lokey, with opaque spandrel glass panels at sill conditions. All glass will be of high performance low-e insulated units with some vision panels having a ceramic fritted pattern. An infill of narrow painted aluminum panels within and to match this system are designed to create larger "frames" on the facade that relate to the new Stanford Hospital design. All areas of exterior glazed window wall will include integrated automated internal roller shades to control glare and solar gain, and operable awning-type windows are proposed for thermal comfort. The main east entry lobby, and a secondary west staff entry, will each include glass doors and storefront at the ground level with open views within and into the lobbies.

Terra cotta rain-screen cladding is incorporated at ground floor entry areas for accent and as an indirect reference to Stanford Red.

At the rooftop, a continuous mechanical equipment roof screen will be of painted perforated metal panels on a steel framing system. The exposed exhaust fan stacks extend approximately 9 feet above the mechanical penthouse screen, which is approximately 11'-6" tall.

Building Entry Expression

To address questions of BMI building entry expression, ZGF has added to the ARB submission several eye-level views with a partial siteplan to better describe the concept in detail. In further examining and refining building entry expression, several central factors have guided the building primary entry placement and design:

1. The existing Heritage Coastal Live Oak at the Northeast corner of the building has been celebrated with a pedestrian zone of respite surrounding the tree, with access off of both Pasteur and Jordan Way. Its presence reinforces a sense of permanence, and with the prominent roof canopy helps to define the symbolic School of Medicine Gateway at Jordan Way.
2. Primary building approach routes to BMI are from within the School of Medicine campus, from the east, south and west. As the building serves School of Medicine Research only, it is not open to the public, and significant pedestrian traffic across Pasteur to BMI is not anticipated.
3. School of Medicine building entries are generally oriented to a quad or plaza internal to the campus. The BMI entry location and orientation responds to this existing circulation and pattern of building entry, reinforcing an overall campus scale clarity of entry and wayfinding

These factors led to the orientation of the BMI building entry fronting and engaging the existing academic quad formed by BMI, Edwards (future BMI2), Beckman and CCSR. Primary interaction of the BMI research community extends from this quad to other buildings south, east and west of BMI (LKSC, Clark, Lokey). Additional diagrams and views provided in the ARB submission supplement to illustrate these relationships, including pedestrian routes and School of Medicine activity nodes.

The main BMI building entry within the eastern façade has been made distinct by the following features:

- An open raised terrace, with terrace furnishings to support the social gathering at the building entry.
- Flanking terra-cotta clad wall elements unique to the building entries, including the staff-only entry at the along Governor's Avenue.
- The use of super-clear, low-iron storefront glazing to reduce reflection and expose the color, lighting and activity of the working lobby within.
- The building entry doors are recessed under cover of the upper stories for weather protection. For this reason, an additional entry canopy was not needed, and was felt to visually compete with the larger roofline canopy.
- The lobby point entry is clearly defined as a portal with two pairs of doors, surrounded by a bold metal-clad frame within the larger glass wall, to visually clarify and reinforce entry door location.
- Entry is further reinforced by extending finish materials from exterior terrace right into the lobby interior, at both the soffit (wood) and the ground plane (terrazzo tile), to reinforce the visual connection of the interior and exterior at the entry location.

As the building is secure, and only open to the working School of Medicine research community, the lobby itself is purposefully small in scale, with focus on the internal communicating stair and internal departmental laboratory access. Fixed tables and wall niche banquets, reinforce the use of the lobby for research collaboration.

Landscape and Site Design

BUILDING CONTEXT

BMI establishes the newest building along Pasteur Drive at the north perimeter of the School of Medicine campus. The site is bounded by Governor's Avenue to the west with a landscape setback, directly across from Lucas Hall. To the east, across School of Medicine Promenade, is Edwards, which will be subject to future replacement with the Stone Building complex. To the south is CCSR, from which a 50' standoff is required, creating Cooper Lane, a pedestrian lane partially covered by the CCSR sun trellis canopy.

CAMPUS CONTEXT

To date, entries to the School of Medicine has been oriented towards Campus Drive, Foundations Walk, and Discovery Walk: the cross campus spine which provides an address for the LKSC, SIM 1, as well as Clark Center and Alumni Green. Discovery Walk has also been the site of an important thematic art work, "Medical Narratives." With BMI, there will be an opportunity to further define the campus character for the "next block in" from the Pasteur frontage – meaning Cooper Lane, and the portion of land opened through the demolition and replacement of Edwards.

The BMI site completes an existing "quad" formed with the intersection of Edwards, Beckman and CCSR, with easy pedestrian and tunnel connections to other recently developed School of Medicine buildings to the south. Redevelopment of this quad, BMI PLAZA, will create a space around which four different building entry porches can be grouped, creating a more focused and compact space where scientists from different areas and disciplines will gather to socialize and exchange ideas from in and out of the lab.

BMI PLAZA

The primary pedestrian entry to BMI is from the plaza at the intersection of Cooper Lane and School of Medicine Promenade, aligned with the main existing pedestrian connection between CCSR and Beckman. The plaza, defined by the entries to Edwards, BMI, CCSR, and Beckman will be a busy social gathering space with afternoon sun exposure. The BMI entry will feature a "social porch" which elevates the building entry roughly 2' above the plaza to create an additional layer of social gathering on broad steps near the threshold. Terrace furnishings will further support the social gathering space of CCSR Café concession across the plaza.

SHOOL OF MEDICINE GATEWAY

The intersection of Pasteur and the Medical School Promenade creates something of a threshold to the School of Medicine, and offers an opportunity for a symbolic gateway. The Gateway Plaza space on the south side of Pasteur will

form a visual entry flanked by BMI and a future BMI2 to replace Edwards. The BMI design, which features a dynamic rooftop canopy projection, will serve as a strong visual feature, along with the existing, large space-defining heritage oak.

The Gateway Plaza will serve as a symbolic and visual presence for the School of Medicine as a whole, for those entering from the Medical Center along the Medical School Promenade. The plaza defines a social space around the existing heritage oak tree through the arrangement of two large, custom social benches that frame the plaza space. These custom benches imbue the Gateway Plaza with character, and provide the setting for social interaction, small gatherings, or rest from the activity along the Promenade. Three Italian Cypress trees and planting create a threshold that provides entrances, and defines the perimeter of the Gateway Plaza space, while also providing a buffer to Medical Center Promenade and Pasteur Drive.

PASTEUR DRIVE FRONTAGE

The Pasteur Drive frontage is highlighted by several mature Heritage Oaks, in two distinct groves at each end, which provide a strong character and sense of permanence. All necessary efforts will be made to preserve and enhance these oaks. These trees offer opportunities for shaded seating areas for pedestrians and shaded views to work areas within BMI, along the north façade. At the northwest corner of the site, a grove of Heritage Oaks will be preserved and incorporated into a new open, flexible, quiet space. This area will maintain a simple, consistent ground plane, utilizing the existing aggregate mulch, and will also provide a space for the reuse of stone paving salvaged from and reused on the site. The plaza at the northeast corner will be much more active, and provide a space for small gatherings. An allee of trees runs along the rest of the BMI building's north frontage, visually extending the allee of trees that begins in front of Lucas, and providing continuity along Pasteur Drive. This area also houses a lushly planted light well, which provides access to sunlight for the lower level of the BMI Building, but is screened off from the public.

GOVERNOR'S AVENUE

The project also fronts on Governor's Avenue, an important cross campus bike connector framed by existing Sycamore trees to be preserved and/or replaced in kind by the end of the construction project. These trees are coupled with bike racks, reinforcing the Avenue's role as a bicycle thoroughfare for the School of Medicine Campus.

COOPER LANE

Cooper Lane runs between CCSR and BMI – this is a 50' wide connector space that extends east / west across the entire Medical School campus. Its character is more casual and relaxed than Discovery Way. Within the portion shared by BMI and CCSR, it will provide space for informal study and seating in a series of small garden spaces edging the pathway. Cooper Lane consists primarily of native lush, shade tolerant planting, serving as a contrast to the character along the Pasteur frontage.

LANDSCAPE DESIGN ELEMENTS

The vocabulary of landscape components for the BMI project -- Paving, Site Furnishings, Planting, Site Lighting and Site Signage -- is defined in the School of Medicine's 2011 "Foundations in Medicine Master Plan". This landscape vocabulary was established by earlier phase SoM built projects including Foundations Walk, Discovery Walk, LKSC and SIM1.

Paving:

The palette of hardscape paving materials will consist primarily of precast concrete unit pavers and aggregate paving that matches existing surfaces around the Oak trees. Building terraces and 'social porches' will be paved with larger module concrete pavers, while major pedestrian circulation spines and walkways, such as SoM Promenade and BMI Plaza will be paved with concrete unit pavers, matching existing adjacent pavers. Smaller garden rooms and bicycle parking corrals will be paved with aggregate, matching existing adjacent surfaces and Stanford's campus-wide standards. The base of the BMI building, where it meets landscape areas, will be paved with narrow ornamental river rock maintenance strips. Areas and grades underneath the drip lines of existing Live Oak trees will be preserved, including un-compacted aggregate mulch in order minimize disturbance and impact to the trees as much as possible.

Site Furnishings:

Site furnishings will include board formed concrete seat walls and combination planter/seat walls, wood benches, café tables, chairs & umbrellas, painted metal trash receptacles, and bike racks, and the two custom, made from Corian,

social benches at the Gateway Plaza. The palette will be consistent with established Stanford Campus and School of Medicine standards.

Planting:

The palette of plantings will consist of preserved trees (primarily Live Oaks and the Sycamores along Governor's Avenue) and new trees; as well as hedges and detail understory/garden plantings. New trees proposed for BMI include Live Oaks (*Quercus agrifolia*) and Elm trees (*Ulmus 'Accolade'*) along Pasteur Drive; Big Leaf Maple (*Acer macrophyllum*) along Cooper Lane; as well as Western Dogwood (*Cornus nuttallii)* and Western Redbud (*Cercis occidentalis*) flowering accent trees. Wax-Leaf Privet (*Ligustrum japonicum 'Texanum'*) hedges and garden planting will be used to screen garden room spaces and bike parking corrals, consistent with Stanford Campus standards. Planting along Pasteur will be drought tolerant native or adapted flowering plants.

Site Lighting:

The palette of site lighting will be consistent with Stanford Campus standards and the fixture type and location criteria established by the 2011 "Foundations in Medicine Master Plan". The Master Plan proposes the campus standard 'framed globe' pole fixture (12' height) along the SoM Promenade and the 'Holophane RSL 350' pole fixture (10' height) along Pasteur, Cooper Lane and Governor's Avenue. The Bega Indirect 88-309 Type V Pole luminaire (10' height) is proposed along Cooper Lane and to illuminate entry plaza areas at the NE and NW corners of the site.

Site Signage:

The palette of site wayfinding signage, established by the 2011 "Foundations in Medicine Master Plan", will be consistent with Stanford Campus and School of Medicine standards.

Green Building Program

The project will follow Stanford Guideline for Sustainable Buildings, and comply with California's Title 24 Energy Code as well as City of Palo Alto's green building requirements.

Stanford University has demonstrated its leadership with respect to environmental stewardship by, among other aspects, creating a comprehensive set of guidelines and criteria for creating responsible and well-performing buildings on its campus. As noted in The Guideline for Sustainable Buildings, Stanford University maintains a commitment to plan and develop high-value, quality, long-term, cost effective facilities and landscapes that enhance the academic mission of the University, embrace their partnership, and reinforce their stewardship of Stanford land. The Guideline acknowledges the resource intensive nature of wet labs due to stringent air change requirements, high process uses of water and energy, and 24-hour operation of systems. As a result, lab buildings are good candidates for a broad range of efficiency measures as even a small percentage improvement in performance can yield significant savings.

SITE DESIGN & PLANNING

> *"The intent is to encourage optimum use of natural/existing features in architectural and site design of campus buildings, such that building energy use is diminished and the environment is enhanced."*

While building orientation and massing have been largely defined by site boundaries and Heritage Trees, design considerations such as window to wall ratio, building self-shading measures, automated internal shading and high efficiency envelop systems have been employed to optimize occupant comfort, building energy use, and exterior microclimates to positive effect.

Careful consideration has been given to the ample accommodation for bicycle racks adjacent to the building, to accessibility from nearby existing parking, and to the connections to basic services of the surrounding community.

ENERGY USE

> *"By making its buildings more energy efficient, Stanford can reduce its energy consumption and cost and the pollution associated with the burning of fossil fuels."*

For the building envelope, analysis of solar gain and cooling loss will help the design team to optimize insulation, shading, glazing selection for variable thermal conditions, and locate areas of glazing for the greatest benefit. Glazing selection and layout, and artificial lighting control systems, will be optimized for daylighting of interior spaces. Ventilation rates for laboratories will be reviewed with university and local authorities, and strategies for enabling lower airflow rates will be employed. Exhaust air heat recovery will be evaluated with LCCA for potential cost and energy savings over time.

WATER MANAGEMENT

> *"Stanford is currently approaching its limit for water use under its General Use Permit (GUP); and as further growth of the campus is planned, the need for water conservation becomes even more apparent."*

In addition to meeting Calgreen Tier Two requirements, strategies like the harvesting, storing and treating RO/DI reject lab water to flush toilets will reduce the need for indoor potable water use. Use of nearby Stanford lakewater for on-site irrigation will eliminate the need for outdoor potable water use. The building will be double-piped for future connection to the City of Pal Alto's reclaimed water distribution system, when it becomes available.

MATERIALS, RESOURCES & WASTE

> *"From a sustainability perspective, the best building materials are those that are long-lived, least disruptive to harvest, ship and install, and are also easiest and safest to maintain and reuse."*

The project team will establish strategies to reduce construction waste and ensure the proper disposal or recycling of construction materials. The project team will consider attributes such as embodied carbon, occupant health, durability and ecological or ethical sourcing in the material selection process. When possible, preference will be given to materials with high recycled content value.

INDOOR ENVIRONMENTAL QUALITY

> *"Research has shown that buildings with daylight, fresh air, and occupant control are consistently rated as more comfortable and contribute to occupants' performance and productivity."*

The project team will implement systems that are shown to produce the highest satisfaction from building users in terms of thermal comfort, acoustic comfort, indoor air quality, lighting, ventilation, and individual control. Additionally, a high degree of adjust-ability will be built into these systems so that they can be tuned more fully to occupant preferences subsequent to the initial commissioning.

Building materials not only have an overall environmental impact, but impact occupant comfort and indoor air quality. The project team will provide recommendations and ensure specification of low to no VOC-emission materials as well as non-CFC/HFC/HCFC HVAC systems to contribute to proper air pollutant control.

ATTACHMENT A
ARCHITECTURAL REVIEW BOARD
DRAFT FINDINGS FOR APPROVAL
Stanford University School of Medicine
10PLN-000397

(1) The design is consistent and compatible with applicable elements of the Palo Alto Comprehensive Plan in that the project is consistent with the following significant policies and programs:

- Policies L-1, L-2, L-3, L-5, L-6, L-7, L-8, L-45, L-48, L-49, L-50, L-70, L-74, L-75, L-77, T-1, T-3, T-19, T-23, T-48, N-17, N-18, N-20, N-21, N-22, N-23, N-24, N-25, N-29, N-30, N-39 and N-47;

(2) The design is compatible with the immediate environment of the site in that the proposed heights of the three foundations buildings are compatible with the adjacent Stanford School of Medicine campus. Further, the project utilizes the full build out potential of the site through additional square footage and the creation/completion of several quads along Pasteur Drive and Cooper Lane. Governors Avenue along the East side of the site is also strengthened. A new front door for the School of Medicine along Pasteur Drive is created in relationship with the new Stanford Hospital entry and an emphasized connection between the two campuses along Medical Center Promenade.

(3) The design is appropriate to the function of the project in that it continues the physical and programmatic needs of the Stanford School of Medicine through continued development of research facilities.

(4) In areas considered by the board as having a unified design character or historical character, the design is compatible with such character in that the project continues the language established with the Clark Center and continued with the Lorry I. Lokey building of limestone facades with red roof elements signifying major entries. The building proportions and massing are also consistent with existing buildings on the School of Medicine campus.

(5) The design promotes harmonious transitions in scale and character in areas between different designated land uses in that the Foundation in Medicine buildings create a northern edge for the School of Medicine Campus within a consistent architectural character and scale that has already been established. The articulation of the base with exposed structure and transparent glass create a consistent rhythm along the entirety of Cooper Lane. In addition, all glass entries are set back to create a series of "front porches" along Cooper Lane for student and staff interaction.

(6) The design is compatible with approved improvements both on and off the site in that it will follow Stanford Design guidelines and reference the architectural "Kit of Parts" established on the Stanford School of Medicine Campus. The project will also help

establish connector elements and walkways between the School of Medicine and the new Stanford Hospital.

(7) The planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general communities in that the proposed buildings help establish a series of new quads along and "porches" along both Pasteur Drive and Cooper Lane. The buildings also complete a distinct and cohesive School of Medicine Campus.

(8) The amount and arrangement of open space are appropriate to the design and the function of the structures in that the proposed buildings create a series of open spaces and quads consistent with the scale and density of the School of Medicine campus.

(9) Sufficient ancillary functions are provided to support the main functions of the project and the same are compatible with the project's design concept in that service areas, garbage, bike parking, and other support functions are all available on or adjacent to the site as part of the campus plan and architecture.

(10) Access to the property and circulation thereon is safe and convenient for pedestrians, cyclists and vehicles in that the site plan creates a clear distinction for vehicular access and departure to the site on Pasteur Drive. Numerous options exist for pedestrian access including Cooper Lane connection back to Stanford University and the Medical Center Promenade that will connect pedestrians through the School of Medicine Campus to the new Stanford Hospital north of the site.

(11) Natural features are appropriately preserved and integrated with the project as the building footprints have been located in order to preserve as many of the existing mature trees as possible. The existing mature oak trees along Pasteur Drive are augmented with additional oak trees to create three large groves along the south side of the Drive.

(12) The materials, textures, colors and details of construction and plant material are appropriate expression to the design and function and whether the same are compatible with the adjacent and neighboring structures, landscape elements and functions as the landscape paving and plant materials have been carefully selected to complement the existing campus palette. At the project boundaries, the design intent is to align with and, in many cases, extend the existing paving materials in order to create a seamless edge.

(13) The landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site in that the landscape design incorporates a range of open space opportunities at varying scales, from a central plaza to an open green suitable for outdoor recreational activities. Bike parking is located close to the entrances of the buildings. Plant massing, form, texture, will enhance the functionality of the open spaces, as well as provide screening where necessary.

(14) Plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which would tend to be drought-resistant and to reduce consumption of water in its installation and maintenance in that all plant material will be native or acclimated to the site's climate zone.

(15) The design is energy efficient and incorporates renewable energy design elements in that the project will be designed in compliance with the following standards:

(A) Stanford University Guidelines for Sustainable Buildings

(B) Title 24 Green Standards

(C) Cal Green Standards

(D) All City Ordinances

(16) The design is consistent and compatible with the purpose of architectural review as set forth in Palo Alto Municipal Code, section 18.76.020(a).

Resolution No 9171

Resolution of the Council of the City of Palo Alto Approving Architectural Review for the Stanford University Medical Center Facilities Renewal and Replacement Project (Stanford Hospitals and Clinics, Lucile Packard Children's Hospital and Stanford University School of Medicine, Applicant)

The Council of the City of Palo Alto does resolve as follows:

SECTION 1. Background.

The City Council finds, determines, and declares that:

A. On August 13, 2007, Stanford Hospitals and Clinics, Lucile Packard Children's Hospital and Stanford University School of Medicine on behalf of the Board of Trustees of the Leland Stanford Junior University, applied for a Zone Change, Comprehensive Plan Amendment, Environmental Assessment, Architectural Review, Annexation and a Development Agreement for the Stanford University Medical Center Facilities Renewal and Replacement Project, including the demolition, renovation, and replacement of on-site structures, thereby adding approximately 1.3 million square feet of net new floor area, broken down as follows:

- Demolition, renovation, and construction of SHC facilities, providing a net increase of approximately 824,000 square feet;
- Demolition, renovation, and construction of LPCH facilities, resulting in approximately 442,000 additional square feet;
- Demolition of four existing SoM buildings and construction of three replacement buildings, with no net increase in square feet;
- Demolition of shops and storage space, renovation of existing Hoover Pavilion, and net addition of approximately 46,000 square feet of new medical, office, research, clinic, and administrative facilities at the Hoover Pavilion Site for medical offices for community practitioners and SUMC-related medical offices, clinical facilities, and support uses;
- Demolition of existing parking spaces and construction of 2,985 new and replacement spaces, for a net increase of 2,053 spaces to address additional demand for the SUMC Project, to be located in surface parking and above- and underground structures;
- Construction of a new road connecting Sand Hill Road and Welch Road, and provision of interior driveways and improved circulation connections, including the extension of Quarry Road to Roth Way, and
- Widening of Welch Road by the addition of a third lane to accommodate left turns in both directions; and related on-site and off-site improvements *("The Project")*.

B. The City Council has adopted Resolution No. 9168 certifying an Environmental Impact Report prepared for the Project, Ordinance No. 5123 adopting a new chapter in Title 18 (Zoning) for a "Hospital" zone district (HD), Resolution No. 9169 amending the Comprehensive Plan to clarify language in specific Land Use policies, initiation of an annexation petition for a 0.65 acre portion of land in Santa Clara County to the City of Palo Alto, approval of a Development Agreement with Stanford University that would vest certain land use and development regulations for a 30-year period in exchange for public benefits, and acceptance of an update to the Stanford University Medical Center Area Plan.

C. The Architectural Review Board, at duly noticed hearings on December 2, 2010, January 6, 2011, February 3, 2011, February 17, 2011, March 24, 2011, April 7, and 2011, April 21, 2011 reviewed and considered design components of the Project and recommended approval upon certain conditions.

D. The Planning and Transportation Commission held duly noticed public hearings on the Project on May 11 and May 18, 2011 and recommended approval of the design of the Project based upon the findings and upon the conditions set forth below.

E. The City Council held a duly noticed public hearing on the Project on June 6, 2011 and heard and considered all public testimony, both oral and written, presented to it, together with all staff reports and the record of the proceedings before the Architectural Review Board and Planning and Transportation Commission.

SECTION 2. Design Approval. The City Council hereby approves the Stanford University Medical Center Facilities Renewal and Replacement Project regarding the architecture, site planning and related site improvements, subject to the conditions set forth below, making findings as described in Exhibit A.

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SECTION 3. Conditions of Approval. The City Council approves the Project subject to the conditions of approval described in Exhibit B.

INTRODUCED AND PASSED: JUNE 6, 2011

AYES: BURT, ESPINOSA, HOLMAN, PRICE, SCHARFF, SCHMID, SHEPHERD, YEH

NOES:

ABSENT: KLEIN

ABSTENTIONS:

ATTEST:

City Clerk

APPROVED:

Mayor

APPROVED AS TO FORM:

Senior Assistant City Attorney

City Manager

Director of Planning and Community Environment

PLANS AND DRAWINGS REFERENCED:

1. Development Plans prepared by the following:
2. New Stanford Hospital: February 17, 2011 & March 31, 2011
3. Lucile Packard Children's Hospital Expansion: December 2, 2010 & March 17, 2011
4. Stanford Hoover Pavilion Renovation: February 2, 2011 & March 25, 2011
5. Hoover Site Development (Medical Office Building and Parking Structure): October 14, 2010 & April 7, 2011
6. School of Medicine Foundations in Medicine: March 17, 2011
7. Welch Road Surface Improvements and Durand Way: March 17, 2011
8. SUMC Campus Design Guidelines: March 17, 2011

Exhibit A: Architectural Review Findings
Exhibit B: Conditions of Approval

Exhibit A
ARCHITECTURAL REVIEW FINDINGS

A. GENERAL:

The project shall be subject to the mitigation measures as identified in the Final Environmental Impact Report's *Mitigation Monitoring Reporting Program (MMRP) adopted by the City Council.* The MMRP is attached an exhibit to the CEQA resolution.

A.1 Planning Division

1. *Plan Conformance.* The plans submitted for permits shall be in substantial conformance with the following Architectural Review Board Drawing Submittals, except as modified to incorporate these conditions of approval:

    a. New Stanford Hospital: February 17, 2011 & March 31, 2011

    b. Lucile Packard Children's Hospital Expansion: December 2, 2010 & March 17, 2011

    c. Stanford Hoover Pavilion Renovation: February 2, 2011 & March 25, 2011

    d. Hoover Site Development (Medical Office Building and Parking Structure): October 14, 2010 & April 7, 2011

    e. School of Medicine Foundations in Medicine: March 17, 2011

    f. Welch Road Surface Improvements and Durand Way: March 17, 2011

    g. SUMC Campus Design Guidelines: March 17, 2011

2. *Review, Oversight, and Inspections.* Due to the complexity and size of the Project and a phasing schedule that is anticipated to last approximately fifteen years, the City shall hire, at the expense of the applicant, an independent consulting firm or firms and/or contractors to perform activities including, but not limited to, plan review, condition compliance review, mitigation monitoring, inspections, and report preparation. Within 30-days of Project approval, the Project sponsors and the City of Palo Alto shall enter into a Memorandum of Understanding (MOU) that describes the initial deposit and subsequent payments, the types of contractors that could be retained, the scopes of work to be performed, procedures for amending the MOU, and reporting responsibilities, among other considerations. It is anticipated that consulting firms and contractors would be needed in the fields including, but not limited to, Planning, Building Review and Inspections, Public Works, Utilities, Fire, and Arborist.

3. *Mitigation and Condition Monitoring.* Within 30-days of Project approval, the Project sponsors shall meet with representatives from the Department of Planning and Community Environment to initiate a plan and process for mitigation and condition monitoring that is agreeable to all parties and is consistent with the provisions of the Development Agreement approved by City Council on ____. All project plan submittals shall include the following statement, printed on the introductory sheet of the plans, "*These plans shall be consistent with the conditions of approval, located in the implementation document prepared for the Project.*"

4. The proposed project shall comply with the requirements of *Palo Alto Green Building Ordinance No. 5107*, where applicable, prior to submittal for building permits. Projects under the jurisdiction of the Office of Statewide Health Planning and Development (OSHPD) shall be exempt from this Ordinance. Projects submitted for building review to the Palo Alto Building Department prior to adoption of Ordinance No. 5107 shall be exempt from this Ordinance.

A.2 Fire Department

1. *Perform a "Hazardous Materials Closure" with the PAFD for 701, 703, and 1101 Welch Road or facilities, areas or rooms within the project area that stored, used or handled hazardous materials.* This includes "permitted site" as well as "unpermitted sites" discovered during the project that have or had hazardous

materials. For sites where a determination has been made that have or previously had hazardous materials and has not been closed with PAFD, a hazardous materials closure permit is required prior to removal of related materials and prior to demolition. Additionally, prior to removal or modification of the site an inspection by the fire dept is required unless otherwise determined.

A hazardous materials closure includes the physical facility and soil below or associated with the facility. Per project specific determination, a complete Phase II ESA and / or soil sampling may be required. The Hazardous Materials Closure Application and Guidelines can be found at *http//:www.unidocs.org* or is available from PAFD. Hazardous Materials closure of the facility includes removal or addressing any items or areas to the degree that maintenance of a hazardous materials permit is no longer required. Any building, room or area shall have hazardous materials or residuals removed to a level at or below state hazardous waste levels, as agreed at the project start. Clean up level within the building will determine if there is a deed restriction on the building use. At a minimum the hazardous materials closure of a facility room or area will include items listed in the Hazardous Materials Closure Guidelines and may include for example; sampling of residues on facility surfaces such as laboratory countertops, fume hoods as well as sampling of walls, equipment, sinks, sumps, floors, and drain lines. Testing for lead containing materials may be required for any facility that previously contained x-ray equipment.

When contamination of the soil suspected or determined, a Phase II ESA or soil sampling shall include sampling and analysis of soil and associated items; sinks, sumps, floors, and drain lines at a minimum. A post closure report shall be supplied to the PAFD. The PAFD and the County DEH shall be notified by the Project sponsors if contamination remains after the hazardous materials closure is completed with the Fire Department. If soil contamination is discovered, the project will be referred to the RWQCB. The RWQCB will determine appropriate action or referral to another agency for the project. The SUMC Project sponsors shall prepare a site remediation assessment that (a) specifies measures to protect workers and the public from exposure to potential site hazards and (b) certifies that the proposed remediation measures would clean up contaminants, dispose of the wastes, and protect public health in accordance with federal, State, and local requirements. Site excavation activities shall not proceed until the site remediation has been approved by the RWQCB or the designated regulatory oversite agency and implemented by the SUMC Project sponsors. Additionally, the site remediation assessment shall be subject to review and approval by the RWQCB. All appropriate agencies shall be notified. *(Note: 701 and 703 Welch Rd. are addressed separately in this report. Other known hazardous materials use storage and handling buildings, facilities, areas or rooms are not addressed separately – such as 1101 Welch Rd, multiple medical clinics / office buildings on Welch Rd, Stanford Hospital areas being remodeled or demolished, 211 Quarry Rd structures, as well as unpermitted or unknown buildings, facility areas or rooms with hazardous materials.)*

A.3 Planning Arborist

General Conditions

1. The Project shall be consistent with the Hospital District (Palo Alto Municipal Code, Section 18.XX) tree regulations including, but not limited to tree retention, relocation and removal.

2. All required Biological Resource mitigations as described in the MMRP approved by City Council shall be completed to the satisfaction of the Director of Planning and Community Environment or his/her designee.

3. The project shall comply with The Palo Alto Tree Technical Manual, Standards & Specifications (Palo Alto Municipal Code, Chapter 8.10.030)

Prior to Demolition, Building or Grading permit issuance

1. *Building Permit Submittal Review.* Prior to submittal for staff review, the plans submitted for State or City of Palo Alto building permit shall be reviewed by the SUMC Project Arborist to verify that all of their recommendations have been incorporated into the final plan set. The submittal set shall be accompanied by the SUMC Project Arborist's certification letter that the plans have incorporated the following information:

    a. Final Tree Preservation Report (TPR) design changes and preservation measures as required in Mitigation Measure BR-4.1.

b. Palo Alto Tree Technical Manual Standards, Section 2.00 and PAMC 8.10.080.

2. *Site Plan Requirements.* The final Plans submitted for building permit shall include the following information and notes on the relevant plan sheets:

   a. Sheet T-1 "Tree Protection-it's Part of the Plan" Applicant shall complete the following sections on Sheet T-1: Tree Disclosure Statement, Inspections, and Monthly Reporting.

   b. The Tree Preservation Report (TPR). All sheets of the TPR approved by the City shall be printed on numbered Sheet T-1 (T-2, T-3, etc) and added to the sheet index.

   c. Conditions of Approval- the final list of City Arborist Conditions of Approval shall be printed on the numbered Sheet T-1 (T-2, T-3, etc) and added to the sheet index.

   d. Protective Tree Fencing Type. Delineate on grading plans, irrigation plans, site plans and utility plans, Type II fencing around Street Trees and Type I fencing around Protected/Designated trees as a bold dashed line enclosing the Tree Protection Zone (per the approved Tree Preservation Report) per instructions on Detail #605, Sheet T-1, and the City Tree Technical Manual, Section 6.35-Site Plans. Site Plan Note- Apply to the site plan stating, "Note #1: All tree protection and inspection schedule measures, design recommendations, watering and construction scheduling shall be implemented in full by owner and contractor, as stated in the Tree Preservation Report on Sheet T-1 and the approved plans".

3. *All Other Plan Notes.* All civil plans, grading plans, irrigation plans, site plans and utility plans and relevant sheets shall include the following notes applying to the trees to be protected, including neighboring trees:

   a. "Note #1: Regulated Trees-before working in this area contact the SUMC Project Arborist at Tel. ___";

   b. "Note #2: Soils Report and excavation instructions for basement construction within the Tree Protection Zone (TPZ) of a protected tree shall specify a vertical cut (stitch piers may be necessary) in order to avoid over-excavating into the tree root zone. Any variance from this procedure requires City Arborist approval, please call (650) 329-2441."

   c. "Note #3: Utility trenching shall not occur within the TPZ of the protected tree. Contractor shall be responsible for ensuring that no trenching occurs within the TPZ of the protected tree by contractors, City crews or final landscape workers. See sheet T-1 for instructions."

   d. Mandatory Landscape Architect (LA) Inspection Verification to the City. The LA of record shall verify the performance measurements are achieved with a separate letter of verification to City Planning staff, in addition to owner's representative for each of the following:

      i. Percolation & drainage checks have been performed and are acceptable.

      ii. Final grading inspection of all plantable areas has been inspected for tilling depth, rubble removal, soil test amendments, are mixed and irrigation trenching will not cut through any tree roots.

      iii. Tree and Shrub Planting Specifications, including delivered stock, meets Standards in the CPA Tree Technical Manual, Section 3.30-3.50. Girdling roots and previously topped trees are subject to rejection.

4. *Tree Protection Verification.* Prior to demolition, grading or building permit issuance, a written verification from the contractor that the required protective fencing (at the boundary of the TPZ) is in place shall be submitted to the Building Inspections Division. The fencing shall contain required warning sign and remain in place until final inspection of the project.

During Construction

5. *Excavation Restrictions Apply* (TTM, Sec. 2.20 C & D). Any approved grading, digging or trenching beneath a tree canopy shall be performed using 'air-spade' method as a preference, with manual hand shovel as a backup. For utility trenching, including sewer line, roots exposed with diameter of 1.5 inches and greater shall remain intact and not be damaged. If directional boring method is used to tunnel beneath roots, then Table 2-1, Trenching and Tunneling Distance, shall be printed on the final plans. *Plan Changes.* Revisions and/or changes to plans before or during construction shall be reviewed and responded to by the SUMC Project Arborist, (*name of certified arborist of record and phone #*), with written letter of acceptance before submitting the revision to the OSHPD or City of Palo Alto for review and approval.

6. *Tree Damage.* Tree Damage, Injury Mitigation and Inspections apply to Contractor. Reporting, injury mitigation measures and arborist inspection schedule (1-5) apply pursuant to TTM, Section 2.20-2.30. Contractor shall be responsible for the repair or replacement of any publicly owned or protected trees that are damaged during the course of construction, pursuant to Title 8 of the Palo Alto Municipal Code, and city Tree Technical Manual, Section 2.25.

7. *General.* The following general tree preservation measures apply to all trees to be retained: No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ. The ground under and around the TPZ shall not be altered. Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.

Prior to Final Inspection by City Arborist

8. *Landscape Inspection.* The SUMC Project Arborist and Landscape Architect shall perform a final inspection and prepare a final report for submittal to the City Arborist. The Planning Department shall be in receipt of written verification that the Landscape Architect has inspected all trees, shrubs, planting and irrigation and that they are installed and functioning as specified in the approved plans.

9. *Tree Inspection.* The contractor shall call for an inspection by the Project Arborist and City Arborist. A final inspection and report by the project arborist shall evaluate all trees to be retained and protected, as indicated in the approved plans, the activity, health, welfare, mitigation remedies for injury, if any, and for the long term care of the trees for the new owner. The report shall provide written verification to the Planning Department that all trees, shrubs, planting and irrigation are installed as specified in the approved plans. The final arborist report shall be provided to the Planning Department prior to written request for temporary or final occupancy. The final report may be used to navigate the security guarantee return process, when applicable.

Post Construction

10. *Maintenance.* All landscape and trees shall be maintained, watered, fertilized, and pruned according to Best Management Practices-Pruning (ANSI A300-2001 or current version). Any vegetation that dies shall be replaced or failed automatic irrigation repaired by the current property owner within 30 days of discovery.

A.4 Public Works

Prior to Submittal of Construction Permits

1. *Construction Impact Mitigation Plan.* Prior to issuance of any development permit (street work, grading, building, etc) for the SUMC project, the project sponsors shall prepare and receive approval of a Construction Impact Minimization Plan (CIMP), the minimum requirements of which are described in Mitigation Measure TR-1.8 of the Mitigation Monitoring and Reporting Plan (MMRP). Additional CIMP information not specifically described in MMRP TR-1.8 may be required. It is anticipated that a separate CIMP will be required for each of the project components. Please contact Public Works staff to initiate discussions on the development of the CIMP.

2. *The applicant is required to meet with Public Works Engineering (PWE)* prior to submittal of construction permits to verify the basic design parameters affecting grading, drainage and surface water infiltration. The applicant is required to submit a conceptual site grading and drainage plan that conveys site runoff to the nearest adequate municipal storm drainage system. In order to address potential storm water quality impacts, the plan shall identify the Best Management Practices (BMP's) to be incorporated into the Storm Water Pollution Prevention Plan (SWPPP) that will be required for the project. The SWPPP shall include permanent BMP's to

be incorporated into the project to protect storm water quality. (Resources and handouts are available from Public Works – Engineering. Specific reference is made to Palo Alto's companion document to "Start at the Source", entitled "Planning Your Land Development Project"). The elements of the PWE-approved conceptual grading and drainage plan shall be incorporated into the building permit plans.

3. *A Grading and Excavation Permit* issued by the CPA Building Inspection Division is required for the proposed project. Any grading permit issued in conjunction with a phased project implementation plan will only authorize grading and storm drain improvements. Other site utilities may be shown on the grading plan for reference only, and should be so noted. No utility infrastructure should be shown inside the building footprint. Installation of these other utilities will be approved as part of a subsequent Building Permit application.

4. *The applicant shall submit a final grading and drainage plan to Public Works Engineering.* This plan shall show spot elevations or contours of the site and demonstrate the proper conveyance of storm water to the nearest adequate municipal storm drainage system. Existing drainage patterns, including accommodation of runoff from adjacent properties, shall be maintained.

5. *The proposed development will result in a change in the impervious area of the property.* The applicant shall provide calculations showing the adjusted impervious area with the building permit application. A Storm Drainage Fee adjustment on the applicant's monthly City utility bill will take place in the month following the final approval of the construction by the Building Inspection Division. The impervious area calculation sheets and instructions are available from Public Works Engineering.

6. *A detailed site-specific soil report* prepared by a licensed soils or geo-technical engineer must be submitted which includes information on water table and basement construction issues. This report shall identify the current groundwater level, if encountered, and by using this and other available information, as well as professional experience, the engineer shall estimate the highest projected ground-water level likely to be encountered in the future. If the proposed basement is reasonably above the projected highest water level, then the basement can be constructed in a conventional manner with a subsurface perimeter drainage system to relieve hydrostatic pressure. If not, measures must be undertaken to render the basement waterproof and able to withstand all projected hydrostatic and soil pressures. No pumping of ground water is allowed. In general, however, Public Works Engineering recommends that structures be constructed in such a way that they do not penetrate existing or projected ground water levels.

7. *Storm water discharge associated with construction activity.* This proposed development will disturb more than one acre of land. The applicant must apply for coverage under the State Water Resources Control Board's (SWRCB) NPDES general permit for storm water discharge associated with construction activity. A Notice of Intent (NOI) must be filed for this project with the SWRCB in order to obtain coverage under the permit. The General Permit requires the applicant to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The applicant is required to submit two copies of the NOI and the draft SWPPP to the Public Works Department for review and approval prior to issuance of the building permit. The SWPPP should include both permanent, post-development project design features and temporary measures employed during construction to control storm water pollution. Specific Best Management Practices (BMP's) which apply to the work should be incorporated into the design.

8. *The applicant is required to paint the "No Dumping/Flows to San Francisquito Creek" logo* in blue color on a white background, adjacent to all storm drain inlets. Stencils of the logo are available from the Public Works Environmental Compliance Division, which may be contacted at (650) 329-2598. A deposit may be required to secure the return of the stencil. Include the instruction to paint the logos on the construction grading and drainage plan. Include maintenance of these logos in the Hazardous Materials Management Plan, if such a plan is part of this project.

9. *Dumpster/recycling area.*

    a. The project includes the construction of dumpster and recycling areas as part of a food service facility. Regulations require that the dumpster/recycling area be adequately roofed or covered (PAMC 5.20.120).

b. The project includes the construction of dumpster and recycling areas. City guidelines recommend that this area be covered where feasible (PAMC 5.20.120).

10. *Storm runoff from loading docks.* The plans include a loading dock. Storm runoff from loading docks where chemicals or hazardous materials may be handled shall not drain to a street, gutter, or storm drain. See 16.09.032(b)(4)(D). It is recommended that the loading dock(s) be covered to preclude the need for a drain.

11. *Dewatering*: The project excavations will require dewatering during construction. Public Works only allows groundwater drawdown well dewatering. Open pit groundwater dewatering is disallowed. Dewatering is only allowed from April through October due to inadequate capacity in our storm drain system. The geotechnical report for this site must list the highest anticipated groundwater level. We recommend a piezometer to be installed in the soil boring. The contractor must determine the depth to groundwater immediately prior to excavation by using the piezometer or by drilling an exploratory hole if the deepest excavation will be within 3 feet of the highest anticipated groundwater level. If groundwater is found within 2 feet of the deepest excavation, a drawdown well dewatering system must be used. Public Works will require the water to be tested for contaminants prior to initial discharge and at intervals during dewatering. The contractor must retain an independent testing firm to test the discharge water for the contaminants Public Works specifies and submit the results to Public Works.

12. *Storm Water Pollution Prevention Measures.* Per Palo Alto Municipal Code Chapter 16.11, the applicant must incorporate permanent storm water pollution prevention measures that treat storm water runoff prior to discharge. As of February 10, 2011, the prevention measures shall be reviewed by a qualified third-party reviewer who needs to certify that it complies with the Palo Alto Municipal Code requirements. This is required prior to the issuance of a building permit. The third-party reviewer shall be acquired by the applicant and needs to be on the Santa Clara Valley Urban Runoff Pollution Prevention Program's (Program) list of qualified consultants. (*http://www.scvurppp-w2k.com/consultants.htm*) Any consultant or contractor hired to design/and/or construct a storm water treatment system for the project cannot certify the project as a third-party reviewer.

13. *Basement Shoring*: Shoring for the basement excavation, including tiebacks, must not extend onto adjacent private property or into the City right-of-way without having first obtained written permission from the private property owners and/or an encroachment permit from Public Works.

During Construction

14. The contractor must contact the CPA Public Works Inspector at (650) 496-6929 prior to any work performed in the public right-of-way.

15. No storage of construction materials is permitted in the street or on the sidewalk without prior approval of Public Works Engineering.

16. The developer shall require its contractor to incorporate best management practices (BMP's) for stormwater pollution prevention in all construction operations, in conformance with the Storm Water Pollution Prevention Plan prepared for the project. It is unlawful to discharge any construction debris (soil, asphalt, sawcut slurry, paint, chemicals, etc.) or other waste materials into gutters or storm drains. (PAMC Chapter 16.09).

17. All construction within the City right-of-way, easements or other property under City jurisdiction shall conform to Standard Specifications of the Public Works and Utility Departments.

Prior to Finalization

18. All sidewalks and curb and gutters bordering the project which have been damaged during construction shall be repaired and/or removed and replaced in compliance with Public Works approved standards. Sec. 12.08.010.

19. All unused driveways shall be removed and replaced with curb and gutter. Sec. 12.08.090.

20. The Public Works Inspector shall sign off the building permit prior to the finalization of this permit. All off-site improvements shall be finished prior to this sign-off. Similarly, all as-builts, on-site grading, drainage and post-developments BMP's shall be completed prior to sign-off. As-Built drawings shall be drawn using NAD88 coordinates and submitted in digital format (ACAD) as well as 3 mil. Mylar.

A.5 Public Works – Water Quality

1. *PAMC 16.09.117(c) Discharge of Groundwater.* Prior approval shall be obtained from the city engineer or designee to discharge water pumped from construction sites to the storm drain. The city engineer or designee may require gravity settling and filtration upon a determination that either or both would improve the water quality of the discharge. Contaminated ground water or water that exceeds state or federal requirements for discharge to navigable waters may not be discharged to the storm drain. Such water may be discharged to the sewer, provided that the requirements of Section 16.09.110 are met and the approval of the superintendent is obtained prior to discharge. The City shall be compensated for any costs it incurs in authorizing such discharge, at the rate set forth in the Municipal Fee Schedule.

2. *PAMC 16.09.080 Industrial Waste Discharge Permit.* Industrial dischargers must submit an application for an industrial waste discharge permit no later than sixty days in advance of commencing discharge. (This is likely to only apply to the hospital and labs/clinics buildings)

3. *PAMC 16.09.180(b)(9) Covered Parking.* Drain plumbing for parking garage floor drains must be connected to an oil/water separator with a minimum capacity of 100 gallons, and to the sanitary sewer system.

4. *PAMC 16.09.180(b)(10) Dumpsters for New and Remodeled Facilities.* New buildings and residential developments providing centralized solid waste collection, except for single-family and duplex residences, shall provide a covered area for a dumpster. The area shall be adequately sized for all waste streams and designed with grading or a berm system to prevent water runon and runoff from the area.

5. *PAMC 16.09.180(b)(14) Architectural Copper.* On and after January 1, 2003, copper metal roofing, copper metal gutters, copper metal down spouts, and copper granule containing asphalt shingles shall not be permitted for use on any residential, commercial or industrial building for which a building permit is required. Copper flashing for use under tiles or slates and small copper ornaments are exempt from this prohibition. Replacement roofing, gutters and downspouts on historic structures are exempt, provided that the roofing material used shall be prepatinated at the factory. For the purposes of this exemption, the definition of "historic" shall be limited to structures designated as Category 1 or Category 2 buildings in the current edition of the Palo Alto Historical and Architectural Resources Report and Inventory.

6. *PAMC 16.09.175(k) (2) Loading Docks*

    a. Loading dock drains to the storm drain system may be allowed if equipped with a fail-safe valve or equivalent device that is kept closed during the non-rainy season and during periods of loading dock operation.

    b. Where chemicals, hazardous materials, grease, oil, or waste products are handled or used within the loading dock area, a drain to the storm drain system shall not be allowed. A drain to the sanitary sewer system may be allowed if equipped with a fail-safe valve or equivalent device that is kept closed during the non-rainy season and during periods of loading dock operation. The area in which the drain is located shall be covered or protected from rainwater run-on by berms and/or grading. Appropriate wastewater treatment approved by the Superintendent shall be provided for all rainwater contacting the loading dock site.

7. *PAMC 16.09.180(b)(5) Condensate from HVAC.* Condensate lines shall not be connected or allowed to drain to the storm drain system.

8. *16.09.215 Silver Processing.* Facilities conducting silver processing (photographic or X-ray films) shall either submit a treatment application or waste hauler certification for all spent silver bearing solutions. 650-329-2421.

9. *PAMC 16.09.205 Cooling Towers.* No person shall discharge or add to the sanitary sewer system or storm drain system, or add to a cooling system, pool, spa, fountain, boiler or heat exchanger, any substance that contains any of the following:

    - Copper in excess of 2.0 mg/liter;
    - Any tri-butyl tin compound in excess of 0.10 mg/liter;
    - Chromium in excess of 2.0 mg/liter.
    - Zinc in excess of 2.0 mg/liter; or
    - Molybdenum in excess of 2.0 mg/liter.

10. The above limits shall apply to any of the above-listed substances prior to dilution with the cooling system, pool, spa or fountain water.

11. A flow meter shall be installed to measure the volume of blowdown water from the new cooling tower. Cooling systems discharging greater than 2,000 gallons per day are required to meet a copper discharge limit of 0.25 milligrams per liter.

12. *PAMC 16.09.180(b)(b) Copper Piping.* Copper, copper alloys, lead and lead alloys, including brass, shall not be used in sewer lines, connectors, or seals coming in contact with sewage except for domestic waste sink traps and short lengths of associated connecting pipes where alternate materials are not practical. The plans must specify that copper piping will not be used for wastewater plumbing.

13. *PAMC 16.09.175(j) Traps Below Laboratory Sinks.* Sewer traps below laboratory sinks shall be made of glass or other approved transparent materials to allow inspection and to determine frequency of cleaning. Alternatively, a removable plug for cleaning the trap may be provided, in which case a cleaning frequency shall be established by the Superintendent. In establishing the cleaning frequency, the Superintendent shall consider the recommendations of the facility. The Superintendent will grant an exception to this requirement for areas where mercury will not be used; provided, that in the event such an exception is granted and mercury is subsequently used in the area, the sink trap shall be retrofitted to meet this requirement prior to use of the mercury.

14. *PAMC 16.09.175(a) Floor Drains.* Interior (indoor) floor drains to the sanitary sewer system may not be placed in areas where hazardous materials, hazardous wastes, industrial wastes, industrial process water, lubricating fluids, vehicle fluids or vehicle equipment cleaning wastewater are used or stored, unless secondary containment is provided for all such materials and equipment

15. *PAMC 16.09.175(i) Laboratory Sinks.* Laboratory countertops and laboratory sinks shall be separated by a berm which prevents hazardous materials spilled on the countertop from draining to the sink.

16. *PAMC 16.09.180(b)(1) and 16.09.105 Segregated Plumbing and Sampling Locations.* The owner of every new commercial and industrial building or portion thereof shall cause the building to be constructed so that industrial waste is segregated, by means of separate plumbing, from domestic waste prior to converging with other waste streams in the sanitary sewer system. For the purposes of this section only, the term "new" shall also include change to a use that requires plumbing for industrial waste.

    Establishments from which industrial wastes are discharged to the sanitary sewer system shall provide and maintain one or more sampling locations or metering devices or volume and flow measuring methodologies or other sampling and measuring points approved by the Superintendent which will allow the separate measuring and sampling of industrial and domestic wastes. Unless otherwise approved by the Superintendent, domestic and industrial waste shall be kept completely separated upstream of such sampling locations and/or measuring points. Establishments that are billed for sewer service on the basis of sewage effluent constituents shall provide a suitable means for sampling and/or measurement of flow to determine billing constituents in accordance with the utilities rules and requirements. Sampling locations shall be so located that they are safe and accessible to the Superintendent at any reasonable time during which discharge is occurring. (This is likely to only apply to the hospital and labs/clinics buildings)

17. *16.09.180(12) Mercury Switches.* Mercury switches shall not be installed in sewer or storm drain sumps.

18. *PAMC 16.09.205(a) Cooling Systems, Pools, Spas, Fountains, Boilers and Heat Exchangers.* It shall be unlawful to discharge water from cooling systems, pools, spas, fountains boilers and heat exchangers to the storm drain system.

19. *PAMC 16.09.165(h) Storm Drain Labeling.* Storm drain inlets shall be clearly marked with the words "No dumping - Flows to Bay," or equivalent.

20. *Designated Food Service Establishment (FSE) Project:*

    a. *Grease Control Device (GCD) Requirements, PAMC Section 16.09.075 & cited Bldg/Plumbing Codes*

        i. The plans shall specify the manufacturer details and installation details of all proposed GCDs. (CBC 1009.2)

        ii. GCD(s) shall be sized in accordance with the 2007 California Plumbing Code.

        iii. GCD(s) shall be installed with a minimum capacity of 500 gallons.

        iv. GCD sizing calculations shall be included on the plans. See a sizing calculation example below.

        v. The size of all GCDs installed shall be equal to or larger than what is specified on the plans.

        vi. GCDs larger than 50 gallons (100 pounds) shall not be installed in food preparation and storage areas. Santa Clara County Department of Environmental Health prefers GCDs to be installed outside. GCDs shall be installed such that all access points or manholes are readily accessible for inspection, cleaning and removal of all contents. GCDs located outdoors shall be installed in such a manner so as to exclude the entrance of surface and stormwater. (CPC 1009.5)

        vii. All large, in-ground interceptors shall have a minimum of three manholes to allow visibility of each inlet piping, baffle (divider) wall, baffle piping and outlet piping. The plans shall clearly indicate the number of proposed manholes on the GCD. The Environmental Compliance Division of Public Works Department may authorize variances which allow GCDs with less than three manholes due to manufacture available options or adequate visibility.

        viii. Sample boxes shall be installed downstream of all GCDs.

        ix. All GCDs shall be fitted with relief vent(s). (CPC 1002.2 & 1004)

        x. GCD(s) installed in vehicle traffic areas shall be rated and indicated on plans.

    b. *Drainage Fixture Requirements, PAMC Section 16.09.075 & cited Bldg/Plumbing Codes*

        i. To ensure all FSE drainage fixtures are connected to the correct drain lines, each drainage fixture shall be clearly labeled on the plans. A list of all fixtures and their discharge connection, i.e. sanitary sewer or grease waste line, shall be included on the plans.

        ii. A list indicating all connections to each proposed GCD shall be included on the plans. This can be incorporated into the sizing calculation.

        iii. All grease generating drainage fixtures shall connect to a GCD. These include but are not limited to:

        iv. Pre-rinse (scullery) sinks (direct connection)

        v. Three compartment sinks (pot sinks) (direct connection)

        vi. Drainage fixtures in dishwashing room except for dishwashers shall connect to a GCD (direct connection)

vii. Examples: trough drains (small drains prior to entering a dishwasher), small drains on busing counters adjacent to pre-rinse sinks or silverware soaking sinks

viii. Floor drains in dishwashing area and kitchens

ix. Prep sinks (indirect connection)

x. Mop (janitor) sinks

xi. Outside areas designated for equipment washing shall be covered and any drains contained therein shall connect to a GCD.

xii. Drains in trash/recycling enclosures

xiii. Wok stoves, rotisserie ovens/broilers or other grease generating cooking equipment with drip lines (indirect connection)

xiv. Kettles and tilt/braising pans and associated floor drains/sinks

xv. The connection of any high temperature discharge lines and non-grease generating drainage fixtures to a GCD is prohibited. The following shall not be connected to a GCD:

xvi. Dishwashers (direct connection)

xvii. Steamers (indirect connection)

xviii. Pasta cookers (indirect connection)

xix. Hot lines from buffet counters and kitchens (indirect connection)

xx. Hand sinks (direct connection)

xxi. Ice machine drip lines (indirect connection)

xxii. Soda machine drip lines (indirect connection)

xxiii. Drainage lines in bar areas (indirect connection)

xxiv. No garbage disposers (grinders) shall be installed in a FSE. (PAMC 16.09.075(d)).

xxv. Plumbing lines shall not be installed above any cooking, food preparation and storage areas.

xxvi. Each drainage fixture discharging into a GCD shall be individually trapped and vented. (CPC 1014.5)

c. *Covered Dumpsters, Recycling and Tallow Bin Areas PAMC, 16.09.075(q)(2)*

i. New buildings constructed to house FSEs shall include a covered area for all dumpsters, bins, carts or container used for the collection of trash, recycling, food scraps and waste cooking fats, oils and grease (FOG) or tallow.

ii. The area shall be designed and shown on plans to prevent water run-on to the area and runoff from the area.

iii. Drains that are installed within the enclosure for recycle and waste bins, dumpsters and tallow bins serving FSEs are optional. Any such drain installed shall be connected to a GCD.

iv. If tallow is to be stored outside then an adequately sized, segregated space for a tallow bin shall be included in the covered area.

d. Large Item Cleaning Sink, PAMC 16.09.075(m)(2)(B)

i. FSEs shall have a sink or other area drain which is connected to a GCD and large enough for cleaning the largest kitchen equipment such as floor mats, containers, carts, etc. Recommendation: Generally, sinks or cleaning areas larger than a typical mop/janitor sink are more useful.

e. GCD sizing criteria and an example of a GCD sizing calculation (2007 CPC)

Sizing Criteria:

Drain Fixtures	DFUs
Pre-rinse sink	4
3 compartment sink	3
2 compartment sink	3
Prep sink	3
Mop/Janitorial sink	3
Floor drain	2
Floor sink	2

GCD Sizing:

Total DFUs	GCD Volume (gallons)
8	500
21	750
35	1,000
90	1,250
172	1,500
216	2,000

Example GCD Sizing Calculation:

Quantity	Drainage Fixture & Item Number	DFUs	Total
1	Pre-rinse sink, Item 1	4	4
1	3 compartment sink, Item 2	3	3
2	Prep sinks, Item 3 & Floor sink, Item 4	3	6
1	Mop sink, Item 5	3	3
1	Floor trough, Item 6 & tilt skillet, Item 7	2	2
1	Floor trough, Item 6 & steam kettle, Item 8	2	2
1	Floor sink, Item 4 & wok stove, Item 9	2	2
4	Floor drains	2	8
	1,000 gallon GCD minimum sized	Total:	30

Note:

- All resubmitted plans to Building Department which include FSE projects shall be resubmitted to Water Quality.
- It is frequently to the FSE's advantage to install the next size larger GCD to allow for more efficient grease discharge prevention and may allow for longer times between cleaning. There are many manufacturers of GCDs which are available in different shapes, sizes and materials (plastic, reinforced fiberglass, reinforced concrete and metal)
- The requirements will assist FSEs with FOG discharge prevention to the sanitary sewer and storm drain pollution prevention. The FSE at all times shall comply with the Sewer Use Ordinance of the Palo Alto Municipal Code. The ordinances include requirements for GCDs, GCD maintenance, drainage fixtures, record keeping and construction projects.

A.6 Transportation Division

1. *Bicycle Parking Plan.* Prior to the issuance of a building permit for each project component, the project sponsors shall review the bicycle parking plan and layout with the Transportation Division. Bicycle parking shall be consistent with all applicable codes (PAMC 18.54.060).

2. *Bicycle Parking During Construction.* As part of the Construction Impact Minimization Plan (CIMP), the project sponsors shall include the installation of temporary bicycle parking facilities if existing facilities would be affected by construction work including bike racks, bike lockers, and covered bike racks. Prior to the

submittal of the draft CIMP, please contact Transportation staff to discuss the layout, type, duration and number of spaces to be provided.

3. *Transit Facilities During Construction.* As part of the CIMP, the project sponsors shall include the installation of temporary transit facilities if existing facilities would be affected by construction work. Prior to the submittal of the draft CIMP, please contact Transportation Division staff to discuss the transit stops that would be affected and the design of temporary facilities, which may include the placement of temporary shelters, furniture, informational signage, etc.

4. *Wayfinding Signage Plan*

    a. *During Construction.* As part of the CIMP, the project sponsors shall include the installation of temporary pedestrian wayfinding/directional signage to improve the flow and circulation of pedestrian and bicyclists around construction areas. Prior to the submittal of the draft CIMP, please contact Transportation staff to discuss the design and placement and duration of the temporary signage.

    b. *Permanent Signs.* Prior to occupancy, the project sponsors shall submit plans for installation of permanent pedestrian wayfinding/directional signage to improve the flow and circulation of pedestrian and bicyclists around the medical center complex and at Hoover Pavilion. Please contact Transportation staff to discuss the design and placement and duration of the permanent signage.

5. *Onsite Improvement Plans.* Prior to the submittal of building permit plans, the project sponsors shall review with Transportation Division staff the automobile and pedestrian circulations plans for each of the project components, including the interface between the driveways, walkways, parking garages, private streets and the public right-of-way. Transportation staff shall make a determination regarding the acceptability of the improvement plans.

A.7 Utilities

A.7.1 Utilities Electric

1. Applicant shall adhere to the requirements listed in City of Palo Alto's Electric Service Requirements and the City of Palo Alto's Electric Rules and Regulations.

2. Where CPAU primary electrical facilities enter private property, the applicant/developer/owner shall supply a Public Utility Easement which shall be approved by the Electric Utilities Department.

3. Only one electric service lateral is permitted per parcel.

4. The applicant/developer/owner shall provide space for installing padmount equipment (i.e. transformers, switches, and interrupters) and associated substructure as required by the City.

5. The customer shall install all electrical substructures (conduits, boxes and pads) required from the service point to the customer's switchgear. The design and installation shall be according to the City standards and shown on plans.

6. The applicant shall be responsible to relocate and/or upgrade all CPAU electric facilities which are impacted by the projects listed under review.

7. Location of the electric panel/switchboard shall be shown on the site plan and approved by the Architectural Review Board and Utilities Department.

8. All utility meters, lines, transformers, backflow preventers, and any other required equipment shall be shown on the landscape and irrigation plans and shall show that no conflict will occur between the utilities and landscape materials. In addition, all aboveground equipment shall be screened in a manner that is consistent with the building design and setback requirements.

9. For services larger than 1600 amps, the customer will be required to provide a transition cabinet as the interconnection point between the utility's padmount transformer and the customer's main switchgear. The

cabinet design drawings must be submitted to the Electric Utility Engineering Department for review and approval. See Drawing SR-XF-E-1020.

10. For underground services, no more than four (4) 750 MCM conductors per phase can be connected to the transformer secondary terminals; otherwise, bus duct must be used for connections to padmount transformers. If customer installs a bus duct directly between the transformer secondary terminals and the main switchgear, the installation of a transition cabinet will not be required. See Drawings SR-XF-E-1020 and DT-SE-U-1032.

11. The customer is responsible for sizing the service conductors and other required equipment according to the National Electric Code requirements and the City standards. See Drawing DT-SE-U-1032.

12. Any additional facilities and services requested by the Applicant that are beyond what the utility deems standard facilities will be subject to Special Facilities charges. The Special Facilities charges include the cost of installing the additional facilities as well as the cost of ownership.

13. The customer is responsible for installing all on-site substructures (conduits, boxes and pads) required for the electric service. No more than 270 degrees of bends are allowed in a secondary conduit run. All conduits must be sized according to National Electric Code requirements and no 1/2 – inch size conduits are permitted. All off-site substructure work will be constructed by the City at the customer's expense. Where mutually agreed upon by the City and the Applicant, all or part of the off-site substructure work may be constructed by the Applicant.

14. All primary electric conduits shall be concrete encased with the top of the encasement at the depth of 30 inches. No more than 180 degrees of bends are allowed in a primary conduit run. Conduit runs over 500 feet in length require additional pull boxes.

15. All new underground conduits and substructures shall be installed per City standards and shall be inspected by the Electrical Underground Inspector before backfilling.

16. The customer is responsible for installing all underground electric service conductors, bus duct, transition cabinets, and other required equipment. The installation shall meet the National Electric Code and the City Standards.

17. Meter and switchboard requirements shall be in accordance with Electric Utility Service Equipment Requirements Committee (EUSERC) drawings accepted by Utility and CPA standards for meter installations.

18. Shop/factory drawings for switchboards (400A and greater) and associated hardware must be submitted for review and approval prior to installing the switchgear.

19. All new underground electric services shall be inspected and approved by both the Building Inspection Division and the Electrical Underground Inspector before energizing.

20. The Applicant shall be responsible for identification and location of all utilities, both public and private, within the work area. Prior to any excavation work at the site, the Applicant shall contact Underground Service Alert (USA) at 1-800-227-2600, at least 48 hours prior to beginning work.

21. All electrical utility installations shall meet the specifications listed in the City of Palo Alto's Electric Service Requirement Manual.

22. Applicant shall maintain required spacing between electric facilities and all other utilities. See CPAU engineering drawing DT-SS-U-1003 for spacing requirements.

23. All conduit installation shall be in accordance with CPAU engineering drawing DT-SS-U-1003.

24. All vault and box installations shall be in accordance with CPAU engineering drawing DT-SS-U-1002.

25. Projects that require the extension of high voltage primary distribution lines or reinforcement of offsite electric facilities will be at the customer's expense and must be coordinated with the Electric Utility.

A.7.2 Utilities Marketing

1. *Outdoor Water Efficiency and Conservation Requirements.* Please be advised that as of January 1, 2011, the City of Palo Alto is enforcing the new State Green Building Code (CALGreen) with local amendments for Palo Alto. Compliance with the tier 2 requirements for outdoor water efficiency is required for landscapes of any size when the project is a new construction, rebuild, or addition with greater than 1,000 square feet of building area. All other projects need to meet the tier 1 requirements if a landscape area included in the scope of the project is greater than 1,000 square feet. Prior to issuance of either a Building Permit or Grading Permit, the applicant will need to demonstrate compliance by providing the following documentation when applying for a Building and/or Grading Permit:

    - Landscape Water Use Statement
    - Water Use Calculations
    - Irrigation Plan
    - Grading Plan
    - Landscape Design and Planting Plan

    Applicants will need to provide this documentation to the City at the Building Permit Review stage. All landscape worksheets and Green Building Permit Applications can be found on the City's website at www.cityofpaloalto.org/greenbuilding Please contact Catherine Elvert in Utilities Marketing Services at (650) 329-2417 catherine.elvert@cityofpaloalto.org or Kristin Parineh in Planning and Community Environment at (650) 329-2189 or kristin.parineh@cityofpaloalto.org for more information.

2. *Recycled Water.* The City of Palo Alto's Recycled Water Ordinance (Ordinance No. 5002) became effective on June 12, 2008. This ordinance has requirements for irrigation and dual plumbing that are effective immediately for certain types of projects in Palo Alto. For most projects, this requires a separate irrigation system utilizing purple irrigation pipe, appropriate fittings and the installation of an approved backflow prevention device. Please see Palo Alto Municipal Code 16.12 for more information on the recycled water ordinance.

A.8 Water, Gas and Wastewater Utilities Department

No General Conditions of Approval at this time. Please see project specific conditions.

Exhibit B
CONDITIONS OF APPROVAL

B. CONDITIONS OF APPROVAL AS PER PROJECTS

For the SUMC Projects, these conditions of approval are intended to be followed in addition to Section A. General Conditions of Approval.

B.1. New Stanford Hospital

B.1.1. Architectural Review Board

1. The following item shall be reviewed as part of the Architectural Review Board Consent Calendar:

    a. The design, construction and materials plans for kiosk at the main entry shall be further developed.

B.1.2. Planning Arborist

11. *Kaplan Lawn Area.* Prior to the submittal of Stanford Medical Center, Main Hospital building permit plans for State or City of Palo Alto review, the Project Sponsors shall provide a construction plan for the road design through the Kaplan Lawn Area. The plans shall employ a "no-cut" road design, limited to a cut no more than 4-inches from grade as feasible. This plan shall be prepared in consultation with the Project and City Arborist to preserve the root area of trees 33, 34, 35, 36, 37, 38, 39, 40, and 41.

B.1.3. Water, Gas & Wastewater Utilities Department

Prior to Issuance of Demolition Permit

1. Prior to demolition, the applicant shall submit the existing water/wastewater fixture unit loads (and building as-built plans to verify the existing loads) to determine the capacity fee credit for the existing load (for all buildings to be demolished). If the applicant does not submit loads and plans they may not receive credit for the existing water/wastewater fixtures.

2. The applicant shall submit a request to disconnect all utility services and/or meters including a signed affidavit of vacancy. Utilities will be disconnected or removed within 10 working days after receipt of request. The demolition permit will be issued by the building inspection division after all utility services and/or meters have been disconnected and removed.

Prior to Submittal For Building Permit

3. The applicant shall submit a completed water-gas-wastewater service connection application - load sheet for each set of meters (the load and location for each water and gas meter shall be separately detailed on one or more utility applications) to City of Palo Alto Utilities. The applicant must provide all the information requested for utility service demands (water in fixture units/g.p.m., gas in b.t.u.p.h, and sewer in fixture units/g.p.d.).

4. The applicant shall submit improvement plans for utility construction. The plans must show the size and location of all underground utilities within the development and the public right of way including meters, backflow preventers, fire service requirements, sewer mains, sewer cleanouts, sewer lift stations and any other required utilities.

5. Utility vaults, transformers, utility cabinets, concrete bases, or other structures can not be placed over existing water, gas or wastewater mains/services. Maintain 1' horizontal clear separation from the vault/cabinet/concrete base to existing utilities as found in the field. If there is a conflict with existing utilities, cabinets/vaults/bases shall be relocated from the plan location as needed to meet field conditions.

6. The applicant must show on the site plan the existence of any auxiliary water supply, (i.e. water well, gray water, recycled water, rain catchment, water storage tank, etc).

7. The applicant shall be responsible for installing and upgrading the existing utility mains and/or services as necessary to handle anticipated peak loads. This responsibility includes all costs associated with the design and construction for the installation/upgrade of the utility mains and/or services.

8. Sewer drainage piping serving fixtures located less than one foot above the next upstream sewer main manhole cover shall be protected by an approved backwater valve per California Plumbing Code 710.0. The upstream sewer main manhole rim elevation shall be shown on the plans.

9. Flushing of the fire system to sanitary sewer shall not exceed 30 GPM. Higher flushing rates shall be diverted to a detention tank to achieve the 30 GPM flow to sewer.

10. Sewage ejector pumps shall meet the following conditions:

    a. The pump(s) be limited to a total 100 GPM capacity or less.

    b. The sewage line changes to a 4" gravity flow line at least 20' from the City clean out.

    c. The tank and float is set up such that the pump run time not exceed 20 seconds each cycle.

Prior to Issuance of Building Permit

11. The applicant's engineer shall submit flow calculations and system capacity study showing that the on-site and off-site water and sanitary sewer mains and services will provide the domestic, irrigation, fire flows, and wastewater capacity needed to service the development and adjacent properties during anticipated peak flow demands. Field testing may be required to determined current flows and water pressures on existing water main. Calculations must be signed and stamped by a registered civil engineer. The applicant is required to perform, at his/her expense, a flow monitoring study of the existing sewer main to determine the remaining capacity. The report must include existing peak flows or depth of flow based on a minimum monitoring period of seven continuous days or as determined by the senior wastewater engineer. The study shall meet the requirements and the approval of the WGW engineering section. No downstream overloading of existing sewer main will be permitted.

12. For contractor installed water and wastewater mains or services, the applicant shall submit to the WGW engineering section of the Utilities Department four copies of the installation of water and wastewater utilities off-site improvement plans in accordance with the utilities department design criteria. All utility work within the public right-of-way shall be clearly shown on the plans that are prepared, signed and stamped by a registered civil engineer. The contractor shall also submit a complete schedule of work, method of construction and the manufacture's literature on the materials to be used for approval by the utilities engineering

section. The applicant's contractor will not be allowed to begin work until the improvement plan and other submittals have been approved by the water, gas and wastewater engineering section. After the work is complete but prior to sign off, the applicant shall provide record drawings (as-builts) of the contractor installed water and wastewater mains and services per City of Palo Alto Utilities record drawing procedures.

13. Existing wastewater laterals to new or remodeled buildings that are not plastic (ABS, PVC, or PE) shall be replaced at the applicant's expense.

14. The applicant shall pay the capacity fees, connection and inspection fees associated with the installation of the new water, gas or wastewater utility services, or additional load to existing services. The approved relocation of services, meters, hydrants, or other facilities will be performed at the cost of the person/entity requesting the relocation. Each unit or place of business shall have its own water and gas meter shown on the plans. An approved reduce pressure principle assembly (RPPA backflow preventer device) is required for all existing and new water connections from Palo Alto Utilities to comply with requirements of California administrative code, title 17, sections 7583 through 7605 inclusive. The RPPA shall be installed on the owner's property and directly behind the water meter, within 5' of the property line. Show the location of the RPPA on the plans. Inspection by the utilities cross connection inspector is required for the supply pipe between the meter and the assembly. The applicant shall provide the City with current test certificates for all backflows.

15. An approved reduced pressure detector assembly is required for the existing or new water connection for the fire system to comply with requirements of California administrative code, title 17, sections 7583 through 7605 inclusive. Reduced pressure detector assemblies shall be installed on the owner's property adjacent to the property line, within 5' of the property line. Show the location of the reduced pressure detector assembly on the plans. Inspection by the utilities cross connection inspector is required for the supply pipe between the City connection and the assembly.

16. The applicant shall secure a public utilities easement for City of Palo Alto Utilities facilities installed in private property. The applicant's engineer shall obtain, prepare, record with the county of Santa Clara, and provide the utilities engineering section with copies of the public utilities easement across the adjacent parcels as is necessary to serve the development. Where public mains are in private streets/PUEs the service agreement shall include the statement: "Public Utility Easements: If the City's reasonable use of the Public Utility Easements, which are shown as P.U.E on the Map, results in any damage to the Common Area, then it shall be the responsibility of the Association, and not of the City, to Restore the affected portion(s) of the Common Area. This Section may not be amended without the prior written consent of the City".

17. All existing water and wastewater services that will not be reused shall be abandoned at the main per WGW Utilities procedures before any new utility services are installed. All utility installations shall be in accordance with the City of Palo Alto utility standards for water, gas & wastewater.

<u>During Construction</u>

18. For contractor installed water and wastewater mains or services, the applicant shall prepare and submit to the WGW engineering section of the Utilities Department as-built drawings of the installation of water and wastewater utilities to be owned and maintained by the City in accordance with:

    a. Two sets of as-built drawings (hard copies).

b. As-built drawings in 2008 or 2010 AutoCAD format.

c. As-built drawings in .tiff format.

d. Survey points in .csv format for all new utility features.

Note: All survey data shall be collected by a California Licensed Land Surveyor. The surveyor is responsible to setup all control points needed to perform the survey work. The accuracy for all survey data shall be +/- 1cm.

Survey data to be collected (what's applicable):

I. Collect horizontal and vertical data for:

1. Sanitary sewer manholes (rim and invert elevations and depth)

2. Storm drain manholes and catch basins (rim and invert elevations and depth)

3. Water valves (cover and stem elevations)

II. Collect horizontal data only for:

1. Service or lateral connection points at the main

2. Fire hydrants

3. Water meters

4. Sanitary sewer cleanout boxes

Use CPAU WGW Engineering's "feature codes" for naming convention available from CPAU WGW Engineering 1007 Elwell Ct, Palo Alto, CA 94303 (650) 566-4501. All drawings and survey data shall be on the California State Plane Coordinate System - Zone 3 in units of feet. The horizontal datum shall be the North American Datum of 1983 (NAD83) and the vertical datum shall be based on Bestor 93.

B.2. Hoover Pavilion Site

B.2.1. Architectural Review Board

For Hoover Medical Office Building

1. The following items shall be reviewed by Planning Division Staff:

   a. Trash enclosure details

   b. Final hardscape plan (center spine paving)

   c. Bruce Fukuji's recommendations regarding open space and parking reserve be considered.

For Renovation of the existing Hoover Pavilion

1. The applicant shall reconstruct and install the finial at the top of the Hoover Pavilion corner tower.

B.2.2. Water, Gas & Wastewater Utilities Department

For Building Permit

1. The applicant shall submit a completed water-gas-wastewater service connection application - load sheet for City of Palo Alto Utilities. The applicant must provide all the information requested for utility

service demands (water in fixture units/g.p.m., gas in b.t.u.p.h, and sewer in fixture units/g.p.d.).

2. The applicant shall submit improvement plans for utility construction. The plans must show the size and location of all underground utilities within the development and the public right of way including meters, backflow preventers, fire service requirements, sewer mains, sewer cleanouts, sewer lift stations and any other required utilities.

3. Utility vaults, transformers, utility cabinets, concrete bases, or other structures cannot be placed over existing water, gas or wastewater mains/services. Maintain 1' horizontal clear separation from the vault/cabinet/concrete base to existing utilities as found in the field. If there is a conflict with existing utilities, cabinets/vaults/bases shall be relocated from the plan location as needed to meet field conditions.

4. The applicant must show on the site plan the existence of any auxiliary water supply, (i.e. water well, gray water, recycled water, rain catchment, water storage tank, etc).

5. The applicant shall be responsible for installing and upgrading the existing utility mains and/or services as necessary to handle anticipated peak loads. This responsibility includes all costs associated with the design and construction for the installation/upgrade of the utility mains and/or services.

6. Sewer drainage piping serving fixtures located less than one foot above the next upstream sewer main manhole cover shall be protected by an approved backwater valve per California Plumbing Code 710.0. The upstream sewer main manhole rim elevation shall be shown on the plans.

7. Flushing of the fire system to sanitary sewer shall not exceed 30 GPM. Higher flushing rates shall be diverted to a detention tank to achieve the 30 GPM flow to sewer.

8. Sewage ejector pumps shall meet the following conditions:

   a. The pump(s) be limited to a total 100 GPM capacity or less.

   b. The sewage line changes to a 4" gravity flow line at least 20' from the City clean out.

   c. The tank and float is set up such that the pump run time not exceed 20 seconds each cycle. The applicant's engineer may be required to submit flow calculations and system capacity study showing that the on-site and off-site water and sanitary sewer mains and services will provide the domestic, irrigation, fire flows, and wastewater capacity needed to service the development and adjacent properties during anticipated peak flow demands. Field testing may be required to determined current water and wastewater flows and water pressures on existing water and wastewater mains. Calculations must be signed and stamped by a registered civil engineer.

9. Existing wastewater laterals that are not plastic (ABS, PVC, or PE) shall be replaced at the applicant's expense.

10. The applicant shall pay the capacity fees and connection fees associated with the installation of the new utility service/s to be installed by the City of Palo Alto Utilities or increased demand on existing water or wastewater services. The approved relocation of services, meters, hydrants, or other facilities will be performed at the cost of the person/entity requesting the relocation.

11. A separate water meter and backflow preventer is required to irrigate the approved landscape plan. Show the location of the irrigation meter on the plans. This meter shall be designated as an irrigation account an no other water service will be billed on the account. The irrigation and landscape plans submitted with the application for a grading or building permit shall conform to the City of Palo Alto water efficiency standards. An approved reduce pressure principle assembly (RPPA backflow preventer device) is required for all existing and new water connections from Palo Alto Utilities to comply with requirements of California administrative code, title 17, sections 7583 through 7605 inclusive. The RPPA shall be installed on the owner's property and directly behind the water meter, within 5' of the property line. **Show the location of the RPPA on the plans**. Inspection by the utilities cross connection inspector is required for the supply pipe between the meter and the assembly. The

applicant shall provide the City with current test certificates for all backflows.

12. An approved reduced pressure detector assembly is required for the existing or new water connection for the fire system to comply with requirements of California administrative code, title 17, sections 7583 through 7605 inclusive. Reduced pressure detector assemblies shall be installed on the owner's property adjacent to the property line, within 5' of the property line. **Show the location of the reduced pressure detector assembly on the plans.** Inspection by the utilities cross connection inspector is required for the supply pipe between the City connection and the assembly.

13. As part of this project the applicant is required to relocate the gas meter out of the breezeway to the front of the building. Show the new gas meter location on the plans. The gas meter location must conform to utilities standard details.

14. The applicant shall secure a public utilities easement for facilities installed in private property (including the existing water meters). The applicant's engineer shall obtain, prepare, record with the county of Santa Clara, and provide the utilities engineering section with copies of the public utilities easement across the adjacent parcels as is necessary to serve the development.

15. All existing water and wastewater services that will not be reused shall be abandoned at the main per WGW utilities procedures before any new utility services are installed.

16. All utility installations shall be in accordance with the City of Palo Alto utility standards for water, gas & wastewater.

B.2.3. Utilities Electric

1. The Applicant and Utilities Electric staff shall meet and discuss the requirements for access to the electrical substation during construction of the Hoover parking garage and medical office building and access to accommodate future placement of additional equipment that may be needed within the existing footprint of the substation.

B.3. Lucile Packard Children's Hospital

B.3.1. Architectural Review Board

2. The following items shall be reviewed by the Architectural Review Board Subcommittee:

   a. Exterior signage;

   b. Material sample for the exterior site wall adjacent to Quarry Road and Welch Road;

3. The following items shall be reviewed by Planning Division Staff:

   a. Final photometric plan, and

   b. Final light fixture plan

B.4. Welch Road / Durand Way

B.4.1. Architectural Review Board

1. The following items shall be reviewed by the Planning Division Staff:

   a. Study alternate locations for Marguerite Shuttle Stop along Quarry Road; and

   b. Study the intersection of Quarry Road and proposed LPCH loading dock to insure safe bike, pedestrian and traffic movements.

B.4.2. Transportation Division

1. ***Durand Way.*** Durand Way shall be constructed at the earliest opportunity to improve automobile circulation from the medical center complex in the vicinity of Welch Road and Sand Hill Road. At a

minimum, to the extent feasible, the Durand Way intersection apron shall be constructed with the Welch Road improvements.

2. ***Welch Road.*** Welch Road shall be constructed per improvements plans approved by the City and shall include, but not be limited to: new median islands that extend from key intersections to channelize left turn vehicles and restrict driveway movements near intersections; installation of pedestrian-activated flashing beacon systems with enhanced roadway markings & signage; installation of new retro-reflective signage throughout the project corridor; traffic signal improvements including intersection safety lighting enhancements; and miscellaneous roadway improvements.

3. ***Quarry Road.*** Improvements to the Quarry Road public street shall be reviewed by Transportation Division staff prior to the submittal for permits.

B.5. School of Medicine, Foundations in Medicine 1 (FIM1)

B.5.1. Architectural Review Board

1. The following items shall be reviewed by the Architectural review Board Subcommittee:

   a. Final landscape plan;

   b. Proposal for a School of Medicine gateway entry feature from Pasteur Drive area;

   c. Final photometric plan; and

   d. Revisions to both FIM1 building entries to be more visible and prominent to pedestrians.

B.6. Design Guidelines Document

B.6.1. Architectural Review Board

1. The following items shall be added by the Applicant and reviewed by Planning Division staff:

   a. Add language to SHC Clinics section that describes importance of the building as terminus to Pasteur Mall and the need for a strong axial relationship of between the building massing and Pasteur Mall;

   b. Include language in the Executive Summary that would allow minor adjustments to the Design Guidelines for items such as light fixtures, pedestrian furniture, etc; and

   c. Include language to the Executive Summary that would describe the process, procedure, and review responsibilities for any future amendments to the Design Guidelines.

Architectural Review Board
Staff Report (ID # 7445)

Report Type:	Action Items	**Meeting Date:**	12/15/2016

Summary Title: 240 Pasteur Drive - Biomedical Innovations Building

Title: PUBLIC HEARING / QUASI-JUDICIAL MATTER. 240 Pasteur Drive [16PLN-00362]: Recommendation to the Director of Planning and Community Environment for a Requested Approval of an Architectural Review Application to Allow the Construction of the a new Biomedical Innovations Building for the Stanford University School of Medicine. The Approximately 215,000 Square Foot Building was Previously Entitled in 2011. The Proposed Project Includes Architectural Modifications to Reflect Updated Internal Program Needs, Surrounding Pathways, Heritage Trees, and the Architecture of the Adjacent Hospital. Environmental Assessment: An Environmental Impact Report was Previously Certified for This Project Pursuant to the California Environmental Quality Act (CEQA). Zoning District: HD

From: Hillary Gitelman

Recommendation

Staff recommends the Architectural Review Board (ARB) take the following action:

1. Conduct a public hearing and continue the project to a date uncertain.

Report Summary

At the applicant's request, the first formal hearing for this project has been scheduled prior to completion of staff's review for project consistency the Comprehensive Plan and Municipal Code, previous entitlement documents, and the prior Environmental Impact Report and Mitigation Monitoring and Reporting Program. The staff report primarily disseminates background entitlement history and outlines forthcoming key analysis topics. The hearing will allow an understanding of the project design goals, opportunities/constraints, as well as the benefit for early Architectural Review Board feedback.

City of Palo Alto
Planning & Community Environment
250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2442

Background

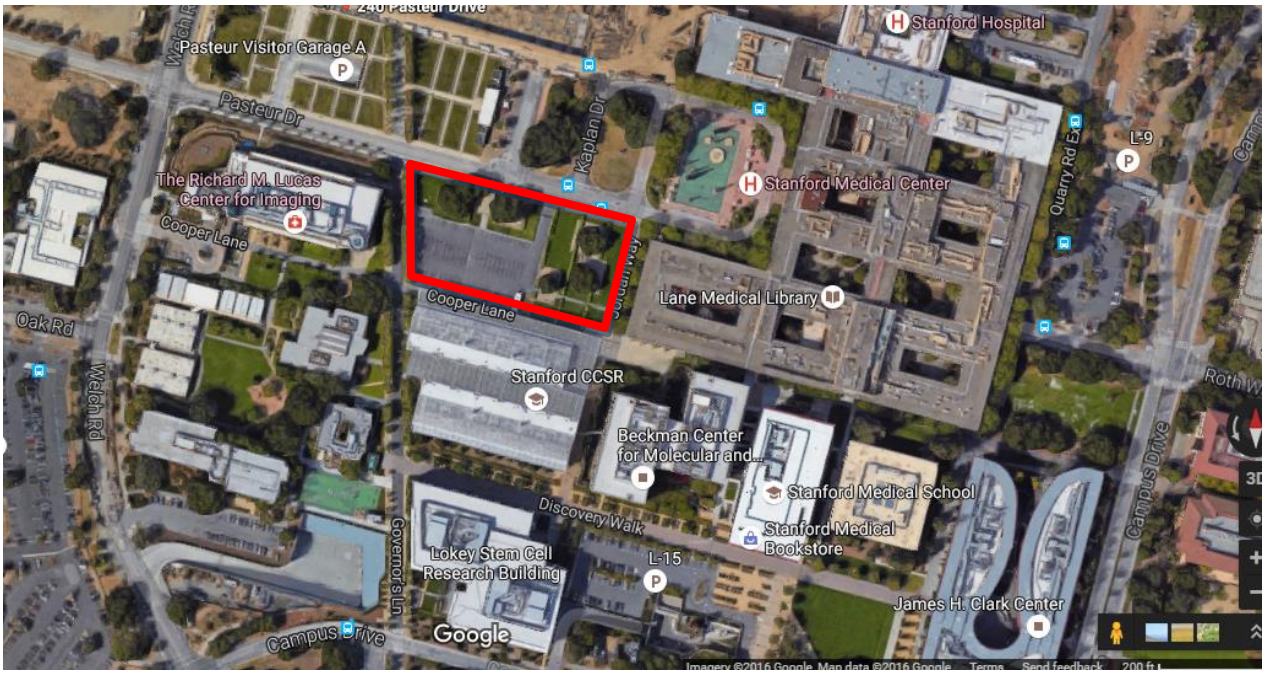
Project Information

Owner:	Board of Trustees of the Leland Stanford Junior University
Architect:	Zimmer Gunsul Frasca Architects LLP
Representative:	Stanford University; School of Medicine
Legal Counsel:	Not Applicable

Property Information

Address:	240 Pasteur Drive
Neighborhood:	Stanford University
Lot Dimensions & Area:	APN 142-05-044 and APN 142-23-003; Over 11 acres
Housing Inventory Site:	Not Applicable
Located w/in a Plume:	Not Applicable
Protected/Heritage Trees:	Yes, ten protected oak trees
Historic Resource(s):	Not Applicable
Existing Improvement(s):	Valet Parking Lot and Landscaping
Existing Land Use(s):	Valet Parking Lot and Landscaping
Adjacent Land Uses & Zoning:	North: Hospital (HD) Zoning West: Santa Clara County (Stanford University) East: Hospital (HD) Zoning South: Santa Clara County (Stanford University)

Aerial View of Property:



Land Use Designation & Applicable Plans

Zoning Designation:	Hospital (HD) Zoning District
Comp. Plan Designation:	Major Institution/ Special Facilities (MISF)
Context-Based Design Criteria:	Not Applicable
Downtown Urban Design Guide:	Not Applicable
South of Forest Avenue Coordinated Area Plan:	Not Applicable
Baylands Master Plan:	Not Applicable
El Camino Real Design Guidelines (1976 / 2002):	Not Applicable
Proximity to Residential Uses or Districts (150'):	Not Applicable
Located w/in the Airport Influence Area:	Not Applicable

Prior City Reviews & Action

City Council:	10PLN-00397
PTC:	10PLN-00397
HRB:	10PLN-00397
ARB:	10PLN-00397

The following information on prior City reviews and actions can be found on the City's website: (http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=3774&TargetID=319):

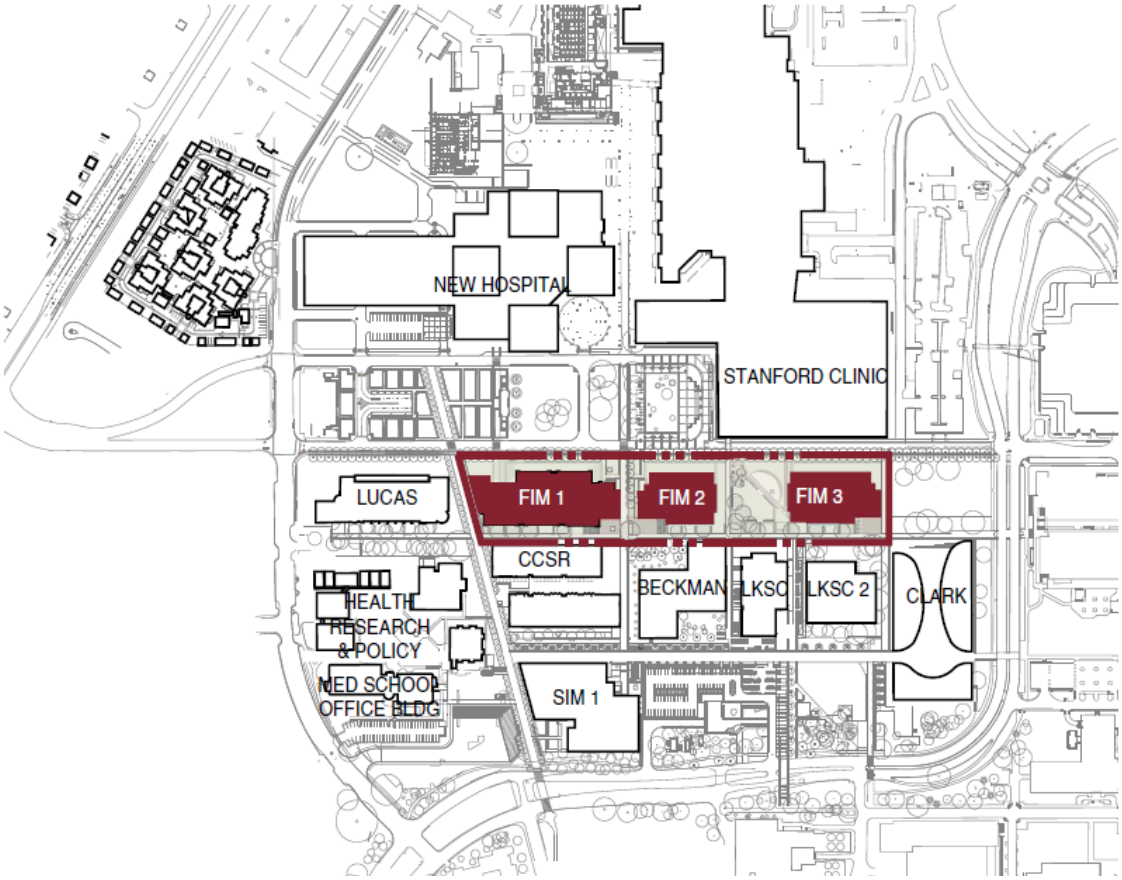
- City Council Res No. 9168 June 6 2011 (SUMC EIR Certification)
- City Council Res No. 9169 June 6 2011 (Comprehensive Plan Amendment)
- City Council RLUA 2011-3 June 6 2011 (SUMC Conditional Use Permit MMRP)
- City Council Res No. 9170 June 6 2011 (LAFCO Initiation)
- City Council Res No. 9171 June 6 2011 (SUMC Architectural Review)
- City Council Ord No. 5123 June 6 2011 (Hospital District Zoning)
- City Council Res No. 9186 July 11 2011 (LAFCO Annexation)
- City Council Ord No. 5124 July 11 2011 (SUMC Development Agreement)
- Architectural Review Board Staff Report - March 24 2011 & Attachments
- SUMC Campus Design Guidelines March 17 2011
- School of Medicine Foundations in Medicine Master Plan March 17 2011

On June 11, 2011 the City Council approved the Stanford University School of Medicine (SoM) Foundations in Medicine (FIM 1) building as part of the School of Medicine Master Plan on Pasteur Drive (Attachment A). The FIM 1 building is the subject of the current application; the applicant is seeking building design modifications, which warrant board-level review.

The FIM 1 building and the School of Medicine Master Plan was discussed by the Architectural Review Board, Planning and Transportation Commission, and City Council on multiple occasions between 2007 and 2011 as part of the much larger Stanford University Medical Center (SUMC) Facilities Renewal and Replacement project for which the City Council also certified an Environmental Impact Report with a Mitigation Monitoring and Reporting Program, entered into a Development Agreement, and approved a Comprehensive Plan Amendment, Zoning Change, Conditional Use Permit, and Design Guidelines.

The School of Medicine (SoM) component of the larger Stanford University Medical Center Facilities (SUMC) Renewal and Replacement project entails demolition of four existing buildings occupied by the SoM (Edwards, Lane, Alway, and Grant). The project location for the replacement three new Foundations of Medicine buildings (FIM 1, FIM 2, and FIM 3) is the site of the existing aforementioned buildings and an existing temporary valet parking lot and landscaped area at 240 Pasteur Drive. While FIM 1 has received the necessary planning entitlements, FIM 2 and FIM 3 have not yet received architectural review approvals.

Approved FIM 1, FIM 2, and FIM 3 Site Plan, March 17, 2011:



Project Description

The project is the construction of the new Biomedical Innovations Building (BMI, formerly known as FIM1) on two parcels. An application for a lot merger is still outstanding. The project architect prepared a detailed BMI project description that is included as Attachment B.

Requested Entitlements, Findings and Purview:

The following discretionary applications are required for the project:

- Architectural Review – Major (AR): The process for evaluating this type of application is set forth in PAMC 18.77.070. Architectural Review applications are reviewed by the ARB and recommendations are forwarded to the Planning & Community Environment Director for action within five business days of the Board's recommendation. Action by the Director is appealable to the City Council if filed within 14 days of the decision. AR projects are evaluated against specific findings. All findings must be made in the affirmative to approve the project. Failure to make any one finding requires project redesign or denial.
- Certificate of Compliance/Lot Merger: The process for evaluating this type of application to remove a lot line and merge two parcels is set forth in PAMC Title 21.

Analysis[1]

Urban Design Questions and Insights

According to the March 24, 2011 Architectural Review Board staff report (Attachment C), the urban design analysis for the School of Medicine (SoM) component of the larger SUMC project primarily focused on four key questions:

1. What are the spatial and functional relationships of the FIM buildings to the School of Medicine (SoM), the Medical Center and University campus?
2. What are the connections and entrance points to and from the SoM and the FIM buildings?
3. How are places and activities organized to attract informal interaction, collaboration and campus community?
4. How does the architectural design of the FIM buildings contribute to the identity of the SoM district, the Medical Center and the Stanford campus?

Two key insights defined the role of the FIM buildings in the SoM, Medical Center and academic campus context, framing how to think about the urban design of the FIM buildings:

- The FIM buildings, as bio-medical lab/office/research facilities part of the SoM, need to orient towards the core of the SoM along Discovery Walk and the campus entrance to the SoM at the Alumni Green open space. The Alumni Green connects the SoM to Serra Mall, the organizing axis of the Stanford Campus that connects the academic precincts together.

[1] The information provided in this section is based on analysis prepared by the report author prior to the public hearing. The Architectural Review Board in its review of the administrative record and based on public testimony may reach a different conclusion from that presented in this report and may choose to make alternative findings. A change to the findings may result in a final action that is different from the staff recommended action in this report.

- To facilitate interdisciplinary team collaboration, the FIM buildings and site design need proximity, access and campus places to attract and support meaningful interdisciplinary connections between the Medical Center and the SoM. The interdisciplinary nature of translational research benefits from informal encounters that foster communication, relationships and creativity among physicians, scientists, medical students, post doc's, researchers and others.

At this time, staff is currently analyzing how the updated Biomedical Innovations Building design responds to the overall School of Medicine Master Plan and the aforementioned key urban design questions and insights.

Project Design to Reduce or Avoid Environmental Impacts

The previously approved School of Medicine (SoM) component addressed those potentially significant environmental impacts identified in the CEQA Environmental Impact Report and agreed to comply with the associated Mitigation Monitoring and Reporting Program. The March 24, 2011 Architectural Review Board staff report discusses how the site design and architecture for the FIM buildings evolved to address potentially significant visual quality impacts (VQ-2, VQ-3, and VQ-5). Furthermore, City Council adopted the Tree Preservation Alternative outlined in the Draft EIR and the site design and architecture for the FIM buildings evolved to incorporate extensive tree protection, relocation, and replacement provisions at the SoM and other SUMC project sites. At this time, staff is currently analyzing how the updated Biomedical Innovations Building design responds to the visual quality, tree protection, and additional Mitigation Measures to determine if the proposed project is consistent with the prior CEQA review.

Municipal Code

At this time, staff is currently analyzing how the updated Biomedical Innovations Building site design and architecture responds to the Hospital (HD) zoning district requirements, architectural review findings, and previous conditions of approval. It is important to note that the Development Agreement for the overall SUMC project requires the use of the 2011 Municipal Code during project review.

Gross Floor Area

The previously approved SoM component of the SUMC project would be constructed in phases and there would be no net increase in gross floor area for the SoM buildings.

Existing School of Medicine gross floor area to be demolished:	
Edwards	65,8000 square feet
Lane	84,700 square feet
Always	112,500 square feet
Grant	152,000 square feet
Total Demolition:	**415,000 square feet***

Proposed School of Medicine gross floor area to be constructed:	
Foundations in Medicine #1 (FIM1)	168,000 square feet

Foundations in Medicine #2 (FIM2)	116,000 square feet
Foundations in Medicine #3 (FIM3)	131,000 square feet
Total Construction:	**415,000 square feet***

Development Standards

The previously approved SoM component of the SUMC project met the new Hospital (HD) zoning district requirements. Please see Attachment D for a comparison between the previously approved and the proposed project.

Architectural Review Findings

With the incorporation of detailed conditions of approval, the previously approved SoM component met the sixteen architectural review findings that were required by the Municipal Code (Attachment E). Exhibit A of City Council Resolution No. 9171 contains the general architectural review-related project conditions of approval for all of the SUMC project sites. Exhibit B contains the project-specific conditions of approval for each of the SUMC project sites, including multiple FIM 1 items to return to the Architectural Review Board Subcommittee for review, as shown below.

Exhibit B Specific Project Conditions Related to Design:

B.5. School of Medicine, Foundations in Medicine 1 (FIM1)

B.5.1. Architectural Review Board

1. The following items shall be reviewed by the Architectural review Board Subcommittee:

   a. Final landscape plan;

   b. Proposal for a School of Medicine gateway entry feature from Pasteur Drive area;

   c. Final photometric plan; and

   d. Revisions to both FIM1 building entries to be more visible and prominent to pedestrians.

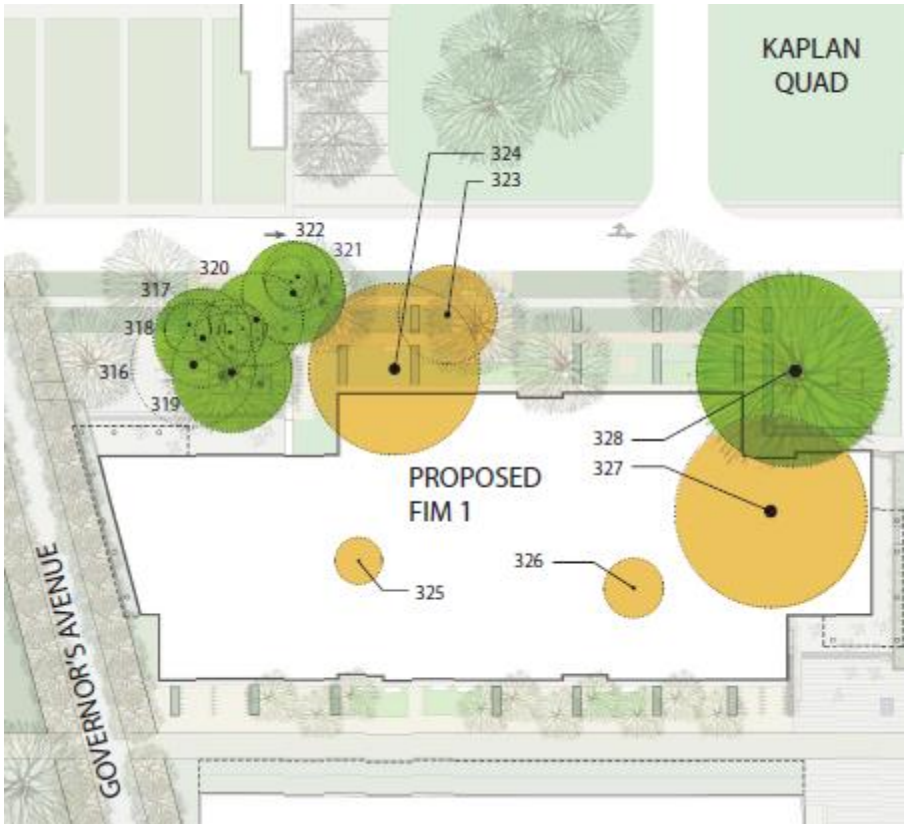
Protected Trees, Landscaping, Hardscape, Utilities, and Stormwater Management

There are 12 oak trees at the project location. Ten of them are protected as either Group 1 or Group 2 trees per the HD zoning district:

- Group 1 Trees: 317, 318, 319, 320, 322, 323*, 324* (* To be relocated)
- Group 2 Trees: 326, 327, 328
- Not Protected Trees: 316, 321

The former Group 2 Tree #325 was removed and relocated consistent with standard City and SUMC review. Consistent with the prior FIM 1 approval, the updated site design for the BMI building still proposes to remove two Group 2 trees (326 and 327), as well as relocate two Group 1 trees (323 and 324) to another location in the vicinity. The remaining oaks would be retained in place. The applicant adjusted landscaping, hardscape, and utility designs to offer additional tree protection for the Group 1 trees in post-project conditions. Stormwater management is proposed on the east side of the BIM building. Urban Forestry, Public Works, Utilities, Green Building, and Planning staff are still analyzing the updated design.

Approved FIM 1 Tree Removal and Relocation, March 17, 2011:



Off-Site Santa Clara County Components

At this time, Building, Zero Waste, Utilities, and Planning staff are also analyzing the extension of a new underground tunnel and a new transformer and other key utilities onto land in Santa Clara County.

SUMC Design Guidelines

The previously approved SoM component addressed the SUMC Design Guidelines. At this time, Transportation, Urban Forestry, Building, and Planning staff are currently analyzing how the updated Biomedical Innovations Building design responds to the relevant SUMC Design Guidelines, including Gateways and Pathways; Visual Hierarchy; Density, Pattern and Context; Massing & Building Composition; Material Palette; and Entry Expression.

Gateways and Pathways

The design of the "gateway" near Pasteur Drive between the new hospital (SCH) and the interior SoM FIM plaza along the Promenade was a key concern for the Architectural Review Board and City Council, as mentioned in the conditions of approval for FIM 1. The "gateway" pertained to the entrance transition onto the SoM campus from other portions of the SUMC project sites and would be created through building form, massing and architectural details,

paving and other hardscape gestures, and organic materials, such as tree placement and landscaping design. Transportation and Planning staff are still analyzing the updated design.
Pathways in the project vicinity include Governor's Avenue, the Promenade, Discovery Walk, Ortega Walk, Pasteur/Roth, Research Way, and Academic Walk. The design guidelines outline how the pathways should be designed. For example, Research Way would serve as a secondary route that will link FIM1, FIM2 and FIM3 with the other School of Medicine Buildings as well as the Chemistry and Biology buildings to the west. The character of this path will be more intimate than the grander scale of the Academic Walk and will include a series of smaller scaled 'outdoor rooms' that serve as additional collaborative and gathering spaces adjacent to the proposed research facilities. Transportation and Planning staff are still analyzing the updated design.

Visual Hierarchy

The design guidelines outline a visual hierarchy for the Pasteur Mall District between the new hospital (SCH) and the SoM buildings with Pasteur Mall at its center. The stepped massing of SCH allows for a visual relationship across the mall to the SoM buildings to allow for distinct but also complimentary identities. According to the applicant, the updated BMI building was designed in part to further develop and refine the visual relationship with the SCH. The design guidelines also outline a visual hierarchy for the SoM District itself. The three new buildings are to form a clear and porous boundary to the SoM and reinforce the SoM vernacular which consists of exposed steel, and generous expanses of glazed wall areas framed with limestone-colored walls. The positioning of the three new buildings would extend the developing grid of axial open spaces with the SoM and create a gateway to facilitate cross-district population relating to the translational medicine nature of their programming. Planning staff are still analyzing the updated design.

Density, Pattern and Context

The design guidelines outline that the character of the SoM project should be built upon a rectangular grid of avenues and walks running east-west. As mentioned previously, the updated BMI building would be the first of three buildings to be constructed as part of the SoM project component of the overall SUMC project. It is currently unknown how the change in design and increase in gross floor area for the BMI building would translate into the design of the second and third buildings. It is still generally assumed that the proposed buildings would still be long linear buildings that engage the grid, would still use staggered footprints to break down the length of the facades, and would still provide courtyards fronting the district's axial walks. Previously, the density standards for the FIM buildings were as follows:

- Max allowable heights: 85' for FIM1, and 60' for FIM 2 and 3
- Alternate building and open space with rational density pattern
- Enforce semi-urban qualities of the SoM campus
- Reinforce FIM's role in defining edge of SoM
- Structure major and minor common open spaces
- Strengthen connectors to SUMC.

Planning and Urban Forestry staff are still analyzing the updated design.

Massing and Building Composition

The updated BMI building has increased gross floor area and has shifted massing, footprint, and setbacks from adjacent buildings. It also has increased height when compared with the former FIM 1 building. Furthermore, the rooftop mechanical screen is no longer setback as much from the cornice as it was in the previous FIM 1 building. The design guidelines outline that massing technique of staggering should be used for SoM to break down the length of their facades, and provide more intimately scaled open space for entry expression. The massing technique of cantilevering portions of the building should also be used to further define areas of the façade to express the building's internal organization, lend human scale, and create protected areas around the building where it fronts exterior open space. The design guidelines also highlight the use of sculptural canopies to further develop main building entries and the use of mechanical screening as another layer in the massing of each building to be set back from the cornice at the roof. Relating the height and distance between structures was an important consideration in the previous ARB review toward understanding the scale of the building and open spaces. Building and Planning staff are still analyzing the updated design.

Entry Expression at the Pedestrian Level and Site Circulation

The design of the building entrances was a key concern for the Architectural Review Board and City Council, as mentioned in the conditions of approval for FIM 1. The design guidelines prioritize the combined use of entry canopies and the recessed volume approach to signify entries. The updated BMI building has shifted the number and location of building entrances, interior floorplans at entrances, and exterior pedestrian circulation. The visitor entrance is at the southern side of the building off of the pedestrian-oriented Promenade. The northern entrance with its bicycle racks is now designed primarily for employees. There are changes in the locations of plazas and sidewalks. Transportation and Planning staff are still analyzing the updated design.

Material Palette

The updated BMI building material palette is shown on Page 20 of the project plans and the applicant will bring additional color/material samples to the December 15, 2016 ARB meeting. The design guidelines emphasize differentiated base and body treatments, modulation of the grouped openings and glassed walled areas, and the use of the material palette to further the massing and building composition goals to express the building's internal organization, lend human scale, and create protected areas around the building where it fronts exterior open space. Planning and Building staff are still analyzing the updated material palette.

Environmental Review

An Environmental Impact Report (EIR) and a Mitigation Monitoring and Reporting program (MMRP) was previously certified by City Council for the Stanford University Medical Center (SUMC) Facilities Renewal and Replacement project pursuant to the California Environmental Quality Act (CEQA). The Draft and Final Environmental Impact Report can be found on the City's website (http://www.cityofpaloalto.org/gov/topics/projects/landuse/sumc/default.asp).

As mentioned above, staff is still evaluating the consistency of the proposed project with previous approvals and CEQA analysis in order to determine if any further review of the project under CEQA is necessary.

Public Notification, Outreach & Comments

The Palo Alto Municipal Code requires notice of this public hearing be published in a local paper and mailed to owners and occupants of property within 600 feet of the subject property at least ten days in advance. Notice of a public hearing for this project was published in the *Palo Alto Weekly* on December 2, 2016, which is 13 days in advance of the meeting. Postcard mailing occurred on December 5, 2016, which is 10 days in advance of the meeting.

Public Comments

As of the writing of this report, no project-related, public comments were received.

Alternative Actions

In addition to the recommended action, the Architectural Review Board may:

1. Approve the project with findings or conditions; or
2. Recommend project denial based on revised findings.

Report Author & Contact Information
Rebecca Atkinson, Planner
(650) 329-2596
Rebecca.Atkinson@CityofPaloAlto.org

ARB[2] Liaison & Contact Information
Jodie Gerhardt, AICP, Planning Manager
(650) 329-2575
Jodie.Gerhardt@CityofPaloAlto.org

Attachments:

- Attachment A: Project Location (PDF)
- Attachment B: Applicant's Project Description (DOCX)
- Attachment C: March 24, 2011 ARB Staff Report with Attachments (PDF)
- Attachment D: Zoning Comparison Table (DOCX)
- Attachment E: ARB Findings (DOCX)
- Attachment F: Approved Project Plans - School of Medicine Foundations in Medicine Master Plan March 17 2011 (DOCX)
- Attachment G: Proposed Project Plans - School of Medicine Biomedical Innovations Building December 15 2016 (DOCX)

[2] Emails may be sent directly to the ARB using the following address: arb@cityofpaloalto.org

ATTACHMENT C
ZONING COMPARISON TABLE
240 Pasteur Drive/16PLN-00362

COMPARISON WITH CHAPTER 18.36 (HD DISTRICT)			
Regulation	**Required**	**Approved**	**Proposed**
Minimum Site Area	No standards	±11.08 acres	±11.08 acres
Minimum Site Width	No standards	±415 feet at Pasteur Drive	±415 feet at Pasteur Drive
Minimum Site Depth	No standards	±220-feet	±213-feet 6-inches
Minimum Street Setbacks	10 ft[(1)]	±55 feet from Pasteur Drive	±56-feet 6-inches from Pasteur Drive
Floor Area Ratio (Entire SUMC Site)	1.5	1.46	1.46
Floor area **Entire SUMC site** **FIM1**	 2.6 million sf No regulation	 2.6 million sf 168,000 gsf	 To be determined as the SUMC project is implemented 202,450 square feet
Maximum Site Coverage **Entire SUMC site** **FIM1**	 40%[(2)(4)] 18.04.030(a)(86)	 33% 40,689 sf	 To be determined as the SUMC project is implemented 42,597 sf
Maximum Height (ft)	130 ft[(5)] 18.04.030(a)(67); 18.40.090	±68-feet to roof; ±80-feet to top of mechanical	±72-feet 6.5-inches to roof; ±83-feet to top of mechanical screen; ±91-feet 11-inches to the top of the exhaust stacks; Separately, SUMC Design Guidelines note that the maximum allowable heights are 66'-88' for FIM1 and 50'-60' for FIM2 and FIM3
Recycling Storage	Required as part of Architectural Review	Unknown	Staging within lower level and removal via tunnel to Central Loading Dock
Employee Shower Facilities	50,000 sf and up = 4 showers	Unknown	4 provided
Parking and Loading	Performance-based	Provided at SHC	Provided at SHC

Tree Protection	Group 1 Trees: 317, 318, 319, 320, 322, 323*, 324* (* To be relocated) Group 2 Trees: 326, 327, 328	Approved tree retention, removal and relocation plan	Tree retention, removal and relocation is consistent with prior approval and analysis
Signs	PAMC 16.20, with HD exceptions	To standards	To standards

(1) Measured from the right-of-way line of any public street to the base of the buildings and not including any awnings or other projections. This setback requirement does not apply to below-grade parking facilities or portions of buildings that bridge a street. This setback requirement also does not apply to any portion of a lot or site that does not abut a public street.
(2) Site coverage is calculated based upon the total contiguous area within this zone (Main SUMC site or the Stanford Hoover Pavilion site), rather than on a parcel-by-parcel basis.
(3) FAR is calculated based up on the total contiguous area within this zone (Main SUMC site or the Stanford Hoover Pavilion site), rather than on a parcel-by-parcel basis.
(4) The maximum site coverage for the Stanford Hoover Pavilion site shall be 30 percent.
(5) The maximum height for new construction at the Stanford Hoover Pavilion site shall be 60 ft.
(6) The maximum floor area ratio for the Stanford Hoover Pavilion site shall be 0.5 to 1.
(7) The regulations referenced in this table apply except as revised in this chapter.

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT
MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
LAND USE				
IMPACT BEING ADDRESSED: Without mitigation measures to ensure consistency with the Comprehensive Plan's policies adopted for the purpose of avoiding or mitigating an environmental effect, the SUMC Project could conflict with Comprehensive Plan policies that avoid or reduce impacts related to visual quality, cultural resources, pedestrian circulation, urban forest resources, groundwater and runoff pollution, air quality degradation, and noise incompatibility. (LU-1)				
See Mitigation Measures VQ-2.1, TR-6.1, AQ-1.1 through AQ-1.2, NO-1.1, NO-4.1, CR-1.1 through CR-1.5, BR-4.1 through BR-4.5, and HW-3.1.				
IMPACT BEING ADDRESSED: Because the SUMC Project would intensify the planned uses within the SUMC Sites, the SUMC Project would have a significant impact pertaining to on-site character and views. (LU-5)				
See Mitigation Measure VQ-2.1.				
VISUAL QUALITY				
IMPACT BEING ADDRESSED: The SUMC Project would substantially degrade the existing visual character and quality of the SUMC Sites during construction. (VQ-1)				
VQ-1.1 Implement Construction Visual Improvements Plan. The SUMC Project sponsors shall develop and implement a Construction Visual Improvements Plan that would make visual improvements to construction zones within a given construction phase and between phases if the zone is not scheduled for construction activity or would remain unused for a period greater than six months. Construction zones subject to this mitigation measure shall be defined by the Planning Director, and shall consider the size of the area, the nature and timing of the construction activity, and the proximity or visibility of the area to public vantage points or residential uses. The Construction Visual Improvements Plan shall be implemented by the project contractor(s) and must be approved by the Planning Director. The intent of the plan is to aesthetically improve portions of the project site that would remain unimproved for an extended period and screen the construction zone from view by passersby along the public streets and sidewalks. Possible improvements in the plan include, but are not limited to, the following: a. The SUMC Project sponsors shall conceal staging areas with fencing material to be approved by the Planning Director prior to commencement of use of	Review and approve Construction Visual Improvements Plans; compliance monitoring	City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
the staging area for construction equipment and vehicles. b. The SUMC Project sponsors shall frequently remove construction debris and refuse from the SUMC Sites. c. The SUMC Project sponsors shall install all landscaping as early as feasible to decrease visual impacts of construction. Existing landscaping within the SUMC Sites that would not be removed by the construction shall be maintained.				**FIM 2** _____ Signature Date **FIM 3** _____ Signature Date
IMPACT BEING ADDRESSED: The SUMC Project would have a significant impact pertaining to degradation of the existing visual character or quality of the SUMC Sites and their surroundings. (VQ-2)				
VQ-2.1 Adhere to City's Architectural Review Process and Recommendations. The SUMC Project sponsors shall submit final building and site plans to the ARB prior to issuance of any development permits. Architectural Review shall assess the appropriateness of proposed demolitions, proposed building heights and massing, siting of buildings and structures, architecture and façade treatments, landscaping, circulation plans, and parking. The ARB may recommend alterations to any of the above project features, or the ARB may suggest new features, such as new landscaping or public art, to improve the proposed SUMC Project design. Any conditions required by the City Council as a result of the Architectural Review process with respect to the design of the SUMC Project shall be implemented by the SUMC Project sponsors.	Undergo Architectural Review; verify building permit plan compliance	City of Palo Alto City Council or City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT
MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
				FIM 2 _____ Signature Date **FIM 3** _____ Signature Date
IMPACT BEING ADDRESSED: The SUMC Project would result in significant impacts on views. (VQ-3)				
See Mitigation Measure VQ-2.1.				
IMPACT BEING ADDRESSED: The SUMC Project could increase light and glare nuisance from exterior lighting, resulting in a significant impact. (VQ-5)				
See Mitigation Measure VQ-2.1.				
TRANSPORTATION				
IMPACT BEING ADDRESSED: Construction activity associated with the SUMC Project could result in significant traffic impacts. (TR-1)				
TR-1.1 Provide Off-Street Parking for Construction Related Vehicles. The SUMC Project sponsors shall be required to provide adequate off-street parking for all construction-related vehicles throughout the construction period. If adequate parking cannot be provided on the construction sites, a remote parking area shall be designated, and a shuttle bus shall be operated to transfer construction workers to the job site.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				FIM 1 _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date
TR-1.2 Maintain Pedestrian Access. The SUMC Project sponsors shall be prohibited from substantially limiting pedestrian access while constructing the SUMC Project, without prior approval from the City of Palo Alto Department of Public Works. Such approval shall require submittal and approval of specific construction management plans to mitigate the specific impacts to a less-than-significant levels. Pedestrian access-limiting actions would include, but not be limited to, sidewalk closures, bridge closures, crosswalk closures or pedestrian re-routing at intersections, placement of construction-related material within pedestrian pathways or sidewalks, and other actions which may affect the mobility or safety of pedestrians during the construction period. If sidewalks are maintained along the construction site frontage, covered walkways shall be provided.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2**

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Signature Date **FIM 3** Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
TR-1.3 Maintain Bicycle Access. The SUMC Project sponsors shall be prohibited from limiting bicycle access while constructing the SUMC Project without prior approval from the City of Palo Alto Department of Public Works. Such approval shall require submittal and approval of specific construction management plans that warn cyclists prior to reaching the impacted bicycle lanes and provide alternative routing around the construction sites to mitigate the specific impacts to a less-than-significant level. Bicycle access-limiting actions would include, but not be limited to, bicycle lane closures or narrowing, closing or narrowing of streets that are designated bicycle routes, bridge closures, the placement of construction-related materials within designated bicycle lanes or along bicycle routes, and other actions which may affect the mobility or safety of bicyclists during the construction period.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date
TR-1.4 Restrict Construction Hours. The SUMC Project sponsors shall be required to prohibit or limit the number of construction material deliveries from 7:00 a.m. to 9:00 a.m., and from 4:00 p.m. to 6:00 p.m. on weekdays. The SUMC Project sponsors shall be required	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8;	City of Palo Alto Planning and Community Environment, Public Works	Prior to issuance of building permits for each building; compliance monitoring during	**SHC Hospital** _____ Signature Date **SHC Clinics**

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
to li mit the nu mber of constru ction em ployees b ased upon an a pproved c onstruction m anagement pl an from arriving or departing the site from the hours of 4:30 p.m. to 6:00 p.m. Alth ough not needed to reduce the impact to a less-th an-significant lev el, th e SUMC Proj ect sponsors also sh all li mit t he number of con struction employees fr om arri ving at the si te fr om 7:00 a.m . t o 9:00 a.m ., cont ingent u pon t he C ity's gr anting of an exception to its co nstruction hours under its no ise ordinance t o allow c onstruction t o c ommence at 7:00 a.m.	compliance monitoring	Department con	struction	Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date
TR-1.5 Restrict Construction Truck Routes. The SUMC Project sponsors shall be required to deliver and remove all construction-related equipment and materials on truck routes designated by the cities of Palo Alto, East Palo Alto and Menlo Park. Heavy construction vehicles shall be prohibited from accessing the site from other routes. Figure 3.4-6 and 3.4-7 of the EIR illustrates the Stanford Area Truck Routes which must be used by all trucks.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics**

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date
TR-1.6 Protect Public Roadways During Construction. The SUMC Project sponsors shall be required to repair any structural damage to public roadways, returning any damaged sections to original structural condition. The SUMC Project sponsors shall survey the condition of the public roadways along truck routes providing access to the proposed project site before construction, and shall again survey after construction is complete. A before-and-after survey report shall be completed and submitted to the City of Palo Alto Public Works Department for review, indicating the location and extent of any damage.	Review before and after survey reports to determine the repair to public roadways	City of Palo Alto Public Works Department	Before construction of any portion of the SUMC projects and after SUMC Project construction is completed	**"Before" Survey Report** Signature Date **"After" Survey Report** Signature Date **Road Repair Completed, if necessary** Signature Date
TR-1.7 Maintain Public Transit Access and Routes. The SU MC Pr oject sp onsors sh all b e prohibited from limiting access to public tran sit, a nd from lim iting	Verify that information is contained in construction impact	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building;	**SHC Hospital** Signature Date

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
movement o f p ublic tran sit v ehicles, with out prio r approval from the Santa Clara C ounty Valley Transportation A uthority (VTA) or other app ropriate jurisdiction. Such approv al sh all requ ire submittal an d approval of specific measures to reduce impacts to a less-than-significant lev el. Po tential actio ns wh ich wo uld impact access to tra nsit includ e, but are not lim ited to, relocating or re moving bus s tops, lim iting access to bus stops or t ransfer facilities, or o therwise restricting o r constraining public transit operations.	mitigation plan pursuant to TR-1.8; compliance monitoring		compliance monitoring during construction	**SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
TR-1.8 Prepare and Implement Construction Impact Mitigation Plan. In lieu of the above mitigation measures, the SUMC Project sponsors shall submit a detailed construction impact mitigation plan to the City of Palo Alto for approval by the Director of Public Works prior to commencing any construction activities with potential transportation impacts. This plan shall address in detail the activities to be carried out in each construction phase, the potential transportation impacts of each activity, and an acceptable method of reducing or eliminating significant transportation impacts. Details such as the routing and scheduling of materials deliveries, construction employee arrival and departure schedules, employee parking locations, and emergency vehicle access shall be described and approved. Prior to its approval of the construction impact mitigation plan, the City of Palo Alto shall provide a copy of the construction impact plan to the City of Menlo Park for review and comment.	Review and approve construction impact mitigation plans; compliance monitoring; transmit construction impact mitigation plans to the City of Menlo Park and receive comment	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring throughout term of the construction impact mitigation plan	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date
TR-1.9 Conduct Additional Measures During Special Events. During major athletic events or other special events which attract a substantial number of visitors to the campus, the SUMC Project sponsors shall implement	Review and approve SUMC Sponsor-prepared plan(s) to minimize traffic effects	City of Palo Alto Planning and Community Environment	As necessary during construction	**Welch Road Improvements** Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
a mechanism to prevent roadway construction activities from reducing roadway capacity along those roadways that would be affected by the SUMC Project and that would provide access to the athletic or other special events. This measure may require a special supplemental permit to be approved by either Santa Clara County or the City of Palo Alto prior to hosting such events during significant construction phases.	in advance of major events near the SUMC during construction			
IMPACT BEING ADDRESSED: Implementation of the SUMC Project would result in significant impacts to intersections during Peak Hour conditions. (TR-2)				
TR-2.1 Install Traffic-Adaptive Signal Technology. The SUMC Project sponsors shall contribute to the Palo Alto Citywide Traffic Impact Fee program, for the installation of traffic-adaptive signals. In Menlo Park, the SUMC Project sponsors shall contribute their fair share amount, which shall be tied to the amount of traffic added to analyzed intersections by the SUMC Project. The SUMC Project sponsors' contributions shall apply towards the installation of traffic-adaptive signals as listed below. • Sand Hill Road (Oak Creek to Shopping Center) - 3 signals • Arboretum Road (Shopping Center to Palm Drive) - 3 signals • Embarcadero Road (Bryant to Saint Francis) - 7 signals • University Avenue (Palm to Lincoln) - 13 signals • Lytton Avenue (Alma to Middlefield) - 10 signals • Hamilton Avenue (Alma to Middlefield) - 10 signals • Middlefield Road (San Antonio to Homer) - 9 signals • Charleston Road (Alma to Middlefield) - 2 signals	Verify payment of Citywide Traffic Impact Fee and fair share contribution towards traffic-adaptive signals in Palo Alto and Menlo Park.	City of Palo Alto Department of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
• El Camino Real (northern city limits of Palo Alto to southern city li mits o f Palo Alto) – signals wo uld require approval of Caltrans In addition, the SUMC Project sponsors shall p ay a fair share contribution towards installation of traffic-adaptive signals at the below significantly-impacted intersections in Menlo Park. T hese intersections are among those at which Menlo Park anticipates installing traffic-adaptive signals: • Middlefield Road/Willow Road (intersection #18) • Middlefield Road/Ravenswood Ave nue (intersection #46)				
TR-2.2 Fund Additional Bicycle and Pedestrian Undercrossings. The SUMC Project sponsors shall contribute their fair share to the cost of construction of the Everett Avenue undercrossing of the Caltrain tracks in Palo Alto and the Middle Avenue undercrossing in Menlo Park. In Palo Alto, there is a Citywide Traffic Impact Fee program that the SUMC Project sponsors shall contribute to. In Menlo Park, the fair share contribution shall be tied to the amount of traffic added to analyzed intersections by the SUMC Project. The construction of the Everett Avenue and Middle Avenue undercrossings would reduce traffic volumes on nearby streets, such as Ravenswood Avenue and University Avenue.	Verify payment of Citywide Traffic Impact Fee and fair share contribution towards bicycle and pedestrian undercrossings in Palo Alto and Menlo Park.	City of Palo Alto Department of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
TR-2.3 Enhance Stanford University Transportation Demand Management (TDM) Program. The SUMC Project sponsors shall enhance the currently-implemented TDM program in order to achieve 35.1 percent usage of alternative transportation modes (i.e., carpool, vanpool, bus, Caltrain, bicycle, and walk) by Hospital employees. The initial enhancements to the SUMC TDM program shall include the following: • Commencing on September 1, 2015, the Hospitals shall purchase annual Caltrain GO Passes (free train passes) for all existing and new Hospital employees who work more than 20 hours per week, at a cost of up to One Million Eight Hundred Thousand Dollars ($1,800,000) per year, which amount shall be adjusted annually to reflect any change in the San Francisco Bay Area Consumer Price Index (the "GO Pass Amount"). The Hospitals' obligation to provide GO Passes shall continue for fifty-one (51) years, or until such earlier date as: (a) Caltrain discontinues the GO Pass program, or a substantially similar program; (b) Caltrain increases the cost of GO Passes, or a substantially similar program, such that the Hospitals' annual costs would exceed the GO Pass Amount; or (c) Caltrain service is reduced by such an extent that the Hospitals and the City mutually determine purchase of annual GO Passes, or a substantially similar program, would no longer be effective in substantially reducing Hospital employee peak period trips in order to achieve the Alternative Mode targets in Table 3.4-19A in Section 3 in the Final EIR. If the cost of obtaining GO Passes exceeds the GO Pass Amount, the Hospitals shall have the option to elect either to purchase the GO Passes at the then applicable price, or to terminate the obligation to provide GO Passes, or a substantially	Review TDM reports to verify that enhancements of TDM program have been implemented and determine whether interim mode split targets have been achieved; transmit TDM reports to City of Menlo Park for their review City and SUMC Project sponsors will meet annually to discuss effectiveness of enhanced TDM program and to identify potential improvements. SUMC Project sponsors may modify enhanced TDM program as needed to improve its effectiveness. Verify lease of 75 parking spaces at Ardenwood Park and Ride lot, or an equivalent location, at a cost not to exceed $45,000 per year. For U-Line load factors, verify Initial	City of Palo Alto Department of Planning and Community Environment	Baseline TDM report within six months of SUMC Project approval Annual TDM reports submitted each Spring	**Baseline TDM Report** Signature Date **Spring 2013** Signature Date **Spring 2014** Signature Date **Spring 2015** Signature Date **Spring 2016** Signature Date **Spring 2017** Signature Date **Spring 2018** Signature Date **Spring 2019** Signature Date **Spring 2020** Signature Date **Spring 2021**

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
similar program. If the Hospitals' obligation to provide GO Passes, or a substantially similar program, terminates for any of the reasons specified in this measure, the Hospitals shall contribute the GO Pass Amount to one or more substitute programs to encourage use of transit by Hospital employees or otherwise reduce peak period traffic trips in the intersections impacted by the Project as identified in the Project EIR, including but not limited to regional transportations systems or solutions. The substitute program or programs shall be mutually agreed upon by the SUMC Parties and the City's Director of Planning and Community Environment. • Use all reasonable efforts to arrange with AC Transit to lease 75 spaces at the Ardenwood Park & Ride Lot, or an equivalent facility, to serve SUMC employees who commute from the East Bay. • Expand the Marguerite shuttle bus service between the SUMC and PAITS as needed to accommodate increased ridership by Hospital employees. • Use all reasonable efforts to assure that the controlling transit agency maintains load factors less than 1.00 on the U-Line. • Maintain a load factor less than or equal to 1.25 on the Marguerite shuttle. • Expand and improve the bicycle and pedestrian networks as specified by Project site plans. • Provide a full-time on-site TDM coordinator by 2015 for the hospital components. The coordinator would be responsible for organizing and disseminating TDM information primarily to hospital employees and also to hospital patients. A central location would be made available to provide information on alternative travel modes. Also, the	Payment offer to AC transit ($250,000) and then subsequent annual payment offers up to $50,000 total.			Signature Date **Spring 2022** Signature Date **Spring 2023** Signature Date **Spring 2024** Signature Date **Spring 2025** Signature Date **Spring 2062** Signature Date

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
SUMC or Hospitals' website would contain information on TDM programs. • Provide a guaranteed ride home program for all employees who use transit and other transport alternatives like carpool and vanpool. The guarantee ride home shall allow employees with dependent children the ability to use alternative modes to travel to and from work but still be able to travel home mid-day in case of an emergency. • Provide employees with shower facilities within the SUMC Sites to encourage bicycling to work. The SUMC Project sponsors shall also provide bicycle storage facilities on the SUMC Sites that would be conveniently located near the employee showers. • Establish, in conjunction with the GO Pass implementation, a "Zip Car" (or other similar car-sharing program) with Zip Cars available at the medical complex. • Perform annual TDM monitoring from the date of initial project approval through the life of the project (51 years after project approval) and submit the report to the City of Palo Alto. This report also shall be submitted to the City of Menlo Park for its review. • Within six (6) months of project approval, and annually for a period of fifty-one (51) years from initial project approval, the SUMC Project sponsors shall submit to the City's Director of Planning and Community Environment, a Hospital TDM Program Report that shows the current number of employees employed over 20 hours per week;, the number of employees using alternative modes shared as documented by a study or survey to be completed by the Hospitals using a method mutually agreeable to the City and Hospitals; and the efforts used by the				

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
Hospitals to attempt to achieve the Alternative Mode targets. These enhancements may not immediately change the mode split for Hospital employees. Further, because transit use by employees of the Hospitals is voluntary, and may be influenced by a number of factors outside the reasonable control of the Hospitals, such as gasoline prices, costs and availability of alternative transit, housing costs and availability, and personal preferences of employees, the Hospitals cannot guarantee the results of their TDM programs. The interim targets in Table 3.4-19A in Section 3 in the Final EIR shall be used to measure the progress toward meeting the desired mode split by 2025. These interim targets assume that in the early phases of implementation, there may be larger shifts to alternative modes than the shifts that may occur in later phases of the TDM program enhancement. For purposes of calculating alternative mode share, any mode that does not constitute driving in a single-occupant vehicle to and from the work site shall be considered an "Alternative Mode," including working remotely from home. For each of the interim target years, following submission of the Hospitals TDM Annual Report, the City shall determine if the interim year target has been met. If the Hospitals have not met the interim target, the Hospitals and the City shall meet to review the TDM Program and to identify possible additional TDM Program enhancements that the Hospitals should consider incorporating into their TDM Program in order to increase the Program's effectiveness. If the Hospitals do not meet the applicable interim targets				

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
for any two consecutive years prior to 2025, the Hospitals shall provide alternative transportation funding to the City of Palo Alto in annual payments in the amount of $175,000 per year until the earlier of the year 2025 or the year the Hospitals achieve the applicable interim mode split target, subject to a maximum of five annual payments. The alternative transportation funding shall be used by the City of Palo Alto for local projects and programs that encourage citywide use of alternative transportation mode uses or otherwise reduce peak period traffic trips in the intersections impacted by the Project as identified in the Project EIR, including but not limited to regional transportation systems and solutions. The City of Palo Alto should consider transportation systems and solutions that also help to reduce traffic in the City of Menlo Park. If by 2025, the Hospitals have not demonstrated substantial achievement of the 35.1 percent target modal split for alternative transportation modes, the following measure shall be required: • The Hospitals shall make a lump sum payment of $4.0 million to the City of Palo Alto for local projects and programs that encourage and improve citywide use of alternative transportation mode uses or otherwise reduce peak period traffic trips in the intersections impacted by the Project as identified in the Project EIR, including but not limited to regional transportation systems and solutions. The City of Palo Alto shall identify capital projects and program enhancements for which the funds may be applied. Sample projects may include contributions towards regional transportation projects of interest to the City of Palo Alto and that are identified within the Valley Transportation Authority – Valley Transportation Plan or other local planning				

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
documents. The City of Palo Alto should consider transportation systems and solutions that also help to reduce traffic in the City of Menlo Park. If required, said $4.0 million payment shall constitute funds to be used by the City to offset trips by Hospital employees through citywide trip reduction. The $4.0 million payment shall not relieve the Hospitals of any of their obligations under this measure, including but not limited to their obligations to continue to attempt to achieve the 35.1 percent target mode split through implementation of the GO Pass or substantially similar program, or a substitute program mutually agreed upon by the Hospitals and the City's Director of Planning and Community Environment, which shall continue for 51 years from the date of Project approval. Further, the Hospitals shall continue to implement an enhanced TDM program, monitor modal splits by Hospital employees, and strive to maximize use of alternative commute modes by Hospital employees. In addition, the Hospitals shall continue to meet with the City on a regular basis to identify potential improvements to the enhanced TDM program.				
TR-2.4 *Fund or Implement those Intersection Improvements that Have Been Determined to be Feasible.* The SUMC Project sponsors shall implement the following measures: • At the intersection of Arboretum Road/Galvez Street, the SUMC Project sponsors shall install a traffic signal. • At the intersection of Bayfront Expressway/Willow Road, the SUMC Project sponsors shall pay a fair share towards providing one more right-turn lane for eastbound Willow Road.	Verify installation of Arboretum/Galvez traffic signal Verify payment of fair share contribution for both Bayfront intersections	City of Palo Alto Director of Planning and Community Environment	Prior to Occupancy Permit for SHC Hospital	**Arboretum/Galvez traffic signal** _____ Signature Date **Fair Share Payment for both Bayfront intersections** _____ Signature Date

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• At the intersection of Bayfront Expressway/ University Avenue, the SUMC Project sponsors shall pay a fair share towards widening southbound Bayfront Expressway to include an additional through lane and re-stripe the exclusive right turn lane to a shared through right turn lane. As a result, two additional receiving lanes in the southbound direction on Bayfront Expressway would be needed.				
IMPACT BEING ADDRESSED: The SUMC Project would result in adverse traffic impacts to roadway segments in the City of Menlo Park. (TR-3)				
See Mitigation Measures TR-2.2, TR-2.3, TR-7.2.				
IMPACT BEING ADDRESSED: The SUMC Project could result in significant traffic impact to the local circulation network in the immediate vicinity of the SUMC Sites. (TR-4)				
TR-4.2 Fund Signing and Striping Plan and Signal Optimization. In addition to paying for the construction of the extension of Durand Way from Sand Hill Road to Welch Road, the SUMC Project sponsors shall also pay for the following improvements to ensure that queues from the Durand Way/Sand Hill Road intersection do not spillback onto the Durand Way/Welch Road intersection. • A signing and striping plan for the Durand Way extension, which would maximize the storage capacity by creating a four-lane roadway with a left and through/right at Sand Hill Road and a right and through/left at Welch Road; • The installation and optimization of the two signals at the intersections of Durand Way/Sand Hill Road and Durand Way/Welch Road.	Review signing and striping plan for Durand Way extension, and signal optimization plan for Durand Way/ Sand Hill Road and Durand Way/ Welch Road	City of Palo Alto Department of Planning and Community Environment	Prior to issuance of building permit for Durand Way	**Durand Way Improvements** _____ Signature Date
IMPACT BEING ADDRESSED: The SUMC Project could impede the development or function of planned bicycle or pedestrian facilities, and result in a significant impact. (TR-6)				
TR-6.1 Bicycle and Pedestrian Infrastructure Improvements. The SUMC Project sponsors shall fund the expansion and improvement of the bicycle and pedestrian network in the immediate vicinity of the	Verify payment for connection from planned Everett bike/ped undercrossing	City of Palo Alto Planning and Community Environment	Payments received prior to Initial Date (45 days from Notice of Determination)	**Funding received for improvements** _____ Signature Date

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SUMC Project. The intent of these improvements is to: • reduce au to related traffic b y prov iding th e infrastructure for alternative travel modes; • improve t he bi cycle an d pedestrian l inkages between the SUMC Projec t and Downt own Pal o Alto, a nd between t he SUMC Project and t he surrounding residential neighborhoods; and • mitigate the safety hazards to pede strians and cyclists th at will resu lt from th e SUMC Proj ect related increase in vehicular traffic and congestion. The specific improvements to be funded by the SUMC Project sponsors shall include the following: • Create a bicycle and pe destrian connection between the Stanford Shopping Ce nter and SUM C. The connection shall p rovide an altern ative route to Quarry Ro ad, wh ich is auto do minated. Th is connection shall extend between Vineyard Lane and Welch Road. Pedestrian traffic signals and crosswalks shall be placed at the cros sing of Vineyard Lan e and Welch R oad. The cr osswalk shall be enhanced either by striping or by the use of contrasting paving. • Provide a connection from the planne d Everett Avenue bicycle and pedestrian undercrossing to the El Ca mino Re al/Quarry Ro ad in tersection. On ce the tunnel is co mpleted, this linkage shall provide a direct connection between t he SUMC Project and Downtown North. • Incorporate in to th e Quar ry Road corr idor, f rom El Camino R eal t o Welch R oad, i mprovements t o a nd within th e public right-of-way to en hance t he pedestrian and b icycle connecti on, i ncluding urban design elements and way fi nding, wider bicycle lanes, as necessary, on Quarry Ro ad, enhanced transit nod es for bus and /or shu ttle st ops, and pro minent b icycle	to ECR/Quarry ($2,250,000), and enhancements of Quarry Road and intersections ($400,000) Verify construction of bicycle/ped connection between Stanford Shopping Center and SUMC Verify that landscape plans contain sufficient Class I and III bicycle parking spaces and are located in a manner consistent with the City of Palo Alto Municipal Code		City constructs improvements prior to Hospital Occupancy Permit Stanford constructs bicycle/ped connection between Stanford Shopping Center and SUMC prior to LPCH Hospital Occupancy Permit. Bike parking requirements prior to issuance of issuance of building permits for each building	**Improvements completed by City** _____ Signature Date **Improvements completed by Stanford** _____ Signature Date **SHC Hospital Bike Parking** _____ Signature Date **SHC Clinics Bike Parking** _____ Signature Date **LPCH Hospital/Clinics Bike Parking** _____ Signature Date **Hoover MOB Bike Parking** _____ Signature Date **FIM 1 Bike Parking** _____ Signature Date **FIM 2 Bike Parking** _____ Signature Date **FIM 3 Bike Parking** _____ Signature

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
facilities. • Enhance all signalized intersections in the Project Vicinity, particularly along Quarry Road, Vineyard, and Welch Roads to include 12-foot pedestrian crosswalks on all legs, with textured or colored paving or diagonal or longitudinal zebra striping as determined by the City, pedestrian push buttons and countdown pedestrian signal heads, and other specific improvements that are determined as necessary during the design process, such as median refuge islands, advanced signing, flashing beacons, in-pavement lighting, etc. • Install the appropriate number of Class I and Class III bicycle parking spaces as required by the City's Zoning Ordinance for the total amount of existing and future development. The SUMC Project sponsors shall install the required number of bicycle parking spaces equally distributed throughout the SUMC Sites.				
IMPACT BEING ADDRESSED: The SUMC Project would not adversely impact either AM or PM Peak Hour bus service in Palo Alto or Caltrain service. Nonetheless, mitigation to provide enhanced bus stops and shuttle service is identified here. (TR-7)				
TR-7.1 Incorporate Enhanced Bus Stops Into Site Plans. The SUMC Project sponsors shall revise their SUMC Project site plan to incorporate two enhanced bus stops to reduce the impact to transit service caused by the SUMC Project. These enhanced bus stops shall be located at Hoover Pavilion and at SHC, and shall be on-street facilities. The enhanced bus stops shall accommodate two buses simultaneously, and shall have shelters, seating, lighting, signs, maps, bus schedules, and bicycle parking. On-street bus stops along Welch Road and Quarry Road shall also be provided, but the enhanced bus stops shall accommodate the majority of transit riders and shall be located to maximize the convenience of employees, patients, and visitors. One enhanced bus stop shall be located in the vicinity of Welch Road and Pasteur Drive to	Verify that enhanced bus stops have been included in site plans	City of Palo Alto Department of Public Works and Department of Planning and Community Environment	Prior to issuance of building permits for SHC Hospital and Hoover MOB	**SHC Hospital** _____ Signature Date **Hoover MOB** _____ Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
serve SHC. The other enhanced bus stop shall be located near the entrance to Hoover Pavilion. Both of these enhanced bus stops shall provide the focal point for transit use for the SUMC.				
TR-7.2 Provide Expanded Transit Service. The SUMC Project sponsors shall fund expansion of the Marguerite shuttle service between the SUMC and PAITS, and shall make a fair share financial contribution to the cost of expanding U-Line bus service • **Marguerite Shuttle.** The SUMC project sponsors shall fund expansion of the Marguerite shuttle service into Palo Alto between SUMC and PAITS. • **U-Line.** The SUMC project sponsors shall use reasonable efforts to assure that the controlling transit agency maintains load factors of less than 1.0 on the U-Line.	Verify expansion of Marguerite shuttle in annual TDM reports pursuant to TR-2.3 Verify Initial Payment offer to AC transit ($250,000) and then subsequent annual payment offers up to $50,000 total pursuant to TR-2.3.	City of Palo Alto Director of Planning and Community Environment	Initial Payment offer within 30 days of Hospital Occupancy Permit and then subsequent annual payments	**Initial AC Transit payment offer** _____ Signature Date **Subsequent annual payment offers** _____ Signature Date
IMPACT BEING ADDRESSED: Implementation of the SUMC Project could potentially result in inadequate emergency access due to increased congestion, a significant impact. (TR-9)				
TR-9.1 Pay Fair Share Towards OptiCom Installation. The SUMC Project sponsors shall pay their fair-share financial contribution towards the City of Palo Alto, to assist with the installation and operation of emergency vehicle traffic signal priority (OptiCom) at all significantly impacted intersections.	Verify payment of fair share towards OptiCom installation ($11,200 to City of Palo Alto and $6,400 to City of Menlo Park).	City of Palo Alto Department of Public Works	Within 30 days of Hospital Occupancy Permit	**Opticom Fair Share Payment** _____ Signature Date
IMPACT BEING ADDRESSED: The SUMC Project, in combination with concurrent construction projects in the vicinity of the SUMC Sites, could result in a significant construction-period impact. (TR-10)				
See Mitigation Measures TR-1.1 through TR-1.9.				
AIR QUALITY				
IMPACT BEING ADDRESSED: Construction activities associated with the SUMC Project could cause emissions of dust and pollutants from equipment exhaust that could contribute to existing air quality violations or expose sensitive receptors to substantial pollutant concentrations. (AQ-1)				
AQ-1.1 Implement Recommended Dust Control Measures. To reduce dust emissions during project	Verify that information is contained in	City of Palo Alto Department of	Prior to issuance of building permits for	**SHC Hospital** _____

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demolition and construction phases, the SUMC Project sponsors shall require the construction contractors to comply with the dust control strategies developed by the BAAQMD. The SUMC Project sponsors shall include in construction contracts the following requirements: a. Cover all trucks hauling soil, sand, and other loose materials including demolition debris, or require all trucks to maintain at least two feet of freeboard; b. Water all active construction areas (exposed or disturbed soil surfaces) at least twice daily; c. Use watering to control dust generation during demolition of structures or break-up of pavement; d. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved parking areas and staging areas; e. Sweep streets daily (with water sweepers) all paved access roads, parking areas and staging areas during the earthwork phases of construction; f. Sweep daily (with water sweepers) if visible soil material is carried onto adjacent public streets; g. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more); h. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.); i. Limit traffic speeds on unpaved roads to 15 mph; j. Install sandbags or other erosion control measures to prevent silt runoff to public roadways; and k. Replant vegetation in disturbed areas as quickly as possible.	construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	Public Works	each building; compliance monitoring during construction	Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date
AQ-1.2 Implement Equipment Exhaust Emission Reduction Measures. To reduce emissions from	Verify that information is contained in	City of Palo Alto Public Works	Prior to issuance of building permits for	**SHC Hospital**

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
construction equipment during project demolition and construction phases, the SUMC Project sponsors shall require the construction contractors to comply with the following emission reduction strategies to the maximum feasible extent. The SUMC Project sponsors shall include in construction contracts the following requirements: a. Where possible, electrical equipment shall be used instead of fossil-fuel powered equipment, b. The contractor shall install temporary electrical service whenever possible to avoid need for fossil-fuel powered equipment. c. Running equipment not being actively used for construction purposes for more than five minutes shall be turned off. (e.g., trucks waiting to deliver or receive soil, aggregate, or other bulk materials; however, rotating-drum concrete trucks may keep their engines running continuously as long as they are on site). d. Trucks shall be prohibited from idling while on residential streets serving the construction site (also included in Mitigation Measure NO-1.1). e. Diesel-powered construction equipment shall be Tier III or Tier IV California Air Resources Board (CARB) certified equipment to the maximum feasible extent. f. The engine size of construction equipment shall be the smallest practical to accomplish the task at hand.	construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	Department each	building; compliance monitoring during construction	Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date
IMPACT BEING ADDRESSED: Combined mobile and stationary source emissions during operation of the SUMC Project would exceed the Bay Area Air Quality Management District's significance threshold of 80 pounds/day of ROG, NOx and PM10. Therefore, air emissions would result in a substantial contribution to an existing regional air quality problem and a significant impact. (AQ-2)				
See Mitigation Measure TR-2.3.				
IMPACT BEING ADDRESSED: Construction equipment NOx emissions associated with the SUMC Project could contribute considerably to regional air quality problems. (AQ-6)				

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
See Mitigation Measures AQ-1.1 and AQ-1.2.				
IMPACT BEING ADDRESSED: SUMC Project operation could contribute considerably to a degradation of regional air quality as defined by the BAAQMD. (AQ-7)				
See Mitigation Measure TR-2.3.				
CLIMATE CHANGE				
IMPACT BEING ADDRESSED: The proposed Emissions Reduction Program would minimize greenhouse gas emission increases associated with the proposed development program. However, the proposed Emissions Reduction Program would not be sufficient to further some of the individual policies of the City's Climate Protection Plan. (CC-1)				
CC-1.1 Commission and Retro-Commission Energy Systems for New and Existing Buildings. New construction for the SUMC Project shall undergo commissioning of energy and HVAC systems within one year following building occupancy. The commissioning process shall follow the standards of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Guideline 0-2005 or the International Performance Measurement and Verification Protocol (MVP). The SUMC Project sponsors shall provide the City of Palo Alto with commissioning verification data within 12 months of OSHPD (or City) certificate of occupancy for each new SUMC Project building component (parking structures excluded). These components shall include: SHC Hospital (Phase 1), SHC Hospital (Phase 2), LPCH Hospital Expansion, Hoover Medical Office Building, School of Medicine (FIM 1, FIM 2 and FIM 3) and 429,000 square feet of clinic space for SHC. The commissioning of the new SHC and LPCH Expansion Hospitals shall be conducted as part of LEED Enhanced Commissioning in compliance with the ASHRAE Guideline 0-2005. During years two to five after completion of the entire SUMC Project, the SUMC Project sponsors shall annually provide the City of Palo Alto with an EPA Energy Star Statement of Energy Performance report for each new building component. This report shall be generated using the EPA Energy Star Portfolio Manager system. Building profiles and consumption details	Review commissioning verification data provided by the SUMC Project sponsors for each building Review EPA Energy Star Statement of Energy Performance Report	City of Palo Alto Utilities Department and Department of Planning and Community Environment	Commission verification report within 1 year of occupancy permits for each building EPA Energy Star Performance Report in years 2 through 5 after completion of entire SUMC Project	**SHC Hospital Commissioning** Signature Date **SHC Clinics Commissioning** Signature Date **LPCH Hospital/Clinics Commissioning** Signature Date **Hoover MOB Commissioning** Signature Date **FIM 1 Commissioning** Signature Date **FIM 2 Commissioning** Signature Date **FIM 3 Commissioning** Signature Date **Energy Star Performance Year 2**

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
entered in the Portfolio Manager system and a resulting energy efficiency rating is provided based on similar facilities (i.e., academic teaching facility, community hospital, free-standing surgery center, etc.) This process would ensure that new and existing energy systems would perform interactively according to construction documents, the SUMC Project design intent and the owner's operational needs.				_____ Signature Date **Energy Star Performance Year 3** _____ Signature Date **Energy Star Performance Year 4** _____ Signature Date **Energy Star Performance Year 5** _____ Signature Date
CC-1.2 Participate in a Renewable Energy Program. The SHC and LPCH Project sponsors facilities shall participate in a renewable energy program approved by the City to partially offset electricity emissions; develop new renewable generation sources in collaboration with the CPAU; incorporate a renewable energy source (such as photovoltaics) in to the SUMC Project, and /or otherwise promote expansion of the use of renewable energy by CPAU customers ("Renewable Energy Program"). The Renewable Energy Program shall be approved by the City and need not directly reduce the emissions from the SUMC Project facilities, and may be designed to promote expansion of the use of renewable energy by CPAU customers, either by providing a new source of renewable energy, educating the public about use of renewable energy, or contributing to research and development of renewable energy sources.	Review and approve SUMC Project sponsor's participation in a Renewable Energy Program	City of Palo Utilities Department and Department of Planning and Community Environment	Prior to completion of entire SUMC Project	**Participation in Renewable Energy Program** _____ Signature Date
CC-1.3 Provide Annual Greenhouse Gas Reporting. The SHC and LPCH shall perform an annual inventory of greenhouse gas emissions associated with Hospital and medical facilities on the SUMC Sites. This inventory	Review annual inventory of greenhouse gas emissions	City of Palo Utilities Department and Department of	Annually	**2012** _____ Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
shall be performed according to a common industry-standard emissions reporting protocol, such as the approaches recommended by California Air Resources Board, The Climate Action Registry, or Business Council for Sustainable Development (BCSD). This inventory shall be shared with the City of Palo Alto to facilitate the development of future collaborative Emissions Reduction Programs. Emissions associated with energy, water, solid waste, transportation, employee commute and other major sources shall be reported in this inventory.		Planning and Community Environment		**2013** Signature Date **2014** Signature Date **2015** Signature Date **2016** Signature Date **2017** Signature Date **2018** Signature Date **2019** Signature Date **2020** Signature Date **2021** Signature Date **2022**

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Signature Date **2023** Signature Date **2024** Signature Date **2025** Signature Date
CC-1.4 Prepare Waste Reduction Audit. The SUMC Project sponsors shall perform a waste reduction audit of waste management practices at the hospitals prior to construction of new facilities and after completion of the SUMC Project to determine post-project diversions.	Review waste reduction audits	City of Palo Department of Planning and Community Environment.	Initial waste reduction audit prior to construction Final waste reduction audit after completion of the entire SUMC Project.	**Initial Waste Reduction Audit** Signature Date **Final Waste Reduction Audit** Signature Date
CC-1.5 Implement Construction Period Emission Reduction Measures. Prior to the issuance of a grading permit the SUMC Project sponsors shall incorporate the following measures in to the construction phasing plan and submit to City Planning for approval. • Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/ equipment of at least 15 percent of the fleet; • Use local building materials of at least 10 percent; and • Recycle at least 50 percent of construction or demolition materials.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Public Works Department	Prior to issuance of grading permits for each building; compliance monitoring during construction	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB**

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
NOISE				
IMPACT BEING ADDRESSED: Construction of the SUMC Project would create a substantial temporary increase in ambient noise levels on the SUMC Sites compared to existing ambient noise levels. The noise increase would be a significant impact to the sensitive uses (i.e., patients) on the Main SUMC Site during construction. (NO-1)				
NO-1.1 Implement Best Management Practices to Reduce Construction Noise. The SUMC Project sponsors shall incorporate the following practices into the construction documents to be implemented by the SUMC Project contractor: a. Provide enclosures such as heavy-duty mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy operations on the site. b. Use quiet construction equipment whenever possible, particularly air compressors. c. Provide sound-control devices on equipment no less effective than those provided by the manufacturer. d. Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors. e. Prohibit unnecessary idling of internal combustion engines. f. Require applicable construction-related vehicles and equipment to comply with the City's truck route ordinance. g. Designate a noise disturbance coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.	Verify that information is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	City of Palo Alto Public Works Department	Prior to issuance of building permits for each building; compliance monitoring during construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date
• *NO-1.2:Implement Best Management Practices to*	Verify that information	City of Palo Alto	Prior to issuance of	**SHC Hospital**

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
Reduce Construction Noise The SUMC Project sponsors shall incorporate the following practices into the construction documents to be implemented by the project contractor: a. Require construction contractors to use noise-reducing pile driving techniques, including pre-drilling pile holes (if feasible, based on soils) to the maximum feasible depth, verify that manufacturer-provided intake and exhaust mufflers on pile driving equipment are present, vibrating piles into place when feasible, and installing shrouds around the pile driving hammer where feasible. • *Implement Best Management Practices to Reduce Construction Pile Driving Vibration.* The SUMC Project Sponsors shall use sonic pile drivers to reduce vibration annoyance and/or damage to on-site sensitive receptors, if feasible. • *Avoid or Repair Structural Damage to SUMC Structures.* The SUMC Project sponsors shall: a. Use sonic pile drivers, if feasible, to avoid potential vibration damage to the closest on-site SUMC structures near the SHC Hospital and garage site; or *b.* Blake-Wilbur Clinic patients and workers shall be relocated to other, more-distant buildings during periods when pile driving occurs on parts of the SHC Hospital construction site within 75 feet of the Blake-Wilbur Clinic. The structural conditions of the Blake-Wilbur Clinic shall be assessed before and after pile driving by a licensed structural engineer and any damage resulting to the Blake-Wilbur Clinic from pile driving shall be completely repaired before patients and workers are allowed to return.	is contained in construction impact mitigation plan pursuant to TR-1.8; compliance monitoring	Public Works Department	building permits for each building; compliance monitoring during construction	_____ Signature Date **SHC Clinics** _____ Signature Date
IMPACT BEING ADDRESSED: Increased traffic and helicopter noise levels due to implementation of the SUMC Project would be less than significant. However, noise from				

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
ambulances due to implementation of the SUMC Project would increase along Sand Hill Road west of El Camino Real, and would increase roadside noise levels by an amount considered unacceptable under the policies of the City Comprehensive Plan. (NO-3)				
No feasible mitigation measures.				
IMPACT BEING ADDRESSED: Operational stationary source noise generated by the SUMC Project could potentially increase ambient noise levels in the vicinity of the SUMC Sites and result in a significant impact. (NO-4)				
NO-4.1 Shield or Enclose HVAC Equipment and Emergency Generators. Noise levels from mechanical equipment shall be minimized to the degree required by the City Noise Ordinance by proper siting and selection of such equipment and through installation of sufficient acoustical shielding or noise emission controls. Noise levels for the emergency generators near Welch Road shall be reduced such that noise levels do not exceed the City's General Daytime Exception standard of 70 dBA at 25 feet. An acoustical analysis shall be prepared by a qualified professional to ensure that the new mechanical equipment is in compliance with noise standards of the Noise Ordinance.	SUMC Project sponsors to prepare acoustical analysis; City to review and verify analysis	City of Palo Department of Planning and Community Environment	Prior to issuance of building permits for each building; compliance testing post-construction	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date

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IMPACT BEING ADDRESSED: If other foreseeable construction in the immediate vicinity of the SUMC Sites would occur simultaneously with the proposed SUMC Project construction, then significant cumulative noise impacts to adjacent residential and other noise-sensitive uses could occur. The SUMC Project's contribution would likely be cumulatively considerable. (NO-5)				
See Mitigation Measure NO-1.1.				
CULTURAL RESOURCES				
IMPACT BEING ADDRESSED: The SUMC Project would have a significant impact on historical resources. (CR-1)				
CR-1.1 Manually Demolish Structures at the Hoover Pavilion Site. Where feasible, the project sponsors shall establish a perimeter of construction fencing around the Hoover Pavilion at a minimum of 25 feet to establish a protective buffer around the building. The demolition of these sheds and storage facilities shall be accomplished manually without the use of vibration causing equipment. Additional protective fencing at a height sufficient to prevent any debris from hitting the building shall also be installed between the Hoover Pavilion and demolition activities occurring within the 25 foot buffer.	Verify that construction contracts contain Hoover Pavilion protection requirements	City of Palo Alto Planning and Community Environment	Prior to issuance of building permit for Hoover Pavilion renovation	**Hoover Pavilion Renovation** _____ Signature Date
CR-1.2 Prepare HABS Documentation for the Stone Building Complex. The SUMC Project sponsors shall prepare HABS-like documentation using the National Park Services' Historic American Building Surveys Level III guidelines for each of the buildings in the Stone Building complex prior to demolition of each building that comprises this historic resource (East, West, Core, Boswell, Edwards, Lane, Alway, and Grant). HABS-like recordation shall not be required until each of the individual buildings is vacated and prepared for demolition. The documentation shall include written and photographic documentation of each of the historic structures within the Stone Building complex. The documentation shall be prepared by a qualified professional meeting the Secretary of the Interior's Professional Qualifications Standards for Architectural History or History.	Review HABS-like documentation	City of Palo Department of Planning and Community Environment	Upon vacation and prior to demolition of any portions of the Stone Building complex.	**SHC Clinics** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
The doc umentation shall be prepare d based on the National Park Services' HABS standards and include, at a minimum, the following: • Site-specific history and appropriate conte xtual information reg arding th e St one B uilding co mplex. This h istory shall fo cus on th e reasons for th e buildings' signi ficance: heart transplantation program and t he role of E.D. Stone in the design of the complex. • Accurate m apping of all b uildings th at are in cluded in th e Ston e Bu ilding co mplex, scaled to in dicate size and proportion of th e build ings to sur rounding buildings; if ex isting p lans accu rately reflect th ese relationships these may be reformatted for su bmittal per HABS guidelines for CAD submittals. • Architectural descri ptions of the m ajor exterior features and public rooms within the Stone Building complex as well as desc riptions o f t ypical pat ient, office, laboratory, and operating rooms. • Photographic d ocumentation o f th e in terior and exterior of th e Stone Building complex and Thomas Church-designed la ndscape features. Either HABS standard large format or digital photography may be used. If digital ph otography i s used, t he i nk an d paper com binations f or printing photographs m ust be in co mpliance with Nati onal Reg ister-National Historic Landmark photo expansion policy and have a perm anency rat ing o f a pproximately 115 y ears. Digital p hotographs will b e tak en as un compressed .TIF file form at. The size of eac h im age shall be 1600x1200 pixels at 30 0 ppi (p ixels p er in ch) or larger, color format, and printed in black and white. The file nam e for each e lectronic im age shall correspond wi th t he I ndex t o Ph otographs an d photograph label.				

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CR-1.3 Distribute Written and Photographic Documentation to Agencies. The written and photographic documentation of historic resources shall be disseminated on archival-quality paper to Stanford University, the Northwest Information Center, and other local repositories identified by the City of Palo Alto.	Verify distribution of written and photographic documents	City of Palo Department of Planning and Community Environment	Prior to demolition of any portion of the Stone Building complex.	**SHC Clinics** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date
CR-1.4 Prepare Permanent Interpretive Displays/Signage/Plaques. The SUMC Project sponsors shall install interpretive displays within the SUMC Sites that provide information to visitors and residents regarding the history of the Stone Building complex. These displays shall be installed in highly visible public areas such as the property's open space or in public areas on the interiors of buildings. The displays shall include historical data and photographs as well as physical remnants of architectural elements. Interpretive displays and the signage/plaques installed on the property shall be sufficiently durable to withstand typical Palo Alto weather conditions for at least five years. Displays and signage/plaques shall be lighted, installed at pedestrian-friendly locations, and be of adequate size to attract the interested pedestrian. Maintenance of displays and signage/plaques shall be included in the maintenance program on the property. Location and materials for the interpretative displays shall be subject to review by the Palo Alto Architectural Review Board and approval by the Planning Director.	Review and approve location and materials for the displays; verify installation	Review by City of Palo Alto Architectural Review Board and approval by Director of Planning and Community Environment	Prior to demolition of entire Stone Building complex; verify installation post-construction	**Demolition of entire Stone Building Complex** _____ Signature Date **Installation of Permanent Interpretive Displays** _____ Signature Date
CR-1.5 Implement Protection Documents for the Hoover Pavilion. The SUMC Project sponsors shall ensure the implementation of the Stanford Hoover Pavilion Protection Documents (Documents) prepared by	Verify that construction contracts contain Hoover Pavilion protection requirements	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits Hoover Pavilion renovation; monitor	**Hoover Pavilion Renovation** _____ Signature Date

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
ARG and dated September 21, 2009. The SUMC Project sponsors sh all co mply with th e sp ecifications for th e treatment and protection of t he H oover Pa vilion during SUMC Proj ect con struction activ ities th at co uld damage the h istoric fab ric of th e building as prov ided in th e Documents.	from ARG report dated September 21, 2009; compliance monitoring		compliance during construction	

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Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
IMPACT BEING ADDRESSED: The SUMC Project could potentially encounter archaeological resources and result in a significant impact. (CR-2)				
CR-2.1 Construction Staff Training and Consultation. Prior to any construction or earth-disturbing activities, a qualified archaeologist shall inform construction supervisors of the potential to encounter cultural resources. All construction personnel shall be instructed to be observant for prehistoric and historic-era artifacts, subsurface archaeological features or deposits, including accumulations of dark, friable soil ("midden"), stone artifacts, animal bone, and shell. In the event that any prehistoric or historic subsurface archaeological features or cultural deposits are discovered during construction-related earth-moving activities, all ground-disturbing activity within 100 feet of the resources shall be halted and the City shall be notified. The City shall consult with the Stanford University Archeologist to assess the significance of the find. If the find is determined to be an historical resource or a unique archaeological resource as defined by CEQA, then representatives of the City and the Stanford University Archaeologist shall meet to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report shall be prepared by the qualified archaeologist according to current professional standards.	SUMC Project sponsors submit report from qualified archaeologist documenting that construction supervisors were informed about potential cultural resource procedures; City to review report	City of Palo Department of Planning and Community Environment	Prior to issuance of grading permits for each building	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date **Welch Road Improvements** Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
IMPACT BEING ADDRESSED: The SUMC Project could potentially encounter human remains and result in a significant impact. (CR-3)				
CR-3.1 Conduct Protocol and Procedures for Encountering Human Remains. If human remains (including disarticulated or cremated remains) are discovered at any SUMC Project construction site during any phase of construction, all ground-disturbing activity within 100 feet of the human remains should be halted and the Stanford University Archaeologist, City of Palo Alto, and the County coroner notified immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC adhered to in the treatment and disposition of the remains. The SUMC Project sponsors shall retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the City of Palo Alto, including the excavation and removal of the human remains. If the human remains cannot be avoided, and the Most Likely Descendant requests that the human remains be removed from its location, the SUMC Project sponsors shall implement removal of the human remains by a professional archaeologist. The City of Palo Alto shall verify that the mitigation is complete before the resumption of ground-disturbing activities within 100 feet of where the remains were discovered.	SUMC Project sponsors include procedures related to possible discovery of human remains in construction contracts; City to verify	City of Palo Alto Planning and Community Environment	Prior to issuance of grading permits for each building	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date **Welch Road Improvements** Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT
MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
IMPACT BEING ADDRESSED: The SUMC Project could have a significant impact on unique paleontological resources or unique geologic resources. (CR-4)				
CR-4.1 Conduct Protocol and Procedures for Encountering Paleontological Resources. Should paleontological resources be identified during SUMC Project ground-disturbing activities, the SUMC Project sponsors shall notify the City and the Stanford University Archaeologist and cease operations in the vicinity of the potential resource until a qualified professional paleontologist can complete the following actions when appropriate: • Identify and evaluate paleontological resources by intense field survey where impacts are considered high; • Assess effects on identified resources; and • Consult with the City of Palo Alto and the Stanford University Archaeologist. Before operations in the vicinity of the potential resource resume, the SUMC Project sponsors shall comply with the paleontologist's recommendations to address any significant adverse effects where determined by the City of Palo Alto to be feasible. In considering any suggested mitigation proposed by the consulting paleontologist, the SUMC Project sponsors shall consult with the Stanford University Archaeologist and the City to determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, cost policies and land use assumptions, and other considerations. If avoidance is infeasible, other appropriate measures (e.g. data recovery) shall be instituted to avoid a significant impact. Work may proceed in other parts of the SUMC Sites while mitigation for paleontological resources is completed.	SUMC Project sponsors include procedures related to possible discovery of paleontological resources in construction contracts; City to verify	City of Palo Alto Planning and Community Environment	Prior to issuance of grading permits for each building	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date **Welch Road Improvements** Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
IMPACT BEING ADDRESSED: The SUMC Project, in combination with other past, current, and probable future development in the City, would cause a substantial change in the significance of the City's historic resources and thus have a significant cumulative impact. The SUMC Project's contribution to the cumulative impact would be cumulatively considerable. (CR-5)				
See Mitigation Measures CR-1.2 through CR-1.4.				
IMPACT BEING ADDRESSED: The SUMC Project, in combination with other reasonably foreseeable probable future development, could cause a substantial change in the significance of prehistoric and/or archaeological resources or human remains and thus contribute to a significant cumulative impact. The SUMC Project is conservatively assumed to have a considerable contribution. (CR-6)				
See Mitigation Measures CR-2.1 and CR-3.1.				
IMPACT BEING ADDRESSED: The SUMC Project, in combination with other reasonably foreseeable probable future development where the Pleistocene-age creek bed may occur, could have a significant cumulative impact. Such an impact would occur if the buried Pleistocene-age creek bed is exposed in lengths greater than approximately 100 feet (or a sufficient length to support detailed hydrological study) and if such deposits contain substantially intact skeletons of extinct species. These conditions would represent a major find for regional paleontology. In the case that significant paleontological finds—such as stretches of buried Pleistocene-age creek bed greater than 100 feet in length and containing intact skeletons of extinct species—are made on the SUMC Site, then the SUMC Project's contribution to the cumulative impact on paleontological resources could be cumulatively considerable. (CR-7)				
See Mitigation Measure CR-4.1.				
BIOLOGICAL RESOURCES				
IMPACT BEING ADDRESSED: The SUMC Project could have a significant impact on special-status wildlife resources. (BR-1)				
BR-1.1 Conduct Pre-Demolition Survey. The SUMC Project sponsors shall retain a qualified biologist ("bat biologist") to conduct a pre-construction survey for roosting bats in trees to be removed or pruned and structures to be removed. If no roosting bats are found, no further mitigation is required. If a bat roost is found, the SUMC Project sponsors shall implement the following measures to avoid impacts on roosting bats.	Review pre-construction roosting bat survey report	City of Palo Alto Department of Planning and Community Environment.	Prior to issuance of building and demolition permits and/or vegetation removal for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Hoover Parking Structure _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
BR-1.2 Avoid Roosting Areas. If non-breeding bats are found in a tree or structure to be removed, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity. Demolition should then follow at least one night after initial disturbance for airflow. This action should allow bats to leave during darkness, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. If active maternity roosts are found in structures that will be removed as part of project construction, demolition of that structure shall commence before maternity colonies form (generally before March 1) or after young are flying (generally by July 31).	Verify that construction contracts contain procedures related to avoidance of roosting bat areas; SUMC Project sponsor to provide qualified bat biologist compliance monitoring reports.	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits for each building; compliance monitoring during construction during site disturbance period	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date
BR-1.3 Develop and Employ Bat Nest Box Plan. If	Review bat nest box	City of Palo Alto	Prior to issuance of	**SHC Hospital**

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MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
special-status bats are found in structures to be removed, the SUMC Project sponsors shall develop a bat nest box plan for the SUMC Sites employing state-of-the-art bat nest box technology. The design and placement of nest boxes shall be reviewed by a qualified bat biologist.	plan, if special-status bats are found in structures to be developed; SUMC Project sponsor to provide qualified bat biologist compliance monitoring reports	Planning and Community Environment	building permits for each building, if required; compliance monitoring during site disturbance period	_____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
BR-1.4 Avoid Tree Removal During Nesting Season. Tree removal or pruning shall be avoided from February 1 through August 31, the nesting period for Cooper's hawk, to the extent feasible. If no tree removal or pruning is proposed during the nesting period, no surveys are required.	Verify that construction contracts contain procedures related to avoidance of Cooper's Hawk nesting	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date
BR-1.5 Protect Cooper's Hawk in the Event of Nest	Verify that construction	City of Palo Alto	Prior to issuance of	**SHC Hospital**

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MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
Discovery. If tree removal or pruning is unavoidable during the nesting season, the SUMC Project sponsors shall hire a qualified biologist to conduct a survey for nesting Cooper's hawk within five days prior to the proposed start of construction. If active Cooper's hawk nests are not present, project activities can take place as scheduled. The qualified biologist shall visit the site daily to search for nests until all nesting substrates are removed. This will avoid impacts to Cooper's hawk that may have moved into the site and initiated nest-building after the start of tree removal activities. Additionally, if more than 5 days elapse between the initial nest search and the tree removal, it is possible for new birds to move into the construction area and begin building a nest. If there is such a delay, another nest survey shall be conducted. If any active Cooper's hawk nests are detected, the SUMC Project sponsors shall delay removal of the applicable tree or shrub while the nest is occupied with eggs or young who have not fledged. A qualified biologist shall monitor any occupied nest to determine when the Cooper's hawk nest is no longer used.	contracts contain procedures related to timing and requirements for Cooper's hawk surveys; SUMC Project sponsor to provide qualified biologist compliance monitoring reports	Planning and Community Environment	building permits for each building; compliance monitoring during site disturbance period	Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date **Welch Road Improvements** Signature Date

IMPACT BEING ADDRESSED: The SUMC Project would have no impact on the movement of any native resident or migratory fish or wildlife species, or use of native resident or migratory wildlife corridors, but could impede the use of native wildlife nursery sites and thus result in a significant impact. (BR-3)

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
BR-3.1 Avoid Tree Removal During Nesting Season. Tree or shrub removal or p runing shall be a voided from February 1 through August 31, the bird-nesting period, to the ex tent feasib le. If no tree or shrub rem oval or pruning is proposed during the nesting period, no surveys are required.	Verify that construction contracts contain procedures related to avoidance of bird nesting	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT
MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
BR-3.2 Protect Birds in the Event of Nest Discovery. If tree and shrub removal or pruning is unavoidable during the nesting season, the SUMC Project sponsors shall hire a qualified biologist to conduct a survey for nesting raptors and other birds within five days prior to the proposed start of construction. If active nests are not present, SUMC Project activities can take place as scheduled. The qualified biologist shall visit the site daily to search for nests until all nesting substrates are removed. These procedures would avoid impacts to any birds that may have moved into the sites and initiated nest-building after the start of tree and shrub removal activities. Additionally, if more than five days elapses between the initial nest search and the vegetation removal, it is possible for new birds to move into the construction area and begin building a nest. If there is such a delay, another nest survey shall be conducted. If any active nests are detected, the SUMC Project sponsors shall delay removal of the applicable tree or shrub while the nest is occupied with eggs or young who have not fledged. A qualified biologist shall monitor any occupied nest to determine when the nest is no longer used.	Verify that construction contracts contain procedures related to protection of nesting birds; SUMC Project sponsor to provide qualified biologist compliance monitoring reports	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits for each building; compliance monitoring during site disturbance period	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **FIM 2** Signature Date **FIM 3** Signature Date **Welch Road Improvements** Signature Date
IMPACT BEING ADDRESSED: The SUMC Project could have a significant impact on Protected Trees. (BR-4)				

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MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
BR-4.1 Prepare a Tree Preservation Report for all Trees to be Retained. An updated tree survey and tree preservation report (TPR) prepared by a certified arborist shall be submitted for review and approval by the Director of Planning and Community Environment in consultation with the City Arborist. For reference clarity, the tree survey shall include (list and field tag) all existing trees within the SUMC Sites, including adjacent trees overhanging the SUMC Sites. The approved TPR shall be implemented in full, including mandatory inspections and monthly reporting to City Arborist. The TPR shall be based on latest SUMC plans and amended as needed to address activity within the dripline area of any existing Protected Tree to be preserved, including incidental work (utilities trenching, street work, lighting, irrigation, etc.) that may affect the health of a preserved Protected Tree. The TPR shall be consistent with the criteria set forth in the Tree Preservation Ordinance, Palo Alto Municipal Code Section 8.10.030, and the City Tree Technical Manual, Section 3.00, 4.00 and 6.30. To avoid improvements that may be detrimental to the health of Protected Trees, the Director of Planning and Community Environment, in consultation with the City Arborist shall review the SUMC Project sponsors' landscape plan to ensure the new landscape is consistent with Tree Technical Manual, Section 5.45 and Appendix L, Landscaping under Native Oaks.	SUMC Project sponsors to prepare TPR; City to review and approve TPR	City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date **FIM 1** Signature Date **Welch Road Improvements** Signature Date
BR-4.2 Prepare a Solar Access Study (SAS) of Short and Long Term Effects on Protected Oaks. The SUMC Project sponsors shall prepare a SAS of Short and Long Term Effects on Protected Oaks that are aesthetic tree resources for review and approval by the Director of Planning and Community Environment in consultation with the City Arborist. The SAS shall be prepared by a qualified expert team (horticulturalist, architect designer, consulting arborist) capable of determining effects, if	Review and approve Solar Access Study, if project design changes and would affect biological and aesthetic tree resources	City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permit for each building, if project design changes and would affect biological and aesthetic tree resources	**SHC Hospital** Signature Date **FIM 1** Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
any, to fo liage, h ealth, disease su sceptibility an d also prognosis for longevity. The SAS shall contain the same information as the SAS for FIM 1 trees that are aesthetic tree res ources su bmitted Se ptember 2 3, 2010. If t he Director of Pl anning a nd C ommunity Envi ronment, i n consultation with th e City Arbo rist, determin es th at th e SUMC P roject wo uld have an a dverse ef fect o n s olar access to a Protected T ree that is a n aesthetic tree resource such that the tree is unlikely to survive, then the SUMC Project sponsors shall relocate the Protected Tree to a site with sufficient solar access, as determined by the Direct0r of Pl anning a nd C ommunity Envi ronment, i n consultation with th e City Arbo rist. The SAS has been completed and acce pted by the City for trees #608, Kaplan Lawn (trees #33 thr ough 41), and FI M (trees #317 through 320 and #322).				

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MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
BR-4.3 Prepare a Tree Relocation Feasibility Plan for Any Protected Tree Proposed for Relocation and Retention. Relocation of Protected Trees with the SUMC Sites shall be allowed only upon issuance of a Protected Tree relocation permit from the Director of Planning and Community Environment in consultation with the City Arborist. Because of inherent mortality associated with the process of moving mature trees, the SUMC Project sponsors shall prepare a Tree Relocation and Maintenance Plan (TRMP) to be reviewed in connection with the Protected Tree relocation permit. The TRMP shall evaluate the feasibility of moving the Protected Trees to an appropriate location on site. Feasibility shall consider current site and tree conditions, a tree's ability to tolerate moving, relocation measures, optimum needs for the new location, aftercare, irrigation, and other long-term needs. The tree relocation permit shall specify that if the relocated trees do not survive after a period of five years, the relocated tree or trees shall be replaced with trees or a combination of trees and Tree Value Standards consistent with Section 3.20, Table 3-1 Tree Canopy Replacement, of the Tree Technical Manual. The TRMP shall be inclusive of the following minimum information: appropriate irrigation, monitoring inspections, post relocation tree maintenance, and for an annual arborist report of the condition of the relocated trees. If a tree is disfigured, leaning with supports needed, in decline with a dead top or dieback of more than 25 percent, the tree shall be considered a total loss and replaced as described above.	Review and approve Tree Relocation Feasibility Plans, and Tree Relocation and Maintenance Plans Issue Protected Tree Relocation Permit	City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date
BR-4.4A Enter into a Memorandum of Understanding for Tree Maintenance. As a security measure, the SUMC Project sponsors shall be subject to a Memorandum of Understanding (MOU) between the City of Palo Alto and	Sign Memorandum of Understanding and security guarantee for trees to be retained	City of Palo Alto Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
the SUMC Project sponsors describing a tree retention amount, the list of trees to be retained, an appraised value for each listed tree, a five-year tree growth and establishment, timeline for return of security, and conditions of approval related to Protected Trees, as cited in the Conditional Use Permit for the SUMC Project. The SUMC Project sponsors and SUMC Project arborist shall coordinate with the City Arborist to determine the conditions required to guarantee the protection and/or replacement of the regulated trees on the site during construction and within five years after occupancy. The SUMC Project sponsors shall provide a security guarantee for the trees, as determined by the Director of Planning and Community Environment, in consultation with the City Arborist, in an amount consistent with the City of Palo Alto Tree Technical Manual.				**LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date
BR 4.4B Replace Protected Trees in Accordance with the Tree Technical Manual. Removal of Protected Trees shall be allowed only upon issuance of a Protected Tree removal permit from the Director of Planning and Community Environment, in consultation with the City Arborist. Protected Trees that are removed without being relocated shall be replaced in accordance with the ratios set forth in Table 3-1 of the City of Palo Alto Tree Technical Manual in the following way, in order to maintain the appropriate landscape approach at the SUMC Sites, which has limited opportunities to plant the required replacement of trees: • The Protected Tree removal permit issued shall stipulate the tree replacement requirements for the removed tree, including number of trees, location, and irrigation; • The number and size of trees required for replacement would be calculated in accordance with Table 3-1; and	Review and approve Tree Removal Plans Issue Protected Tree Removal Permit	City of Palo Alto Director of Planning and Community Environment	Prior to issuance of building permits for each building	**SHC Hospital** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
• The difference between the required tree replacement and the number of trees planted at the SUMC Sites would be mitigated through contribution to the Forestry Fund in the City of Palo Alto. Payment to the Forestry Fund would be in the amount representing the value of the replacement trees that would be required under the TTM standard.				
BR-4.5 Provide Optimum Tree Replacement for Loss of Publicly-Owned Trees Regulated Tree Category. There are many publicly owned trees growing in the right-of-way along various frontages (Welch Road, Pasteur Drive, Quarry Road, Sand Hill Road, etc.). These trees provide an important visual and aesthetic value to the streetscape and represent a significant investment from years of public resources to maintain them. As mitigation to offset the net benefits loss from removal of mature trees, and to minimize the future years to achieve parity with visual and infrastructure service benefits (CO_2 reduction, extended asphalt life, water runoff management, etc.) currently provided by the trees, the new public trees on all roadway frontages shall be provided with best practices design and materials, including, but not limited to, the following elements: • Consistency with the City of Palo Alto Public Works Department Street Tree Management Plan, in consultation with Canopy, Inc. • Provide adequate room for natural tree canopy growth and adequate root growing volume. For large trees, a target goal of 1,200 cubic feet of soil shall be used. • For pedestrian and roadway areas that are to include tree planting or adjacent to existing trees to be retained, utilize City-approved best management practices for sustainability products, such as	Review landscape plans submitted as part of building permit applications for impact to publicly owned trees	City of Palo Alto Department of Public Works	Prior to issuance of building permits for each project	**SHC Hospital** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **FIM 1** _____ Signature Date **Welch Road Improvements** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
permeable ADA side walk surfaces, Silva Cell base support planters, engineered soil mix base, and other advantage methods.				
IMPACT BEING ADDRESSED: Cumulative impacts on Protected Trees would be significant. Because the SUMC Project would result in the loss of Protected Trees, the SUMC Project's contribution would cumulatively considerable. (BR-9)				
See Mitigation Measures BR-4.1 through BR-4.6.				
HYDROLOGY AND WATER QUALITY				
IMPACT BEING ADDRESSED: The SUMC Project could have a significant impact on groundwater quality during construction. (HW-3)				
HW-3.1 Develop a Work Plan for any Unknown Contaminated Sites. During con struction, if su spected contaminated soil, undocu mented u nderground t anks, hazardous m aterials pipelin es, or othe r evide nce of potential ha zardous m aterials are discove red, construction activities shall cease and the SUMC Project sponsors sh all p repare a workplan to d etermine th e potential risk to hum an and ecol ogical health. T he workplan s hall be p repared by a R egistered Environmental Assessor and in co mpliance with th e Department of To xic Su bstances C ontrol (DT SC) guidelines a nd the Nati onal Oil and Hazardous Substances C ontingency Plan (t he "National Contingency Plan" [NCP]). The SUMC Project s ponsors, or t heir representative, shall be res ponsible for submitting the w orkplan for the DTSC's review and approval prior to implementing field activities. Th e wo rkplan mu st in clude all in formation necessary for im plementing fi eld wo rk. The wo rkplan shall in clude a Site Safety Plan (SSP) an d a Sam pling Work Plan (SWP). Th e SSP must b e sub mitted to th e DTSC in conjunction with the submittal of the SWP. The objective o f t he S SP i s t o ens ure protection of t he investigative t eam as well a s th e g eneral p ublic d uring sampling activities.	Verify that SUMC Project sponsors have submitted workplans to DTSC, if any unknown contaminated is discovered during construction .	City of Palo Alto Fire Department and Department of Planning and Community Environment	As necessary	**SHC Hospital** _____ Signature Date **SHC Clinics** _____ Signature Date **LPCH Hospital/Clinics** _____ Signature Date **Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
If risk to human or ecological health is identified, the SUMC Project sponsors shall prepare and implement a Removal Action Workplan (SB 1706 Stats. 1994, Chapter 441) (non-emergency removal action or remedial action at a hazardous substance release site which is projected to cost less than $1,000,000) that is consistent with the NCP.				Signature Date **FIM 3** Signature Date
HAZARDOUS MATERIALS				
IMPACT BEING ADDRESSED: The SUMC Project could release hazardous materials in existing buildings. (HM-2)				
HM-2.1 Conduct Asbestos Survey at the SUMC Sites. Prior to building renovation and/or demolition, an asbestos survey shall be performed on all areas of the building anticipated to be demolished and/or renovated. This survey shall be performed by a licensed asbestos abatement contractor. In the event that asbestos is identified in the buildings proposed to be demolished and/or renovated, all asbestos containing materials shall be removed and appropriately disposed of by a licensed asbestos abatement contractor. A site health and safety plan, to ensure worker safety, in compliance with OSHA requirements (8 CCR 5208) shall be developed by the SUMC Project sponsors and in place prior to commencing renovation or demolition work on portions of buildings containing asbestos.	Verify that SUMC Project sponsors have conducted asbestos surveys and prepared site health and safety plan for buildings to be demolished .	City of Palo Alto Fire Department and Department of Planning and Community Environment	Prior to issuance of demolition permits for each project	**1101 Welch Road** Signature Date **Parking Structure III** Signature Date **701 Welch Road** Signature Date **703 Welch Road** Signature Date **Edwards** Signature Date **Alway** Signature Date **Lane**

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Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Signature Date **East, West, Core, Boswell, Grant** Signature Date **Core Expansion** Signature Date
IMPACT BEING ADDRESSED: The SUMC Project could expose construction personnel and public to existing contaminated groundwater and/or soil. (HM-3)				
HM-3.1 Perform a Phase II ESA for the 701 Welch Site. A Phase II ESA shall be performed at 701 Welch Site Building B. The Phase II ESA shall include sampling and analysis of soil, groundwater, wastewater, and residues on surfaces such as laboratories countertops, fume hoods, sinks, sumps, floors, and drain lines. The County Department of Environmental Health (DEH) and Palo Alto Fire Department (PAFD) shall be notified by the Project sponsors if contamination is discovered. If contamination is discovered, the SUMC Project sponsors shall prepare a site remediation assessment that (a) specifies measures to protect workers and the public from exposure to potential site hazards and (b) certifies that the proposed remediation measures would clean up contaminants, dispose of the wastes, and protect public health in accordance with federal, State, and local requirements. Site excavation activities shall not proceed until the site remediation has been approved by the County DEH and implemented by the SUMC Project sponsors. Additionally, the site remediation assessment shall be subject to review and approval by the San Francisco Bay Regional Water Quality Control Board (RWQCB). All appropriate agencies shall be notified.	Receive notification if contamination is discovered during Phase II ESA at 701 Welch Site Building B Verify that County DEH has approved a site remediation plan, if necessary Compliance monitoring	City of Palo Alto Fire Department	As necessary	**701 Welch Road** Signature Date
HM-3.2 Excavate Contaminated Soil from the 703 Welch Site. For the 4- to 9-square-foot area near every	Receive notification if contamination is	City of Palo Alto Fire Department	As necessary	**703 Welch Road**

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
discharge point from the building, soil samples shall be performed and contaminated soil excavated, removed, and transported to an approved disposal facility in compliance with OSHA requirements. The County DEH and the PAFD shall be notified by the SUMC Project sponsors if contamination is encountered during construction.	discovered during construction at 703 Welch .			Signature Date
HM-3.3 Conduct a Soil Excavation Program at the Hoover Pavilion Site. A qualified consultant, under the SUMC Project sponsors' direction, shall undertake the following activities: • Remove all buried underground storage tanks from the property after sheds and storage buildings on the Hoover Pavilion Site have been demolished; • To the extent necessary, additional soil sampling shall be collected to determine health risks and to develop disposal criteria; • If warranted based on soil sampling, contaminated soil shall be excavated, removed, and transported to an approved disposal facility in compliance with OSHA requirements; • To the extent required based upon the results of soil sampling and the results of a health risk assessment, a Site Health and Safety Plan to ensure worker safety in compliance with OSHA requirements shall be developed by the Project sponsors, and in places prior to commencing work on any contaminated site; and • The SUMC Project sponsors shall submit documents to the County DEH to proceed with closure of the Hoover Pavilion Site.	Verify that SUMC Project sponsors have removed buried underground storage tanks and conducted soil sampling, if necessary Verify that SUMC Project sponsors have prepared a site health and safety plan, if warranted Verify that SUMC Project sponsors have submitted closure documents to County DEH Compliance monitoring	City of Palo Alto Fire Department	As necessary	**Hoover MOB** _____ Signature Date **Hoover Parking Structure** _____ Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT
MITIGATION MONITORING AND REPORTING PLAN

Mitigation Measures	Monitoring or Reporting Action	Responsibility	Timing	Signature/Date Completed
HM-3.4 Develop a Site Management Plan for the Hoover Pavilion Site. The SUMC Project sponsors shall prepare a site remediation assessment that (a) specifies measures to protect workers and the public from exposure to potential site hazards, including hazards from remediation itself, and (b) certifies that the proposed remediation measures would clean up contaminants, dispose of the wastes, and protect public health in accordance with federal, State, and local requirements. Site excavation activities shall not proceed until the site remediation has been approved by the County DEH and implemented by the SUMC Project sponsors. Additionally, the site remediation assessment shall be subject to review and approval by the San Francisco Bay RWQCB. All appropriate agencies shall be notified.	Verify that SUMC Project sponsors have prepared and submitted a site management plan to County DEH	City of Palo Alto Fire Department	Prior to excavation at the Hoover site	**Hoover MOB** Signature Date **Hoover Parking Structure** Signature Date
IMPACT BEING ADDRESSED: The SUMC Project would result in construction of facilities on a site included on the Cortese List. (HM-7)				
See Mitigation Measures HM-3.3 and HM-3.4.				
IMPACT BEING ADDRESSED: The SUMC Project could impair implementation or physically interfere with an adopted emergency response or evacuation plan. (HM-10)				
See Mitigation Measures HM-10.1, TR-1.1, TR-1.4 through TR-1.6, TR-1.8, and TR-9.1.				
HM-10.1 Coordinate Construction Activities with the City of Palo Alto. The SUMC Project sponsors shall provide to the City planned construction routes, roadway closures, and access and closures schedules. This information shall be provided to the City at least two weeks in advance of the planned access and closures. The City shall coordinate this information among affected emergency service providers, including the City's Fire and Police Departments, and private ambulance services, so that alternative routes could be planned and announced prior to the scheduled access and closures, as deemed necessary by the City.	Coordinate SUMC Project information on planned construction routes, and roadway closures to affected emergency service providers	City of Palo Alto Fire Department and Department of Planning and Community Environment, and Public Works Department	At least two weeks prior to scheduled roadways closures	**SHC Hospital** Signature Date **SHC Clinics** Signature Date **LPCH Hospital/Clinics** Signature Date **Hoover MOB** Signature Date

STANFORD UNIVERSITY MEDICAL CENTER FACILITIES RENEWAL AND REPLACEMENT MITIGATION MONITORING AND REPORTING PLAN				
Mitigation Measures	**Monitoring or Reporting Action**	**Responsibility**	**Timing**	**Signature/Date Completed**
				Hoover Parking Structure _____ Signature Date **FIM 1** _____ Signature Date **FIM 2** _____ Signature Date **FIM 3** _____ Signature Date **Welch Road Improvements** _____ Signature Date
IMPACT BEING ADDRESSED: The SUMC Project and adjacent development could result in cumulative release of hazardous materials during construction, a significant cumulative impact. The SUMC Project's contribution to the cumulative impact would be considerable. (HM-12)				
See Mitigation Measure HM-2.1.				
IMPACT BEING ADDRESSED: The SUMC Project and adjacent development could result in cumulative disturbance of contaminated soils, release of hazardous materials during construction, a significant cumulative impact. The SUMC Project's contribution to the cumulative impact would be considerable. (HM-13)				
See Mitigation Measures HM-3.1, HM-3.2, HM-3.3, and HM-3.4.				
IMPACT BEING ADDRESSED: Cumulative development could impair implementation or physically interfere with an adopted emergency response or evacuation plan. The SUMC Project's contribution to the cumulative impact would be considerable. (HM-15)				
See Mitigation Measures HM-10.1, TR-1.1, TR-1.4 through TR-1.6, and TR-1.8.				

Attachment G

Approved Project Plans

Hardcopies of project plans are provided to ARB Members. These plans are available to the public by visiting the Planning and Community Environmental Department on the 5th floor of City Hall at 250 Hamilton Avenue.

Directions to review Project plans online:

1. Go to: https://paloalto.buildingeye.com/planning
2. Search for "240 Pasteur Drive" and open record by clicking on the green dot
3. Review the record details and open the "more details" option
4. Use the "Records Info" drop down menu and select "Attachments"
5. Open the attachment named "**School of Medicine Biomedical Innovations Building March 9 2017**"