Architectural Review Board

Staff Report

Agenda Date: March 24, 2011

From: Steven Turner, Advance Planning Manager

Department: Planning and Community Environment

Subject: **Lucile Packard Children’s Hospital [10PLN-00396]**: Request by Lucile Packard Children’s Hospital on behalf of The Board of Trustees for the Leland Stanford Junior University for Final Architectural Review of an expansion to the Lucile Packard Children’s Hospital, a component of the Stanford University Medical Center Facilities Renewal and Replacement Project. Existing Zone District: MOR (Medical Office and Research).

**RECOMMENDATION**

Staff requests that the Architectural Review Board (ARB) review the development plans, architectural review findings and recommend that the City Council approve the expansion to the Lucile Packard Children’s Hospital.

**BACKGROUND**

*Stanford University Medical Center Facilities Renewal and Replacement Project*

The Stanford University Medical Center (SUMC) comprises the general area between Sand Hill Road, Vineyard Lane, Quarry Road, Pasteur Drive, and including Welch Road and Blake Wilbur Drive. The area is zoned Medical Office and Medical Research (MOR) and Public Facilities (PF). The applicant is proposing the demolition of the existing Stanford Hospital and Clinics (SHC), construction of new hospital buildings, renovation and expansion of the Lucile Packard Children’s Hospital (LPCH), reconstruction of the School of Medicine (SoM) facilities, and construction of new medical office buildings and parking structure as well as the renovation of the Hoover Pavilion to meet State mandated seismic safety standards (SB 1953) and to address capacity issues, changing patient needs and modernization requirements. The renovation and expansion project, which would be constructed over a 20-year horizon, would result in a net increase of approximately 1.3 million square feet of hospital, clinic, and office space.

An application for the project described above was filed on August 13, 2007 with the City of Palo Alto (See Attachment F for an excerpt). In summary, the applicants have requested, among other entitlements, a zoning code amendment to establish a new “Hospital” district with development standards designed to accommodate the proposed project. The applicants have requested design approval for Stanford University Medical Center Campus Design Guidelines, SHC, LPCH, a new medical office building and parking garage as well as the renovation of the Hoover Pavilion, and the SoM’s Foundations in Medicine 1 (FIM) building.

Over the course of the past two years, each of the SUMC Project components has been reviewed
by the ARB through a series of study sessions and early preliminary review meetings. Each component of the SUMC Project has gone through preliminary ARB reviews and the ARB will be providing a final recommendation to the City Council for their consideration. This ARB meeting is the final review for the LPCH project.

PROJECT DESCRIPTION
Perkins + Will in association with Hammel, Green and Abrahamson, Inc. (HGA) have designed the new addition to the Lucile Packard Children's Hospital. A detailed project description can be found in Attachment D.

SUMMARY OF KEY ISSUES
The applicants have requested that the ARB provide a formal review of LPCH. The project plans contain site plans, tree diagrams, elevations, parking plans, floor plans, lighting plans, sections, landscape plans, details of the bridge, signage and perspective views of the proposed project. These plans were most recently reviewed at the ARB meeting on December 2, 2010. Since that meeting, the applicant has submitted plans for the exterior lighting photometric study, ground level landscape lighting plan, first and second level partial lighting plans, lighting illustrations for the Emerald and Rainbow Gardens, and the photovoltaic canopy at the patient transfer deck. The project plans submitted for this ARB review contain complete plans for LPCH (Attachment F).

Prior ARB Review
The ARB held study sessions and preliminary review of the LPCH on August 21 and October 20, 2008, August 20, 2009, February 4, May 21 and July 15, 2010. In addition, the ARB held its first formal review of the LPCH on December 2, 2010. Please see Attachment D for a detailed description of these prior meetings.

The ARB held a formal review of the LPCH on December 2, 2010. The ARB members overall supported the project, and remarked that the building, site planning elevations and landscaping were exemplary. They commented that there was good attention to detail and the design seemed to anticipate the needs and requirements for users in the building and landscape. They asked the applicants to consider keeping the monument design in stone, and to revise the color of the building into a darker tone. In addition, they asked the applicants to provide further details regarding the signage and exterior lighting in the project in order to understand quality and integration into the design.

Zoning Development Standards
The LPCH building would be located in the new “Hospital” zone district. Although the site development regulations for the new “Hospital District” have not yet been approved, the Project's conformance with the draft standards is described in Attachment B.

Summary of Issues Identified by Urban Design Consultant
The City’s urban design consultant, Bruce Fukuji, has provided comments on each of the Project components throughout this review process. His updated comments on the LPCH are contained in Attachment E.
Design Guidelines and the Lucile Packard Children’s Hospital

The applicant has submitted under a separate cover the final Stanford University Medical Center Campus Design Guidelines. The document sections include discussion on Site Design, Building Design and Connective Elements. The ARB will be reviewing the Design Guidelines as a separate review item. Attachment C provides a summary of how the final Guidelines relate to the proposed LPCH project.

Environmental Impact Report

The City has prepared an environmental impact report (EIR) for the SUMC Project. Please see Attachment D for a detailed discussion of the visual quality sections in the EIR.

The ARB review has resulted in changes from the originally proposed design that addresses the visual quality impacts identified in the EIR. The staff recommends that the ARB find that the projects are consistent with the Architectural Review Findings in Attachment A. In addition, if the ARB finds that the project is consistent with the Architectural Review Findings, then the mitigations applicable to the LPCH project have been satisfied.

The Final EIR for the SUMC Project was released on February 17, 2011. With this final review of the project, the ARB needs to find that the Project is consistent with the sixteen findings of approval. Staff’s recommended findings are contained in Attachment A. The ARB’s final recommendations will be forwarded to the Planning and Transportation Commission and City Council for their consideration.

Conditions of Approval

Draft conditions of approval are being prepared for the Project. These conditions will focus on the “standard” conditions that apply to development within Palo Alto, as well as specific requirements that address unique development aspects of the Project. In addition, the conditions would contain any design-related conditions that the ARB may recommend. Staff recommends that the ARB discuss appropriate conditions at the meeting. These conditions would be forwarded to the City Council for their review and decision. Staff expects to provide a draft list of conditions to the ARB at the March 24, 2011 meeting. These conditions may be modified prior to final City Council review.

NEXT STEPS

The ARB will review all of the Project components at the March 24 meeting and at a second meeting in April 2011. The ARB’s recommendation on all of the project components will be forwarded to both the Planning and Transportation Commission and City Council. The City Council will take action on these items after certification of the Final EIR, anticipated in May 2011.

ATTACHMENTS

Attachment A: Architectural Review Findings for Approval
Attachment B: Conformance with Proposed “Hospital District” Site Development Regulations
Attachment C: Summary of Design Guidelines related to LPCH
Attachment D: ARB Staff Report, LPCH, December 2, 2010
Attachment E: Urban Design Peer Review Memo, LPCH, March 14, 2011
Attachment F: SUMC Project Application Excerpt, including: Project Overview, Project Description, Comprehensive Plan Conformance, SUMC Design Intent, SUMC Applicant's Objectives, Entitlements Request, Summary of the Tree Preservation Alternative, Fact Sheets and FAQ's for the SUMC Project (separate attachment, previously distributed to the ARB; also available at the meeting).
Attachment G: Additional Drawings for the new Lucile Packard Children's Hospital - LPCH (provided by Architects - Perkins + Will, and Hammel, Green and Abrahamson, ARB members only)

COURTESY COPIES
William T. Phillips, Sr. Assoc. Vice President, Stanford University – Land, Buildings & Real Estate
Jean McCown, Director of Community Relations, Office of Government and Community Relations
Zach Pozner, Project Manager, Stanford University Medical Center, Facilities
Charles Carter, Director Land Use and Environmental Planning, Stanford University
Mark Tortorich, Vice President of Facilities and Design & Construction, Stanford Hospitals & Clinics / Lucile Packard Children's Hospital
Catherine Palter, Assistant Director Land Use and Environmental Planning, Stanford University
Bruce Fukuji, Fukuji Planning & Design

Prepared by: Whitney McNair, Consulting Planner
Ruchita Kadakia, Consulting Planner
(1) The design is consistent and compatible with applicable elements of the Palo Alto Comprehensive Plan and is consistent with the following significant policies and programs:

L-1, L-2, L-3, L-4, L-5, L-6, L-7, L-8, L-45, L-46, L-48, L-49, L-50, L-70, L-75, L-76, L-77, L-78, T-1, T-3, T-19, T-42, T-48, N-6, N-14, N-16, N-17, N-18, N-20, N-21, N-22, N-23, N-24, N-28, N-29, N-35, N-39, N-40 and N-47, as described in Table 3.2-2 of the Draft Environmental Impact Report and reproduced for this ARB review.

(2) The design is compatible with the immediate environment of the site in that it maximizes the use of available outdoor space through the creation of three distinct gardens which are utilized by staff and families being served by the hospital. Parking has been placed underground to eliminate the visual impact of surface parking. Trees are used to screen the view of the hospital and to integrate the design into the landscape. Although the Lucile Packard Children’s Hospital (LPCH) Project would introduce building massing that is taller than the surrounding buildings, including the existing LPCH hospital, this building massing is primarily oriented to the Welch Road and Quarry Road corner of the site, rather than adjacent to the existing LPCH hospital. The gardens described above serve as setbacks from the existing hospital. Where the proposed building massing is closest to the existing LPCH hospital, this massing is adjacent to the existing LPCH parking structure rather than the hospital itself. This reduces the visual impact on the existing hospital.

(3) The design is appropriate to the function of the project in that the LPCH Project provides a state of the art tertiary care children’s hospital that meets the higher goals of sustainability with an appropriate contextual design.

(4) In areas considered by the board as having a unified design character or historical character, the design is compatible with such character. The visual expression of the hospital is that of a building integrated with the land. The landscape berms up to modulate the scale of the building through the creation of sculpted outdoor rooms that relate to the immediate surroundings and the campus as a whole. The delicate use of materials and color palates also enhances its relationship to the character of the buildings immediately adjacent to it such as the existing LPCH.

(5) The design promotes harmonious transitions in scale and character in areas between different designated land uses by using the landscape to mitigate the height of the building. The landscape rises to cover the entry lobby, and the bed pavilions emerge
from this landscape feature. The Emerald Garden is both adjacent to interior lobby space and recessed from the upper most levels of the berm which are executed as a green roof. As stated above, the building massing is primarily oriented to the Welch Road and Quarry Road corner of the site, rather than adjacent to the existing LPCH hospital. The gardens serve as setbacks from the existing hospital. Where the proposed building massing is closest to the existing LPCH hospital, this massing is adjacent to the existing LPCH parking structure rather than the hospital itself. These design features serve to promote harmonious transitions in scale.

(6) The design is compatible with approved improvements both on and off the site as this project intimately links the design of site and structure. As the LPCH project is an expansion to the existing hospital, the connections and transition between the expansion and existing hospital have been carefully considered to be compatible. In addition, the LPCH project has been designed to be consistent and compatible with the proposed Welch Road improvements, which include street widening, pedestrian features, and landscaping.

(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 community. The central experience for the families being served by the hospital is a link to outdoor healing gardens. The main event garden, the Emerald Garden, is visible from the entire lobby experience. As the family leaves the lobby and moves up to the main service floor, they rise up a grand stair where they encounter the more reflective Discovery Garden. The discovery garden is a place for families to find space to contemplate their situation and to find comfort and solace in nature. Within this garden is the hospital’s chapel. At the service side of the building, the third garden, the Rainbow Garden, provides a private area for staff renewal.

(8) The amount and arrangement of open space are appropriate to the design and the function of the structures. Open spaces for gatherings and for visual respite are integral to the design. The three outdoor gardens serve the hospital users and provide a durable connection to nature seldom found in healthcare projects. Parking has been located underground to allow for the ample areas devoted to these spaces.

(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. Ancillary functions are all provided within the design of the project. As described above, the parking structure is entirely below grade. In addition, the loading dock is dropped a full level below grade to allow the development of the Rainbow Garden. Transformers are located at the loading dock and are not visible to the public. Cisterns for collecting water are buried beneath the landscape elements.

(10) Access to the property and circulation thereon are safe and convenient for pedestrians, cyclists and vehicles. The entry to the facility is clearly designated and accessible to all. A network of pedestrian/cycling paths and ample bicycle parking make the project especially attractive to those arriving by alternative means of transportation.
(11) Natural features are appropriately preserved and integrated with the project. Large trees are being preserved and/or relocated on the site wherever possible, including the existing mature Coast redwood trees at the corner of Welch and Quarry Roads. Where the LPCH Project would conflict with existing trees, the project sponsor will either transplant these trees to various locations on the LPCH site or will replace trees consistent with the requirements of the proposed Hospital District.

(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. The building materials, texture, color and plant material are designed to be evocative of the immediate surrounding architectural and ecological context. GFRC planters on the exterior of the building recall the color of the dry chaparral found in our region. Drought tolerant plants within the planters provide color and a verdant liveliness to the façade. The color of the horizontal shading devices on the exterior picks up on the accent color of the adjacent existing hospital.

(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; The amount, arrangement and quality of landscaped outdoor rooms as described above is extensive and uncommon in modern hospital design. This design is at the leading edge of green design; bringing sustainable health care concepts together with a design appropriate to the Northern California region and culture.

(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. Drought tolerant plants are fundamental to the concept of the garden design. Not only are these plants being planted in the typical locations at street level, but they continue along the perm and in the site walls up onto the green roof which is filled with drought tolerant species in intensive and extensive areas.

(15) The design is energy efficient and incorporates renewable energy design elements including, but not limited to:

(A) Exterior energy design elements
   - exterior vertical and horizontal shading devices to limit direct solar gain on the interior surfaces to 5%
   - use of solar thermal or solar photovoltaic systems
   - site lighting will use energy efficient fixtures and provide only light levels required by the design and regulatory restrictions.

(B) Internal lighting service and climatic control systems;
o displacement ventilation system throughout applicable spaces reducing the typical load on mechanical systems by 30%.
   o Lighting controls will be utilized to adhere to strict energy goals for the project.

(C) Building siting and landscape elements
   o collection of roof rain water into cisterns
   o collection of surface rain water into retention ponds that become “rain gardens” before releasing the water back to the storm system.
   o extensive and intensive green roofs

(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).
ATTACHMENT B
PROJECT DATA AND “HOSPITAL” DISTRICT DEVELOPMENT REGULATIONS CONFORMANCE
Lucile Packard Children’s Hospital
10PLN-000396

## PROJECT DATA

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Lucile Packard Children’s Hospital</th>
</tr>
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<tbody>
<tr>
<td>Owner</td>
<td>Leland Stanford Junior University</td>
</tr>
<tr>
<td>Assessor’s Parcel Numbers</td>
<td>142-23-010, 142-23-012, 142-23-024, 142-23-025</td>
</tr>
<tr>
<td>Comprehensive Plan Designation</td>
<td>Research/Office Park</td>
</tr>
<tr>
<td>Zoning District</td>
<td>Medical Office/ Research (MOR)</td>
</tr>
<tr>
<td>Surrounding Land Use</td>
<td>Hospital, Medical Office Retail, Eating &amp; Drinking, Parking</td>
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## EXISTING CONDITIONS

<table>
<thead>
<tr>
<th>Property size, for APs above</th>
<th>±187,744,000 square feet</th>
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<tbody>
<tr>
<td>Street frontage</td>
<td>±345-feet at Quarry Road, ±520-feet at Welch Road</td>
</tr>
<tr>
<td>Existing buildings floor area</td>
<td>701 Welch Road- 56,300 square feet</td>
</tr>
<tr>
<td></td>
<td>703 Welch Road- 23,500 square feet</td>
</tr>
<tr>
<td></td>
<td>LPCH (e)- 274,700 square feet</td>
</tr>
<tr>
<td>Building setbacks</td>
<td></td>
</tr>
<tr>
<td>Front</td>
<td>±20-feet from Quarry Road (701 Welch Road)</td>
</tr>
<tr>
<td>Rear</td>
<td>±64-feet</td>
</tr>
<tr>
<td>Street Side</td>
<td>±50-feet from Welch Road (701, 703 Welch Road)</td>
</tr>
<tr>
<td>Interior Side</td>
<td>±42-feet, ±140-feet</td>
</tr>
<tr>
<td>Floor Area Ratio</td>
<td>0.41</td>
</tr>
<tr>
<td>Site coverage, building</td>
<td>36,157 square feet</td>
</tr>
<tr>
<td>Height of existing building(s)</td>
<td>±20 to 30-feet</td>
</tr>
<tr>
<td>Existing parking facilities</td>
<td>Surface parking</td>
</tr>
<tr>
<td>Landscape features</td>
<td>Perimeter landscaping, minor interior plantings</td>
</tr>
</tbody>
</table>

## PROPOSED PROJECT

<p>| LPCH Addition Area           | ±521,300 gross square feet |
| Setbacks                    |                           |
| Front                       | ±40-feet at Quarry Road, |
| Rear                        | ±25-feet |
| Street Side                 | ±68-feet at Welch Road |
| Floor Area Ratio, SUMC Project | 1.46               |
| Site coverage, building     | ±291,000 square feet |
| Height of proposed building | ±84-feet to roof, ±94-feet to top of mechanical |</p>
<table>
<thead>
<tr>
<th>Feature</th>
<th>Regulation</th>
<th>Proposed</th>
<th>Conformance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking facilities</td>
<td>430 spaces at facility under LPCH</td>
<td></td>
<td></td>
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<tr>
<td>Landscape Features</td>
<td>Extensive interior gardens and perimeter landscaping</td>
<td></td>
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</tbody>
</table>

**Table 1: CONFORMANCE WITH PROPOSED “HOSPITAL” DISTRICT**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Regulation</th>
<th>Proposed</th>
<th>Conformance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Area Ratio (Entire SUMC Site)</td>
<td>1.5</td>
<td>1.46</td>
<td>Conforms</td>
</tr>
<tr>
<td>Floor area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entire SUMC site LPCH</td>
<td>1.3 million sf</td>
<td>1.3 million sf</td>
<td>Conforms</td>
</tr>
<tr>
<td>No regulation</td>
<td></td>
<td>531,200 gsf</td>
<td></td>
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<tr>
<td>Site Coverage</td>
<td>40%</td>
<td>33%</td>
<td>Conforms</td>
</tr>
<tr>
<td>Entire SUMC site LPCH</td>
<td>No regulation</td>
<td>61,500 sf</td>
<td></td>
</tr>
<tr>
<td>Street Setback</td>
<td>10-feet</td>
<td>40-feet, 60-feet</td>
<td>Conforms</td>
</tr>
<tr>
<td>Building Height</td>
<td>130-feet</td>
<td>84-feet</td>
<td>Conforms</td>
</tr>
</tbody>
</table>
ATTACHMENT C

SUMC Design Guidelines – Lucile Packard Children’s Hospital

a) Within the **Site Design** section, the applicant presents specific guidelines for the open spaces for the proposed site.

**Design Guidelines: Open Spaces (Page 30 & 33 of the Guidelines)**
The Olmsted Plan has been used as a format for the formal open spaces where in it creates nodes of interest and drama around important intersections of the master plan. The Arboretum open space is a strong element that gives Stanford a connection to its rural character, and the guidelines discuss extending this character of Arboretum-like planting trees across towards the LPCH to create a symbolic ‘landscape gateway’ to the campus. This landscape gateway is established by the density of Arboretum trees planted across Quarry at the intersection of Welch Road. Another key design point is an open space setback in front of the new LPCH expansion that provides for a terraced landscape interlacing vehicular entry points, drop-off, and turn-around into a sculpted landscape feature that appropriately addresses the street, while at the same time, provides a ‘defensible space’ for the main entry of LPCH.

b) Within the **Building Design** section, the applicant presents specific guideline categories that describe the approaches to visual hierarchy, density, pattern & context, massing & building composition, materials palette, and entry expression.

The scale and prominence of the new LPCH, at the corner of Welch and Quarry Roads portrays the institutional identity of the LPCH, as well as an image of the campus as a whole for those approaching from the north on Quarry Road. This image is established by the unique corner presentation of LPCH and is softened by integrating “The Arboretum” typology of open space into the building. Thus the building shall be viewed as a harmony of building and landscape.

The Lucile Packard Children’s Hospital Expansion Project wraps around the existing hospital facing the corner at Welch and Quarry Roads. The new building will be planned around a central courtyard (the Healing Garden) as a main organizing feature of the plan. The location of the nursing wings in two sections is configures to break down the massing by creating a dynamic street frontage that allows the building and landscape to become integrated with each other.
Design Guidelines: Massing & Building Composition (Page 77 of the Guidelines)
The plan of the massing for the LPCH provides a dynamic visual presence on the corner, and creates a focal point for the main entry facing Welch Road. The massing of LPCH will utilize techniques to establish the volumetric shape of the new buildings of terracing, curving, and glass walls to reduce the visual presence of the building masses fronting the streetscape along Welch Road. Building Articulation in the form of façade treatments such as grouped fenestration, shading devices, roof canopies, and material changes give the massing depth, richness and texture.

Design Guidelines: Material Palette (Page 85 of the Guidelines)
The massing of LPCH will be articulated to enhance its’ dynamic visual presence on the corner, and reinforce the focal point for the main entry facing Welch Road. Differentiated base material shall be used to harmonize with the entry podium for the facility. Where feasible, base and body articulation shall be combined to create large solid areas to contrast with more open, glass wall elements and grouped openings to register human scale and/or create a sense of welcome at the main entry. Glass curtain wall system shall be used to enhance expression of LPCH’s internal organization. At the top of the LPCH building wings, a roof eave will be composed to screen mechanical equipment and harmonize with the curved facades and terracing of the architecture. Building Articulation in the form of façade treatments such as grouped fenestration, shading devices, roof canopies, and material changes give the massing depth, richness and texture.

Design Guidelines: Entry Expression (Page 93 of the Guidelines)
The new Primary Entry for the LPCH expansion shall affront a new drop off/pick up area at Welch Road. The glassy curved entry to the LPCH design shall utilize the Sculptural Volume approach to portray the openness (glass) and warmth (wood interior) that invites the visitors inside. The entry is to be further enhanced by its’ focal position at the intersection of the MOB and in-patient wings. The large glass entry volume is beneficial for the following reasons:
- Natural light – sustainability
- Clarity of entry massing vs. nursing towers
- Open environment which organizes multiple functions, building levels, and a large volume of people
- Dampening of noise generated by various programs.
Architectural Review Board

Staff Report

Agenda Date: December 2, 2010
From: Steven Turner, Advance Planning Manager
Department: Planning and Community Environment

Subject: Lucile Packard Children’s Hospital [10PLN-00396]: Request by Lucile Packard Children’s Hospital on behalf of The Board of Trustees for the Leland Stanford Junior University for Architectural Review of an expansion to the Lucile Packard Children’s Hospital, a component of the Stanford University Medical Center Facilities Renewal and Replacement Project. Existing Zone District: MOR (Medical Office and Research).

RECOMMENDATION
Staff requests that the Architectural Review Board (ARB) review the development plans, draft architectural review findings, provide comments to the applicant and staff and continue the review until after the release of the Final Environmental Impact Report. Recommended conditional of approval will be provided at the final review meeting.

BACKGROUND
Stanford University Medical Center Facilities Renewal and Replacement Project
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Over the course of the past two years, each of the SUMC Project components has been reviewed by the ARB through a series of study sessions and early preliminary review meetings. Each component of the SUMC Project has gone through preliminary ARB reviews and the ARB will be providing a final recommendation to the City Council for their consideration. This ARB meeting is the first formal review for the LPCH project.

PROJECT DESCRIPTION
Perkins + Will in association with Hammel, Green and Abrahamson, Inc. (HGA) have designed the new addition to the Lucile Packard Children’s Hospital. The existing LPCH facility requires expansion to serve additional children and families, and to accommodate modern healthcare standards. The expansion of the LPCH is designed to promote family-centered care and create welcoming and safe healing environments by balancing the hybrid needs of clinical research advancements with the specialized needs of pediatric and obstetric patients and their families.

The LPCH proposes to construct a new hospital addition on the properties located at 701 and 703 Welch Road, at the corner of Quarry and Welch Roads. This new addition will become the key entry point to the medical center. LPCH would add 104 new inpatient beds for a total of 361 beds, surgical operating suites, diagnostic and treatment suites, and associated nursing and support space. The existing LPCH hospital facility would continue to house inpatient beds as well as diagnostic, treatment, clinical, and support services.

The LPCH site will expand northeastward from the existing LPCH and include demolition of the 23,500 gsf building at 703 Welch Road, the 56,300 gsf building at 701 Welch Road and the existing parking lot north of the Falk building. The new hospital building will be served by a new loop entry drive off of Welch Road and the parking will be rebuilt as an underground structure, to be accessed from Welch Road. The new hospital building will be five stories high with a total height of approximately 85-feet.

The proposed design is planned around a central courtyard that organizes the building along a main pedestrian spine. The design allows each patient room views to the outside. The landscape plan is comprised of several distinct gardens each with a special design and function. They include the Rain Garden, Emerald Garden, Rainbow Garden, Discovery Garden and Healing Garden. The plant palette consists mainly of native and drought tolerant species with low irrigation water demands. Rolling mounds and stone walls are integrated into the lower levels of the building as a way to blend the indoor and outdoor space while providing the necessary security and privacy for the hospital.

This building is cited the point at which the formal tree lined Welch Road bisects the more natural arboretum design of the campus. The landscape design for this corner will help bring these two concepts together to form a gateway to the medical center and the campus. These landscape features, along with the patient drop off and entry to the underground parking structure leads to consolidated street crossing of Welch Road that connects to the central promenade on campus through the medical center.

There are 31 protected trees within the LPCH portion of the SUMC Project. Of those 31 trees, 4 will remain, 11 are to be removed and replaced, and 16 will be transplanted to other locations on
the LPCH site (6 oak trees and 10 redwood trees). See Sheet 249 on the project plans for transplanted tree locations.

The proposed building materials include a GFRC wall assembly, metal panel system bisected with glass curtain walls. Painted metal and horizontal louvers as well as planters help soften the windows and allow for all patient rooms to have natural light and view of vegetation. The main building entry has a beige stone with integrated landscaping leading to a curved glazed wall to encapsulate the entry to allow for a seamless connection between the outdoor and indoor spaces.

**SUMMARY OF KEY ISSUES**
The applicants have requested that the ARB provide a formal review of LPCH. The project plans that accompany this staff report contain site plans, tree diagrams, elevations, parking plans, floor plans, lighting plans, sections, landscape plans, details of the bridge, signage and perspective views of the proposed project (Attachment E). Excerpts from the project application materials including the applicant’s entitlement requests, project objectives, project description, design intent, text for the tree preservation alternative, compliance to the comprehensive plan and project fact sheets are contained in Attachment D.

*Prior ARB Review*
The ARB held study sessions and preliminary review of the LPCH on August 21 and October 20, 2008, August 20, 2009, February 4, May 21 and July 15, 2010. As a result of these design meetings, the project site and buildings have evolved. A separate free-standing parking structure at the corner of Welch and Quarry Roads has been redesigned as a below-grade structure under the hospital allowing for a significant increase in site open space. Additionally, the patient wing at this corner has been shifted to the west on the site to provide as much open/green space as possible. The loading docks are in a more concealed below-grade location farther to the south. These changes have allowed for the creation of three additional garden areas. In an effort to minimize the perceived height of the building, a landscape berm helps transition to a landscaped green roof as it wraps in front of the north patient tower and continues over the lobby and in front of the south patient tower. The corner stair towers have been changed to all glass enclosures. The overlook terraces have been repositioned to opposing corners helping to decrease the mass of the building by providing open exterior spaces at prominent corners of the building. A partially climate protected vestibule has been added at the main entry to add whimsy while reducing the scale and softening the project edges. Furthermore, the patient rooms have been refined with planter boxes and climate responsive features to create a more residentially scaled façade.

During the preliminary review meetings held on May 20, 2010 and July 15, 2010, the ARB reviewed revisions to the design of the LPCH and details of the materials. Design changes reviewed at those meetings included revisions to the loading dock, which allowed for the creation of the Rainbow Garden that provided landscaped views from patient beds, a buffer from the loading area, outdoor seating, and a labyrinth. The ARB supported the way the evolution of the design, especially the curved entrance lobby and the Rainbow Garden. The ARB felt that there was a good relationship between the building architecture and landscaping. The ARB also felt that the layering of the different materials worked in making the structure seem less like a traditional hospital or office building.
The landscape plans were presented to the ARB on July 15, 2010, which included details of the different garden areas, the proposed bridge which connects the existing hospital to the proposed building and details of a proposed chapel to be located at the base of the bridge. The ARB generally liked the design and felt that the landscaping was thoroughly thought out. They felt that details for the signage and lighting could be included for final review. Those items are incorporated into the submittal package.

**Zoning Development Standards**

The LPCH building would be located in the new “Hospital” zone district. As proposed by the applicant, the land within this district would be considered as one large parcel for the purposes of determining gross floor area and site coverage. As proposed, the new Hospital Zone would have a maximum floor area ratio of 1.5 to 1 and maximum site coverage of 40 percent. The requirements for parking would be performance-based (based upon projected needs). The new zone would also include regulations for building heights with a proposed maximum height of 130-feet.

As proposed, the gross building area is 521,000 square feet and the site coverage is 291,000 square feet. The building height is 84-feet above the proposed first floor elevation and the setbacks from Welch and Quarry Roads are 68-feet and approximately 40-feet respectively. The pervious coverage is 177,990 square feet and the impervious coverage is 113,560 square feet. There are a total of 430 parking spaces in both structured and surface parking.

Although the site development regulations for the new “Hospital District” have not yet been approved, the Project’s conformance with the draft standards is described in Attachment B.

**Building Height**

The proposed addition to the LPCH would exceed the standard 50-foot height limit in the existing MOR district. As proposed, the “Hospital” district would have maximum height of 130-feet. The maximum height limit would not include helicopter landing pads, rooftop equipment and elevator shafts. The LPCH addition would extend to 84-feet above the first finished floor, with rooftop equipment extending to approximately 94-feet. In comparison, the existing LPCH extends to 46-feet.

**Automobile and Bicycle Parking**

Automobile parking at SUMC has historically been addressed on a regional basis; parking lots at SUMC have been made available to both hospital and university employees. For the SUMC project, the parking requirements are proposed to be “performance based” meaning that the required parking is based upon automobile parking counts rather than the strict ratios described in the municipal code. The total number of parking spaces proposed for the SUMC project is 2,985 spaces distributed in four parking structures within the SUMC project area. This number of parking spaces is greater than the requirements of the municipal code, which would require a minimum of 1,948 spaces.

At LPCH, automobile parking is available in a three-level parking facility below the hospital. A total of 430 parking spaces would be provided in this facility. Access would be from Welch
Road. Approximately 14 parking spaces would be provided at the Patient Transfer Deck with access from Quarry Road.

Approximately a total of 97 bicycle parking would be provided in two areas at LPCH - the Rainbow Garden off Quarry Road and in an area near the patient transfer and staff entrance. Of these 97 bicycle parking spaces, 89 will be short-term parking and 8 spaces will be long-term parking.

Protected Trees
As stated above, there are 31 protected trees within the LPCH portion of the SUMC Project. Of those 31 trees, 4 trees will remain, 11 are to be removed and replaced and 16 will be transplanted to other locations on the LPCH site (6 oak trees and 10 redwood trees) as shown in the project plans.

The applicant has requested the adoption of a new “Hospital” district that would encompass the entire SUMC project site, including the site of the LPCH expansion. As part of the new “Hospital” district regulations, there would be specific regulations for tree protection, removal and replacement that would exist only for the SUMC project. The intent of these new tree regulations is to acknowledge the unique conditions of the SUMC site and the proposed project, to protect unique tree specimens, and to permit removal, replacement and/or transplantation of trees that would be protected in other zone districts.

The 11 trees to be removed would be required to be replaced, as proposed, in accordance with the ratios set forth in Table 3-1 of the City of Palo Alto Tree Technical Manual (TTM) in order to maintain the appropriate landscape approach at the SUMC. The difference between the required tree replacement and the number of trees planted at SUMC 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 if appropriate replacement tree locations cannot be identified within the proposed “Hospital” district.

Design Guidelines and the Lucile Packard Children’s Hospital
The applicant has submitted, for preliminary review, proposed Stanford University Medical Center Campus Design Guidelines. The document sections include discussion on Site Design, Building Design and Connective Elements. The ARB will review the Design Guidelines in early 2011. Attachment C provides a summary of how the draft Guidelines relate to the proposed LPCH project.

Environmental Impact Report
The City has prepared an environmental impact report (EIR) for the SUMC Project. The Draft EIR includes an analysis of how development of the SUMC Project would affect the existing visual quality of the SUMC Sites and the vicinity. Visual quality pertains to how people see and experience the environment, particularly its visual character. The EIR identifies the following significant environmental impacts related to visual quality:

- VQ-2: Permanent Degradation of Visual Character Post Construction. The SUMC Project
as a whole would have a significant impact pertaining to degradation of the existing visual character or quality of the SUMC Sites and their surroundings, in that 1.3 million square feet of building floor area would be added to the medical center site and the overall height limit would be raised to 130 feet.

- VQ-3: Alteration of Public Viewsheds, View Corridors, or Scenic Resources. The SUMC Project as a whole would result in significant impacts on views, in that the additional floor area, massing and height could impact viewsheds protected under the Compressive Plan, such as the Santa Cruz Mountains, and view corridors such as Sand Hill Road and views from other public streets.

- VQ-5: New Sources of Light and Glare. The SUMC Project as a whole could increase light and glare nuisance from exterior lighting, resulting in a significant impact.

Implementation of Mitigation Measure VQ-2.1 from the Draft EIR would reduce Impacts VQ-2, VQ-3 and VQ-5 to a less-than-significant level. This mitigation measure requires compliance with ARB recommendations for final design.

**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 require 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 recommendations made by the ARB with respect to the design of the SUMC Project shall be implemented by the SUMC Project sponsors.

The Project applicant has submitted design drawings submitted for ARB review respond to each of the impacts identified in the Draft EIR:

- VQ-2: Permanent Degradation of Visual Character Post Construction. Compliance with VQ-2.1 would ensure that impact on on-site visual character and quality would be less than significant because the ARB’s recommendations, through the Architectural Review process, would address massing, layout, landscaping, and architectural design impacts from the SUMC Project.

The LPCH project has evolved through the preliminary review process to address building massing, site planning and layout, and landscaping concerns raised by the ARB. The draft Architectural Review findings in Attachment A describe how the project is appropriately designed to address the visual character impacts.

- VQ-3: Alteration of Public Viewsheds, View Corridors, or Scenic Resources. Compliance with VQ-2.1 would reduce impacts on views from the proposed buildings under the SUMC Project. The Architectural Review of the SUMC Project would
consider, among other factors, whether the SUMC Project has a coherent composition and that its bulk and mass are harmonious with surrounding development.

As stated above for VQ-2, the LPCH project has evolved through the preliminary review process to improve the composition of the massing elements, to ensure that existing natural features and significant landscape elements are preserved, that there is a harmonious transition in scale and character between land uses; and that there is an internal sense of order to create a desirable environment for patients, visitors and employees to LPCH.

VQ-5: New Sources of Light and Glare The mitigation measure requires compliance with ARB recommendations for final design and would reduce light and glare impacts from the proposed buildings under the SUMC Project. The Architectural Review of the SUMC Project would consider, among other factors, whether the SUMC Project incorporates quality materials, harmonious colors, appropriate ancillary features, a cohesive design with a coherent composition, and an appropriate lighting plan.

As stated above for VQ-2, the LPCH project has evolved to address exterior finishes, treatments, colors, and materials. The choice of exterior materials to be used throughout the façade would minimize excessive glare and reflectivity. The ARB would have an opportunity to review a detailed exterior lighting plan for LPCH at the point when it is more fully developed to determine consistency with the Architectural Review findings.

The preliminary review and study session process has resulted in changes from the originally proposed design that addresses the visual quality impacts identified in the EIR and summarized above. The staff recommends that the ARB find that the projects are consistent with the Architectural Review Findings in Attachment A. In addition, if the ARB finds that the project is consistent with the Architectural Review Findings, then the mitigations applicable to the LPCH project have been satisfied.

Under the California Environmental Quality Act (CEQA), the City of Palo Alto is required to respond to all comments raised during the public review period for the Draft EIR. The Final EIR is made up of the Responses to Comments document and any proposed edits to the language provided in the Draft EIR. The emphasis in the Responses to Comments document will be to provide clarification and further substantiation for the analysis and conclusions presented in the Draft EIR. Additionally, the responses shall seek to correct and remedy minor technical mistakes or errors identified in the Draft EIR.

Currently, the staff is in the process of preparing the Final EIR for the SUMC Project, which is expected to be released in early 2011. No formal recommendations by any board or commission may be made until the Final EIR has been released. The staff recommends that the ARB continue the review of the LPCH project until after the release of the Final EIR.

With the final review of the project, the ARB will need to find that the Project is consistent with the sixteen findings of approval. Staff’s recommended draft findings are contained in Attachment A. After the ARB has completed their preliminary review of each Project component, the
ARB’s final recommendations will be forwarded to the Planning and Transportation Commission and City Council for their consideration.

**Summary of Issues Identified by Urban Design Consultant**
The City’s urban design consultant, Bruce Fukuji, has provided comments on each of the Project components throughout this review process. His comments on the LPCH will be provided at the meeting.

**Green Building**
The LPCH Expansion Project is targeting LEED for Healthcare (LEED-HC) Silver certification equivalency. LEED for Healthcare, passed by member ballot on November 16, 2010, is designed to guide and distinguish high-performance healthcare projects, including inpatient and outpatient care facilities and long term care facilities. Information regarding LEED for Healthcare may be found at the U.S. Green Building Council’s website: www.usgbc.org.

Both the LPCH and the Stanford Hospital and Clinics have been tracking 15 “big sustainability ideas” throughout the design process, which include:

1. Alternative System Approaches to Reduce Energy Demand (Displacement Ventilation)
2. Passive Design Elements to Reduce Energy Demand
3. Maximize Daylight and Views
4. Healthy Materials - Develop Material “Precautionary List”
5. Site as Therapeutic & Restorative Tool
6. Restore the Landscape & Create Habitat
7. Rainwater Harvesting to Provide 100% Irrigation
8. Reduce Potable Water Use by at least 30% from BAU
9. Alternative Transportation & Active Living
10. Renewable Energy Sources
11. Local Materials - Regional Materials Sourcing
12. Sustainability Sourced Materials with Low Embodied Energy
13. Minimize Construction Waste
14. Optimize Indoor Air Quality
15. Learning - educate visitors by integrating sustainable design features into the patient experience

During the final review, the applicants will highlight the sustainable design aspects of the exterior façade, and explain how the skin system is integral to the Displacement Ventilation HVAC System.

**NEXT STEPS**
The ARB will review the other project components through December and January 2011. Staff will recommend that the ARB approve the LPCH project once the Final EIR has been completed. The meeting to review this recommendation is expected to take place in February, 2011.
The ARB’s recommendation on all of the project components will be forwarded to both the P&TC and City Council during the first half of 2011. The City Council will take action on these items after certification of the Final EIR.

ATTACHMENTS
Attachment A: Draft Architectural Review Findings for Approval
Attachment B: Conformance with Proposed “Hospital District” Site Development Regulations
Attachment C: Summary of Design Guidelines related to LPCH
Attachment D: SUMC Project Application Excerpt, including: Project Overview, Project Description, Comprehensive Plan Conformance, SUMC Design Intent, SUMC Applicant’s Objectives, Entitlements Request, Summary of the Tree Preservation Alternative, Fact Sheets and FAQ’s for the SUMC Project (separate attachment).
Attachment E: Drawings for the new Lucile Packard Children’s Hospital - LPCH (provided by Architects - Perkins + Will, ARB members only)

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LUCILE PACKARD CHILDREN'S HOSPITAL EXPANSION
COMMENTS TO THE PALO ALTO ARCHITECTURAL REVIEW BOARD

March 14, 2011

This memo summarizes my urban design comments regarding the Lucile Packard Children’s Hospital Expansion (LPCH) project as proposed in Stanford University’s 12/2/2010 final submittal to the Palo Alto Architectural Review Board.

1) Site Plan Evolves Stanford Campus Design

- The site planning for the LPCH expansion has significantly evolved from the initial proposal in August 2008, with further refinements since June 2010. The most significant improvement since August 2008 is the complete redesign of the building and site plan.

- The arrangement of the building massing and open spaces appropriately relate to adjacent sites.

- The key to LPCH success is dividing the building massing into two wings with a connecting core that links to the existing Children’s Hospital. The effect is to reduce the building mass and height at the intersection of Quarry Road and Welch Road. The two wings are off-set from each other in plan view. The Welch Road wing faces the street with an urban entry court. The Quarry Road wing is set-back from Welch Road, creating a significant open space at the intersection of Welch and Quarry Roads. This open space balances the open space of the Arboretum across Quarry Road, with a transplanted redwood tree landscape facing the Stanford campus. The offset building wings create an
interior courtyard adjacent to the existing Children's hospital. The courtyard offers light, air and a connection to nature through landscape design, enhancing both the existing and new facilities.

- Consolidating the Welch Road entrance drives on both sides of the street into a single intersection across from the Stanford Barn increases pedestrian, bike and vehicular safety. It also improves access to the Stanford Shopping Center across Welch Road.

- The site plan has arranged the building mass to minimize the perceived intensity of use of the site with a 98-foot building height (measured to parapet, not including mechanical screening).

- The proposed plans are consistent with City Comp Plan land use policy. The proposed project is a complete transformation of the physical environment from existing, auto-oriented medical office buildings and surface parking. The LPCH expansion will enhance the physical environment of the area as a well designed, attractive hospital and employment facility that contributes to shaping a distinctive SUMC district that contributes to the character of the city as a whole.

- The site plan is an evolution of Stanford campus design, taking an informal approach of integrating open space with building design in contrast to the formal approach of the Stanford quads as designed by Charles Allerton Coolidge.

2) Integration of Building and Landscape Design to Shape Healing Spaces

- The landscape is designed to create healing spaces. Healing is restoring the body, mind and spirit into balance to enable health. Connecting to nature and experiencing nature is highly restorative and balancing of one's well being. The building orientation and access facilitate connection to the outdoors. Both at the ground level entry lobby and the first level outdoor dining provide direct views and access to the outdoor gardens.

- The five gardens offer distinct landscape temperaments from public to more private, to bring a range of human needs into sympathy with the natural environment. The Rain Garden, Emerald Garden, Discovery Garden, Healing Garden and Rainbow Garden
feature the use of boundary and raised field planting, shade, color, and variety of native planting to create people places.

- The merging of the building and landscape is most significantly expressed with the chapel. The perimeter wall of the chapel spirals down from supporting the roof to enclosing a landscape wall with meditation niches.

- The restorative experience of landscape extends to the public realm. Pedestrian paths along Quarry Road bring people into nature as they walk through a grove of existing trees. Privacy is maintained by separating the path from the Emerald Garden by use of visually hidden ha-ha walls with raised landscape beds. These features draw people into the experience of nature, yet maintain privacy without visual disruption of the natural environment.

3) Visitor Entrance as Urban Experience

- The entry court provides and urban entrance to a vehicle drop-off and pick-up, without creating an auto dominated environment. The covered drop off, separate one-way drive aisles with a landscape storm water detention basin, and parallel parking along the median, avoid creating a front door parking lot.

- The entry court needs to add direct pedestrian access to the Quarry Road and Welch Road intersection, to reduce the walking distance to the main entrance.

- The pedestrian entry sequence continues the theme of the restorative power of the landscape. One arrives under a glass canopy that leads to a curving wall entrance with views to the Rain Garden and the Emerald Garden as one enters the building, blurring the distinction between indoors and out.

4) Staff Access as Restorative Landscape

- The staff access, with ample bike parking and pedestrian ramp up from the Marguerite Shuttle Stop reduces auto dependence by staff. The screen trees, staff garden, labyrinth and sloped planting reinforce the restorative power of connecting to nature, for staff use.
• Locating service drive and staff access off Quarry Road away from Welch Road reduces the visual impact and separates potential vehicular and pedestrian conflicts.

5) **Enhances Existing Children’s Hospital**

• The site plan locates the Discovery and Healing Gardens in view of the existing facilities, so that the visitors, patients and staff of the existing Packard Children’s Hospital have access at the 1st floor and visually benefit from the attractiveness of landscape design, and the design of the new building itself.