



3

LONG
RANGE
DEVELOPMENT
PLAN

FUTURE OUTLOOK - INFLUENCES OF CHANGE

Healthcare Trends

Although there is considerable uncertainty in how the healthcare environment will change, the following trends are discernable, reflecting a likely scenario of a mixed economy, slowing growth and modest health inflation.

Health Policy

- Government subsidies for the uninsured population (especially children)
- Balanced Budget Act relief through Benefits Improvement and Protection Act (BIPA) of 2000
- Regulation of pharmaceutical prices
- Compliance with Health Information Protection and Portability Act (HIPPA) regulations
- Potential restriction regarding moral/ethical issues such as embryonic stem cell research and cloning

Managed Care

- HMO's losing market share & enrollment
- Less risk contracts and capitation
- Market consolidation
- Improved provider contracts
- Federal increase in Medicare HMO reimbursement
- Addition of drug benefit program

Healthcare Delivery

- Fewer large, integrated delivery networks
- Increased physician consolidation
- Increased clinical centers of excellence
- Increased outsourcing (clinical activities as well as business and support services)
- Health programs developed specifically to meet the needs of ethnically diverse consumer groups
- Increased home-based and self-health models of care
- Emphasis on health promotion, alternative medicine and chronic care management

Utilization

- Reduced number of hospitals and beds
- Increased inpatient admissions (reversing a 15 year trend)
- Increased hospital use rates
- Higher acuity (sicker patients)
- Growth and shift to ambulatory care

Healthcare Consumers

- Informed consumers
- Population growth
- Aging of America (baby-boom)
- Focus on consumer satisfaction
- Philanthropy opportunities
- Design of "healing environments"

Technology

- Medical advances including genetic therapies, robotics, nanotechnology, biosensors, xenotransplantation, etc.
- E-health and Infomatics (web enabled systems, e-commerce, electronic medical records, clinical management systems, telemedicine, etc.)

Human Resources

- Labor shortages (nursing, physicians, etc.)
- Growth of healthcare unions

Financial Performance

- Financial marketplace uncertainty
- Continued financial constraints from Managed Care and Balanced Budget Act
- Cost pressures (labor shortages, increased wages, pharmaceutical costs, etc.)
- Increased focus on cutting costs and improving operational effectiveness

UCI Health Sciences Strategic Plan

The future outlook for UCIMC and the driving force behind this LRDP is the UCI Health Sciences Strategic Plan, developed in February, 1999. The Strategic Plan reinforces the interdependence between the College of Medicine and UCIMC, evidenced by the plan's inherent integration of research, education and patient care missions. The core assumption of the plan is that "achieving excellence is the only appropriate and acceptable expectation for any part of the University of California."

Mission

- The College of Medicine is dedicated to advancing the knowledge and practice of medicine for the benefit of society. This mission is achieved through programs of excellence in research, education, clinical care, and service to the public.
- The mission of the UCI Health System is to provide high quality patient care in a manner that supports the education and research programs of the College of Medicine.
- The College of Medicine and Health System act together as the UCI Health Sciences in advancing the research, education and patient care missions.

Vision

- To be a major contributor to UCI's vision of an institution of national and international research stature.
- To solidify its national ranking and reputation for innovative medical education and as a leading institution in primary care education.
- To be the pre-eminent tertiary care provider in the Orange County region, with an enhanced network of clinical relationships and improved financial performance, in support of the College of Medicine.
- To operate with positive cash flow and positive cash balances and be a financially sound organization.

Key Strategic Plan Initiatives

Research

- Increase sponsored research funding.
- Recruit new research faculty.
- Increase the sponsored research funding of current faculty.
- Build two new research buildings (main UCI campus).
- Focus research efforts in Neurosciences, Cancer, Genetics, and Immunology/ Infectious Disease.

Education

- Protect financial resources for education programs.
- Continue to implement a set of innovative and progressive education programs.
- Focus on primary care education, while building excellence across a range of specialty programs.
- Focus accountability for graduate medical education programs.
- Continue the process of focusing on UCIMC and Long Beach VA as the primary clinical affiliates of the College of Medicine.

Clinical

- Recruit new clinical faculty in high priority clinical program areas.
- Expand the clinical base through network relationships and geographical expansion.
- Improve customer service for patients and referring physicians.
- Promote common standards and accountability for performance across the faculty through a more effective faculty practice organization.
- Improve core operational infrastructure at the Medical Center.
- Reduce annual operating expenses.
- Improve the payor mix with a focus on the senior population. FY 2000 discharges were distributed as follows: Medi-Cal=38%, County Indigent=9%, Medicare=13%, HMO/PPO contracts=27%, Self-Pay=9% and other reimbursement=4%. Source: The Camden Group and OSHPD.

Impact to the LRDP

The LRDP is directly affected by many of the initiatives in the Strategic Plan. Facilities will need to accommodate expected future growth such as additional faculty, increased service volume, and increased research funding. Also, by providing the appropriate physical infrastructure and environment, the LRDP can be instrumental in helping to achieve strategic goals by promoting faculty recruitment, facilitating operational re-engineering, supporting implementation of innovative education programs, aiding in the ability to increase research funding and overall, helping to shape the image for UCI Health Sciences.

Community Environment

Population & Growth

Orange County is anticipating nearly a 17.2% population growth, with approximately 3.3 million residents by the year 2020. The four major cities in UCIMC's primary service area (Orange, Anaheim, Garden Grove and Santa Ana) expect to grow at a slower rate than the County and all but Santa Ana anticipate slower growth than experienced during the 1990's.

Ethnicity

The proportion of Whites (Non-Hispanics) in Orange County is estimated to decrease by 14%, while all other ethnic groups are expected to substantially increase. The group showing the greatest percent increase is African American at 71% growth, followed by Hispanics at 54% growth and Asian & Pacific Islander at 30% growth. Collectively, the cities of Orange, Anaheim, Garden Grove and Santa Ana will remain more ethnically diverse than Orange County with a majority of residents being either Hispanic or Asian/Pacific Islander.

Age

As a result of the Baby Boom generation, the 55-64 and the 65-74 age groups are expected to experience the greatest growth, 94% and 96% respectively. The 15-24 and the 75+ age group will also experience considerable growth. Several age categories are expected to decrease including the 8% drop in the 0-4 group and the 11% decline in the 25-34 group.

Table 11: Future Population (2020)

	2000	2020	% Growth
State of California	32,521,000	43,442,000	33.6%
Orange County	2,853,757	3,343,829	17.2%
City of Orange	129,400	140,674	8.7%
Anaheim	310,654	350,998	13%
Garden Grove	158,300	173,374	9.5%
Santa Ana	317,700	350,172	10.2%

Source: U.S. Census Bureau & Center for Demographic Research, CSUF

Table 12: Future Ethnicity in Orange County (2020)

	2000	2020	Delta 2000 - 2020
White, Non Hispanic	54%	40%	-14%
Hispanic	30%	41%	54%
Asian & Pacific Islander	13%	15%	30%
African American	2%	3%	71%
Other Races	<1%	<1%	14%

Source: Center for Demographic Research, CSUF

Table 13: Future Age Distribution in Orange County (2020)

Age	2000	2020	Delta 2000 - 2020
0 - 4	8%	6%	-8%
5 - 14	15%	13%	-2%
15 - 24	12%	14%	30%
25 - 34	16%	13%	-5%
35 - 54	31%	24%	-11%
55 - 64	8%	14%	94%
65 - 74	5%	9%	96%
75 +	5%	7%	60%

Source: Center for Demographic Research, CSUF

Surrounding Areas

Future Development

Currently in the planning phase are two development projects that may impact UCIMC.

First is the Chapman Avenue development project, a 6-story, 132,000 sq. ft. office building and a 5-level 528 space parking structure. This project is located at the northeast corner of Chapman Avenue and Manchester Place and is 5.14 acres in area. This area is presently used for employee parking for UCI Medical Center.

Second is the City Tower development project, a 24-story, 465,000 sq. ft. office building and 8-level, 2,360 space parking structure. The City Tower project is located on the west side of The City Drive, approximately 500 feet south of Chapman Avenue, and is approximately 5.4 acres in size.

UCI MEDICAL CENTER

LRDP Concepts

Planning concepts for the 2003 LRDP are an integration of pertinent elements from previous planning efforts and new concepts based on expected future conditions. These expected future conditions reflect many factors, including healthcare trends, city, county and surrounding area influences, the UCIMC Health Sciences Strategic Plan, existing site/facility deficiencies, sound planning principles and design goals.

Continuation of Previous Concepts

- Flexibility - Develop a flexible physical framework to accommodate appropriate building siting, circulation, and infrastructure.
- Land use zones - Continue to concentrate functionally common services together into defined zones. This supports key adjacencies, allows efficient utility infrastructure, and provides flexibility for program growth and contraction.
- Location of zones - Patient care services (especially ambulatory care) to be at the front of the site for convenience and accessibility.
- De-intensification - Reduce the intensity of use for the oldest buildings and construct new, highly flexible building types to house those users requiring the most intensive space (building infrastructure).
- Consolidation - Regroup fragmented services to provide appropriate relationships and use.

- Circulation - Improve site circulation by developing a clear loop road vehicular system that provides access to all zones.
- Parking - Locate parking structures outside the loop and near the uses they serve.

New Concepts

- Academic Character - Enhance the environmental character of the campus as an academic center through the use of formal building relationships, courts, pedestrian elements, etc. Refer to the next section for design concepts.
- Density - Increase the site density to an urban scale so as to provide needed expansion, increase open space and improve site organization.
- Proactive Replacement Strategy - Plan for future development by creating land banks. Remove buildings that are outdated and, as much as possible, tie new building projects with demolition. This is especially important when open land on the campus is at a premium. This strategy reduces interim relocations and operational fragmentation.
- Plant / Utility Infrastructure - Strategically locate service facilities and distribution paths so that utility systems are provided in an efficient, yet flexible manner. Refer to Plant / Utility Infrastructure section for details.
- Pedestrian Orientation - Instead of creating one spine within a cluster of buildings as earlier master plans suggest, create a network of multiple pedestrian paths to help unify the entire campus.

Planning Concepts

The University of California, Irvine Medical Center is a premier academic medical center providing world-renown research, teaching, and patient care. The benefit UCIMC has to society is invaluable and all aspects of the medical center, including the design of the campus, must reinforce its basic values.

The vision for UCIMC is that of *“a unified academic campus that provides a timeless response to human nature yet signifies a sense of time and place”*. The vision embodies the mission of UCI Health Sciences by combining knowledge from the past (teaching) with advancement into the future (research), all for the health and well-being of people today (patient care).

The following are key design elements that will help establish a physical planning framework to create an image identifiable with UCIMC as a leading academic medical center.

Campus Unification

The campus is currently comprised of a mismatched collection of buildings with various architectural expressions and little relationship to one another. Transformation is needed to tie the campus into a cohesive whole. Unification is not intended to mean “the same”. It is intended to imply a relationship between elements, through the use of physical properties, symbolic connections and experiential responses.

As previously discussed in this report, changes in the vehicular and pedestrian circulation to provide access to all site zones will help unify them. In addition, planning elements should be implemented to further unification such as:

- Related architectural language (building forms, mass, imagery)
- Common palette of materials, colors and finishes (for buildings, hardscape, etc.)
- Consistent landscape program

Design for Health & Healing

Changes in the healthcare industry are dramatically transforming the physical character of medical centers. Today, health care has become increasingly consumer-oriented with a focus on prevention and wellness and creation of healing environments. Design must be sensitive to the physical condition and psychological state of patients, families, and all care providers. Design elements that have been shown to have a positive affect on health and healing include:

- Natural light and views with connection to outdoors
- Comfortable, accessible, well-signed walking paths
- Places for rest and reflection - connecting gardens/open spaces
- Colors that universally tend to calm and soothe
- Non-institutional materials and finishes
- Control of sound and noise
- Privacy, independence, and control of one's environment

The New University Hospital

The New University Hospital will blend the healing, teaching and research missions of UCI Medical Center to provide state-of-the-art care in a patient focused setting to better serve our community.

The following five guiding principles were adopted to be addressed at all levels of scale throughout the development of the New University Hospital:

- Create a patient-focused, healing environment
- Integrate patient care, teaching, and research
- Design exceptional specialty care facilities that are second to none
- Incorporate advanced technology
- Establish an architectural landmark for Orange County

Design for the Academic Environment

The physical environment of the campus can be enhanced to reflect the academic character through the use of the following design elements:

- Campus unification
- Timeless architecture
- Formal building relationships
- Clear building and site order
- Hierarchy of buildings and space
- Scale and proportion
- Campus "quadrangles" and open space
- Courts, plazas, gardens and other landscape elements
- Pedestrian pathways, lighting and furnishings

Timeless Architecture

Design that is intended to be an icon in the community for decades should not be comprised of architectural features that are trendy, momentary, and easily identified with whatever is currently popular. In its best manifestations, architecture is vital, and exploratory in terms of technical innovation, reflects important social and cultural tendencies, and embodies (or challenges) our most deep-seated values and aspirations.

Architecture that stands the test of time tends to appropriately respond to the following:

- Universal limits such as the physical properties of materials, the laws of physics, and the geometry of forms.
- Universal proportions
- Scale and rhythm
- Environmental sensitivity for the ground/earth, the sky, and weather/climate conditions.
- A sense of time and place can give identity by providing context of community and culture.
- Permanence and tradition within an image that also conveys modern, cutting edge medicine

Landscape Framework

Design Principles

Successful campus planning, especially in an urban environment, is greatly influenced by the treatment of landscape elements. Outlined below are key design principles that should be used as a basis for decisions regarding future landscape development at UCI Medical Center.

- Promote a healing environment by emphasizing landscape elements
- Develop more open space
- Use hierarchy and scale to establish order and improve site organization
- Create a visually unified campus by using a common palette of landscape elements
- Enhance UCI's image and identity



Entries and Edges

Proper use of landscape elements at campus entries and along predominant edges is essential to establishing an appropriate image for UCI and the surrounding community. The front of the campus, extending along The City Drive, should be the most "designed" edge by having a formal landscape arrangement. The site perimeter at Chapman Avenue is also an important edge due to its high visibility yet landscaping in this area should not compete with the primary campus front at The City Drive. The main entry to the campus is to remain at Medical Center Drive and should be landscaped as the main focal point along the perimeter.

A major challenge at UCI is to develop a landscape plan that mitigates noise, vehicle emissions, and visualization of heavily traveled vehicular routes surrounding the campus. Landscape buffer elements along the perimeter should be focused on the east edge of the site at the I-5 Freeway, the west edge at The City Drive and the north edge at Chapman Ave. The design should provide needed buffering yet not limit visibility of key entry points.



Open Space and Quads

The provision of open space within an urban setting, especially for an academic healthcare campus, is of critical importance. Open space at UCI should become the primary organizing element and help to enhance order, aid in wayfinding, provide relief from an ever-increasing density of buildings, and focus the overall site design on health and well-being. Open space should be located in each of the three primary sectors and Medical Center Drive shall be reinforced as the most predominant open space on campus.

Formal quads should be developed within each of the sectors and designed with their own unique identity yet with a similar landscape palette for campus unification. Special paving and ground treatment should be utilized.

Unique landscape elements or "landmarks" should be used to reinforce the built environment by distinguishing specific areas on the campus such as at the north, south and east quads. Effective landmarks may include water elements, trees, flower gardens, sculpture, and other distinctive elements.



Vehicular Roadways

Primary public/patient vehicular paths within the campus should have landscape elements of a larger scale (such as tall trees) and be more formally designed than surrounding secondary roadways. The primary circulation loop road should be treated in a uniform fashion to aid in wayfinding and to provide campus continuity. However, Medical Center Drive, the most significant component of the roadway system, should include unique landscape elements such as accent paving, special lighting fixtures, etc.

Pedestrian Pathways

An important component of the overall landscape plan is the development of a well-designed pedestrian corridor system that connects all campus sectors together. Pathways should be clearly defined, direct, utilize smaller scale planting, and provide easy wayfinding by having good directional signage and special landscape elements at key intersections. Pedestrian paths should also be especially sensitive to the medical conditions of patients visiting the campus by using shade trees, having areas of rest, and providing materials that are easily traversable.



Future Land Use

Figure 16 illustrates the LRDP Zoning. Although all LRDP uses will fall under one general land use designation "Academic Medical Center", specific planning zones have been established to guide the siting of future facilities, manage land use intensity, and plan for long term infrastructure needs. The site is divided into three planning zones: the north sector, south sector and east sector. Permitted uses and land use intensities are identified for each sector. Aggregate development within the three planning zones will not exceed the LRDP development program identified in Table 14. Service uses and parking as described in the overall LRDP program will be distributed throughout the three sectors to support these uses.

Functional Use Categories

- Inpatient Care: Includes all inpatient treatment facilities such as hospital and neuropsychiatric facilities.
- Ambulatory Care: Includes all outpatient services including primary care, cancer care, occupational therapy, dialysis and diagnostic services.
- Instruction / Research: Includes all academic functions such as academic offices, teaching/instruction, research labs, classrooms and libraries.
- Administrative: Includes general administrative uses, medical office and general office space.
- Service: Includes service support uses such as central plant, electrical facilities, linen, materials mgmt and waste mgmt.
- Parking: Includes on-site surface parking, parking structures and other infrastructure to support site parking and transportation.

Permissible Uses

Identifying permissible uses for each zone provides UCIMC the flexibility to situate facilities in the appropriate location on campus as functional requirements and service delivery models demand.

<u>Zone</u>	<u>Permissible Use</u>
North Sector:	Inpatient Care Ambulatory Care - shared inpatient/outpatient operations Instruction - requiring clinical interface Research - clinical research Administrative - requiring clinical interface Service - requiring inpatient interface Parking
South Sector:	Ambulatory Care Instruction - requiring clinical interface Research - clinical research only Administrative - requiring clinical interface Service Parking
East Sector:	Instruction / Research Administrative Service Parking

Allowable Intensities

To accommodate UCIMC's anticipated growth of more than a 100% increase in space, the intensity on the site needs to substantially increase. Density, allowable area (square feet) and building height guidelines are identified for each functional zone in order to realize the space demand of 1.9 million square feet as well as to achieve other campus design goals such as increased open space, improve site organization, and increased parking.

- North Sector: Allowable area of 955,277 sf. High Density. Average 6-8 levels.
- South Sector: Allowable area of 441,699 sf. Low and Medium Density. Average 4 to 5 levels. Service buildings have unique facility requirements.
- East Sector: Allowable area of 505,073 sf. Medium Density. Average 4 to 5 levels.

University of California Irvine Medical Center
Long Range Development Plan

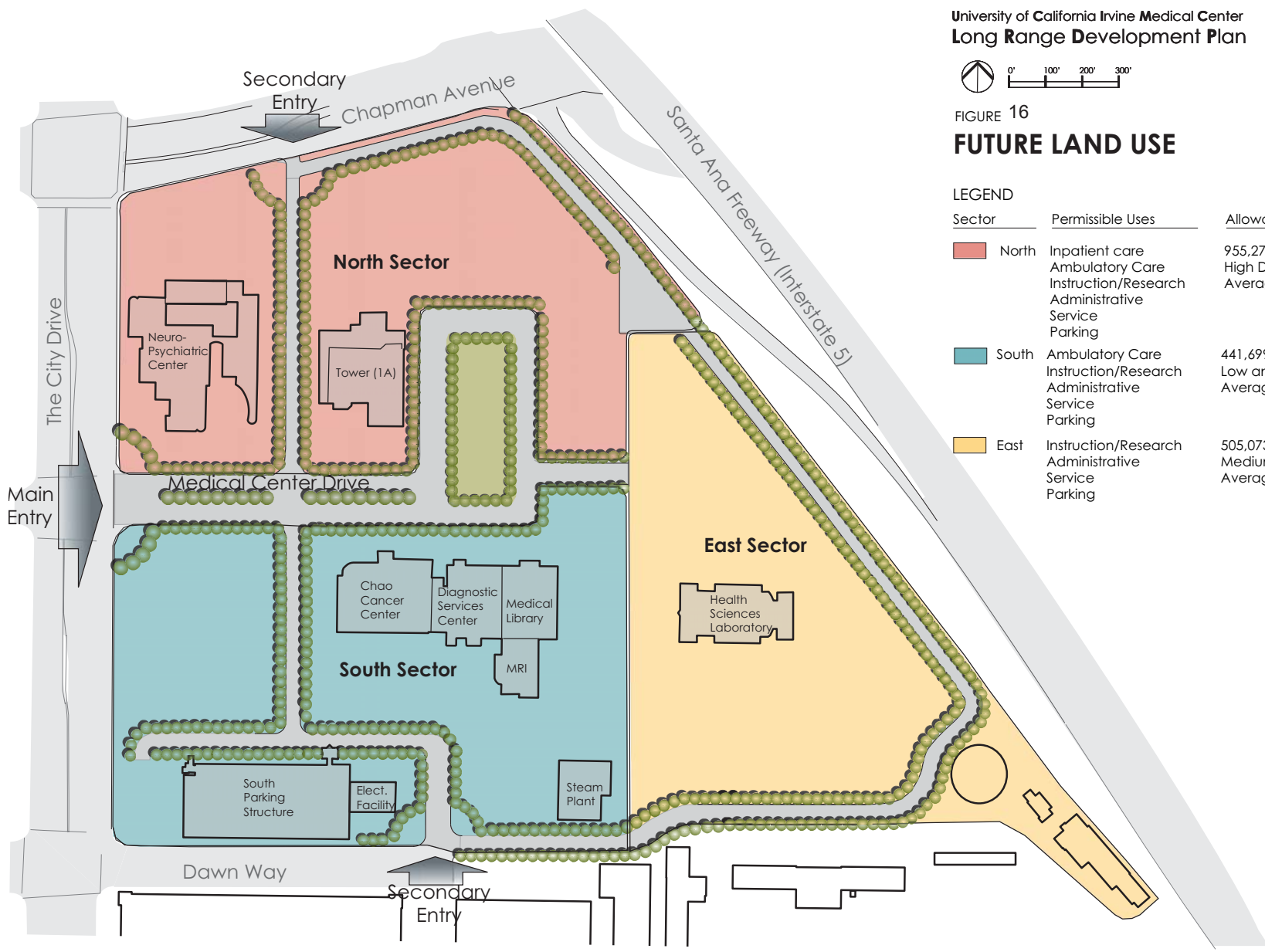


FIGURE 16

FUTURE LAND USE

LEGEND

Sector	Permissible Uses	Allowable Intensities
North	Inpatient care Ambulatory Care Instruction/Research Administrative Service Parking	955,277 sf High Density Average 6 - 8 levels
South	Ambulatory Care Instruction/Research Administrative Service Parking	441,699 sf Low and Medium Density Average 4 - 5 levels
East	Instruction/Research Administrative Service Parking	505,073 sf Medium Density Average 4 - 5 levels



Facility Space Use

Inpatient Services

Hospital activities are expected to increase considerably in the future, growing from 391 beds and 374,695 gsf to 527 beds and 955,277 gsf. Growth in the number of beds and related services is primarily due to:

- City and County influences (population growth and aging)
- Marketplace influences (reduced number of hospitals and beds, increasing hospital use rates and admissions, and higher patient acuity).
- UCIMC Health Sciences Strategic Plan initiatives (focus on tertiary care, centers of excellence, increase the number of faculty, etc.).

The amount of space required in the future (ratio of area per bed) will increase substantially due to:

- New healthcare delivery models
- New code requirements and emphasis on life-safety
- Response to consumer demands for private patient rooms, family accommodations, etc.

In response to Senate Bill (SB) 1953, which requires all general acute care facilities to comply with specific seismic requirements, Building 1 is planned for replacement. Building 1A and Building 3 are to remain over the planning horizon. Services supporting the hospital that are currently located in Buildings 2 and 10 will need to be relocated due to demolition for the replacement hospital project.

Ambulatory Care Services

Ambulatory care services are also expected to significantly increase in the future, growing from 272,000 annual visits (1999) and 167,633 gsf to 550,000 annual visits and 380,837 gsf. Growth in visits is primarily due to:

- City and County influences (population growth and aging).
- Marketplace influences (shift to ambulatory care setting to reduce costs, emphasis on health prevention).
- UCIMC Health Sciences Strategic Plan initiatives (focus on primary care, increase the number of faculty, etc.).

In the future, the Orange campus is expected to remain as the "hub" for outpatient services with a majority of visits concentrated on-site and supplemented by additional primary care centers in the community. The Orange campus is an important location for outpatient services due to the following:

- Provides the community easily accessible, comprehensive services in one location.
- Provides the critical relationship between outpatient, inpatient and research facilities that are necessary for the multi-responsibilities of faculty.
- Fosters multi-disciplinary activity and interface that promotes teaching and learning.

Of the ambulatory buildings currently onsite, only the Cancer Center, the Diagnostic Services Center, and the MRI Building are planned to remain over the planning horizon. The other facilities that have received fair to poor evaluation ratings are planned to be replaced to provide the sites needed to accommodate expected growth of outpatient services at appropriate density.

Table 14: Future Space Use (Summary)

Service	Volume Projections	Space Demand (GSF)	Area to Remain (GSF)	Space Deficiency (GSF)
Inpatient Care	391 Beds to 527 35% Growth	955,277	182,463	772,814
Ambulatory Care	272K Visits to 550K 102% Growth	380,837	60,837	320,000
Academic / Research	53% Growth in SF	405,073	133,494	271,579
Administrative / Service	55% Growth in SF	160,862	13,668	147,194
Total	109% Growth in SF	1,902,049	390,462	1,511,587

Instruction / Research

Academic and research functions are expected to increase in the future, growing from 264,203 gsf to 405,073 gsf. Growth is primarily due to the UCIMC Health Sciences Strategic Plan to increase faculty and research investigators and to provide state-of-the art facilities to support their activities.

All academic and research facilities, except the newly constructed UCI Health Science Laboratory, received fair to poor evaluation ratings and are planned to be replaced over the planning horizon to provide the sites needed to accommodate expected growth at appropriate density.

Administrative/Service

Administrative/service functions are expected to grow 55% over the planning horizon from 103,833 gsf to 160,862 gsf as a result of increases in inpatient, ambulatory, and academic/research activities.

These facilities will include administration, departmental offices, planning & development, volunteer services, childcare services, facilities services, steam plant, electrical, and storage.

None of the on-site buildings that currently house administrative functions are expected to remain over the planning horizon. Service buildings that are anticipated to remain include the Steam Plant, the Primary Electrical Facility, Building 59, and Building 76. The off-site service center (materials management warehouse) will remain off-site since on-site space is at a premium and current operations are generally efficient. However, on-site materials management, currently in Building 25, is planned to be located within the new replacement hospital due to code requirements and the need for critical access to supplies.

Refer to the Appendix for detailed Future Facility Space Use.

Transportation, Circulation & Access

Public Transportation

Public bus service for the Medical Center is currently provided by the Orange County Transportation Authority (OCTA). The development of a light rail transit system, the Centerline, along The City Drive has been under consideration, however due to lack of consensus among surrounding cities, plans for a mass transit system in this area are on hold indefinitely. A shuttle bus to and from the UCI campus is available for faculty, staff, and students.

There are no other documented plans for major changes to adjacent public transportation or roadway improvements.

Vehicular System

Primary access onto the site will continue to be The City Drive to Medical Center Drive. This will provide immediate access to all patient care facilities. Dawn Way will continue to be used for patient/visitor/staff parking and service vehicle circulation. Chapman Avenue will be used for limited service vehicle access to the hospital (for material management functions) as well as continuing to be used for emergency vehicle access.

A key element for future on-site vehicular circulation is a loop road system providing convenient access to all zones (north, south, and east sectors). This loop road will link all zones together and provide access to parking structures around the perimeter of the road. The loop road will also improve site circulation in the back of the site where access is currently circuitous.

Patient Care Vehicular Access

Medical Center Drive is to provide direct drop-off and pick-up access to all of the inpatient and ambulatory care facilities within the north and south sectors. Easy access is to be provided from patient drop-off and pick-up to parking structures.

Emergency

The public access route for emergency services will be via the main campus entry along Medical Center Drive. Ambulances and other emergency vehicles will access the campus from Chapman Avenue since it has the most direct route to the Emergency Department. A dedicated drive shall be considered for rapid access in and out of the site.

Pedestrian Circulation

The development of pedestrian pathways is an important element in improving the overall site circulation. A pedestrian network will be used to unify the campus and tie together all land use zones, with special attention to paths connecting buildings to parking structures.

Existing north-south paths currently established should be emphasized. This includes 1). The primary route from the south parking structure through the south sector and up to the north sector; 2). Redevelopment of the north-south path within the east sector.

Existing east-west pathways located in the southern portion of the site should extend from the south sector to the east sector. This, along with several new east-west paths at the northern portion of the site, will help connect buildings together and unify the campus.

Planning Framework

In order to guide the future siting of facilities and ensure that the Medical Center is redeveloped in a cohesive manner, the LRDP establishes a planning framework to organize the site, identifies planning zones to guide the siting and design of facilities, and establishes general design principles to guide the design of future buildings.

Figure 17 illustrates the LRDP Planning Framework including the identification of entries, public open space, landscape framework, edge buffers, vehicular circulation, pedestrian circulation, and building opportunity sites. Future facilities will be planned within this framework to ensure the cohesive redevelopment of the site and establishment of a high quality physical environment. Certain elements of this framework exist today and will be strengthened through implementation of the LRDP.

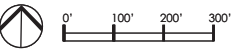
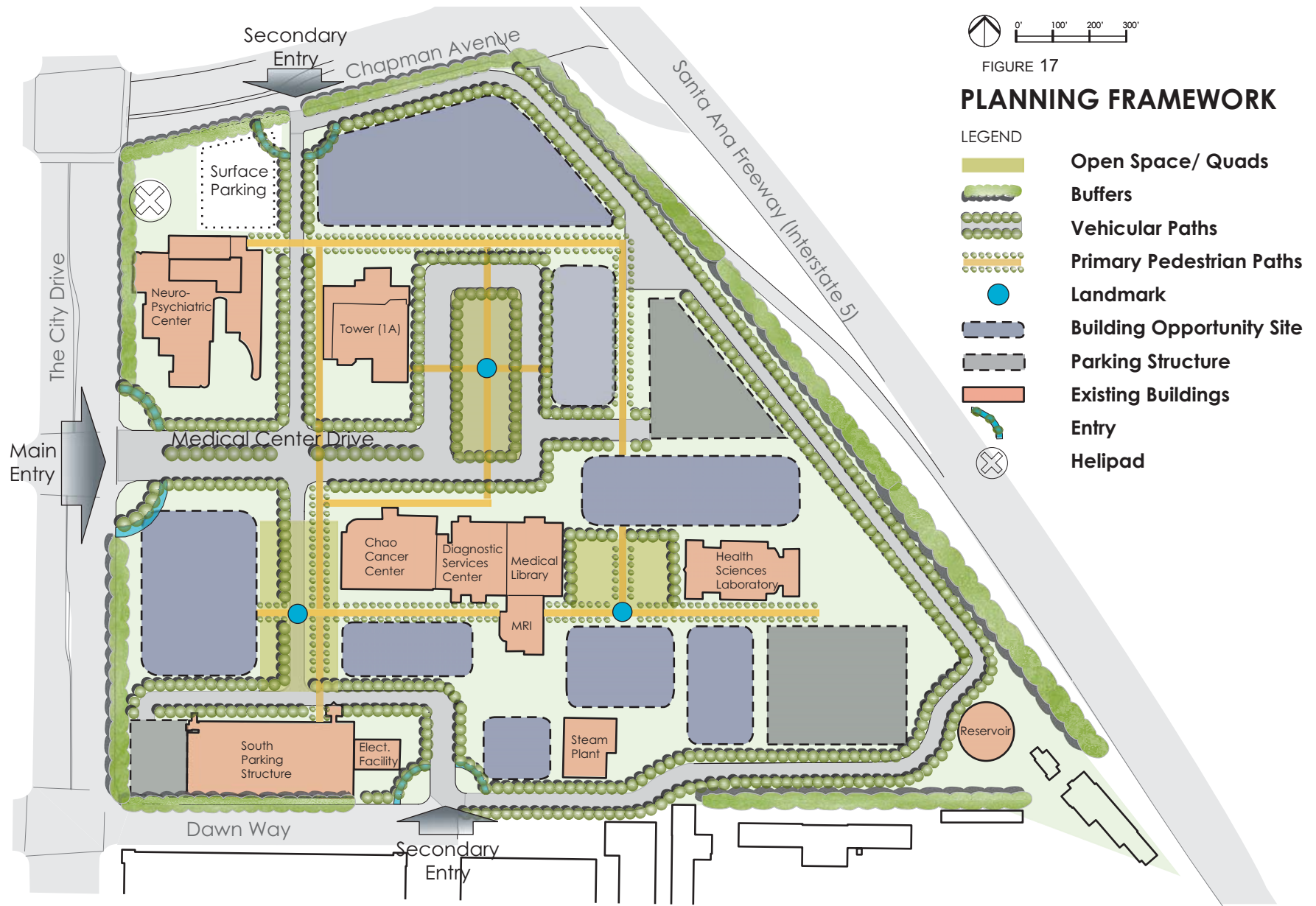


FIGURE 17

PLANNING FRAMEWORK

LEGEND

- Open Space/ Quads
- Buffers
- Vehicular Paths
- Primary Pedestrian Paths
- Landmark
- Building Opportunity Site
- Parking Structure
- Existing Buildings
- Entry
- Helipad

Future Parking

The goal of the LRDP is to provide an adequate parking supply on site to meet the projected demand.

Parking Demand

LRDP parking projections are based on current use rates by functional categories (i.e., Inpatient Care, Ambulatory Care, Academic/Research, Administrative and Service) and are applied to future allocations by functional categories within the LRDP space program of 1,902,049 gsf.

The total parking demand for the planning horizon is a maximum of 4,200 spaces, excluding the off-site Building 200 and the Service Center Warehouse. The 4,200 spaces represent an increase of nearly 70% from the 2,465 that currently exist.

Parking Goals

The following are key LRDP parking objectives:

- Maximize on-site parking without compromising the growth of future buildings and the quality of the campus.
- Parking for patients and visitors to be visible, easily accessible, and close to the facilities they serve.
- Minimize the amount of traffic through the middle of the site.
- Provide adjacent controlled parking for the Emergency Department.
- Parking for staff can be remotely located.

Table 15: Future Parking

	Existing Area (GSF)	Existing # of Spaces	Projections	Future Area (GSF)
On Site				
North Parking Structure	87,000	318	318 Spaces to 0	0
South Parking Structure	182,200	675	675 Spaces Remain	182,200
Surface (Med Center)		597	597 Spaces to 575	0
New Parking Structure(s)			0 to 2,950	1,032,500
Subtotal	269,200	1,590	1,590 to 4,200	1,214,700
Off Site				
200 Building (Surface)		Not Included	N/A	
Warehouse (Service Center)		Not Included	N/A	
County Lease (Up in 2004)		375	375 Spaces to 0	
Manchester Lease (Monthly)		500	500 Spaces to 0	
Subtotal		875	875 to 0	
Total		2,465	2,465 to 4,200	1,214,700

- Utilize free-standing parking structures due to cost advantages.
- Plan for continued use of UCIMC's valet and shuttle service.

Parking Plan

Three (3) primary areas for parking structures have been identified to accommodate parking demand. These include and are illustrated in Figure 13:

- Area A in the South Sector - This location is along the perimeter of the site and provides excellent accessibility to outpatient facilities. This structure should be reserved primarily for patients.

- Area B in the East Sector - This location provides good access to inpatient, teaching, research and administrative facilities but it should be used primarily for hospital patients and visitors. It is critical that the location of parking structure(s) in this sector does not limit future inpatient expansion. More than any other functional category, expansion for inpatient services requires immediate adjacencies and connections to other hospital facilities.
- Area C in the East Sector - Located at the back of the site, it will be used primarily for staff and physicians. It will not be used for patients and visitors since it is remote from patient care facilities. This location can accommodate a sizable and cost effective parking structure.

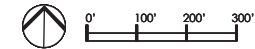
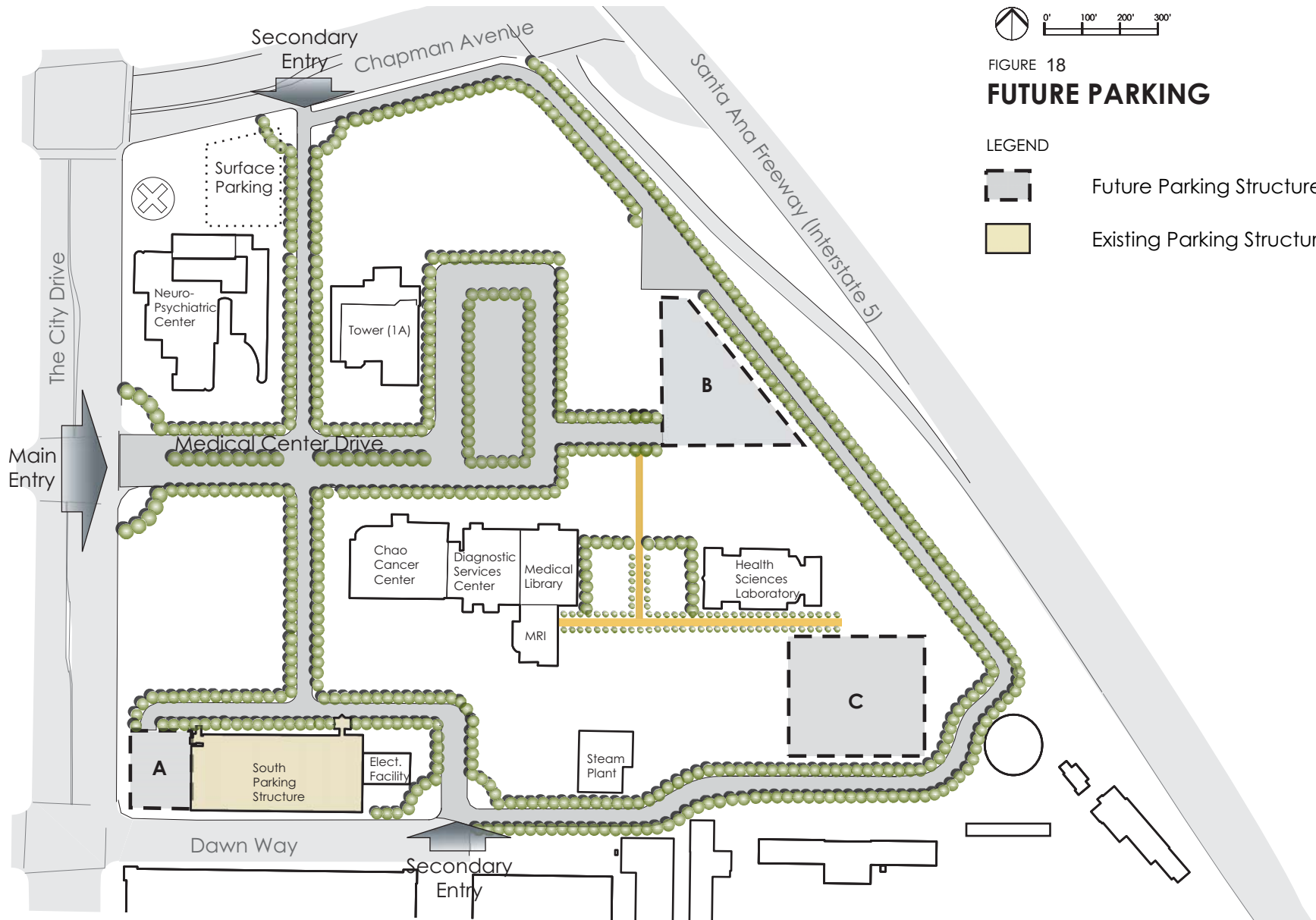




FIGURE 18
FUTURE PARKING

LEGEND

-  Future Parking Structure Sites
-  Existing Parking Structure

Plant / Utility Infrastructure

Key Concepts

The primary land planning objective for central plant/utility infrastructure is to strategically locate service facilities and distribution paths so that utility systems are provided in an efficient, yet flexible manner.

The service zone is to become the central point of service for chilled water, soft water, steam, and emergency power for the entire campus. The existence of functional zones (i.e., inpatient, ambulatory, academic/research / admin, service) allows utility service to be optimized by separately feeding each zone. Separating the inpatient zone limits more stringent hospital building requirements to that zone. Separation of other zones allows more efficient sizing of services.

Steam Plant

The existing steam plant will continue to serve the entire campus. There is current excess capacity and room to accommodate a future boiler if needed.

New Central Plant

Existing plant services will be supplemented with a new central chiller/emergency generator plant which will provide cost-effective utility service for the campus.

Future plant facilities will be located within the current service zone, next to other service buildings. This location improves operations by grouping services together, minimizes disruption, and can be easily expanded in the future, including tying into a possible future co-generation plant that is under consideration.

The new plant and subsequent additions are to be configured so the plant can be easily expanded in the future as new development is implemented.

Electrical Power

Electrical power for the campus is to be provided by a combination of the existing Primary Electrical Facility (Building 32) and a new plant to be located immediately adjacent. Emergency power, currently supplied from Building 32, is to be phased out over time to instead be provided from the new plant. Building 32 shall, however, continue to supply a majority of the campus' normal power with the exception of inpatient facilities. In the future, inpatient facilities will be served via a sub-station off of Chapman Avenue. This location will provide more efficient service since future inpatient facilities are expected to remain in the northern portion of the site and distribution distances from the point of service will be reduced.

Distribution System

Distribution paths will use the existing utility tunnel and/or follow the primary vehicular circulation loop road system that is developed for the LRDP. Having utilities follow the loop road system provides a path that will not be compromised by the construction of future facilities.

Medical Gases

Medical gases are to be decentrally located in the northern area of the campus since the hospital is the primary user.

Natural Gas

The site infrastructure for natural gas is capable of supporting future increases in the LRDP space program, but improvements will be necessary to extend service to the building points-of-connection.

Water

The site infrastructure for domestic water is capable of supporting future increases in the LRDP space program, but improvements will be necessary to extend service to the building points-of-connection.

Sanitary Sewer

The site infrastructure for sanitary sewer is capable of supporting future increases in the LRDP space program, but improvements will be necessary to extend service to the building points-of-connection.

Storm Drainage

On-site storm drains will be upgraded as a part of future facility development projects.

IS/Communications

To accommodate the transition to digital imaging, electronic medical records, and other applications in healthcare, the campus network speeds will be upgraded by using single mode fiber truck lines. A ring (loop) configuration will also be developed to provide critical redundancy for both network and phone service.