UCI Naturescape Advisory Committee

Background Information

UCI’s existing open space network is identified in the 2007 UCI Long Range Development Plan (LRDP). The LRDP describes UCI’s vision, planning goals, and land resources for campus open space. The LRDP open space element was informed by recommendations of a faculty/staff committee (Chancellors Advisory Committee Physical Resources Subcommittee) which provided recommendations in 2004 on land use and open space strategy and planning goals. The CAC Subcommittee recommendations (Attachment A) included the concept of a linked network of open spaces to serve the campus including developing a main campus botanical garden and trail systems to link campus open space areas, which were adopted as concepts in the 2007 LRDP. (Figures 5-6 & 5-10)
1. LRDP Open Space Element

Planning Objectives:

1. Dedicate and manage open space to provide visual relief, buffer development, and promote active and passive recreation.

2. Preserve and enhance significant habitat resources.

3. Encourage environmental enhancement, including promotion of water resource and water quality systems.

4. Provide a network of open space corridors to link the campus community with connections to the regional open space network.

5. Develop a linear arboretum and trail systems to link the Academic Core and the South Campus.

6. Develop a network of pedestrian trails in campus open space areas to encourage passive recreation.

Open space plays a vital role in university life and in the educational experience at UCI. Due to Southern California’s Mediterranean climate, outdoor activity occurs virtually year-round on the campus, and the availability of open space is essential. In addition, open space is a major determinant of UCI’s visual structure and image. The spatial distribution and interconnection of open spaces work together to form a system that has a powerful effect on the visual cohesion of the campus, whether developed through landscaping or left in a natural state.

The 2007 LRDP identifies an open space network consisting of interconnected parks, athletic fields, recreational facilities, trail systems, open space corridors, community gardens, and habitat areas (see Figure 5-10). Under the plan, approximately 415 acres, or 28 percent, of the UCI campus, will remain as open space. Aldrich Park forms the central open space feature of the campus. This 16-acre park contrasts with the densely built Academic Core and provides a venue for passive recreation. Permitted uses within Aldrich Park are limited to open space; pedestrian and bike trails; water features, public art, and other landscape elements; and small dining and seating amenities. At the perimeter, academic facilities will be designed in a manner that engages the park and encourages visual and social interaction consistent with campus goals.
The open space network within the Academic Core radiates from Aldrich Park and consists of an interlinked system of tree-lined pedestrian malls and public spaces, small gardens and parks within the academic quads, and greenbelts (see Figure 5-11). The system is intended to provide areas for sitting and social gathering; accommodations for
walking, jogging, and passive recreation; and visual relief from the urban core. In addition, open space helps to restore a sense of human scale.

In the outer campus neighborhoods, the open space network includes both formal and informal open space such as pedestrian malls, greenbelts and pedestrian paseos, neighborhood and community-level parks, habitat corridors, and informal open space corridors linking campus land use areas.
The 2007 LRDP accommodates a linear arboretum linking the Academic Core and the South Campus. The arboretum would include native and non-native botanical collections along a linear trail system connecting Aldrich Park, the Ecological Reserve, and other campus trials (see Figure 5-6).

As depicted in Figure 5-10, 135 acres of open space within the outer campus are enlisted in a 38,000-acre reserve established by Natural Community Conservation Planning (NCCP) program for the central/coastal Orange County subregion. This land is committed to habitat conservation and management and is administered in cooperation with other regional landowners as a part of the non-profit Nature Reserve of Orange County.

In addition to the approximately 415 acres of open space on the main campus, the UC Natural Reserve System manages the adjacent 202-acre San Joaquin Freshwater Marsh, bringing the total amount of open space administered by UCI to about 617 acres. Because the San Joaquin Freshwater Marsh operates to support biological research and teaching, access to trails within the marsh is limited to authorized scientific personnel and guided tours.

2. Existing UCI Natural Area Management

UCI currently manages a total of 721 acres of University-owned protected natural areas through the cooperation of a cooperative partnership that includes UCI’s Office of Environmental Planning and Sustainability, UCI-Nature (Networked Assets to Understand Resilience in the Environment). Center for environmental Biology, and Facilities Management – which represent an intersection of academic and operations components of the University. UCI sustains a broad range of sensitive species and habitats, including multiple threatened and endangered species in areas set aside in perpetuity.

UCI provided leadership in the establishment of the first coupled Natural Communities Conservation Plan (NCCP) program and Habitat Conservation Plan (HCP) reserve in the U.S., the Nature Reserve of Orange County (www.occonservation.org). The Reserve permanently protects more than 38,000 acres of regionally important habitat, including 135 acres on the UCI campus. The Reserve provides long-term preservation and management for sensitive species and their critical habitats, including the protection of 33 state and federally recognized threatened and endangered species. The Reserve is managed by the Natural Communities Coalition (NCC), a 19-member non-profit consisting of private landowners, public agencies, state and federal wildlife agencies, and a public research university (UCI). The 20-year-old NCCP Reserve has served as a national model for collaboration for the protection, management, and restoration of critical habitats. UCI continues to provide leadership in stewardship, operations, and science in the ongoing management of this expansive reserve, holding a place on the Board of Directors, the executive committee, and the technical advisory committee.
UCI contributes to the monitoring and adaptive management activities, aligns basic research with local biodiversity needs, and provides capacity to the many short-term projects required to successfully conserve biological diversity in open-space interspersed as a mosaic with urban lands containing > 5 million people. During this period UCI has been instrumental in leading numerous Natural Community Coalition habitat restoration projects, biological monitoring efforts, and biodiversity research programs.

The Implementation Agreement for the NCCP/HCP allows UCI to conduct habitat-related field research on UCI-owned areas of the reserve in recognition of UCI’s role as the primary public research University serving NCC. In addition to UCI’s ability to conduct field research in the 135 acre UCI-owned reserve areas, UCI scientists are involved in field research and monitoring activities in other areas of the 38,000 acre NCCP reserve.

Across all of these sites, and in the adjacent conservation lands (either city, county, state or federal lands), UCI provides research capacity through the Center for Environmental Biology, where staff maintain relationships with local land managers that allows for easy faculty integration with conservation needs on the ground. As such, UCI works collaboratively with State Parks, U.S. and California Fish and Wildlife, Orange County Parks, The Nature Conservancy, and non-profit land management organizations, such as the Irvine Ranch Conservancy in the protection and monitoring of habitat.

UCI is implementing the monitoring and assessment plan for the Natural Communities Coalition (NCC) Reserve of Orange County, inclusive of the on-campus parcel and the entire Reserve. This includes repeated site visits, detailed community assessment, interactions with consultants on specific monitoring of key species, integration of new technologies, such as remote sensing and genetic techniques in the environment, and synthesis exercises through meetings and modeling. UCI’s goal as an institution is to take our specific stewardship mission and leverage it to have a regional impact on adjacent habitat, collaborating extensively with our regional partners. Over the last 20 years, this has included multiple campuswide assessments of environmentally sensitive habitat and numerous efforts to monitor endangered and sensitive species in conjunction with state and federal agencies.

UCI participates in the monitoring of multiple protected species including California Gnatcatcher and Coastal Cactus Wren, Least Bell’s Vireo, and the Pacific Pond Turtle. UCI actively monitors more than 45 different locations throughout the Reserve, describing annual changes in habitat. UCI maintains an experimental apparatus to evaluate the effects of climate change on the principle habitat of concern. UCI has compiled extensive databases on sensitive species distributions and population dynamics, most recently for more than 60 species of rare plant taxa.
3. Watershed Management

In addition to the management of upland open space and habitat areas, UCI manages and restores a range of wetland, riparian (streambed), and other water resource areas on campus and cooperates in the management of water resource areas as a partner in the regional upper Newport Bay watershed area. These watershed areas provide an important open space resource for the campus for passive recreation, using adjacent bike and pedestrian trails and site for faculty and student research projects.
On campus resources include natural drainage courses (arroyos), manmade natural treatment systems for storm water, and the north campus San Joaquin Marsh managed in collaboration with UCNRS (Exhibit 3). Nearly all UCI watershed areas on campus have been impacted by the Shot Hole Borer (SHB), resulting in the significant loss of tree and shrub canopy provided by native willows, sycamores, and cottonwoods. UCI and other UC scientists are currently conducting field research within UCI watershed areas to develop management methods for treating and restoring these native wetland species.

UCI watershed areas are managed and monitored through a partnership of multiple campus entities including UCI NATURE, Center for Environmental Biology, School of Biological Sciences, Water UCI, UC Natural Reserve System, Campus and Environmental Planning, and Facilities Management.

UCI participates in the regional collaboration of watershed issues including Orange County Public works, Orange County Parks, California Department of Fish and Wildlife, Irvine Ranch Water District, and other regional partners within the Newport Bay Watershed.

4. Additional Parcel Information

UCI Ecological Reserve

The 62-acre UCI Ecological Preserve on the UCI main campus protects and manages critical upland habitat for many threatened and sensitive species as part of the regional NCCP Reserve. The Preserve consists of coastal sage scrub, cactus scrub and grassland habitats, and it currently sustains multiple nesting pairs of the federally listed as threatened California gnatcatcher and the state-recognized sensitive species, coastal cactus wren. The Preserve is open to the public and includes a trail system and interpretive sign program. In addition to providing habitat conservation and a passive recreation resource, the Preserve provides a site for field research projects for UCI faculty and students.

San Joaquin Marsh

The 202-acre UC Natural Reserve System’s (NRS) San Joaquin Marsh Reserve is embraced by the UCI main and north campus lands and includes a variety of wetland habitats. The marsh is jointly managed by UCI Office of Research and the UC NRS. It represents one of the few remaining remnants of marsh habitat remaining in Orange County. Along the Pacific Flyway, the marsh is a stopping place for more than 100 migratory bird species, and it sustains an equivalent number of resident species. The marsh provides a site for UCI faculty and student field research projects involving wetland and riparian habitats.
**UCI North Campus Arboretum**

The UCI North Campus Arboretum is a 12.5-acre botanic garden and research facility located on the UCI north campus (approximately one mile from the UCI main campus) that is open to the campus community and the public. The Arboretum features plants and communities from the California Floristic Province and also has an extensive collection of South African species. The arboretum was founded in the 1960’s, to support landscaping activities to establish the new UCI campus and as a plant growing facility for research and teaching purposes for the School of Biological Sciences. The Arboretum is currently administered by the School of Biological Sciences.

As a part of the School of Biological Sciences, the Arboretum hosts research projects for undergraduate and graduate students, faculty, and post-doctoral scholars. The arboretum provides shadecloth growing facilities and facilities for “common garden” experiments. Arboretum staff are currently engaged in planning for the relocation of its North Campus operations to the main campus as the campus considers replacement of the North Campus Arboretum as part of North Campus mixed use development planning.

**Community Gardens**

UCI operates 4 community gardens including through the UCI Garden Project. This includes two campus-wide gardens (Anthill Village Community Garden and the ASUCI Garden) and 2 residential community gardens (located within the Palo Verde and Verano graduate student apartment communities). The gardens provide an open space resource for students, faculty, and staff to engage in gardening activities and support UCI’s living laboratory for sustainability programs by educating students on issues of urban gardening, food security, local food sourcing, and community engagement.

More information on UCI community gardens and their locations can be found at:


**Aldrich Park**

Aldrich Park serves as the central open space for the campus, providing an important recreation and social resource for the campus community. Aldrich Park is regarded as one of the best urban parks in Orange County and hosts a range of campus and community events and festivals. The original tree plantings within Aldrich Park consisted of groves of native Sycamores, Eucalyptus trees, and Pines, plantings of a variety of
shade tree specimens, and open grass meadow areas to support activities. The original plantings within Aldrich Park have suffered severe damage over the past decade from the Shot Hole Borer, which has decimated the Sycamore groves, and other pests and structural damage that has required the removal of many large Eucalyptus trees. As a result, Aldrich Park has lost a significant amount of its mature tree canopy and the campus has initiated a reforestation program for the Park focusing on introducing greater species diversity and resiliency within this urban forest.

Since campus inception, Aldrich Park has been viewed as an opportunity to support additional program needs including supports uses, public art, and other cultural uses to further engage the campus community. As part of the reforestation program for the Park, UCI is considering additional program uses including outdoor public art in collaboration with the proposed Museum and Institute of California Art, interpretive signage, and other teaching, research, and public engagement programs to support a central campus botanical garden program.
INTRODUCTION

This report summarizes the topics discussed and general consensus recommendations of the Chancellor’s Advisory Council Physical Resources Subcommittee (PRSC).

PRSC’s charge was to broadly consider key aspects of the UCI physical plan and how or whether they can support campus development to meet UCI’s mission related goals. Accordingly, the PRSC focused on identifying the type, scale, and quality of physical resources needed to meet UCI’s strategic goals, notably, the 8-10 year goal of achieving “flagship” status as well as accommodating long term needs. The Subcommittee discussed the relationship between enrollment levels and achievement of these strategic goals, and recommended a planning framework to meet these strategic goals.

PRSC focused on key aspects of planning that were determined critical to achieving “flagship” status. There are many other physical planning variables involved, which can be addressed once these key parameters and attributes are optimized. Within this framework discussions focused on the following topics:

- General Campus Academic Space Needs
- Health Sciences and Clinical Space Needs
- Student Housing
- Faculty/Staff Housing
- Mixed Use/Commercial Uses
- Transportation and Parking
- Utility Infrastructure
- Athletics, Recreation and Open space
- Community Support Uses

As a starting point for review and discussion of each topic area, PRSC reviewed existing planning information including the current Long Range Development Plan (LRDP) and LRDP Physical Capacity Studies for enrollment levels of 30,000, 35,000 and 40,000 students (UCI Office of Campus and Environmental Planning, November 2003). Table A summarizes the program assumptions for each option analyzed in the LRDP capacity studies as well as comparable data from UCLA, UC Berkeley, and UC San Diego.

The following summary identifies key issues discussed and recommendations for each topic area:
# Program Comparison from LRDP Capacity Study

(UCI Office of Campus and Environmental Planning, November 2003)

<table>
<thead>
<tr>
<th>LRDP Parameter</th>
<th>UCI Alternative A</th>
<th>UCI Alternative B</th>
<th>UCI Alternative C</th>
<th>UC Berkeley</th>
<th>UCLA</th>
<th>UC San Diego</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Enrollment</td>
<td>23,520</td>
<td>27,520</td>
<td>31,400</td>
<td>23,950</td>
<td>25,661</td>
<td>21,900</td>
</tr>
<tr>
<td>Graduate/Professional Enrollment</td>
<td>5,880</td>
<td>6,880</td>
<td>7,850</td>
<td>9,500</td>
<td>8,121</td>
<td>6,000</td>
</tr>
<tr>
<td>Health Sciences Enrollment</td>
<td>600 a</td>
<td>600 a</td>
<td>750 a</td>
<td>not applicable</td>
<td>3,848</td>
<td>1,200</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td>30,000 c</td>
<td>35,000 c</td>
<td>40,000 c</td>
<td>33,450</td>
<td>37,630 b</td>
<td>29,100</td>
</tr>
<tr>
<td>Faculty</td>
<td>1,578 d</td>
<td>1,807 d</td>
<td>2,043 d</td>
<td>1,980</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Other Academics</td>
<td>2,000 d</td>
<td>2,165 d</td>
<td>2,371 d</td>
<td>1,800</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td><strong>Subtotal Faculty and Other Academics</strong></td>
<td>3,578</td>
<td>3,972</td>
<td>4,414</td>
<td>3,780</td>
<td>6,147</td>
<td>3,700</td>
</tr>
<tr>
<td>Non-Academic Staff</td>
<td>5,739 d</td>
<td>6,559 d</td>
<td>7,408 d</td>
<td>8,950</td>
<td>15,793 e</td>
<td>9,200</td>
</tr>
<tr>
<td><strong>Total Campus</strong></td>
<td>39,317</td>
<td>45,531</td>
<td>51,822</td>
<td>46,180</td>
<td>59,570</td>
<td>42,000</td>
</tr>
<tr>
<td><strong>Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Campus Area (Acres)</td>
<td>1,477</td>
<td>1,477</td>
<td>1,477</td>
<td>1,290 r</td>
<td>420</td>
<td>1,152</td>
</tr>
<tr>
<td>Academic Core (Acres)</td>
<td>343</td>
<td>343</td>
<td>343</td>
<td>180</td>
<td>220</td>
<td>557</td>
</tr>
<tr>
<td>Health Sciences (Acres)</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>not applicable</td>
<td>47 g</td>
<td>not available</td>
</tr>
<tr>
<td>Academic &amp; Support Space (GSF)</td>
<td>6,595,275</td>
<td>7,694,707</td>
<td>8,793,479</td>
<td>9,166,537</td>
<td>8,002,362</td>
<td>not available</td>
</tr>
<tr>
<td>Academic Core Density (Floor-Area Ratio)</td>
<td>0.44</td>
<td>0.52</td>
<td>0.59</td>
<td>1.17</td>
<td>0.84</td>
<td>not available</td>
</tr>
<tr>
<td>Health Sciences Space (GSF)</td>
<td>1,875,286</td>
<td>1,875,286</td>
<td>1,875,286</td>
<td>not applicable</td>
<td>3,104,396</td>
<td>not available</td>
</tr>
<tr>
<td>Health Sciences Density (Floor-Area Ratio)</td>
<td>0.51</td>
<td>0.51</td>
<td>0.51</td>
<td>not applicable</td>
<td>1.52</td>
<td>not available</td>
</tr>
<tr>
<td><strong>Total I&amp;R Space (GSF)</strong></td>
<td>8,470,561</td>
<td>9,569,993</td>
<td>10,668,765</td>
<td>9,166,537</td>
<td>11,106,758</td>
<td>9,437,000</td>
</tr>
<tr>
<td><strong>Parking &amp; Transportation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Daily Trips (ADT)</td>
<td>128,000 /</td>
<td>136,500 /</td>
<td>145,000 /</td>
<td>not available</td>
<td>139,500</td>
<td>not available</td>
</tr>
<tr>
<td>Total Parking Spaces in Academic Core</td>
<td>15,614 j</td>
<td>17,540 j</td>
<td>19,724 j</td>
<td>10,150</td>
<td>19,069 k</td>
<td>not available</td>
</tr>
<tr>
<td><strong>Student Housing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Beds (Existing/LRDP)</td>
<td>9,289/15,000</td>
<td>9,289/17,500</td>
<td>9,289/20,000</td>
<td>7,140/11,750</td>
<td>9,397/14,499</td>
<td>7,050/13,300</td>
</tr>
<tr>
<td>% of Students Housed (Existing %/LRDP %)</td>
<td>41%/50%</td>
<td>41%/50%</td>
<td>41%/50%</td>
<td>22%/35%</td>
<td>26%/39%</td>
<td>32%/45%</td>
</tr>
<tr>
<td>Density of Recent Projects (Beds/Acre)</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>296</td>
<td>133</td>
<td>125</td>
</tr>
<tr>
<td><strong>Faculty/Staff Housing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing On-Campus Dwelling Units</td>
<td>1,018</td>
<td>1,018</td>
<td>1,018</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LRDP On-Campus Dwelling Units (Range)</td>
<td>1,100-1,350</td>
<td>1,100-1,500</td>
<td>1,100-1,650</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Footnotes may be found on the next page.
Table A (continued)

PROGRAM COMPARISON FROM LRP\[3\] CAPACITY STUDY
(UCI Office of Campus and Environmental Planning, November 2003)

Notes:

General Note: The LRDP horizon year proposed for each campus’ plan is as follows: UCI (2015-16); UC Berkeley (2020-21); UCLA (2010-11); and UC San Diego (2020-21).

a Excluding medical residents and interns who are assumed to be located off campus.

b UCLA figure includes approximately 1,185 off-campus health sciences students and students studying abroad.

c For all alternatives, it is assumed that undergraduates comprise 80 percent of General Campus enrollment, and graduates 20 percent.

d "Faculty" category includes Academic Senate members and emeriti. "Other Academics" category include other teaching faculty, postgraduate and other researchers, and librarians. "Non-Academic Staff" category includes all career staff and non-student staff in non-career positions. All categories include full- and part-time employees and are expressed as headcount. Faculty are estimated to increase at one FTE per 18.7 new student FTE, the ratio at which the campus is compensated by the State for the incremental cost of growth. Staff projections are based on the current ratio of staff to faculty and are preliminary. Other campuses may project staff growth differently or currently provide higher staffing levels, and thus their estimates may not be directly comparable with UCI staff estimates.

e Figure includes Medical Center staff (breakdown of staff located on the campus was unavailable).

f Includes 850-acre Hillside campus (primarily open space). Campus area also includes numerous non-contiguous parcels.

g Not including Santa Monica.

h Includes academic core and health sciences I&\[3\] space, plus Scripps (UCSD).

i Preliminary estimate. Include North Campus trips.

j Total includes parking spaces within the central core and the Health Sciences complex.

k LRDP parking total of 25,169 spaces less Medical Center parking spaces (estimated 4,100) and Medical Center staff parking spaces on campus (estimated 2,000).

l Average density of recent student apartment projects. UCLA figure includes parking at one space per bed. UCB project does not provide on-site parking. UCSD figure includes parking. UCI figure based on Pal Verde 2 and East Campus Student Apartments, Phase 1, projects which include parking.
ACADEMIC CORE SPACE NEEDS

PRSC reviewed projections for academic space needs and capacity as identified in the LRDP Capacity Studies (see Table B). These projections identified space needs and capacity for growth in existing programs, as well as capacity to accommodate new programs. The projected academic space required to serve campus growth is significant; all options identify more than doubling of existing academic core space. In general, the academic space projections in Table B appear reasonable to provide the flexibility to accommodate future growth and to meet long-term strategic needs.

In order to implement this academic space program, future buildings in the academic core must be constructed at certain heights and densities, similar in scale to the original construction on campus in the 1960’s (vs. smaller scale buildings constructed in the 1970’s and 80’s). Opportunities exist to place infill buildings at the perimeter of Aldrich Park (outside the inner ring pathway) to increase pedestrian use and enlivening the park. A key challenge will be retaining the high quality pedestrian environment in the academic core as these density standards are implemented.

Recommendations:

- Minimum density/height requirements in Quad Plan capacity studies (i.e., 4-5 story laboratory buildings, 5-6 story office structures) to achieve program appear reasonable given a mature, urbanizing campus.
- The campus should adopt and implement these density guidelines in order to accommodate long term growth needs.
- Academic quad plans should preserve capacity for a substantial main library expansion (Library staff recommends capacity for Library expansion 195,000 gsf beyond current Quad Plan capacity studies).
- Redevelopment of underutilized sites within the academic core will likely be necessary including Student Health Center, Campus Village, and Gateway Commons to provide capacity for long term growth.
- The campus should relocate the arboretum to Aldrich Park to provide better program integration, to realize the full potential of the North Campus, and to enhance the academic core pedestrian environment.
- Pursue opportunities for infill buildings at the perimeter of Aldrich Park to enliven park.
### Table B

**PROJECTED ACADEMIC SPACE REQUIREMENTS (GFS) IN CENTRAL CORE AND HEALTH SCIENCES**  
*(From LRDP Capacity Study, UCI Office of Campus and Environmental Planning, November 2003)*

<table>
<thead>
<tr>
<th>Academic Quads</th>
<th>Existing Space*</th>
<th>Approved LRDP</th>
<th>Alternative A 30,000 Students</th>
<th>Alternative B 35,000 Students</th>
<th>Alternative C 40,000 Students</th>
<th>Capacity in Current Quad Plans (4/5 Story)</th>
<th>Capacity with Increased Building Height (5/6 Story)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences</td>
<td>572,466</td>
<td>857,200</td>
<td>1,036,705</td>
<td>1,211,857</td>
<td>1,384,905</td>
<td>1,213,966</td>
<td>1,344,566</td>
</tr>
<tr>
<td>Engineering/ICS</td>
<td>560,278</td>
<td>1,096,100</td>
<td>1,247,458</td>
<td>1,455,409</td>
<td>1,663,236</td>
<td>1,390,658</td>
<td>1,512,108</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>653,829</td>
<td>929,400</td>
<td>1,161,885</td>
<td>1,355,571</td>
<td>1,549,141</td>
<td>1,386,829</td>
<td>1,508,912</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>689,197</td>
<td>1,144,800</td>
<td>1,192,542</td>
<td>1,344,671</td>
<td>1,536,684</td>
<td>1,467,389</td>
<td>1,627,722</td>
</tr>
<tr>
<td>Humanities</td>
<td>186,479</td>
<td>575,900 †</td>
<td>493,322</td>
<td>575,559</td>
<td>657,746</td>
<td>525,479</td>
<td>649,479</td>
</tr>
<tr>
<td>The Arts</td>
<td>222,245</td>
<td>383,739</td>
<td>447,708</td>
<td>511,639</td>
<td>490,245</td>
<td>457,578</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Academic Quads</strong></td>
<td><strong>2,884,494</strong></td>
<td><strong>4,603,400</strong></td>
<td><strong>5,477,651</strong></td>
<td><strong>6,390,775</strong></td>
<td><strong>7,303,351</strong></td>
<td><strong>6,384,566</strong></td>
<td><strong>7,100,365</strong></td>
</tr>
<tr>
<td>Gateway</td>
<td>566,100</td>
<td>1,288,000</td>
<td>1,117,624</td>
<td>1,303,932</td>
<td>1,490,128</td>
<td>1,134,100</td>
<td>1,299,433</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,450,594</strong></td>
<td><strong>5,891,400</strong></td>
<td><strong>6,595,275</strong></td>
<td><strong>7,694,727</strong></td>
<td><strong>8,793,479</strong></td>
<td><strong>7,518,666</strong></td>
<td><strong>8,399,798</strong></td>
</tr>
</tbody>
</table>

#### Academic Opportunity Sites

<table>
<thead>
<tr>
<th>Site Description</th>
<th>Capacity with Increased Building Height (5/6 Story)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Opportunity Sites (Core)</td>
<td>1,208,000</td>
</tr>
<tr>
<td>Academic Opportunity Sites (Net following Campus Village redevelopment)</td>
<td>1,358,000</td>
</tr>
</tbody>
</table>

#### Health Sciences

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing Space</th>
<th>Approved LRDP</th>
<th>Capacity in Current Quad Plans (4/5 Story)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Campus (Irvine)</strong></td>
<td>655,286</td>
<td>1,439,100</td>
<td>1,875,286</td>
</tr>
<tr>
<td><strong>Medical Center (Orange)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient</td>
<td>374,695</td>
<td>958,573</td>
<td></td>
</tr>
<tr>
<td>Ambulatory Care</td>
<td>167,633</td>
<td>380,837</td>
<td></td>
</tr>
<tr>
<td>Academic/Research/Admin</td>
<td>320,643</td>
<td>498,494</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>47,394</td>
<td>64,145</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Medical Center</strong></td>
<td><strong>910,365</strong></td>
<td><strong>1,902,049</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

*Figures for existing space in the Academic Core include all buildings occupied or under construction as of March 2003, including Natural Sciences Unit 2 but excluding trailers. In addition to program space, space totals for Biological Sciences include the Science Library.

†The approved 1989 LRDP combined space projections for Humanities and The Arts.
HEALTH SCIENCES AND CLINICAL NEEDS

Achieving UCI’s strategic goals will require growth in existing health sciences programs, new programs (e.g., pharmacy, public health), and expansion of clinical uses at Irvine and Orange. Existing outpatient uses at Irvine could benefit from greater efficiencies (e.g., serve student outpatient needs at Gottschalk Plaza). Regional demographics support growth in clinical programs at Irvine.

LRDP capacity studies identify physical capacity to grow from 655,000 gsf to 1.9 million gsf in health sciences (see Table B). In addition, new programs related to health sciences and biological sciences could benefit from increased academic core capacity resulting from redevelopment of underutilized parcels (Campus Village).

**Recommendations:**

- Mid-range plans should accommodate multi-use clinical facilities including expanded outpatient clinic, surgi-center, sports medicine, chronic care center, and student health:
  - **Outpatient Clinic Space**
    - Oncology
    - Woman’s Health
    - Ophthalmology
    - Neurology
    - Sports Medicine
    - Primary Care (geriatrics, student health, faculty and staff)
    - Medical and surgical specialties
  - **Enhanced Diagnostic and treatment facilities:**
    - Radiology
    - Infusion (oncology, neurology, immunology)
    - Radiation therapy
    - Cardiovascular and neurodiagnostics
  - **Outpatient Surgicenter**
    - Minimum of six operating room suites and support space
  - Rehabilitation Hospital
  - Ophthalmology Institute

- Long term plans should provide capacity for inpatient facilities.

- All clinical uses will benefit from good accessibility and visibility from on- and off-campus users.
STUDENT HOUSING

The existing LRDP identifies a goal of housing 43 percent of students on campus. LRDP Capacity Studies evaluated a goal of housing 50 percent of students on campus (see Table 1). Based on the assumed land allocation and density in these capacity studies (see Figure 1) a maximum of approximately 17,500 students could be housed on campus. An additional 1,500 to 2,500 students could be housed in the University Town Center TIC apartments (other UC campuses include nearby community housing in LRDP campus housing totals). If additional on-campus housing is required beyond 17,500, this would require increased densities of future housing or additional land allocation (e.g., North Campus).

Availability of affordable graduate student housing is a key issue. A substantial number of housing units to serve graduate students will be completed over the next 1-3 years (projects currently in design or construction will nearly double the number of graduate student beds on campus from 1,414 to 2,666) resulting in the ability to house approximately 60% of graduate students on campus. The affordability threshold for graduate students is assumed at $600/month total housing cost.

Housing is a land-intensive use. Density of existing UCI student housing is generally lower than established flagship campuses. Maximum density of current housing is 2-3 story “walk-up.” Projects currently in design include some four-story units with elevators. The trade-offs of increasing housing density in future projects include higher per unit construction costs and a change in residential character of student housing neighborhoods.

Recommendations:

- Availability of affordable graduate student housing should be a high priority within the campus housing system.
- Planning assumption of accommodating 50 percent of students on campus is valid based on local housing market trends; adequate land should be reserved to meet this goal.
- Higher density student housing models should be pursued to preserve planning flexibility, if not cost-prohibitive.
- To retain the practice of accommodating all freshmen requesting to live on campus, a third first year community would be required. Opportunities include infill at Mesa Court or redevelopment/relocation of Campus Village.
- Explore mixed use development as a strategy to subsidize the cost of graduate student housing.
Figure 1
UCI LONG RANGE DEVELOPMENT PLAN
Conceptual Development Framework (Alt. C)

Legend
Campus Streets
- 2- Lane 56'
- 2- Lane w/ Median 70'
- 4- Lane w/ Median 94'
Parcel Designation (Approx. Total = 1,476.9 ac)
- Academic & Support (213.7 ac)
- Campus Support Services (27.8 ac)
Key Assumptions for Capacity Analysis
1. Mixed-use development including 300 attached homes for faculty and staff.
2. Additional athletic fields constructed on landfill. Would require NCCP boundary adjustment.
3. Additional Parking Structure locations (1).
4. Assume redevelopment of Campus Village Housing for academic uses.
5. Designate parcel for Student Housing (current LRPD assumption is "Academic and Support").
6. Redevelop one-story south wing of Crawford Hall to build sports arena and parking structure.
7. Assumes 2,500 student residents in University Town Center.
8. Mixed-use development (3 parcels). Student housing over commercial, food, recreation, or other community support uses.
9. Assumes density of 80 beds per acre.
10. Student Housing on south campus site (assumes no public elementary school on campus).
11. Remaining south campus faculty/staff parcels would yield approximately 80-200 homes depending on product type (may be reduced if housing program on main campus would increase from 1,100 to 1,300 homes).
12. Athletics uses on abandoned Gaffneys Ave. alignment.
13. Additional recreation playfields south of existing ARC fields.
14. Pedestrian and Bicycle Bridge over San Diego Creek.

Existing Development
Future Development
Pedestrian Bridge

0 400 800 1,600 2,400 3,200 Feet

San Joaquin FRESHWATER MARSH
(LOC 3)

San Joaquin River-Tidal Marsh
(LOC 3)

SACRAMENTO RIVER

UNIVERSITY OF CALIFORNIA
IRVINE

SACRAMENTO RIVER

LEGEND

Income Producing Inclusion (109.7 ac)
Mixed Use (55.0 ac)
Student Housing (300.0 ac)
Faculty Staff Housing (205.7 ac)
Open Space/Recreation (124.7 ac)
Open Space (290.3 ac)
Parking (29.5 ac)
Vehicular Circulation ROW (51.5 ac)

Existing Parking Structure
Future Parking Structure
Sept. 15, 2003
FACULTY AND STAFF HOUSING

The availability of affordable faculty and staff housing will be a key factor in recruitment of faculty and staff needed to achieve “flagship” status. There are limited land areas the main campus to accommodate additional faculty and staff housing (particularly with a 50 percent student housing goal). Current projects will bring the total number of units in University Hills to 1,018 including the Area 8 Expansion and Gabrielino Apartment projects. LRDP Capacity Studies indicate that the remaining land areas available for faculty/staff housing (see Figure 1) will accommodate between 80 and 280 additional housing units (depending on unit type and density) resulting in a total capacity of approximately 1,100 to 1,300 units on the main campus. The phasing of University Hills development is linked to faculty recruitment needs, but on average ICHA has built at a rate of 40 new units per year. In addition to the supply of new housing, ICHA estimates a steady-state yield of 40 resale units per year at build-out, based on a total inventory of 1,100 to 1,300 units.

Based on this limited supply of future new faculty/staff housing units, it is important to pursue additional options to serve this need. Opportunities include the North Campus, infill areas such as Campus Drive Tustin Marine Base redevelopment, El Toro Marine Base redevelopment, and the proposed “workforce” housing initiative in the City of Irvine (Sand Canyon/Trabuco Road).

Recommendations:

- Maximize the number of housing units on available remaining main campus land areas by building more multi-family housing, including areas near toll road and Bonita Canyon Road, and by exploring infill and mixed use housing opportunities.
- Move forward with faculty and staff housing on North Campus. Consider high-rise housing as an element of this planning.
- Move Arboretum to main campus to accommodate additional faculty/staff housing opportunities on north campus and academic core enhancement.
- Continue to pursue opportunities in local community for affordable faculty/staff housing working with City, TIC, and others.

ROADWAYS, PARKING, AND INFRASTRUCTURE

LRDP Capacity Studies indicate a significant increase in campus traffic volumes from current conditions, but these projections remain within the parameters identified in the current LRDP. Existing average daily trips (ADT) on campus are approximately 74,000, which would increase to approximately 150,000 ADT at 40,000 enrollment. The ADT level assumed in the existing LRDP traffic mitigation fee program and 1988 UCI/City Planning MOU is approximately 150,000 ADT.

Capacity studies also indicate that demand for parking in all enrollment scenarios (see Table 1)
can be accommodated, primarily in parking structures (see Figure 1). These parking projections assume that current policy for access to parking remains constant. Policy options that would limit parking demand (e.g., no cars for freshmen residents) would reduce demand.

These LRDP Capacity Study projections in Table A represent linear projections of traffic and parking demand based on current UCI commuter habits and policy. These projections represent the traffic and parking capacity that would need to be accommodated if commuting habits and policies remain constant. These projections should not represent campus goals. Campus planning goals should reflect a priority of optimizing for a high quality pedestrian environment by limiting traffic and parking demand to the greatest extent feasible through transportation demand management, parking policy, and physical planning measures. Such measures should be implemented to substantially reduce the demand projections identified in Table A.

The key on-campus roadway issue is the capacity of Peltason Drive (assuming that California Avenue extension will not be built). Capacity studies indicate that Peltason Drive will require widening on certain segments (two lanes each direction plus turn lanes) in any enrollment scenario beyond the existing LRDP enrollment of 26,050. Widening of Peltason Drive would entail significant cost and change the character of this roadway.

UCI has in place a number of policy and incentive programs to reduce traffic demand. Additional policies could be considered to further reduce traffic demand on Peltason Drive and other primary campus roads including assigned parking, limiting access to Peltason Drive, banning freshman and/or sophomore automobiles, denying parking permits to commuter students within a defined radius of the campus (while providing transportation alternatives), and additional on-campus shuttle service.

All utility infrastructure systems will require upgrades to serve increased enrollment growth (e.g. water, sewer, electricity, central plant utilities, gas, communications). These upgrades will require significant financial investment. There are no known on or off-campus factors that would prohibit upgrading these utility systems to meet demand.

Recommendations:

- Continue to pursue transportation demand management through policy and incentives.
- Analyze concepts for further limiting access and traffic volumes on Peltason Drive through alternative roadway design schemes, assigned parking, and increased on-campus transit use to defer the need to widen Peltason.
- Implement more restrictive parking policies for students living on-campus and near campus (e.g. University Town Center).
- Investment in utility infrastructure systems to support growth will be required and should be planned.
MIXED-USE AND COMMERCIAL USE

Mixed use (combining residential uses with commercial, food, recreation uses in same development) could provide several benefits to UCI. It provides the opportunity to enliven campus life, bring the local community onto campus, achieve land use efficiency (use same land area two or three times), and generate income to support residential or other campus programs. This concept could include academic or student life themes (e.g., arts, recreation, etc.) to support program uses. Capacity studies identified three sites for mixed use opportunities on east campus, plus one site on north campus.

In addition to on-campus opportunities, mixed use development adjacent to the campus would benefit UCI’s strategic mission. A key opportunity is University Town Center (UTC) which will become more closely linked (almost becoming a sector of the UCI campus) as the campus community grows. A mixed use concept in UTC that would include multi-family housing serving UCI staff, commercial uses, and overnight guest accommodations would support UCI’s mission and enliven the local campus community. This would also support Student Center Phase 4 conference space by providing overnight conference capacity to UCI, as well as benefiting UTC restaurant and commercial uses.

Recommendations:

- Designate east campus parcels identified in capacity study for future mixed use. Begin feasibility studies for public/private mixed use projects on these sites.
- Work with TIC to pursue mixed use in University Town Center to meet staff housing needs and enliven campus community including overnight guest accommodations.

ATHLETICS, RECREATION, AND OPEN SPACE

Campus population growth, coupled with increased interest in health and fitness, could result in unmet demand for recreation resources on campus for students, faculty, and staff. Existing recreation facilities at the Anteater Recreation Center (ARC) are near capacity. Future demand will require expansion of the ARC as well as satellite recreation facilities at other locations on campus. A satellite faculty/staff indoor recreation facility could serve multiple needs including fitness, wellness center, and lockers/showers to support bicycle commuters and walkers/joggers using campus trails.

UCI’s location in coastal Orange County could be better utilized to serve recreation needs of the campus community and to support town/gown linkages. This would include better utilization of existing open space resources and developing linkages to nearby amenities (e.g., San Diego Creek, Upper Newport Bay, adjacent City/County nature reserves) by expanding UCI trail systems. Opportunities include walking/jogging trail systems as part of a main campus arboretum, access to outer campus open space areas, and linkages and facilities near San Diego Creek.
Recommendations:

- Accommodate ARC expansion as a part of mixed use concept for east campus parcel located south of ARC.
- Identify a location in the central campus for an indoor recreation facility (fitness center, lockers/showers, wellness center, which could serve as a hub for bikers, joggers, walkers)
- Identify walking, hiking, biking trails linking areas of the campus together with east campus ARC and/or central campus fitness center as origin. Consider “arboretum walk” concept.
- Evaluate opportunities to utilize San Diego Creek and other aquatic uses owned or accessible to UCI to serve campus community as envisioned in the 1965 LRDP.

COMMUNITY SUPPORT USES

Expanded community support uses to serve the needs of the UCI community (on-campus residents and commuters) will be needed to achieve UCI’s strategic goals and to maintain a high quality on-campus community. Key community support uses identified include:

- Elementary Schools
- Child Care
- Food Service
- Commercial Uses

Children of UCI residents (faculty, staff, and students with families) enrolled in the Irvine Unified School District (IUSD) generally attend Turtle Rock Elementary School (9-month program) or Vista Verde Elementary School (year-round program). In addition there are several private elementary schools in the campus vicinity. The existing LRDP accommodates a 10-acre, on-campus IUSD elementary school, if needed. Based on evaluation of local demographics, the IUSD Board determined in 2003 that future demand in the UCI vicinity could be best met by building two new schools: a year-round K-8 school (relocation of the Vista Verde program) near the UCI campus in Turtle Ridge, and a K-6 School in Quail Hill (Sand Canyon/I-405 area). The IUSD Board has authorized the purchase of these two new school parcels. Based on the decision to construct these two new schools, an on-campus IUSD school is unlikely. In the event an on-campus IUSD school is not constructed, the LRDP Capacity Studies assumed the 10-acre site would be used for student housing.

UCI has five University-managed and one privately run child care/pre-schools on campus. The privately run facility currently serves a substantial percentage of non-campus families as well as campus affiliates. Planning for a seventh child care/pre school facility (a University-managed facility) is currently underway. Additional child care facilities will be required to meet UCI’s strategic goals including faculty, staff, and graduate student recruitment.
Additional, quality food service facilities and other commercial uses on or adjacent to the campus will be required to meet the needs of campus community. Such facilities could be developed in concert with housing, recreation, academic facilities or other campus uses (i.e., mixed-use) for land use efficiency, to enhance campus life, and to support the financial viability of these services.

**Recommendations:**

- Based on IUSD decision to build two new schools in UCI vicinity, consider alternative uses of land area for on-campus school to support strategic mission (LRDP Capacity Studies assume student housing).
- Consider bicycle linkages to new Vista Verde School site to serve families in University Hills and other campus neighborhoods.
- Complete demand analysis for on-campus and commuter child care needs and identify facility program requirements.
- Identify opportunities for food and commercial uses to support campus community in coordination with academic quad plans and mixed use parcels.

**CULTURAL FACILITIES**

Cultural facilities such as museums provide multiple benefits to Universities, including academic collaboration, community relations, prestige, and the possibility of broadening the University’s philanthropic support base. UC flagship campuses and many other top universities are affiliated with such facilities on or near campus. These facilities are important assets to these campuses, but not an absolutely necessary element for achieving flagship status.

While museums and other cultural facilities can provide substantial academic and community outreach benefits, they generally impose a substantial financial obligation. These facilities are costly to construct and operate. Although many are gift funded and endowed, most require substantial annual funding support from the campus.

Key program and site attributes for such facilities include visibility and access, proximity to academic core programs with supportive programmatic ties, parking, proximity to transit/drop-off, and the potential for on-site building expansion (typically developed over several phases or wings).

The current LRDP identifies a site for a large museum or other cultural facility in Gateway Quad across from Barclay Theatre. This location provides visibility, adjacency to Barclay Theatre, proximity to restaurants and shops in UTC, good access for the community, adjacent drop-off/bus stop on Campus Drive, and access to two nearby parking structures housing 2,900 parking spaces. This site was reviewed by Cynthia Cooper Executive Director of the UCLA Arts Program, a guest at a PRSC meeting. Ms. Cooper recommended that the site was “nearly perfect” based on its location, adjacencies,
and other attributes. Other sites on the campus have been evaluated for cultural facilities in the past (North Campus, West Campus) but have not been pursued.

In addition to on-campus opportunities, the redevelopment of El Toro Marine Corps Air Station (‘‘Heritage Fields” or “The Great Park”) has been identified by the City of Irvine as the focus for cultural uses in the City of Irvine, as well as the region. Heritage Fields provides an opportunity for interaction and collaboration between UCI, other local universities, and the community on a variety of cultural uses.

Recommendations:

- Continue to identify the Gateway Quad site for a future cultural facility
- Evaluate the opportunity to reconfigure the Gateway site to better accommodate expansion potential.
- Pursue off-campus opportunities for collaboration on cultural uses at El Toro “Great Park”

RECOMMENDATIONS ON FUTURE ENROLLMENT LEVELS

As a part of the subcommittee’s charge PRSC was requested to provide recommendations on enrollment goals for mid-range (7-8 years) and long range enrollment levels to support UCI’s strategic mission.

There was no consensus from PRSC on a specific enrollment target; therefore these recommendations are presented as a range.

Recommendations

- Adoption of an enrollment target must be accompanied by adoption of implementing measures for the many factors required to support this level of growth (i.e., physical resources, financial resources, program achievements).
- Ultimate “steady state” enrollment should be comparable in size to other UC flagship campuses.
- Graduate student enrollment must track with total enrollment
- Mid-range (2011-2012) enrollment of 30,000-32,000 general campus plus growth in Health Sciences enrollment.
- Long range plans should be able to accommodate “steady state” enrollment or 35,000-36,000 as well as on-campus inpatient facility.
- All campus planning decisions should accommodate this long-term enrollment program.
Figure 2 compares future enrollment growth based on the recommendations of PRSC with historical enrollment growth. This graph identifies both the average and range of enrollment levels recommended by PRSC.

**CONCLUSIONS/FINDINGS**

- In general, UCI has the physical capacity and planning framework to meet most physical resource needs to achieve strategic mission objectives.
- An exception may be housing demand, which will require both on- and off-campus solutions.
- PRSC has recommended certain changes to campus plans to better serve strategic goals (see Figure 3)
- Certain planning tradeoffs will be required (higher density housing, widening roads, relocating certain uses) to optimize these goals, but the overall quality of the campus environment could be preserved or enhanced.
- The following six physical planning issues were identified by PRSC as key factors for UCI to meet its strategic goals:
  - Accommodating the projected academic space program (and other campus growth) while preserving the environmental quality of the campus.
  - Accommodating new academic and clinical uses in health sciences.
  - Providing access to affordable faculty and staff housing either on-campus or in the local community.
  - Providing access to affordable graduate student housing on campus or in local community.
  - Expanding the transportation capacity and other infrastructure of the campus to accommodate growth.
  - Providing mixed use, commercial, cultural, recreation, guest facilities on or adjacent campus to support/enhance campus life.
Figure 2
UCI HISTORICAL AND PRSC RECOMMENDED ENROLLMENTS
General Campus

Key:
- Actual Enrollment
- Projected Enrollment

PRCS Recommended Enrollment
- Upper Range
- Committee Average
- Lower Range

Enrollment (Headcount)

Source of actual data: Office of Analytical Studies & Information Management, April 6, 2004. All figures are expressed as headcount and exclude Health Sciences and self-funded MBA program students. Projections for 2011-12 and 2020-21 assume graduate students comprise 20 percent of General Campus enrollment.
Figure 3
CAC Physical Resources Subcommittee—Initial Recommendations
PLANNING OPPORTUNITIES
University of California, Irvine

Legend

<table>
<thead>
<tr>
<th>Parcel Designations</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic &amp; Support (313.7 ac)</td>
<td></td>
</tr>
<tr>
<td>Campus Support Services (27.8 ac)</td>
<td></td>
</tr>
<tr>
<td>Income Producing Inclusion Area (20.7 ac)</td>
<td></td>
</tr>
<tr>
<td>Mixed Use (150.0 ac)</td>
<td></td>
</tr>
<tr>
<td>Student Housing (192.0 ac)</td>
<td></td>
</tr>
<tr>
<td>Faculty/Staff Housing (136.7 ac)</td>
<td></td>
</tr>
<tr>
<td>Open Space/Recreation (29.7 ac)</td>
<td></td>
</tr>
<tr>
<td>Parking (295 ac)</td>
<td></td>
</tr>
<tr>
<td>Vehicular Circulation ROW (31.5 ac)</td>
<td></td>
</tr>
</tbody>
</table>

Existing Development
Future Development
Pedestrian Bridge
Existing Parking Structure
Potential Parking Structure

Scale: 0, 400, 800, 1,600, 2,400, 3,200 feet

March 3, 2004