

# University of California, Riverside

## **ENVIRONMENTAL HEALTH & SAFETY EXPANSION PROJECT**

SRG PARTNERSHIP INC ARCHITECTURE PLANNING INTERIORS Portland, oregon







## 2005 Long Range Development Plan (LRDP)



University of California, Riverside

Environmental Health & Safety Expansion Project Siting Study



## **Executive Summary**

## INTRODUCTION

The University of California, Riverside (UCR) completed a site selection process as part of the Detailed Project Program (DPP) in 2004 to identify the appropriate location for the new Environmental Health and Safety (EH&S) facility. The "proposed site" is adjacent to and east of the UCR Transportation and Parking Services facility on Linden Street and is within the campus boundaries. The front of the building would have access from Linden, a campus street, and the storage and operations yard would have access from Watkins Drive, a city street. Some of the elements considered when selecting a site for the new facility were physical limitations such as topography, size, utilities, access (to the campus and to city streets) and adjacencies to similar support uses. Also considered were the Long Range Development Plan's (LRDP) land use designations and campus area studies.

The proposed site was determined by the Campus to be the best location for the facility, based on these criteria; however, some of the off-campus neighbors challenged this determination during a public meeting which was held in compliance with the terms of a settlement agreement recorded about the time Schematic Design on the facility was completed. The agreement provides that future campus projects requiring public review under CEQA be subject to two community meetings during the Schematic Design phase, specifically a preliminary project review meeting to solicit public input on project design and a subsequent design selection meeting to present the project proposed by the Campus to be subject to CEQA. Comments at the first public meeting requested that the campus consider other sites for the new facility. Those sites are: the northwest corner of University Avenue and West Campus Drive (the Latter Day Saints Community Center site); the northeast corner of Martin Luther King Boulevard and Canyon Crest Drive (the Caltrans lay-down area); and the Agricultural Operations area south of Martin Luther King Boulevard.

The campus hired SRG Partnership, Inc. to conduct an independent evaluation of sites for a new EH&S facility, to include the:

- Existing facility location (for expansion),
- Proposed site (as determined by UCR's DPP), and
- Other sites identified by the campus, the community, and-SRG

This report presents the findings of that evaluation.

## BACKGROUND

Every University of California major capital project begins with the development of a Detailed Project Program (DPP) that sets the project concept—it establishes the program, the scope and budget for the project and identifies the site. Upon completion of the DPP, the project proceeds to the Project Planning Guide (PPG), which, upon approval, becomes the contract with the Office of the President, the Regents and the state (if a state funded project). It includes the description of the program, delivery schedule and overall budget. When the PPG has been approved, the project goes into Schematic Design, at the end of which, the design is considered to be 15%-20% complete. The EH&S DPP was completed in October 2004, the PPG was approved by the Regents in November 2004, and Schematic Design was completed in March 2006.

## LONG RANGE DEVELOPMENT PLAN (LRDP)

The LRDP establishes the context in which campus projects are conceived and constructed. It provides development policies, goals and objectives and a land use map with land use designations. The UCR LRDP was reviewed by public agencies and the public through public hearings during the spring and summer of 2005 and was approved by the University of California Regents in November 2005. The 2005 UCR LRDP can be amended with proper justification; however, because it is the overall blueprint for the development of the campus, modifications or changes often have complicated, second-

**ASSESSMENT SUMMARY** 

In the Summary of Site Evaluations shown in this Executive Summary (see matrix below), Site 4 (the proposed site) meets all criteria set forth for consideration; Site 2 (the Caltrans lay down area) meets more criteria than the remaining sites.

Site	#	Technical Evaluation	Cost (Additional)	Time (Adds minimum of)	Comments
Proposed	4	93%	BASELINE	BASELINE	Meets all criteria
CalTrans	2	84%	\$1.7 mill	6 months	<ul> <li>Impacts proposed parking structure and displaces future fleet services</li> <li>LRDP amendment required</li> <li>Major entrance to the campus</li> </ul>
Parking Lot 13	8	75%	\$2.5 mill	6 months	<ul> <li>Displaces prime building location in Academic land use</li> <li>LRDP amendment required</li> </ul>
Substation	9	71%	\$2.9 mill	6 months	<ul> <li>Requires campus access road not in LRDP</li> <li>Significant cost impact</li> </ul>
Parking Lot 6	6	69%	\$2.2 mill	6 months	<ul> <li>Displaces prime building location in Academic land use</li> <li>LRDP amendment required</li> <li>Displaces major planned academic building</li> </ul>
Ag Ops	3	64%	\$2.2 mill	6 months	<ul> <li>Displaces R &amp; D agricultural operation</li> <li>LRDP amendment required</li> <li>No planned UCR access</li> </ul>
LDS Student Center	7	62%	\$8.5 mill	24 months	<ul> <li>Major entrance to campus</li> <li>Requires property acquisition</li> <li>Major cost and schedule impact</li> <li>LRDP amendment required</li> </ul>
Greenhouses Area	5	55%	\$9.2 mill	12 months	<ul> <li>Displaces experimental horticultural operations</li> <li>LRDP amendment required</li> <li>Major cost and schedule impact</li> </ul>
Existing Site	1	42%	\$5.2 mill	12 months	<ul> <li>Insufficient site size</li> <li>LRDP amendment required</li> <li>Major cost and schedule impact</li> </ul>
	Proposed CalTrans Parking Lot 13 Substation Parking Lot 6 Ag Ops LDS Student Center Greenhouses Area	Proposed4CalTrans2Parking Lot 138Substation9Parking Lot 66Ag Ops3LDS Student Center7Greenhouses Area5	Site#EvaluationProposed493%CalTrans284%Parking Lot 13875%Substation971%Parking Lot 6669%Ag Ops364%LDS Student Center762%Greenhouses Area555%	Site# Evaluation(Additional)Proposed493%BASELINECalTrans284%\$1.7 millParking Lot 13875%\$2.5 millSubstation971%\$2.9 millParking Lot 6669%\$2.2 millAg Ops364%\$2.2 millLDS Student Center762%\$8.5 millGreenhouses Area555%\$9.2 mill	Site# Evaluation(Additional)(Adds minimum of) (Adds minimum of)Proposed493%BASELINEBASELINECalTrans284%\$1.7 mill6 monthsParking Lot 13875%\$2.5 mill6 monthsSubstation971%\$2.9 mill6 monthsParking Lot 6669%\$2.2 mill6 monthsAg Ops364%\$2.2 mill6 monthsLDS Student Center762%\$8.5 mill24 monthsGreenhouses Area555%\$9.2 mill12 months

Costs are "Order-of-Magnitude" only-they are NOT to used as the basis for construction

ary impacts on the campus master development plan a well as on more detailed area studies which are more specific as to use and arrangement of development.

## APPROACH TO EH&S SITING CRITERIA

In order to respond to questions and concerns raised by the community regarding the proposed location of the new EH&S facility, the campus decided to respond to community input by requesting a third party to conduct a site analysis or evaluation for the facility. UCR hired SRG of Portland, Oregon, an outside consultant, to perform an assessment of sites proposed by the Campus and the community. SRG is an architectural and planning firm that assisted the campus with site selection for the new Genomics Building. Following is a list of potential sites evaluated in the assessment including two that SRG identified:

Identified by UCR:

- Existing site (for expansion)Parking Lot 6
- Parking Lot 9
  Proposed site (DPP)

as	Identified by community: Caltrans Lay-down area LDS Student Center
by	Identified by SRG: ■ Parking Lot 13 ■ Power Substation
t er-	This analysis resulted in the documentation of a criteria- based assessment, focused on the goals and objectives of the 2005 LRDP, subsequent Area Studies, and a list of criteria including the following: availability of utilities, cam- pus infrastructure, impact on existing uses and general

"buildability" of a site. The site identified in the DPP, the

proposed site, was used as a "baseline" for evaluating the

 other sites since it met all of the criteria that were evaluated and had all utilities available at the site.

## Definition of Transportation, Storage & Disposal Facility (TSDF)

The regulations that govern the collection, storage, handling and disposal of hazardous waste were adopted pursuant to the federal Resource Conservation and Recovery Act (RCRA). The State of California is a "delegated" state under RCRA and implements its own hazardous waste program under state law. In all cases, the State of California regulations are as stringent, or more stringent than the federal RCRA regulations. In California, the agency that enforces the state hazardous waste regulations is the Department of Toxic Substance Control (DTSC). The California Code of Regulations (CCR) sections that address hazardous waste are in Title 22 (Social Security), Division 4.5 (Environmental Health Standards for the Management of Hazardous Waste).

The proposed Environmental Health and Safety facility is considered by the state of California as a 90-Day Storage Facility. It stores waste collected from various departments on campus in a safe and regulated manner for no more than 90-days and, by its nature and definition, does not and cannot accept waste from off-campus generators, nor store for longer than the 90-days.

During the community meeting, several community members stated that the proposed facility was a Transportation, Storage and Disposal Facility (TSDF) as defined by the DTSC and, therefore, needed a TSDF permit and was an inappropriate use in their neighborhood. The regulations that answer this question can be found in CCR Title 22 Section 66262.34.

Section 66262.34 states, in part, that "a generator may accumulate hazardous waste on-site for 90 days or less without a [TSDF] permit" if it meets certain conditions. These requirements are intended to apply to generators of hazardous waste (as distinguished from treatment, storage and disposal facilities) that accumulate waste on-site before it is shipped off-site for ultimate treatment, recycling, incineration or disposal at a permitted TSDF.

UCR, as a generator of hazardous waste, including computers, fluorescent lights, batteries, chemicals, and other hazardous materials complies with the following conditions that must be met to qualify for the "generator" exemption from being a TSDF:

Waste is placed in containers that are:

- In good condition
- Compatible with the contents
- Kept closed except when necessary to add or remove waste
- Inspected for corrosion or deterioration
- Containers holding ignitable or reactive waste must be at least 50 feet from the property line (The California Building Code and the California Fire Code, based upon Section 503.1 specify that "For the purpose of this section, the center line of an adjoining public way shall be considered an adjacent property line").
- Incompatible waste must be kept in separate containers.
- Containers with wastes must be separated from other

incompatible materials by means of a dike, berm, wall, or other device.

- All hazardous waste containers managed must comply with all air emission standards including those for process vents and tank systems.
- All hazardous wastes must be placed on drip pads (rather than in secondary containers), require a leak detection and collection systems, liners, inspections, and maintenance and keeping of records.
- Waste is only placed in one or more buildings designed to contain it.
- Written description of procedures is required to ensure that each waste volume remains for no more than 90 days.
- Emergency preparedness requirements must be met.
- Contingency plan and emergency procedure requirements
   must be met.
- Personnel handling the waste in the facility are properly trained.
- If a generator is managing and treating waste that has land disposal restrictions, or contaminated soil in tanks, containers, or containment buildings, then certain procedures must be followed.
- University vehicles are permitted to travel on campus roads, which are defined as "private".
- University vehicles may not travel on public roads, i.e., city or county-owned roads or freeways; however, they may "cross over" a public road.

## SPECIAL CONSIDERATIONS

None of the evaluated sites are affected by flood plains, poor soils, or seismic considerations - the following descriptions of those site characteristics are taken from the 2005 UCR LRDP.

Flooding: The campus is partially located on the alluvial fan of the Box Springs Mountains. Considerable runoff occurs during storms due to the steep topography and two arroyos pass through the campus. In addition, urbanization of the once agricultural area has increased the amount of surface runoff. There are two areas on the campus within the 100-year floodplain, according to the Federal Emergency Management Agency (FEMA). Those two areas are the University Arroyo on the East Campus and the Box Springs Arroyo south of Martin Luther King Boulevard on the West Campus. Both areas trend in an east to west direction. In the past, the University Arroyo 100-year flood plain width ranged to about 400 feet and was located along Big Springs Road, the adjacent parking lots, North Campus Drive, across the Athletic Fields and to the Gage Basin. The width of the University Arroyo flood plain has been reduced in width with the completion of the University Arroyo Stormwater Flood Control and Enhancement project, which has channeled the surface flow of that 100-year flood plain on camp

**Soils:** The campus is generally located on soils of the Arlington, Buren, Hanford, Monserate, Cienba and Vista association. In the western, northwestern and southwestern portions of the campus, where slopes are relatively flat or slightly sloped, the

soils consist of silty fine to coarse sands. In the east central portion of the campus, the soils are comprised of deep sandy loams, with slopes ranging from 8% to 15%. The northeastern part of the campus consists of well-drained soils that developed in alluvium from predominately granitic material, with slopes ranging from 0% to 15%. The southeastern area of the campus consists largely of slopes over 15% with well drained soils developed from igneous rock.

Seismic: The campus is located in a seismically active area of southern California; however, no active faults are known to exist on the campus and the area is not on or near an Alquist-Priolo Special Studies Zone (state designated zones along active and potentially active faults) for seismic hazard. There are four major faults In the Riverside area. The nearest active fault is the northwest trending San Jacinto Fault, located approximately seven miles to the northeast. Other major faults include the San Andreas (14 miles to the northeast), the Banning Fault (ten miles to the northeast), and the Elsinore Fault (16 miles to the southwest). A concealed fault trending in a northwesterly direction is thought to pass at the foot of the Box Springs Mountain and is believed to be responsible for the springs found in the area. No surface evidence of the fault is apparent and no recent activity along this fault has been recorded, and thus it is considered inactive. While the campus is not located within any of the active fault zones, ground shaking from any of these faults could result in considerable damage. Generally, the more adverse effects from ground shaking would occur in areas of unconsolidated soils, whereas less damage would be expected in bedrock or consolidated materials. The potential for liquefaction is minimal due to existing soil types (which consist of consolidated materials and bedrock) and the depth to groundwater. All development on campus is required to address the seismic potential for this area in its design and construction.the depth to groundwater. All development on campus is required to address the seismic potential for this area in its design and construction.

## **CRITERIA MATRIX CATEGORY EXPLANATION**

## LRDP/Planning

*Compliance of site development to land use planning issues* This category measures adherence to approved land use plans and regulations that apply to EH&S operations, identified as Campus Support land use. It also evaluates if existing buildings must be relocated, which is quantified in the Cost & Schedule category. Changing the LRDP is a significant undertaking because of the associated approval process and potential secondary effects (changes in transportation, circulation and density decisions) when changing and displacing land uses, and is weighted to be one of the more important categories. It is anticipated that UCR will comply with the California Environmental Quality Act (CEQA) with a focused Environmental Impact Report for the selected site.

## **Campus Utilities**

Availability of campus service and utilities to the site The absence of utilities has cost implications that are quantified in the Cost & Schedule category. Some sites are scheduled for utility extensions in the LRDP, but this project could force design and construction in a less comprehensive way for some sites, and be potentially more expensive. The "additional cost" for each site includes the cost for utility extensions.

## Access to Site

## Access by public and private visitors

Access to the site by campus and public vehicles addresses efficiency of access, potential disturbance to other operations, and sufficient parking capacity, since EH&S conducts training primarily for UCR; however, it occasionally also conducts training for other campuses and the public. This category also determines if UCR haulers of waste material have to travel along public streets—a condition not permitted under regulations for a 90-day storage facility.

## Buildable Area

## Capacity of site

This category measures the ability of the site to satisfy the space required for a functional program, including a provision for future expansion. The site should also be sufficiently large enough to allow the considerations of viable design alternatives.

## Site Qualities

## Qualitative characteristics of the site

The site's physical and environmental qualities for the most part have less impact on the project than do the other criteria; however, topography can impact price and accessibility, and the importance of image relative to campus entrances, and visibility from outside the campus, can enhance or detract from a sense of place for UCR in the community. Prevailing winds are from the northwest. During Santa Ana conditions, they come from the northeast.

## Constructability

## Site constraints on construction

Constructability measures the efficiency and economy of the construction process, based on the size and location of the site. Construction staging and parking are critical elements. A site that's too small incurs premium costs to store construction material and trailers. This category evaluates how existing on-going operations will be affected.

## **Cost and Schedule**

## Cost and schedule impacts

All sites, except for Proposed Site 4, will require a new schematic design, and, except for Site 9, a LRDP amendment as well. Each site will be subject to the California Environmental Quality Act (CEQA) and its requirements. Construction cost escalation is presumed to be 8%-9% per year, based on recent campus construction cost experience.



# SITE ANALYSES





LRDP



Available site area:	1.3 acres
Required site area:	3.2 acres
LRDP Designated Use:	Academic
Gradient cost premium:	Severe



Transportation

Utility	Exists	Length
Domestic/Fire Water	yes	—
Sewer	yes	
Storm	yes	
Natural Gas	yes	—
Power	yes	
Copper	yes	—
Comm Fiber	yes	—
Fiber/Alarms & EMS	yes	



University of California, Riverside Environmental Health & Safety Expansion Project Siting Study



View From Container Storage Area



View From South Campus Drive



Aerial View



## SITE #1 ANALYSIS SUMMARY

Site 1 is the existing EH&S facility. Due to Caltrans "take" of a large portion of the site adjacent to the freeway to improve regional circulation in the area, the available site left is less than one half of the area required to construct the proposed building, exterior storage and circulation necessary to update the facility to comply with new regulations and desired operations. In addition,

an interim EH&S structure would have to be built to serve the campus while a new facility is constructed, since the site is too small to accommodate construction and operations concurrently. It is not a feasible site for the needed expansion.

## CAMPUS **External influences**

Planning/LRDP	Compliance with campus and	district planning:
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<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
<ul> <li>CEQA</li> </ul>	8	

Campus Util	ities Availabilit	y of campus s	service and utilities:
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<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional</li> </ul>
<ul> <li>Power</li> </ul>	5	
Access to Site: By public and	private vi	sitors
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responde</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	10	

## **Program and Site Influences** PROJECT

uildable Area Capacity of site:	10 pts Ma			
<ul> <li>Building</li> </ul>	2	<ul> <li>Parking</li> </ul>	2	2
<ul> <li>Yard/storage</li> </ul>	2	<ul> <li>Circulation on-site</li> </ul>	2	
<ul> <li>Future expansion</li> </ul>	0	<ul> <li>Flexibility/configuration</li> </ul>	0	

## Si

te Qualities Qualitative characteristics of the site:				ots Max
<ul> <li>Security (day/night)</li> </ul>	4	<ul> <li>Adjacent facilities</li> </ul>	4	3
Image/visibility	3	<ul> <li>Noise (external/internal)</li> </ul>	5	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	0	
<ul> <li>Vegetation/habitat</li> </ul>	4	<ul> <li>Prevailing Winds</li> </ul>	5	
<ul> <li>Soils/geotech</li> </ul>	2	<ul> <li>Sustainable potential</li> </ul>	2	

## (

onstructability Site constraints on construction:			5 pts M	
<ul> <li>Access</li> </ul>	1	<ul> <li>On-going operations</li> </ul>	0	1
<ul> <li>Staging</li> </ul>	1	<ul> <li>Adjacent operations</li> </ul>	1	
<ul> <li>Vibration/noise</li> </ul>	1			

## C

Cost & Schedule Cost and sc	ost & Schedule Cost and schedule impacts:			10 pts Max	
<ul> <li>Site development</li> </ul>	4	<ul> <li>Demolition</li> </ul>	0	2	
<ul> <li>Building construction</li> </ul>	4	<ul> <li>Redesign cost</li> </ul>	0		
<ul> <li>Infrastructure</li> </ul>	10	Escalation/delay	0		
<ul> <li>Off-site construction</li> </ul>	10	<ul> <li>Operational impact</li> </ul>	0		
<ul> <li>Relocation of existing</li> </ul>	0				

## SUMMARY SCORE



## Concept Plan



# Requires LRDP amendment Requires building a temporary EH&S facility

 Requires parking across Campus Drive; parking lot becomes future Academic land use

- Site too small for program
- No room for expansion
- Insufficient for truck circulation

- Very constrained site
- Requires demolition of the existing facility, and the construction of interim building
- Requires major redesign and delay
- Significant cost impact

Total points 23 42% Percentage of the 55 available points



LRDP



SITE #2 CAL-TRANS LAY DOWN

Available site area:	3.2 acres
Required site area:	3.2 acres
LRDP Designated Use:	Parking
Gradient cost premium:	none



Utility	Exists	Length
Domestic/Fire Water	no	600'
Sewer	no	1,800'
Storm	no	600'
Natural Gas	no	400'
Power	no	1,200'
Copper	no	900'
Comm Fiber	no	150'
Fiber/Alarms & EMS	no	1,900'



University of California, Riverside Environmental Health & Safety Expansion Project Siting Study



View to Lay-Down Entrance



View to Freeway from MLK



Aerial View From SE



## SITE #2 ANALYSIS SUMMARY

Site 2 is the California Transportation (Caltrans) construction staging area for improvements to the MLK and Interstate 215 interchange. The present schedule is for work to be completed in the Spring quarter of 2008, which means that pre-construction work on the new EH&S facility could possibly begin when the site becomes available. This site is not consistent with the LRDP, requiring an LRDP amendment, and would significantly impact

the proposed parking structure, which would have to be downsized and a new site found for the associated support facilities. It requires extensive utility extensions, incurs redesign costs for a new facility and yard, and would result in construction cost escalation. Although it has liabilities, it ranks second to Site 4.

## CAMPUS **External influences**

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>	10	8	<ul> <li>Requires amending the LRDP</li> </ul>	
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>	0		<ul> <li>Replaces or reduces proposed parking</li> </ul>	g structur
CEQA	10				<ul> <li>Requires relocation of fleet services</li> </ul>	
ampus Utilities Availability of Domestic/fire water	f campus 0	s service and utilities: Telecom/data	5 r 3	ots Max 2	<ul> <li>Requires extension of utilities</li> </ul>	
Sewer	0	<ul> <li>Fiber optic (alarms)</li> </ul>	3	2		
Storm	3	<ul> <li>Steam (optional)</li> </ul>	0			
<ul> <li>Natural gas</li> </ul>	3	<ul> <li>Chilled water (optional)</li> </ul>	0			
<ul> <li>Power</li> </ul>	3					
ccess to Site: By public and p	orivate vi	isitors	10 p	ots Max		
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responders</li> </ul>	10	10	<ul> <li>May impact planned fleet services par</li> </ul>	king
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>	10			
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<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>	10	8	Requires amending the LRDP
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>	0	•	Replaces or reduces proposed parking structu
<ul> <li>CEQA</li> </ul>	10				Requires relocation of fleet services
<ul> <li>ampus Utilities Availability o</li> <li>Domestic/fire water</li> </ul>	f campus 0	s service and utilities: Telecom/data	5	pts Max	Requires extension of utilities
<ul> <li>Sewer</li> </ul>	0	<ul> <li>Fiber optic (alarms)</li> </ul>	3	-	
<ul> <li>Storm</li> </ul>	3	<ul> <li>Steam (optional)</li> </ul>	0		
<ul> <li>Natural gas</li> </ul>	3	<ul> <li>Chilled water (optional)</li> </ul>	0		
Power	3				
ccess to Site: By public and p	private vi	isitors	10	ots Max	
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responders</li> </ul>	10	10	May impact planned fleet services parking
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>	10		

## PROJECT **Program and Site Influences**

## В

uildable Area Capacity of site:			10	ots Max
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10	
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10	

## of the old Sit

ite Qualities Qualitative char	racteristic	s of the site:	5	ots Max
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	5	5
Image/visibility	5	<ul> <li>Noise (external/internal)</li> </ul>	5	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5	
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5	
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5	

Constructability Site const	raints on cor	nstruction:	5	ots Max
<ul> <li>Access</li> </ul>	5	<ul> <li>On-going operations</li> </ul>	5	5
<ul> <li>Staging</li> </ul>	5	<ul> <li>Adjacent operations</li> </ul>	5	
<ul> <li>Vibration/noise</li> </ul>	5			

## C

Cost & Schedule Cost and sc	10 p	ots Max		
<ul> <li>Site development</li> </ul>	8	<ul> <li>Demolition</li> </ul>	10	6
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>	0	100
<ul> <li>Infrastructure</li> </ul>	2	<ul> <li>Escalation/delay</li> </ul>	0	
<ul> <li>Off-site construction</li> </ul>	8	<ul> <li>Operational impact</li> </ul>	10	
<ul> <li>Relocation of existing</li> </ul>	10	n an		

## SUMMARY SCORE



## Concept Plan

Requires major redesign

Delays occupancy due to redesign

Additional cost for redesign, delays, construction

84% Percentage of the 55 available points Total points 46



## SITE #3 AGRICULTURAL OPERATIONS

3.2 acres
3.2 acres
gricultural, Teaching &
Research Fields
none



**Reference Map** 

LRDP



## Transportation

Utility	Exists	Length
Domestic/Fire Water	yes	—
Sewer	yes	—
Storm	yes	_
Natural Gas	yes	—
Power	no	2,400'
Copper	no	2,400'
Comm Fiber	no	100'
Fiber/Alarms & EMS	no	4,800'

Site

University of California, Riverside

Environmental Health & Safety Expansion Project Siting Study



Ag Ops from MLK Entrance



View from Ag Ops to MLK



Aerial View From SW



## SITE #3 ANALYSIS SUMMARY

Site 3 is adjacent to the Agricultural Operations area within the teaching and research fields, south of MLK. It's adjacent to the existing structures and offices used to maintain the experimental orchards and fields. This site would encroach significantly on research and development acreage identified for long-term use per the LRDP. Due to development proposals north of MLK, maintaining the orchards and fields south of MLK is extremely important to the agricultural program, and is the best use of the land. In addition, the West Campus academic core would have to be redesigned to provide an internal campus access road to comply with regulations for UCR haulers. The road would be a significant encroachment on the academic core of the West Campus.

## CAMPUS **External influences**

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>	2	4	Requires amending the LRDP
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>	0		Displaces the experimental horticultural operatio
CEQA	10				
<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>	0	3	Requires major utility extensions
ampus Utilities Availability o	f campu	s service and utilities:	5	pts Max	
				3	Requires major utility extensions
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>	0		
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>	0		
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional)</li> </ul>	0		
<ul> <li>Power</li> </ul>	0				
ccess to Site: By public and	private v	isitors	10	ots Max	
<ul> <li>UCR haulers</li> </ul>	2	<ul> <li>Emergency responders</li> </ul>	10	2	No planned campus access without significant
	10	<ul> <li>Campus/public</li> </ul>	6		LRDP impact
<ul> <li>Commercial haulers</li> </ul>	10	oampuorpuolio	~		

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>	2	4	Requires amending the LRDP
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>	0		Displaces the experimental horticultural operatio
CEQA	10				
<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>	0	3	Requires major utility extensions
ampus Utilities Availability o	f campus	s service and utilities:	5	ots Max	
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>	0	Ĩ	
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>	0		
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional)</li> </ul>	0		
<ul> <li>Power</li> </ul>	0				
ccess to Site: By public and	private vi	isitors	10	ots Max	
<ul> <li>UCR haulers</li> </ul>	2	<ul> <li>Emergency responders</li> </ul>	10	2	No planned campus access without significant
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>	6		LRDP impact
	10			1	

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>	2	4	Requires amending the LRDP
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>	0		Displaces the experimental horticultural operation
<ul> <li>CEQA</li> </ul>	10				
<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>	0	3	Requires major utility extensions
Campus Utilities Availability o	f campu	s service and utilities:	5 p	ots Max	
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>	0		
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>	0		
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional)</li> </ul>	0		
<ul> <li>Power</li> </ul>	0				
ccess to Site: By public and p	private v	isitors	10 p	ots Max	
<ul> <li>UCR haulers</li> </ul>	2	<ul> <li>Emergency responders</li> </ul>	10	2	No planned campus access without significant
	10	- Compus/public	6		LRDP impact
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>	0		

## PROJECT **Program and Site Influences**

Buildable Area Capacity of site:		0	10 p	ots Max	
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
Site Qualities Qualitative charac	cteristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	5	
<ul> <li>Image/visibility</li> </ul>	4	<ul> <li>Noise (external/internal)</li> </ul>	5		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	3		
<ul> <li>Vegetation/habitat</li> </ul>	4	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
Access     Staging     Vibration/noise	5 5 5	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5	5	
Cost & Schedule Cost and sche				ots Max	- Device estimated
<ul> <li>Site development</li> </ul>	8	Demolition	8	6	<ul><li>Requires major redesign</li><li>Delays occupancy due to redesign</li></ul>
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>	0		<ul> <li>Additional cost for redesign, delays, construction</li> </ul>
<ul> <li>Infrastructure</li> </ul>	3	<ul> <li>Escalation/delay</li> </ul>	0		
<ul> <li>Off-site construction</li> </ul>	8	<ul> <li>Operational impact</li> </ul>	10		
<ul> <li>Relocation of existing</li> </ul>	8				
SUMMARY SCORE	_		al points	35	64% Percentage of the 55 available points

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
ite Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	5	
<ul> <li>Image/visibility</li> </ul>	4	<ul> <li>Noise (external/internal)</li> </ul>	5		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	3		
			<b>-</b>	5	
<ul> <li>Vegetation/habitat</li> </ul>	4	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> </ul>	5 ts on cor	Sustainable potential  istruction:	5 5 p	ots Max	
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> </ul>	5 ts on cor 5 5	Sustainable potential  istruction:	5 5 p	ots Max 5	
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> </ul>	5 ts on cor 5	<ul> <li>Sustainable potential nstruction:</li> <li>On-going operations</li> </ul>	5 5 p 5		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and schedule</li> </ul>	5 ts on cor 5 5 5	Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:	5 5 5 5		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and scl</li> <li>Site development</li> </ul>	ts on cor 5 5 5 hedule ir 8	<ul> <li>Sustainable potential Instruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5 5 10 p	5	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and schedule Cost and schedule Cost and schedule Site development</li> <li>Building construction</li> </ul>	ts on con 5 5 5 bedule ir 8 10	Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition     Redesign cost	5 5 5 10 p 8 0	5 ots Max	<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and scl</li> <li>Site development</li> </ul>	5 5 5 5 hedule ir 8 10 3	Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition     Redesign cost     Escalation/delay	5 5 5 10 p 8 0 0	5 ots Max	
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and schedule Cost and schedule Cost and schedule Site development</li> <li>Building construction</li> </ul>	ts on con 5 5 5 bedule ir 8 10	Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition     Redesign cost	5 5 5 10 p 8 0	5 ots Max	<ul> <li>Delays occupancy due to redesign</li> </ul>

Buildable Area Capacity of site	e:	ų.	10	ots Max	
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
Site Qualities Qualitative chara	acteristic	s of the site:	5	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	5	
Image/visibility	4	<ul> <li>Noise (external/internal)</li> </ul>	5		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	3		
<ul> <li>Vegetation/habitat</li> </ul>	4	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
Constructability Site constrain     Access     Staging	5 5	On-going operations     Adjacent operations	5	5 5	
<ul> <li>Vibration/noise</li> </ul>	5				
Cost & Schedule Cost and sch	hedule ir	npacts:	10	ots Max	
<ul> <li>Site development</li> </ul>	8	<ul> <li>Demolition</li> </ul>	8	6	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>	0		<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Infrastructure</li> </ul>	3	<ul> <li>Escalation/delay</li> </ul>	0		<ul> <li>Additional cost for redesign, delays, construction</li> </ul>
<ul> <li>Off-site construction</li> </ul>	8	<ul> <li>Operational impact</li> </ul>	10		
<ul> <li>Relocation of existing</li> </ul>	8				
			1		
SUMMARY SCORE		Tot	al points	35 6	4% Percentage of the 55 available points

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	Flexibility/configuration	10		
Site Qualities Qualitative char	acteristic	s of the site:	5 (	pts Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	5	
Image/visibility	4	<ul> <li>Noise (external/internal)</li> </ul>	5		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	3	1	
<ul> <li>Vegetation/habitat</li> </ul>	4	<ul> <li>Prevailing Winds</li> </ul>	5	1	
<ul> <li>Soils/geotech</li> </ul>	5 nts on co	<ul> <li>Sustainable potential instruction:</li> </ul>	5	] pts Max	
Soils/geotech Constructability Site constrain     Access     Staging	nts on co 5 5	•		pts Max 5	
<ul> <li>Soils/geotech</li> <li>Constructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	nts on co 5 5 5	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5		
Soils/geotech Constructability Site constrain     Access     Staging     Vibration/noise Cost & Schedule Cost and sc	nts on co 5 5 5	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5 5		
<ul> <li>Soils/geotech</li> <li>Constructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Cost &amp; Schedule Cost and sc</li> <li>Site development</li> </ul>	nts on co 5 5 5 chedule ir 8	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5 5 10	5	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>Constructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Cost &amp; Schedule Cost and sc</li> <li>Site development</li> <li>Building construction</li> </ul>	the on column of the other other of the other oth	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> <li>mpacts:</li> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 5 5 10 8 0	5 pts Max	<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>Constructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Cost &amp; Schedule Cost and sc</li> <li>Site development</li> </ul>	tts on col 5 5 5 thedule ir 8 10 3	nstruction: • On-going operations • Adjacent operations mpacts: • Demolition • Redesign cost • Escalation/delay	5 5 5 5 10 1 8 0	5 pts Max	
<ul> <li>Soils/geotech</li> <li>Constructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Cost &amp; Schedule Cost and sc</li> <li>Site development</li> <li>Building construction</li> </ul>	the on column of the other other of the other oth	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> <li>mpacts:</li> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 5 5 10 8 0	5 pts Max	<ul> <li>Delays occupancy due to redesign</li> </ul>



## **Concept Plan**



LRDP



SITE #4 EAST OF TAPS (TRANSPORTATION AND PARKING SERVICES-PROPOSED SITE)





Utility	Exists	Length
Domestic/Fire Water	yes	—
Sewer	yes	
Storm	yes	—
Natural Gas	yes	—
Copper	yes	—
Comm Fiber	yes	—
Fiber/Alarms & EMS	yes	_



University of California, Riverside Environmental Health & Safety Expansion Project Siting Study



View Across Site to Watkins Drive



View from Railway to Residential



Aerial View From SW



## SITE #4 ANALYSIS SUMMARY

This is the proposed project site identified through the DPP process, and is the baseline site for EH&S, relative to the examined criteria. The jet fuel line and railway, both located on the north side of Watkins Drive, are approximately 150' from the building. The proposed site is located 780' to the west of the 108" diameter, steel, aquaduct pipeline, owned and maintained by the

Department of Water Resources. The UCR Fire Marshal, through the campus emergency plan, has determined that water from a break in the line in the area of the proposed site, north of Watkins would flow NW along Watkins to Blaine; a break south of Watkins would flow south along Valencia Hill Drive and Big Springs Road into the City stormwater system.



## F

2005 UCR LRDP	10	<ul> <li>Relocation of existing</li> </ul>	10	10
Codes regs/non TSDF	10	Other Master Plans	10	10
CEQA	10		10	
ampus Utilities Availability o	f campu	s service and utilities:	5	ots Max
<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>	5	5
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>	5	
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>	0	
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional)</li> </ul>	0	
<ul> <li>Power</li> </ul>	5			
ccess to Site: By public and p	orivate v	isitors	10 (	ots Max
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responders</li> </ul>	8	10
<ul> <li>Commercial haulers</li> </ul>	10	<ul> <li>Campus/public</li> </ul>	8	
<ul> <li>Vendors</li> </ul>	10			

## PROJECT **Program and Site Influences**

## В

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	8	8	<ul> <li>Modest flexibility for configuration</li> </ul>
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	8	<ul> <li>Flexibility/configuration</li> </ul>	6		
te Qualities Qualitative char	acteristic	s of the site:	5 p	ts Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	
<ul> <li>Image/visibility</li> </ul>	4	<ul> <li>Noise (external/internal)</li> </ul>	4	5.	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	4		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
	nts on cor 5	1	5 pi	ts Max	<ul> <li>Construction noise disruption;</li> </ul>
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>		<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>		4	<ul> <li>Construction noise disruption; impact on TAPS yard</li> </ul>
Access     Staging	5 4 3	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	53	4	
Access     Staging     Vibration/noise      Schedule Cost and sc	5 4 3	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	53	4 ts Max	
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Stage Cost and so</li> <li>Site development</li> </ul>	5 4 3 chedule in	On-going operations     Adjacent operations	5 3 10 p	4	impact on TAPS yard
<ul><li>Access</li><li>Staging</li><li>Vibration/noise</li></ul>	5 4 3 chedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:</li> <li>Demolition</li> </ul>	5 3 10 pt	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul> ost & Schedule Cost and so <ul> <li>Site development</li> <li>Building construction</li> </ul>	5 4 3 chedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 3 10 pt 10 10	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site Schedule Cost and so</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> </ul>	5 4 3 chedule in 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pt 10 10 10	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> <li>Off-site construction</li> </ul>	5 4 3 shedule in 10 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pt 10 10 10	4 ts Max	impact on TAPS yard

## 5

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	8	8	<ul> <li>Modest flexibility for configuration</li> </ul>
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	8	<ul> <li>Flexibility/configuration</li> </ul>	6		
te Qualities Qualitative chara	acteristic	s of the site:	5 pts	Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	
Image/visibility	4	<ul> <li>Noise (external/internal)</li> </ul>	4		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	4		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
onstructability Site constrain			5 pts		
Access     Staging	ts on cor 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 pts 5 3	Max 4	<ul> <li>Construction noise disruption; impact on TAPS yard</li> </ul>
Access	5	<ul> <li>On-going operations</li> </ul>	5		
<ul><li>Access</li><li>Staging</li><li>Vibration/noise</li></ul>	5 4 3	<ul><li>On-going operations</li><li>Adjacent operations</li></ul>	53	4	
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	5 4 3	<ul><li>On-going operations</li><li>Adjacent operations</li></ul>	5 3 10 pts	<b>4</b> Max	
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	5 4 3 hedule in	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 3 10 pts	4	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Stage Cost and science</li> <li>Site development</li> </ul>	5 4 3 hedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:</li> <li>Demolition</li> </ul>	5 3 10 pts	<b>4</b> Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site Schedule Cost and sc</li> <li>Site development</li> <li>Building construction</li> </ul>	5 4 3 hedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 3 10 pts 10 10	<b>4</b> Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site Schedule Cost and sc</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> </ul>	5 4 3 hedule in 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pts 10 10 10	<b>4</b> Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> <li>Off-site construction</li> </ul>	5 4 3 hedule in 10 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pts 10 10 10	<b>4</b> Max	impact on TAPS yard

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	8	8	<ul> <li>Modest flexibility for configuration</li> </ul>
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
Future expansion	8	<ul> <li>Flexibility/configuration</li> </ul>	6		
Site Qualities Qualitative char	acteristic	s of the site:	5 p	ts Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	
<ul> <li>Image/visibility</li> </ul>	4	<ul> <li>Noise (external/internal)</li> </ul>	4		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	4		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
Access	nts on cor 5	<ul> <li>Struction:</li> <li>On-going operations</li> </ul>	5 p	ts Max 4	<ul> <li>Construction noise disruption;</li> </ul>
					<ul> <li>Construction noise disruption; impact on TAPS yard</li> </ul>
Access     Staging     Vibration/noise	5 4 3	<ul><li>On-going operations</li><li>Adjacent operations</li></ul>	5 3	4	
Access     Staging     Vibration/noise Cost & Schedule Cost and sc	5 4 3 shedule in	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 3 10 p	4 ots Max	impact on TAPS yard
Access     Staging     Vibration/noise Cost & Schedule Cost and sc     Site development	5 4 3	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:</li> <li>Demolition</li> </ul>	5 3	4	impact on TAPS yard
Access     Staging     Vibration/noise Cost & Schedule Cost and sc	5 4 3 thedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 3 10 p	4 ots Max	impact on TAPS yard
Access     Staging     Vibration/noise Cost & Schedule Cost and sc     Site development     Building construction	5 4 3 thedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 3 10 p 10 10	4 ots Max	impact on TAPS yard
Access     Staging     Vibration/noise Cost & Schedule Cost and so     Site development     Building construction     Infrastructure	5 4 3 thedule in 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 p 10 10 10	4 ots Max	impact on TAPS yard
Access     Staging     Vibration/noise Cost & Schedule Cost and sc     Site development     Building construction     Infrastructure     Off-site construction	5 4 3 thedule in 10 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 p 10 10 10	4 ots Max	impact on TAPS yard

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<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	8	8	<ul> <li>Modest flexibility for configuration</li> </ul>
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	8	<ul> <li>Flexibility/configuration</li> </ul>	6		
te Qualities Qualitative char	acteristic	s of the site:	5 p	ts Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	
Image/visibility	4	<ul> <li>Noise (external/internal)</li> </ul>	4		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	4		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
	nts on cor 5	1	5 pi	ts Max	<ul> <li>Construction noise disruption;</li> </ul>
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>		<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>		4	<ul> <li>Construction noise disruption; impact on TAPS yard</li> </ul>
Access     Staging	5 4 3	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	53	4	
Access     Staging     Vibration/noise      Schedule Cost and sc	5 4 3	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	53	4 ts Max	
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Stage Cost and so</li> <li>Site development</li> </ul>	5 4 3 chedule in	On-going operations     Adjacent operations	5 3 10 p	4	impact on TAPS yard
<ul><li>Access</li><li>Staging</li><li>Vibration/noise</li></ul>	5 4 3 chedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:</li> <li>Demolition</li> </ul>	5 3 10 pt	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul> ost & Schedule Cost and so <ul> <li>Site development</li> <li>Building construction</li> </ul>	5 4 3 chedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 3 10 pt 10 10	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site Schedule Cost and so</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> </ul>	5 4 3 chedule in 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pt 10 10 10	4 ts Max	impact on TAPS yard
<ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> <li>Off-site construction</li> </ul>	5 4 3 shedule in 10 10 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 3 10 pt 10 10 10	4 ts Max	impact on TAPS yard



## Concept Plan



LRDP



## SITE #5 GREENHOUSES AREA

Available site area:	3.2 acres
Required site area:	3.2 acres
LRDP Designated use:	Academic
Gradient cost premium:	high (18' change at 2 terraces)



Transportation



Utility Exists Length Domestic/Fire Water yes \_ Sewer yes \_ Storm yes \_ Natural Gas yes \_\_\_\_ Power yes \_ Copper yes Comm Fiber yes — Fiber/Alarms & EMS 1,200' no

Site

University of California, Riverside Environmental Health & Safety Expansion Project Siting Study



View to Entrance of Lot 9



View to West from Lot 9



Aerial View From NE



## SITE #5 ANALYSIS SUMMARY

Site 5 is located north of parking lot 9, and includes the greenhouses north of the lot. In addition to the redesign cost and cost escalation, this site has three terraces that vary in height from eight to twelve feet. The building and yard areas would have to cross those terraces, putting the structure and retaining system costs in excess of a 20% premium. Realizing an efficient design would be challenging, and would likely require two or more lev-

els. There is a significant cost to demolish and rebuild the nine large, experimental greenhouses on another site, and the research teams that use those facilities are just several blocks away—a relationship that can not be duplicated at a new site. However, EH&S would be located in the middle of the "service area" for campus laboratories.

## CAMPUS **External influences**

## Planning/LRDP Compliance with campus and district planning:

2005 UCR LRDP	0	<ul> <li>Relocation of existin</li> </ul>
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
CEQA	10	

## Campus Utilities Availability of campus service and utilities:

<ul> <li>Domestic/fire water</li> </ul>	5	<ul> <li>Telecom/data</li> </ul>
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (option</li> </ul>
<ul> <li>Power</li> </ul>	5	
Access to Site: By public and	private vi	sitors
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responde</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	8	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	8	

## **Program and Site Influences** PROJECT

<ul> <li>Building</li> </ul>	4	<ul> <li>Parking</li> </ul>	4	4	<ul> <li>Requires major regrading on terraced site</li> </ul>
<ul> <li>Yard/storage</li> </ul>	4	<ul> <li>Circulation on-site</li> </ul>	4		
<ul> <li>Future expansion</li> </ul>	4	<ul> <li>Flexibility/configuration</li> </ul>	2		
te Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	<ul> <li>Adjacent to arroyo</li> </ul>
<ul> <li>Image/visibility</li> </ul>	3	<ul> <li>Noise (external/internal)</li> </ul>	4		
	5	<ul> <li>Slope/topography</li> </ul>	0		
<ul> <li>Seismic</li> </ul>	0	ere parte page april			
<ul> <li>Seismic</li> <li>Vegetation/habitat</li> </ul>	2	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul><li>Vegetation/habitat</li><li>Soils/geotech</li></ul>	2	Prevailing Winds     Sustainable potential	3	ts Max	<ul> <li>Significant topographic constraints</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> </ul>	2 5 Its on cor	Prevailing Winds     Sustainable potential	3 5 p		<ul> <li>Significant topographic constraints</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> </ul>	2 5 nts on cor 3 4	<ul><li>Prevailing Winds</li><li>Sustainable potential</li></ul>	3 5 p	ots Max 3	<ul> <li>Significant topographic constraints</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> </ul>	2 5 Its on cor	<ul> <li>Prevailing Winds</li> <li>Sustainable potential</li> <li>nstruction:</li> <li>On-going operations</li> </ul>	3 5 p		<ul> <li>Significant topographic constraints</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> </ul>	2 5 nts on cor 3 4 2 hedule in	<ul> <li>Prevailing Winds</li> <li>Sustainable potential</li> <li>nstruction: <ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> </li> <li>npacts:</li> </ul>	3 5 5 5		
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> <li>Site development</li> </ul>	2 5 hts on cor 3 4 2	Prevailing Winds     Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition	3 5 5 5	3	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> </ul>	2 5 nts on cor 3 4 2 hedule in	<ul> <li>Prevailing Winds</li> <li>Sustainable potential</li> <li>nstruction: <ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> </li> <li>npacts:</li> </ul>	3 5 p 5 5 10 p	3 ots Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> <li>Site development</li> </ul>	2 5 hts on cor 3 4 2 hedule in 2 4 10	Prevailing Winds     Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition	3 5 p 5 5 10 p 0 0 0	3 ots Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> <li>Additional cost for relocation of greenhouses,</li> </ul>
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> <li>Site development</li> <li>Building construction</li> </ul>	2 5 nts on cor 3 4 2 hedule in 2 4	<ul> <li>Prevailing Winds</li> <li>Sustainable potential</li> <li>Sustainable potential</li> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul> </li> </ul>	3 5 p 5 5 5 10 p 0 0	3 ots Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>

<ul> <li>Building</li> </ul>	4	<ul> <li>Parking</li> </ul>	4	4	Rec	quires major regrading on terraced site
<ul> <li>Yard/storage</li> </ul>	4	<ul> <li>Circulation on-site</li> </ul>	4			
<ul> <li>Future expansion</li> </ul>	4	<ul> <li>Flexibility/configuration</li> </ul>	2			
te Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max		
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	<ul> <li>Adja</li> </ul>	acent to arroyo
<ul> <li>Image/visibility</li> </ul>	3	<ul> <li>Noise (external/internal)</li> </ul>	4			
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	0			
period with the second	0		5			
<ul> <li>Vegetation/habitat</li> </ul>	2	<ul> <li>Prevailing Winds</li> </ul>	5			
<ul> <li>Soils/geotech</li> </ul> onstructability Site constrain	5	<ul> <li>Sustainable potential</li> </ul>	3	ots Max	■ Sig	nificant topographic constraints
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> </ul>	5 its on cor 3 4	Sustainable potential  struction:	3 5 p		■ Sig	nificant topographic constraints
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	5 ts on cor 3 4 2	<ul> <li>Sustainable potential</li> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	3 5 p 5 5	3	■ Sig	nificant topographic constraints
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and scl</li> </ul>	5 ts on cor 3 4 2 hedule in	Sustainable potential     struction:     On-going operations     Adjacent operations	3 5 p 5 5 10 p	3 ots Max		
<ul> <li>Soils/geotech</li> <li>Sonstructability Site constraint</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>State Schedule Cost and schedule</li> <li>Site development</li> </ul>	ts on cor 3 4 2 hedule in 2	Sustainable potential     struction:     On-going operations     Adjacent operations  npacts:     Demolition	3 5 5 5 10 p	3	■ Rec	quires major redesign
<ul> <li>Soils/geotech</li> <li>Sonstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Sost &amp; Schedule Cost and sch</li> <li>Site development</li> <li>Building construction</li> </ul>	bedule in 2 4 2 4 4 2 4	Sustainable potential     struction:     On-going operations     Adjacent operations     npacts:     Demolition     Redesign cost	3 5 p 5 5 5 10 p 0 0	3 ots Max	<ul><li>Rec</li><li>Del</li></ul>	quires major redesign ays occupancy due to redesign
<ul> <li>Soils/geotech</li> <li>Sonstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> </ul>	5 15 on cor 3 4 2 hedule in 2 4 10	Sustainable potential     struction:     On-going operations     Adjacent operations     practs:     Demolition     Redesign cost     Escalation/delay	3 5 p 5 5 10 p 0 0 0	3 ots Max	<ul><li>Rec</li><li>Del</li><li>Ado</li></ul>	quires major redesign lays occupancy due to redesign ditional cost for relocation of greenhouses
<ul> <li>Soils/geotech</li> <li>Sonstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Sost &amp; Schedule Cost and sch</li> <li>Site development</li> <li>Building construction</li> </ul>	bedule in 2 4 2 4 4 2 4	Sustainable potential     struction:     On-going operations     Adjacent operations     npacts:     Demolition     Redesign cost	3 5 p 5 5 5 10 p 0 0	3 ots Max	<ul><li>Rec</li><li>Del</li><li>Ado</li></ul>	quires major redesign ays occupancy due to redesign

<ul><li>Building</li><li>Yard/storage</li><li>Future expansion</li></ul>	4 4 4	Parking     Circulation on-site     Elevibility/configuration	4	4	<ul> <li>Requires major regrading on terraced site</li> </ul>
Future expansion	-			Į.	
	4	<ul> <li>Elevibility/configuration</li> </ul>		6	
		<ul> <li>Flexibility/configuration</li> </ul>	2		
Site Qualities Qualitative charac	cteristic	s of the site:	5 r	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	<ul> <li>Adjacent to arroyo</li> </ul>
<ul> <li>Image/visibility</li> </ul>	3	<ul> <li>Noise (external/internal)</li> </ul>	4		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	0		
<ul> <li>Vegetation/habitat</li> </ul>	2	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	3		
<ul> <li>Staging</li> </ul>	4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5	3	<ul> <li>Significant topographic constraints</li> </ul>
Constructability Site constraints     Access	3 011 001	On-going operations	5	3	<ul> <li>Significant topographic constraints</li> </ul>
<ul> <li>Vibration/noise</li> </ul>	2			ſ	
			1	5 	
Cost & Schedule Cost and sch				ots Max	
<ul> <li>Site development</li> </ul>	2	<ul> <li>Demolition</li> </ul>	0	2	Requires major redesign
<ul> <li>Building construction</li> </ul>	4	<ul> <li>Redesign cost</li> </ul>	0		Delays occupancy due to redesign
	10	<ul> <li>Escalation/delay</li> </ul>	0		<ul> <li>Additional cost for relocation of greenhouses, redecign delays construction</li> </ul>
<ul> <li>Infrastructure</li> </ul>	102.11			63	redesign, delays, construction
Infrastructure     Off-site construction     Relocation of existing	8	<ul> <li>Operational impact</li> </ul>	10		<b>3</b> , <b>,</b> . ,

<ul> <li>Building</li> </ul>	4	<ul> <li>Parking</li> </ul>	4	4	•	Requires major regrading on terraced site
<ul> <li>Yard/storage</li> </ul>	4	<ul> <li>Circulation on-site</li> </ul>	4			
<ul> <li>Future expansion</li> </ul>	4	<ul> <li>Flexibility/configuration</li> </ul>	2			
Site Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max		
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4		Adjacent to arroyo
<ul> <li>Image/visibility</li> </ul>	3	<ul> <li>Noise (external/internal)</li> </ul>	4	1		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	0			
<ul> <li>Vegetation/habitat</li> </ul>	2	<ul> <li>Prevailing Winds</li> </ul>	5			
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Soils/geotech Constructability Site constrain				ots Max		
Constructability Site constrain     Access     Staging	nts on cor 3 4			ats Max	•	Significant topographic constraints
Constructability Site constrain  Access	nts on cor	nstruction: • On-going operations	5 p		•	Significant topographic constraints
Constructability Site constrain     Access     Staging	nts on cor 3 4 2	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 p 5 5		•	Significant topographic constraints
Constructability Site constrain  Access  Staging  Vibration/noise	nts on cor 3 4 2	<ul> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 p 5 5	3	•	Requires major redesign
Constructability Site constrain  Access  Staging  Vibration/noise  Cost & Schedule Cost and sc	nts on cor 3 4 2 chedule ir	nstruction: • On-going operations • Adjacent operations npacts:	5 p 5 5 10 p	3 ots Max	•	Requires major redesign Delays occupancy due to redesign
Constructability Site constrain  Access  Staging  Vibration/noise  Cost & Schedule Cost and sc  Site development	nts on cor 3 4 2 chedule ir 2	nstruction: • On-going operations • Adjacent operations mpacts: • Demolition • Redesign cost • Escalation/delay	5 p 5 5 10 p 0 0 0	3 ots Max	•	Requires major redesign Delays occupancy due to redesign Additional cost for relocation of greenhouses,
Constructability Site constrain  Access  Staging  Vibration/noise  Cost & Schedule Cost and sc  Site development Building construction	nts on cor 3 4 2 2 2 2 2 4	nstruction: • On-going operations • Adjacent operations mpacts: • Demolition • Redesign cost	5 p 5 5 10 p 0 0	3 ots Max	•	Requires major redesign Delays occupancy due to redesign







## Requires amending the LRDP

Displaces greenhouses research program

Commercial haulers use campus roads





SITE #6 PARKING LOT #6

Available site area:	3.2 acres
Required site area:	3.2 acres
LRDP Designated use:	Academic
Gradient cost premium:	moderate (6%)



Utility	Exists	Length
Domestic/Fire Water	no	400'
Sewer	yes	
Storm	yes	—
Natural Gas	yes	—
Power	no	400'
Copper	no	400'
Comm Fiber	no	400'
Fiber/Alarms & EMS	no	800'



University of California, Riverside Environmental Healt



View to Freeway from High End



View of Low End



Aerial View From NE



## SITE #6 ANALYSIS SUMMARY

Site 6 is parking lot 6, and is located within the LRDP East Campus Academic land use area, near the freeway. Because of the prominent location relative to MLK and the freeway, it is the prime location for a "signature" structure that announces the UCR campus to the public. A "signature" building is one that has

a unique architectural quality or element that is, or could become the campus logo (such as the campus carillon tower). It would also be a visual focal point from the proposed Administrative Center in the original Citrus Experiment Station buildings.

## CAMPUS **External influences**

## Planning/LRDP Compliance with campus and district planning:

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
<ul> <li>CEQA</li> </ul>	10	

## Campus Utilities Availability of campus service and utilities:

<ul> <li>Domestic/fire water</li> </ul>	3	<ul> <li>Telecom/data</li> </ul>
<ul> <li>Sewer</li> </ul>	5	· Fiber optic (alarms)
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (option</li> </ul>
<ul> <li>Power</li> </ul>	3	- 000
Access to Site: By public and	private v	sitors
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency respond</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	8	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	8	

## PROJECT **Program and Site Influences**

## Е

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
Yard/storage	10	<ul> <li>Circulation on-site</li> </ul>	10		
Future expansion	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
Site Qualities Qualitative char	acteristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	1	3	<ul> <li>Negates use of site for "signature" building</li> </ul>
Image/visibility	0	<ul> <li>Noise (external/internal)</li> </ul>	3	1.5	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4	1	
Constructability Site constrain				ots Max	4
Constructability Site constrain     Access     Staging	nts on cor 5 5	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 p 5 5	ots Max 5	
<ul> <li>Access</li> </ul>	5	<ul> <li>On-going operations</li> </ul>	5		
Access     Staging	5 5 4	On-going operations     Adjacent operations	5 5		
Access     Staging     Vibration/noise	5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5	5	<ul> <li>Requires major redesign</li> </ul>
Access     Staging     Vibration/noise Cost & Schedule Cost and sc	5 5 4 chedule in	On-going operations     Adjacent operations	5 5 10 p	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise Cost & Schedule Cost and sc     Site development	5 5 4 chedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:</li> <li>Demolition</li> </ul>	5 5 10 p 10 0 0	5 pts Max	<ul> <li>Requires major redesign</li> </ul>
Access     Staging     Vibration/noise  Cost & Schedule Cost and so     Site development     Building construction	5 5 4 chedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:         <ul> <li>Demolition</li> <li>Redesign cost</li> </ul> </li> </ul>	5 5 10 p 10 0	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise  Cost & Schedule Cost and so     Site development     Building construction     Infrastructure	5 5 4 chedule in 10 10 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise  Cost & Schedule Cost and sc     Site development     Building construction     Infrastructure     Off-site construction	5 5 4 chedule in 10 10 8 8 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>

## S

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
Yard/storage	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
e Qualities Qualitative char	acteristic	s of the site:	5 (	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	1	3	<ul> <li>Negates use of site for "signature" building</li> </ul>
Image/visibility	0	<ul> <li>Noise (external/internal)</li> </ul>	3		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> </ul>	5 nts on cor 5	Sustainable potential     nstruction:     On-going operations	4 5 5	ots Max	
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> </ul>	nts on cor	nstruction:	5 (		
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	nts on cor 5 5 4	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 5 5	5	
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sc</li> </ul>	nts on cor 5 5 4	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 5 5	5 ots Max	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>nstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Sta Schedule Cost and sc</li> <li>Site development</li> </ul>	nts on cor 5 5 4 chedule ir	nstruction: • On-going operations • Adjacent operations mpacts:	5 5 5	5	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>structability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> </ul>	nts on cor 5 4 chedule in 10	nstruction:   On-going operations  Adjacent operations  npacts:  Demolition	5 5 5 10 10	5 ots Max	
<ul> <li>Soils/geotech</li> <li>soils/geotech</li> <li>sonstructability Site constrain</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>Site development</li> <li>Building construction</li> <li>Infrastructure</li> </ul>	nts on cor 5 5 4 chedule in 10 10	nstruction: • On-going operations • Adjacent operations mpacts: • Demolition • Redesign cost	5 5 5 10 1 10	5 ots Max	<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Soils/geotech</li> <li>onstructability Site constrain</li> <li>Access</li> <li>Staging</li> </ul>	tts on con 5 5 4 thedule in 10 10 8	nstruction: • On-going operations • Adjacent operations mpacts: • Demolition • Redesign cost • Escalation/delay	5 5 5 10 10 0 0	5 ots Max	<ul> <li>Delays occupancy due to redesign</li> </ul>

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10		
Yard/storage	10	<ul> <li>Circulation on-site</li> </ul>	10			
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10			
Site Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max		
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	1	3		Negates use of site for "signature" building
<ul> <li>Image/visibility</li> </ul>	0	<ul> <li>Noise (external/internal)</li> </ul>	3	1.07		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5			
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5			
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4			
Constructability Site constrain				ots Max		
Constructability Site constrain <ul> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	nts on cor 5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 p 5 5	ots Max 5		
Access     Staging     Vibration/noise	5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5			
Access     Staging     Vibration/noise	5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5	5 ots Max		Requires major redesign
Access     Staging     Vibration/noise Cost & Schedule Cost and sch	5 5 4 hedule ir	On-going operations     Adjacent operations	5 5 10 p	5	:	Delays occupancy due to redesign
Access     Staging     Vibration/noise Cost & Schedule Cost and scl     Site development	5 5 4 hedule in 10	On-going operations     Adjacent operations  npacts:     Demolition	5 5 10 p 10 p	5 ots Max	:	
Access     Staging     Vibration/noise  Cost & Schedule Cost and scl     Site development     Building construction	5 5 4 hedule ir 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> <li>npacts:         <ul> <li>Demolition</li> <li>Redesign cost</li> </ul> </li> </ul>	5 5 10 p 10 0	5 ots Max	:	Delays occupancy due to redesign
Access     Staging     Vibration/noise  Cost & Schedule Cost and sch     Site development     Building construction     Infrastructure	5 5 4 hedule ir 10 10 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 ots Max	:	Delays occupancy due to redesign

<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	
<ul> <li>Yard/storage</li> </ul>	10	Circulation on-site	10		
Future expansion	10	Flexibility/configuration	10		
Site Qualities Qualitative chara	cteristic	s of the site:	5 r	ots Max	(
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	1	3	<ul> <li>Negates use of site for "signature" building</li> </ul>
<ul> <li>Image/visibility</li> </ul>	0	<ul> <li>Noise (external/internal)</li> </ul>	3	1.00	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4		
Constructability Site constraint	_			ots Max	<u>&lt;</u>
Access     Staging	5 5	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 p 5 5	ots Max 5	<u> </u>
Access     Staging     Vibration/noise Cost & Schedule Cost and sch	5 5 4	On-going operations     Adjacent operations	5 5		- <u>&lt;</u>
Access     Staging     Vibration/noise	5 5 4 nedule in 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5	5	Requires major redesign
Access     Staging     Vibration/noise Cost & Schedule Cost and sch	5 5 4 nedule in	On-going operations     Adjacent operations	5 5 10 p	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise Cost & Schedule Cost and sch     Site development	5 5 4 nedule in 10 10 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 pts Max	Requires major redesign
Access     Staging     Vibration/noise  Cost & Schedule Cost and sch     Site development     Building construction     Infrastructure     Off-site construction	5 5 4 nedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 5 10 p 10 p	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise  Cost & Schedule Cost and sch     Site development     Building construction     Infrastructure	5 5 4 nedule in 10 10 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Access     Staging     Vibration/noise  Cost & Schedule Cost and sch     Site development     Building construction     Infrastructure     Off-site construction	5 5 4 nedule in 10 10 8 8	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> <li>Escalation/delay</li> </ul>	5 5 10 p 10 0 0	5 pts Max	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>



## Concept Plan









LRDP

## SITE #7 LDS STUDENT CENTER

Available site area:	
Required site area:	
LRDP Designated use:	
	E

Gradient cost premium:

1.3 acres 3.2 acres Parking for area owned Building area not owned none



Transportation

Utility	Exists	Length
Domestic/Fire Water	yes	—
Sewer	yes	—
Storm	yes	
Natural Gas	yes	—
Power	no	200'
Copper	yes	—
Comm Fiber	yes	_
Fiber/Alarms & EMS	no	800'



## Site

University of California, Riverside

Environmental Health & Safety Expansion Project Siting Study



View from Reservoir



View to University Drive



Aerial View From SE



## SITE #7 ANALYSIS SUMMARY

Site 7 is the Latter Day Saints Student Center, located next to the City-owned, partially underground water reservoir. UCR discussed the possibility of purchasing the property on University Avenue before this study, and the cost to buy, demolish and rebuild a similar facility adjacent to the campus is prohibitively expensive. In addition, the site is too small to accommodate the required area. It's on a major campus entry, and would require

using most of the adjacent parking Lot 1, which is the primary parking lot with access the adjacent buildings at the south end of the Carillon Mall. The LRDP designates parking Lot 1, adjacent to the LDS Community Center, to be a future parking structure. Implementation of an EH&S on this site could require drastic downsizing or elimination of proposed parking structure.

## CAMPUS **External influences**

## Planning/LRDP Compliance with campus and district planning:

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
<ul> <li>CEQA</li> </ul>	10	

## Campus Utilities Availability of campus service and utilities:

5	<ul> <li>Telecom/data</li> </ul>
5	<ul> <li>Fiber optic (alarms)</li> </ul>
5	<ul> <li>Steam (optional)</li> </ul>
5	<ul> <li>Chilled water (optional)</li> </ul>
4	
	5

## Access to Site: By public and private visitors

<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responders</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	4	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	4	12 D

## **Program and Site Influences** PROJECT

		10 p	ots Max		
10	<ul> <li>Parking</li> </ul>	10	10		Requires two thirds of required area to come from
10	<ul> <li>Access/circulation on-site</li> </ul>	8			future parking structure
10	<ul> <li>Circulation on-site</li> </ul>	6			
eristics	s of the site:	5 r	ots Max		
5	<ul> <li>Adjacent facilities</li> </ul>	4	4		Major campus entrance
1	<ul> <li>Noise (external/internal)</li> </ul>	4			
5	<ul> <li>Slope/topography</li> </ul>	5			
5	<ul> <li>Prevailing Winds</li> </ul>	5			
5	<ul> <li>Sustainable potential</li> </ul>	4			
5	<ul> <li>Adjacent operations</li> </ul>	5	4	-	Construction would use most of the remainder of
4					the parking area.
	npacts:	10 p	ots Max		the parking area.
	npacts: Demolition	10 p	ots Max		Requires construction of replacement LDC facility
dule im					Requires construction of replacement LDC facility Requires major redesign
dule im 10	<ul> <li>Demolition</li> </ul>	0		:	Requires construction of replacement LDC facility Requires major redesign Delays occupancy due to redesign
dule im 10 10	Demolition     Redesign cost	0		- 1	Requires construction of replacement LDC facility Requires major redesign
	10 10 eristics 5 1 5 5 5 5 0 n con 4 5	10       Access/circulation on-site         10       Circulation on-site         10       Circulation on-site         eristics of the site:	10       Access/circulation on-site       8         10       Circulation on-site       6         eristics of the site:       5           5       Adjacent facilities       4         1       Noise (external/internal)       4         5       Slope/topography       5         5       Prevailing Winds       5         5       Sustainable potential       4         on construction:       5           4       On-going operations       5	10       Access/circulation on-site       8         10       Circulation on-site       6         eristics of the site:       5 pts Max         5       Adjacent facilities       4         1       Noise (external/internal)       4         5       Slope/topography       5         5       Prevailing Winds       5         5       Sustainable potential       4         on construction:       5 pts Max         4       On-going operations       5	10       Access/circulation on-site       8         10       Circulation on-site       6         eristics of the site:       5 pts Max         5       Adjacent facilities       4         1       Noise (external/internal)       4         5       Slope/topography       5         5       Prevailing Winds       5         5       Sustainable potential       4         on construction:       5 pts Max         4       On-going operations       5

Buildable Area Capacity of site:			10	pts Max	
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10	<ul> <li>Requires two thirds of required area to come from</li> </ul>
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Access/circulation on-site</li> </ul>	8	1	future parking structure
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	6	6	
Site Qualities Qualitative charact	eristic	s of the site:	5	pts Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4	<ul> <li>Major campus entrance</li> </ul>
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	4	· ·	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5	1	
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5	1	
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4	1	
Access     Staging     Vibration/noise	4 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5	4	<ul> <li>Construction would use most of the remainder of the parking area.</li> </ul>
Cost & Schedule Cost and sched		npacts:	10	pts Max	
<ul> <li>Site development</li> </ul>	10	<ul> <li>Demolition</li> </ul>	0	2	<ul> <li>Requires construction of replacement LDC facility</li> </ul>
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>	0		<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Infrastructure</li> </ul>	8	<ul> <li>Escalation/delay</li> </ul>	0	]	Delays occupancy due to redesign
<ul> <li>Off-site construction</li> </ul>	0	<ul> <li>Operational impact</li> </ul>	10		<ul> <li>Additional cost for site purchase, replacement apartmution, redesign delays, construction</li> </ul>
<ul> <li>Relocation of existing</li> </ul>	0				construction, redesign, delays, construction
			107241		
SUMMARY SCORE		Total	points	34	62% Percentage of the 55 available points

			101	ots Max		
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	10		Requires two thirds of required area to come from
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Access/circulation on-site</li> </ul>	8			future parking structure
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	6			
ite Qualities Qualitative chara	acteristic	s of the site:	5 p	ots Max		
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4		Major campus entrance
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	4	1000		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5			
			-	1		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5			
<ul><li>Vegetation/habitat</li><li>Soils/geotech</li></ul>	5	<ul> <li>Sustainable potential</li> </ul>	4	ots Max		Construction would use most of the remainder of
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constraint</li> <li>Access</li> <li>Staging</li> </ul>	5 its on cor 4 5	Sustainable potential	4 5 p			Construction would use most of the remainder of the parking area.
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constraint</li> <li>Access</li> </ul>	5 its on cor 4	Sustainable potential  struction:     On-going operations	4 5 p 5			
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constraint</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> </ul>	5 ts on cor 4 5 4	<ul> <li>Sustainable potential</li> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	4 5 5 5		•	
Vegetation/habitat     Soils/geotech onstructability Site constrain     Access     Staging     Vibration/noise ost & Schedule Cost and sch     Site development	5 ts on cor 4 5 4 hedule in 10	<ul> <li>Sustainable potential</li> <li>nstruction:</li> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	4 5 5 5 10 p	4	•	the parking area. Requires construction of replacement LDC facility
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constraint</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sch</li> </ul>	5 ts on cor 4 5 4 hedule in 10 10	Sustainable potential     struction:     On-going operations     Adjacent operations     npacts:     Demolition     Redesign cost	4 5 5 5	4 ots Max	•	the parking area. Requires construction of replacement LDC facility Requires major redesign
Vegetation/habitat     Soils/geotech  onstructability Site constrain     Access     Staging     Vibration/noise  ost & Schedule Cost and sch     Site development     Building construction     Infrastructure	5 ts on cor 4 5 4 hedule in 10	Sustainable potential     struction:     On-going operations     Adjacent operations     npacts:     Demolition	4 5 5 5 10 p 0 0 0	4 ots Max	•	the parking area. Requires construction of replacement LDC facility Requires major redesign Delays occupancy due to redesign
<ul> <li>Vegetation/habitat</li> <li>Soils/geotech</li> <li>onstructability Site constraint</li> <li>Access</li> <li>Staging</li> <li>Vibration/noise</li> <li>ost &amp; Schedule Cost and sch</li> <li>Site development</li> <li>Building construction</li> </ul>	5 ts on cor 4 5 4 hedule in 10 10	Sustainable potential     struction:     On-going operations     Adjacent operations     npacts:     Demolition     Redesign cost	4 5 5 5 10 p 0 0	4 ots Max		the parking area. Requires construction of replacement LDC facility Requires major redesign

Buildable Area Capacity of site	r:		10 r	pts Max		
<ul> <li>Building</li> </ul>	10	Parking	10	10		Requires two thirds of required area to come from
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Access/circulation on-site</li> </ul>	8			future parking structure
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	6			
Site Qualities Qualitative chara	cteristic	s of the site:	5	pts Max		
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	4	4		Major campus entrance
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	4			
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5	1		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5	1		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4	1		
			_	pts Max		Construction would use most of the remainder of
Constructability Site constraint Access Staging Vibration/noise	s on cor 4 5 4	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 p 5 5	ots Max 4	•	Construction would use most of the remainder of the parking area.
Access     Staging     Vibration/noise	4 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5	4	•	
Access     Staging     Vibration/noise	4 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5 5		•	
Access     Staging     Vibration/noise Cost & Schedule Cost and sch	4 5 4 nedule in	On-going operations     Adjacent operations	5 5 10 p	4 pts Max	•	the parking area. Requires construction of replacement LDC facility Requires major redesign
Access     Staging     Vibration/noise Cost & Schedule Cost and sch     Site development	4 5 4 nedule in 10	On-going operations     Adjacent operations  npacts:     Demolition	5 5 10 p	4 pts Max	•	the parking area. Requires construction of replacement LDC facility Requires major redesign Delays occupancy due to redesign
Staging     Vibration/noise Cost & Schedule Cost and sch     Site development     Building construction	4 5 4 nedule in 10 10	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul> npacts: <ul> <li>Demolition</li> <li>Redesign cost</li> </ul>	5 5 10 p 0 0	4 pts Max	•	the parking area. Requires construction of replacement LDC facility Requires major redesign









SITE #8 PARKING LOT 13

3.2 acres
3.2 acres
Academic
none



Transportation



Utility	Exists	Length
Domestic/Fire Water	no	300'
Sewer	yes	
Storm	yes	—
Natural Gas	yes	_
Power	no	400'
Copper	no	400'
Comm Fiber	no	400'
Fiber/Alarms & EMS	no	600'

Site

University of California, Riverside Environmental Health & Safety Expansion Project Siting Study



View to East



View to South



Aerial View From SW



## SITE #8 ANALYSIS SUMMARY

Site 8 is on the edge of the LRDP Academic land use area at the west end of Parking Lot 13, located at the edge of the East Campus Academic Core. There will be costs for redesign and

construction cost escalation, plus the realignment of the access road serving the building to the south, and would require an LRDP amendment.

## CAMPUS **External influences**

## Planning/LRDP Compliance with campus and district planning:

<ul> <li>2005 UCR LRDP</li> </ul>	0	<ul> <li>Relocation of existing</li> </ul>
<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
CEQA	8	

## Campus Utilities Availability of campus service and utilities:

<ul> <li>Domestic/fire water</li> </ul>	2	<ul> <li>Telecom/data</li> </ul>
<ul> <li>Sewer</li> </ul>	5	<ul> <li>Fiber optic (alarms)</li> </ul>
<ul> <li>Storm</li> </ul>	5	<ul> <li>Steam (optional)</li> </ul>
<ul> <li>Natural gas</li> </ul>	5	<ul> <li>Chilled water (optional</li> </ul>
<ul> <li>Power</li> </ul>	3	
Access to Site: By public and	private v	isitors
<ul> <li>UCR haulers</li> </ul>	10	<ul> <li>Emergency responder</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	8	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	8	

## PROJECT **Program and Site Influences**

Buildable Area Capacity of site:			10	ots Max	
Building	10	Parking	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10	]	
Site Qualities Qualitative charact	teristic	s of the site:	5	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	2	4	
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	3	1	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	4	1	
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5	1	
Constructability Site constraints     Access     Staging     Vibration/noise	5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5	5	
Cost & Schedule Cost and sche	10	Demolition		ots Max	Requires major redesign
<ul> <li>Site development</li> <li>Building construction</li> </ul>	10	Redesign cost	8	6	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Infrastructure	8	<ul> <li>Escalation/delay</li> </ul>	0		<ul> <li>Additional cost for redesign, delays, construction,</li> </ul>
Off-site construction	10	Operational impact	10		new road to salinity lab
<ul> <li>Relocation of existing</li> </ul>	10				
SUMMARY SCORE		Tota	al points	41	75% Percentage of the 55 available points

Buildable Area Capacity of site:			10 p	ots Max	
<ul> <li>Building</li> </ul>	10	Parking	10	10	
<ul> <li>Yard/storage</li> </ul>	10	<ul> <li>Circulation on-site</li> </ul>	10		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
Site Qualities Qualitative charact	teristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	2	4	
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	3		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	4		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
Constructability Site constraints     Access     Staging     Vibration/noise	on coi 5 5 4	<ul> <li>• On-going operations</li> <li>• Adjacent operations</li> </ul>	5 p 5 5	5 5	
Cost & Schedule Cost and sche	dule ir	npacts:	10 p	ots Max	
<ul> <li>Site development</li> </ul>	10	<ul> <li>Demolition</li> </ul>	8	6	<ul> <li>Requires major redesign</li> </ul>
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>	0		<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Infrastructure</li> </ul>	8	<ul> <li>Escalation/delay</li> </ul>	0		<ul> <li>Additional cost for redesign, delays, construction</li> </ul>
<ul> <li>Off-site construction</li> </ul>	10	<ul> <li>Operational impact</li> </ul>	10		new road to salinity lab
<ul> <li>Relocation of existing</li> </ul>	10				
SUMMARY SCORE		Tota	al points	41	75% Percentage of the 55 available points

	10	<ul> <li>Parking</li> </ul>	10 p	10	
Building     Vord/storage	10	Circulation on-site	10	10	
Yard/storage	-		the subscreen statement of		
<ul> <li>Future expansion</li> </ul>	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
Site Qualities Qualitative charac	cteristic	s of the site:	5 p	ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	2	4	
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	3		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	4		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
Access     Staging     Vibration/noise	5 5 4	<ul> <li>On-going operations</li> <li>Adjacent operations</li> </ul>	5	5	
			12		
Cost & Schedule Cost and sche	edule in	npacts:	10 p	ots Max	
Cost & Schedule Cost and sche	edule in 10	npacts: Demolition	10 p 8	ots Max 6	<ul> <li>Requires major redesign</li> </ul>
	_				<ul> <li>Delays occupancy due to redesign</li> </ul>
<ul> <li>Site development</li> </ul>	10	Demolition	8		<ul> <li>Delays occupancy due to redesign</li> <li>Additional cost for redesign, delays, construction</li> </ul>
<ul><li>Site development</li><li>Building construction</li></ul>	10 10	Demolition     Redesign cost	8		<ul> <li>Delays occupancy due to redesign</li> </ul>
Site development     Building construction     Infrastructure	10 10 8	<ul><li>Demolition</li><li>Redesign cost</li><li>Escalation/delay</li></ul>	8 0 0		<ul> <li>Delays occupancy due to redesign</li> <li>Additional cost for redesign, delays, construction</li> </ul>
Site development     Building construction     Infrastructure     Off-site construction	10 10 8 10	<ul><li>Demolition</li><li>Redesign cost</li><li>Escalation/delay</li></ul>	8 0 0		<ul> <li>Delays occupancy due to redesign</li> <li>Additional cost for redesign, delays, construction</li> </ul>

	10	Parking	10	10	
<ul><li>Building</li><li>Yard/storage</li></ul>	10	Circulation on-site	10	10	
Future expansion	10	<ul> <li>Flexibility/configuration</li> </ul>	10		
ite Qualities Qualitative charac				ots Max	
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	2	4	
Image/visibility	1	<ul> <li>Noise (external/internal)</li> </ul>	3		
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	4		
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5		
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	5		
<ul> <li>Access</li> </ul>	5	<ul> <li>On-going operations</li> </ul>	5	5	
Staging     Vibration/noise	5 4	Adjacent operations	5	te May	
Vibration/noise ost & Schedule Cost and sche	4 edule ir	npacts:	10 p	ots Max	Requires major redesign
Vibration/noise  ost & Schedule Cost and sche     Site development	4 edule ir 10	npacts: Demolition	10 p	ots Max 6	<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> </ul>
Vibration/noise  ost & Schedule Cost and sche     Site development     Building construction	4 edule ir 10 10	npacts: Demolition Redesign cost	10 p		<ul> <li>Requires major redesign</li> <li>Delays occupancy due to redesign</li> <li>Additional cost for redesign, delays, construction</li> </ul>
Vibration/noise  ost & Schedule Cost and sche     Site development	4 edule ir 10	npacts: • Demolition • Redesign cost • Escalation/delay	10 p 8 0 0		<ul> <li>Delays occupancy due to redesign</li> </ul>
Vibration/noise     ost & Schedule Cost and sche     Site development     Building construction     Infrastructure	4 edule ir 10 10 8	npacts: Demolition Redesign cost	10 p 8 0		<ul> <li>Delays occupancy due to redesign</li> <li>Additional cost for redesign, delays, construction</li> </ul>



Concept Plan







LRDP

BLAINE STREET



## SITE #9 - ELECTRICAL SUBSTATION

Available site area:	3.2 acres
Required site area:	3.2 acres
LRDP Designated use:	Campus Support
Gradient cost premium:	none



Transportation

Utility	Exists	Length
Domestic/Fire Water	no	600'
Sewer	no	1,900'
Storm	no	3,200'
Natural Gas	no	1,600'
Power	yes	—
Copper	no	1,400'
Comm Fiber	yes	—
Fiber/Alarms & EMS	no	2,200'

Site

University of California, Riverside



View NW from Freeway



Aerial View From SW



## SITE #9 ANALYSIS SUMMARY

Site 9 is an electrical substation area that the LRDP designates as Campus Support. It isn't intended to be an occupied use, and there are no streets, currently or proposed, that penetrate the Academic land use around it, so circulation to and from the site becomes an issue. It is lacking in utilities—several times more

costly than Site 2 to extend utilities, and would further encroach into the Academic land use area. Building a road is an additional expense, and would significantly impact the West Campus in order to provide access for campus haulers.

## CAMPUS **External influences**

P	lanning/LRDP Compliance wi	th camp	us and district planning:
	<ul> <li>2005 UCR LRDP</li> </ul>	6	<ul> <li>Relocation of existing</li> </ul>
	<ul> <li>Codes regs/non TSDF</li> </ul>	10	<ul> <li>Other Master Plans</li> </ul>
	<ul> <li>CEQA</li> </ul>	10	

## Campus Utilities Availability of campus service and utilities:

<ul> <li>Domestic/fire water</li> </ul>	0	<ul> <li>Telecom/data</li> </ul>
<ul> <li>Sewer</li> </ul>	0	<ul> <li>Fiber optic (alarms)</li> </ul>
<ul> <li>Storm</li> </ul>	0	<ul> <li>Steam (optional)</li> </ul>
<ul> <li>Natural gas</li> </ul>	0	<ul> <li>Chilled water (option)</li> </ul>
Power	5	
Access to Site: By public and	private v	isitors
<ul> <li>UCR haulers</li> </ul>	8	<ul> <li>Emergency responde</li> </ul>
<ul> <li>Commercial haulers</li> </ul>	4	<ul> <li>Campus/public</li> </ul>
<ul> <li>Vendors</li> </ul>	4	

## **Program and Site Influences** PROJECT

## В

uildable Area Capacity of site:			10 p	ots Ma
<ul> <li>Building</li> </ul>	10	<ul> <li>Parking</li> </ul>	10	8
Yard/storage	10	<ul> <li>Circulation on-site</li> </ul>	6	
Future expansion	8	<ul> <li>Flexibility/configuration</li> </ul>	8	

## S

orte Qualities Qualitative cha	racteristic	cs of the site:	5	pts Max
<ul> <li>Security (day/night)</li> </ul>	5	<ul> <li>Adjacent facilities</li> </ul>	5	5
Image/visibility	5	<ul> <li>Noise (external/internal)</li> </ul>	3	
<ul> <li>Seismic</li> </ul>	5	<ul> <li>Slope/topography</li> </ul>	5	
<ul> <li>Vegetation/habitat</li> </ul>	5	<ul> <li>Prevailing Winds</li> </ul>	5	]
<ul> <li>Soils/geotech</li> </ul>	5	<ul> <li>Sustainable potential</li> </ul>	4	

<b>Constructability</b> Site constr	raints on co	nstruction:	5	ots Max
<ul> <li>Access</li> </ul>	4	<ul> <li>On-going operations</li> </ul>	5	5
<ul> <li>Staging</li> </ul>	4	<ul> <li>Adjacent operations</li> </ul>	5	
<ul> <li>Vibration/noise</li> </ul>	5			

Cost & Schedule Cost and sc	hedule ir	npacts:
<ul> <li>Site development</li> </ul>	6	<ul> <li>Demolition</li> </ul>
<ul> <li>Building construction</li> </ul>	10	<ul> <li>Redesign cost</li> </ul>
<ul> <li>Infrastructure</li> </ul>	2	<ul> <li>Escalation/delay</li> </ul>
<ul> <li>Off-site construction</li> </ul>	4	<ul> <li>Operational impact</li> </ul>
<ul> <li>Relocation of existing</li> </ul>	10	

## **SUMMARY SCORE**



## Concept Plan



- Requires amending the LRDP
- Major impact on Academic land use
- Requires significant utility extensions
- Site access is poor

10	6
2	
0	
10	

Requires using future academic land use

- Requires major redesign
- Delays occupancy due to redesign
- Additional cost for redesign, delays, construction, campus access road

Total points 39 71% Percentage of the 55 available points