UH-Clear Lake Master Plan

MASTER PLAN COMMITTEE | 09 AUGUST 2017
Agenda

01 Background and Overview
02 Draft Plan Framework
03 Campus Districts
04 Phasing
05 Design Guidelines
06 Pearland Campus
07 Finalizing the Plan: Next Steps
01 Background and Overview
Master Plan Components

- Stakeholder Interviews
  - Analysis
  - Initial Ideas
- Concept Alternatives
- Draft Plan
- Documentation
# Space Projections

## 15,000 Headcount Enrollment (Long Term Capacity)

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing Space (asf)</th>
<th>Existing and Planned Space (asf)</th>
<th>Additional Space Need (asf)</th>
<th>Approx. Net New GSF</th>
</tr>
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<tbody>
<tr>
<td>Classrooms</td>
<td>43,032</td>
<td>53,252</td>
<td>35,000</td>
<td>53,000</td>
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<td>Teaching Labs</td>
<td>84,225</td>
<td>118,781</td>
<td>59,000</td>
<td>91,000</td>
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<td>Research Labs</td>
<td>11,685</td>
<td>28,224</td>
<td>41,000</td>
<td>63,000</td>
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<td>Office</td>
<td>237,460</td>
<td>245,928</td>
<td>175,000</td>
<td>269,000</td>
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<td>Library and Study</td>
<td>111,630</td>
<td>111,930</td>
<td>100,000</td>
<td>154,000</td>
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<td>Media</td>
<td>76</td>
<td>76</td>
<td>10,000</td>
<td>15,000</td>
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<td>Campus Life</td>
<td>67,457</td>
<td>71,417</td>
<td>88,000</td>
<td>135,000</td>
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<td>Support</td>
<td>36,293</td>
<td>38,343</td>
<td>88,000</td>
<td>136,000</td>
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<td>Healthcare</td>
<td>1,193</td>
<td>1,193</td>
<td>4,000</td>
<td>6,000</td>
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<td>Rec/Athletics</td>
<td>0</td>
<td>31,700</td>
<td>107,000</td>
<td>164,000</td>
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<td><strong>Subtotal</strong></td>
<td><strong>593,051</strong></td>
<td><strong>700,844</strong></td>
<td><strong>705,000</strong></td>
<td><strong>1,114,000</strong></td>
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<table>
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<tr>
<th>Long Term Target for Total Students Housed</th>
<th>New Beds*</th>
<th>Net New Gsf (350 Gsf/bed)</th>
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<tr>
<td>10%</td>
<td>930</td>
<td>326,000</td>
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<tr>
<td>15%</td>
<td>1,680</td>
<td>589,000</td>
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<tr>
<td>20%</td>
<td>2,430</td>
<td>851,000</td>
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<tr>
<td>25%</td>
<td><strong>3,180</strong></td>
<td><strong>1,114,500</strong></td>
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* In addition to the 268 beds existing in the University Forest Apartments and 300 beds proposed for the future residence hall

**Program summary:**
- +/- double existing and planned non-residential space
- +/- 5 additional academic buildings
- New student life and recreation facilities
Parking: Long Term Peak Demand
15,000 Headcount Enrollment

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<th>PARKING SPACES</th>
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<tr>
<td>Total Projected Long Term Peak Demand</td>
<td>5,440</td>
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<tr>
<td>Existing Parking Supply</td>
<td>3,220</td>
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<tr>
<td>Additional Long Term Need</td>
<td>2,220</td>
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</tbody>
</table>

Parking Assumptions:

- 25% of students living on campus
- One car per two students living on campus
- Limited transit and carpooling
- Limits to regional bicycle and pedestrian network
- Peak demand continues to occur in the evenings
Campus Planning Principles

I. Celebrate the **Natural Environment**

II. Employ **Compact Development** Strategies

III. Enhance **Campus Identity** and **Visibility**

IV. Reinforce the Campus **Land Use** and **Open Space Pattern**
Celebrate the Natural Environment

- Campus is at **natural/urban interface**
- Natural character defines **campus identity** and also provides **educational value**
- **Balance** campus development with environmental protection
- Consider **long term resilience** - flooding, natural disasters, heat
Employ Compact Development

• Use land **efficiently**

• Use density to support **campus character** and promote activity

• **Balance** campus development with environmental protection

• Minimize **parking footprint** though structures and TDM measures
Enhance Campus Identity and Visibility

- Provide thoughtful wayfinding

- Differentiate campus entry characters

- Ensure new buildings and site improvements contribute to the quality and character of the campus setting

- Balance parking convenience and campus character and placemaking
Reinforce Campus Land Use and Open Space Pattern

- Create a **Campus Mall** as a north-south connector through campus
- Concentrate academic and campus life uses **along the Mall**
- Create **activity nodes** near the Bayou for placemaking and to reduce the perceived distance across
- Create student **neighborhoods**
02 Draft Plan Framework
Draft Plan Framework

1. Continuous Campus Mall
2. Bayou Crossing
3. Residential Neighborhoods
4. Recreation Zones
5. Natural Areas
Primary Building Use

- Academic program organization
- Residential neighborhoods- first year and upper division
- Campus life uses and One Stop/Welcome Center
- Athletics and Recreation
- EIH relocation
Landscape Types

- Campus Malls
- Courtyards and Plazas
- Recreation Fields and Courts
- Paths and Trails
- Bayou Habitat
- Forest
- Parking and Circulation
- Utility Corridors
Bicycle and Pedestrian Circulation

- Primary N-S bicycle route-separate path along University Drive to the Mall
- Bikes are accommodated on all campus streets
- Continuous N-S pedestrian movement with shaded walkways
- Improved Bayou crossing
- Connections to nature trails
Vehicular Circulation

- Entrance hierarchy/identity
- Completed loop road
- Primary parking access
Parking and Transportation Demand Management

- Structured parking- 5 levels each
- Concentrate parking close in to the campus and where it is most needed (avoid sensitive areas)
- TDM strategies could reduce parking demand- transit, shuttle, carpooling priority, financial incentives, ride share, bicycle/pedestrian infrastructure
Infrastructure: Stormwater

- Work with natural surface drainage patterns to avoid building costly storm drains
- Capture the first one inch of stormwater for temporary storage and water quality treatment
- Return treated stormwater water to the Bayou
- Integrate stormwater management into the campus landscape
Integrated Stormwater: Parking Lots
Integrated Stormwater: Campus Landscape
Integrated Stormwater: Transition Zone
Integrated Stormwater: Natural Pond Management
03 Campus Districts
Campus Districts

- North Mall
- Bayou Crossing
- South Mall
North Mall
North Mall: View from East

Existing

Proposed
North Mall: View from Bay Area Blvd

Existing

Proposed
Bayou Crossing

Existing

Proposed
Bayou Crossing: View from North
South Mall
South Mall: View from the South

Existing

Proposed
04 Phasing
## Preliminary Phasing Concept

<table>
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<tr>
<th>Phase</th>
<th>Total Student Enrollment</th>
<th>New Academic and Campus Life SF</th>
<th>New Beds/Total Beds*</th>
<th>New Parking/Total Parking</th>
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<tbody>
<tr>
<td>One (0-5 yrs)</td>
<td>10,200</td>
<td>278,000</td>
<td>800 / 1,360</td>
<td>560 / 3,770</td>
</tr>
<tr>
<td>Two (5-10 yrs)</td>
<td>11,800</td>
<td>278,000</td>
<td>800 / 2,160</td>
<td>560 / 4,330</td>
</tr>
<tr>
<td>Three (10-20 yrs)</td>
<td>15,000</td>
<td>556,000</td>
<td>1,590 / 3,750</td>
<td>1,110 / 5,440</td>
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</tbody>
</table>

* Includes the 268 beds existing in the University Forest Apartments and 300 beds proposed for the future residence hall
Phasing Concept: Existing & Planned
Phasing Concept: Phase 1 (0-5 years)

- Improved entrances
- Improved Bayou crossing for pedestrians and bikes
- North Mall landscape
- Academic buildings, including STEM II and One Stop/Welcome Center on the North Mall
- Campus life addition to Arbor
- Replacement EIH building
- New upper division housing
- New and replacement surface parking
Phasing Concept: Phase 2 (5-10 years)

- Campus Center
- Open space and trail improvements along the Bayou
- South Mall landscape with new academic building
- Recreation and athletics building on the South Mall
- New housing on the north and south sides of campus
- First parking garage (1,100 spaces)
- New recreation field north of STEM building
Phasing Concept: Final Build-Out (10-20 years)

- Second parking garage (1,100 parking spaces)
- Final infill of academic and residential buildings
- New access drive off Space Center Blvd
- New recreation fields at the south end of campus
05 Design Guidelines
Design Guidelines: Topic Areas

I. Campus Design
II. Architecture
III. Landscape and Open Space
IV. Identity and Wayfinding
Design Guidelines: Campus Design

GUIDING PRINCIPLES:

• Establish a **continuous, linear open space** to connect the north and south cores of campus, the Campus Mall

• **Concentrate academic uses** along the Campus Mall

• Organize campus development and circulation to **prioritize comfortable pedestrian movement** through scale, shading, wayfinding, and land use

• Create and preserve important **view corridors** down the Mall as well as to the Bayou and surrounding natural areas

• Locate key **campus life functions at the nexus of the Bayou and Campus Mall** to provide high visibility and accessibility to the entire campus

• Site and configure buildings to **create “outdoor rooms”** to provide supplementary intimate courtyards to the larger, active Campus Mall
Design Guidelines: Campus Design

ELEMENTS:

• Building Orientation and Placement
• Ground Level Treatment
• Setbacks and Build-to Lines
• Height and Massing
• Site Development Impact
Design Guidelines: Campus Design

ELEMENTS:

- Building Orientation and Placement
- Ground Level Treatment
- Setbacks and Build-to Lines
- Height and Massing
- Site Development Impact
Design Guidelines: Architecture

GUIDING PRINCIPLES:

• Promote a **simple and timeless** design aesthetic

• Utilize **sustainable architectural techniques** for healthy and resilient buildings

• Establish **active ground floors and clear entries**, particularly along key corridors and open spaces through building program, transparency, and façade treatments

• Build respectfully as a **complement to the natural environment** of the campus

ELEMENTS:

• Entrances

• Façades and Fenestration

• Roofs

• Building Materials

• Service and Mechanical Screening

• Parking Structures
Design Guidelines: Landscape and Open Space

GUIDING PRINCIPLES:

• Promote an attractive and ecologically functional campus landscape through native and context-sensitive landscape design

• Create an interconnected network of different scales for campus open spaces— from large and iconic, to smaller and intimate

• Establish a clear, contiguous, and shaded pedestrian and bicycle network throughout the campus

• Provide visual and physical access to the natural environment

• Use green infrastructure techniques to collect, filter, and return water to the Bayou

• Maintain and create new opportunities for outdoor research in the natural environment of the campus
Design Guidelines: Landscape and Open Space

ELEMENTS:

• Campus Mall
• Courtyards and Plazas
• Natural Areas and Buffers
• Paths and Trails
• Streets and Driveways
• Surface Parking Lots
• Stormwater Management
• Plant Palette
• Maintenance
Design Guidelines: Landscape and Open Space

ELEMENTS:

- Campus Mall
- Courtyards and Plazas
- Natural Areas and Buffers
- Paths and Trails
- Streets and Driveways
- Surface Parking Lots
- Stormwater Management
- Plant Palette
- Maintenance
OBJECTIVE:

Establish a framework to guide future design of the campus wayfinding program that helps elevate the University of Houston-Clear Lake campus as a distinct place and provides useful and effective means of orientation and guidance.

The framework includes recommendations for sign types, locations, message hierarchies and visual design direction.
Design Guidelines: Identification and Wayfinding

PRINCIPLES:
• Design the wayfinding system as a coordinated family of elements
• Establish clear hierarchy and nomenclature for clarity and consistency
• Provide useful information when and where it is needed
• Create a memorable and iconic arrival experience to the campus that celebrates the unique aspects of the physical place, visually engaging Bay Area Blvd to promote the University’s presence
• Promote campus legibility to all campus users – visitors, students, faculty, staff, administration, and the broader community
• Ease of implementation and maintenance

ELEMENTS:
• Information Hierarchy & Nomenclature
• System Scale / Sign Type Families
• Aesthetic Direction / Look & Feel
• Campus Identity & Brand Integration
• Campus Entrances / Arrival Experience
Current Site Signage & Existing Conditions

- Inconsistent design aesthetics and hierarchy
- Entrance 2 is visually obscured
- Vehicular directionals often contain too much information
- Building-mounted signs are often under-scaled
- Lack of pedestrian signage
- Brand integration is minimal and inconsistent
- Opportunity to improve campus character and placemaking
- Existing signage not capable of addressing new campus growth
Entrance & Arrival Experience

• Existing directions send most visitors to the University Drive Entrance (Entrance 1)

• Existing directions lead visitors to the University Drive Entrance (Entrance 1) from the south, and to the Bayou Road Entrance (Entrance 2) from the north, emphasizing the need for visibility from those approaches.

• The amount of traffic and differentiation of user groups may inform a hierarchy of entrance identification in addition to character distinctions, establishing a greater and more welcoming presence at the campus’ primary entry points.

• Opportunity to consider North and South campus organization and entrance naming which could aid in orientation and better serve direction sets.
Approach & Sightlines

UNIVERSITY DRIVE ENTRANCE:
- Signage footprint is under-scaled in relation to overall area
- Current sign placement requires a separate identification for each vantage point

BAYOU ROAD ENTRANCE:
- Visibility is compromised by stoplight post and is overpowered by surrounding trees

UNIVERSITY DRIVE ENTRANCE:
- From Bay Area Blvd South
- From Bay Area Blvd North
- From Krueger Way Intersection

BAYOU ROAD ENTRANCE:
- From Bay Area Blvd North
- From Bay Area Blvd South
- From Forest Drive Intersection
Vehicular Circulation

• Provide clear guidance at **multiple decision making points** within the campus

• Clarify navigation to **defined parking zones**, particularly for visitors

• Reinforce visibility of **primary campus destinations**

• Considerations for **visitor destinations** drives location and content for vehicular directionals: major geographic locations, parking areas, and primary visitor destinations
Pedestrian Circulation

- Most traffic originates from parking areas
- Establish clear orientation and direction for pedestrian traffic
- Encourage foot traffic along the Mall, supporting the connection of north and south campuses
- Highlight community amenities and serve recreation and exploration purposes
- Increase pedestrian safety at traffic intersections
Information Hierarchy

• Vehicular wayfinding can carry a minimal amount of information easily read at a glance (3-5 destinations)

• Pedestrian wayfinding can carry a variety of information with different levels of density (quick reference directional and detailed information to study)

<table>
<thead>
<tr>
<th>Information Hierarchy</th>
<th>Vehicular Destinations and Direction Sets</th>
<th>Pedestrian Orientation and Direction</th>
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<tbody>
<tr>
<td><strong>A. University Drive Site Identification</strong></td>
<td>University of Houston Clear Lake</td>
<td></td>
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<tr>
<td><strong>B. Vehicular Directional</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>↑</td>
<td>North Campus</td>
<td></td>
</tr>
<tr>
<td>↑</td>
<td>North Mall</td>
<td></td>
</tr>
<tr>
<td>↑</td>
<td>Trail Head</td>
<td></td>
</tr>
<tr>
<td>↑</td>
<td>Visitor Parking P5 P6</td>
<td></td>
</tr>
<tr>
<td>❯</td>
<td>South Campus</td>
<td></td>
</tr>
<tr>
<td>❯</td>
<td>South Mall</td>
<td></td>
</tr>
<tr>
<td><strong>C. Vehicular Directional</strong></td>
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<td></td>
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<tr>
<td>✗</td>
<td>North Mall</td>
<td></td>
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<tr>
<td>✗</td>
<td>West Visitor Parking P5</td>
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<td>Trail Head</td>
<td></td>
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<tr>
<td>❯</td>
<td>East Visitor Parking P6</td>
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<td><strong>D. Parking Identification</strong></td>
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<td></td>
<td>West Visitor Parking</td>
<td>One Stop Welcome Center</td>
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<td><strong>E. Building Identification</strong></td>
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<td></td>
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<tr>
<td></td>
<td>One Stop Welcome Center</td>
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Sign Type Family Overview

Multiple sign types in many forms make up a comprehensive system.
The minimum program requirements address the **campus identity** and **arrival experience** from surrounding roads, support **top-level vehicular** and **pedestrian wayfinding needs**, and solidifies **building identification**.

Minimum Program Requirements

Preliminary Sign Location Plan

Site Identification

Vehicular Wayfinding

Pedestrian Wayfinding

Building Identification
Unified Integrated System

**Fully unified, integrated system:** defines the campus clearly and visibly, promoting a sense of place and the UHCL brand. An increase in human-scale elements extends the usability of the pedestrian wayfinding, and offers further clarity for new visitors and students. Unified **regulatory signage** makes the campus a defined zone separate from the city surroundings.
Design Considerations

- Form and Scale
- Materials
- Use of Color
- Typography
- Visual Identity & Brand Integration
- Placemaking
Entrance Formal Studies
Option 1

- Large-scale, low profile installations with small footprint monoliths
- Increase visibility over distance for both higher speed and congested traffic conditions
- The University Drive entrance becomes a gateway with a monument flanking both sides of the entrance
- The Bayou Road entrance monument lies perpendicular to the street frontage to improve viewing angles from multiple directions
• The University Drive entrance uses gently curving monuments that soften the visual edge while extending viewing angles
• The Bayou Road entrance incorporates a cluster of taller structures to create a singular monument
• The combined monuments become a more sculptural set of elements, while offering clear delineation between the entrances
Entrance Character & Nature

UNIVERSITY DRIVE ENTRANCE:
• Formal entrance for visitor arrival
• Stately and timeless
• Neutral palette utilizing materials which share a common vocabulary with UHCL buildings

BAYOU ROAD ENTRANCE:
• Primarily the entrance for students, faculty, and staff
• Demonstrates university spirit
• Shares DNA with University Drive Entrance but uses elements to engage younger user group
Case Study – Integrated Sign Type Family

Form
Vertical Modules

Color & Brand
Singular Neutral Palette
Neutral University Logo

Typography
Sans Serif

Material
Painted Metal Cabinets
Frosted Glass Panels

Information
Symbols
Directional Arrows
Primary Destinations
Secondary Destinations
Orientation

The William and Susan Alexander Health Learning Building
06 Pearland Campus
Pearland Site Analysis

• Site currently has high development capacity

• Potential synergies with adjacent City of Pearland development parcels

• Opportunities to connect to future regional trail system
Pearland Development Opportunities

- At the same growth rate as Clear Lake campus, Pearland only needs one additional building.
- Parking (including new 66 spaces with the planned development) is sufficient for long term demand.
- Future development may occur to the south end of the site.
### Pearland Site Analysis

<table>
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<td>Potential Site Capacity</td>
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Existing building: 30,000 GSF

New Health and Sciences Building: 69,000 GSF

Potential additional program: 457,000 GSF
Design Principles: Pearland

- Organize building around a central open space

- Organize campus development and circulation to prioritize comfortable pedestrian movement through scale, shading, wayfinding, and land use

- Create and preserve important future connections to nearby parcels and trail network

- Create intimate “outdoor rooms” to supplement the central open space
07 Next Steps
Draft Plan Next Steps

• Integrate final comments into Draft Plan
• Subcommittee to review of Design and Wayfinding Guidelines
• Executive Steering Committee to review of Draft Report in September
• Final Report