

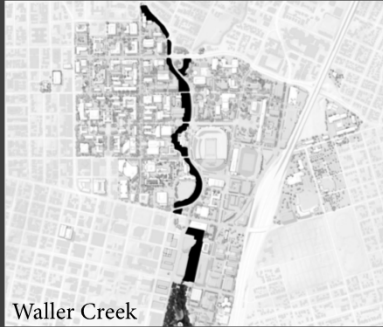
Quads,
Courtyards,
Plazas



Parking and Services



Parkland



Waller Creek



Civic



Connective Space



Streets

Landscape + HydroDesign

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School of Architecture
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CE 365K Hydraulic Engineering Design

Texas CityLab



Project Areas:

Energy and Water Conservation

Value Proposition of Sustainability Initiatives

Zero Waste

Waller Creek

Wildlife and Biodiversity

Waller Creek

UT's Campus Master Plan calls for the transformation and restoration of Waller Creek in order to enhance the campus environment; however, limited staff resources for consistent evaluation and maintenance presents an opportunity for students to creatively think about how to move a plan from vision to implementation.

Classes in this section will study the urban watershed and develop particular program and policy strategies for how to manage the creek over time, specifically within the larger context of the roles of an anchor institution in a city.

Civil Engineering: *Introduction to Environmental Engineering*, Dr. Kerry Kinney

Landscape Architecture: *Landscape Architectural Design*, Dr. Allan Shearer

Public Affairs: *Policy Research Project*, Prof. Sherri Greenberg

Community and Regional Planning: *Water Resources Planning*, Dr. Katherine Lieberknecht

UT Watersheds and Topography

0 0.125 0.25 0.5 Miles

- UT Watersheds
WATERSHE_1
- Boggy Creek
 - Lady Bird Lake
 - Shoal Creek
 - Waller Creek



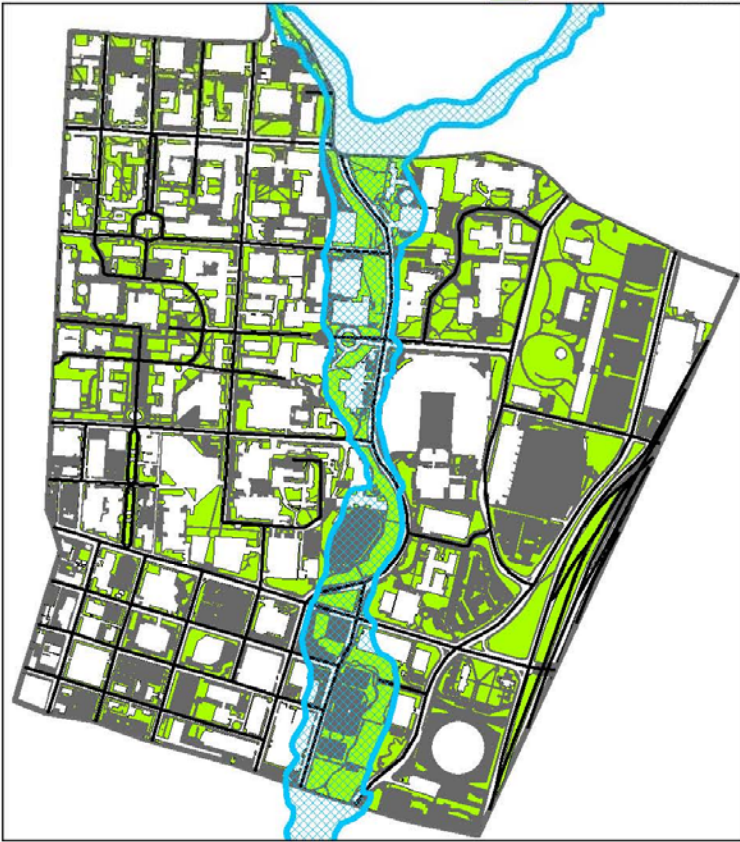
DEM: UT Austin Campus

0 0.125 0.25 0.5 Miles

- UT Austin Elevation
Value
- High : 898.079
 - Low : 476.174



Paved and Pervious Surfaces: Overlay 100yr Floodplain



Paved and Pervious Surfaces: Overlay Water Quality Buffer



HydroDesign Process

Representation

- How should the study area be described?

Process

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Design

de·sign
də'zīn/

Q: "What is your definition of 'Design,' Monsieur Eames?"

"One could describe Design as a plan for arranging elements to accomplish a particular purpose."

Q: "Is Design an expression of art?"

"I would rather say it's an expression of purpose. It may, if it is good enough, later be judged as art."

Q: "Does the creation of Design admit constraint?"

"Design depends largely on constraints."

Q: "Is it a method of general expression?"

"No. It is a method of action."

Q: "What are the boundaries of Design?"

"What are the boundaries of problems?"

Aesthetic

aes·thet·ic

es'THedik/

Adjective

concerned with beauty or the appreciation of beauty.

"the pictures give great aesthetic pleasure"

Noun

a set of principles underlying and guiding the work of a particular artist or artistic movement.

"the Cubist aesthetic"

UT Campus Master Plan

1. Accommodate Potential Growth
2. Revitalize the Core Campus
3. Enhance the Central Campus
4. Forge Strategic Partnerships
5. Facilitate Safe and More Efficient Mobility
6. Transform the Waller Creek / San Jacinto Corridor
7. Improve the Learning and Research Environments
8. Integrate Academic and Residential Life

Landscape Master Plan

- Supports Master Plan Objectives
- Aligns the design and construction of newly built environments with established campus aesthetics
- Development Priorities
 1. The expansion of campus facilities will require an integration of buildings and landscape
 2. The revitalization of core campus and call to protect the history of buildings and landscape
 3. The redevelopment of central campus to accommodate growth and enhance the pedestrian environment
 4. The transformation Waller Creek and the San Jacinto Corridor, making it less of a barrier within campus

Development priorities are underpinned by principles of use

Principles of use define how individuals experience a given space

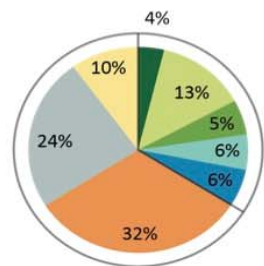
Circulation and access, connection to place, experience of user, ecosystem benefits, appropriateness, aesthetic value, and efficient management

Principles of use apply differently to different landscape types (context dependency)

Seven unique and hierarchical landscape types exist: Civic Space; Streets; Quads, Courtyards, and Plazas; Connective Space, Parklands; Service and Parking; Waller Creek

Landscape types require a tailored application of use principles to maintain campus's identity

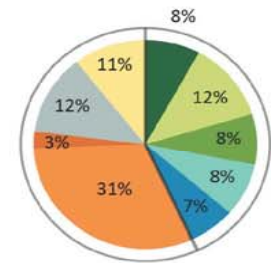
Principles of use and aesthetic value are formalized in tandem to create the built environment



LEGEND

CIVIC	12.9 AC.
PARKLAND	44.7 AC.
COURTS, QUADS & PLAZAS	18.4 AC.
CONNECTIVE LANDSCAPES	18.7 AC.
WALLER CREEK	19.7 AC.
STREET	107.6 AC.
TRANSIT ONLY STREET	0 AC.
SERVICE & PARKING	80.7 AC.
ATHLETICS & RECREATION	33.8 AC.

EXISTING LANDSCAPE TYPES



LEGEND

CIVIC	24.7 AC.	12.9 AC.
PARKLAND	38.2 AC.	44.7 AC.
COURTS, QUADS & PLAZAS	24.6 AC.	18.4 AC.
CONNECTIVE LANDSCAPES	25.6 AC.	18.7 AC.
WALLER CREEK	20.8 AC.	19.7 AC.
STREET	88.7 AC.	107.6 AC.
TRANSIT ONLY STREET	8.2 AC.	0 AC.
SERVICE & PARKING	38.6 AC.	80.7 AC.
ATHLETICS & RECREATION	32.6 AC.	33.8 AC.

PROPOSED LANDSCAPE TYPES

CIVIC SPACE



Foundation of campus identity; classical compositions

Iconic, institutional, and ceremonial references

Vegetation type is limited

Spaces experienced as single, non-segmented units

View sheds structured by high quality masonry

“...Opportunities to reduce water use and improve storm water management in existing Civic landscapes should be explored; however, human use should be prioritized in these important public spaces.”



STREETS +
CONNECTIVE
SPACE

Primary means of circulation; Multi-modal emphasis

Linear Configurations; Appropriately scaled vegetation

Material Consistency

“Where possible, integrate storm water management practices into streetscapes to improve water quality and reduce the speed and volume of runoff. Best management practices include the use of permeable pavement, water-receiving landscapes, and pavement reduction where possible.”

A photograph of a courtyard between brick buildings. The courtyard is a grassy area with a winding path. There are several trees, including a large one in the center and another on the left. The buildings are multi-story brick structures with many windows. A set of stairs with a railing is visible in the middle ground.

QUADS, COURTYARDS, PLAZAS

Self-contained and noncontiguous

Structured by formal buildings and walls

Aesthetics are defined by adjacent architecture

Landscape as laboratory: specific materials and planting types are not explicit

Storm water “*collection, detention and infiltration can be integrated as a design feature... If employed across the campus, this strategy would significantly reduce storm water runoff volume entering Waller Creek during storm events.*”



WALLER CREEK

Engage cross-campus connections

Environmental framework emphasized

Incorporate creek into larger Austin context

Creek as social and environmental asset

“...management techniques that improve water quality including rain gardens, bioretention ponds, vegetative filter strips, vegetative swales, rainwater harvesting, porous pavement, tree planters, and hybrid engineering/ecological solutions...”



SERVICES
AND
PARKING

Paved space with connected pedestrian
and automobile activity

Simple and orderly accents; Perceived as
'pedestrian oriented landscape'

Shading through tree network; Linear
vegetation

Emphasis on functionality

“...best management practices to improve water quality and reduce the rate and volume of runoff.... planted filter strips within parking lots, pervious pavement, water storage systems below pavements, and separator catch basins at connections to the storm sewer network...”



PARKLAND

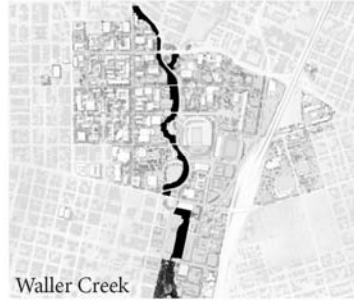
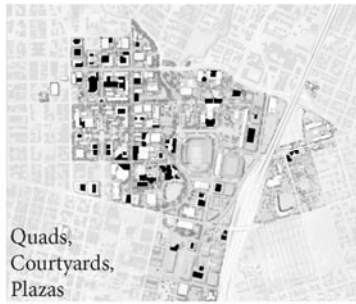
Repetitive materials; Simple and unified structures

Open views to maintain connection with surrounding environment

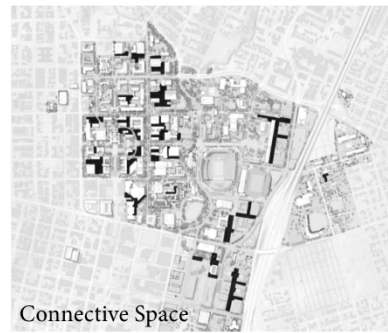
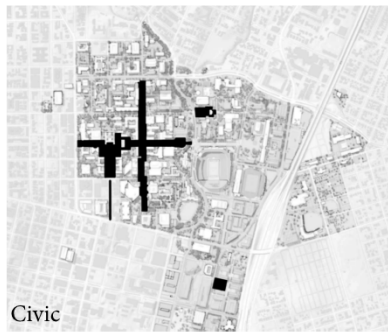
Extensive lawns and vegetation

“...should be converted... to a more ecologically functional and resilient native Texas Savannah grassland in order to minimize maintenance, water use, and storm water runoff, provide habitat or a wider array of species, and develop a more robust soil profile.”

**Unconstrained
Implementation**



**Constrained
Implementation**



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