

CAMPUS HYDRO REDESIGNED



DESIGN STATEMENT AND VISIONS

Situated in a large campus parking lot suffering from heavy flooding, Campus Hydro ReDesigned is a water management landscape project that envisions the possibility of water infiltration through green infrastructure while integrating ecology and educational, social elements through comprehensive goals listed below:

- Goal 1: Increasing parking lot safety and accessibility, while reducing impervious pavement
- Goal 2: Add green infrastructure to increase infiltration and reduce peak runoff
- Goal 3: Improve the area aesthetically
- Goal 4: Set an example for future parking lot renovations on our campus
- Goal 5: Address campus objectives
- Goal 6: Educate students and community members about green infrastructure

CIRCULATION

-Of 90 survey participants, circulation connectivity was the most important factor (85.6%) for traveling hence the comprehensive route system for pedestrians within the design site that integrates cycling.

FLOW AND INFILTRATION

- 14,000 square feet porous paving for runoff infiltration.
 - Green infrastructure changes the hydrological system so that it can store and infiltrate 98% of the total inflow volume of stormwater.

NATURAL STORMWATER FILTERS

- A total length of 750 feet wide conveyance channels and bioswale strip constructed along the edge of the parking lot for water infiltration.
 - A 4,400 square feet large rain garden with diverse flowering plants for infiltration.

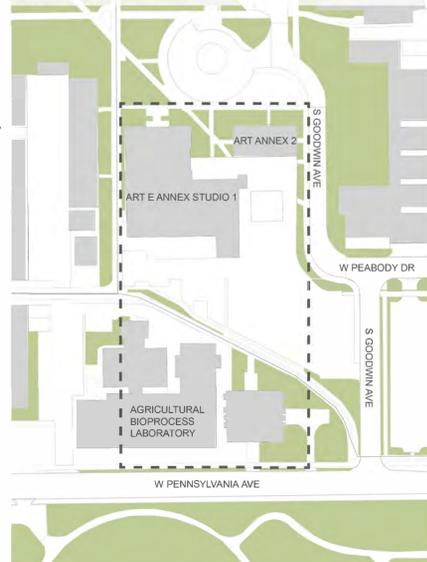
FACILITIES

- A range of seating, vine canopy, educational canopy and grass mound encourage pedestrians to actively engage with the landscape and experience the processes of water treatment while having an opportunity to relax and socialize.

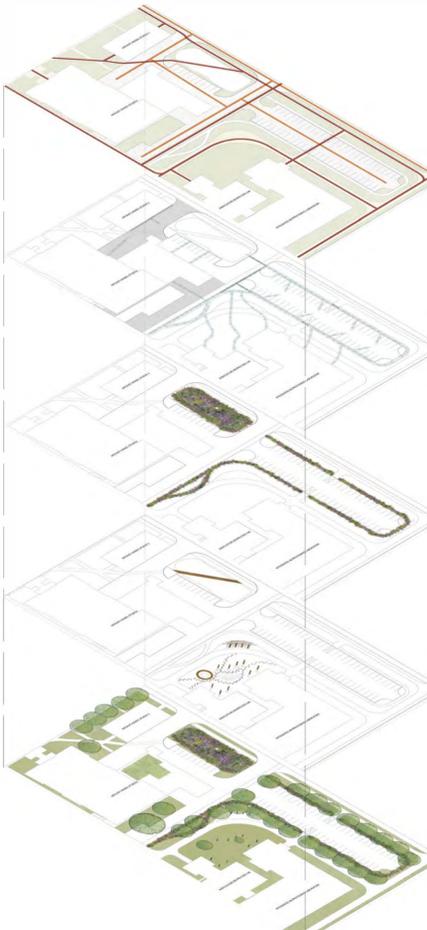
GREEN INFRASTRUCTURES

- A 2,612 square feet green roof for roof water management.
 - A total reduction of 18,130 square feet of impervious area through ecological means.
 - 10,500 square feet of native flowering plants that can purify water and offer biodiversity.

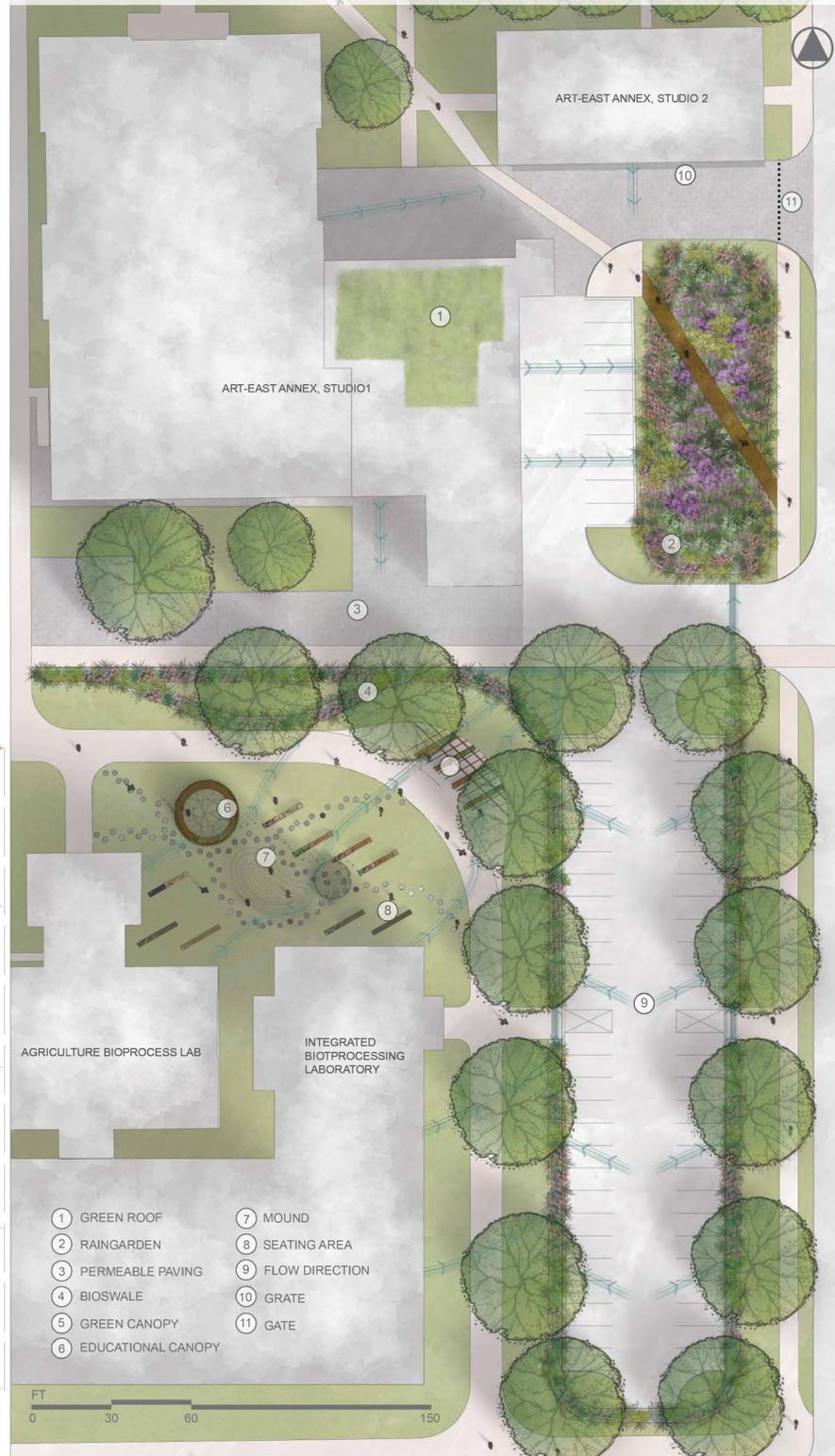
SITE CONTEXT AND SCOPE



DESIGN ELEMENTS AND IMPACTS



DESIGN PLAN



- 1 GREEN ROOF
- 2 RAINGARDEN
- 3 PERMEABLE PAVING
- 4 BIOSWALE
- 5 GREEN CANOPY
- 6 EDUCATIONAL CANOPY
- 7 MOUND
- 8 SEATING AREA
- 9 FLOW DIRECTION
- 10 GRATE
- 11 GATE

EXPERIENTIAL PERSPECTIVE 1 GATHERING AREA AND BIOSWALE



EXPERIENTIAL PERSPECTIVE 2 RAIN GARDEN

