



THE PATH FORWARD : CONNECTING THE URBAN SYSTEM

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TEAM M22



CONTAIN
RAINWATER FOR SMART
REUSE AND RECYCLING



CLEAN
POLLUTION REDUCTION
IN LOCAL WATERSHEDS
AND BEYOND

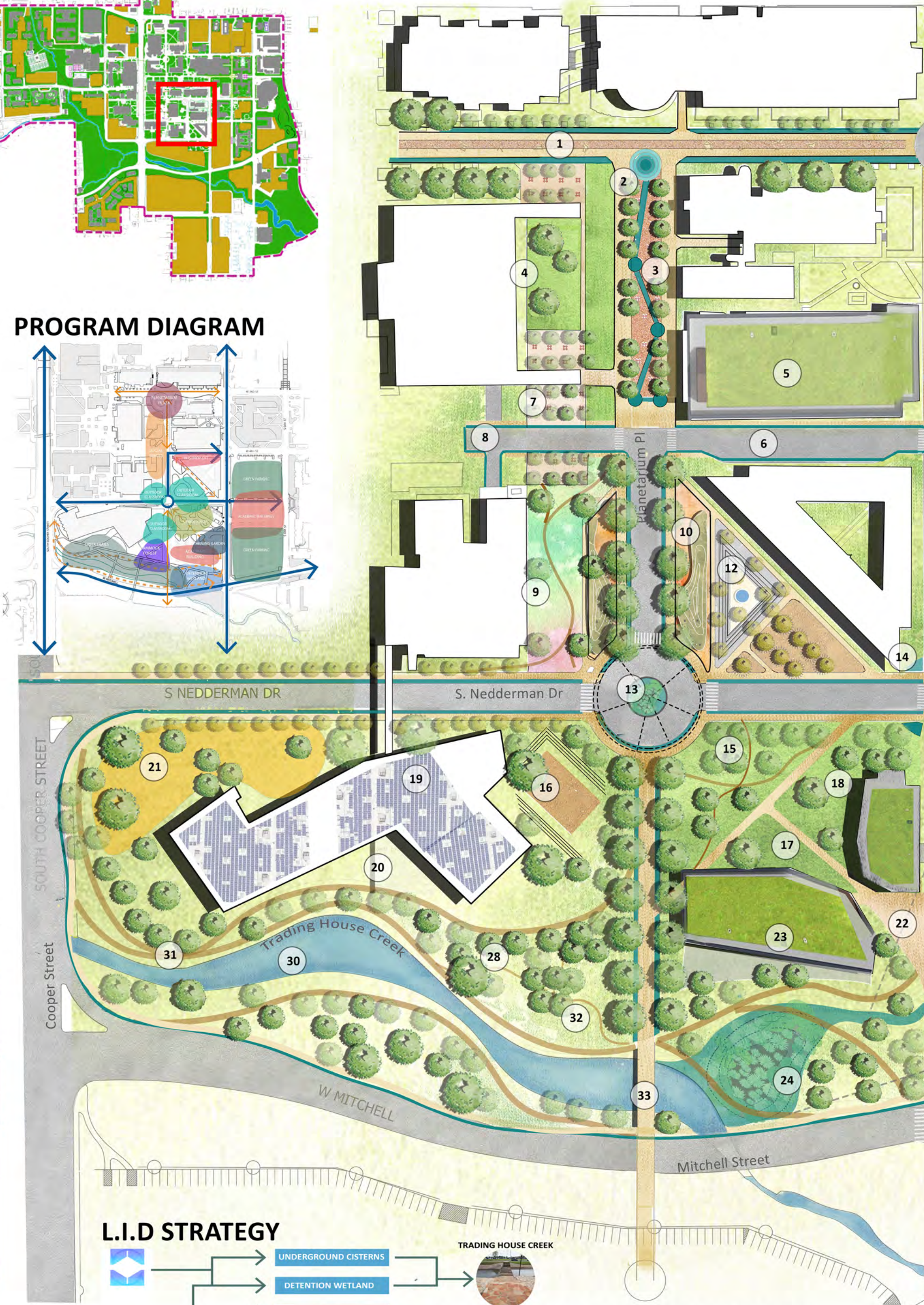


CONNECT
PEOPLE, WILDLIFE, WATER
& SPACES

PROJECT GOALS

- COMPLIMENT FUTURE UTA MASTER PLAN DEVELOPMENT GOALS
- INSTALL GREEN INFRASTRUCTURE AND RESILIENT DESIGN
- REDUCE STORMWATER POLLUTION AND FLOODING
- PREVENT DOWNSTREAM EROSION IN JOHNSON CREEK

SCHEMATIC MASTER PLAN



LANDSCAPE PERFORMANCE

- 35% INCREASE STORMWATER INFILTRATION FOR 2 (IN.) STORM EVENT
- 34% DECREASE STORMWATER RUNOFF FOR 2 (IN.) STORM EVENT
- 50% INCREASE IN PERMEABLE SURFACES
MORE PLANTINGS, PERMEABLE PAVING AND WATER BODIES
- 100-YEAR STORM EVENT RUNOFF MITIGATED ALONG THE PLANETARIUM PROMENADE
- 155,931 GALLONS OF RAINWATER HARVESTED ANNUALLY THROUGH UNDERGROUND CISTERNS
- 102 TONS OF CO2 SEQUESTERED ANNUALLY
270 NEW TREES PLANTED
- 1.8 ACRES RESTORED SOILS
WITH NEW CREEKBANK AND DETENTION WETLAND
- 270 NEW TREES PLANTED
& 83% OF EXISTING CANOPY TREES PROTECTED

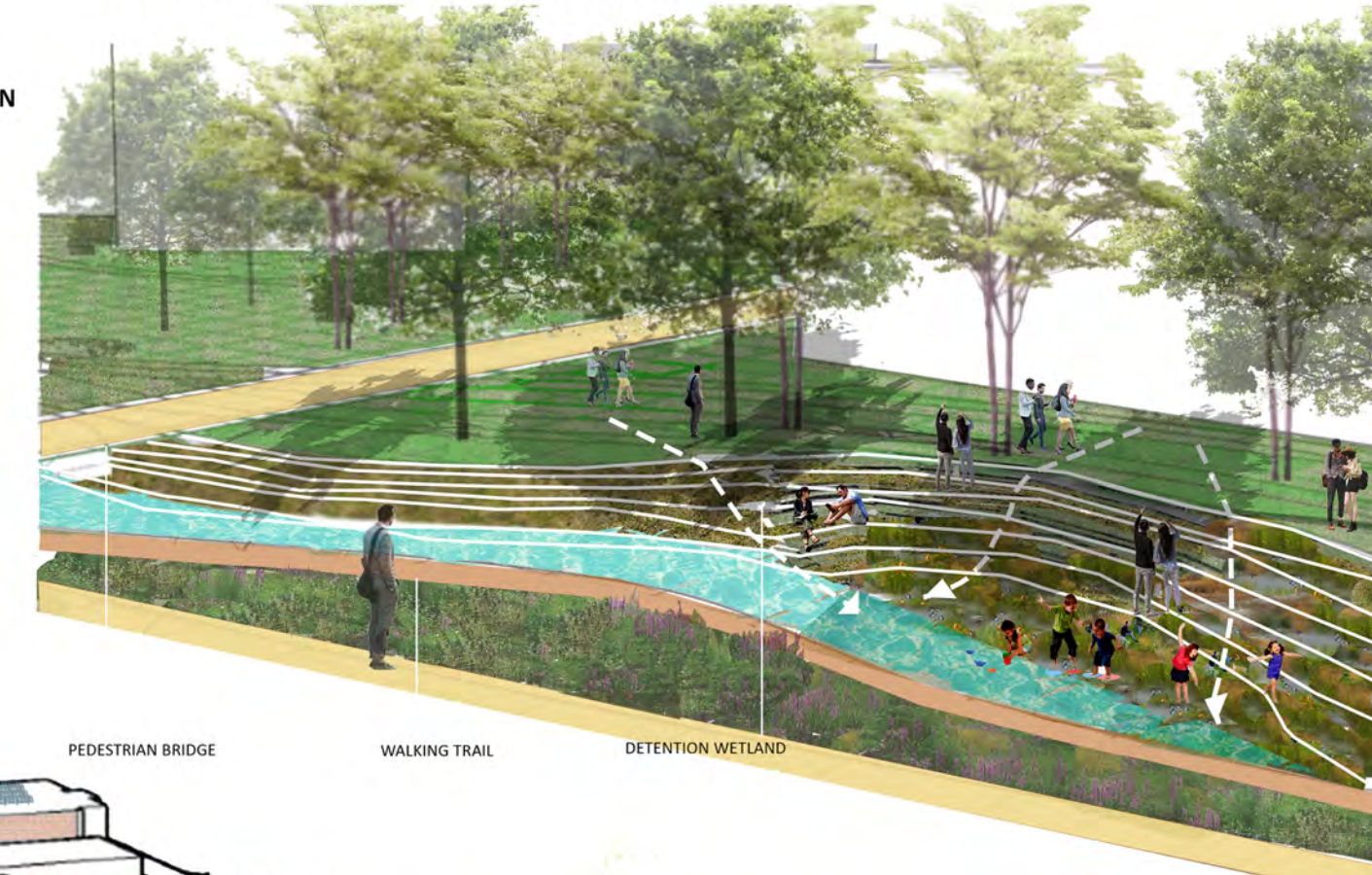
LEARN - WITH ALL NEW OUTDOOR CLASSROOMS



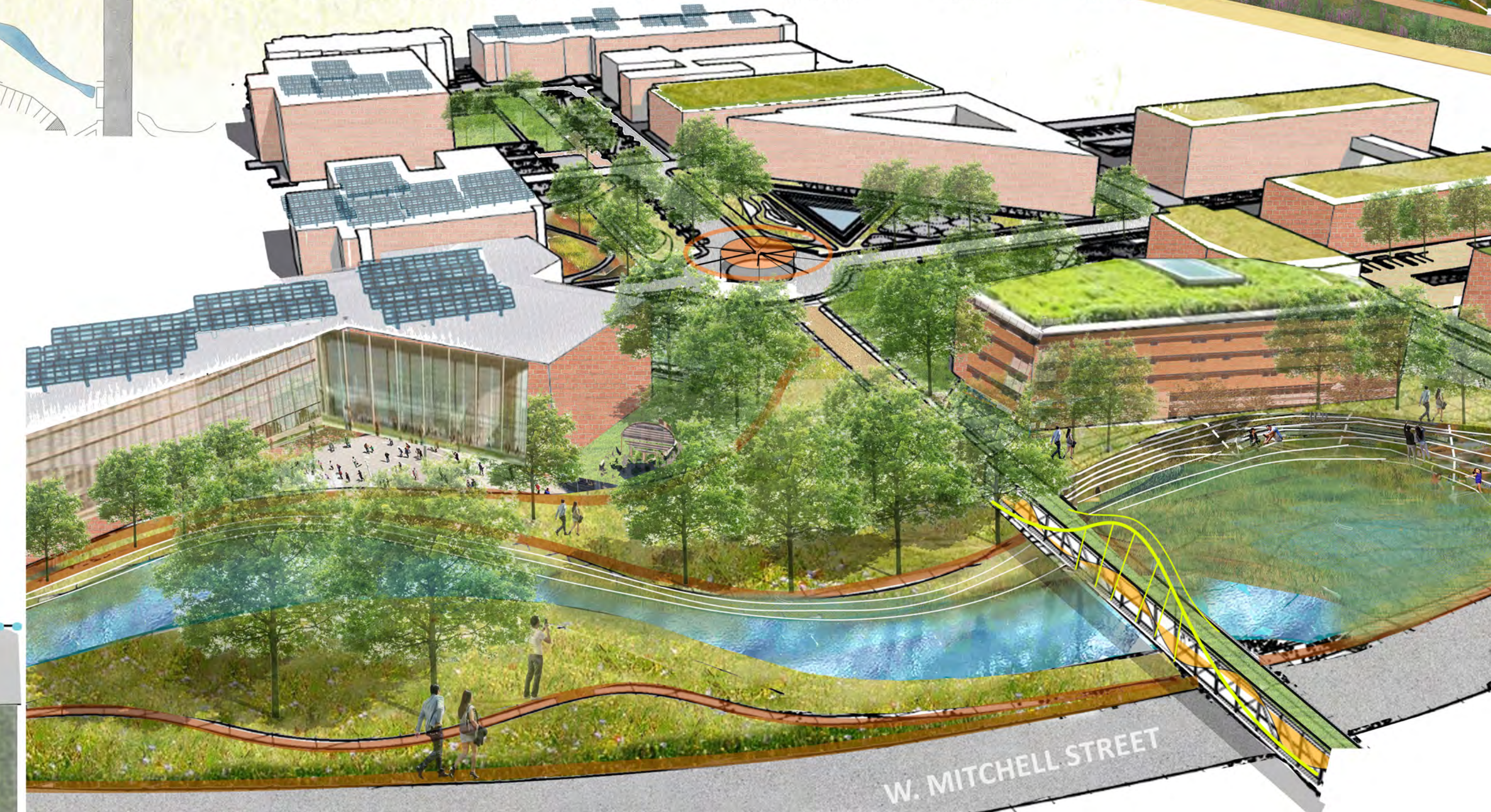
REST - IN THE SUNNY LAWN AREAS OR THE SHADY READING NOOKS



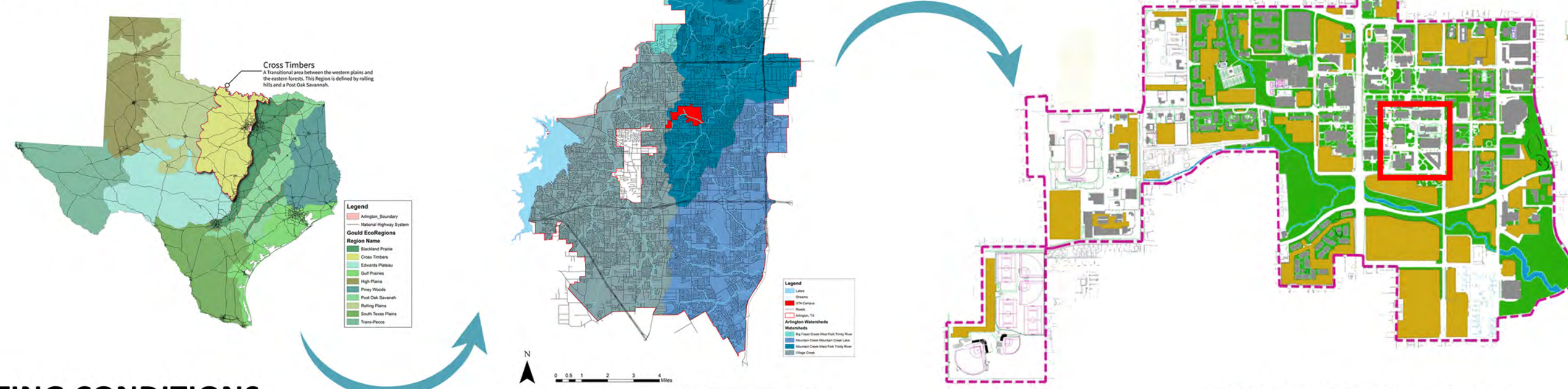
CONNECT - WITH AND EXPLORE NATURE



THE NEW HEALTH SCIENCE QUARTER



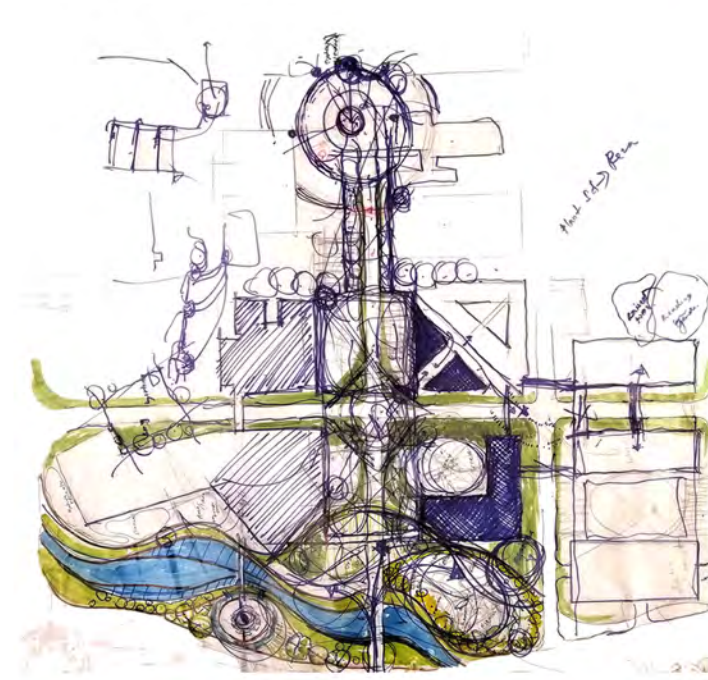
INVENTORY + ANALYSIS



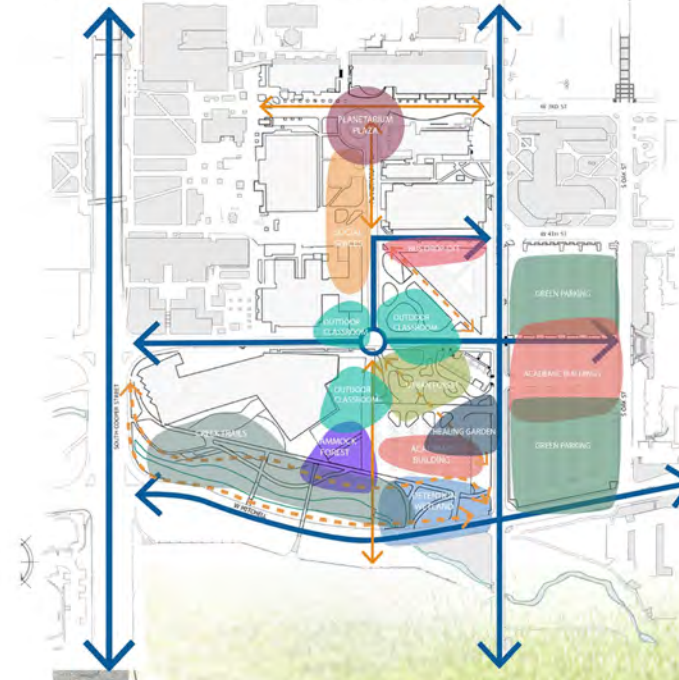
EXISTING CONDITIONS



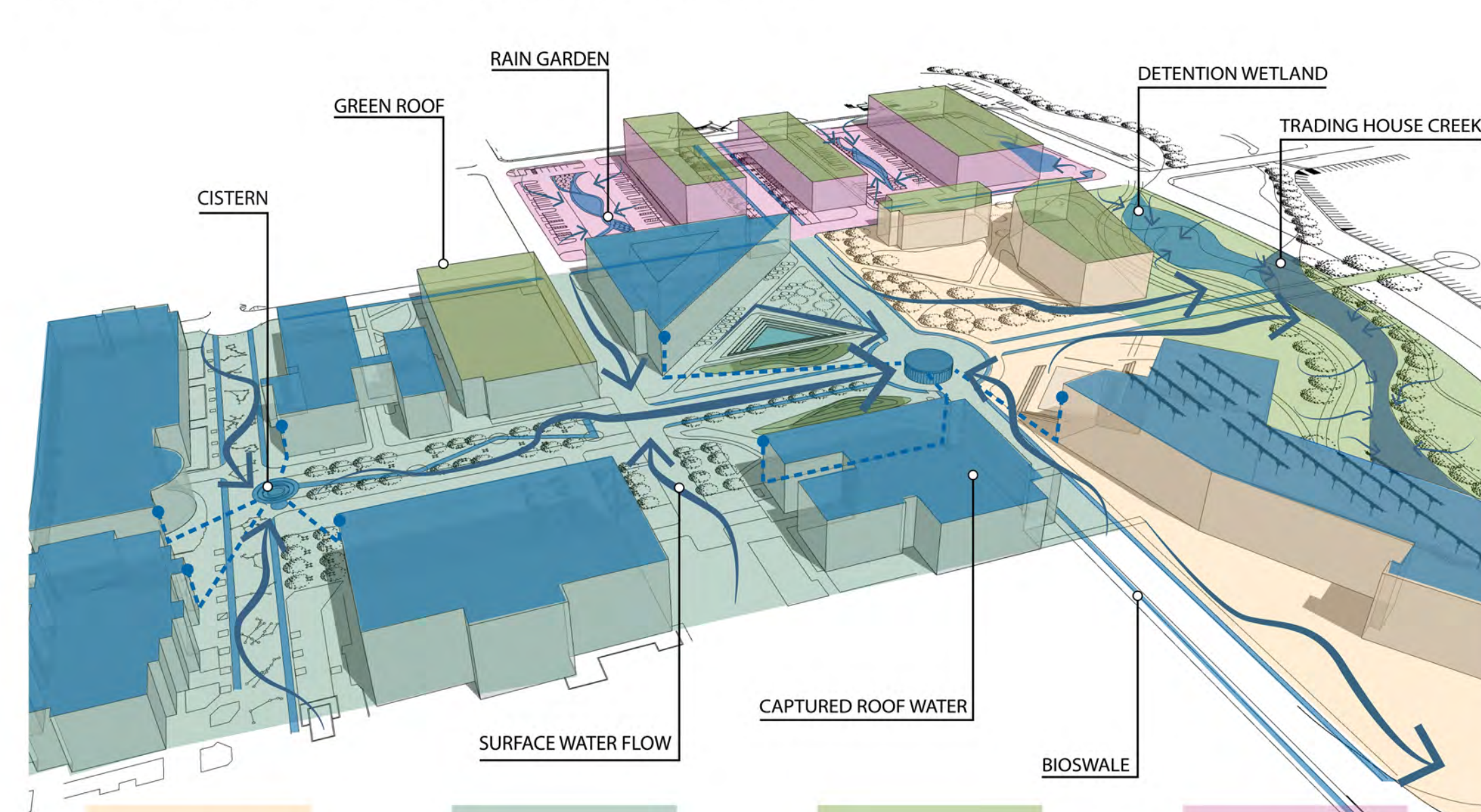
CONCEPT



PROGRAM DIAGRAM

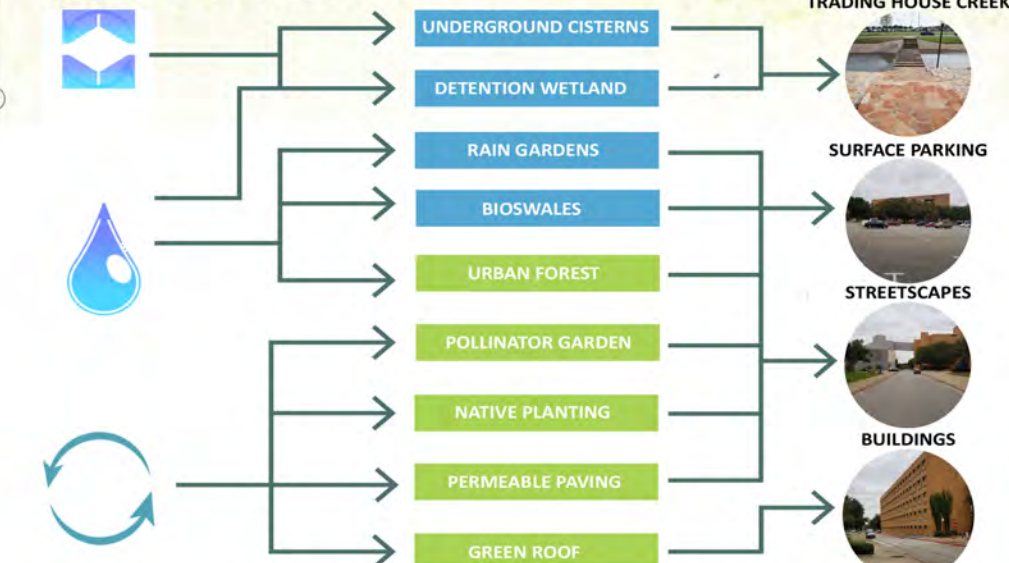


PROPOSED HYDROLOGY + PHASING DIAGRAM

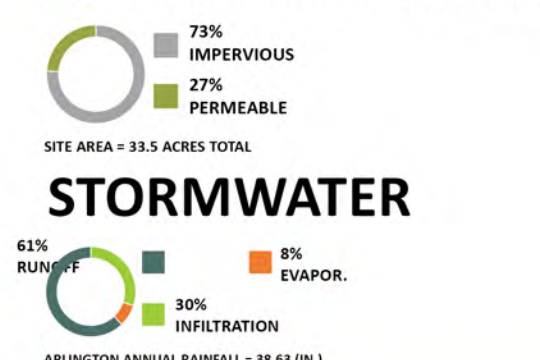


- PHASE 1: 1-5 YEARS**
SOCIAL WORK BUILDING & SURROUNDING LANDSCAPE PER EXISTING UTA DEVELOPMENT PLANS
- PHASE 2: 5-10 YEARS**
RETROFITTING STREETS WITH BIOSWALES AND INSTALLING OUTDOOR CLASSROOMS
- PHASE 3: 10-20 YEARS**
RESTORING CREEK TO NATURAL CONDITION, INSTALLING DETENTION WETLAND AND PEDESTRIAN BRIDGE
- PHASE 4: 20-30 YEARS**
REPLACING SURFACE PARKING WITH ACADEMIC BUILDINGS, PARKING GARAGE AND SUSTAINABLE PARKING

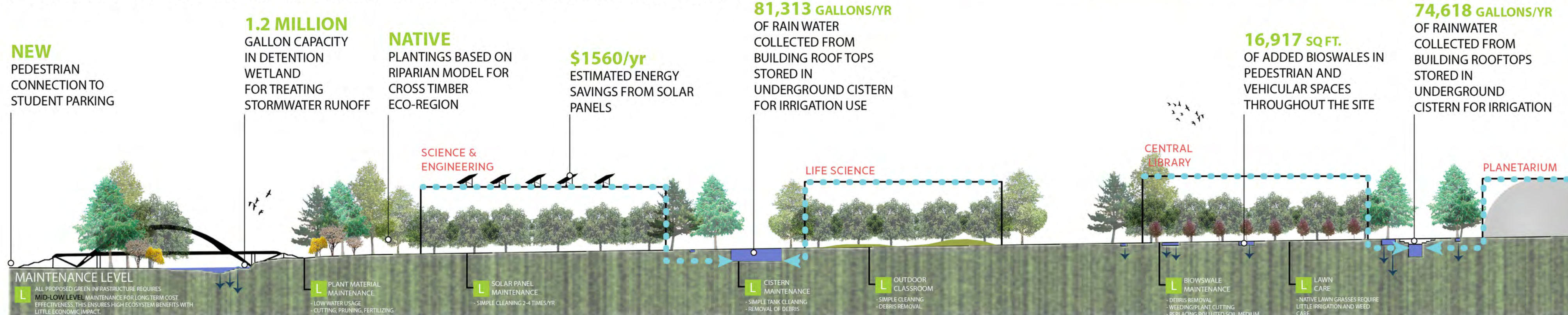
L.I.D STRATEGY



EXISTING SURFACES



SECTION ELEVATION OF PLANETARIUM PLACE + MAINTENANCE PROGRAM



1.2 MILLION GALLON CAPACITY IN DETENTION WETLAND FOR TREATING STORMWATER RUNOFF

NATIVE PLANTINGS BASED ON RIPARIAN MODEL FOR CROSS TIMBER ECO-REGION

\$1560/yr ESTIMATED ENERGY SAVINGS FROM SOLAR PANELS

81,313 GALLONS/YR OF RAIN WATER COLLECTED FROM BUILDING ROOF TOPS STORED IN UNDERGROUND CISTERN FOR IRRIGATION USE

16,917 SQ.FT. OF ADDED BIOSWALES IN PEDESTRIAN AND VEHICULAR SPACES THROUGHOUT THE SITE

74,618 GALLONS/YR OF RAINWATER COLLECTED FROM BUILDING ROOFTOPS STORED IN UNDERGROUND CISTERN FOR IRRIGATION

- MAINTENANCE LEVEL**
ALL PROPOSED GREEN INFRASTRUCTURE REQUIRES: MILD TO MODERATE MAINTENANCE (WEEKLY/BIWEEKLY/QUARTERLY/ANNUAL) EFFECTIVENESS: THIS ENGINEERS HIGH ECOSYSTEM BENEFITS WITH LITTLE ECONOMIC BURDEN
- PLANT MATERIAL MAINTENANCE**
SLOW WATER USAGE, FERTILIZER, PESTICIDES, PRUNING
- SOLAR PANEL MAINTENANCE**
SIMPLE CLEANING 2 TIMES/YR
- CISTERN MAINTENANCE**
SIMPLE TANK CLEANING (EVERY 5-10 YRS)
- OUTDOOR CLASSROOM**
SIMPLE CLEANING, OVERSHADING
- BIOSWALE MAINTENANCE**
OVERSHADING, WEEDING, PRUNING, REPLACING MULCH/LEAF LITTER
- LAWN CARE**
NATIVE LAWN GRASSES REQUIRE LITTLE IRRIGATION AND WEED CARE