

A hand holding a bird's nest in a forest. The background is a dense forest of green leaves. A hand is holding a nest made of twigs and grass. The nest is in the center-right of the image.

**SONOMA  
STATE  
UNIVERSITY**

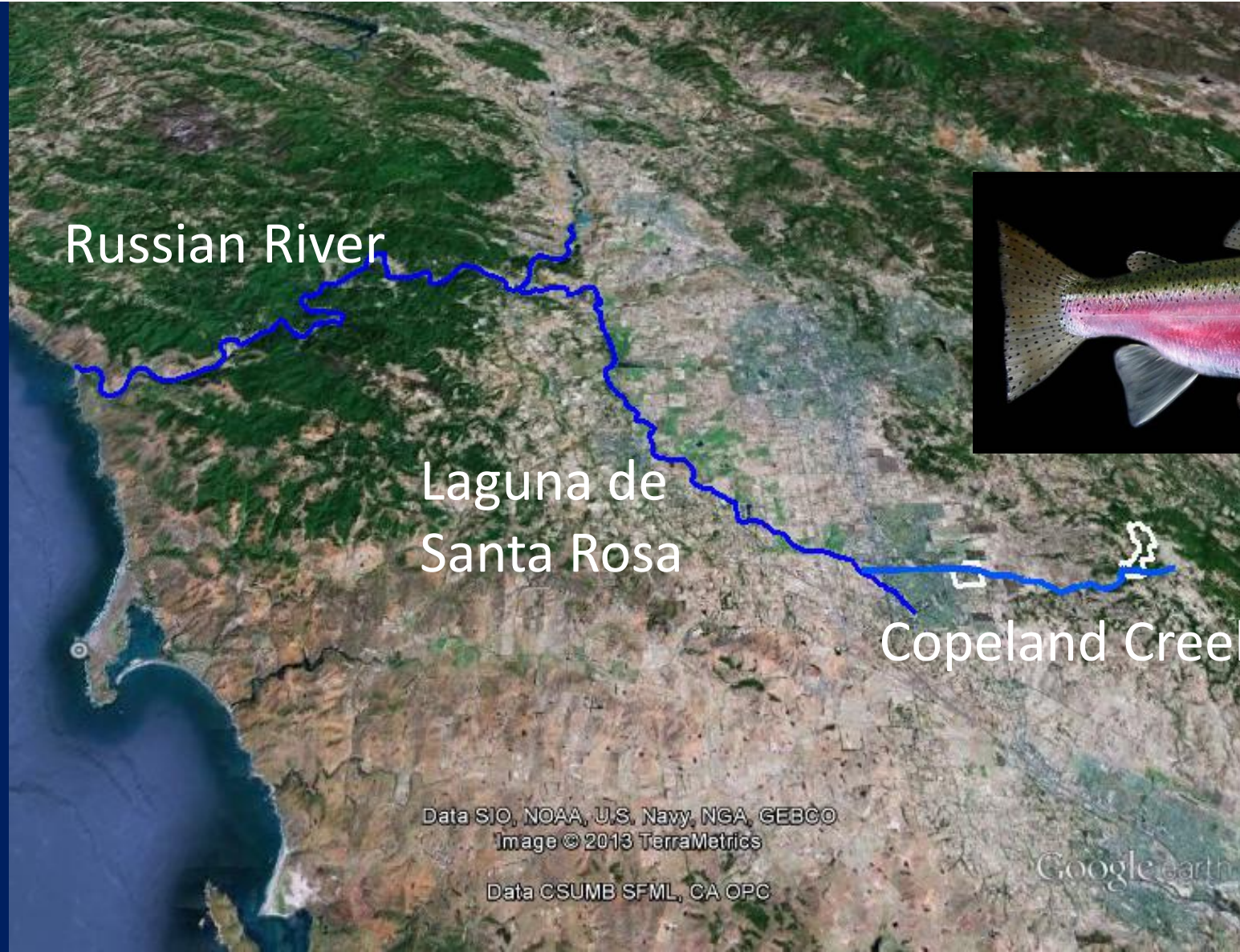
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**CENTER FOR  
ENVIRONMENTAL  
INQUIRY**

# **Copeland Creek Corridor**

**Claudia Luko, Director**

# Copeland Creek



Russian River

Laguna de  
Santa Rosa

Copeland Creek

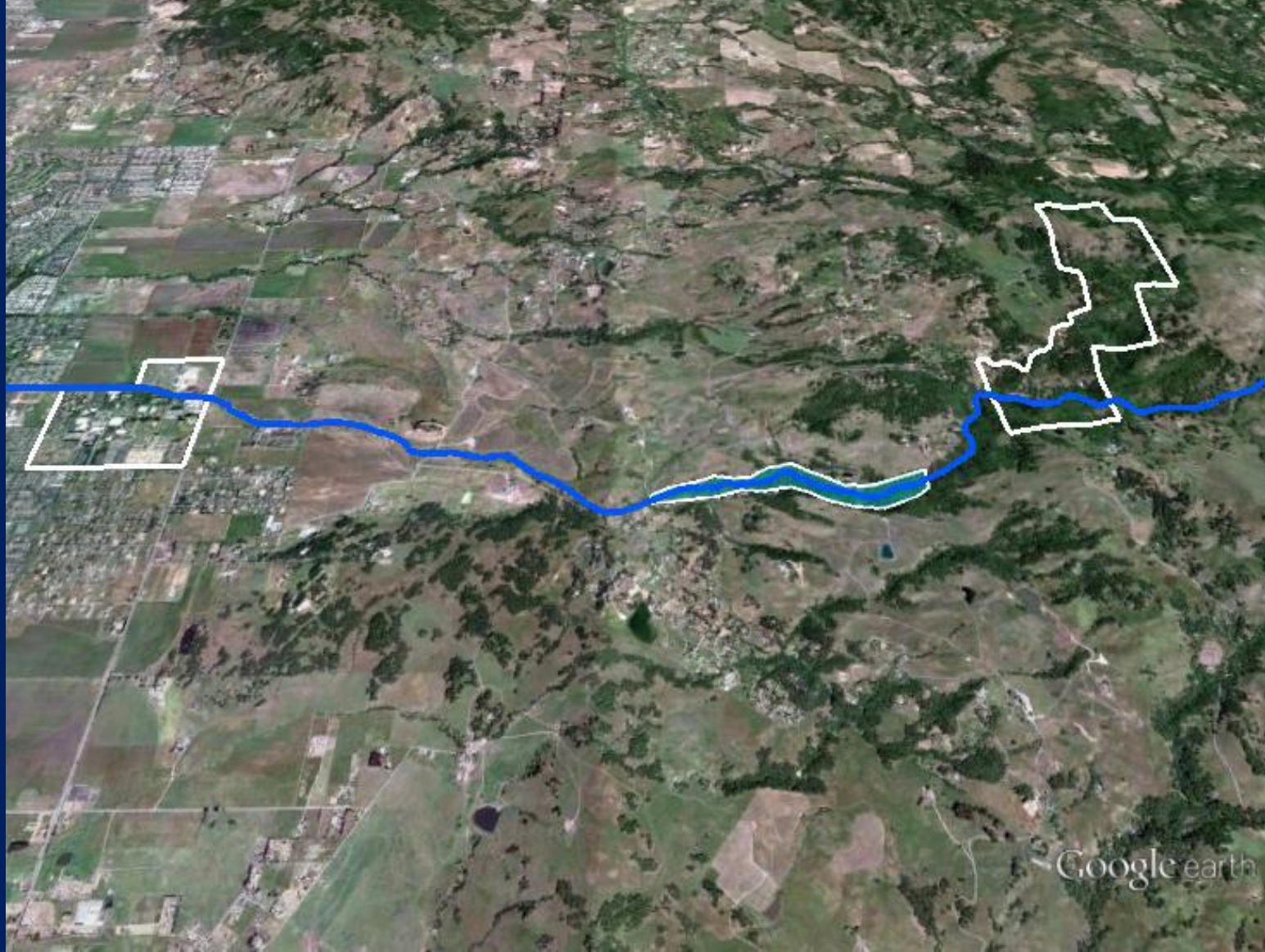


Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2013 TerraMetrics

Data CSUMB SFML, CA OPC

Google earth

# Copeland Creek



# COPELAND CREEK MASTER PLAN

## SONOMA STATE UNIVERSITY

Prepared for the Campus Reengineering Committee, chaired by Vice President of Administration and Finance and Chief Financial Officer, and the Campus Planning Committee, chaired by President Ruben Armiñana.

# 2001

Prepared by  
**Quadriga Landscape Architecture and Planning, Inc.**

In consultation with  
**COPELAND CREEK ADVISORY COMMITTEE**

Deborah Gannon DuVall (Chair) .....	SSU Director of Facilities Planning
Bruce Walker.....	SSU Capital Planning, Design & Constr
Nate Johnson .....	SSU Chief of Police Services
Craig Dawson .....	SSU Director, EH&S
Phil Northen .....	SSU Professor, Biology
Tom Jacobson.....	SSU Associate Professor, ENSP
David Stokes .....	SSU Assistant Professor, ENSP
Karen Tillinghast .....	SSU Lead Gardener, Landscape Services
Vicki Pannell .....	SSU Work Control System Administrator
Kara Heckert .....	SSU Student
Brian Turner .....	SSU Student
Steve Hernandez.....	SSU Student
Bill Cox, (ex officio).....	California Dept. of Fish and Game
Andrew Jensen, (ex officio) .....	North Coast Regional Water Quality
Bill Mastick.....	Quadriga Landscape Architecture
Jane Marx .....	Quadriga Landscape Architecture

## GOALS: CREEK & WATERSHED PROTECTION

routine maintenance, management, admin, development

**GOAL 1: Maintain and protect the native biodiversity**, ecological processes, and conditions of Copeland Creek and its associated in-stream, riparian, transitional, and upland habitats.

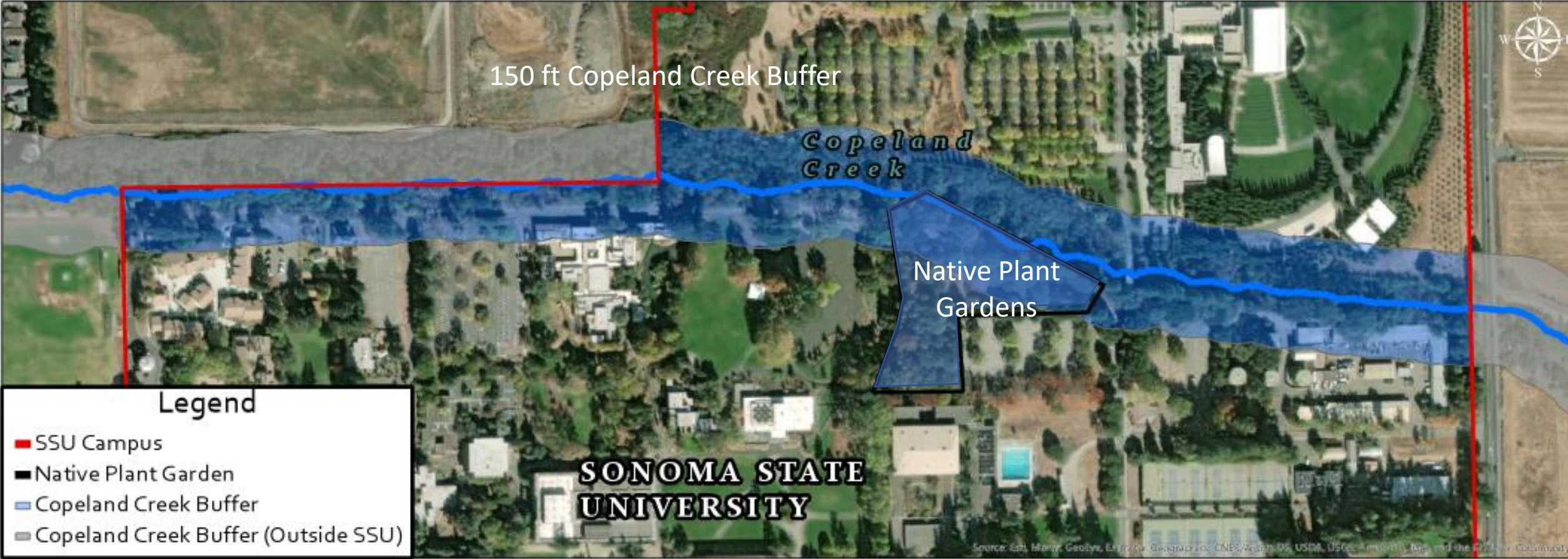
**GOAL 2: Restore native species**, biotic communities, ecological processes, and conditions in Copeland Creek and its associated in-stream, riparian, transitional, and upland habitats.

**GOAL 3: Increase community awareness** and appreciation of Copeland Creek and its associated habitats as an important campus amenity by providing opportunities for public access, recreation, and education, in forms not inconsistent with Goals 1 and 2.

**GOAL 4: Increase knowledge and understanding** of native biodiversity, ecological processes, ecological restoration, and human impacts in and around riparian ecosystems in general, and Copeland Creek in particular, through research and educational activities undertaken by Sonoma State University faculty and students, provided these activities are not inconsistent with Goals 1 and 2.

**GOAL 5: Maintain and improve hydraulic function** of Copeland Creek in a manner that combines flood control requirements with ecological restoration and water quality considerations.

# Master Plan Boundaries



Bravo 2021



# Copeland Creek Master Plan

**Definitions:**

**TOP OF BANK (TB)**

The break in slope between the bank and the surrounding terrain.

**ORDINARY HIGH WATER (OHW)**

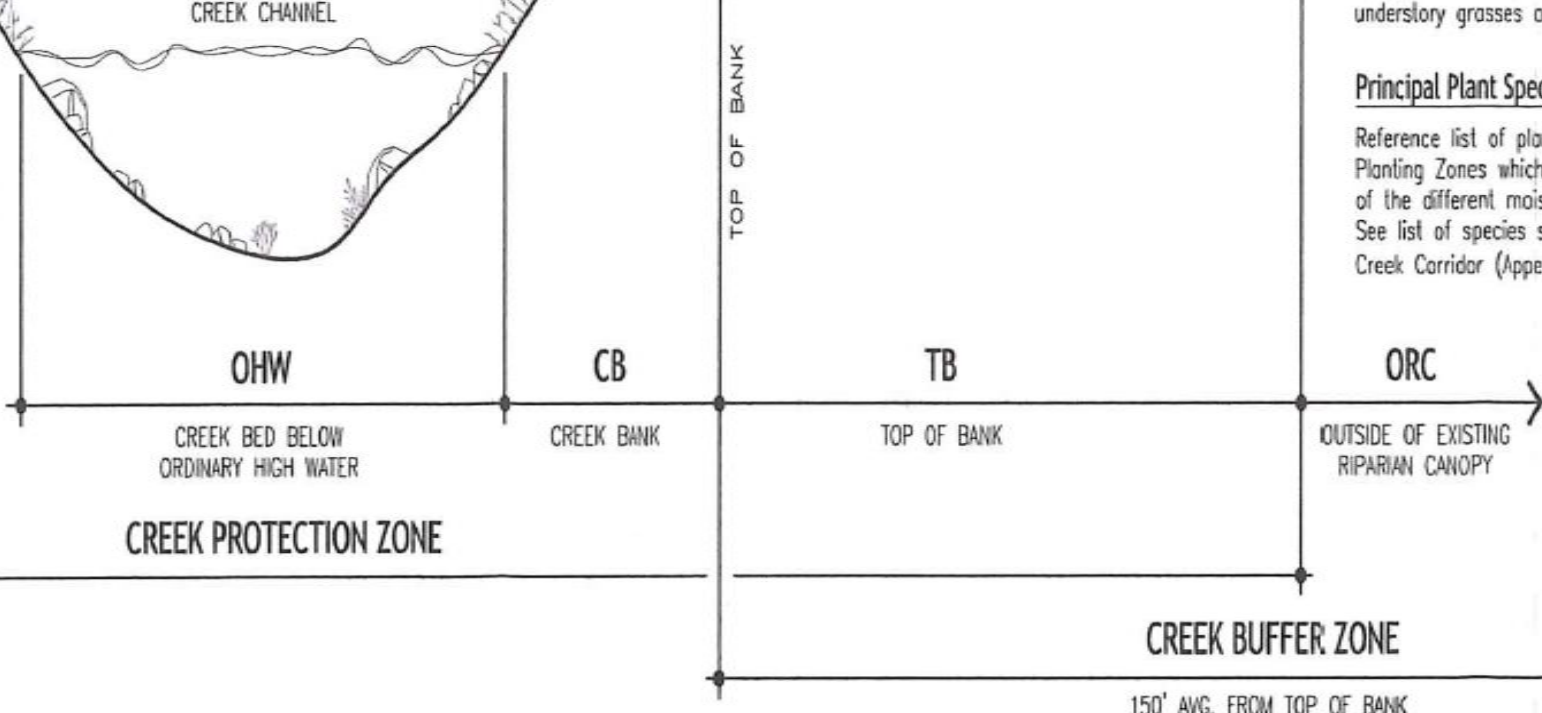
Generally equivalent to the 2-year flood elevation. OHW is manifested where bank vegetation is replaced by a scour line below which sediment and aquatic habitat occur.

**CREEK BUFFER ZONE**

Encompasses a zone originating at the TB and extending laterally from the creek for 150' (avg.).

**CREEK PROTECTION ZONE**

Corresponds to the area within the drip line of the vegetation along the creek.



**The Goal for Planting**

Outside of the existing riparian canopy (ORC) is to plant trees to create shade canopy over the path with low-growing understory grasses and shrubs.

**Principal Plant Species**

Reference list of plant species appropriate to Planting Zones which match their tolerance of the different moisture regimes shown. See list of species suitable to Copeland Creek Corridor (Appendix to Goal 2)

# Restoration & Study

- **2000-2013:** Friends of Copeland Creek (Julie Bright) undertake invasive species and trail work
- **2003-2015:** Sonoma Water contract with ENSP/GEP for plant propagation class and invasive species research
- **2012-2022:** Sonoma Water contract with CEI to engage faculty and students in study and restoration: water quality, hydrology, biodiversity, etc.
- **2016-2022:** Copeland Creek Restoration becomes central to GEP's Restoration class (Wendy St. John).



# Restoration & Study

- **Sonoma Water Contract**
- Restoration Plan
- Annual Reporting



## **Copeland Creek Restoration Plan Sonoma State University Campus**

Prepared by:  
Center for Environmental Inquiry

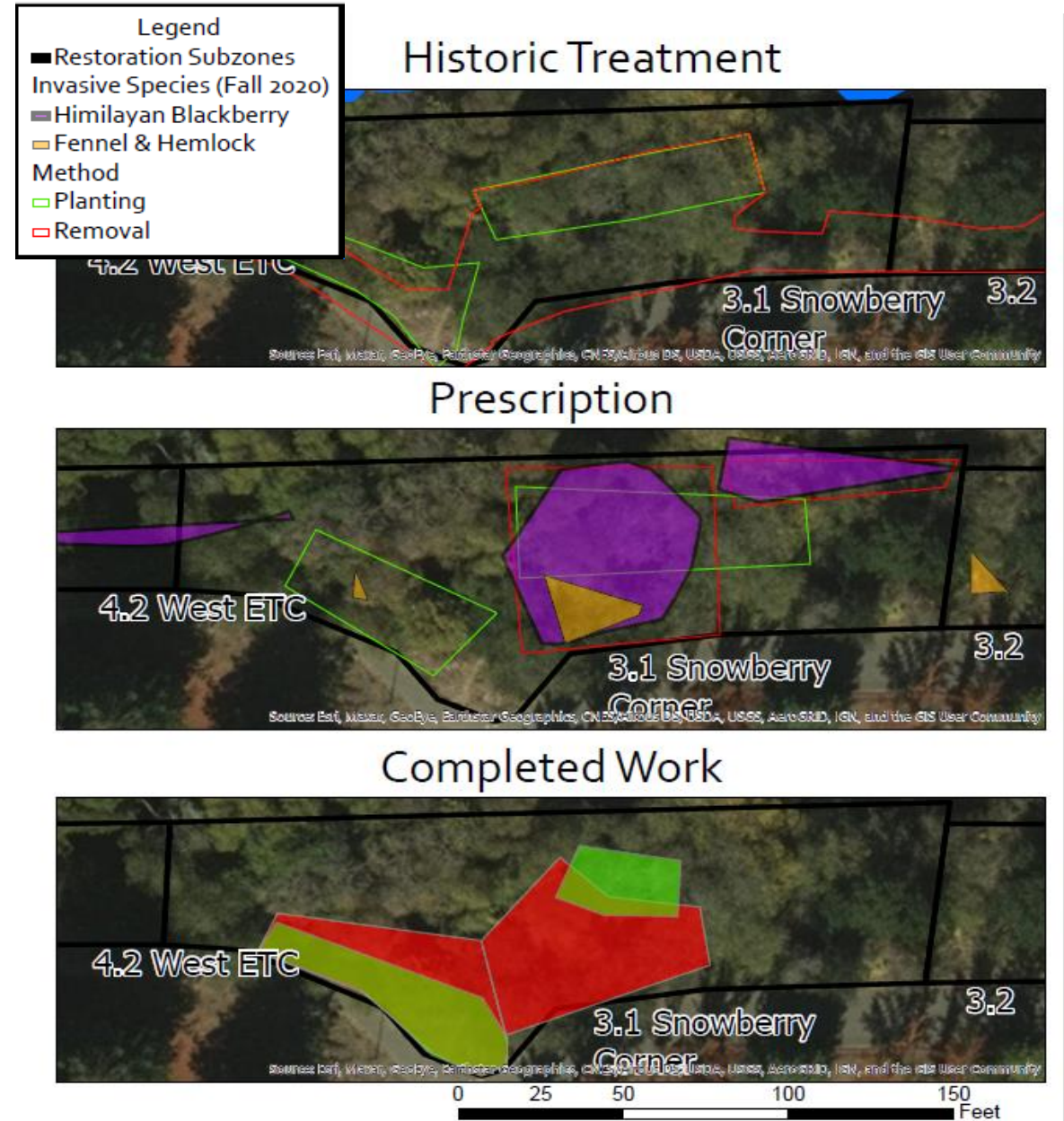
Prepared for:  
Sonoma Water in fulfillment of contract #1920-062

June 2021

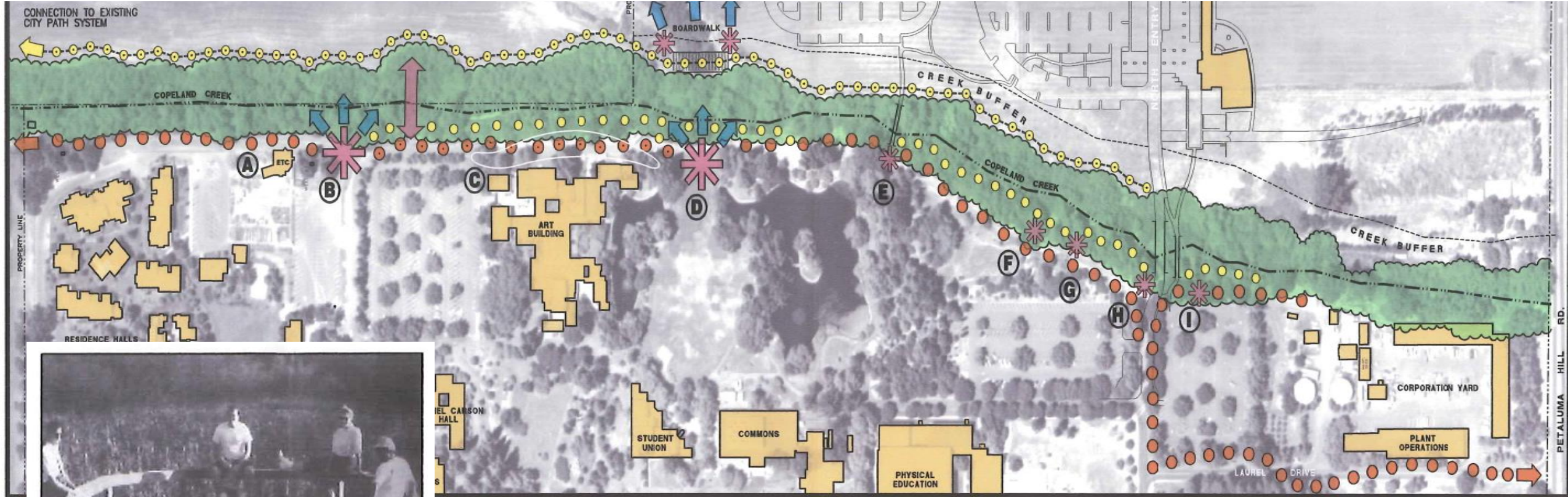


# Restoration & Study

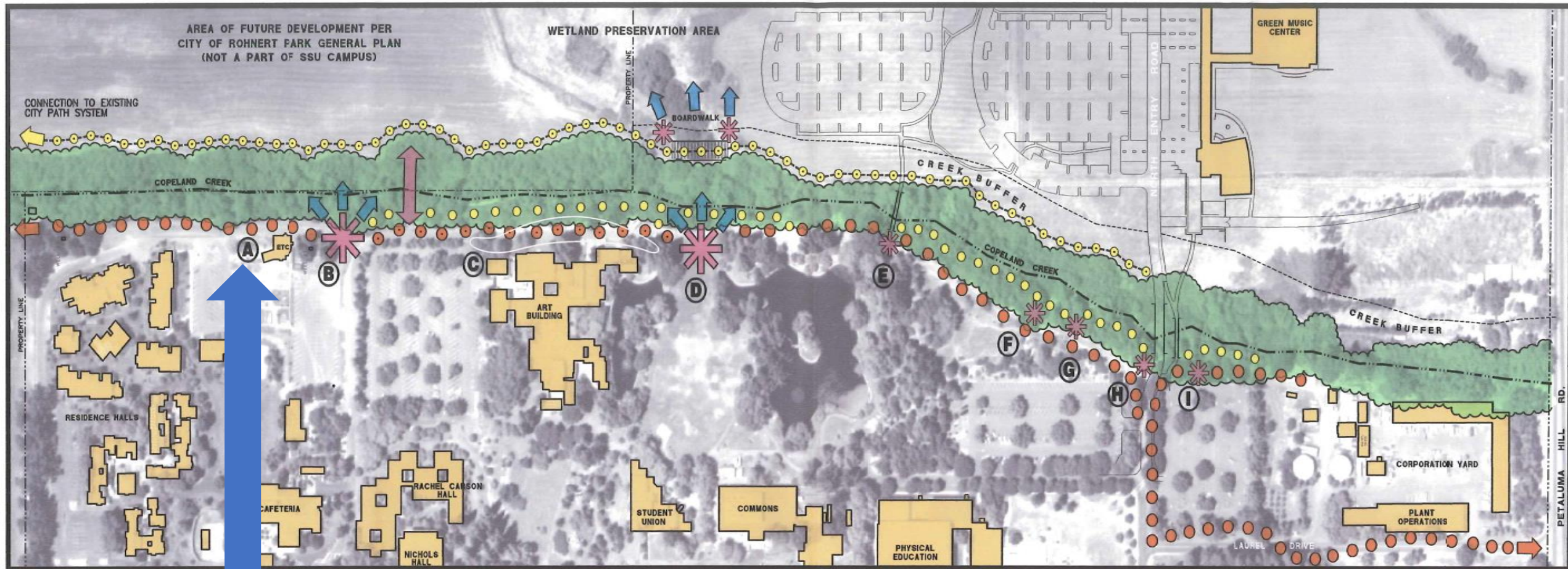
- **Complies with Copeland Creek Master Plan**
- Purpose: documents invasive species, treatment areas, work performed, survivorship of plants



# Proposed Access



- EXISTING 8'+ GRAVEL/HARD PATH PROPOSED TO BE 8'-12' ROAD OYL SURFACE
- EXISTING 2'-3' SOFT PATH TO REMAIN (no bicycles)
- EXISTING 20' AC BIKE/PED./EMERGENCY ACCESS TO BE 20' MEANDERING ROAD OYL SURFACE
- FUTURE 6'-8' GRAVEL, DECOMPOSED ROCK OR ROAD OYL PATH



A

## Revegetate Environmental Technology Center



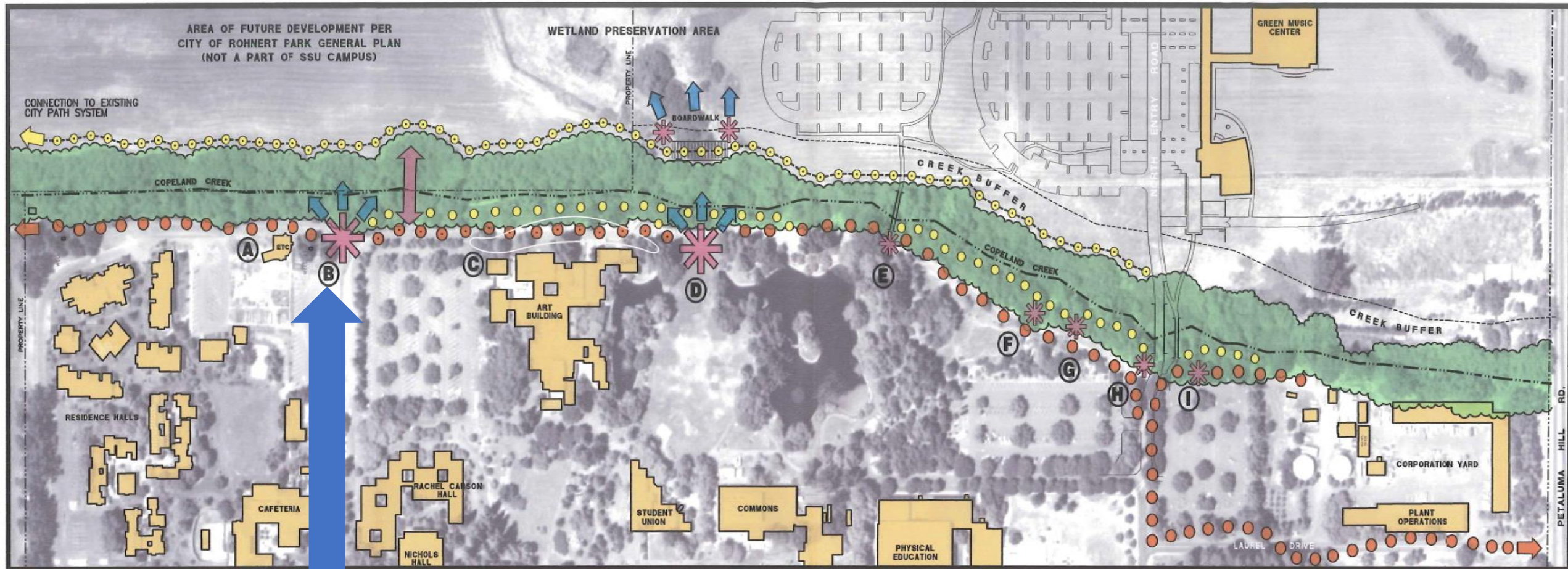
**A** REVEGETATE AROUND 'ETC' BLDG

EXISTING AREA ADJACENT  
TO 'ETC' BLDG



ALONG UPPER TRAIL:  
BRING PLANTING UP TO EDGES  
OF UPPER PATH. PLANTING  
SHALL INCLUDE TREES FOR  
SHADE CANOPY, WITH HIGH  
BRANCHING STRUCTURE FOR  
SECURITY/VISIBILITY





B

Outdoor Classroom

Copeland Creek Channel

**B** OUTDOOR CLASSROOM

SEATING  
AREA/OUTDOOR  
CLASSROOM

RESTORATION  
PLANTING

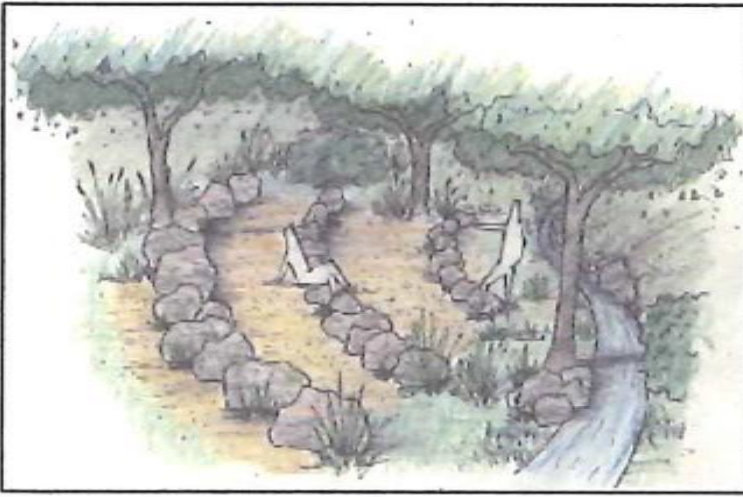
NATIVE TREE  
PLANTING

NEW PATH  
ALIGNMENT

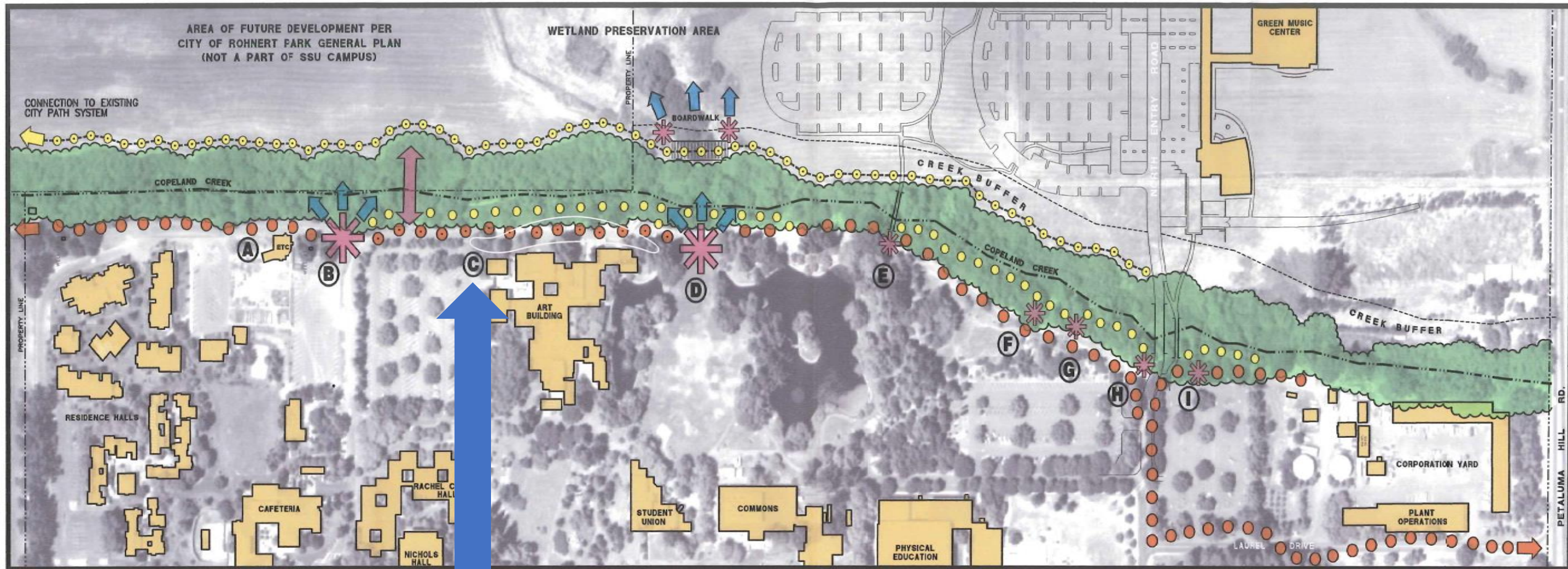
EXISTING



EXISTING CREEK PATH



OUTDOOR CLASSROOM SHALL CONSIST OF ROCK TERRACES FOR SEATING IN A SMALL SCALE, NATURAL APPEARING AMPHITHEATER



C

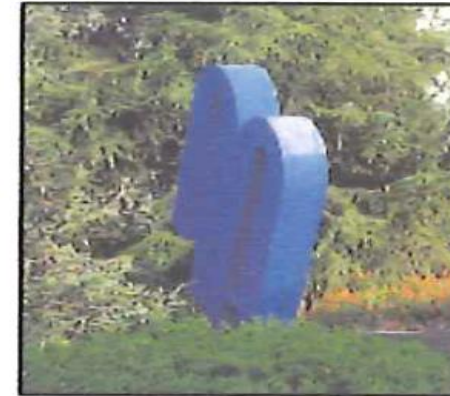
# Sculpture Garden



SCULPTURE GARDEN AT ART BLDG

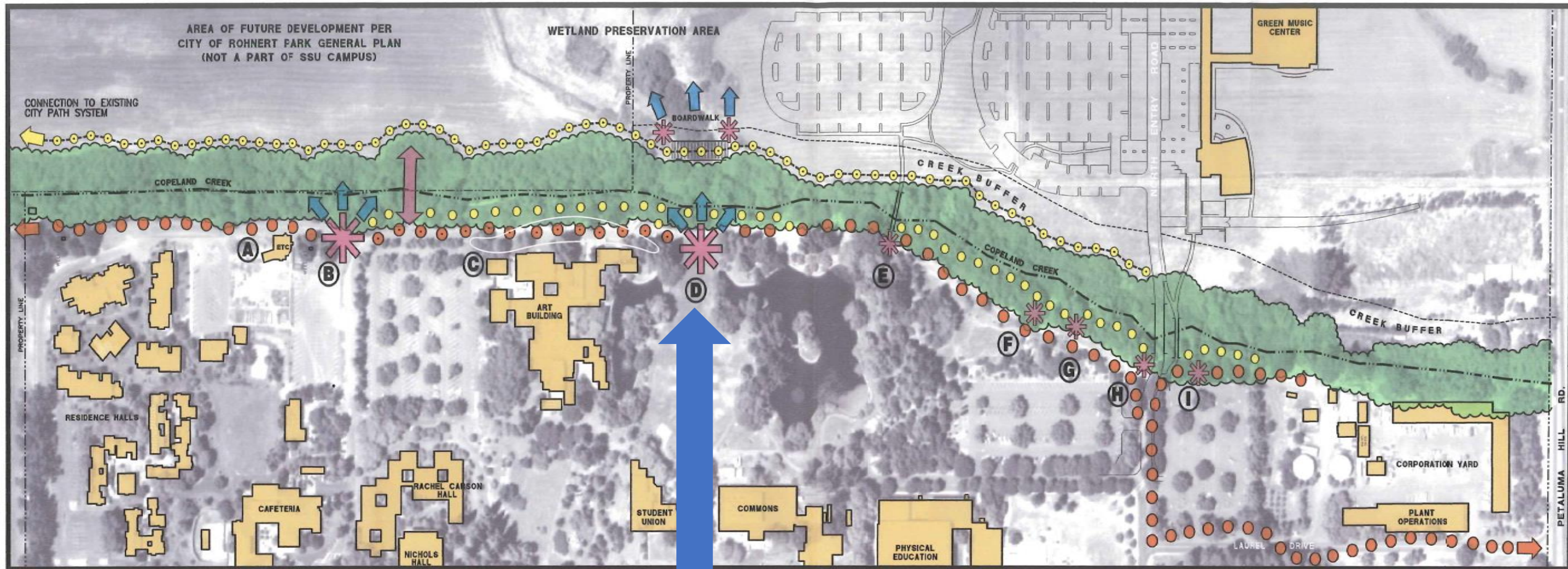


EXISTING EMERGENCY ACCESS ROAD/PED/BIKE PATH BETWEEN ART BLDG AND CREEK



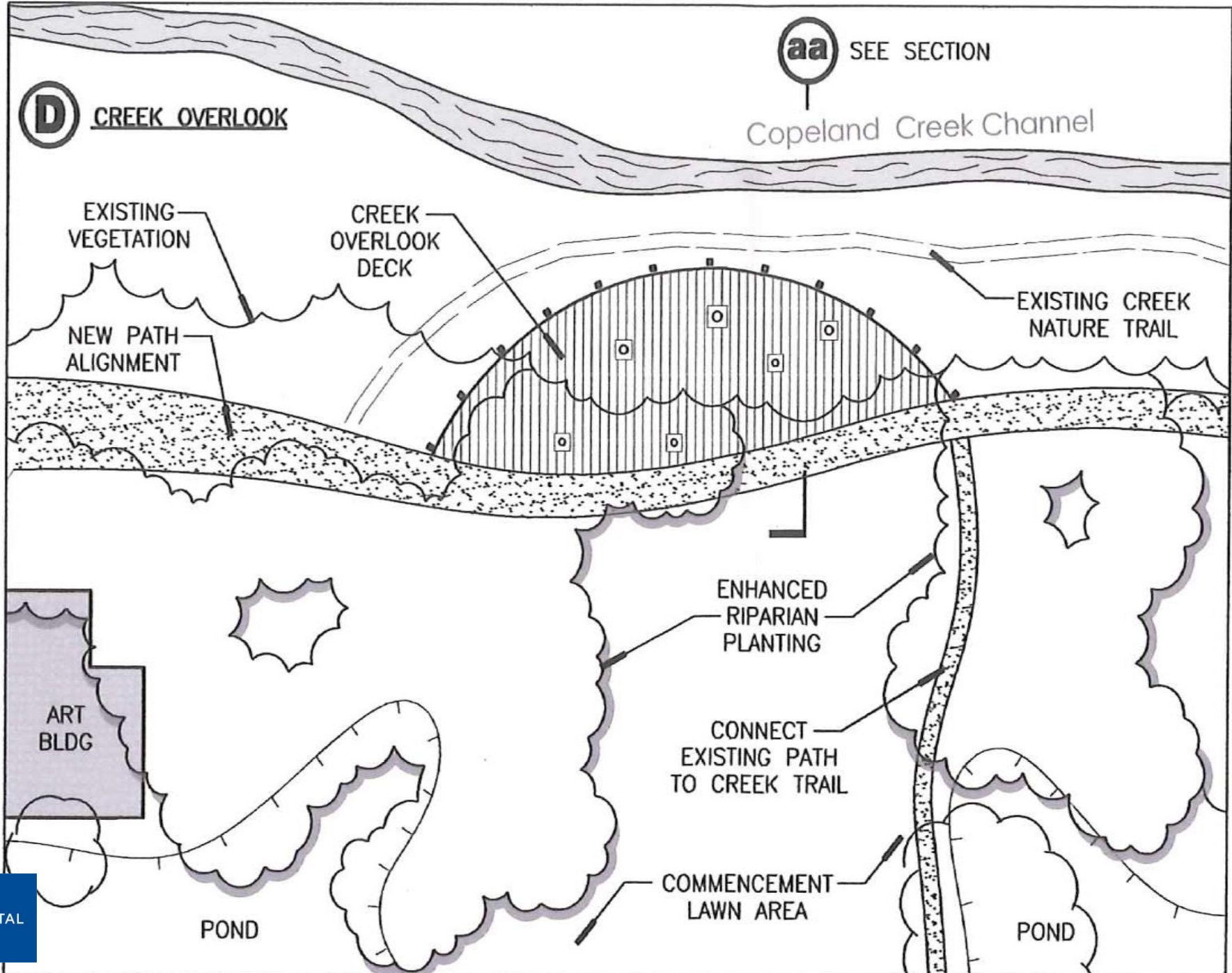
PROPOSED: MEANDER 20' ACCESS ROAD, PAVED WITH 'Road Oyl' AND MEANDER THROUGH A SCULPTURE GARDEN. CREATE ACCESS FROM ART BLDG. DIRECTLY TO SCULPTURE GARDEN AND ROAD.

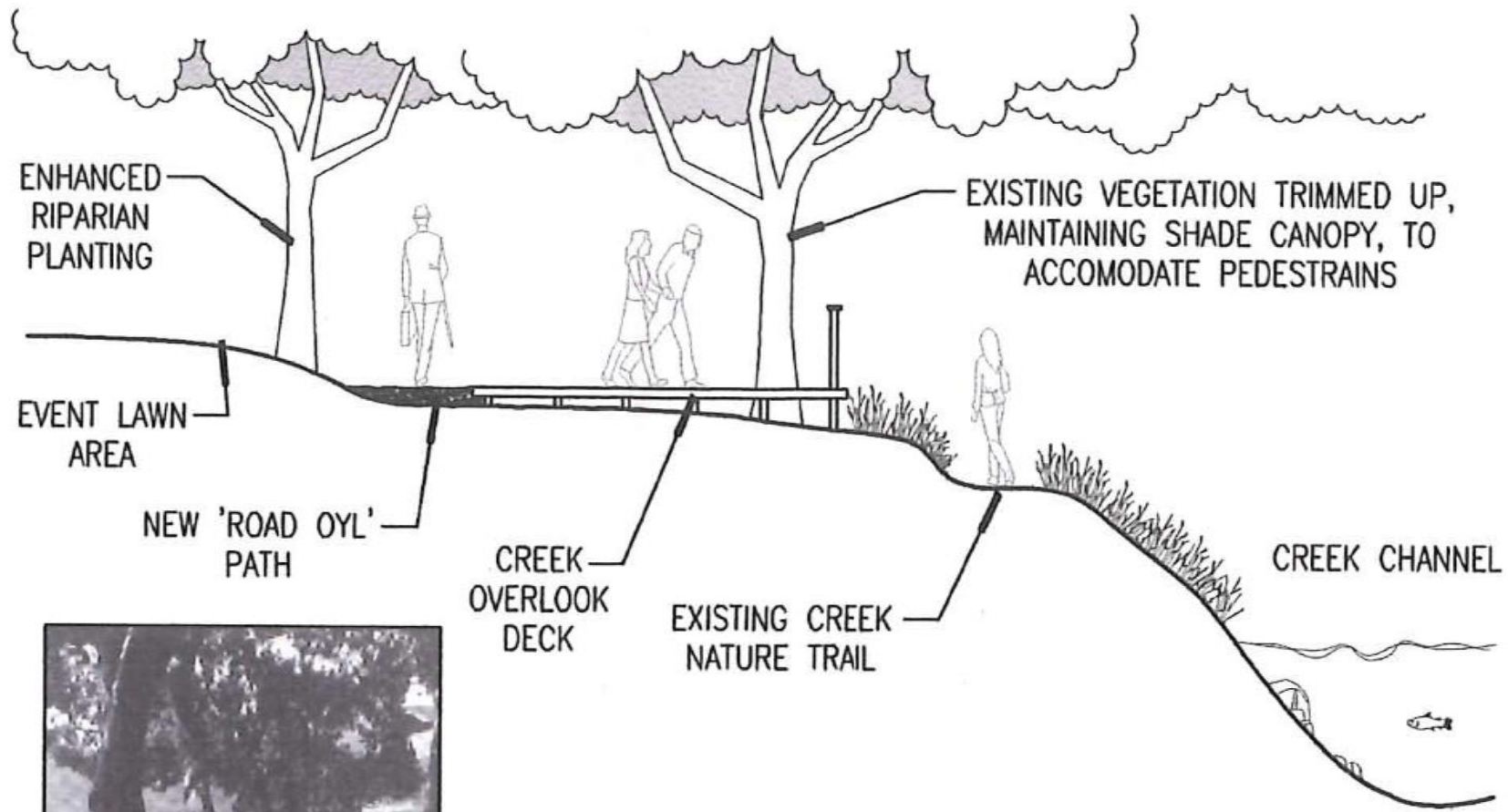




D

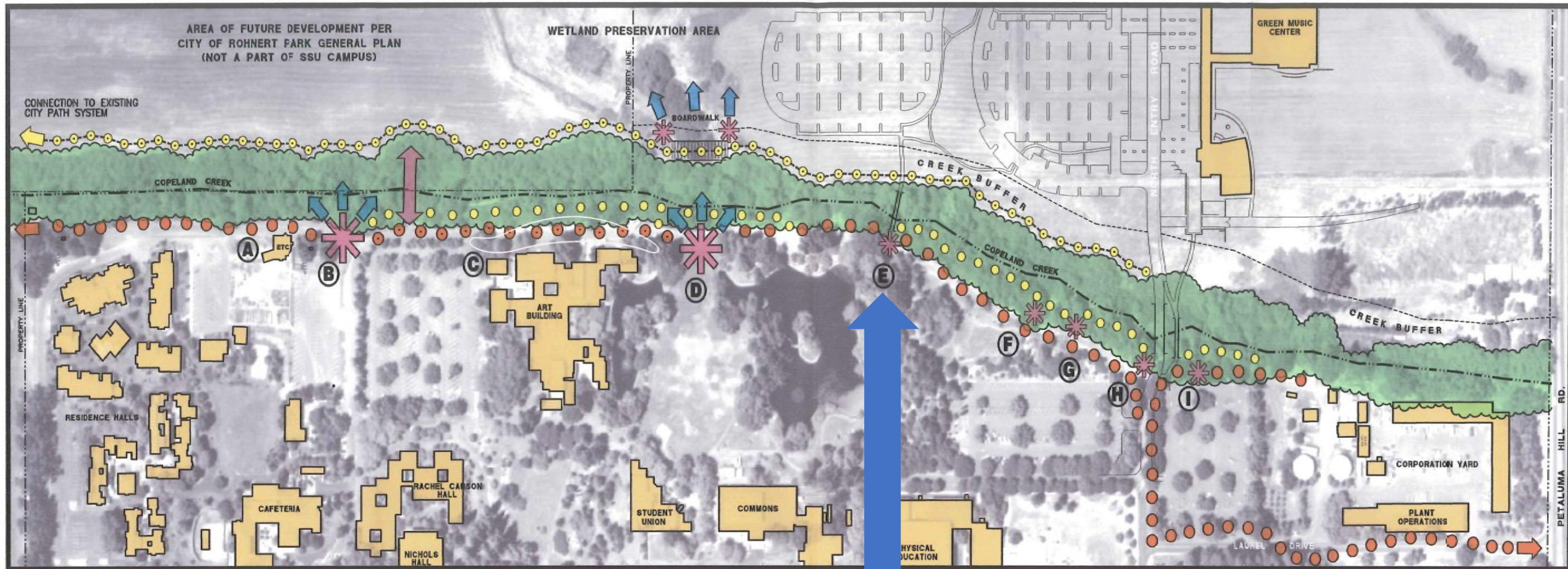
Creek Overlook





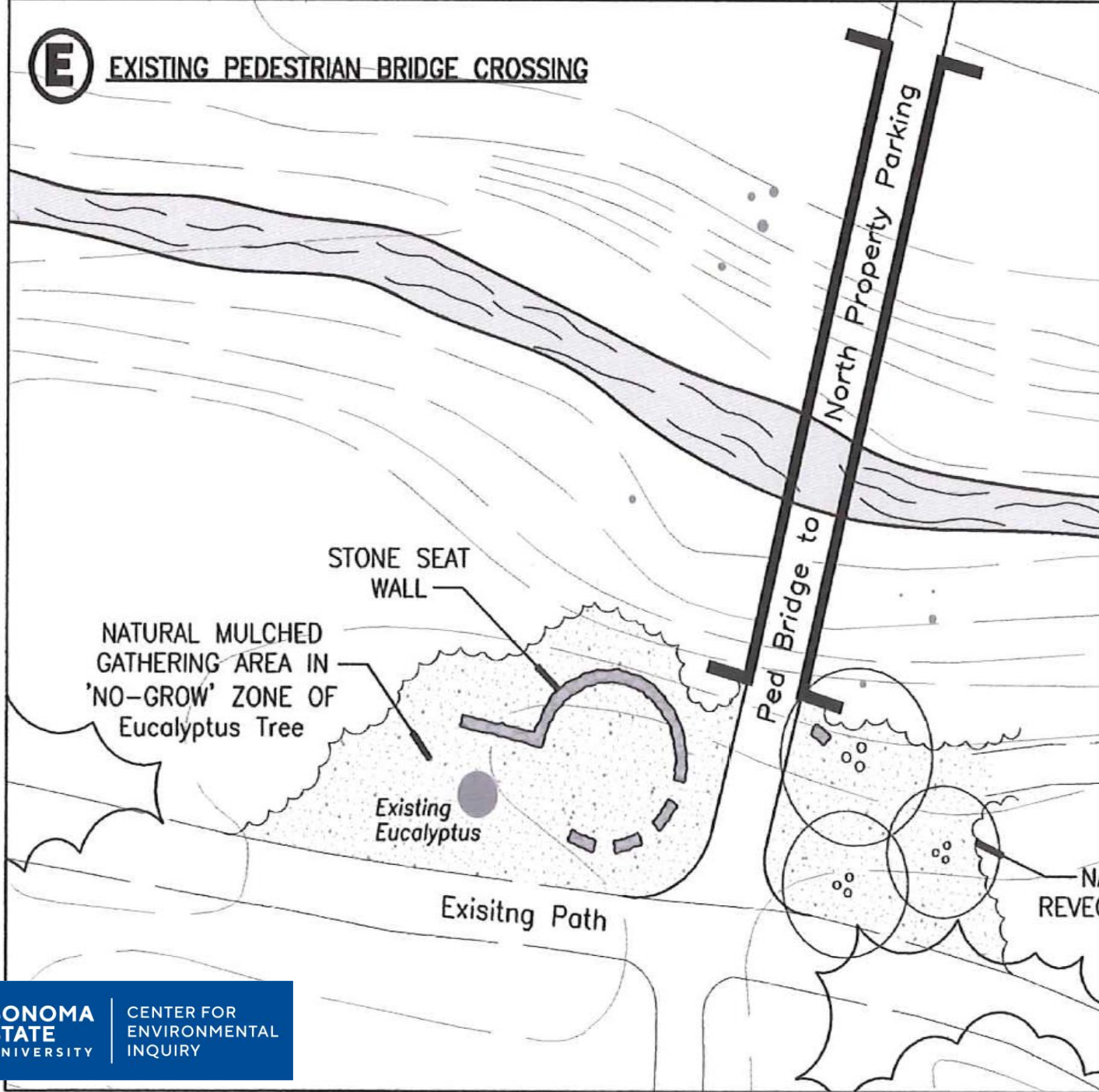
**aa** CREEK OVERLOOK DECK SECTION

CREEK OVERLOOK DECK CONCEPT



Pedestrian Bridge  
Stone Seating Area

**E** EXISTING PEDESTRIAN BRIDGE CROSSING



EXISTING CREEK PATH @ BRIDGE



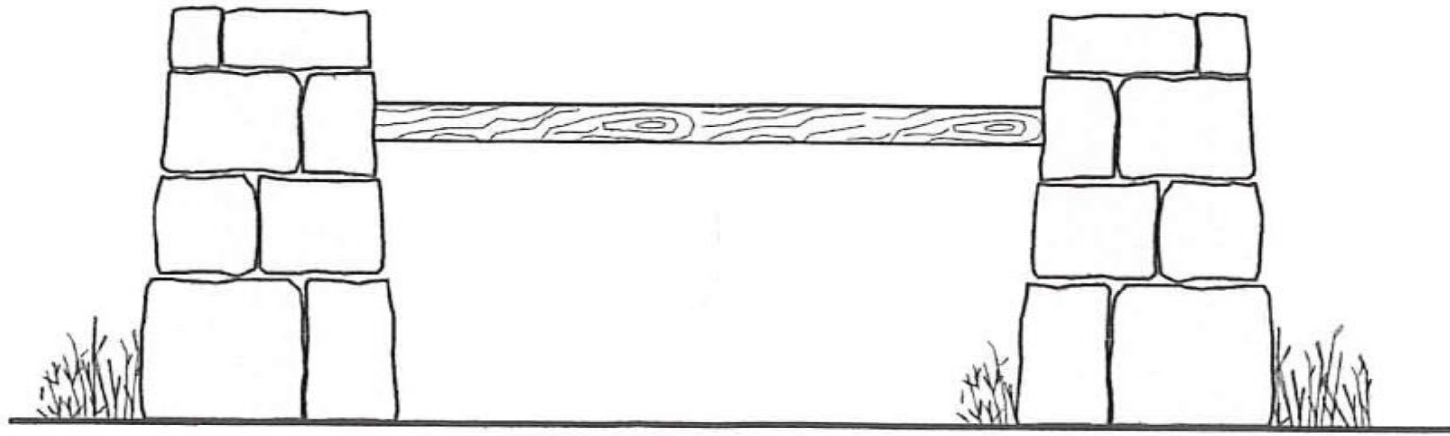
STONE SEAT WALL



**F** SEATING AREA



EXISTING SEATING



STONE BASES WITH  
REDWOOD BENCHES





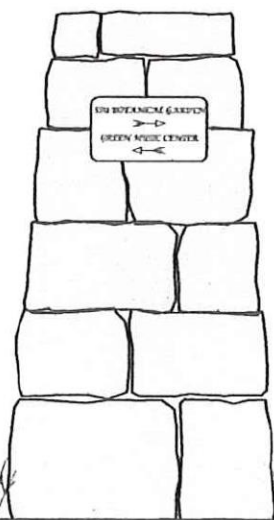
**G** INTERPRETIVE SIGNAGE/TRAILHEAD



EXISTING SIGNAGE



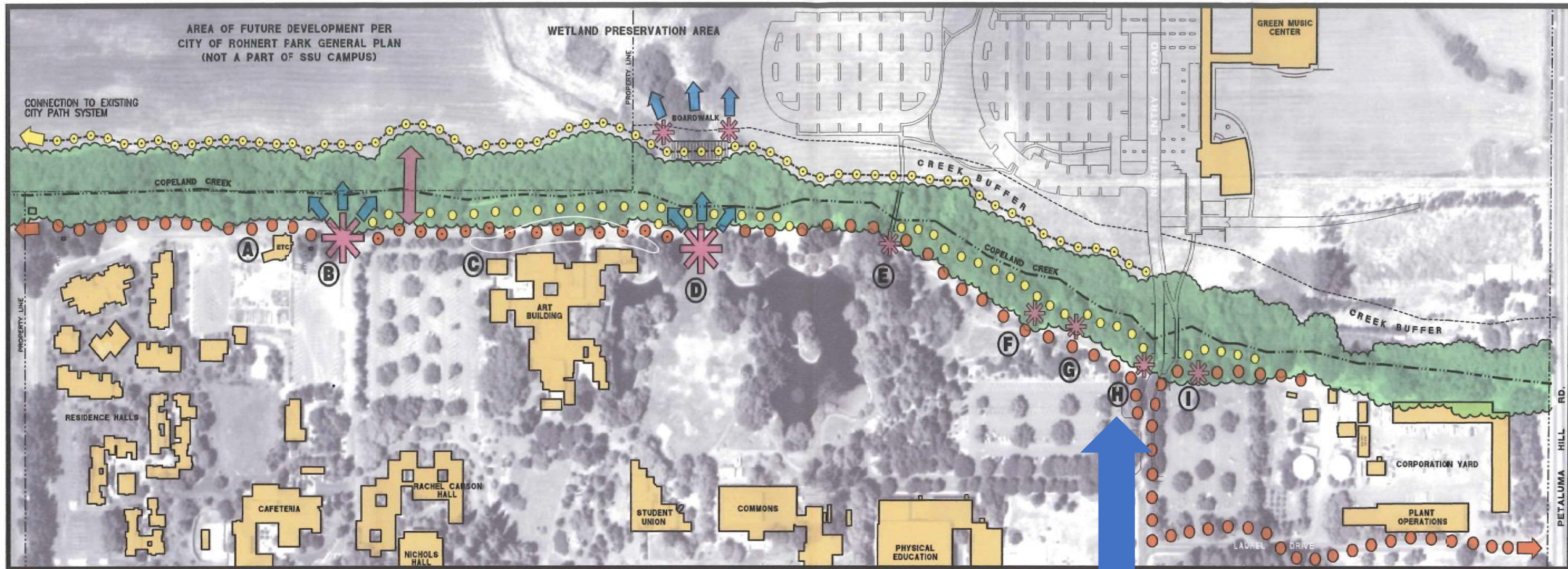
INTERPRETIVE SIGNAGE DESIGN TO BE USED CONSISTENTLY ALONG CORRIDOR



PROPOSED STONE DIRECTIONAL/TRAILHEAD SIGNAGE

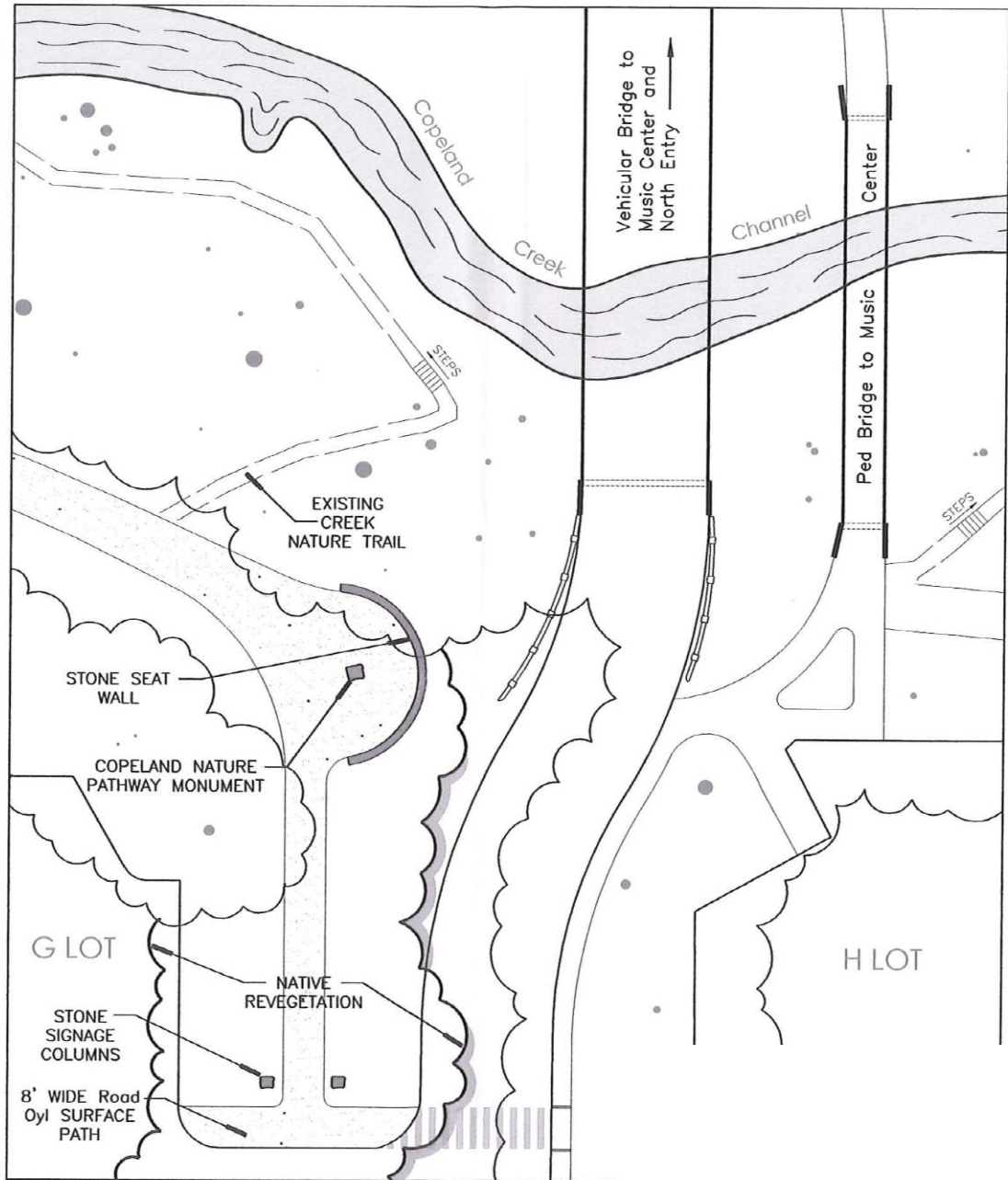


EXISTING SIGNAGE

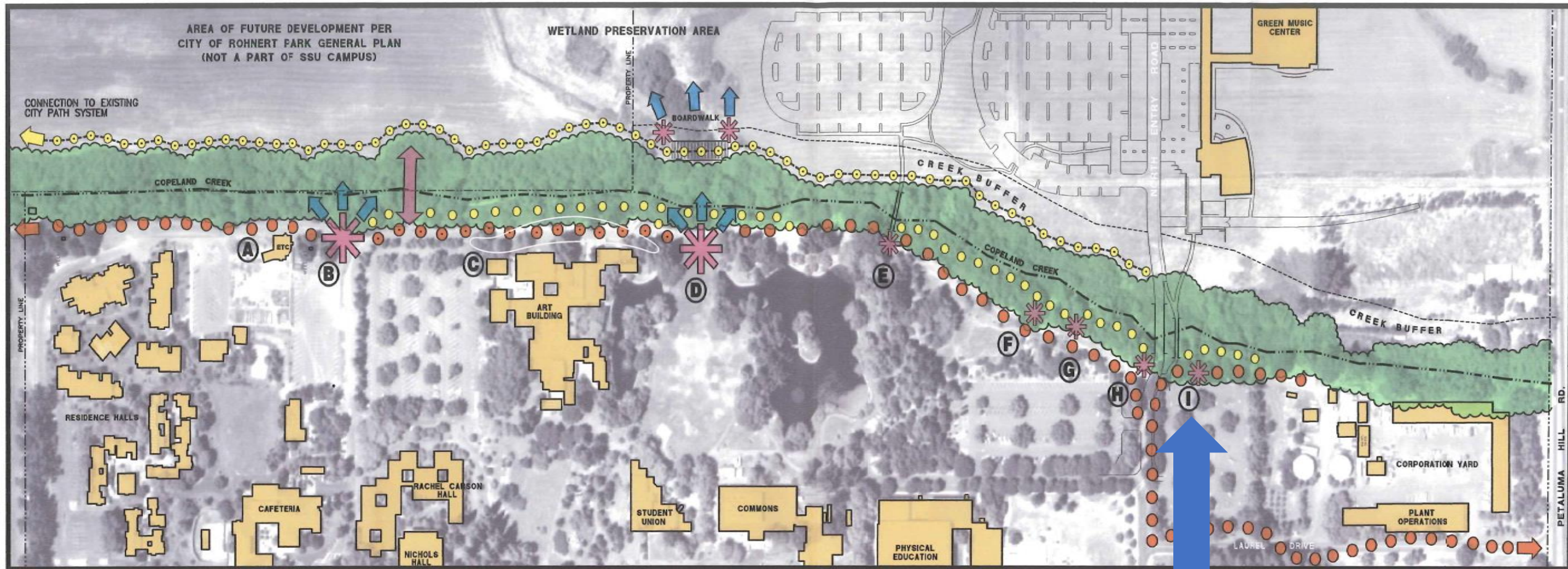


## Native Plant Garden Entrance





STONE SEAT WALL

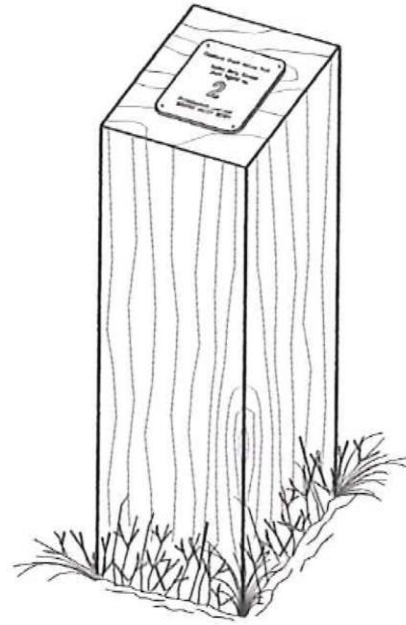


## Native Berry Garden



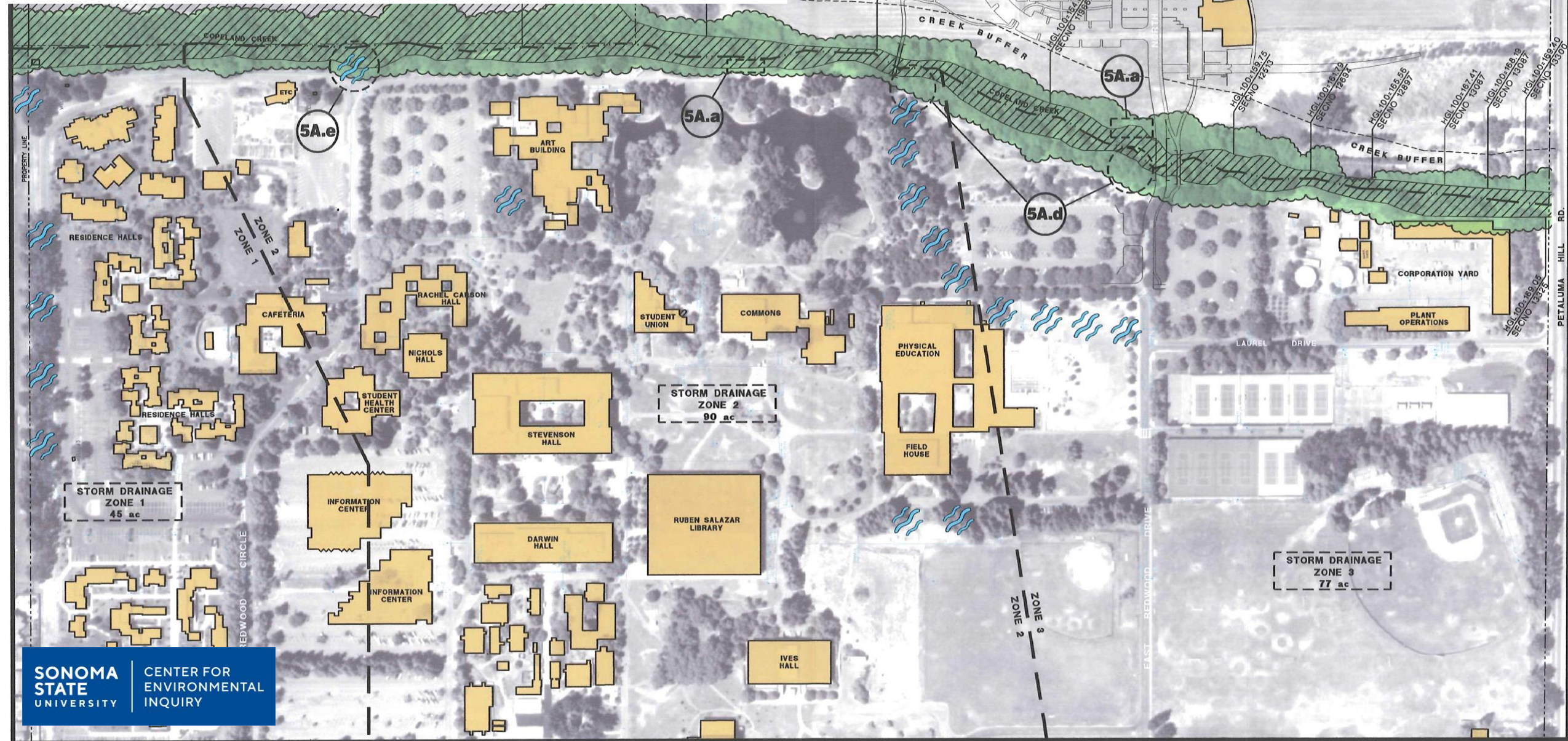
NATIVE BERRY GARDEN

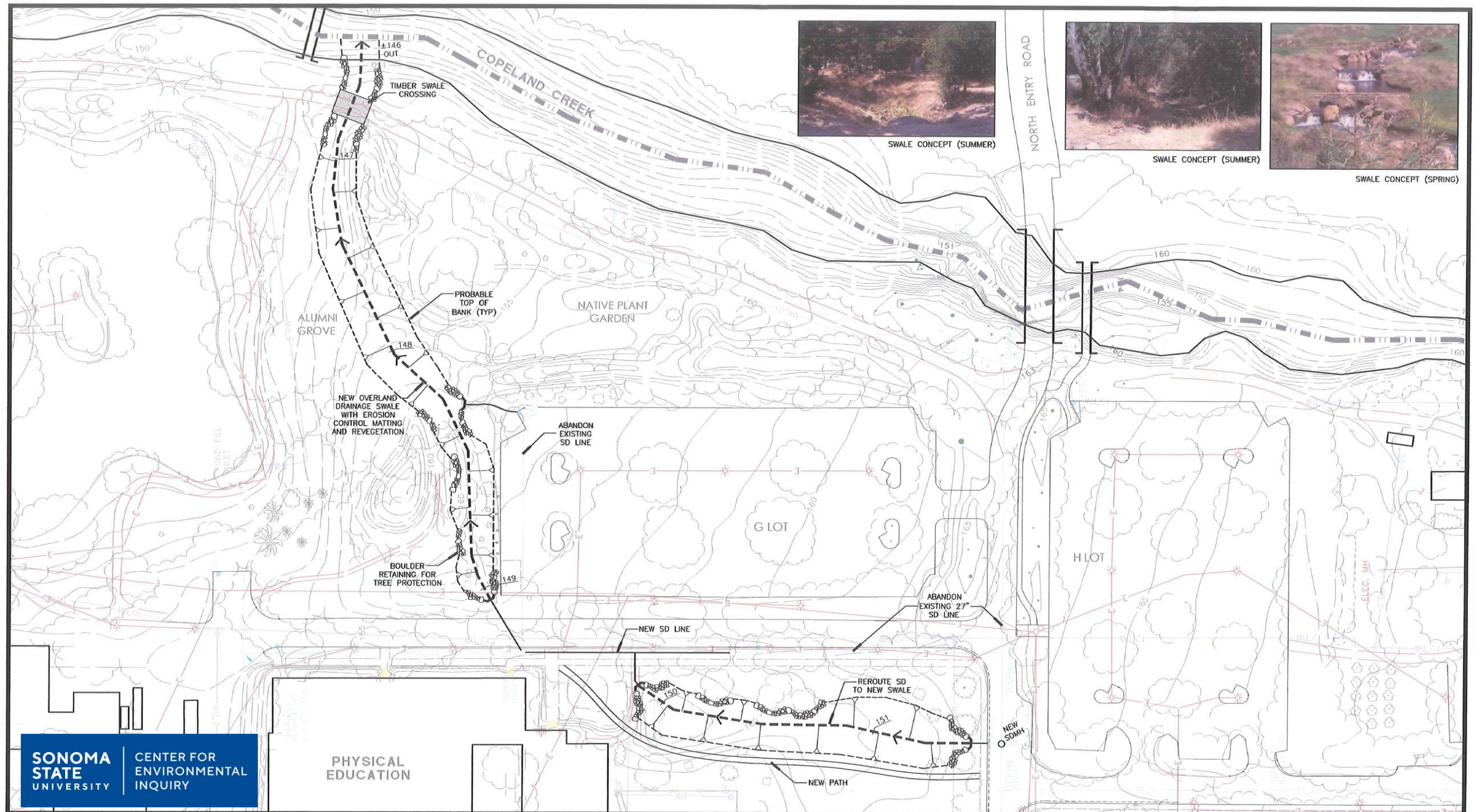
PROPOSED PLANT I.D. POST  
IDENTIFY VARIOUS BERRY  
PLANTS IN THIS AREA WITH  
I.D. POSTS AND AN  
INTERPRETIVE SIGN AT A  
SMALL SEATING AREA



EXISTING CREEK PATH

# Reduce Sedimentation





SWALE CONCEPT (SUMMER)

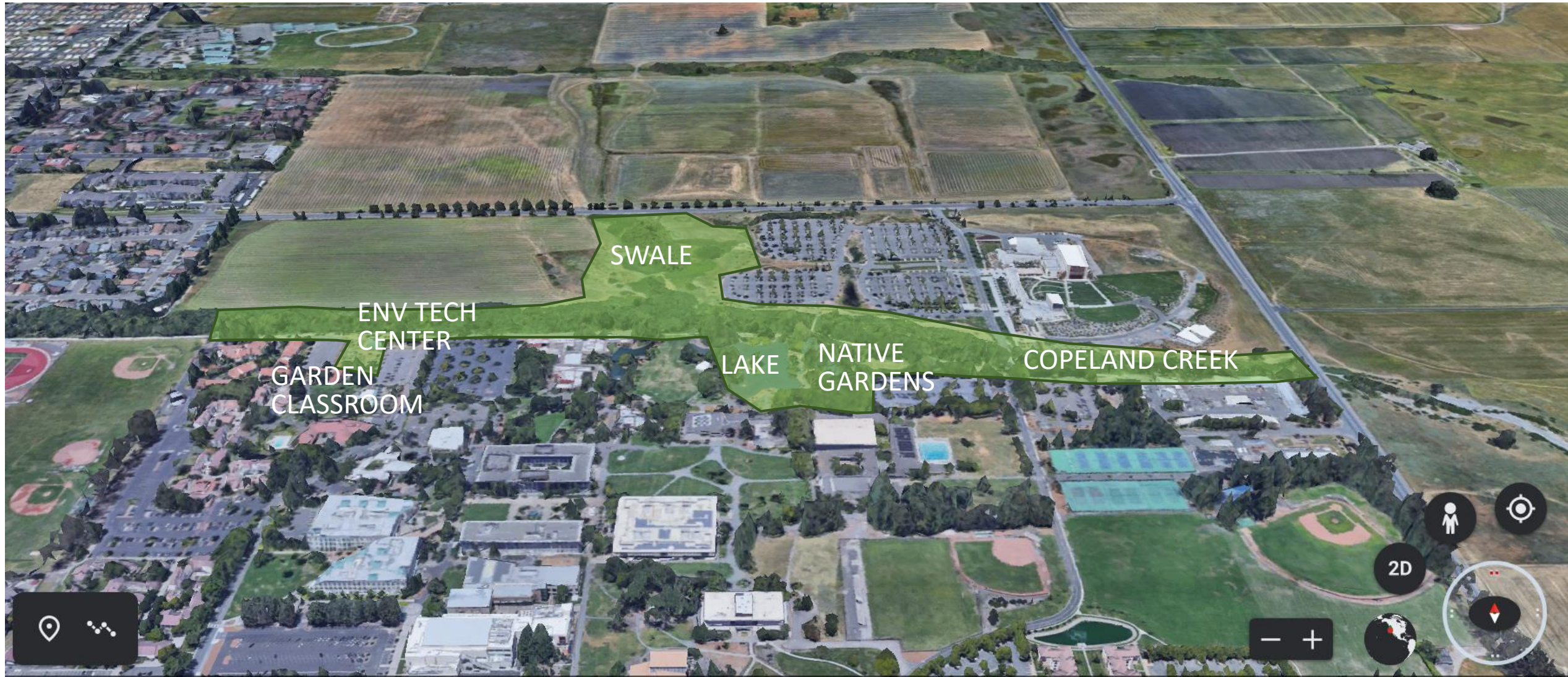


SWALE CONCEPT (SUMMER)



SWALE CONCEPT (SPRING)

# Sustainable SSU





# Sustainable SSU



(Putah Creek, UC Davis campus)

# Sustainable SSU

- Research & Education
- Recreation & Health
- Biodiversity
- Watersheds and Floods
- Carbon Sequestration

