

AMERICAN RIVER WATERSHED COMMON FEATURES, WATER RESOURCES DEVELOPMENT ACT OF 2016,

American River Erosion Update

Contract 1 (Site 2-1)

Contract 2 (Season 1, Site 2-3)

Contract 3A (Site 1-1)

Contract 3B (Site 3-1, 4-1, 4-2)

Contract 4A (Seg 1-17b)

Presented by William Polk
Sr. Project Manager
LAR Erosion

13DEC2022



US Army Corps
of Engineers®





AGENDA



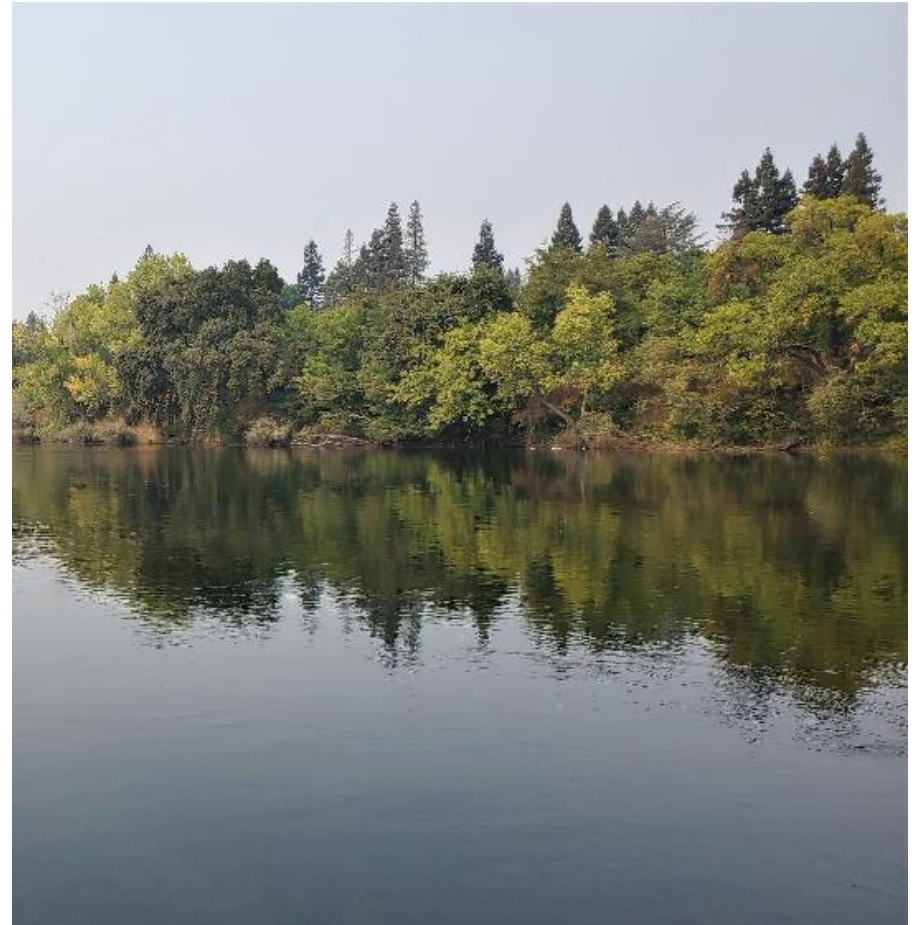
Project Partners

Looking Back

- Construction of C1 & C2S1

Looking Forward

- Contract C2S2
- Contract C3A
- Contract C4A





PROJECT PARTNERS

Federal Government



**US Army Corps
of Engineers®**

Local Government



State Government



Central Valley
Flood Protection
Board

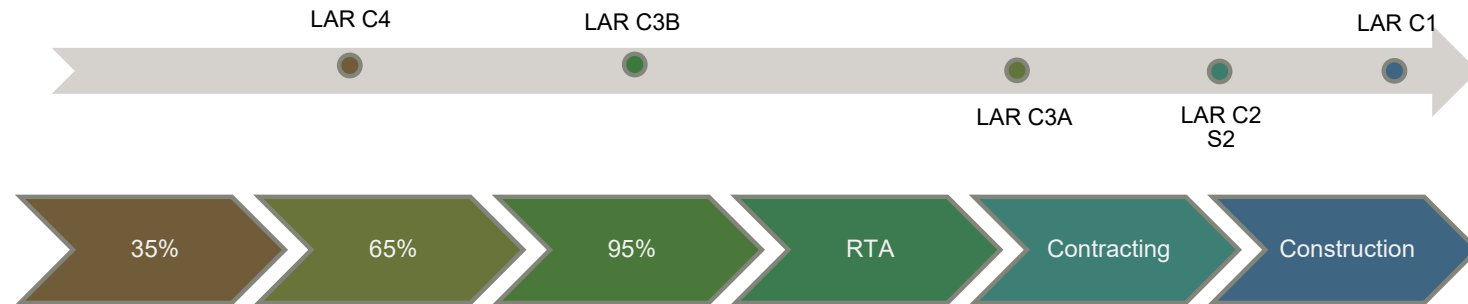


Department of
Water
Resources



AMERICAN RIVER EROSION STATUS OF DESIGNS

4



LOOKING BACK

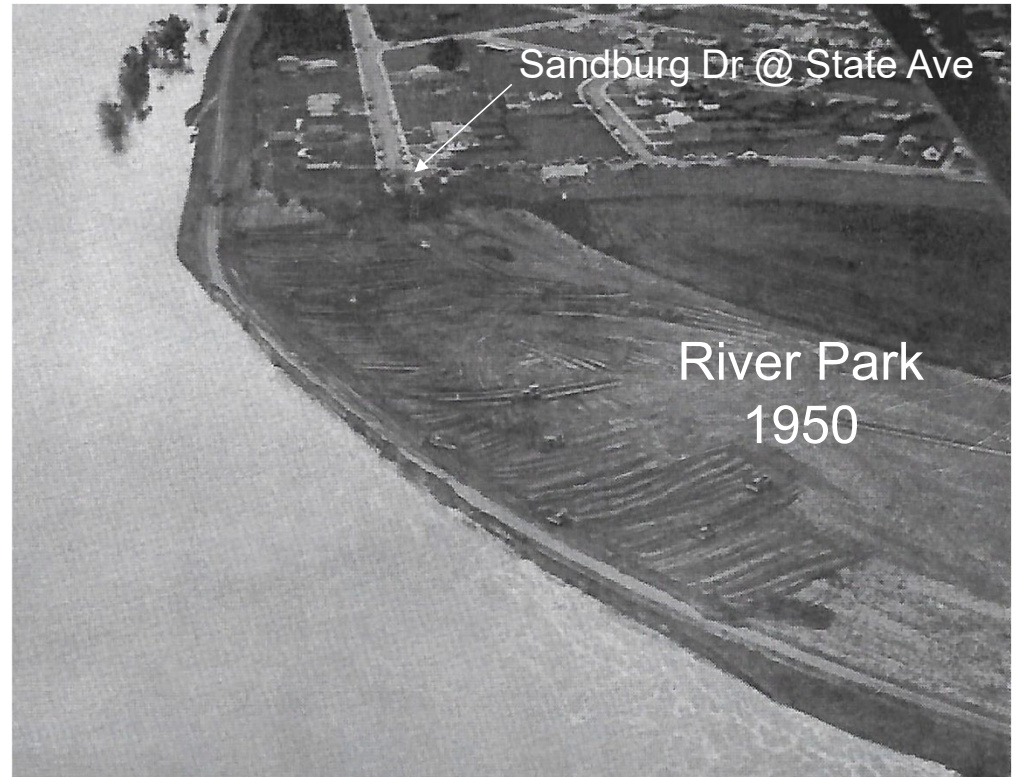
2022 CONSTRUCTION SEASON - C1 & C2S1



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EROSION PROTECTION - PROJECT NEED



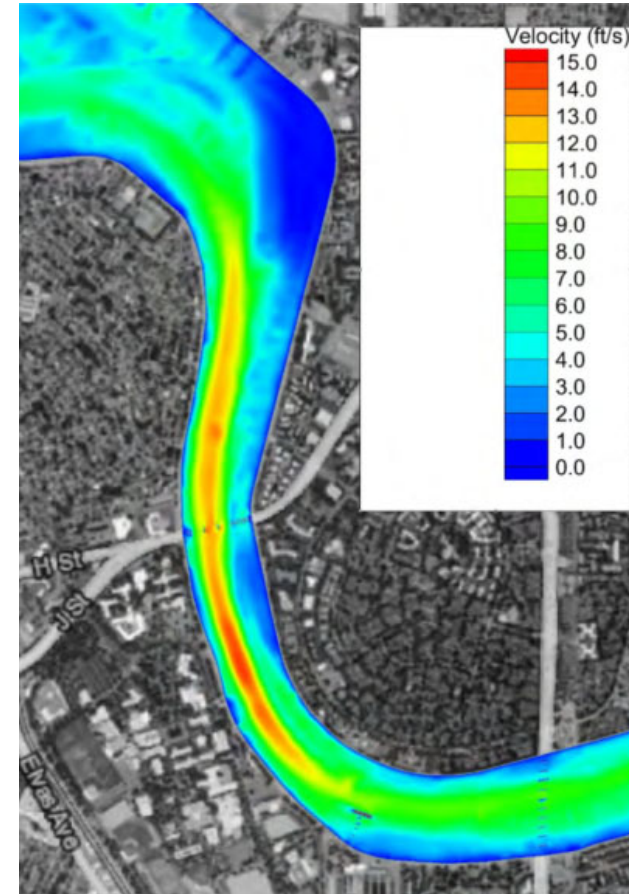
Flooding from levee failure threatens the safety of over 500,000 people in the Sacramento Region



EROSION PROTECTION - PROJECT NEED



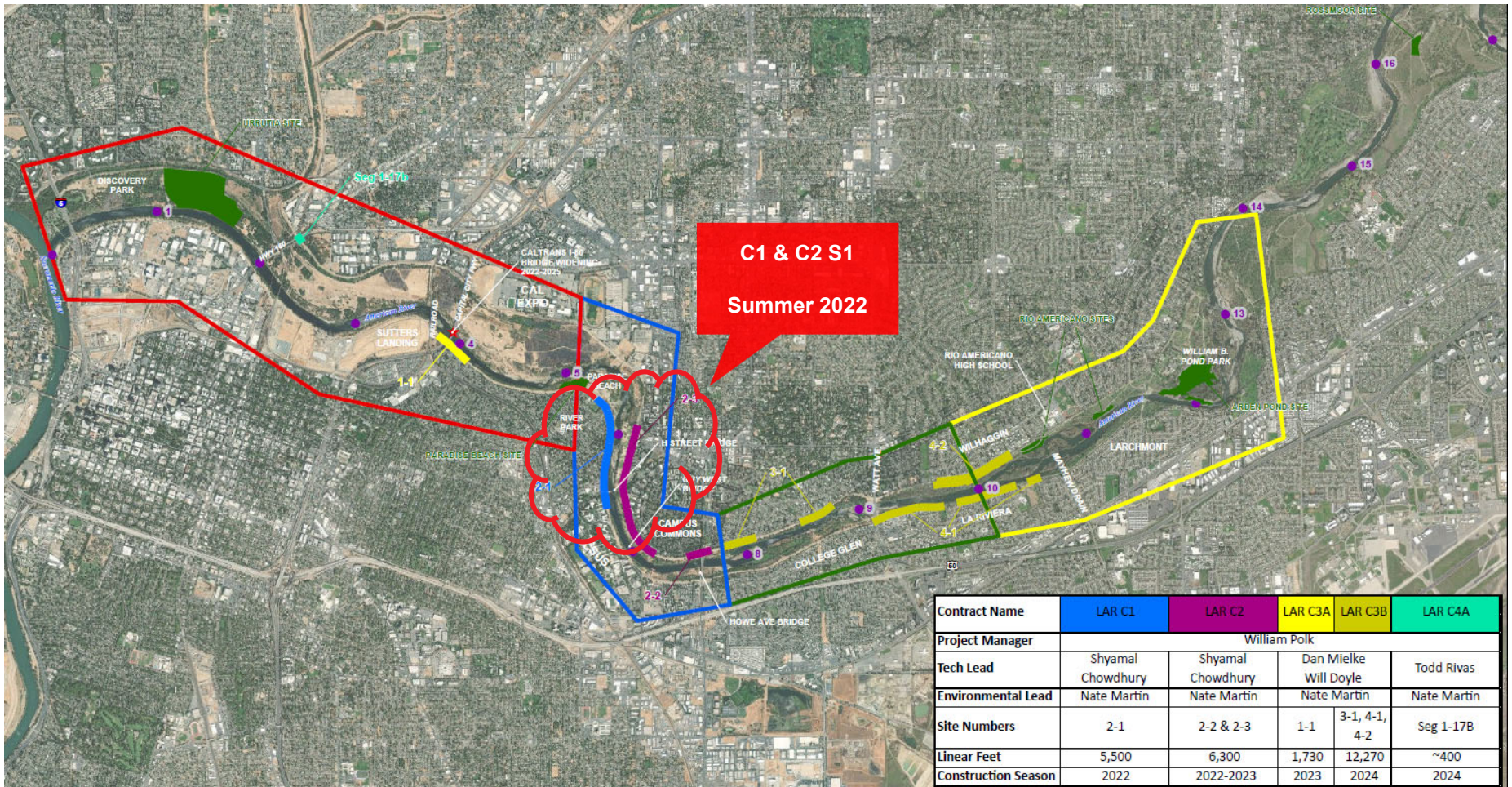
- Narrow levees lead to high flood flow velocities
- Critical high-risk area: Paradise Beach to Howe Ave (Site 2-1, Contract 1)
- **High velocity flood flows could lead to substantial levee erosion**
- System being upgraded to handle 160,000 cfs
- Authorized up to 11 miles of erosion protection measures to be constructed along Lower American River



Velocities at 160,000 cfs



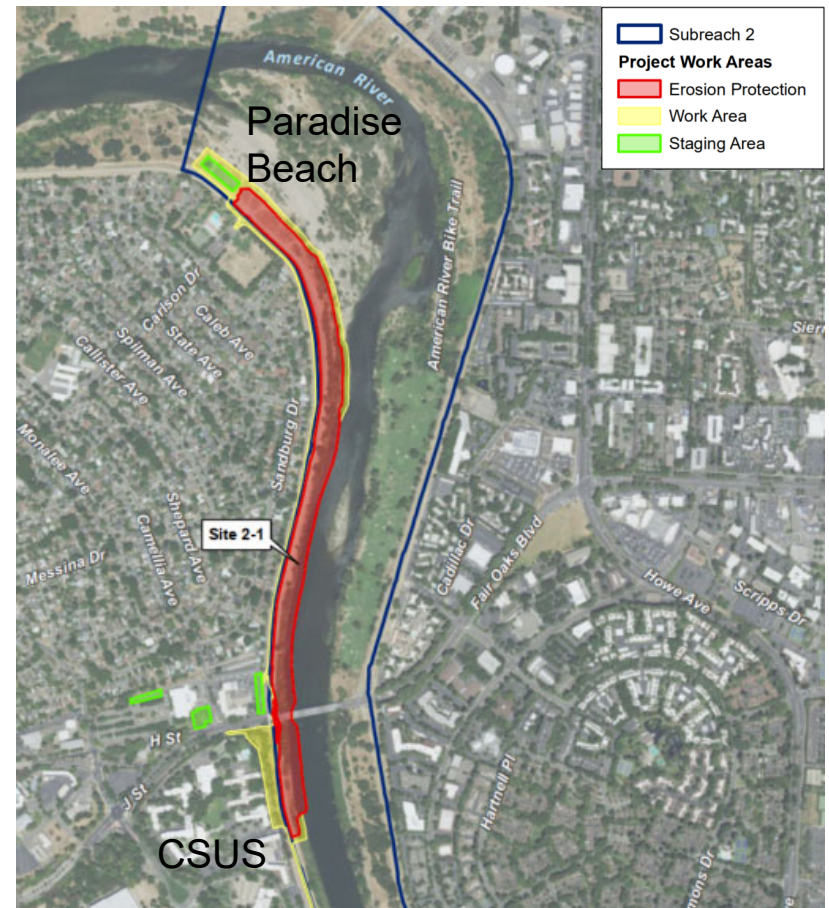
LAR EROSION - BANK PROTECTION SITES





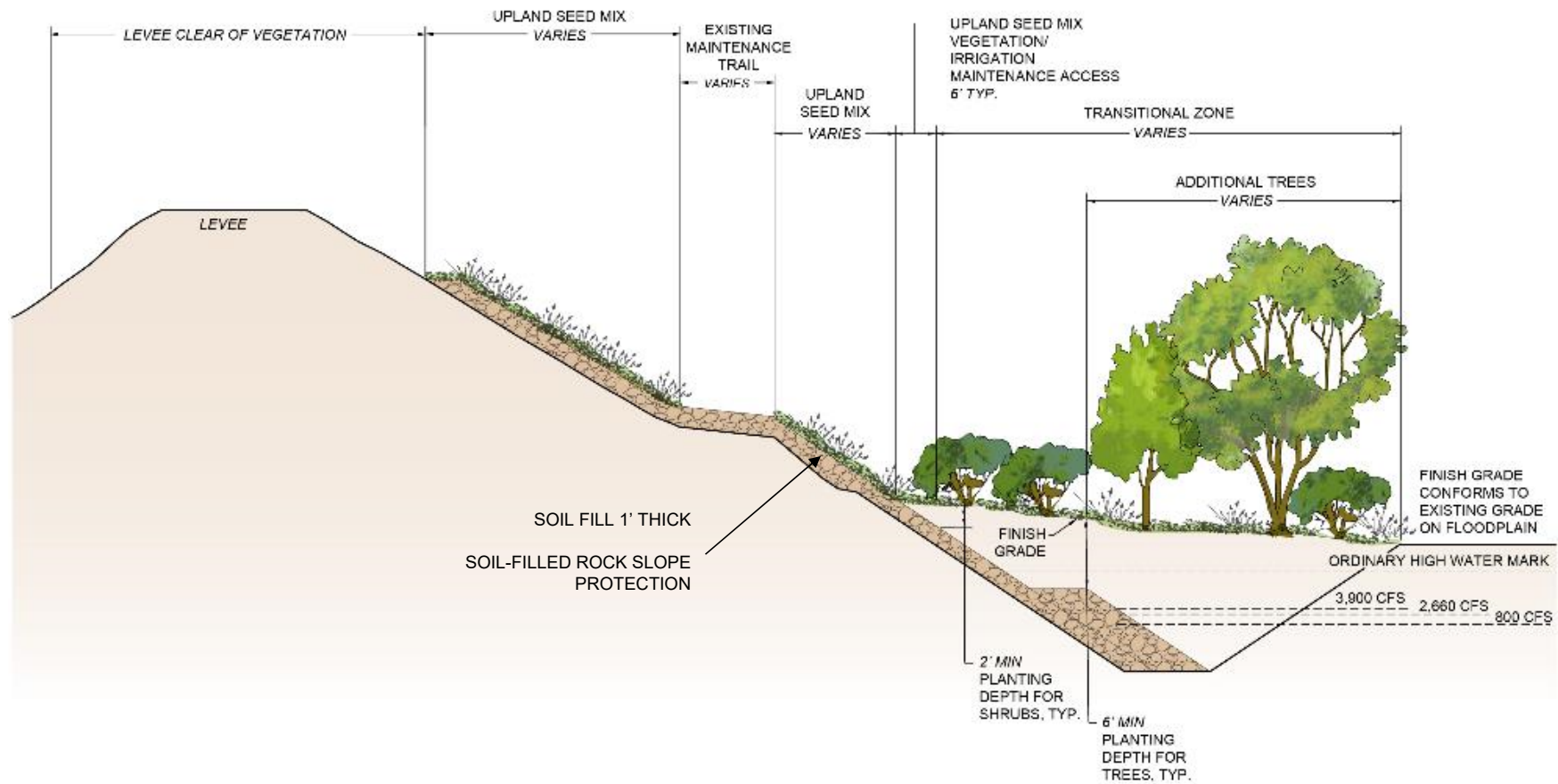
- Left bank of American River between CSUS and Glenn Hall Park
- Approximately 5,500 lineal feet of bank protection measures constructed
- Designs Combine Flood Protection and Environmental Stewardship

On-site mitigation integrated into Project Design



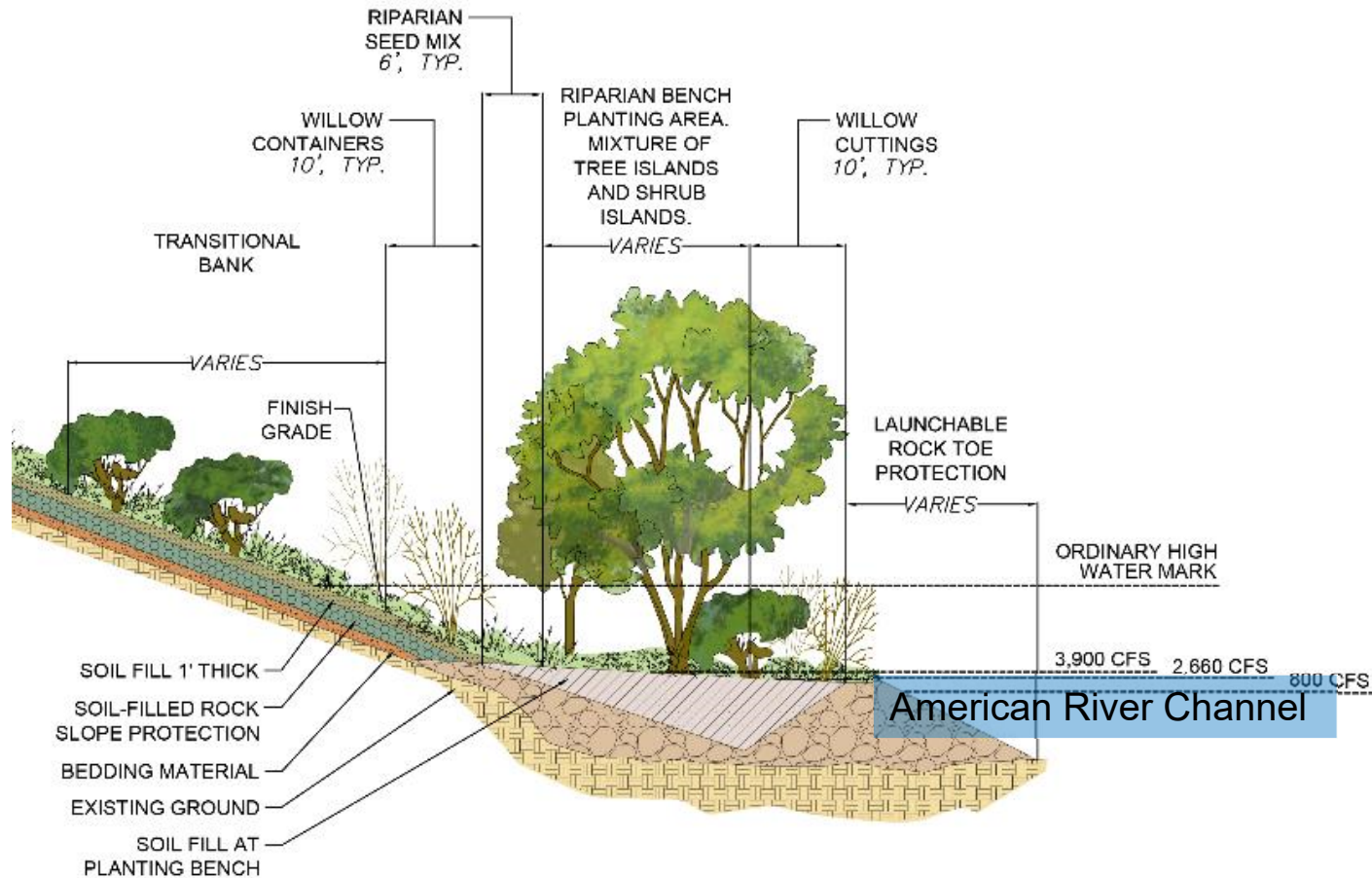


TYPICAL CROSS SECTION – PARADISE BEACH



Launchable Rock Trench and Soil-filled Rock Slope Protection

TYPICAL CROSS SECTION – UPSTREAM



Planting Bench and Soil-filled Rock Slope Protection (typical cross section)



CONTRACT 1 (SITE 2-1) PRE-CONSTRUCTION ACTIVITIES

12



Vegetation Clearing

- Clearing: Feb 22
- One elderberry cluster removed to Beach Stone Lakes





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

13



As of 13-Dec-22



CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

Mobilization & Site Prep: Apr – May 22

- Glenn Hall Park Access Point
 - Fencing & signage installed
 - Facilities & Parking remained open
 - Carlson Drive e-signage & school monitors
- Vibration monitoring baseline
- Pre-construction surveys complete for residences along Sandburg drive





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

15



Paradise Beach



- Excavation, toe rock and slope protection



CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

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- Soil Filled Rock Demonstration Section





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

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In-Water Work

- Excavation and Placement



Planting Bench Construction



CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

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CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES

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CONTRACT 1 (SITE 2-1) REMAINING CONSTRUCTION ACTIVITIES

20



December 2022

- Complete placement of Soil fill and topsoil
- Complete maintenance road
- Complete Erosion fabric installation and Seeding

January 2023

- Complete Seeding and willow poles
- Remove fencing and Demobilize

Spring 2023

- Greening (Re-Vegetation)





AMERICAN RIVER EROSION PROTECTION

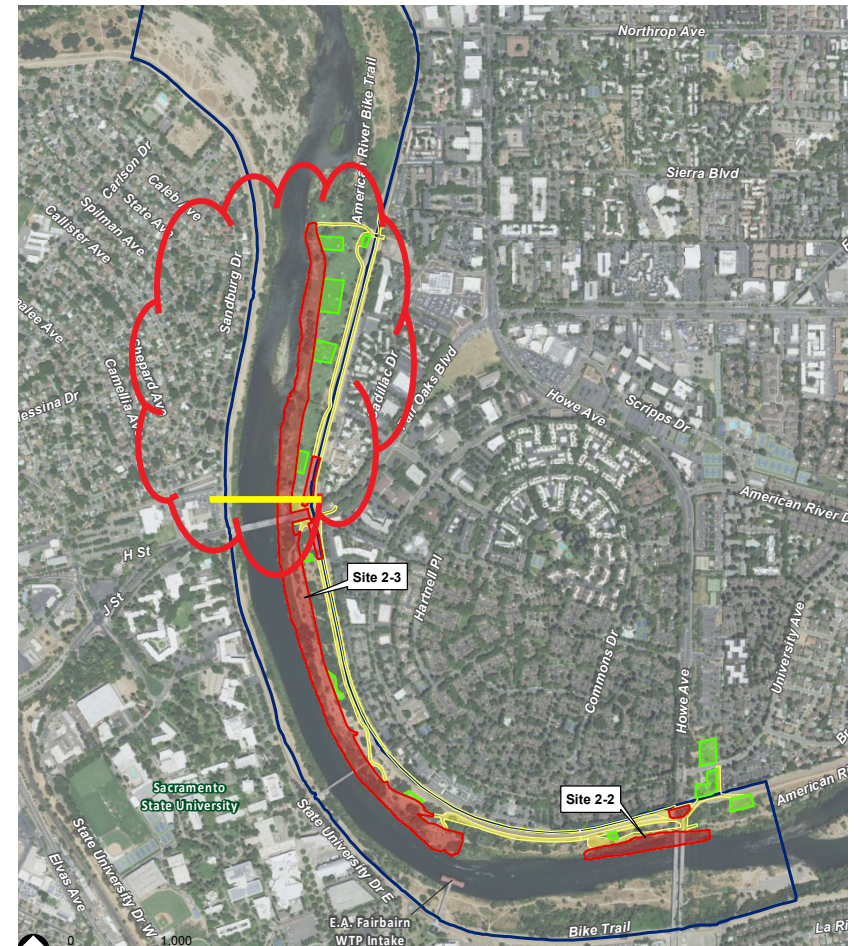
21



Contract 2 (Site 2-3, Season 1)

- Right bank of American River adjacent to the Campus Commons Golf Course
- Approximately 2,800 linear feet of bank protection measures constructed
- Site 2-3 Improvements include:
 - Launchable rock spurs
 - Buried rock tie-back
 - Plantings between spurs/tie-backs

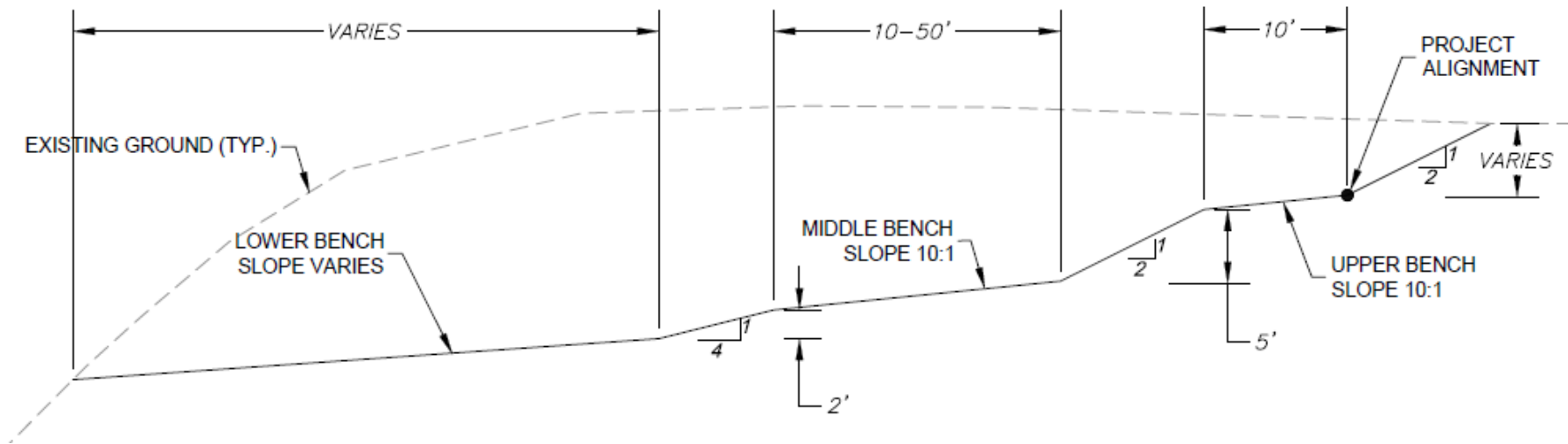
On-site mitigation integrated into Project Design



As of 13-Dec-22

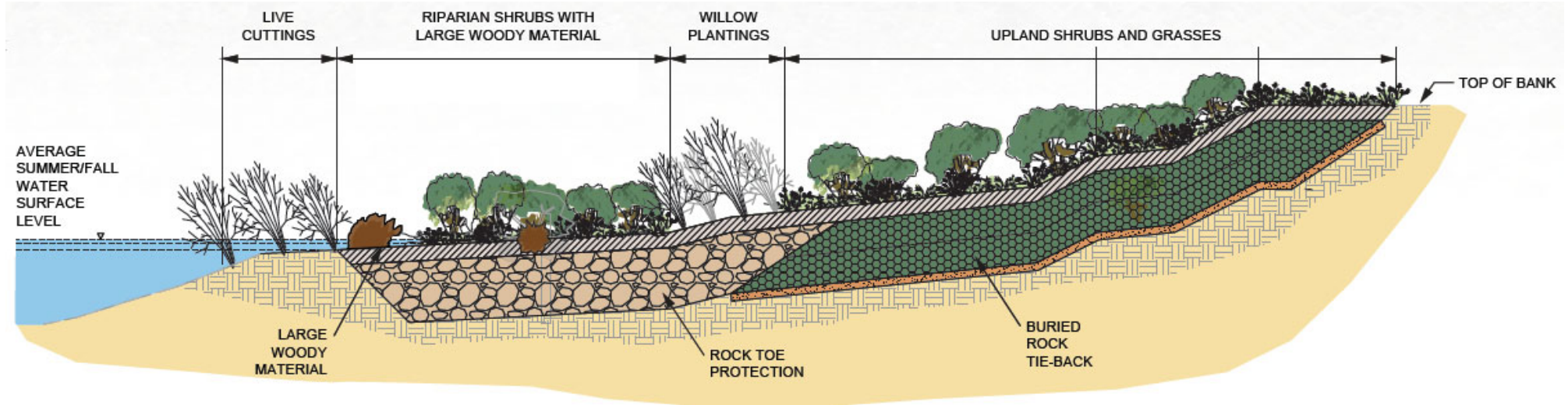


SITE 2-3, TYPICAL CROSS SECTION





SITE 2-3, TYPICAL CROSS SECTION





CONTRACT 2 (SITE 2-3, SEASON 1) PRE-CONSTRUCTION ACTIVITIES

24



Vegetation Clearing

- Clearing: Mar 22
- Elderberry removed to Rio Americana mitigation site





CONTRACT 2 (SITE 2-3, SEASON 1) CONSTRUCTION ACTIVITIES

25



Excavation of benches





CONTRACT 2 (SITE 2-3, SEASON 1) CONSTRUCTION ACTIVITIES

26



Launch Rock Spurs with
tie-backs

As of 13-Dec-22



CONTRACT 2 (SITE 2-3, SEASON 1) CONSTRUCTION ACTIVITIES

27



As of 13-Dec-22

VIDEO

2022 CONSTRUCTION SEASON LAR C1 & C2S1



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QUESTIONS



LOOKING FORWARD

2023 CONSTRUCTION SEASON – C2S2 & C3A



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SCHEDULE CONTRACT 2 (SITES 2-2 & 2-3)

Season 1 (site 2-3 partial)

- ~~Veg clearing, Jan 22 – Mar 22~~
- ~~Construction, Summer 2022~~
- Greening, Spring 2023

Season 2 (site 2-2, 2-3 remainder)

- Veg clearing, Dec 22 – Feb 23
- Construction, Summer 2023
- Greening, Spring 2024

LAR EROSION - BANK PROTECTION SITES





AMERICAN RIVER EROSION PROTECTION

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C3-A (Site 1-1)

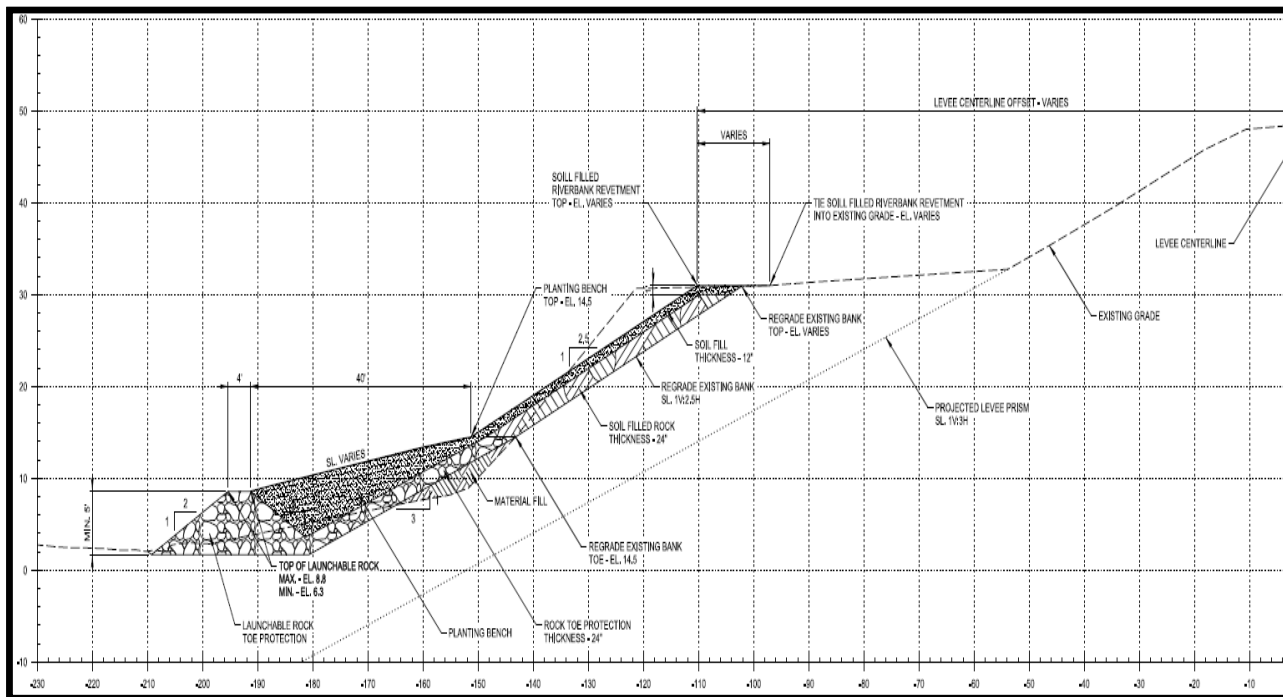
- Left Bank @ I-80 Bridge
- Approximately 2,400 linear feet of bank protection measures will be constructed

On-site mitigation integrated into Project Design



C3-A (SITE 1-1)

34



- Launchable rock toe with a planting bench
- Slope protection
- Currently in Pre-Solicitation Activities



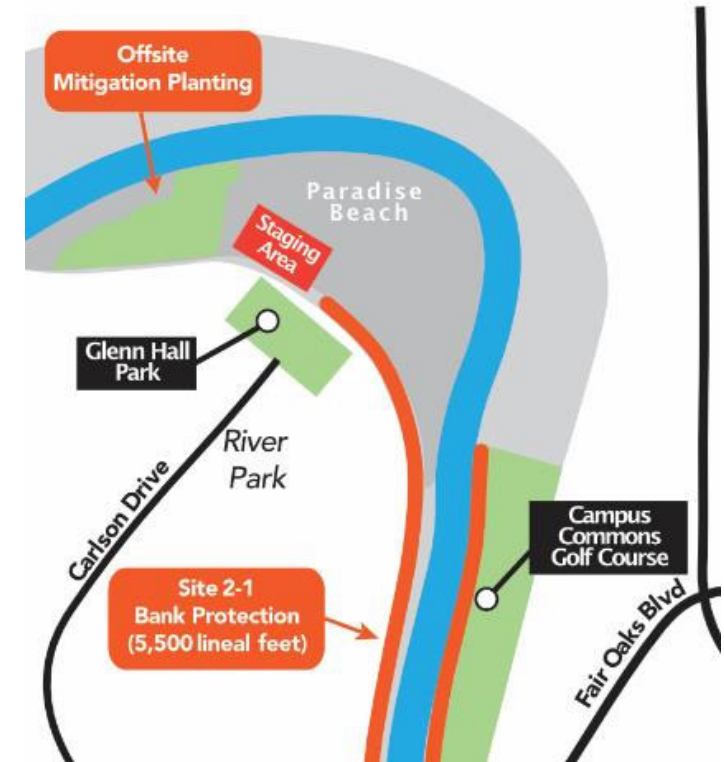
C3A PRE-CONSTRUCTION ACTIVITIES

35



Vegetation Clearing

- Paradise Bend mitigation site
- Elderberry transplant
- Vegetation clearing at site 1-1





C3A PRE-CONSTRUCTION ACTIVITIES

36

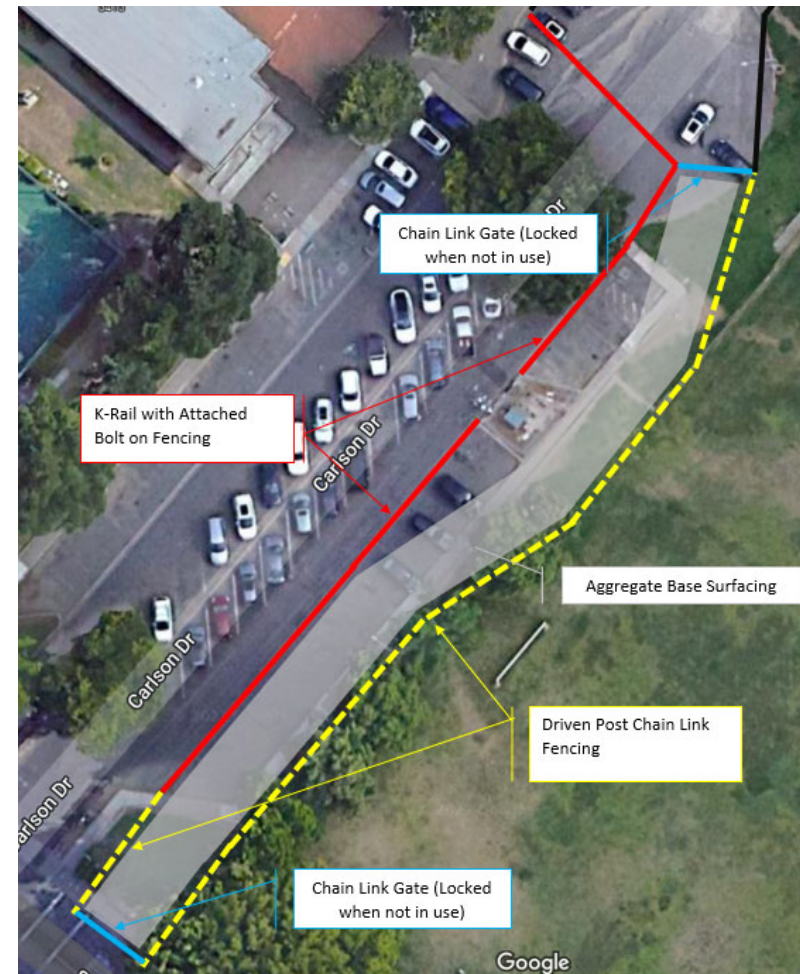


Glenn Hall Park

- Access point retained through 2023 Season
- Park facilities will remain open
- Paradise beach will remain open (except mitigation site)

Multi-Project Coordination

- USACE Bank Protection
- Caltrans I-80 deck Rehabilitation
- City bike trail construction





QUESTIONS



LOOKING FORWARD

CONTRACT 3B & 4A

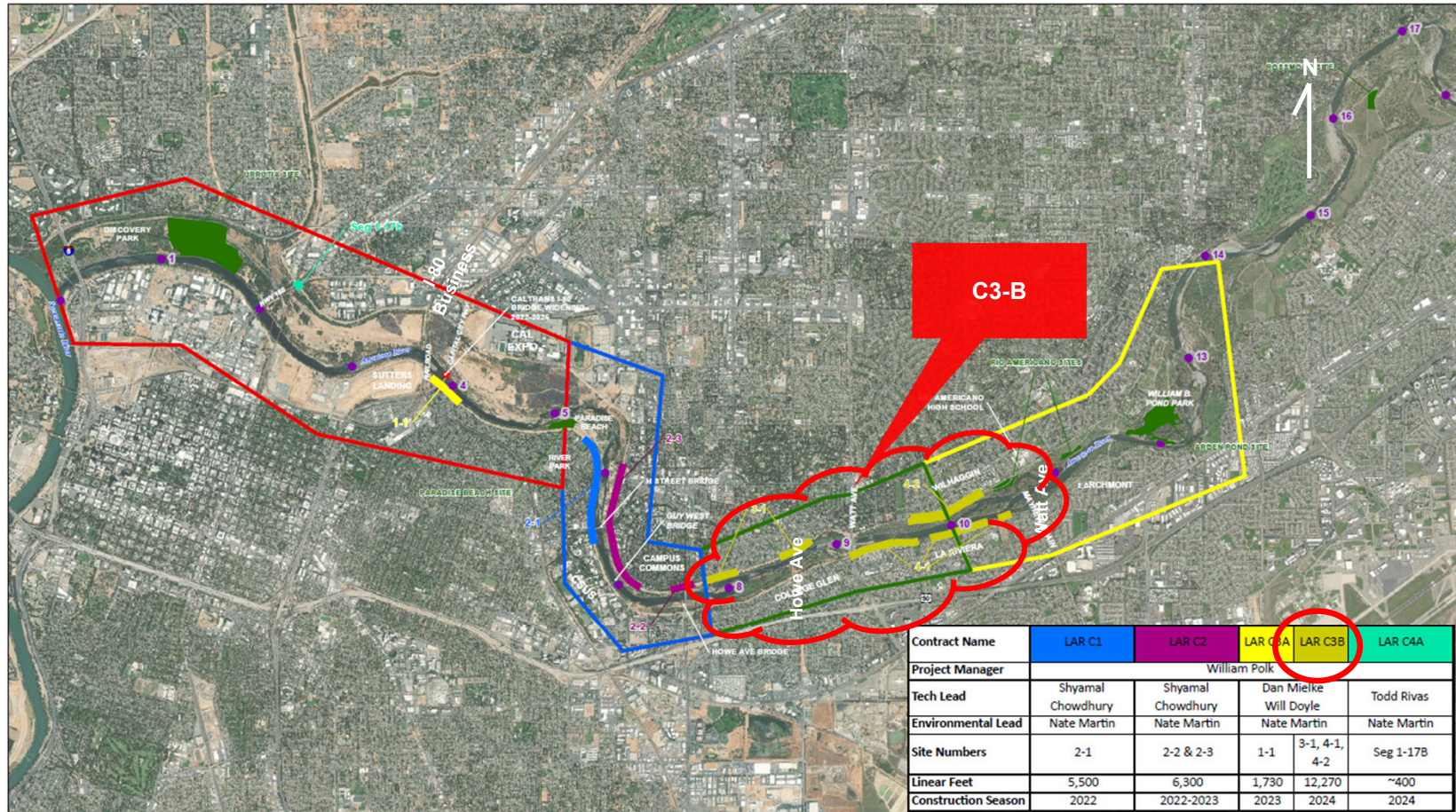


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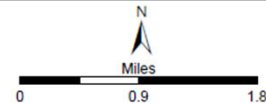
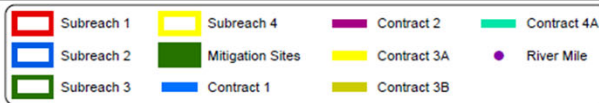


C3B STATUS UPDATE

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Contract Name	LAR C1	LAR C2	LAR C3A	LAR C3B	LAR C4A
Project Manager	William Polk				
Tech Lead	Shyamal Chowdhury	Shyamal Chowdhury	Dan Mielke	Todd Rivas	
Environmental Lead	Nate Martin	Nate Martin	Nate Martin	Nate Martin	
Site Numbers	2-1	2-2 & 2-3	1-1	3-1, 4-1, 4-2	Seg 1-17B
Linear Feet	5,500	6,300	1,730	12,270	~400
Construction Season	2022	2022-2023	2023	2024	2024

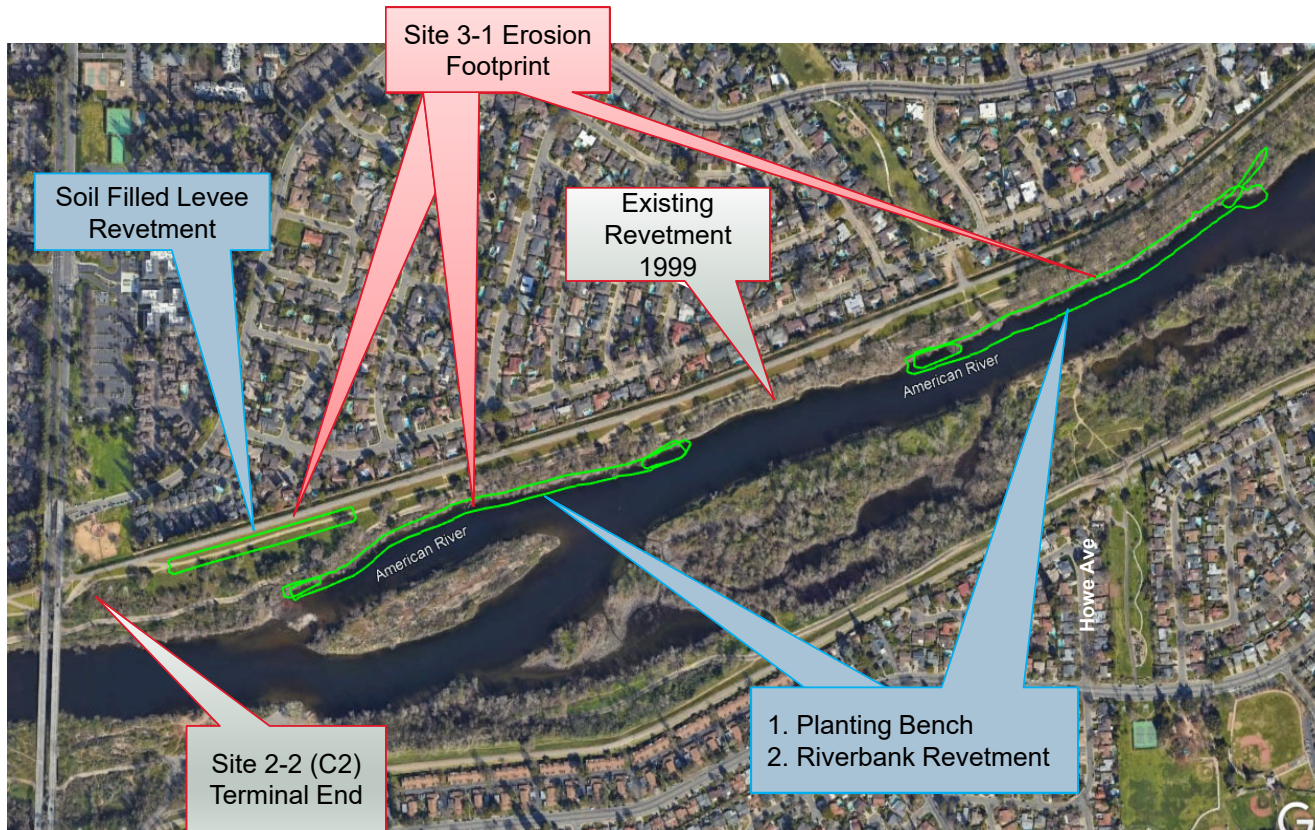


LAR EXECUTIVE SUMMARY SHEET
LOWER AMERICAN RIVER
WRDA 2016



C3B STATUS UPDATE

40



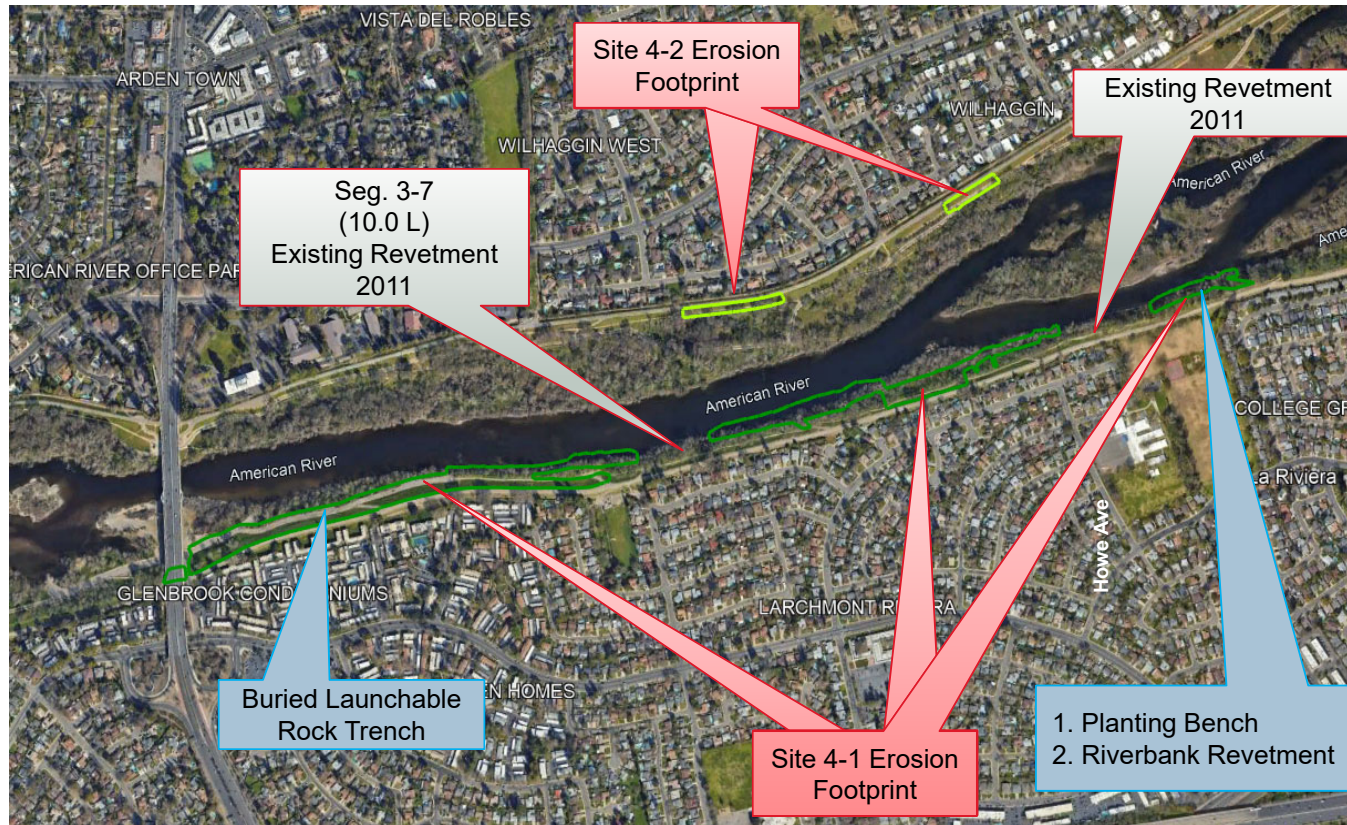
C3B

- Left and right bank from Howe Ave upstream past Watt Ave.
- Approximately 14000 ft lineal feet of bank protection
- Launchable rock with planting benches
- Soiled Filled Bank revetment
- Soiled Filled Levee revetment
- Balance impacts to fish, riparian, upland woodlands and recreation



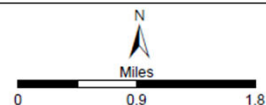
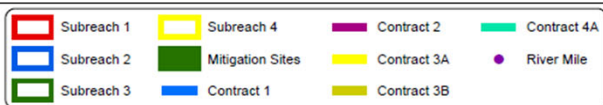
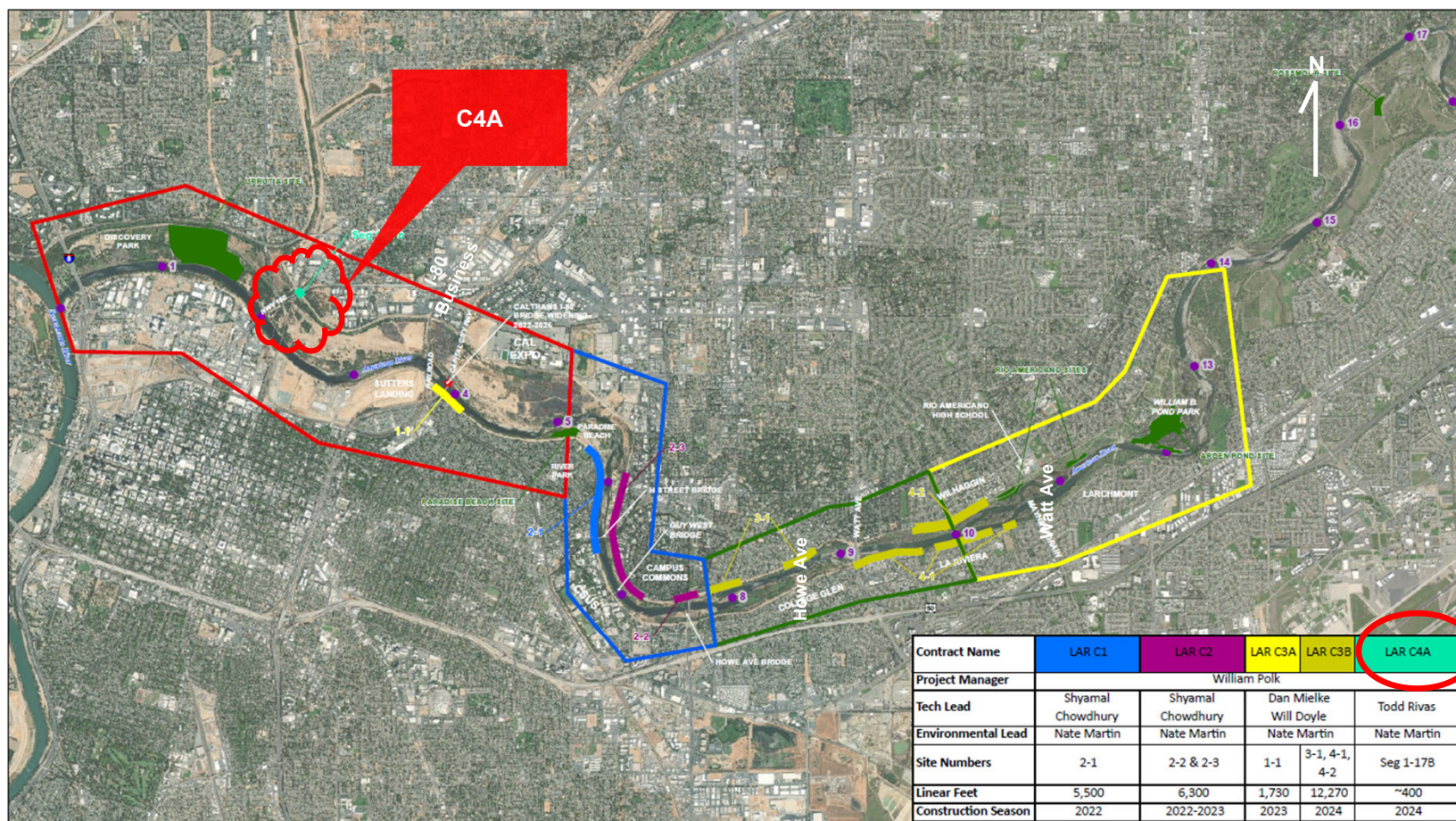
C3B STATUS UPDATE

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C3B

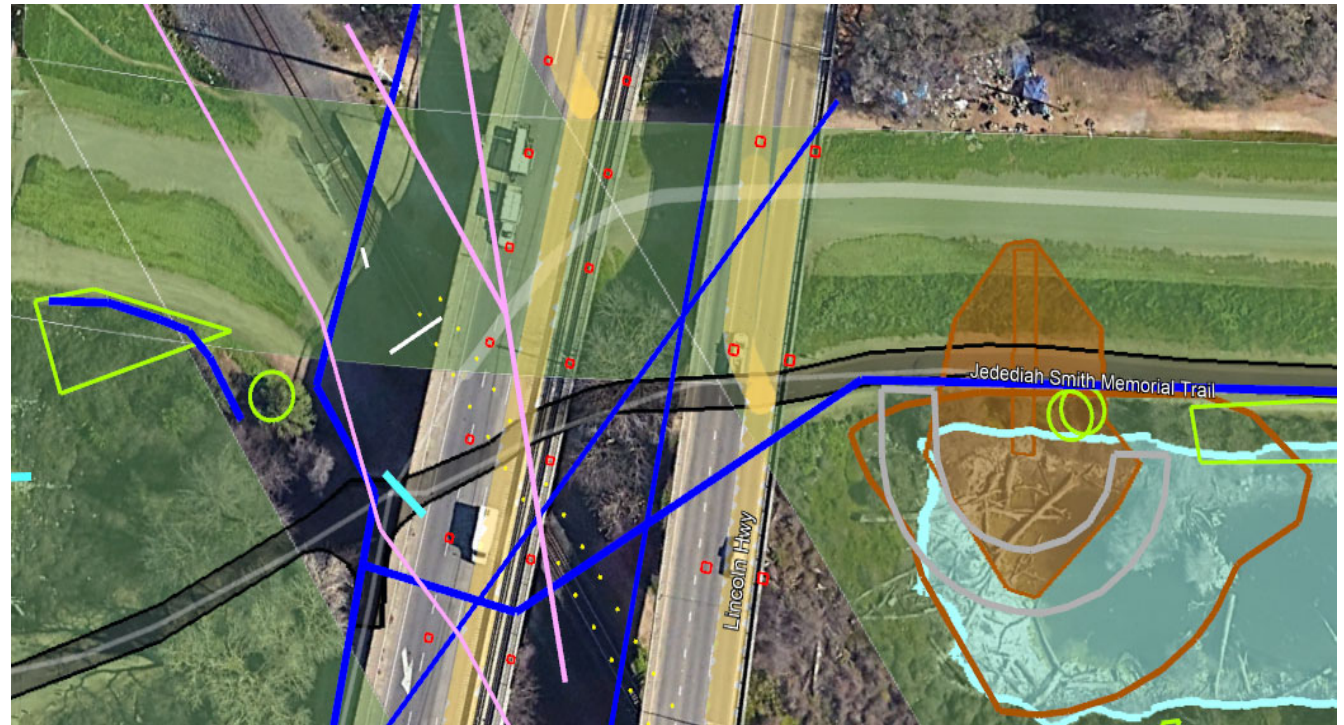
- Onsite Greening
- Mitigation at Rossmore West
- Advancing design to 95%
 - Adjusting design to accommodate potential 2 season construction
- Construction
 - Season 1 – Summer 2025
 - Season 2 – Summer 2026



LAR EXECUTIVE SUMMARY SHEET
LOWER AMERICAN RIVER
WRDA 2016

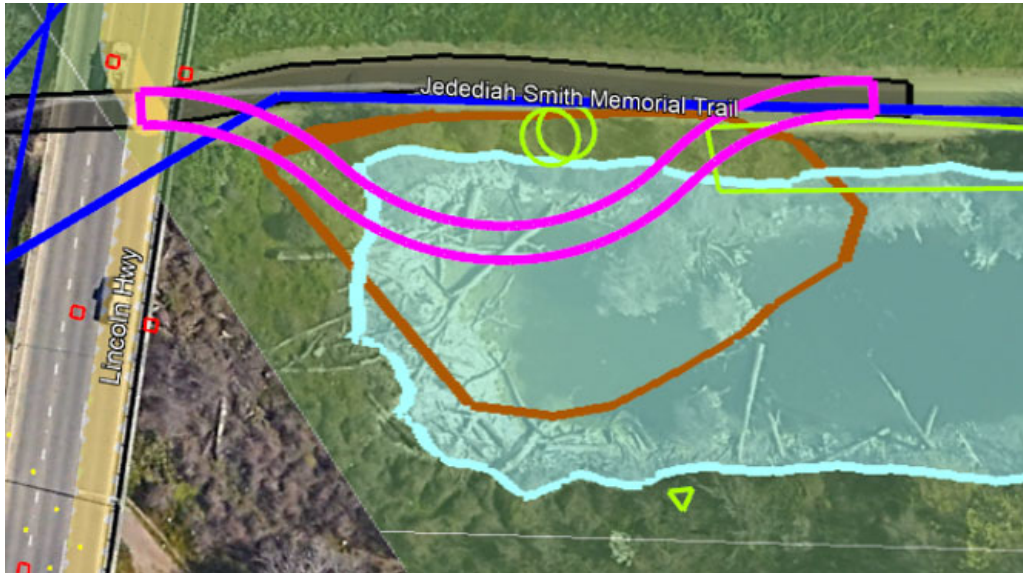


- Right bank at the Highway 160 bridge
- 400 linear feet
- Complex site with highway bridge piers, RR bridge, & multiple utilities
- Current concept – Berm to reduce velocities against levee beneath and around bridges



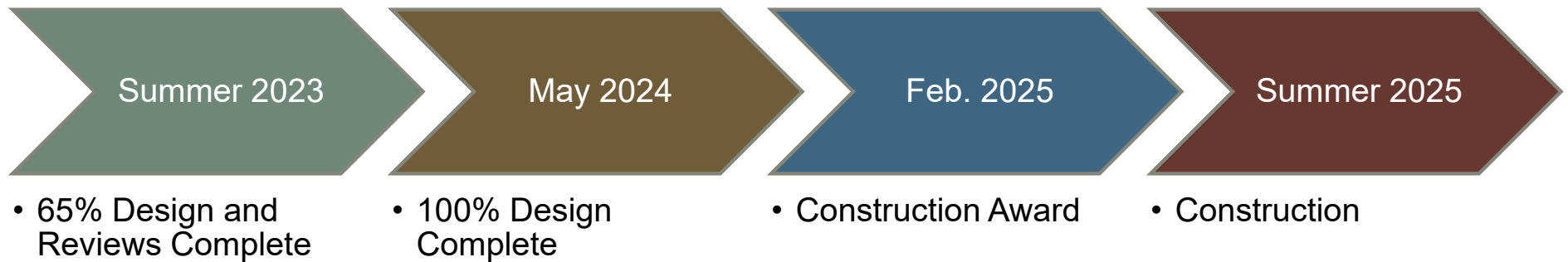


C4A STATUS UPDATE – BIKE PATHS





ARCF LAR 4A SCHEDULE





QUESTIONS





HOW TO STAY INFORMED



Project Overview

American River Levees

Sacramento River Levees

Sacramento Weir

Subscribe for Construction
& Traffic email updates



Reducing flood risk in Sacramento

Greater Sacramento, California, is often considered to be the most at-risk region in America for catastrophic flooding, relying on an aging system of levees, weirs and bypasses and Folsom Dam to reduce its flood risk. But that system, just like a chain, is only as strong as its weakest link. Together, the U.S. Army Corps of Engineers, California's Central Valley Flood Protection Board, California Department of Water Resources, and the Sacramento Area Flood Control Agency have made tremendous progress in reducing the flood risk, but more work remains. Through the Bipartisan Budget Act, the Corps has received full upfront funding to modernize Sacramento's aging flood infrastructure. This allows us to more efficiently implement nearly \$1.8 billion in upgrades to Sacramento's flood risk management system. The authorized work includes up to: 13 miles of seepage cutoff walls, 21 miles of bank protection, 5 miles of levee stabilization, 5 miles of levee raises and widening the Sacramento Weir and bypass.

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