

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

6DEC2022



US Army Corps
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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®**

State Government



Central Valley
Flood Protection
Board



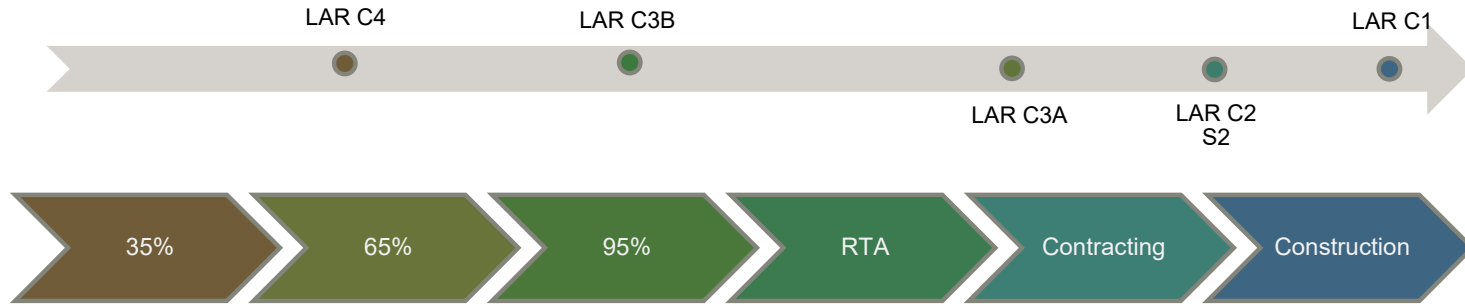
Department of
Water
Resources

Local Government





AMERICAN RIVER EROSION STATUS OF DESIGNS



LOOKING BACK

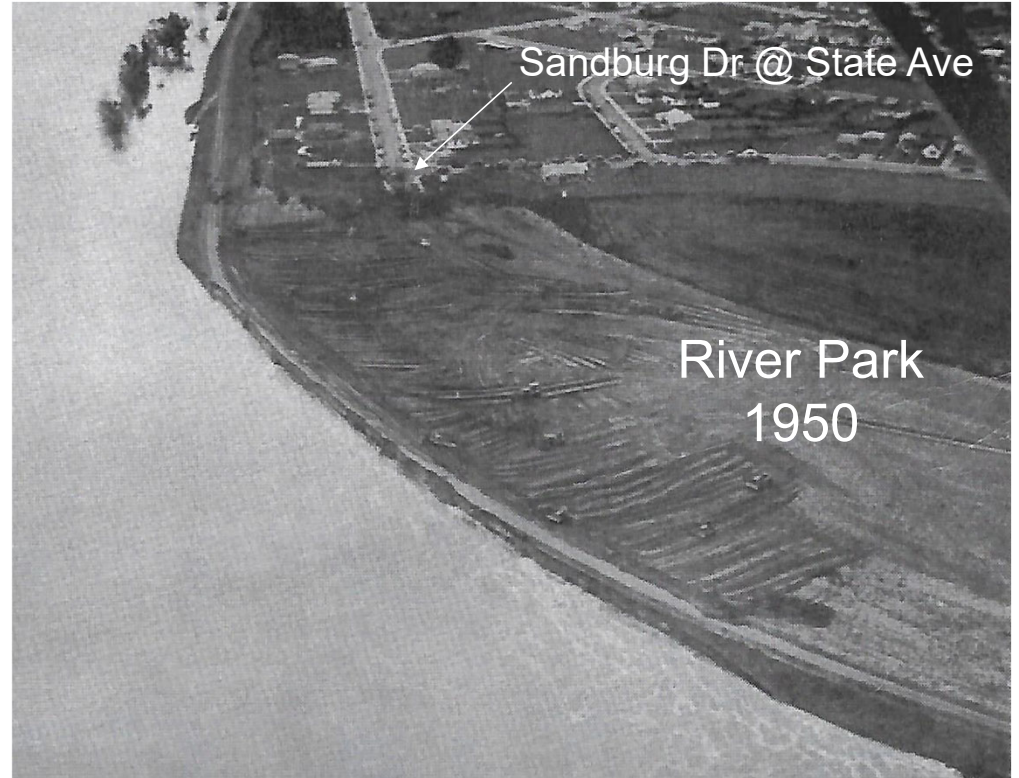
2022 CONSTRUCTION SEASON - C1 & C2S1



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EROSION PROTECTION - PROJECT NEED



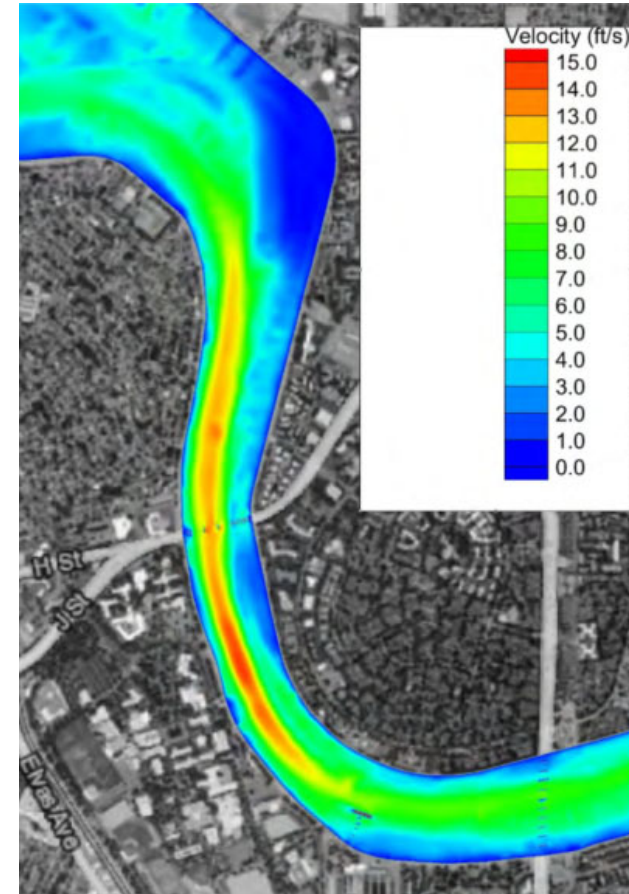
Flooding from levee failure threatens the safety of over 500,000 people in the Sacramento Region



EROSION PROTECTION - PROJECT NEED



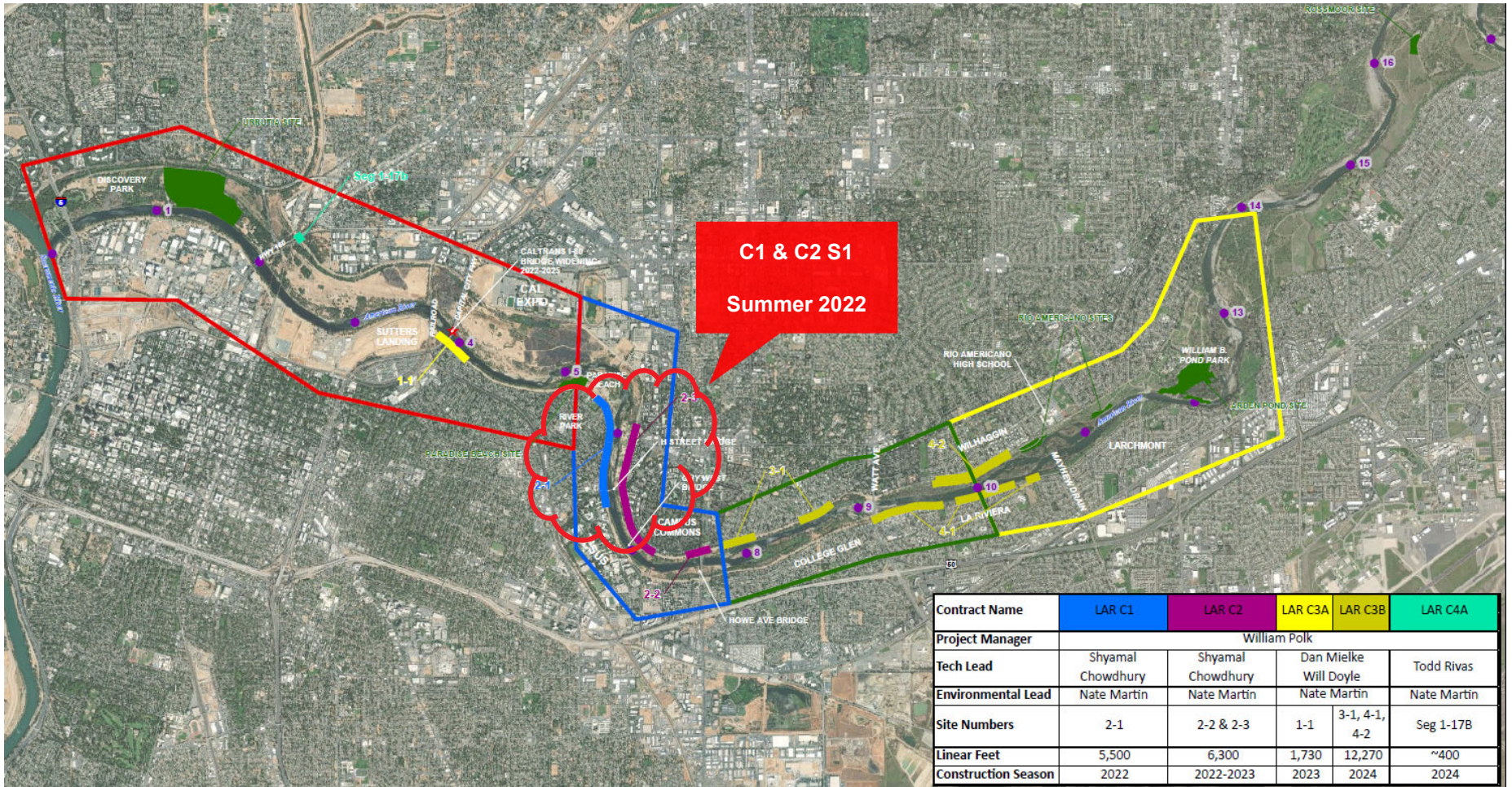
- Narrow levees lead to high flood flow velocities
- Critical high-risk area: Paradise Beach to Howe Ave (Site 2-1, Contract 1)
- **High velocity flood flows could lead to substantial levee erosion**
- System being upgraded to handle 160,000 cfs
- Authorized up to 11 miles of erosion protection measures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



Velocities at 160,000 cfs



LAR EROSION - BANK PROTECTION SITES



Contract Name	LAR C1	LAR C2	LAR C3A	LAR C3B	LAR C4A
Project Manager	William Polk				
Tech Lead	Shyamal Chowdhury	Shyamal Chowdhury	Dan Mielke Will Doyle	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



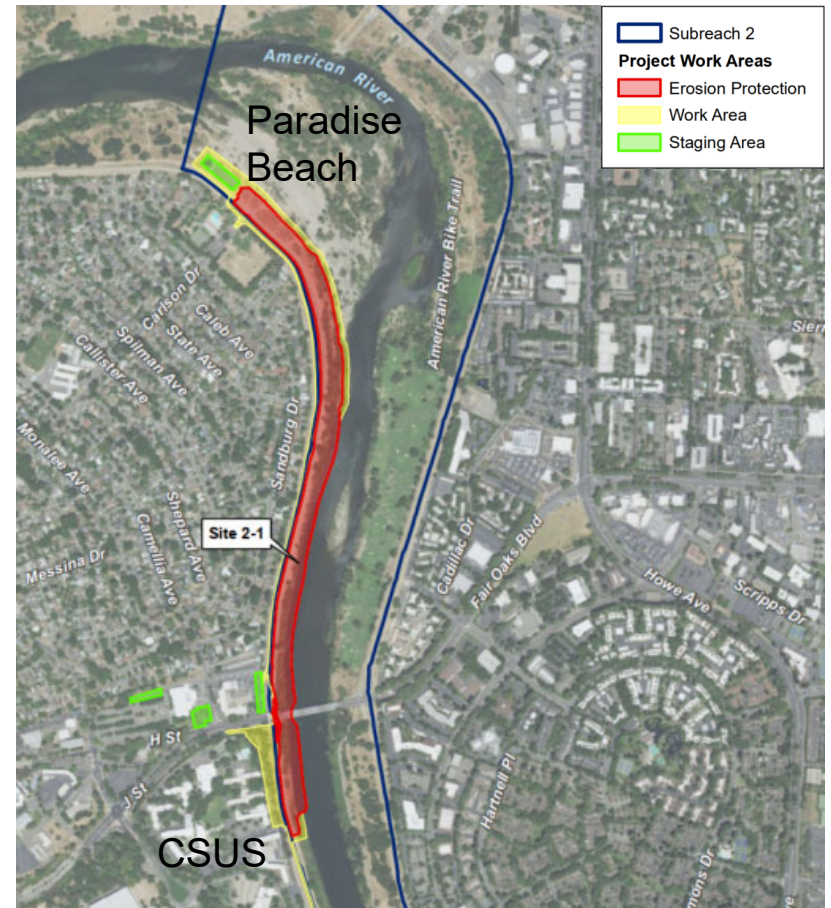
AMERICAN RIVER EROSION PROTECTION



Contract 1, Site 2-1

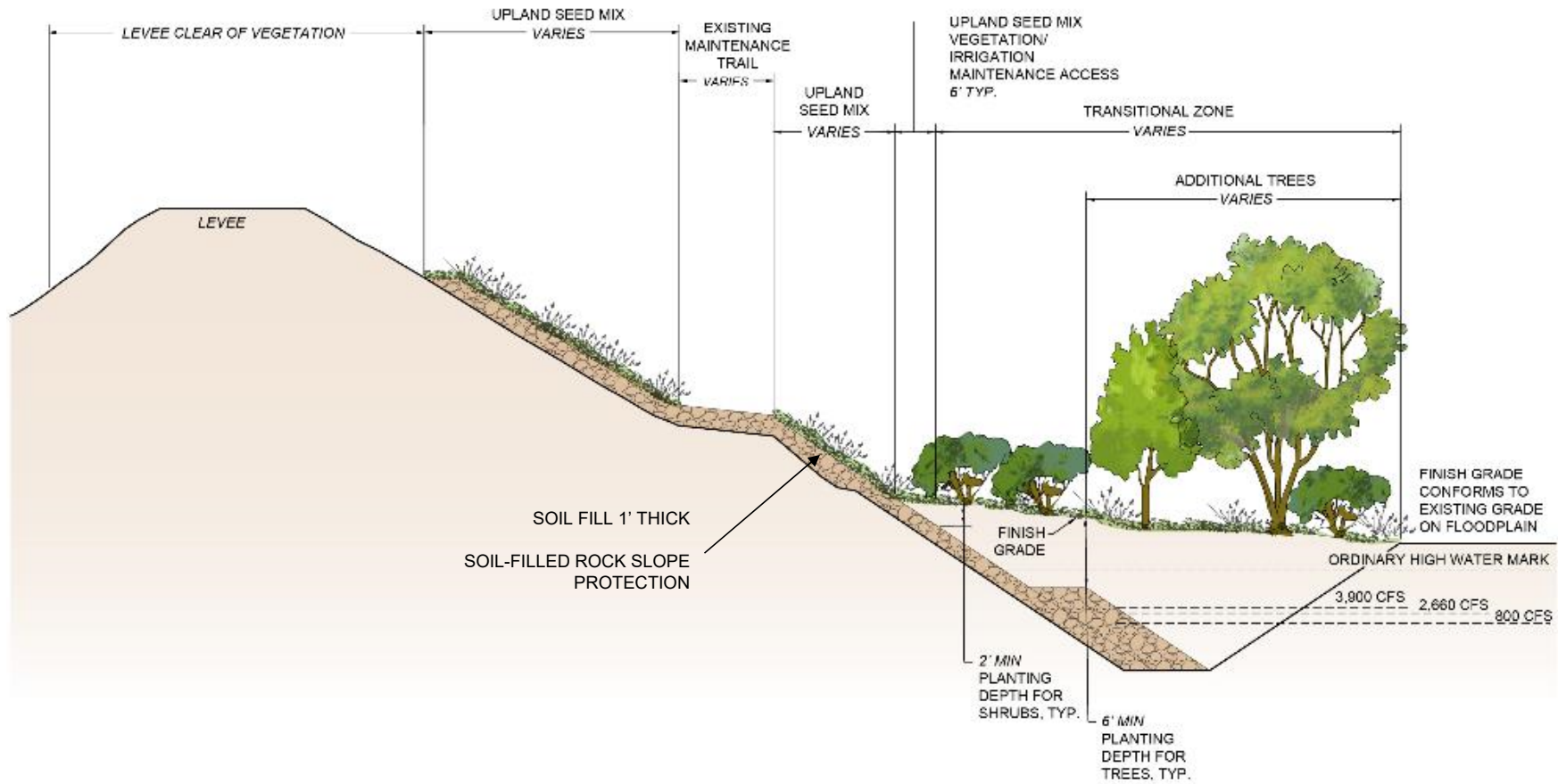
- Left bank of American River between CSUS and Glenn Hall Park
- Approximately 5,500 lineal feet of bank protection measures constructed
- Designs Combine Flood Protection and Environmental Stewardship

On-site mitigation integrated into Project Design





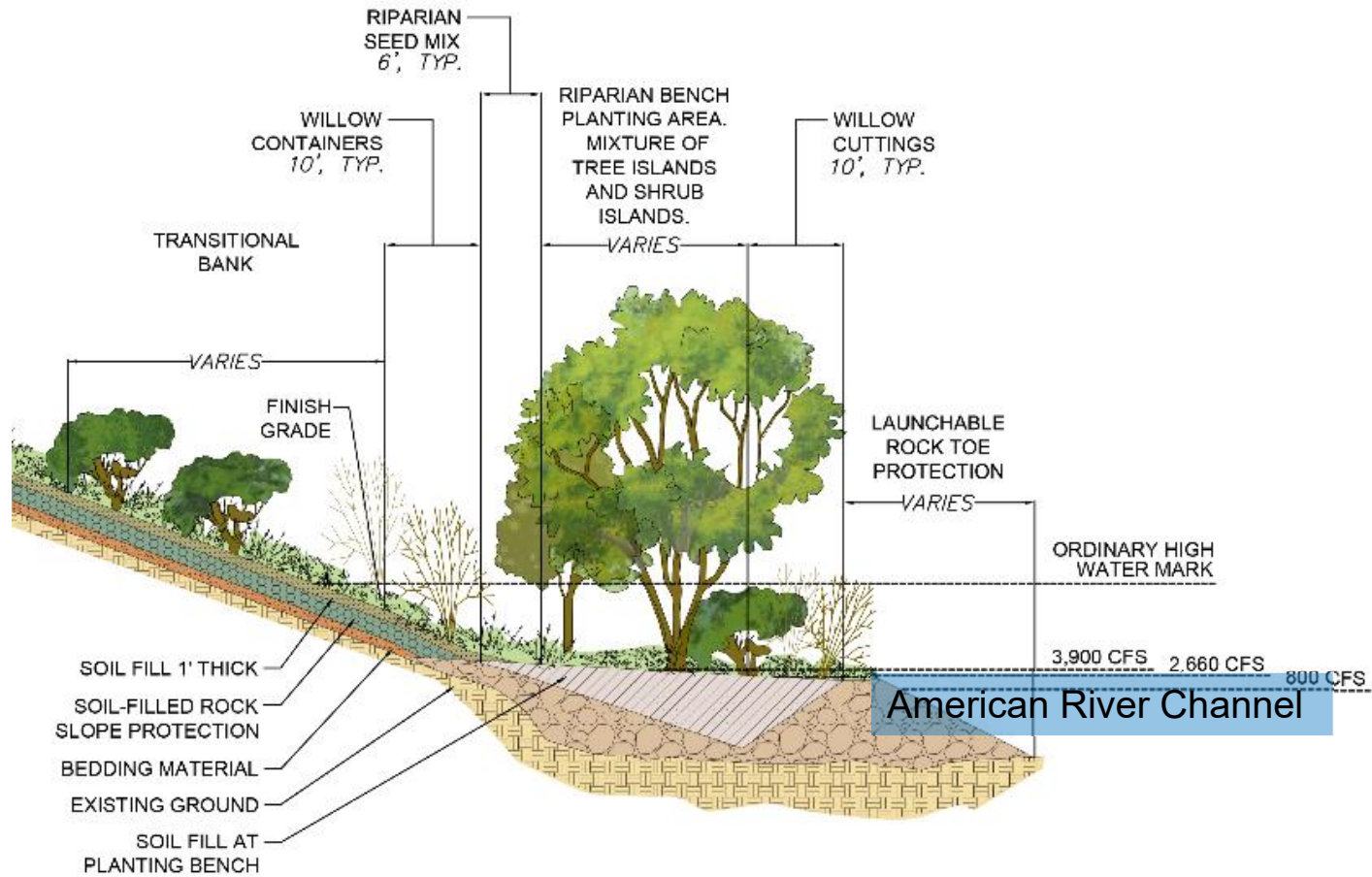
TYPICAL CROSS SECTION – PARADISE BEACH



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



Vegetation Clearing

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





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES





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



Paradise Beach



- Excavation, toe rock and slope protection



CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES



- Soil Filled Rock Demonstration Section





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES



In-Water Work

- Excavation and Placement



Planting Bench Construction



CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES





CONTRACT 1 (SITE 2-1) CONSTRUCTION ACTIVITIES





CONTRACT 1 (SITE 2-1) REMAINING CONSTRUCTION ACTIVITIES



December 2022

- Complete placement of Soil fill and topsoil
- Complete maintenance road,
- Erosion fabric
- Seeding and willow poles

January 2023

- Complete placement of Soil fill and topsoil
- Complete Seeding and willow poles
- Demobilize, remove fencing, etc...

Spring 2023

- Greening (Re-Vegetation)





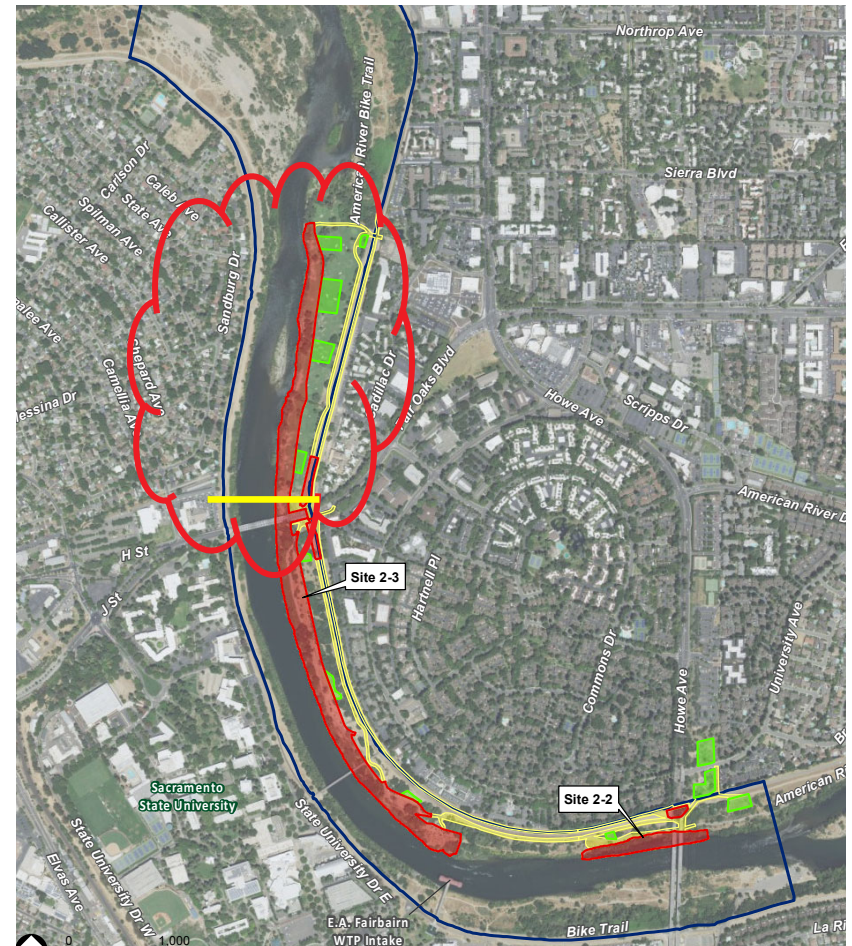
AMERICAN RIVER EROSION PROTECTION



Contract 2 (Site 2-3, Season 1)

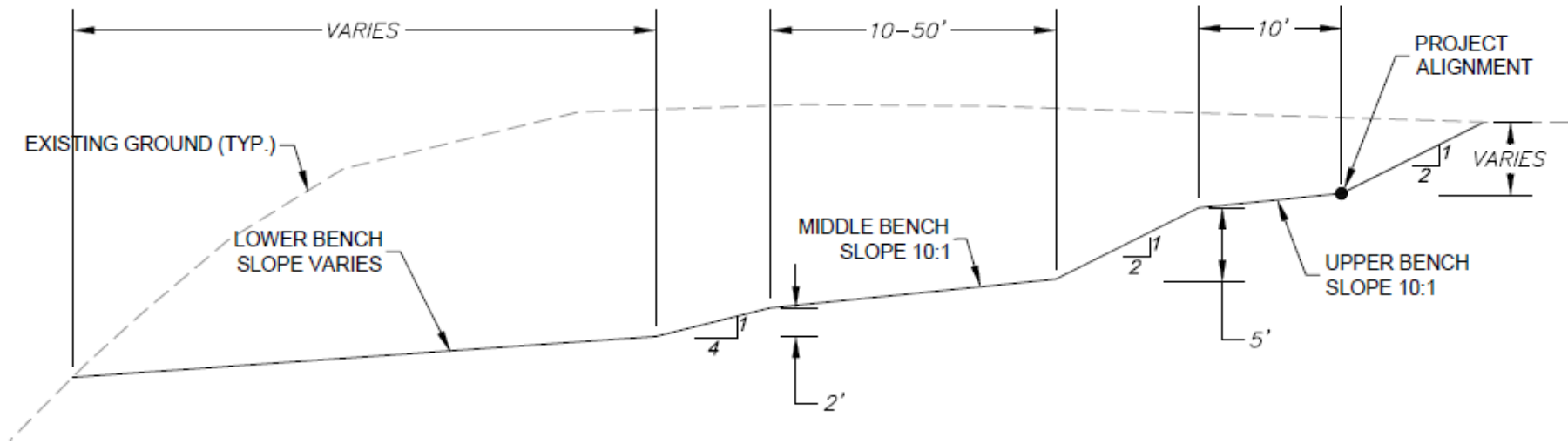
- Right bank of American River adjacent to the Campus Commons Golf Course
- Approximately 2,800 linear feet of bank protection measures constructed
- Site 2-3 Improvements include:
 - Launchable rock spurs
 - Buried rock tie-back
 - Plantings between spurs/tie-backs

On-site mitigation integrated into Project Design



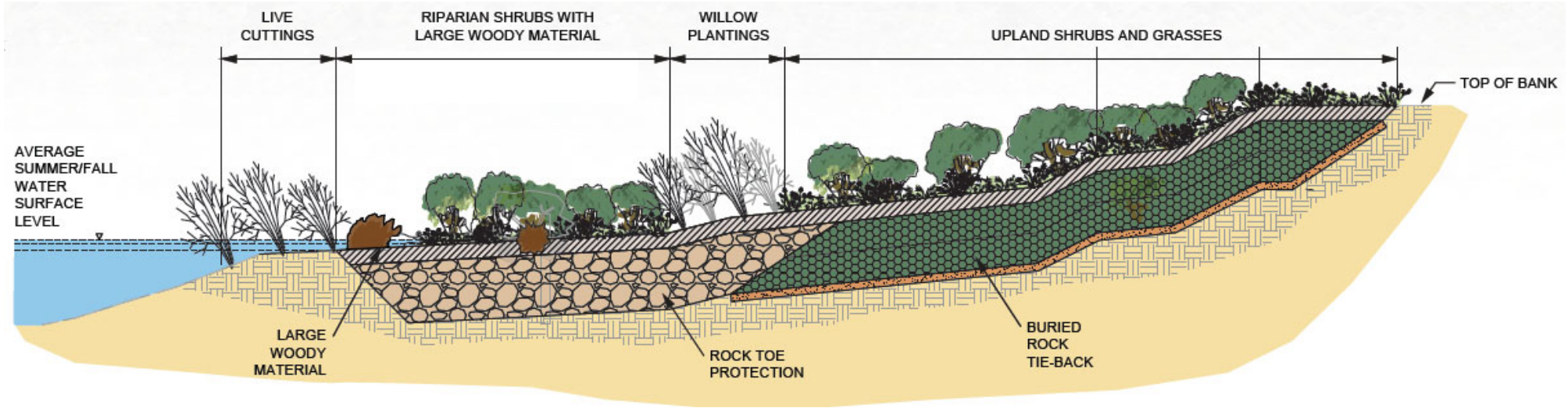


SITE 2-3, TYPICAL CROSS SECTION





SITE 2-3, TYPICAL CROSS SECTION





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



Vegetation Clearing

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





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



Excavation of benches





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



Launch Rock Spurs with
tie-backs



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



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)

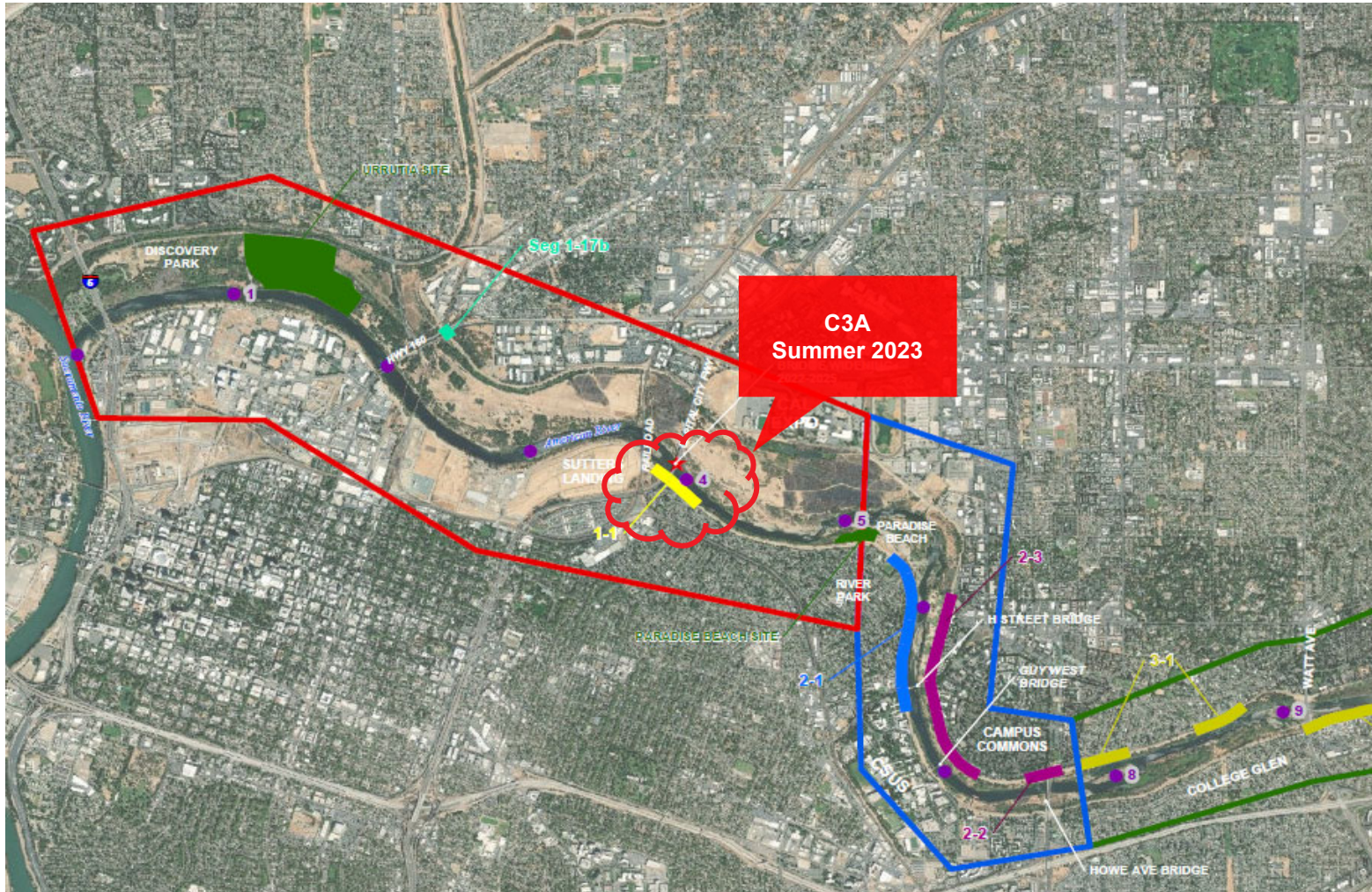
- ~~Veg clearing, Jan 22 – Mar 22~~
- ~~Construction, Summer 2022~~
- Greening, Spring 2023

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



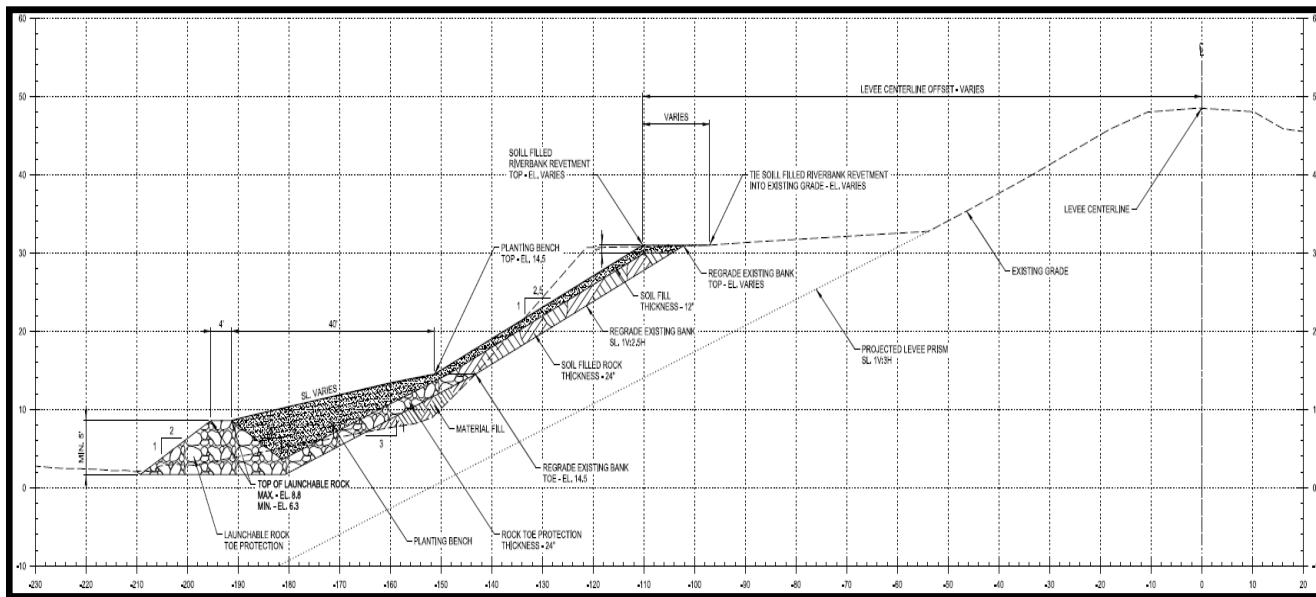
C3-A (Site 1-1)

- 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)



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

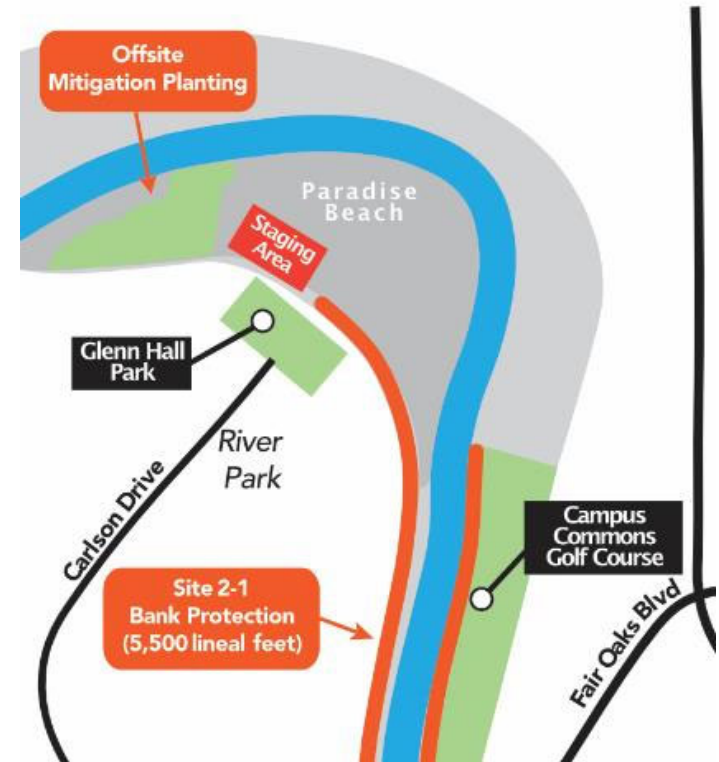


C3A PRE-CONSTRUCTION ACTIVITIES



Vegetation Clearing

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





C3A PRE-CONSTRUCTION ACTIVITIES

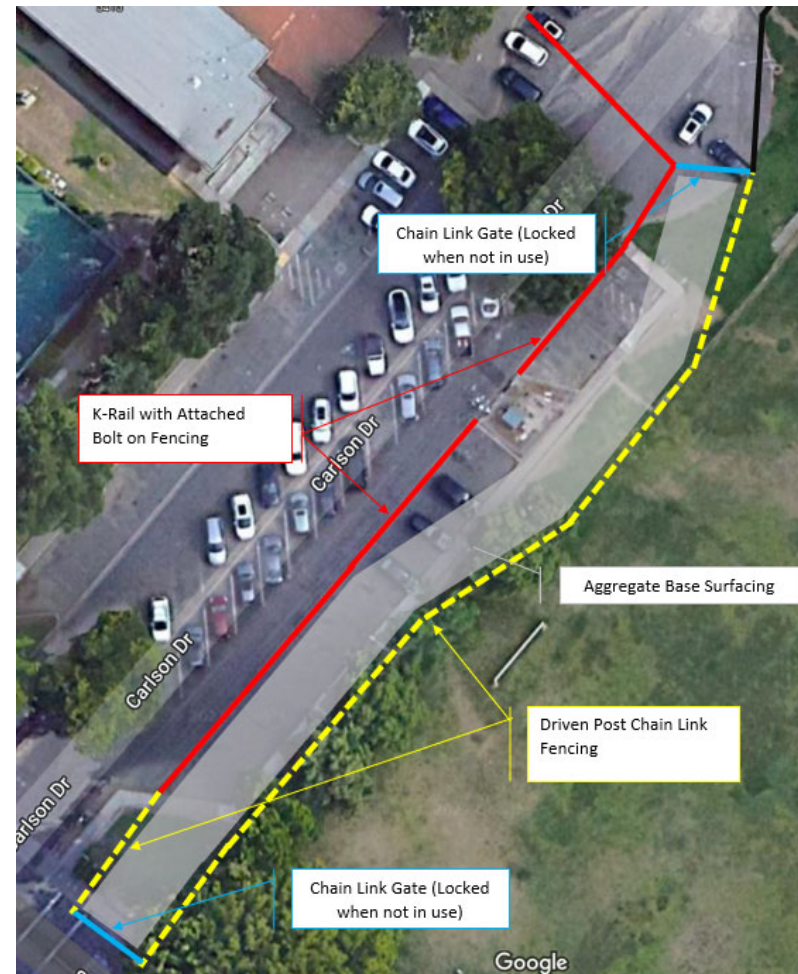


Glenn Hall Park

- 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

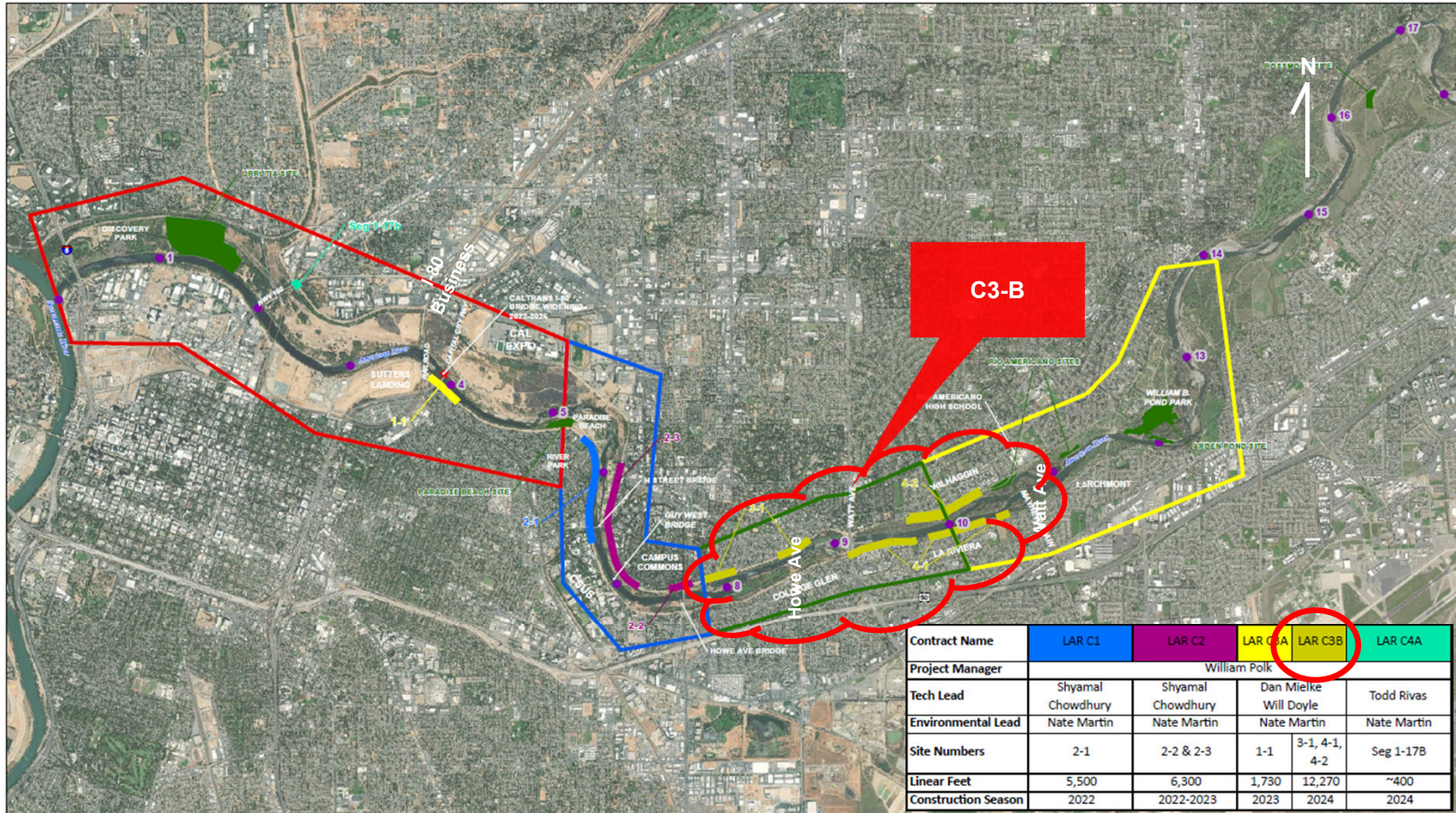
CONTRACT 3B & 4A



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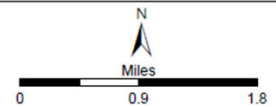


C3B STATUS UPDATE



Contract Name	LAR C1	LAR C2	LAR C3A	LAR C3B	LAR C4A
Project Manager	William Polk				
Tech Lead	Shyamal Chowdhury	Shyamal Chowdhury	Dan Mielke	Will Doyle	Todd Rivas
Environmental Lead	Nate Martin	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

- Subreach 1 (Red outline)
- Subreach 2 (Blue outline)
- Subreach 3 (Green outline)
- Subreach 4 (Yellow outline)
- Mitigation Sites (Green fill)
- Contract 1 (Blue line)
- Contract 2 (Purple line)
- Contract 3A (Yellow line)
- Contract 3B (Green line)
- Contract 4A (Cyan line)
- River Mile (Purple dot)



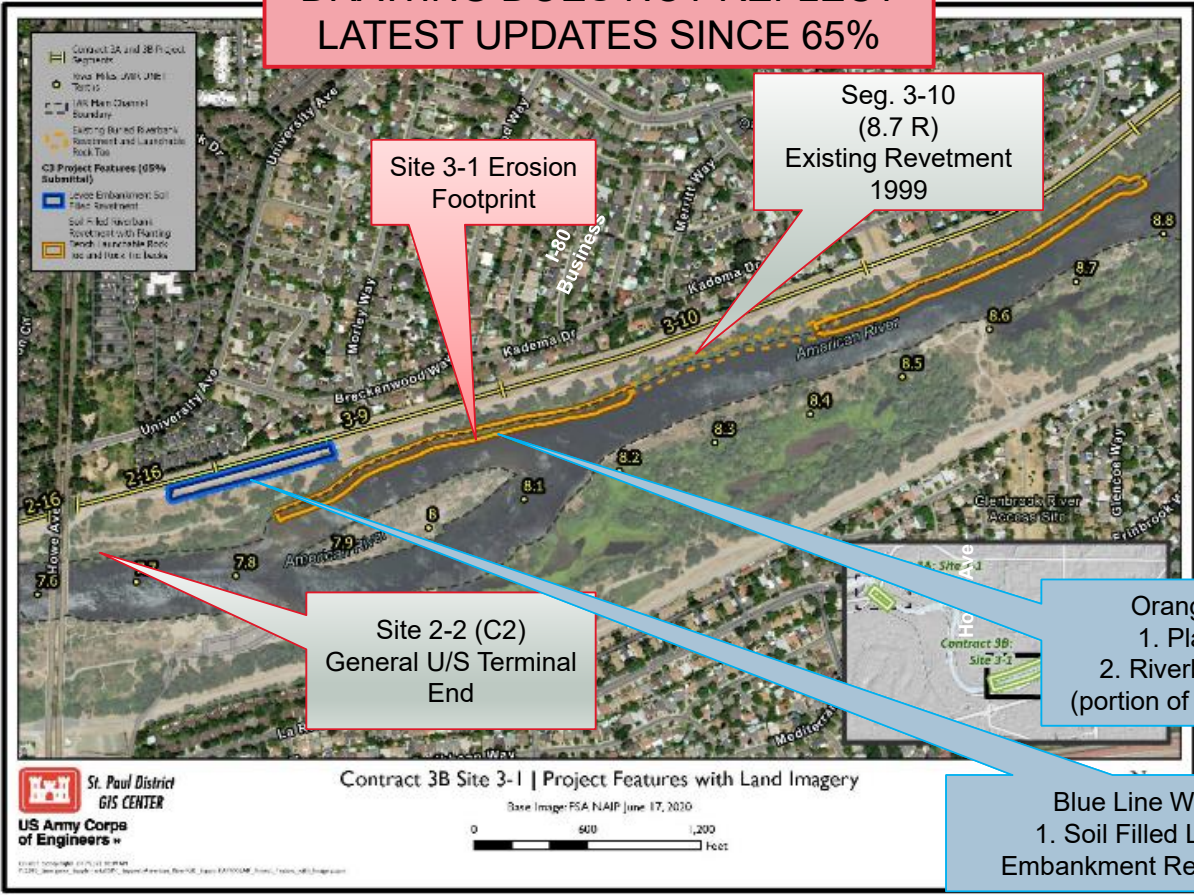
LAR EXECUTIVE SUMMARY SHEET
LOWER AMERICAN RIVER
 WRDA 2016



C3B STATUS UPDATE



DRAWING DOES NOT REFLECT LATEST UPDATES SINCE 65%



C3B

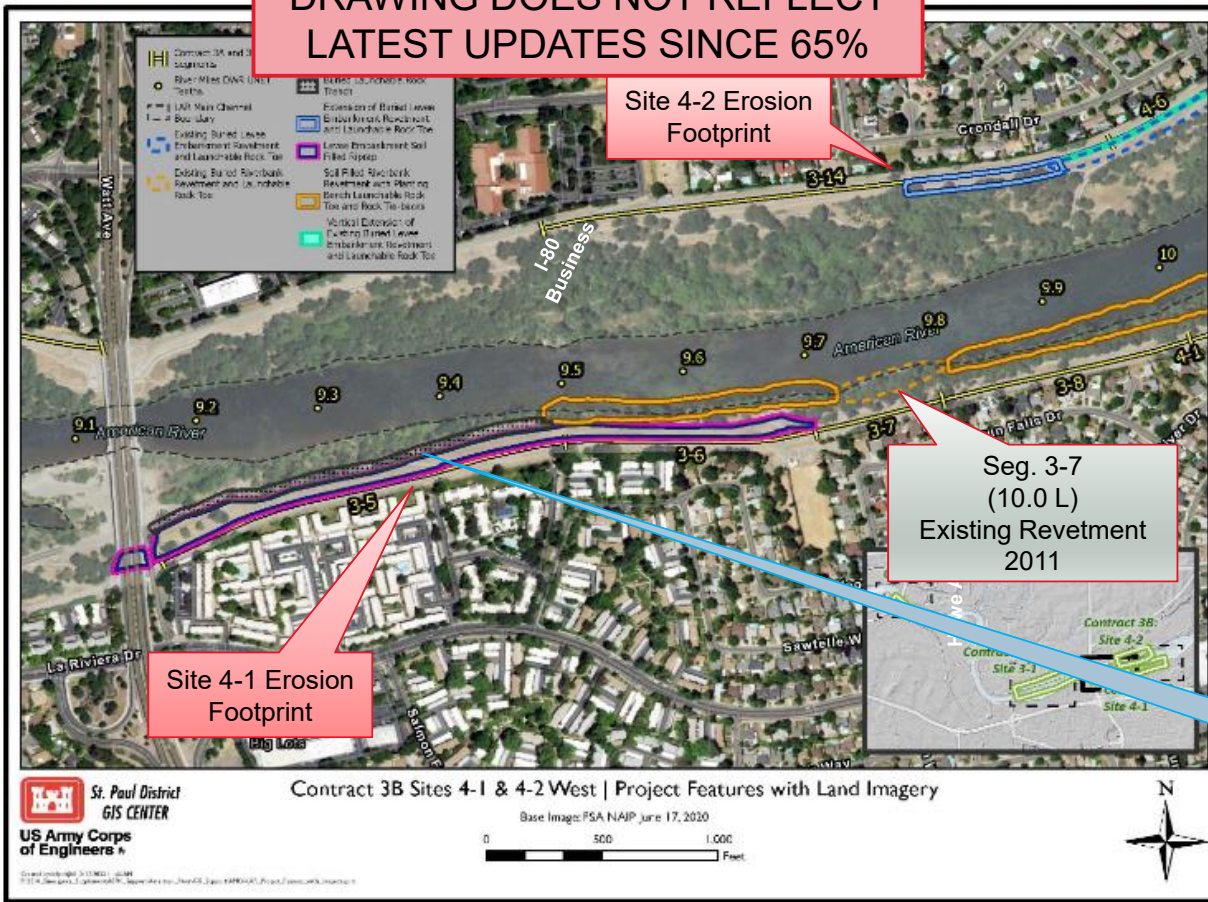
- Left and right bank from Howe Ave upstream past Watt Ave.
- Balance impacts to fish, riparian, upland woodlands and recreation



C3B STATUS UPDATE



DRAWING DOES NOT REFLECT LATEST UPDATES SINCE 65%



C3B

- Advancing design to 95%
- Adjusting design to accommodate 2 season construction

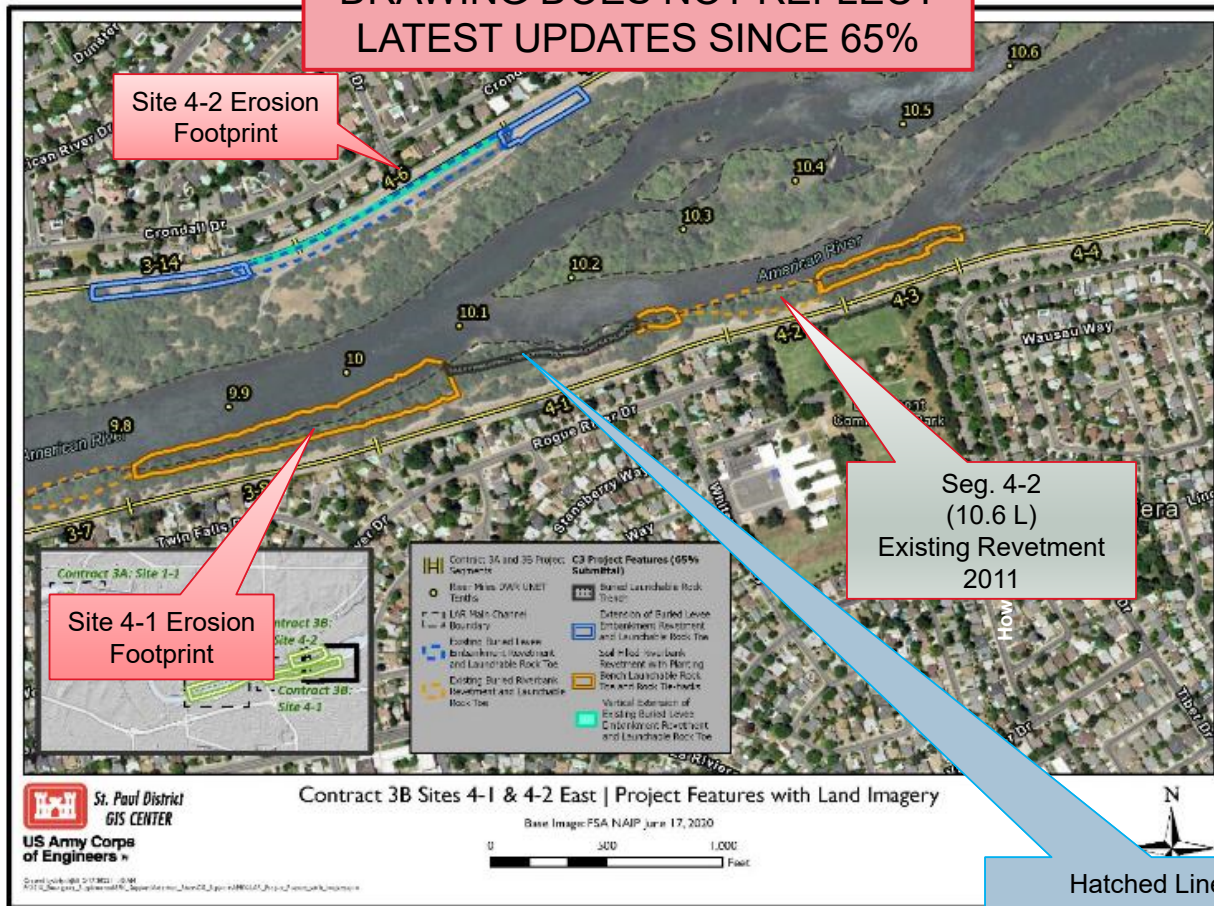
Hatched Line Work:
1. Buried Launchable Rock Trench



C3B STATUS UPDATE



DRAWING DOES NOT REFLECT LATEST UPDATES SINCE 65%



Site 4-2 Erosion Footprint

Site 4-1 Erosion Footprint

Seg. 4-2 (10.6 L) Existing Revetment 2011

Hatched Line Work:
1. Buried Launchable Rock Trench

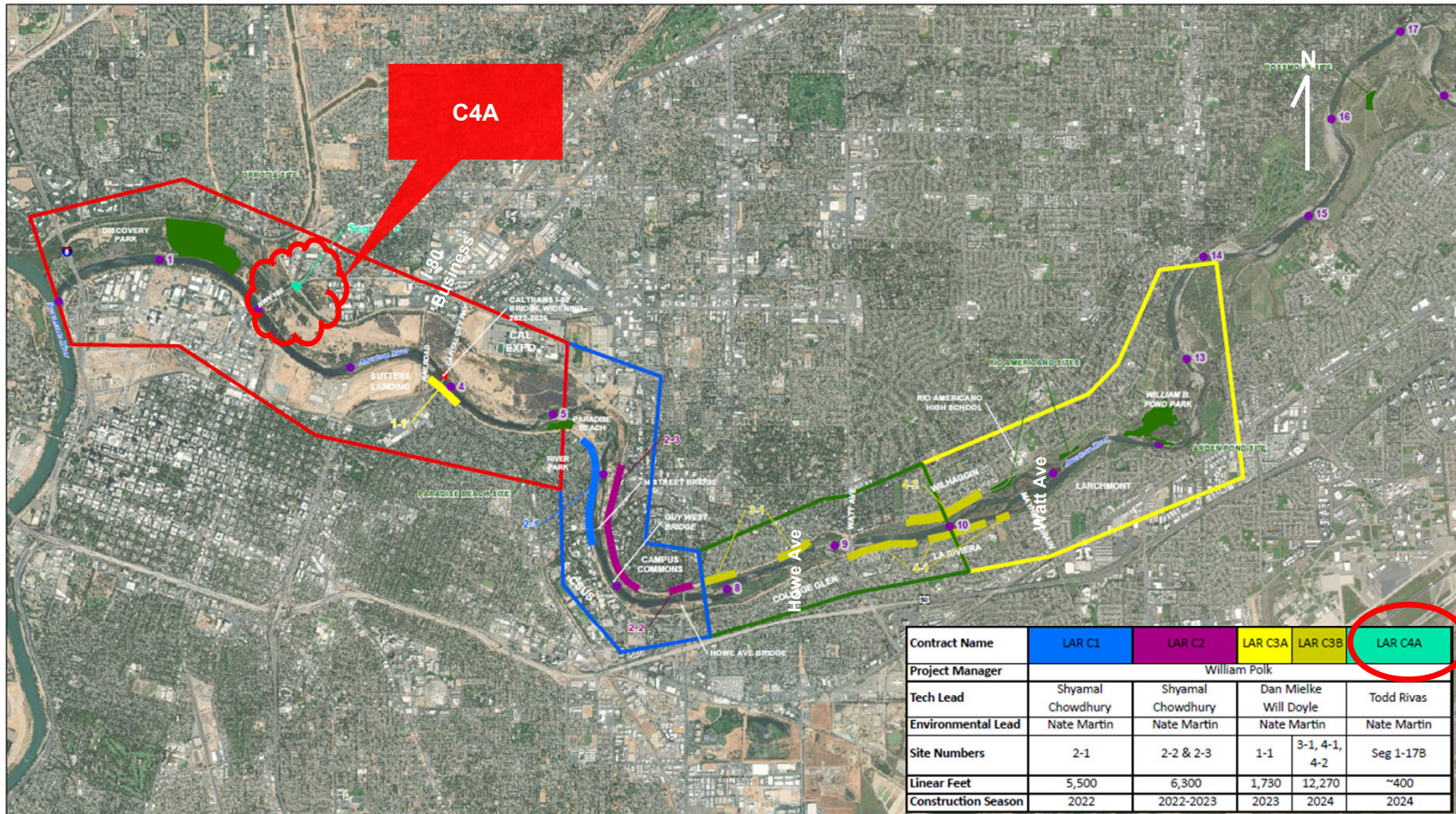
C3B

- Onsite Greening
- Mitigation at Rossmore West

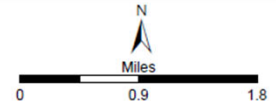
- Construction
 - Season 1 – Summer 2025
 - Season 2 – Summer 2026



C4A STATUS UPDATE



- Subreach 1
- Subreach 2
- Subreach 3
- Subreach 4
- Mitigation Sites
- Contract 1
- Contract 2
- Contract 3A
- Contract 3B
- River Mile
- Contract 4A



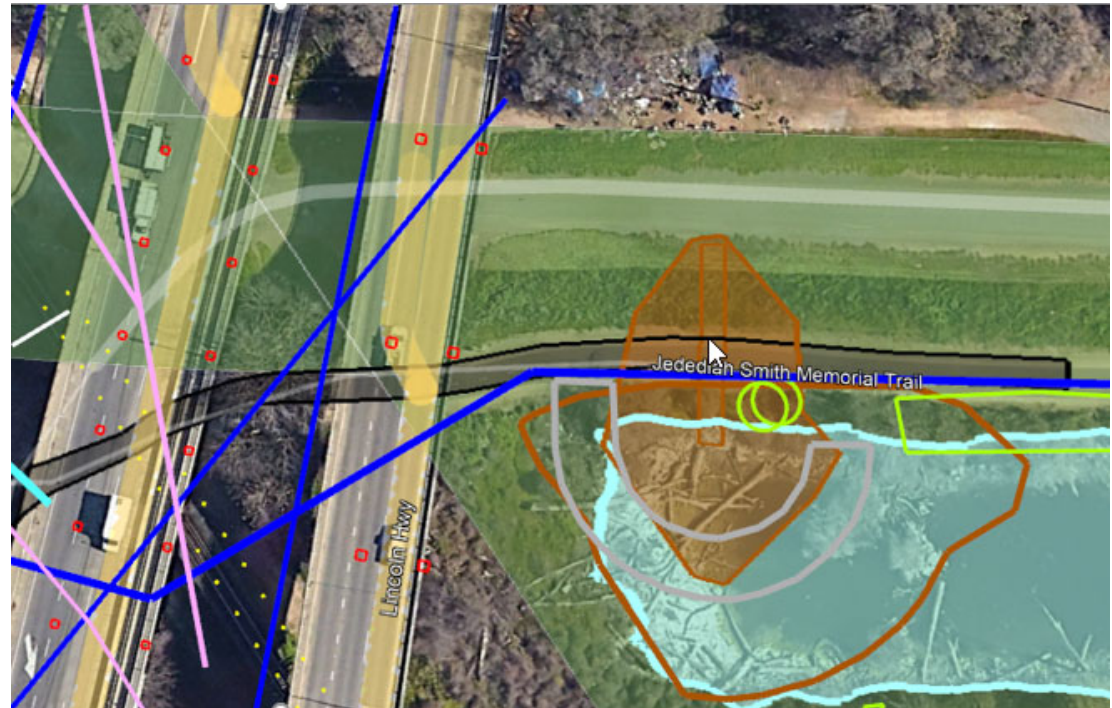
LAR EXECUTIVE SUMMARY SHEET
LOWER AMERICAN RIVER
 WRDA 2016



C4A STATUS UPDATE

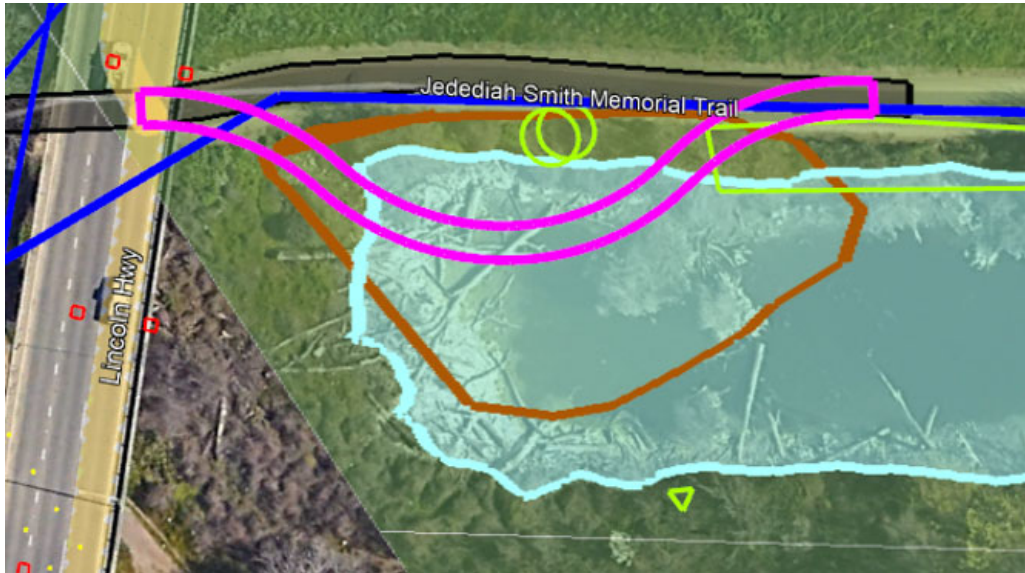


- Right bank at the Highway 160 bridge
- 400 linear feet
- Complex site with highway bridge piers, RR bridge, & multiple utilities
- Current concept – Berm to reduce velocities against levee beneath and around bridges





C4A STATUS UPDATE – BIKE PATHS

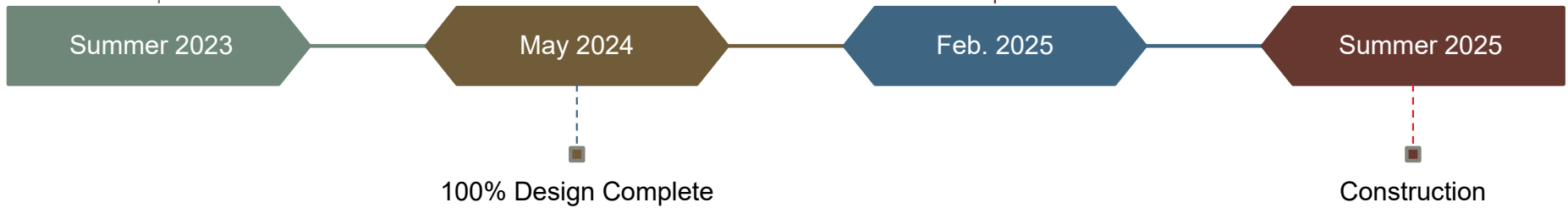




ARCF LAR 4A SCHEDULE

65% Design and Reviews Complete

Construction Award



Summer 2023

May 2024

Feb. 2025

Summer 2025



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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Questions? Comments? Concerns?

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