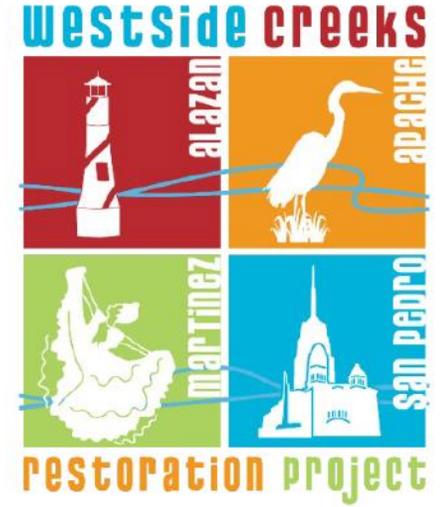


WELCOME

Westside Creeks Ecosystem Restoration: Apache and San Pedro Creeks Interim Design Update



Presented by: US Army Corps of Engineers
San Antonio River Authority
Michael Baker Int'l – Huitt Zollars JV

Tuesday, October 8, 2024



US Army Corps
of Engineers®



SAN ANTONIO
RIVER AUTHORITY

Ways to Participate in the Design Process

- Follow project updates online at westsidecreeks.com
 - Presentations posted online in English and Spanish
 - Fill out online comment form
- Attend in-person Information Session
 - View presentation
 - Fill out comment card
 - View poster boards and ask questions
 - Posters and Experts available to answer questions
- Attend Westside Creeks Restoration Oversight Committee Meetings
 - Next: November 19, 2024
 - RA Boardroom 6 PM



Part 1: Project Background

Rebecca Krug, Sr. Project Manager



SAN ANTONIO
RIVER AUTHORITY



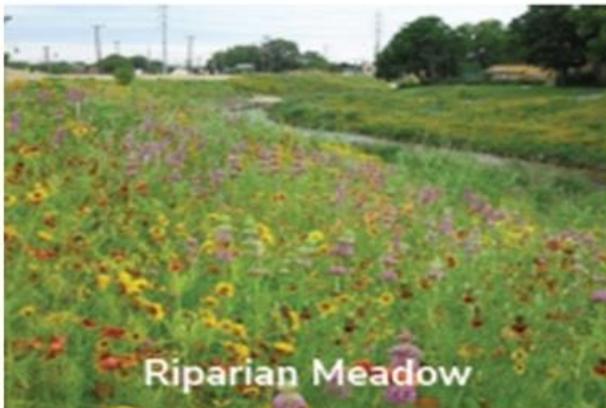
Overview

Federal project partnership with US Army Corps of Engineers to restore channelized Westside Creeks and improve community connectivity.

EXISTING CONDITIONS



RESORATION MEASURES



Project Team

Federal Sponsor:



**US Army Corps
of Engineers®**

Non-Federal Sponsor:



Local Funding Partner:



Architect – Engineer:



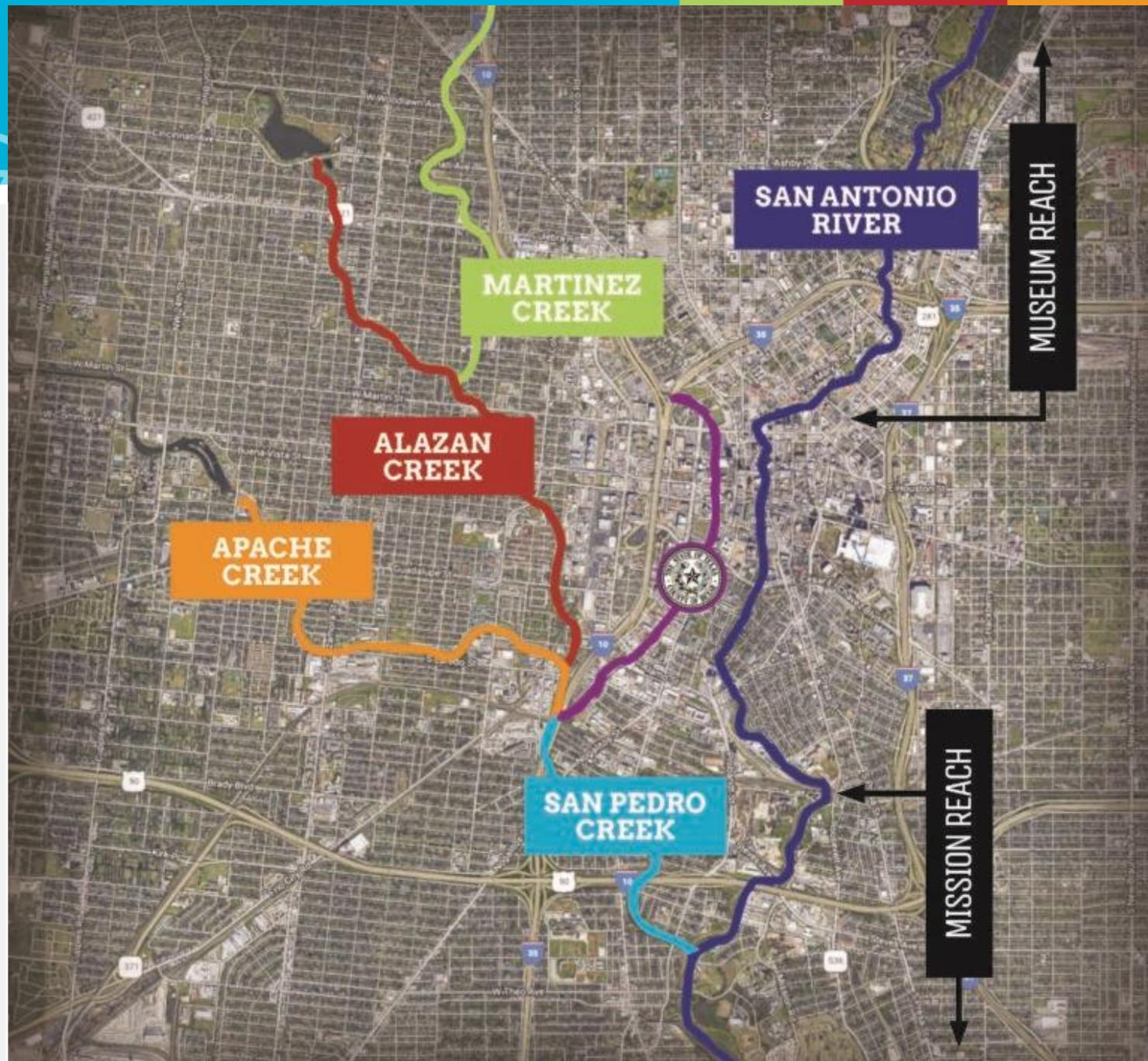
Background

- 2008 – Westside Creeks Restoration Oversight Committee formed
- 2012 – Vision Plan
- 2014 – Feasibility Study
- Jan 2022 – USACE Announces \$75 million funding for the project
- Sept 2022 – SARA/USACE Partnership
 - Pre-design Activities Begin: Survey and Baseline Environmental Studies
- March 2023 – Design Phase Begins
 - Architect-Engineer: Michael Baker Intl. – Huitt Zollars JV
- July 2023 – Public Input Session
 - Recreation Features
- September 2023 – 35% Initial Design Milestone
- October 2024 – 65% Interim Design Milestone



Project Area

- **San Pedro Creek**
 - Project 2.4 Miles
- **Apache Creek**
 - Project Length = 2.6 miles
- **Alazán Creek**
 - Project Length = 4.0 Miles
- **Martinez Creek**
 - Project Length = 2.4 miles



Oversight Committee Organizations

Alazán Resident Council

Avenida Guadalupe

Beacon Hill Neighborhood Association

Bexar Audubon Society

Historic Westside Residents Association

Los Bexareños Genealogical Society

Martinez Creek Neighborhood Association

Opportunity Home San Antonio

Our Lady of the Lake University

Prosper West

Prospect Hill Neighborhood Association

River Aid San Antonio

San Antonio Alternative Housing Corporation

San Antonio Conservation Society

San Antonio Independent School District

San Antonio Wheelmen

St. Mary's University

Student At-Large

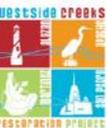
TexasTejano.com

University of Texas at San Antonio

United San Antonio Pow Wow Inc.

Woodlawn Lake Neighborhood Association

*The River Authority Board appointments committee organizations, the organizations select their member representatives

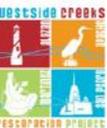


Part 2: Design Concept Overview

Danny Allen, Wildlife Biologist
Jeff Holba, Landscape Architect



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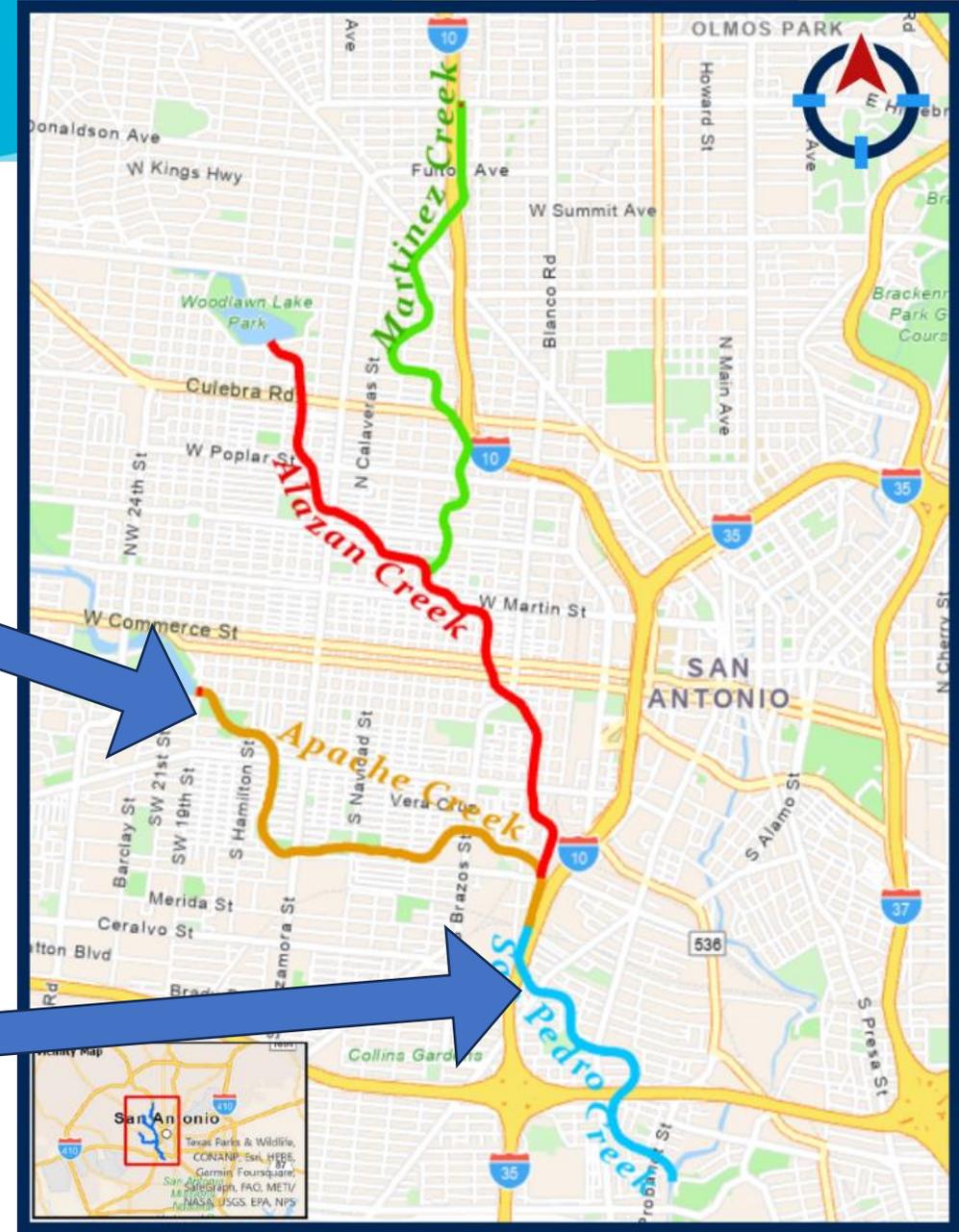
Design Overview

Apache Creek

- 2 acres Riparian Woody Vegetation
- 46.6 acres of Riparian Meadow
- 0.85 miles of pilot channel
- 18 pool-riffle complexes
- 18 slackwater areas

San Pedro Creek

- 5.5 acres of Riparian Woody Vegetation
- 28.7 acres of Riparian Meadow Vegetation
- 1.78 miles of pilot channel
- 26 pool-riffle complexes
- 25 slackwater areas

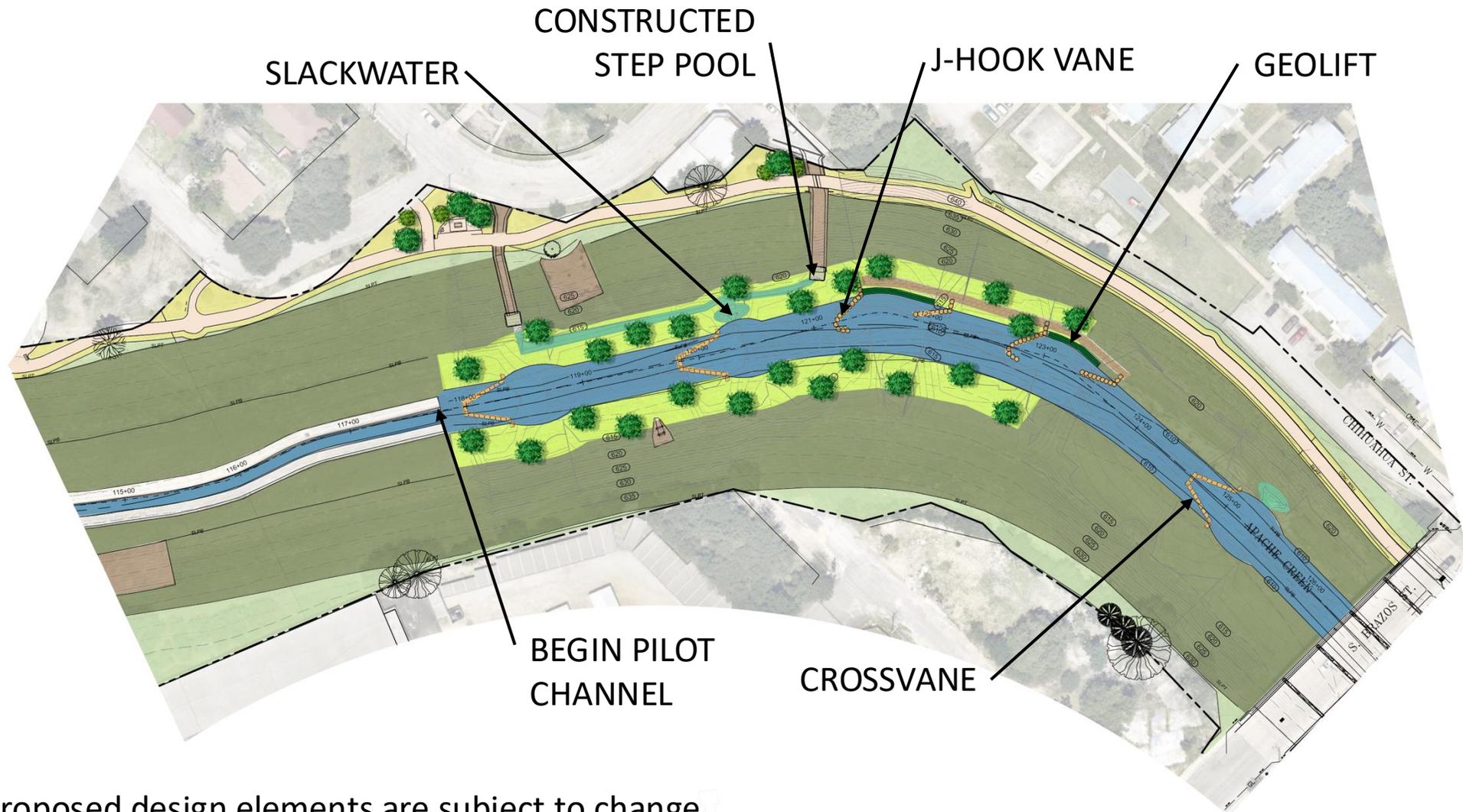


Apache Creek Design Considerations

- 1 railroad crossing
- 1 low water crossing
- 3 pedestrian bridge crossings
- 10 street bridge crossings
- Reinforced concrete banks
- Underground utilities

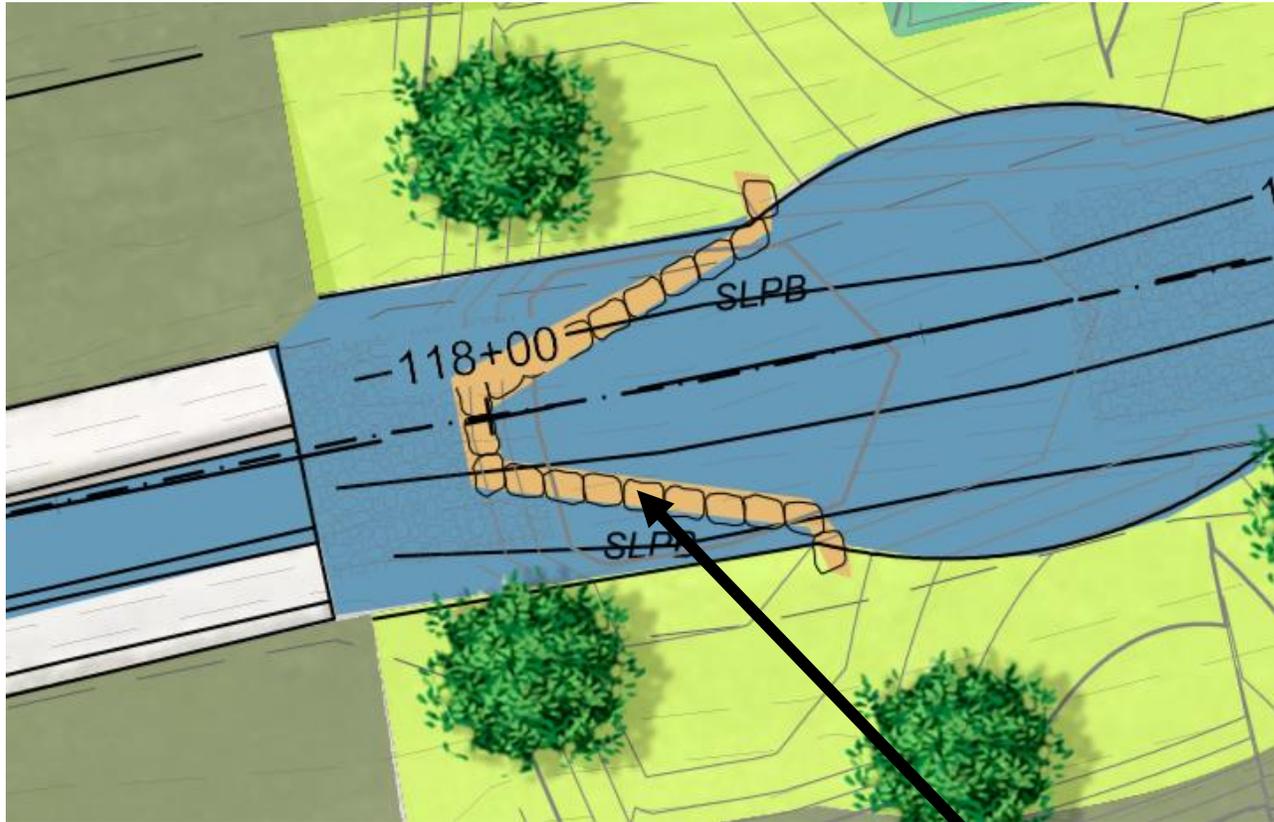


Proposed Apache Creek In-Stream Structures

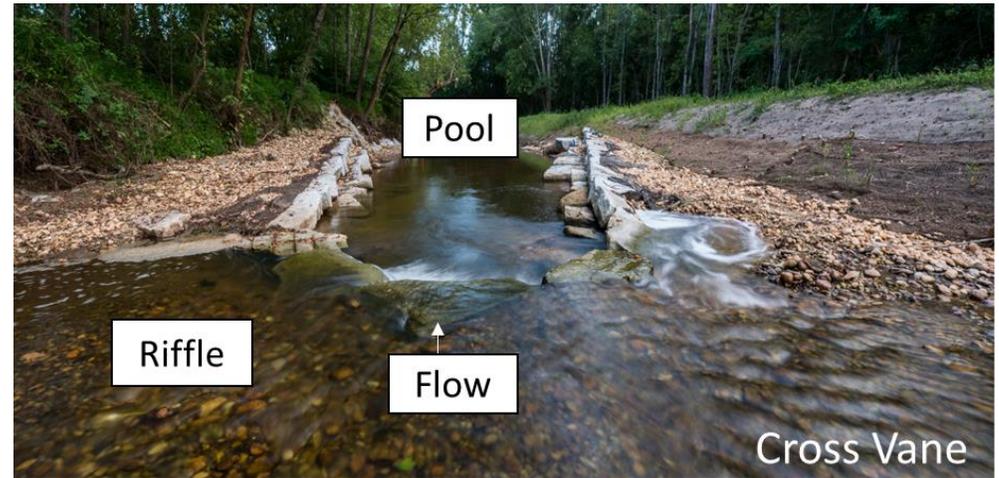
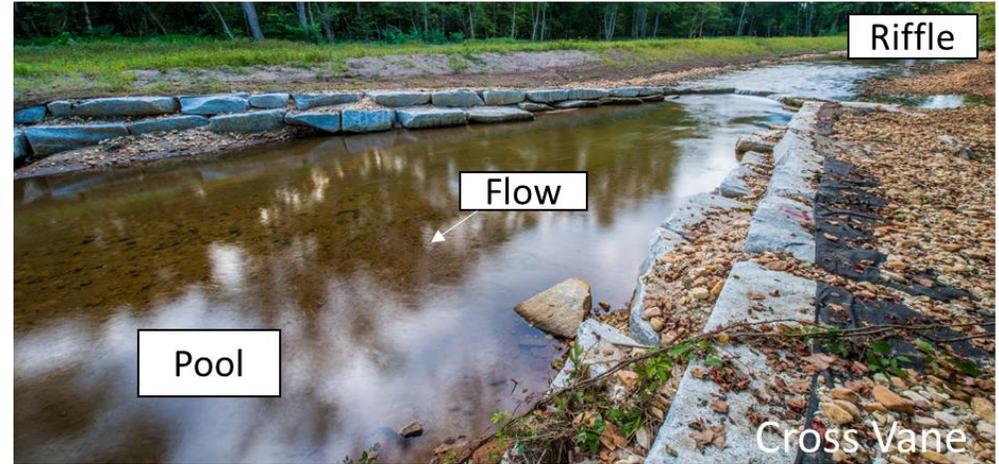


*Proposed design elements are subject to change

Proposed Apache Creek Cross Vane

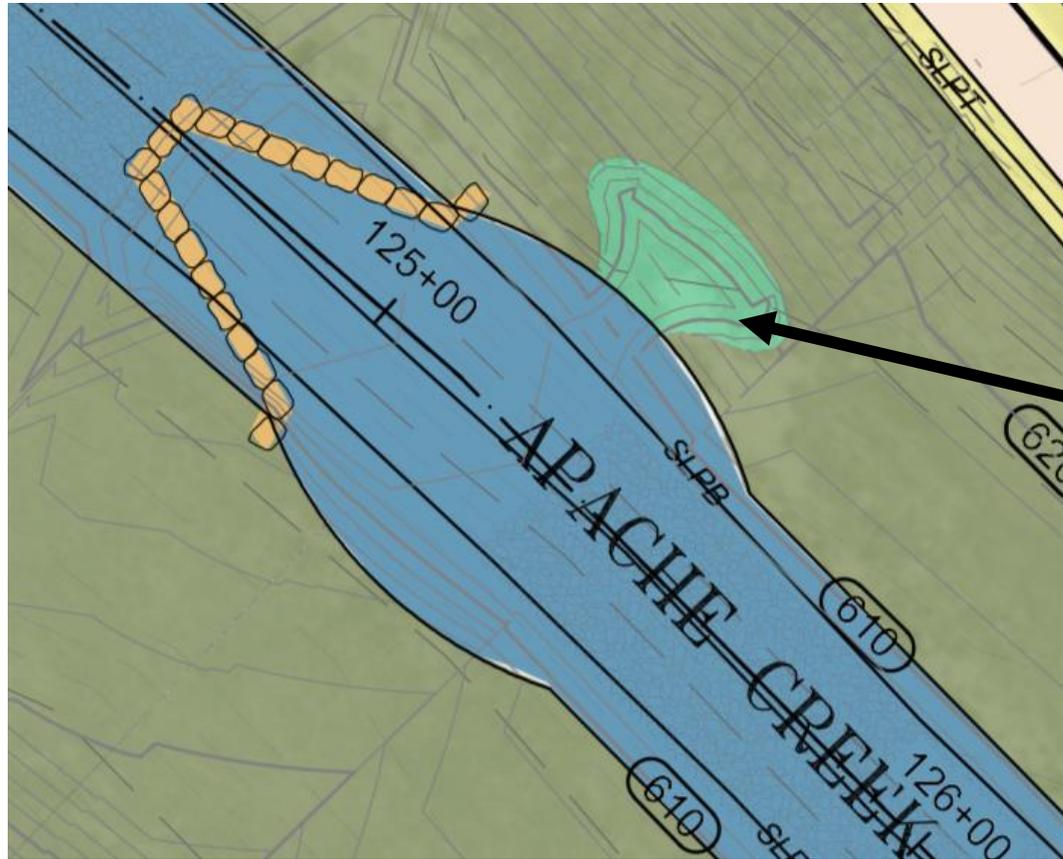


PROPOSED
CROSS VANE



*Proposed design elements are subject to change

Proposed Apache Creek Slackwater

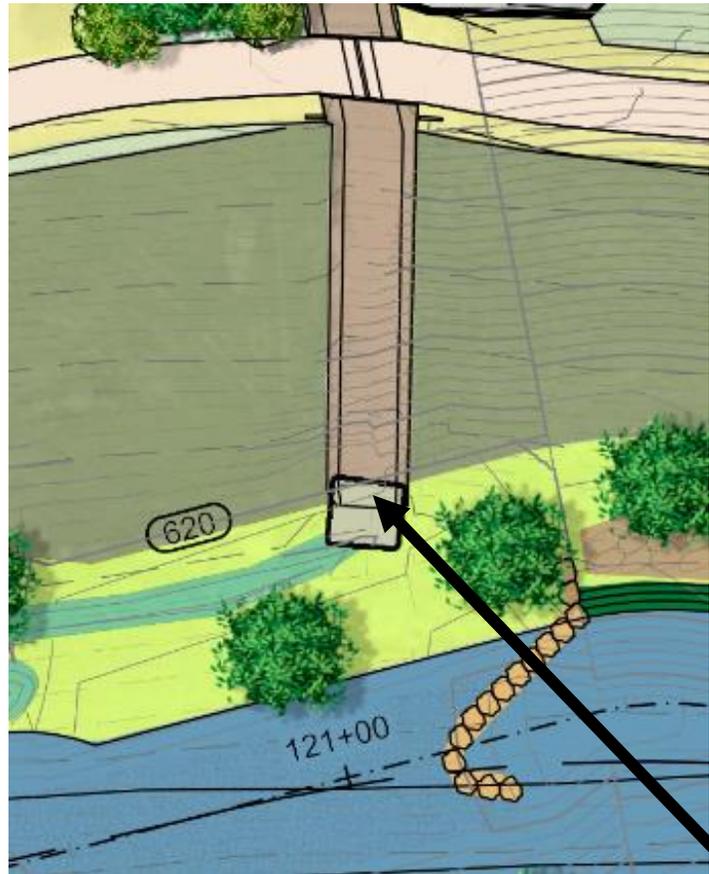


PROPOSED
SLACKWATER



SLACKWATER

Proposed Apache Creek Constructed Step Pool



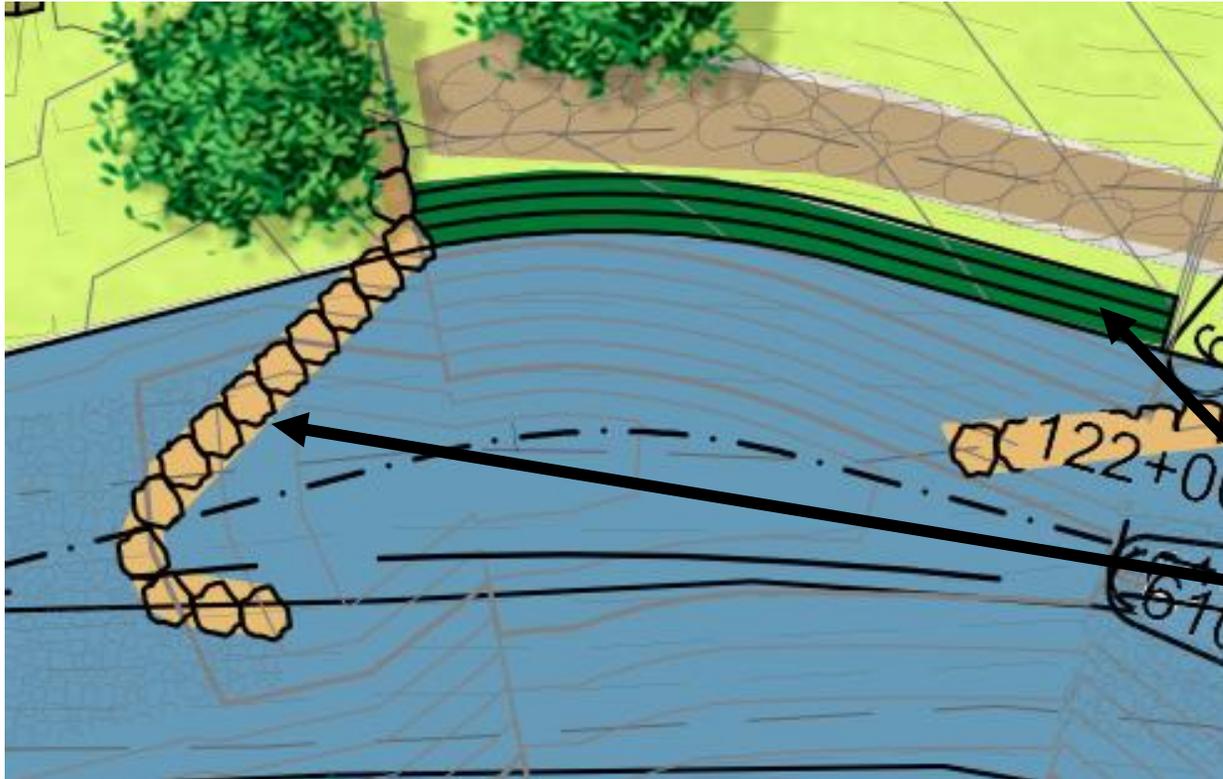
PROPOSED
CONSTRUCTED
STEP POOL



Figure 14. Example of Constructed Step Pools Using Native Central Texas Material (Limestone Blocks) at a Storm Sewer Outfall

CONSTRUCTED STEP POOL

Proposed Apache Creek Geolift/ J Hook vane



GEOLIFT

PROPOSED
GEOLIFT

PROPOSED
J HOOK



J HOOK

*Proposed design elements are subject to change

Proposed Apache Creek Planting

RIPARIAN WOODY
VEGETATION
30 STEM/AC

NATIVE SHORT
GRASS MIX

NATIVE TALL
GRASS MIX



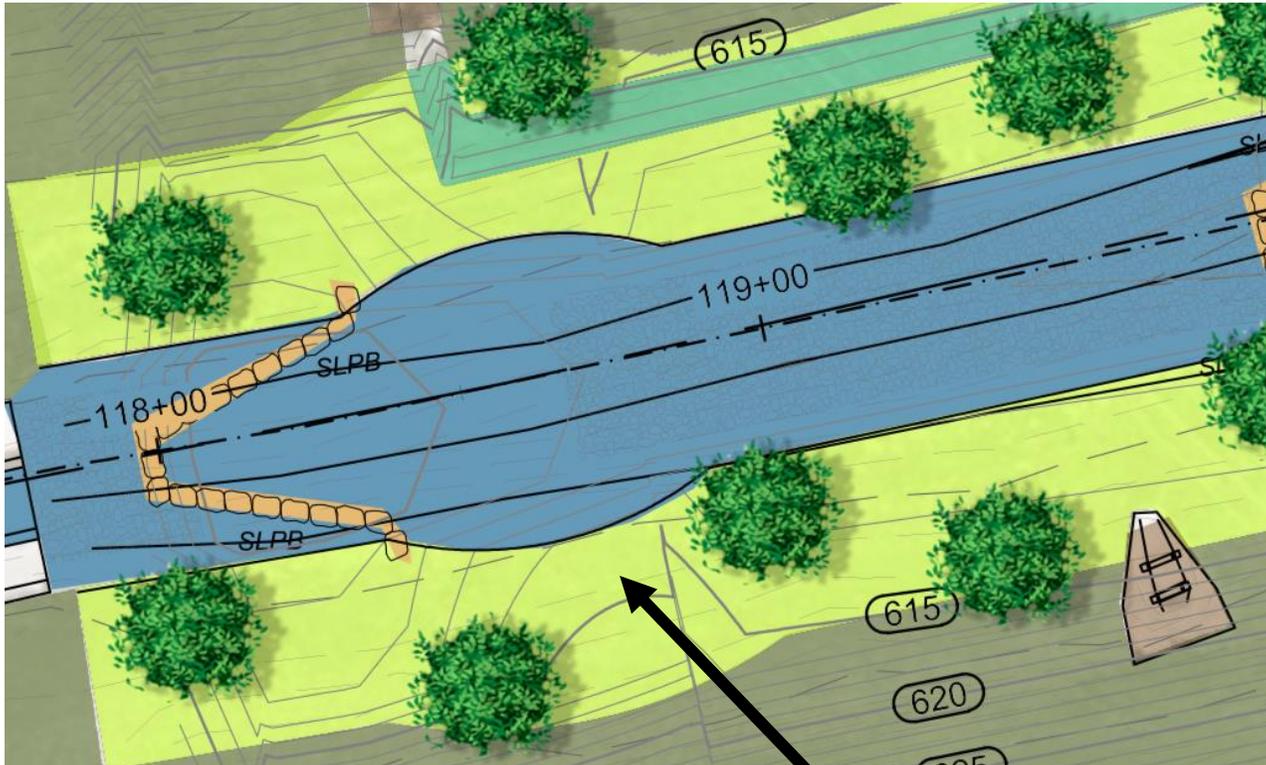
LEGEND

- RIPARIAN WOODY VEGETATION
30 STEMS/AC
- RIPARIAN MEADOW
TALL GRASS SEED MIX
- RIPARIAN MEADOW
SHORT GRASS SEED MIX
- 5' MOW STRIP
- SLACKWATER
- GEOLIFT

*Proposed design elements are subject to change

Proposed Apache Creek Planting- Riparian Woody

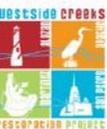
At some locations along edge of creek



RIPARIAN WOODY VEGETATION

PROPOSED RIPARIAN WOODY VEGETATION

*Proposed design elements are subject to change



Proposed Apache Creek Planting- Native Tall Grass

Throughout areas as Riparian Meadow and at edge of creek
Mow strip is on either side of trail



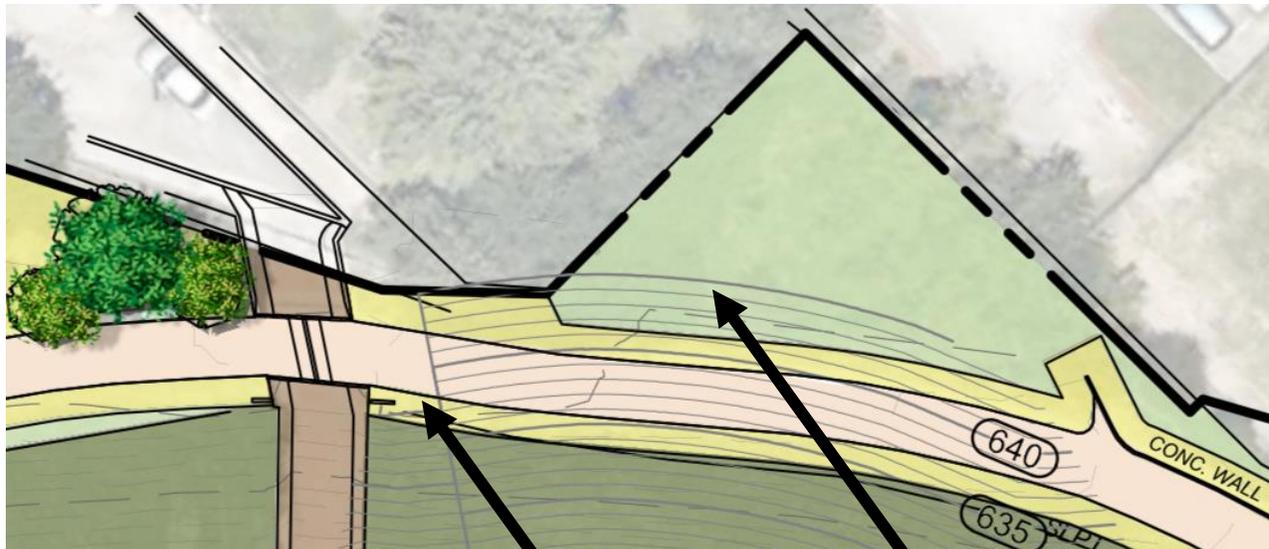
NATIVE TALL GRASS MIX

PROPOSED
NATIVE TALL
GRASS MIX

*Proposed design elements are subject to change

Proposed Apache Creek Planting- Native Short Grass

At some locations along top of creek bank



PROPOSED
MOWSTRIP

PROPOSED
NATIVE SHORT
GRASS MIX



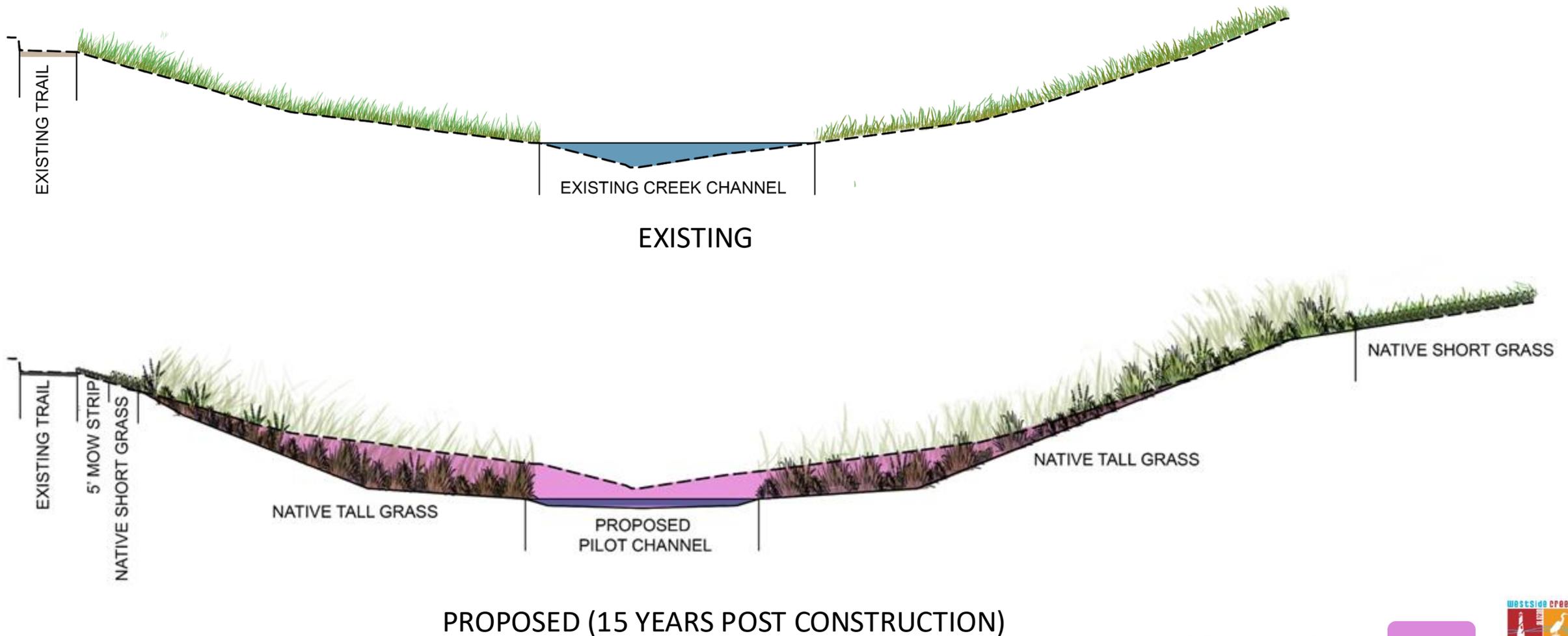
PROPOSED NATIVE SHORT GRASS MIX



MOWSTRIP

*Proposed design elements are subject to change

Typical Apache Creek Sections

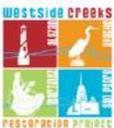
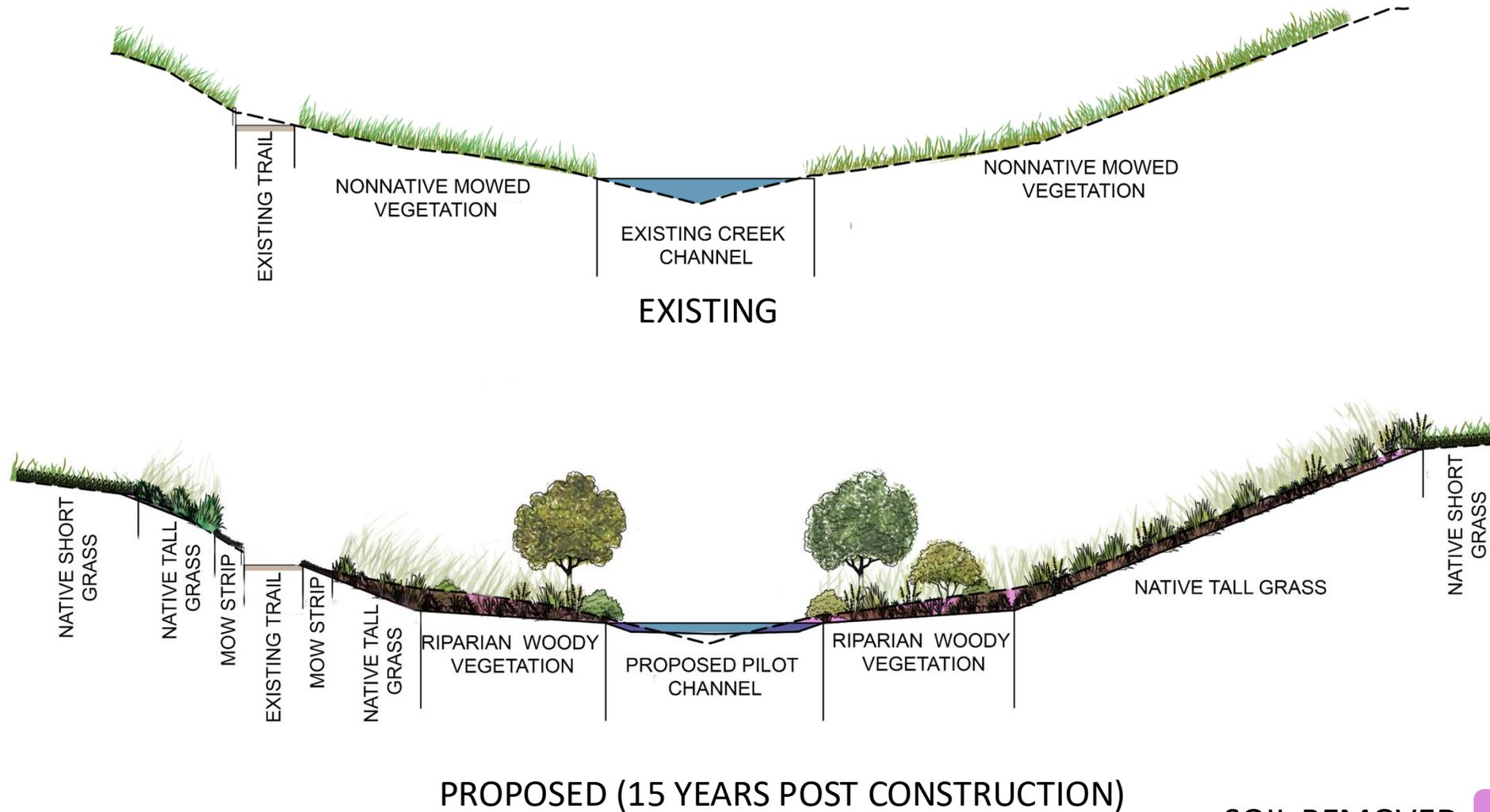


SOIL REMOVED 



*Proposed design elements are subject to change

Typical Apache Creek Sections



*Proposed design elements are subject to change

Apache Creek Today



Apache Creek Proposed



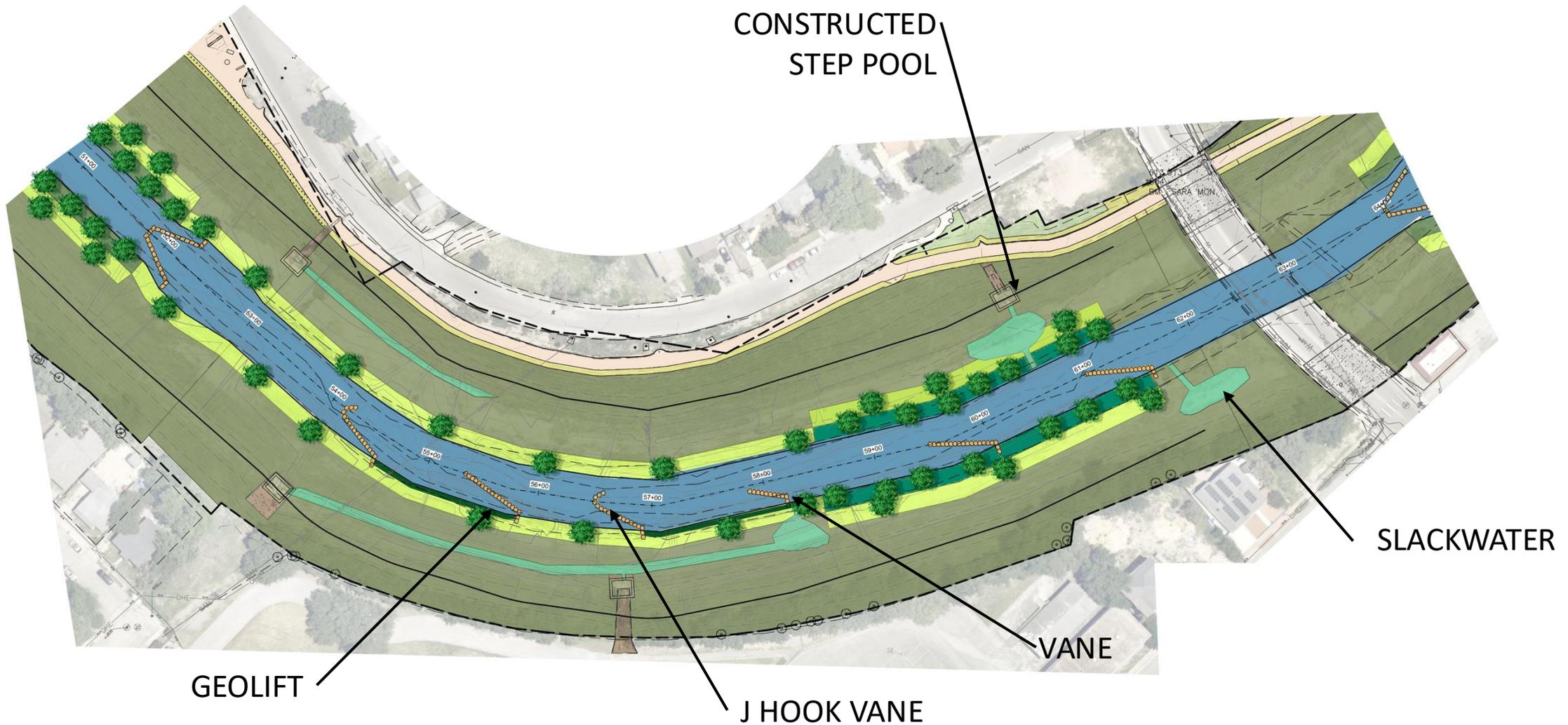
*Proposed design elements are subject to change

San Pedro Creek Design Considerations

- 1 railroad crossing
- 1 low water crossing
- 7 street bridge crossings
- Underground utilities

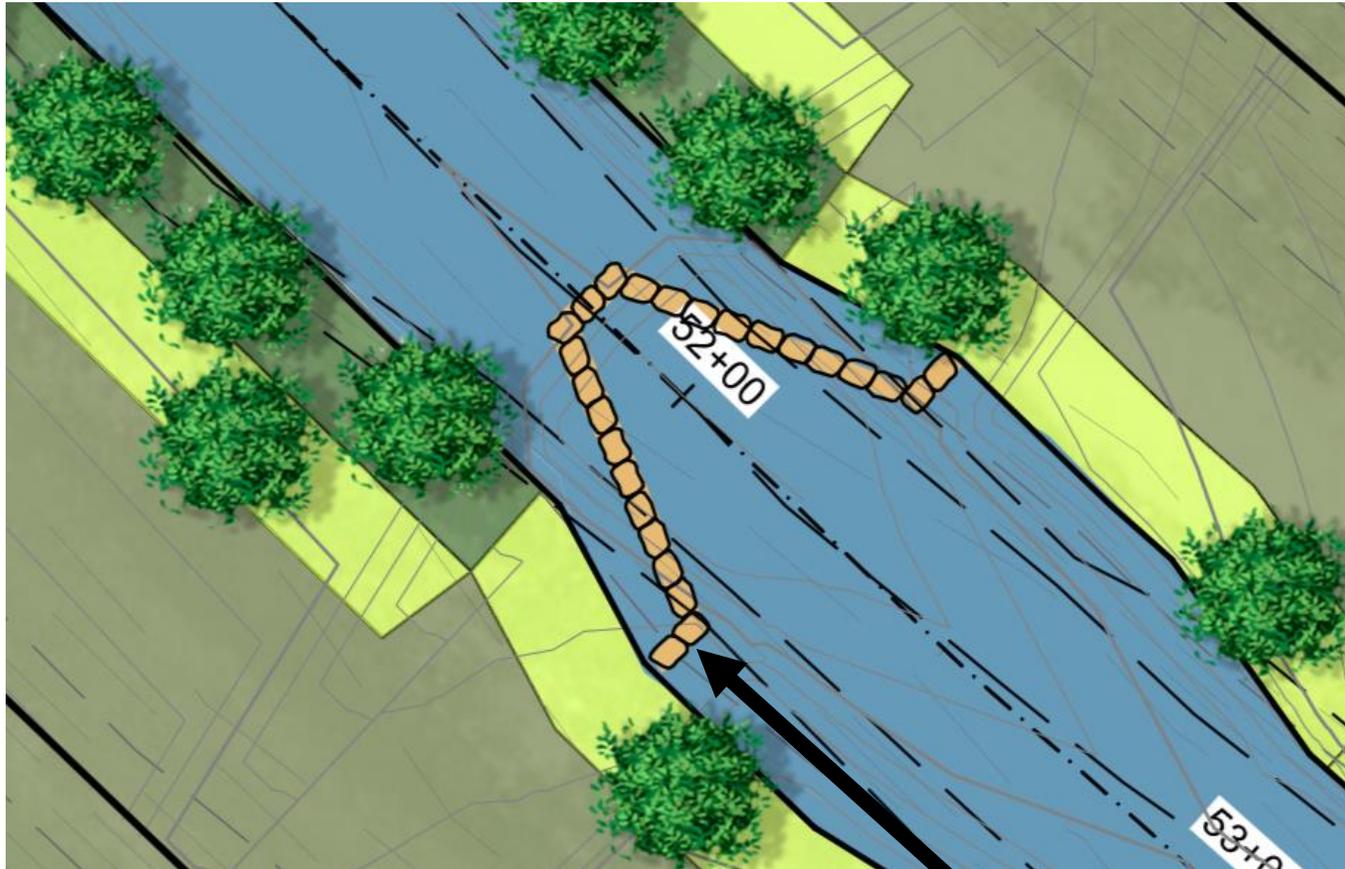


Proposed San Pedro Creek In-Stream Structures



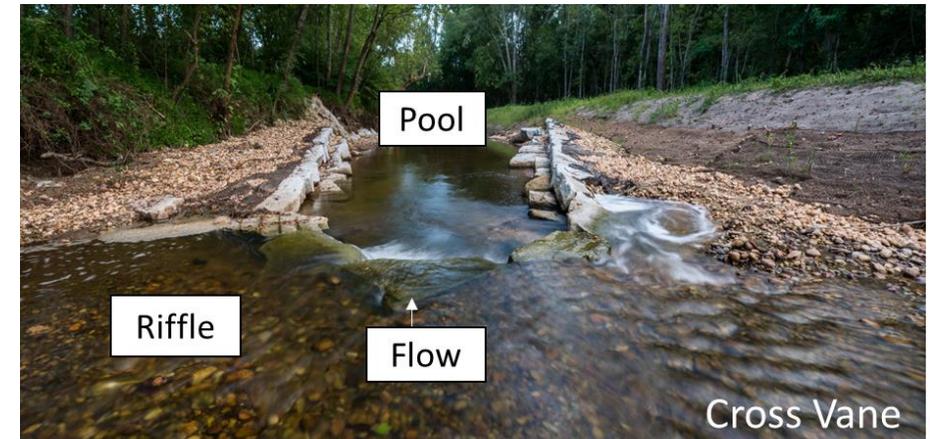
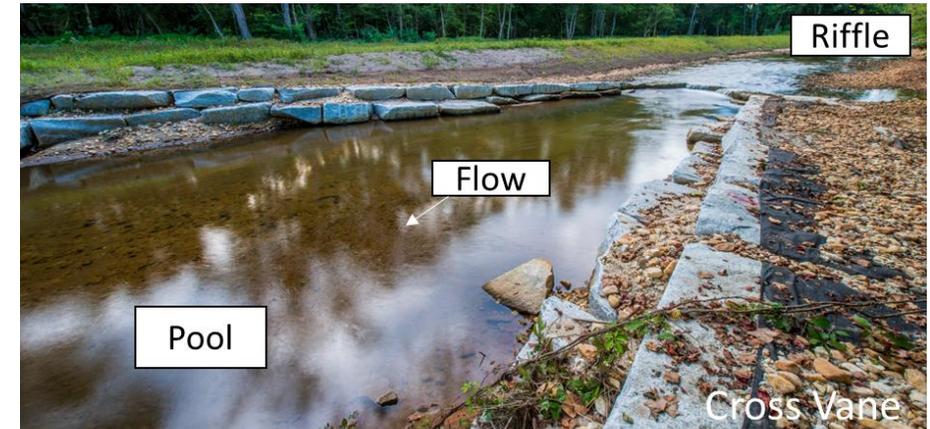
*Proposed design elements are subject to change

Proposed San Pedro Creek Cross Vane

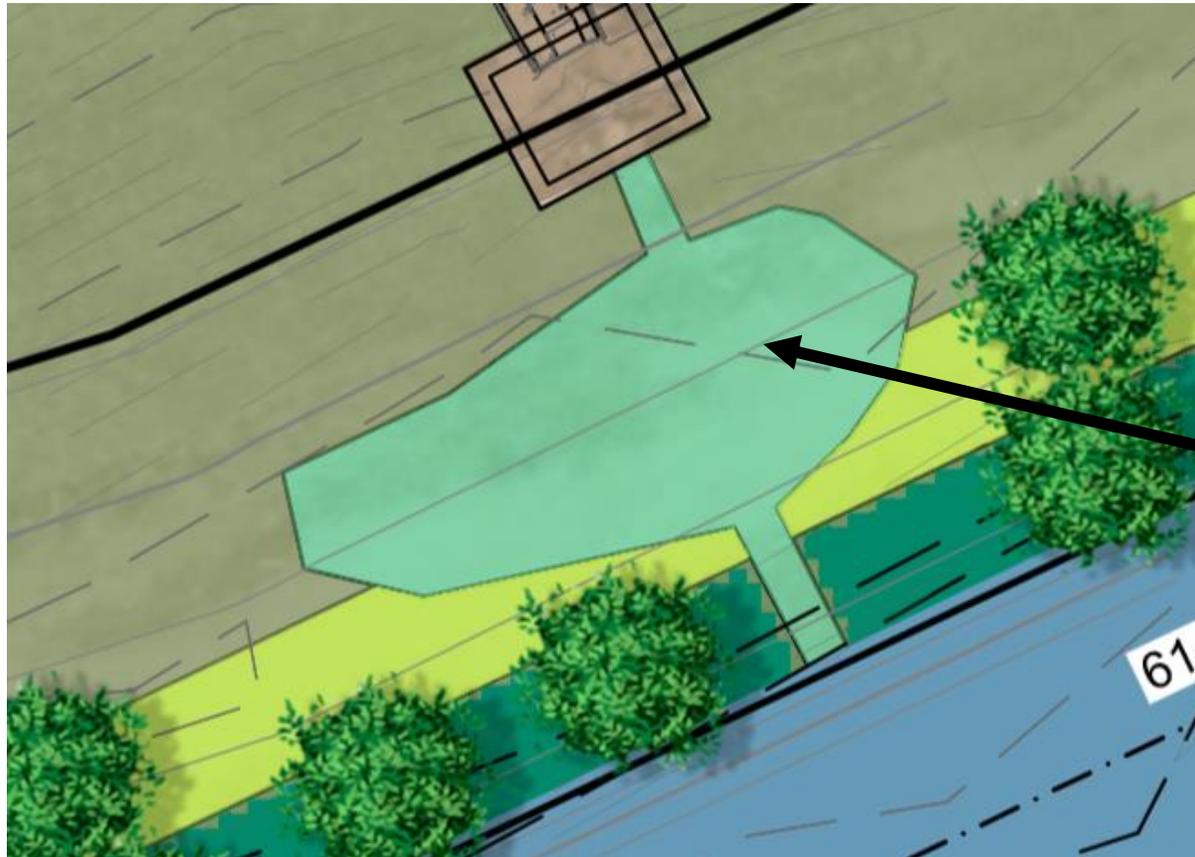


PROPOSED
CROSS VANE

*Proposed design elements are subject to change



Proposed San Pedro Creek Slackwater



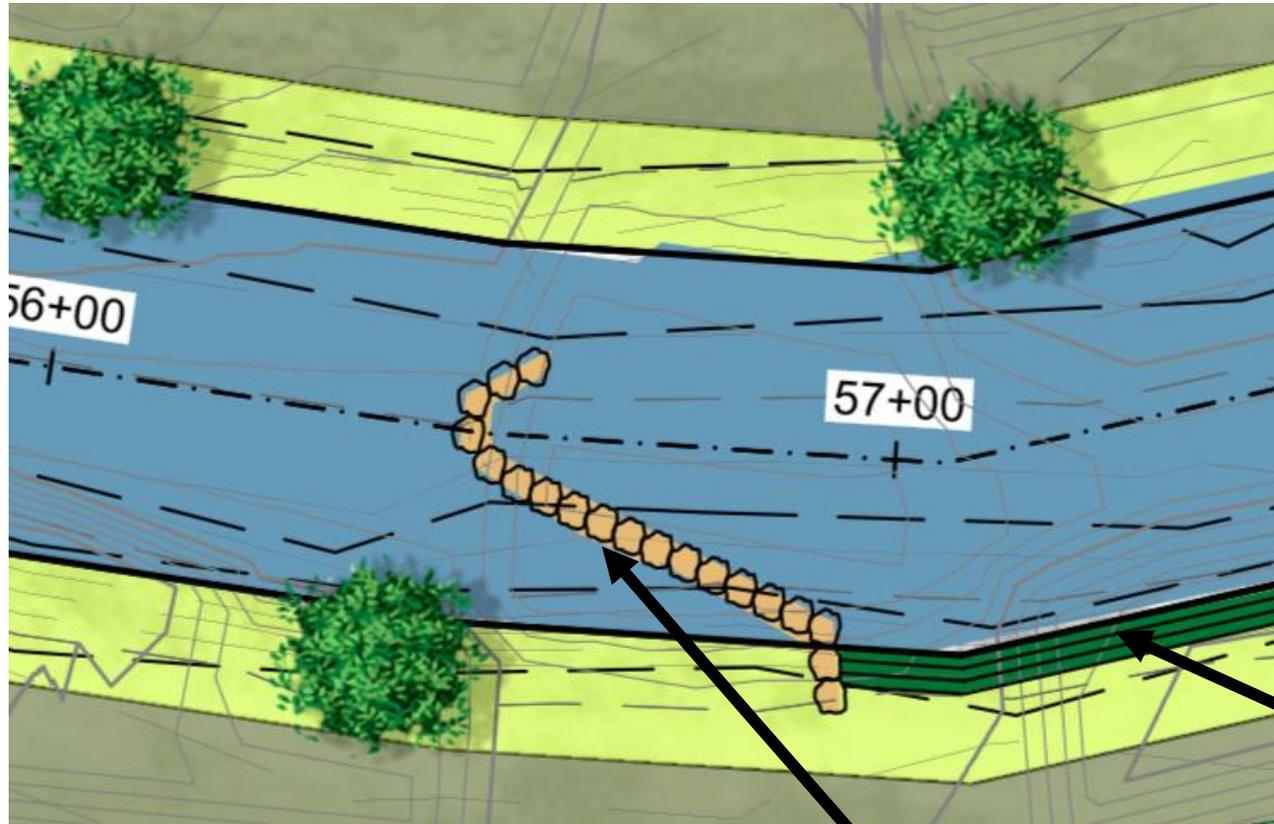
PROPOSED
SLACKWATER



SLACKWATER

*Proposed design elements are subject to change

Proposed San Pedro Creek Geolift/ J Hook vane



PROPOSED GEOLIFT



PROPOSED
GEOLIFT

PROPOSED
J HOOK

PROPOSED J HOOK

*Proposed design elements are subject to change

Proposed San Pedro Creek Constructed Step Pool

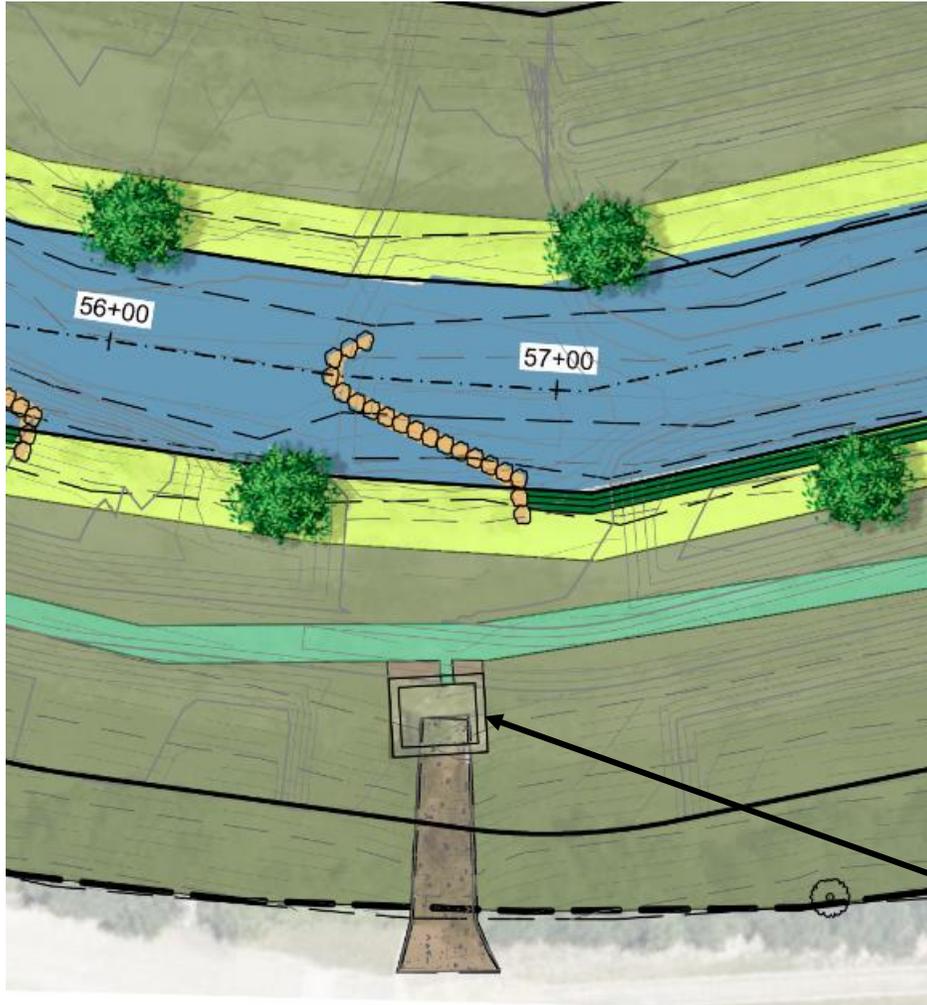


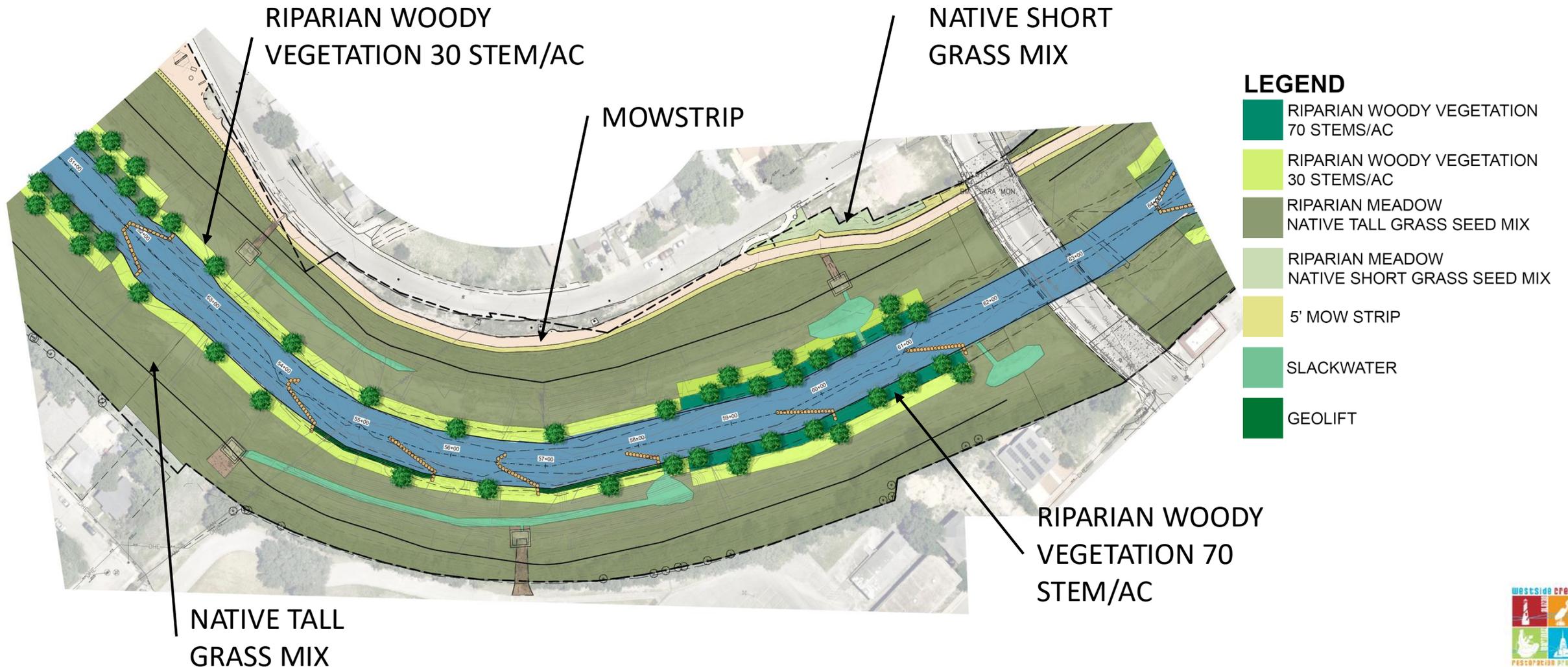
Figure 14. Example of Constructed Step Pools Using Native Central Texas Material (Limestone Blocks) at a Storm Sewer Outfall

CONSTRUCTED STEP POOL

PROPOSED
CONSTRUCTED
STEP POOL

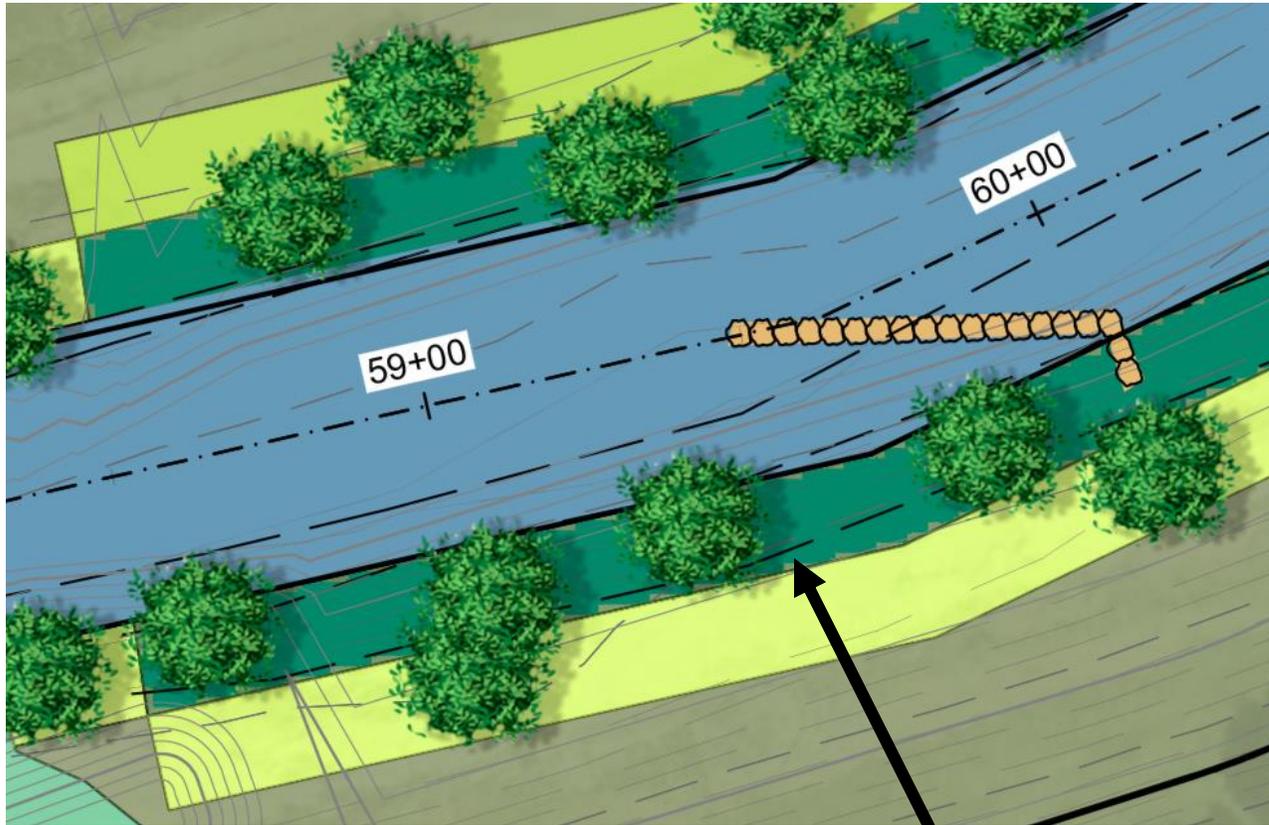
*Proposed design elements are subject to change

Proposed San Pedro Creek Planting



*Proposed design elements are subject to change

Proposed San Pedro Creek Planting- Riparian Woody



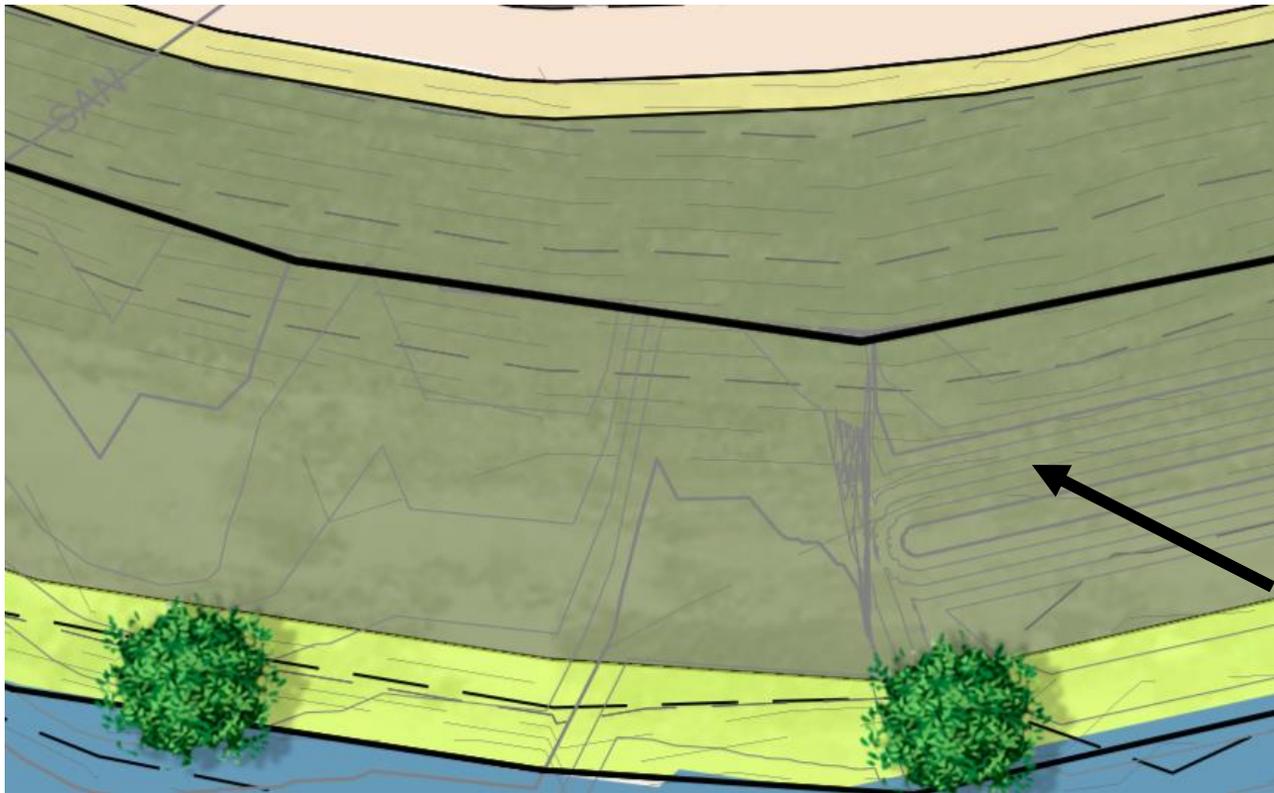
PROPOSED RIPARIAN WOODY



RIPARIAN WOODY

*Proposed design elements are subject to change

Proposed San Pedro Creek Planting- Native Tall Grass

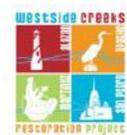


PROPOSED
NATIVE TALL
GRASS MIX

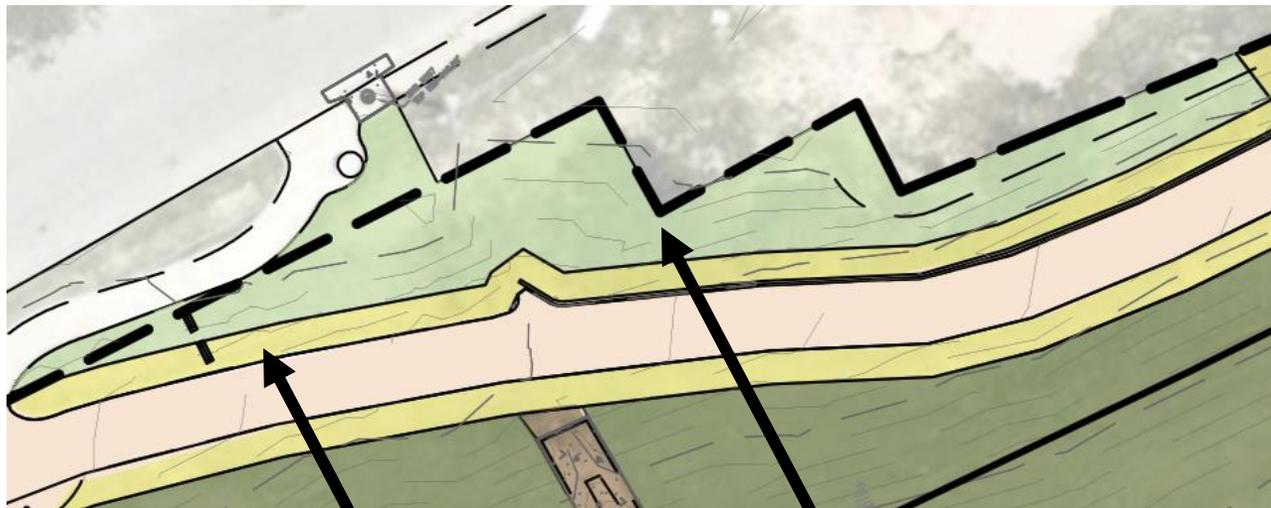


NATIVE TALL GRASS MIX

*Proposed design elements are subject to change



Proposed San Pedro Creek Planting- Native Short Grass



MOWSTRIP

NATIVE SHORT GRASS MIX



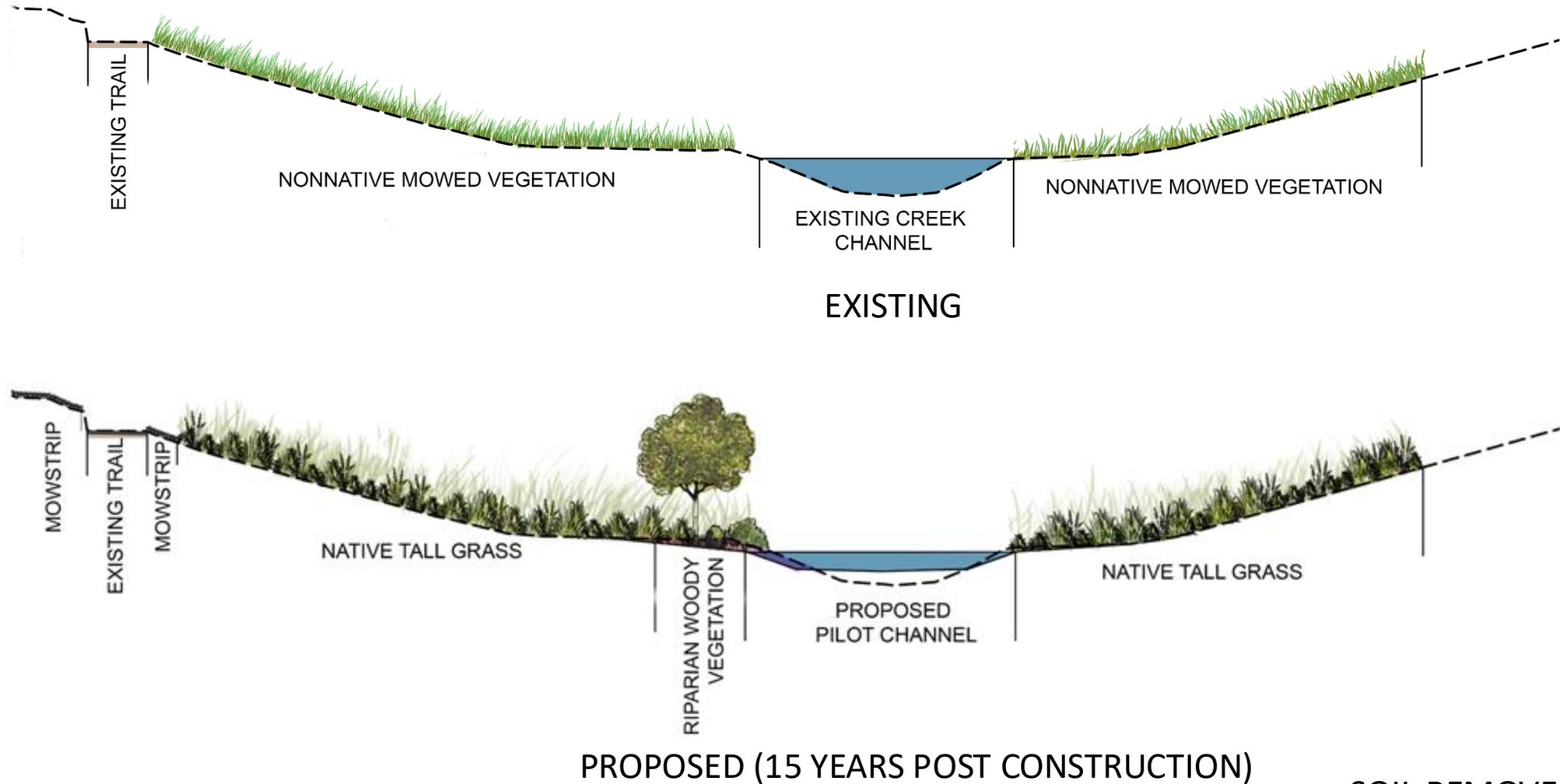
SARA SHORT GRASS MIX



MOWSTRIP

*Proposed design elements are subject to change

Typical San Pedro Creek Sections

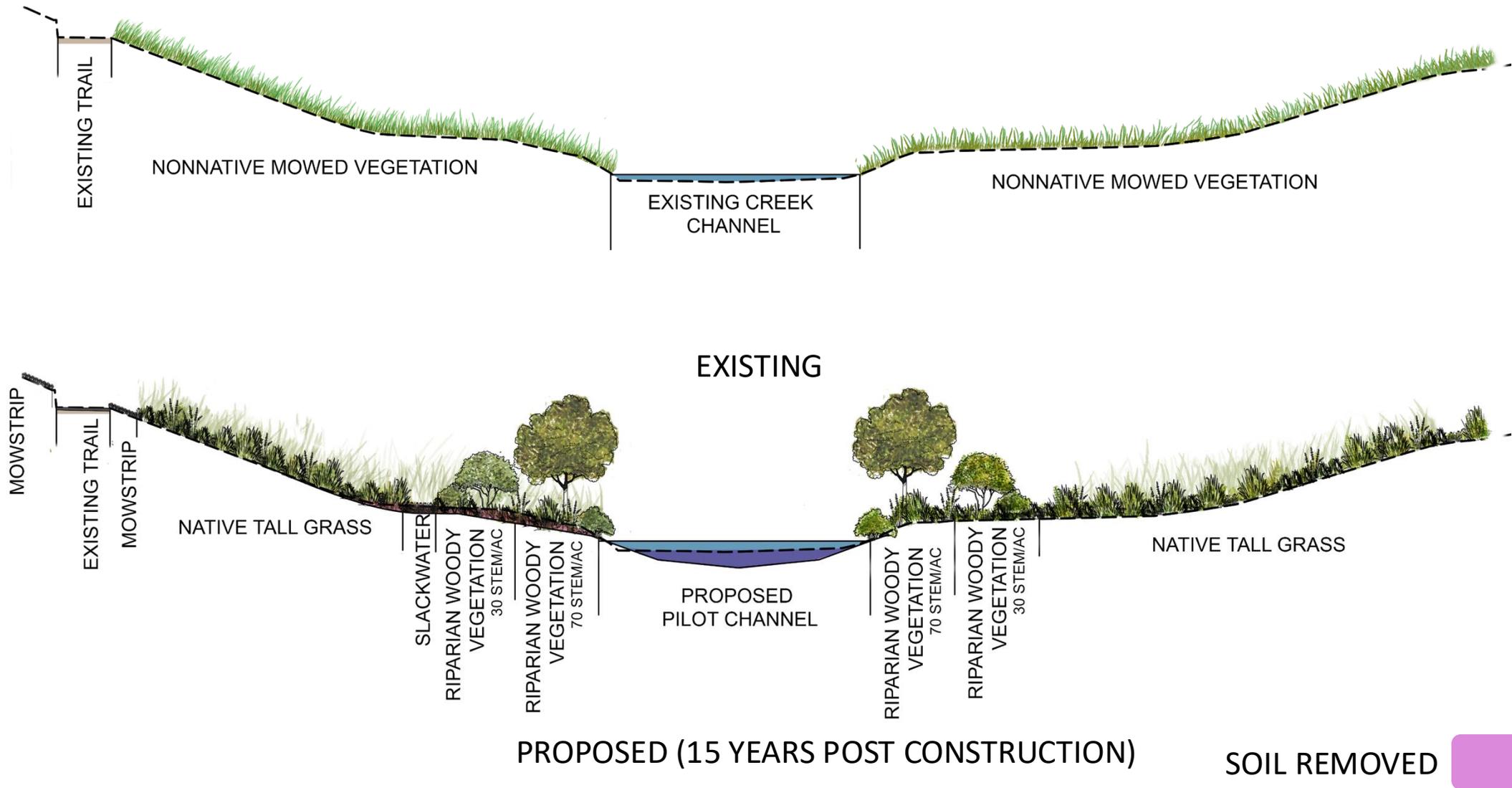


SOIL REMOVED



*Proposed design elements are subject to change

Typical San Pedro Creek Sections



*Proposed design elements are subject to change

San Pedro Creek Today



San Pedro Creek Proposed



*Proposed design elements are subject to change

Vegetation Value

Food for wildlife:

Nectar, foliage, pollen, seeds, nuts, fruits, etc.



Shelter for wildlife

Vegetation Value



Soil and creek bank
stabilization

Shading

Filtration for water
quality

Higher tolerance of heat,
drought, and flooding



Vegetation Growth Over Time



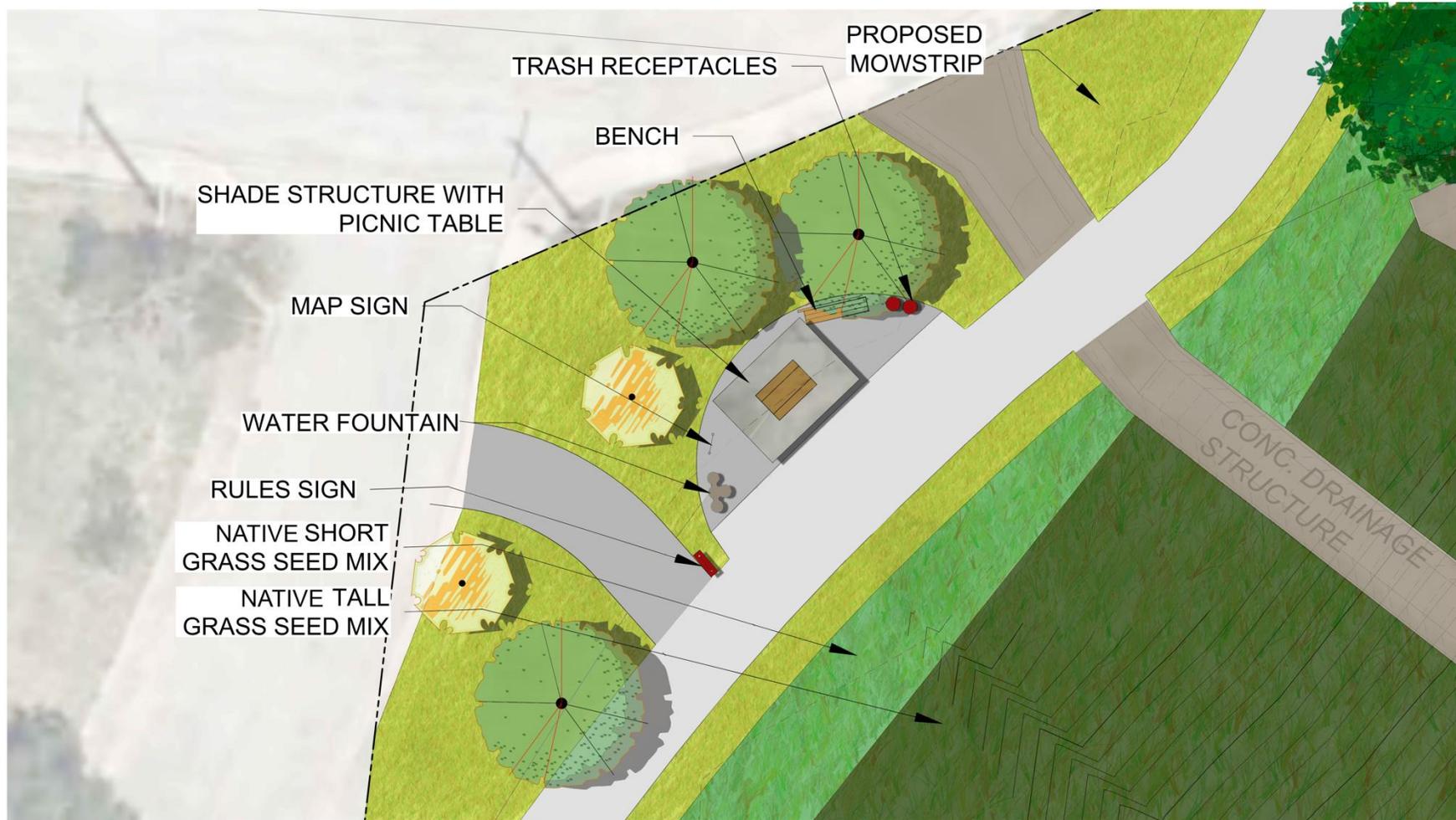
Recreation Amenities

- Interpretive and wayfinding signs
- Shade structures
- Benches
- Water fountains
- Picnic tables
- Trash receptacles



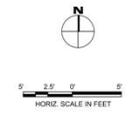
*Proposed designs are subject to change

Proposed Amenity Layout: Picnic Area



5' 2.5' 0' 5'
HORIZ. SCALE IN FEET

Proposed Amenity Layout: Rest Area



*Proposed design elements are subject to change

Future Opportunities

- Trailheads
- Scenic Overlook



Pedestrian Bridge



Biofiltration Features



Dog Mitt Stations

*Proposed designs are subject to change

Part 3: Look Ahead

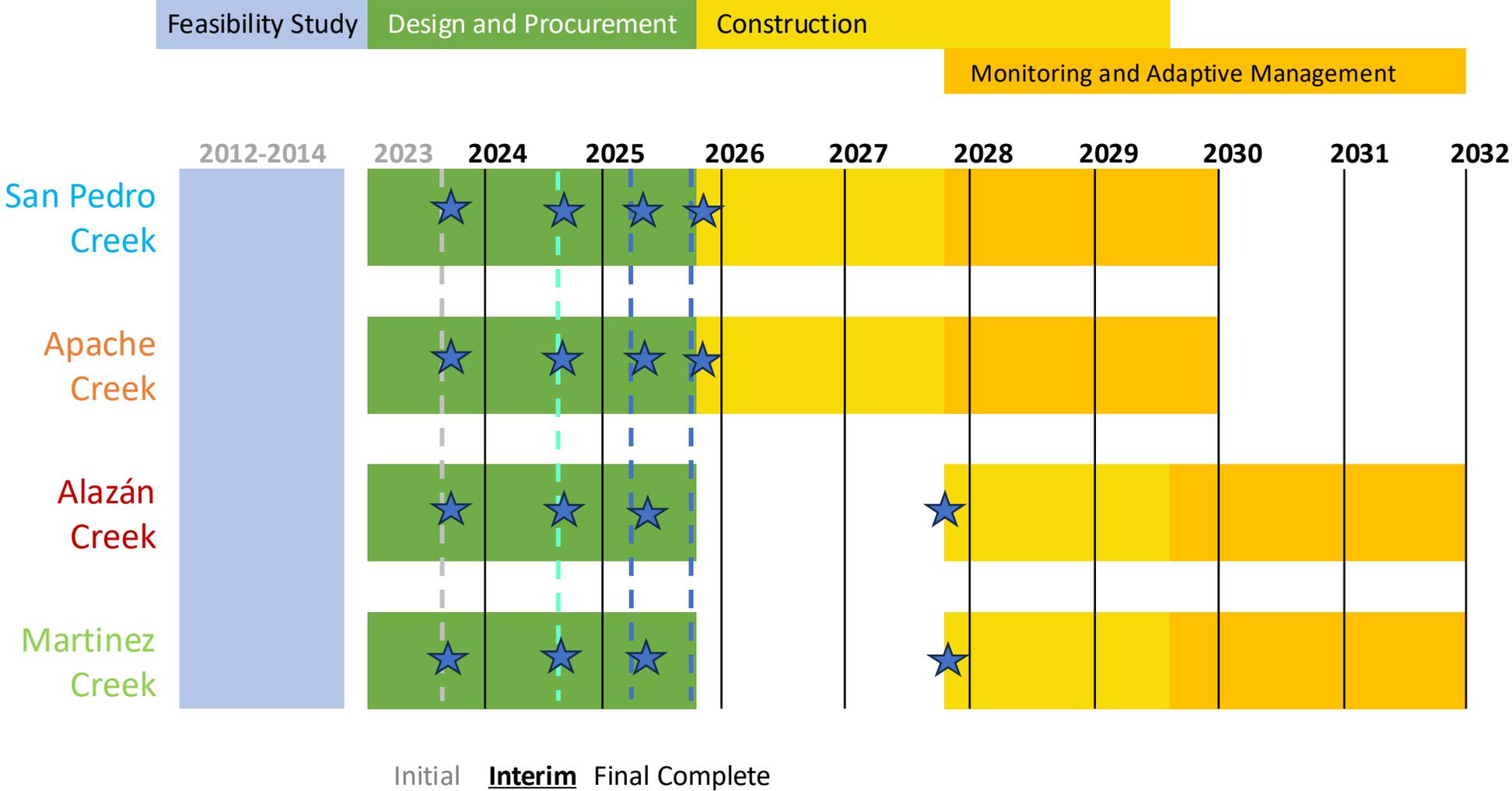
Zia Burns, Program Manager

Andrew Park, Program Manager



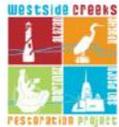
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Proposed Schedule*



*Proposed schedule subject to change

★ Public Engagement



NEPA Overview and Partnerships

Cultural

- Surveys (Architectural and Archeological) of base area completed
- Inclusive consulting with 16 parties
- Draft report expected in Fall of 2024
- Additional survey and analysis will be required with betterments

Environmental

- Continue coordination with stakeholders and application of federal, state, and local regulations.

Ways to Participate in the Design Process

- Follow project updates online at westsidecreeks.com
 - Presentations posted online in English and Spanish
 - Fill out online comment form
- Attend in-person Information Session
 - View presentation
 - Fill out comment card
 - View poster boards and ask questions
 - Posters and Experts available to answer questions
- Attend Westside Creeks Oversight Committee Meetings
 - Next: November 19, 2024
 - RA Boardroom 6 PM



Join Us This Week

You're invited to the following project community events:

Alazán and Martinez Presentation

Wednesday, 10/9

6-7:30 PM

Alazán Apache Courts, 1011 Brazos St.



Open House - All Creeks

Thursday, 10/10

2-5 PM

Bazan Library, 2200 W. Commerce St.



Thank you!

Please join us at the poster boards

Refreshments provided

Contact Information



**US Army Corps
of Engineers®**

US Army Corps of Engineers
Public Affairs Office

Phone number: 817-886-1306
westsidecreeks@usace.army.mil

CESWF-PA

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Public Outreach

westsidecreeks@sariverauthority.org

