Valley Water

Clean Water • Healthy Environment • Flood Protection

Thank you for joining us.
We will be starting our meeting shortly.

Zoom Webinar Instructions

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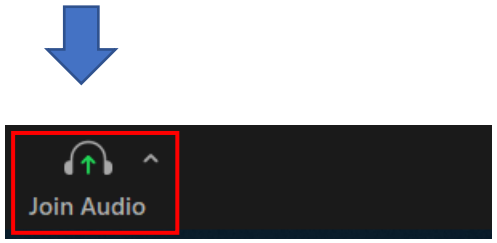

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- Check your invite/email for call-in number and meeting ID
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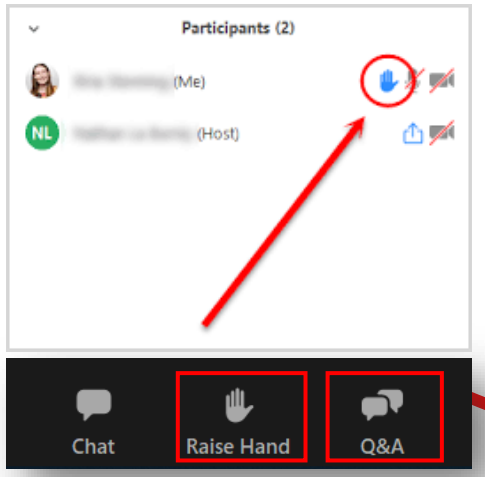
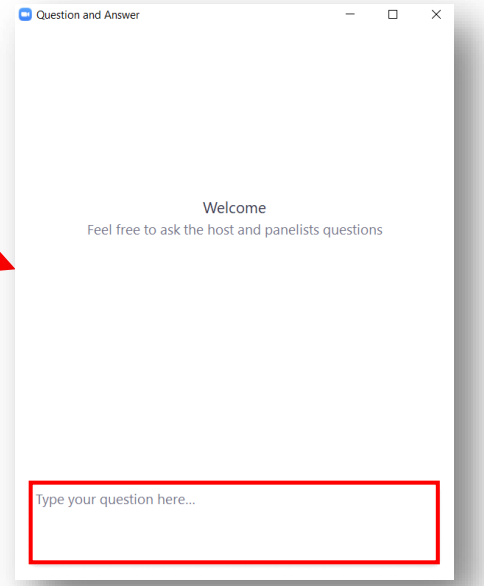
Ask a Question

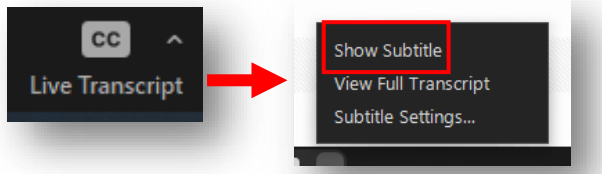


After we enable your mic, you have to unmute yourself before you verbally ask your question.

If only on phone:
*Press *9 to raise your hand if*
*Press *6 to mute/unmute yourself.*



Enable Closed Captions/ Live Transcript



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More information on the Water Supply Master Plan can be found at ***https://delivr.com/2st85*.**

For any questions please contact **Jing Wu** at **jwu@valleywater.org.**

WATER SUPPLY
MASTER PLAN 2050

The Water Supply Master Plan is Valley Water's guiding document for long-term water supply investments to ensure water supply reliability for Santa Clara County. Updated about every five years, this long-range plan assesses future countywide demands and evaluates and recommends water supply and infrastructure projects to meet those demands to achieve Valley Water's level of service goal through the planning horizon. The Water Supply Master Plan 2050 extends the planning horizon to 2050. Once developed, the plan will detail Valley Water's investment strategies to provide a safe, clean, and reliable water supply for Santa Clara County.

Lower Guadalupe River Project

Recommended Alternative

Presented by: **Katie Muller**

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Agenda

- Objective: Provide updates on the Lower Guadalupe River Project and share the Recommended Alternative
- Outline
  - Project Background
  - Planning Process
  - Alternatives Evaluation
  - Recommended Alternative
  - Opportunity for questions and feedback

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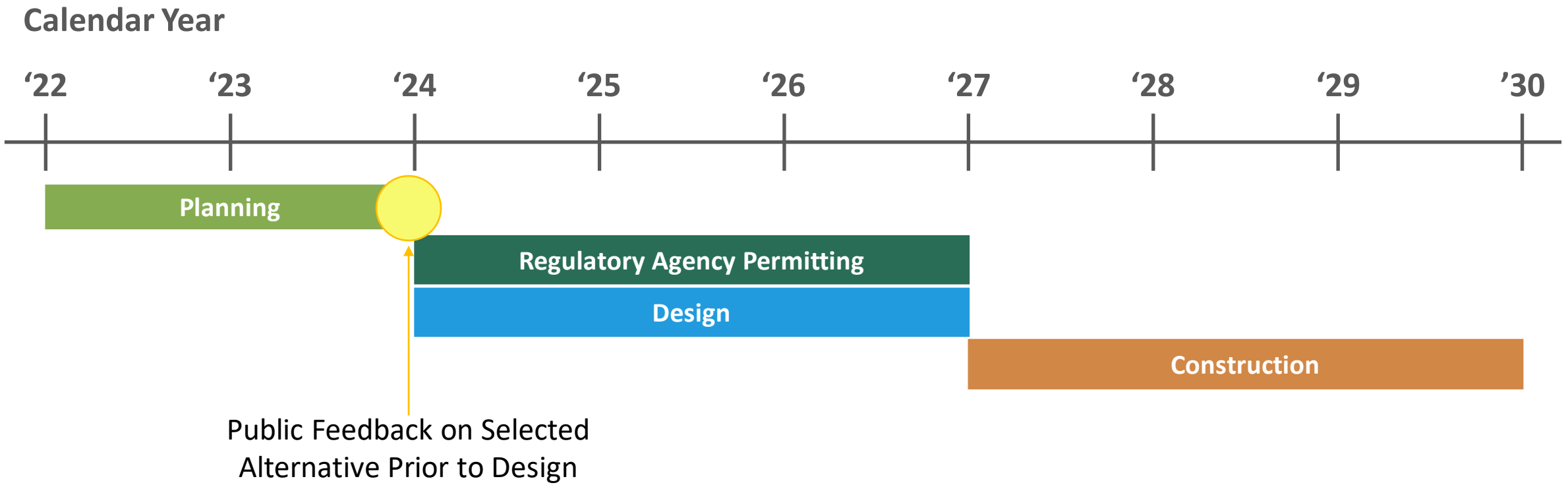
Project Status & Purpose of This Meeting



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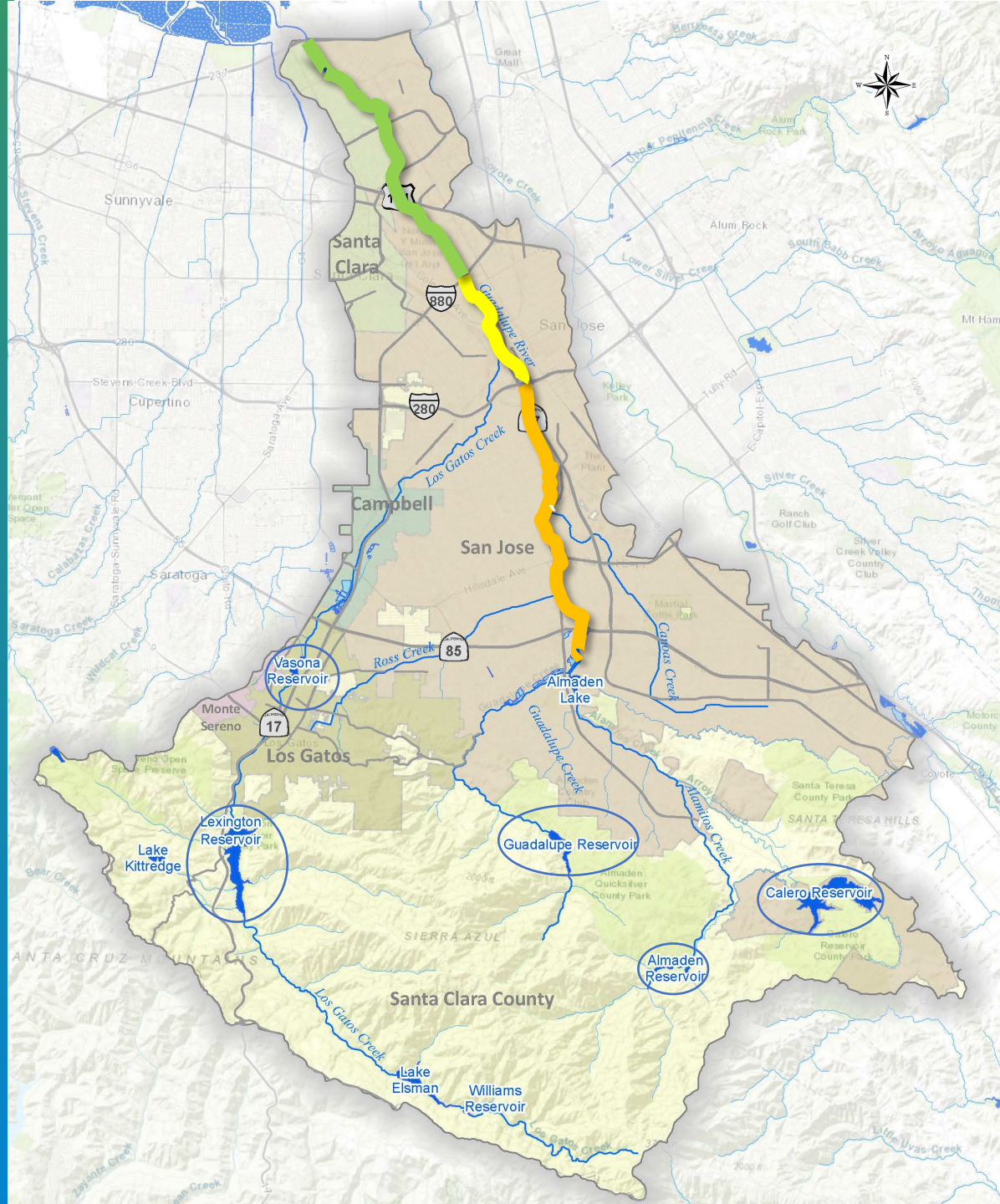
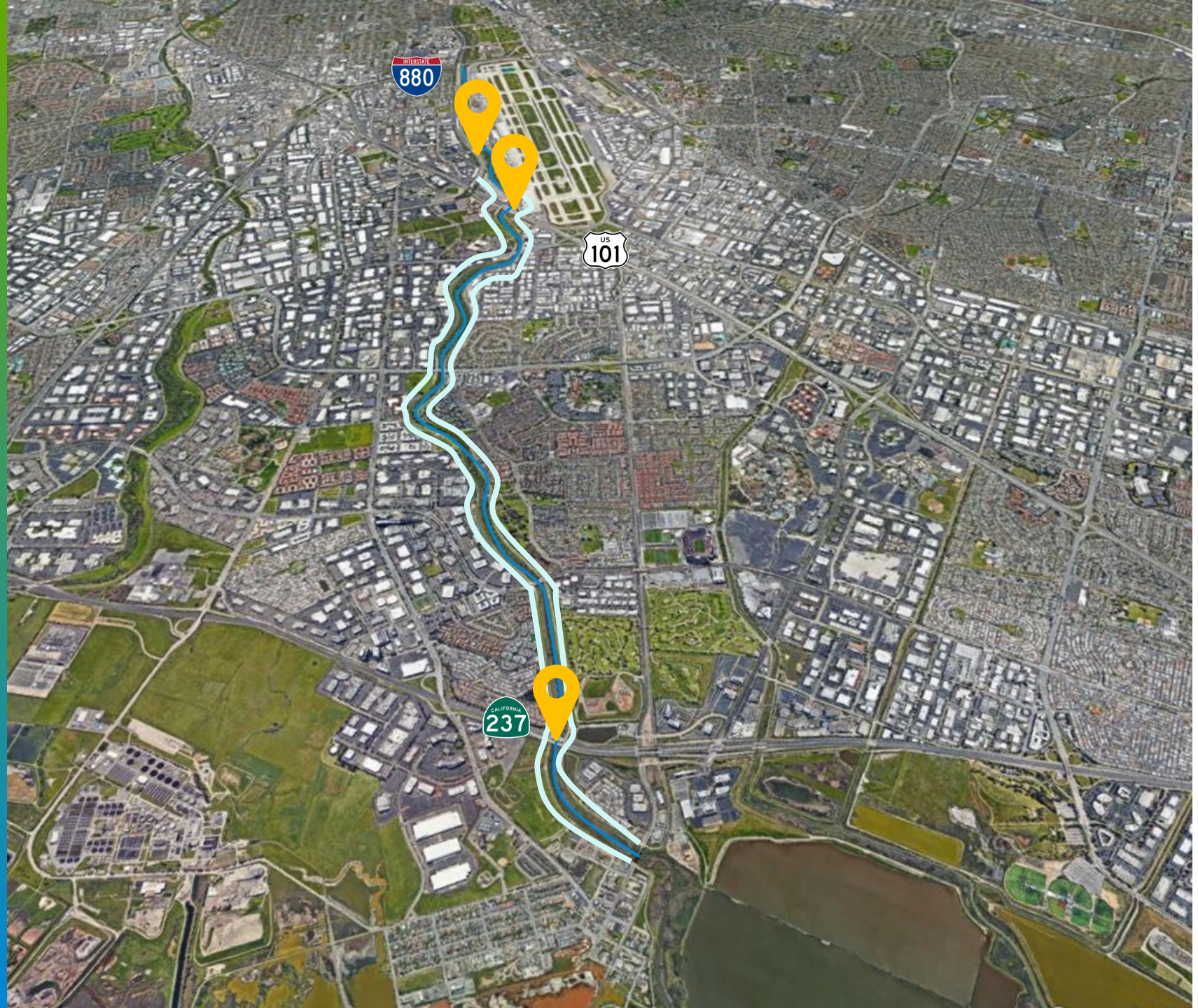
Project History

Guadalupe Watershed

- All rain ends up in the Guadalupe River
- 7 Reservoirs
- Three sections of river:
  - Upper
  - Downtown
  - Lower

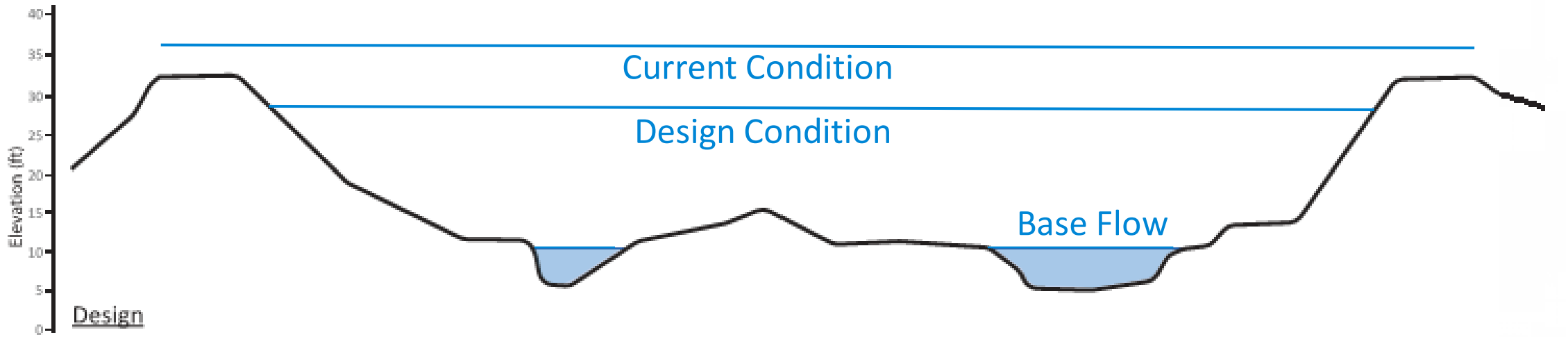




Lower Guadalupe River Project

- Completed 2004
- 100-Year flood protection
- Levees and Floodwalls
- Bridge Improvements

Problem: Insufficient Capacity



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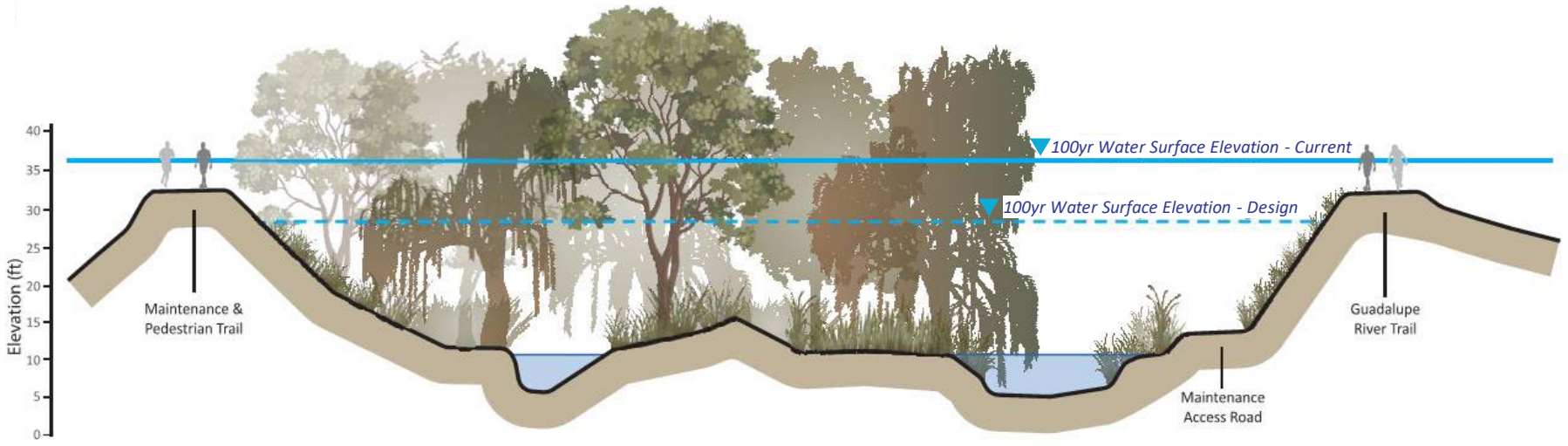
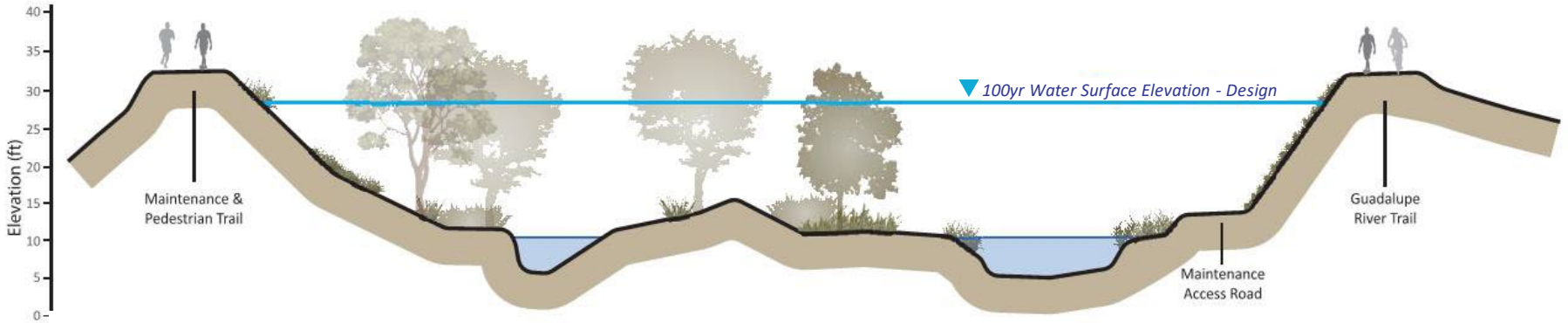
Typical Section: Trimble Road to Montague Expressway

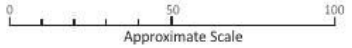
Facing Downstream to Montague Expressway



Current Condition



2004 Design Condition



Preparations for This Winter

Vegetation Removal

Trees cleared from levees and 15 feet from levee toe

Sediment Removal

Sediment removed from side channels to add flow capacity

Lexington Operations

Operate Reservoir for Flood Risk Reduction

Storm Preparedness

Valley Water Field Information Teams (FIT), City Coordination, and Emergency Action Plans

Valley Water

Project Benefits

- Sustainable flood protection that balances environment and capacity
- Trails will be maintained

Objectives

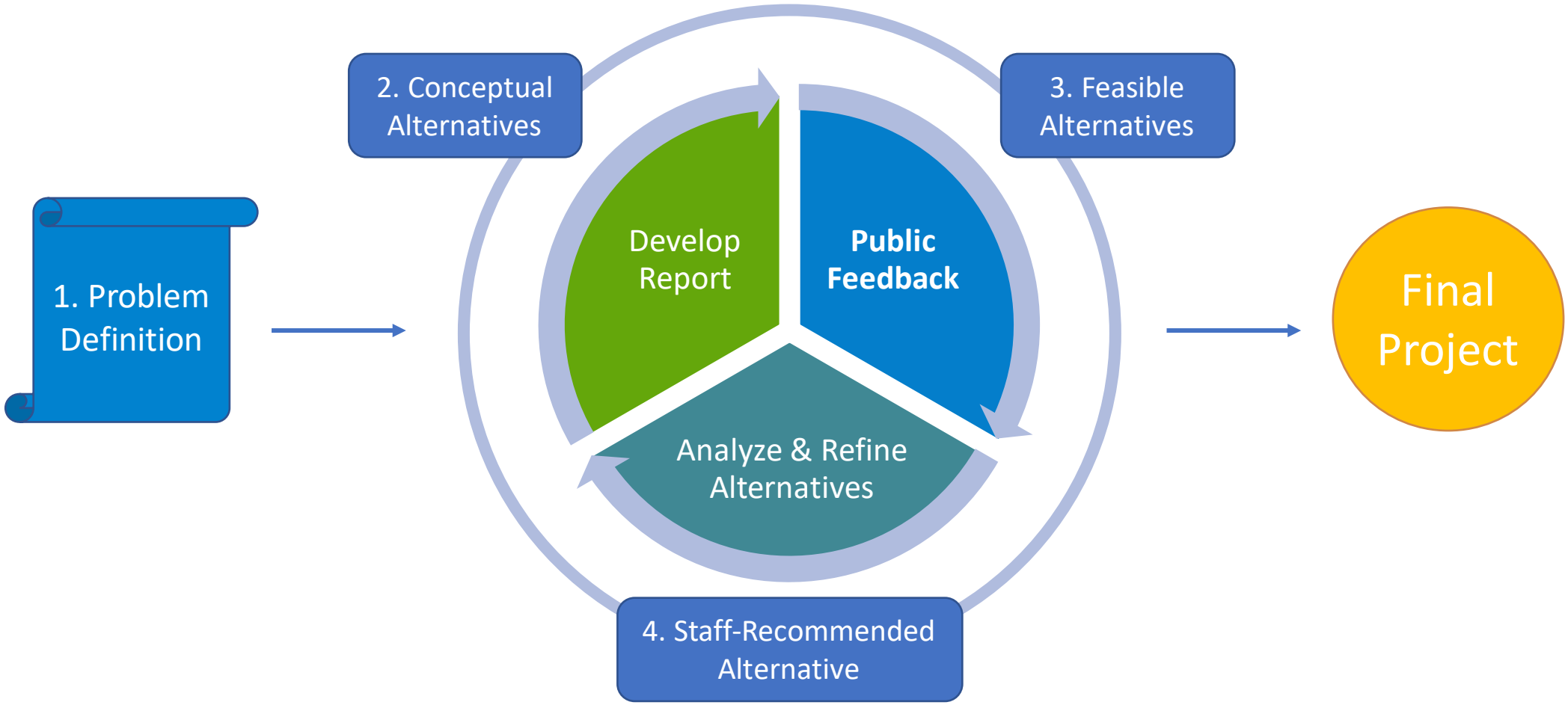
1. Restore level of service
2. Minimize the need for future operations and maintenance activities
3. Maintain and or enhance public recreation and access
4. Obtain community support and participation for the project

Design Criteria

- Hydraulics/ Hydrology
- Operations and Maintenance
- Cost and Schedule
- Vegetation Condition

Planning Process

The Planning Process



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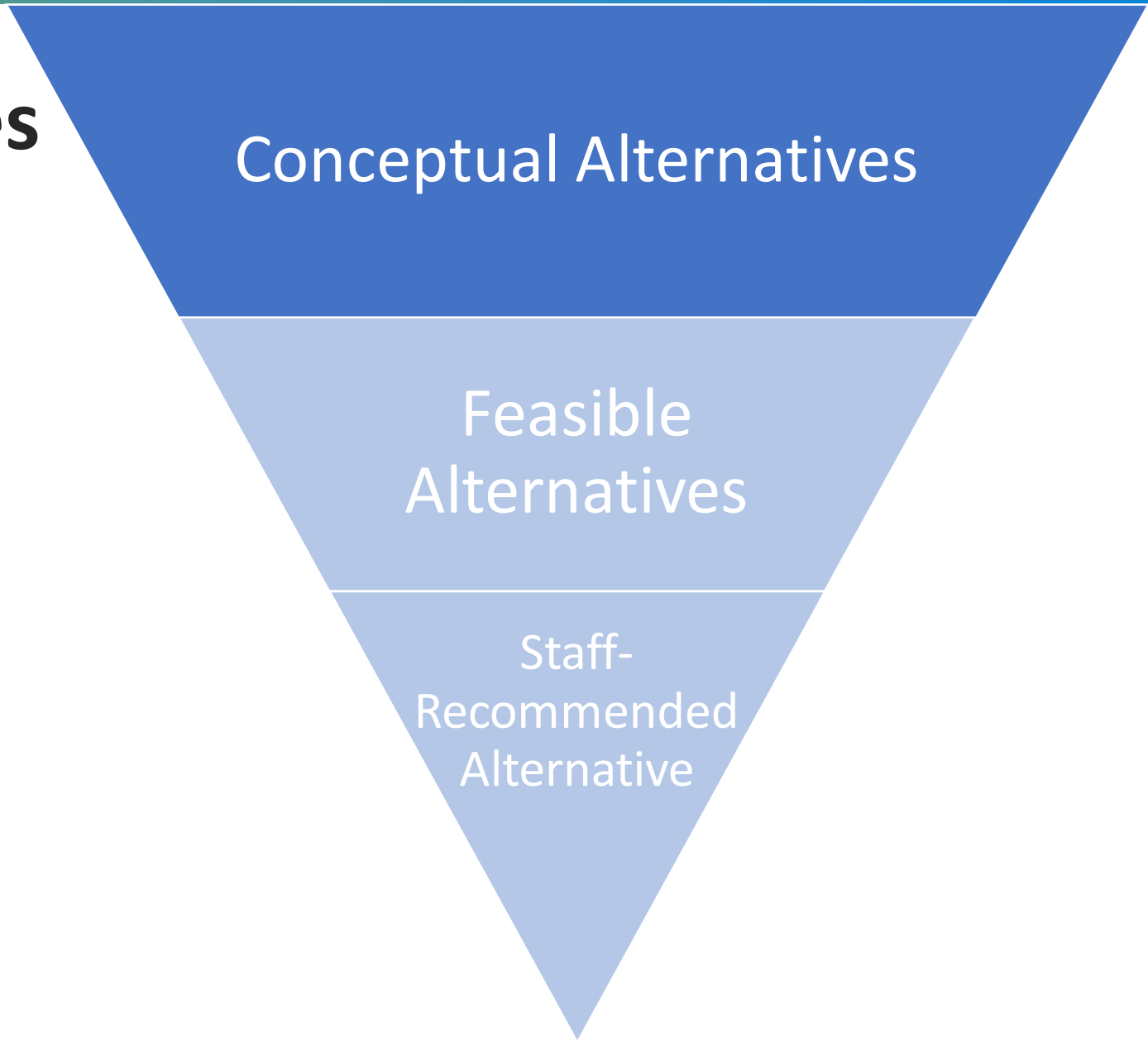
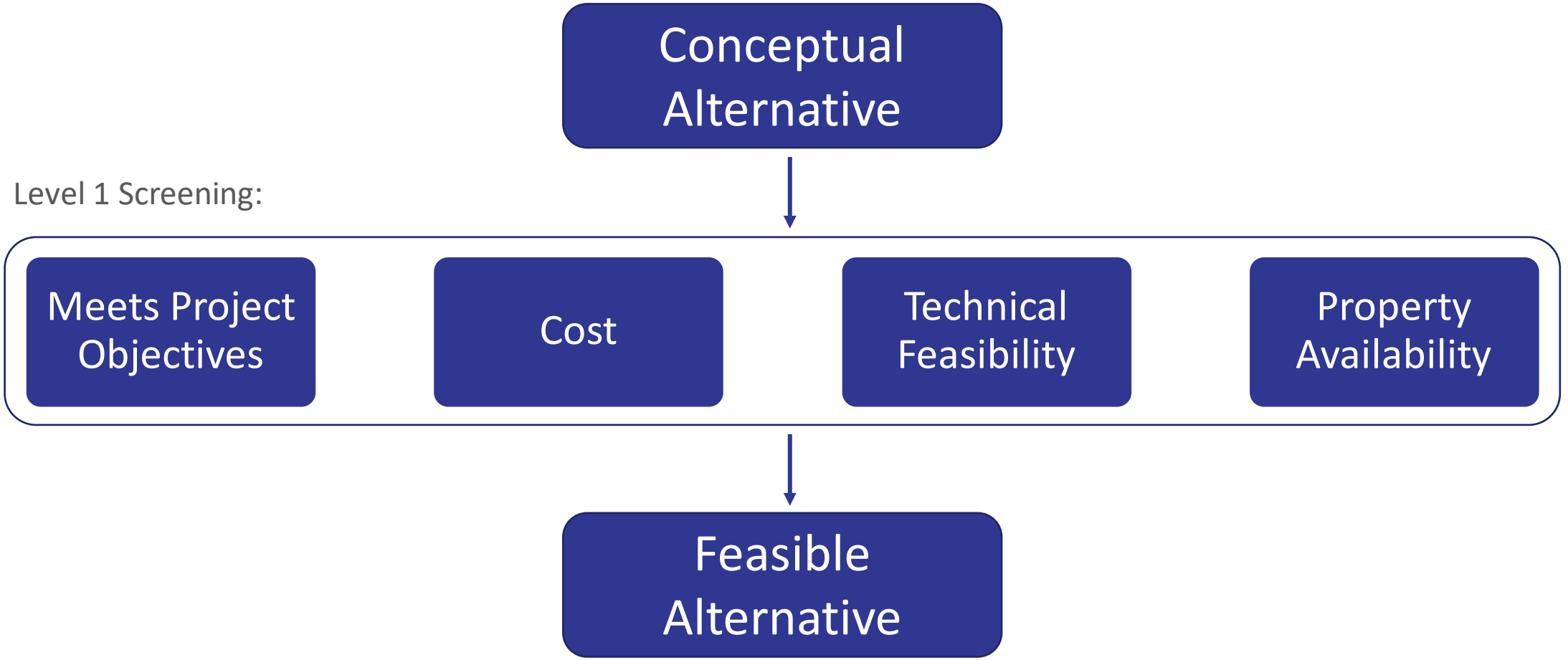
Conceptual Alternatives

- High-level
- Anything within realm of possibility

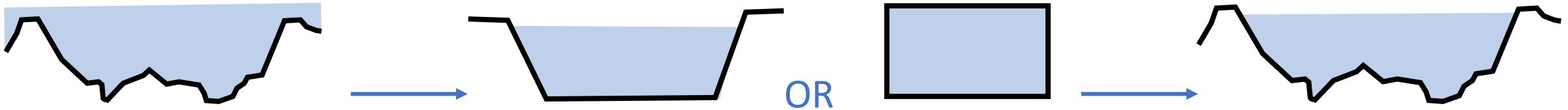
- 19 Alternatives identified



Conceptual Alternatives Screening



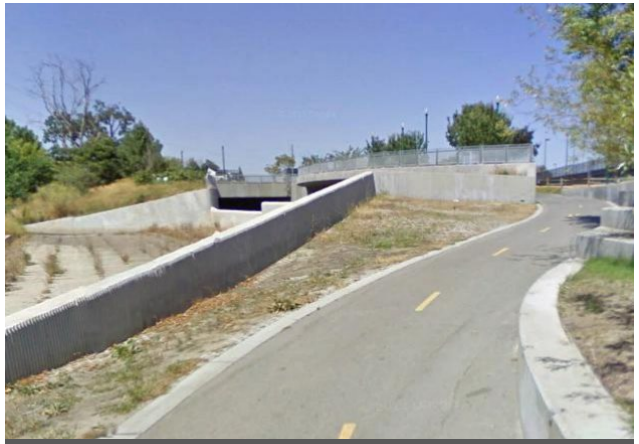
Types of Flood Risk Reduction Elements



Reduce high flows → Large open space to hold flood water

OR

Large bypass pipe (culvert) → Less flow in channel



Bypass Culvert

Detention Basin

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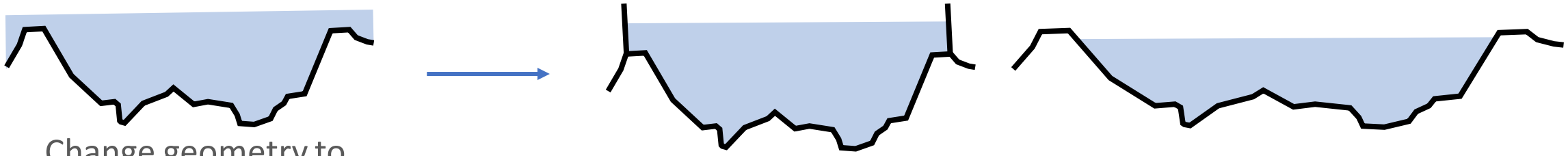
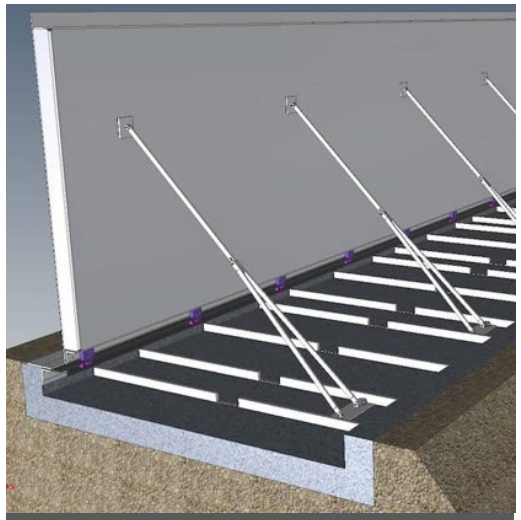
Types of Flood Risk Reduction Elements

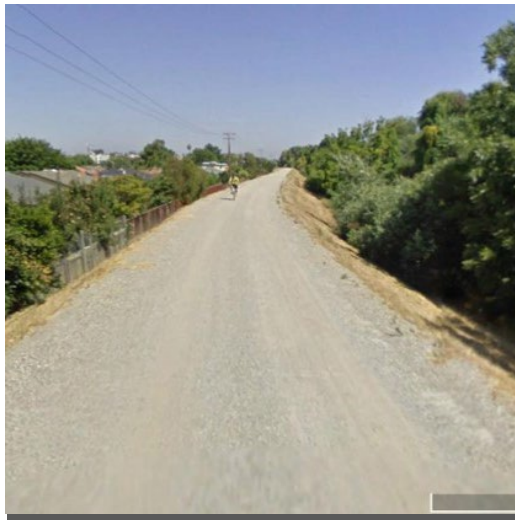


Floodwall

Headwall



Passive Barrier



Levee

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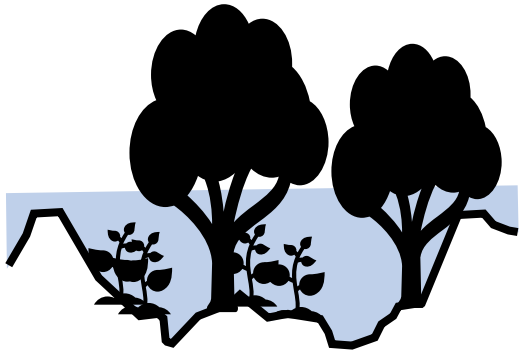
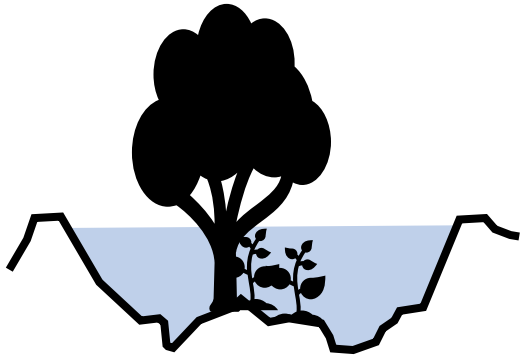
Types of Flood Risk Reduction Elements



Reduce roughness



Water moves faster, has more space

Vegetation Removal

Concrete Paving

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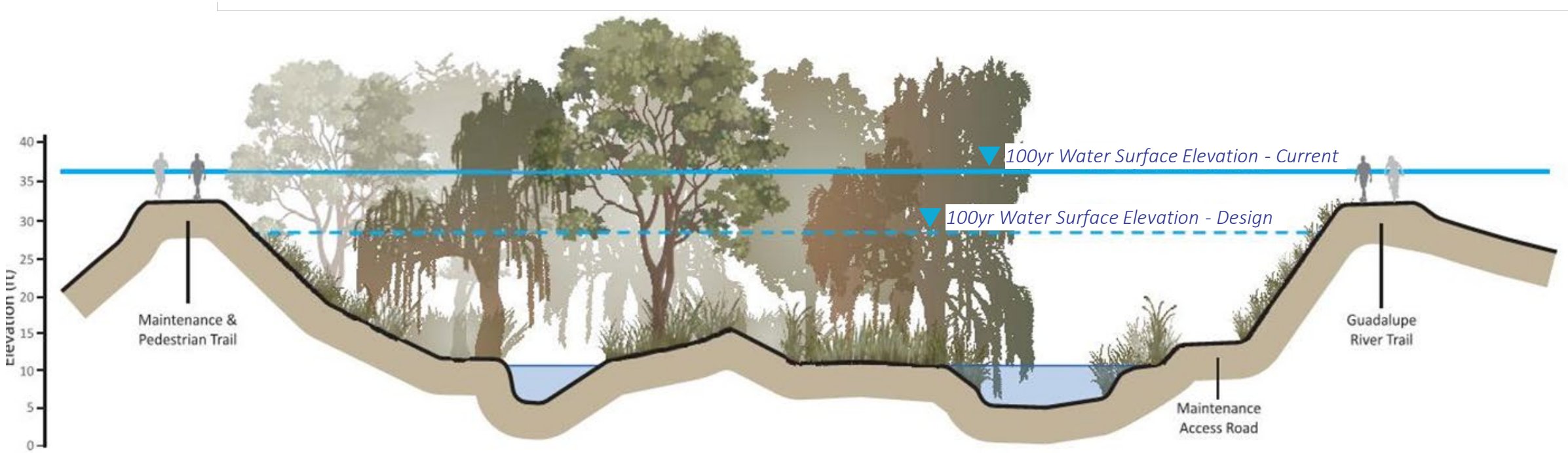
Conceptual Alternative	Meets Project Objectives	Within Project Budget	Technically Feasible	Right-of-Way Availability	Overall
A - No Project	✗	✓	✓	✓	✗
B - Floodwalls and Headwalls	✓	✓	✓	✓	✓
B.1 - Floodwalls, Passive Barriers, and Headwalls	✓	✗	✓	✓	✗
B.2 - Floodwalls, Passive Barriers, Closed Roadways	✓	✓	✓	✓	✓
C - Levees with Retaining Walls, and Headwalls	✓	✓	✓	✓	✓
C.1 - Levees, Floodwalls, and Headwalls	✓	✓	✓	✓	✓
D - 5 Foot Detention, Floodwalls, and Headwalls	✓	✗	✓	✓	✗
D.1 - 25 Foot Detention, Floodwalls, and Headwalls	✓	✗	✓	✓	✗
D.2 - 5 Foot Detention, Less ROW Acquisition	✓	✓	✓	✓	✓
E - Raise Bridges, Floodwalls, and Headwalls	✓	✗	✓	✓	✗
F - Channel Bypass	✓	✗	✓	✓	✗
G - Replace West Levee with Floodwall	✓	✗	✓	✓	✗
H - Add Outlet Capacity to Lexington in New Tunnel	✓	✓	✓	✓	✓
H.1 - Add Outlet Capacity to Lexington in Existing Tunnel	✓	✓	✓	✓	✓
I - Raise Lenihan Dam	✓	✗	✓	✓	✗
J - Re-Operate Lenihan Dam	✓	✓	✓	✓	✓
K - Channel Widening	✓	✗	✓	✗	✗
L - Vegetation Removal	✓	✗	✓	✗	✗
M - Levee Paving	✓	✗	✓	✓	✗

Infeasible Alternative: Remove Vegetation

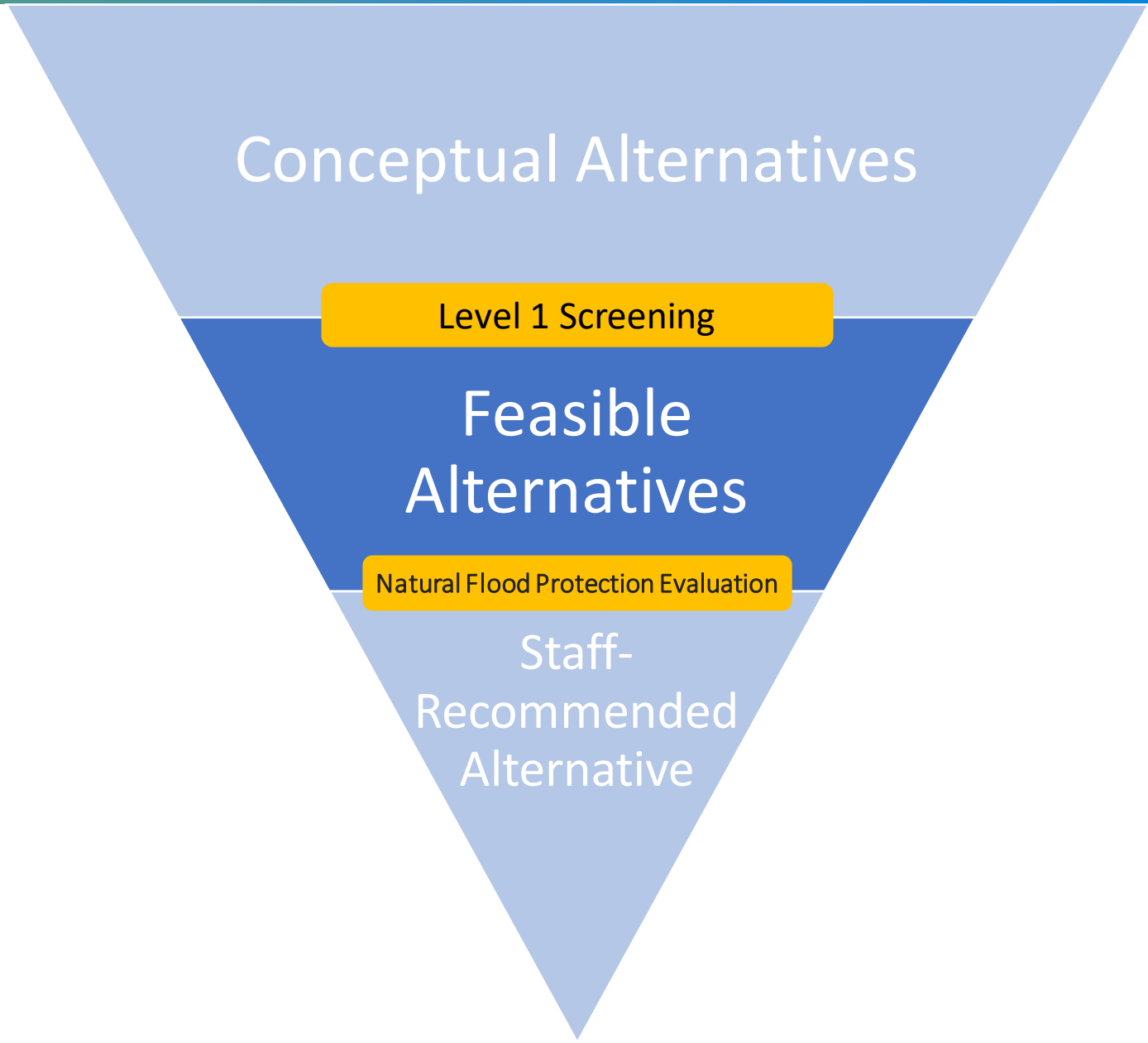


Feasible Alternatives

Feasible Alternatives

- More detailed
- Must be practical
- Must pass screening

- 8 Alternatives identified



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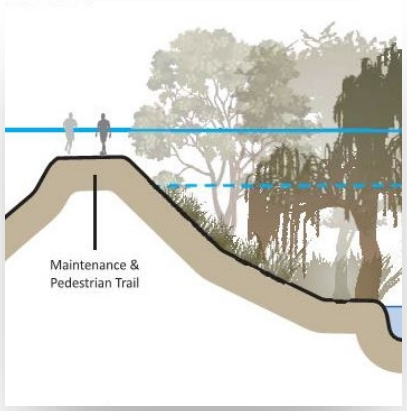
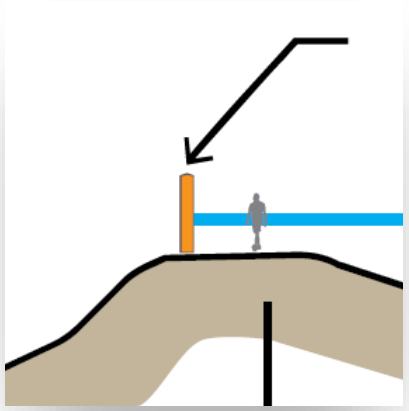
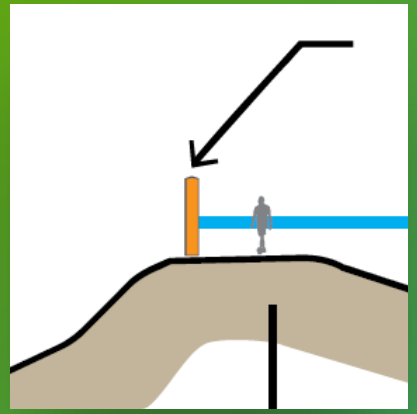


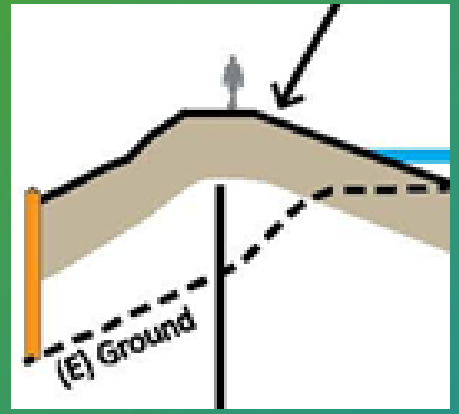
No Project



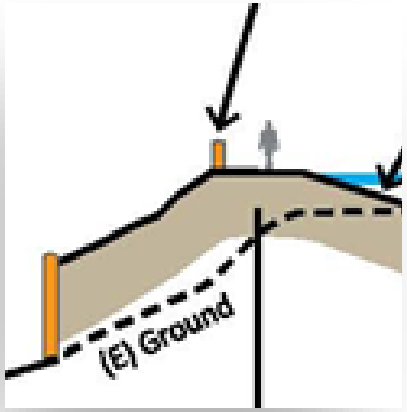
Floodwalls/Headwalls



Floodwalls/Close Bridges



Raise Levees



Floodwalls + Levees

Detention Basin

Upsize Lexington Outlet

Re-Operate Lexington

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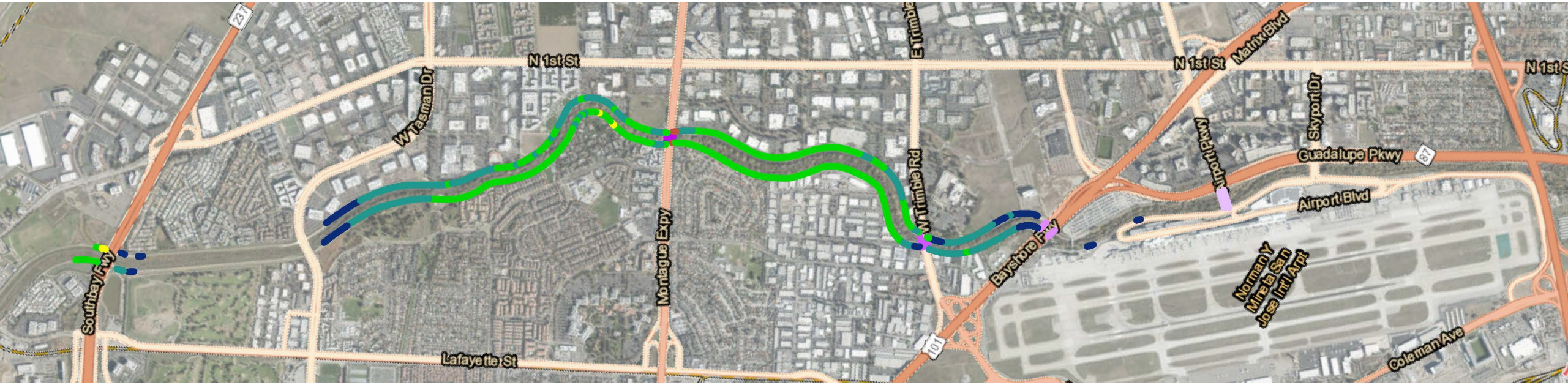
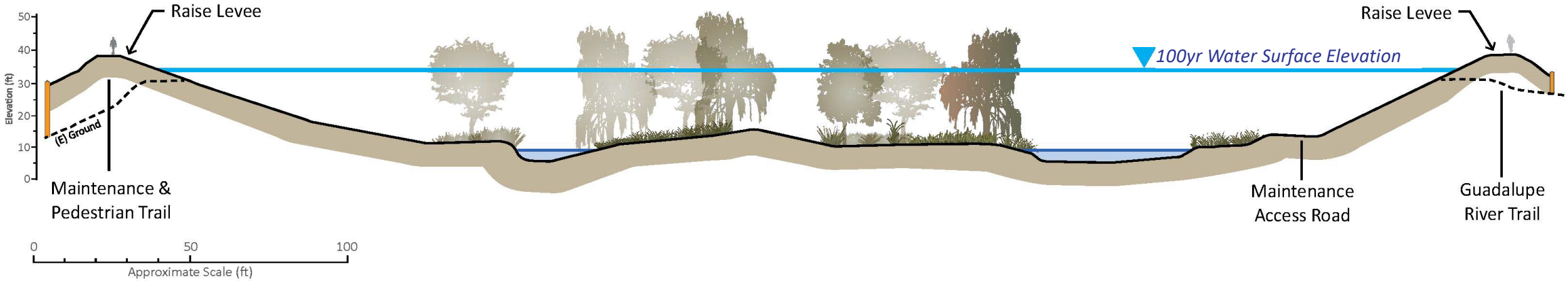
Natural Flood Protection Evaluation

Feasible Alternative	Meets Project Objectives	Sustainable Maintenance	Cost	Ecological Benefits	Community Benefits
No Project	✗	✗	$		
Floodwalls/Headwalls	✓	✓	$$$	🌳🌳	👤👤
Floodwalls/Close Bridges	✓	✓	$$$	🌳🌳	👤👤
Raise Levees, Improve Bridges	✓	✓	$$$$	🌳🌳🌳	👤👤👤
Floodwalls + Levees	✓	✓	$$$$	🌳🌳	👤👤👤
Detention Basin	✗	✗	$$$$$	🌳🌳🌳	👤👤👤
Upsize Lexington Reservoir Outlet	✗	✓	$$$$	🌳🌳🌳🌳	👤👤👤
Re-Operate Lexington Reservoir	✗	✓	$$	🌳🌳🌳🌳	👤👤👤

Recommended Alternative

Recommended Alternative – Raise Levees, Improve Bridges





Representative Photos

Levee

Raise 1 to 3 feet
Maintain trail access

Bridge Headwall

Up to 4 bridge modifications
4 to 7 feet total height

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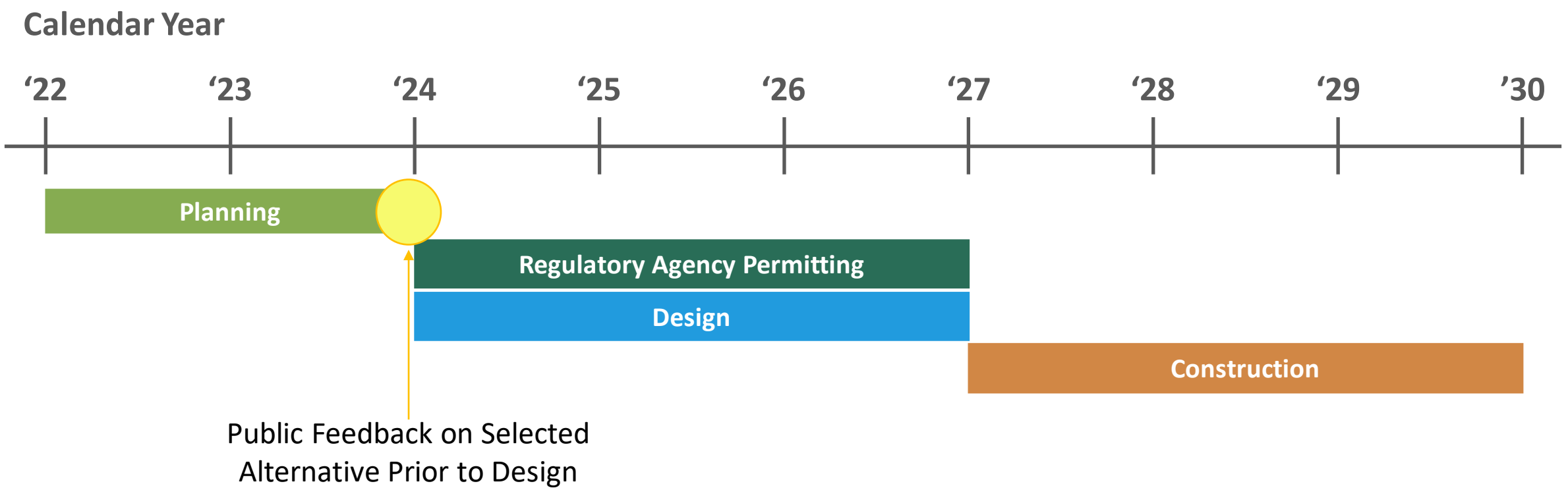
Next Steps



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Questions?

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