

An aerial photograph of a coastal city, likely Los Angeles, with a dense urban grid and a prominent coastline. The left side of the image is covered by a solid blue overlay, which serves as a background for the text.

Arroyo Seco Projects

Infrastructure Program

Fiscal Year 2023-2024

Watershed Area – Upper Los Angeles River

Project Lead – City of South Pasadena

Presenter Names – Ted Gerber & Anteneh Tesfaye

Previously Awarded TRP – Yes



Project Overview

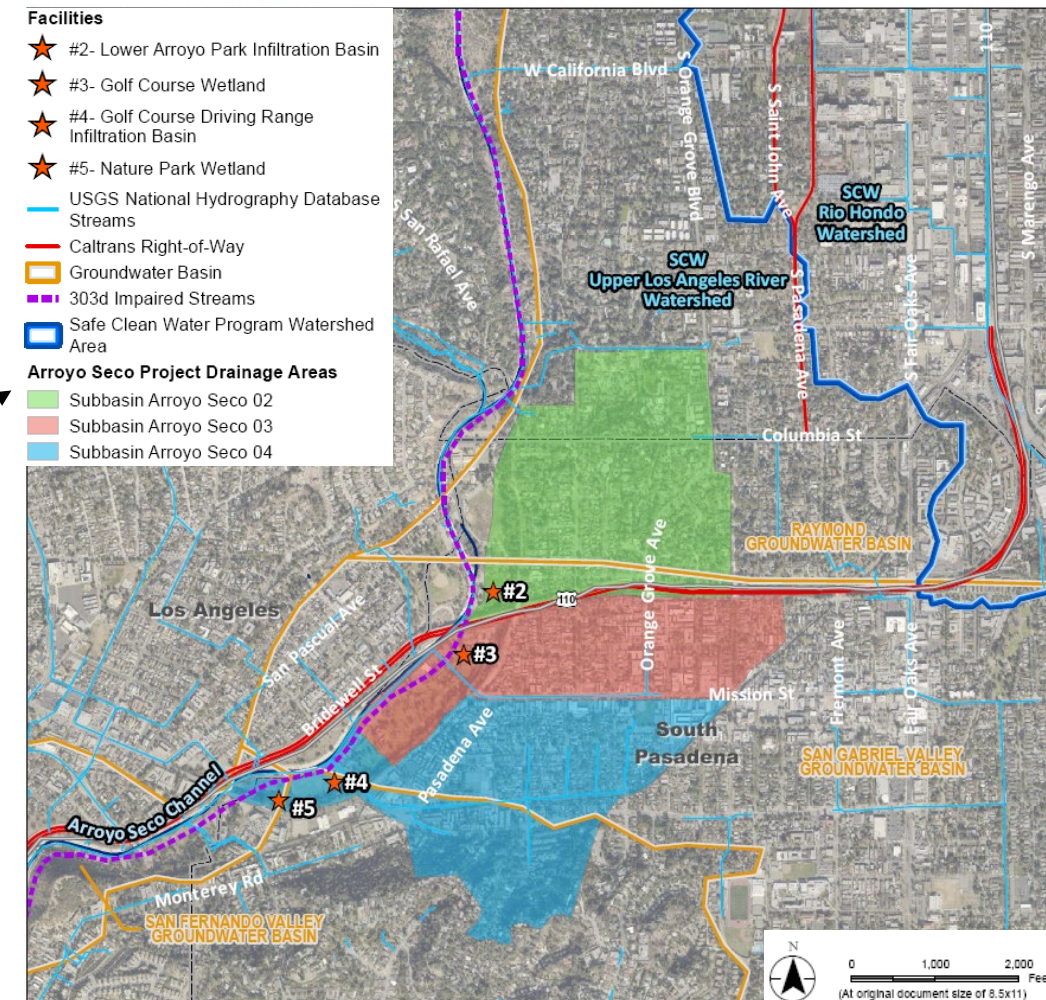
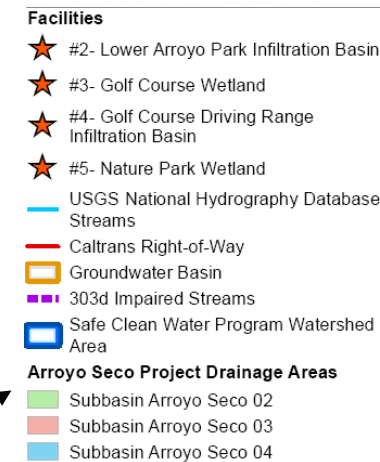
Three regional stormwater capture & treatment facilities located within open space near the Arroyo Seco Channel in South Pasadena.

- Primary Objective
 - Capture and/or treat stormwater runoff and dry weather flows to achieve compliance with the EWMP goals.
- Secondary Objectives
 - Enhance water supply by providing opportunities for groundwater recharge through infiltration
- Project Status: Planning, Design, Construction
- Total Funding Requested: \$33,995,086.06





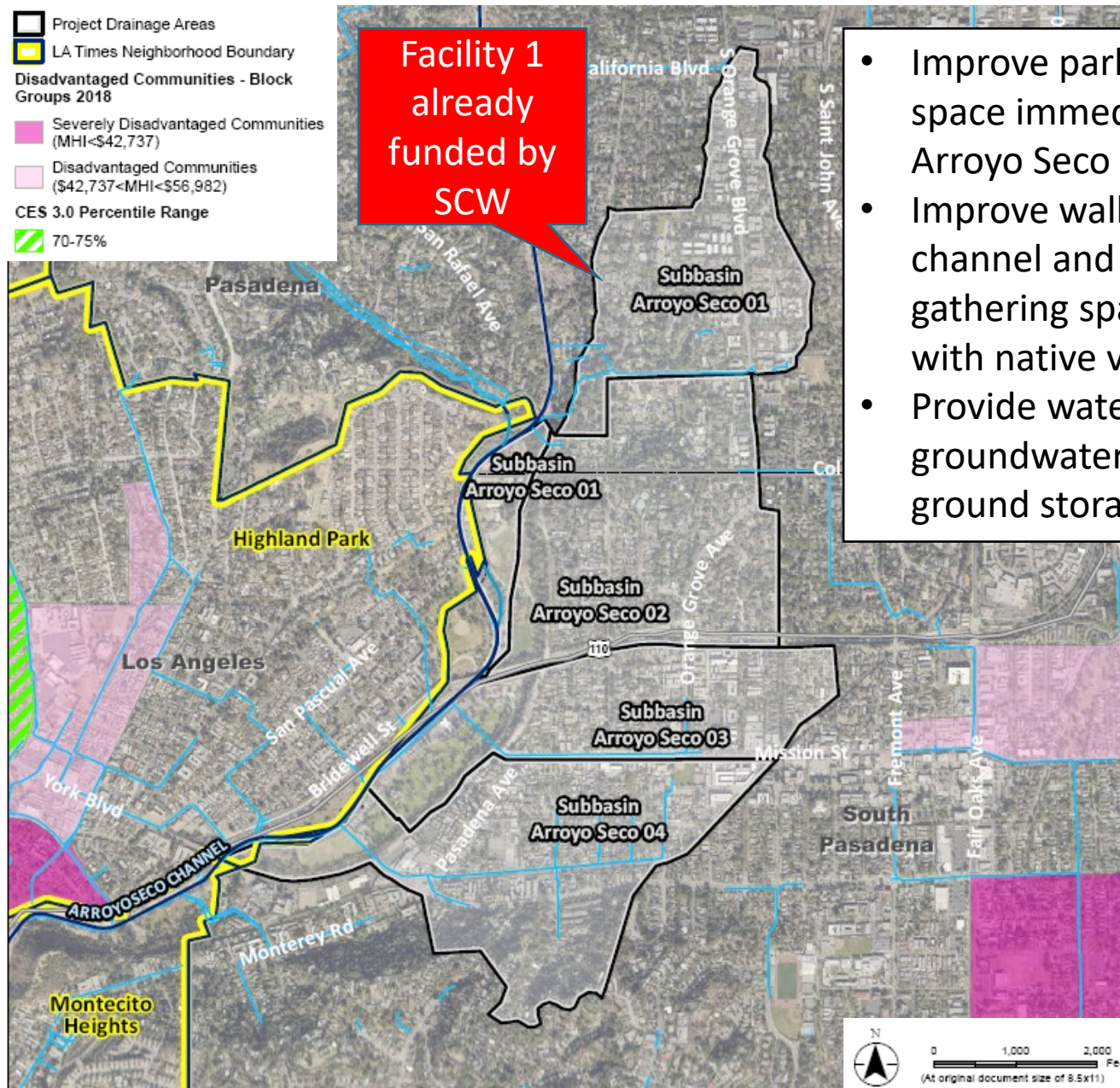
Project Location



- Proposed facilities are located along the Arroyo Seco Channel within an existing sports field and park, golf course, driving range and nature park with open space to develop infiltration galleries and wetlands.



Disadvantaged Community Map



- Improve park space and golf course space immediately adjacent to the Arroyo Seco Channel
- Improve walking trail alongside the channel and establishment of gathering spaces and rest areas with native vegetation and trees.
- Provide water supply benefits by groundwater recharge and above-ground storage



Project Background

- Project (Lower Arroyo Park) was mentioned in ULAR EWMP (2016).
- Then, it was modified as a set of projects proposed for funding to conduct a Feasibility Study under the SCW TRP and approved under the ULAR WASC SIP in December 2019.
- City of South Pasadena will have
 - enhanced water supply through infiltration and treatment
 - enhanced park space, soccer fields, Arroyo Seco Golf Course
 - increased drought tolerant/native landscaping
 - New native vegetation, extended walking paths and educational signage

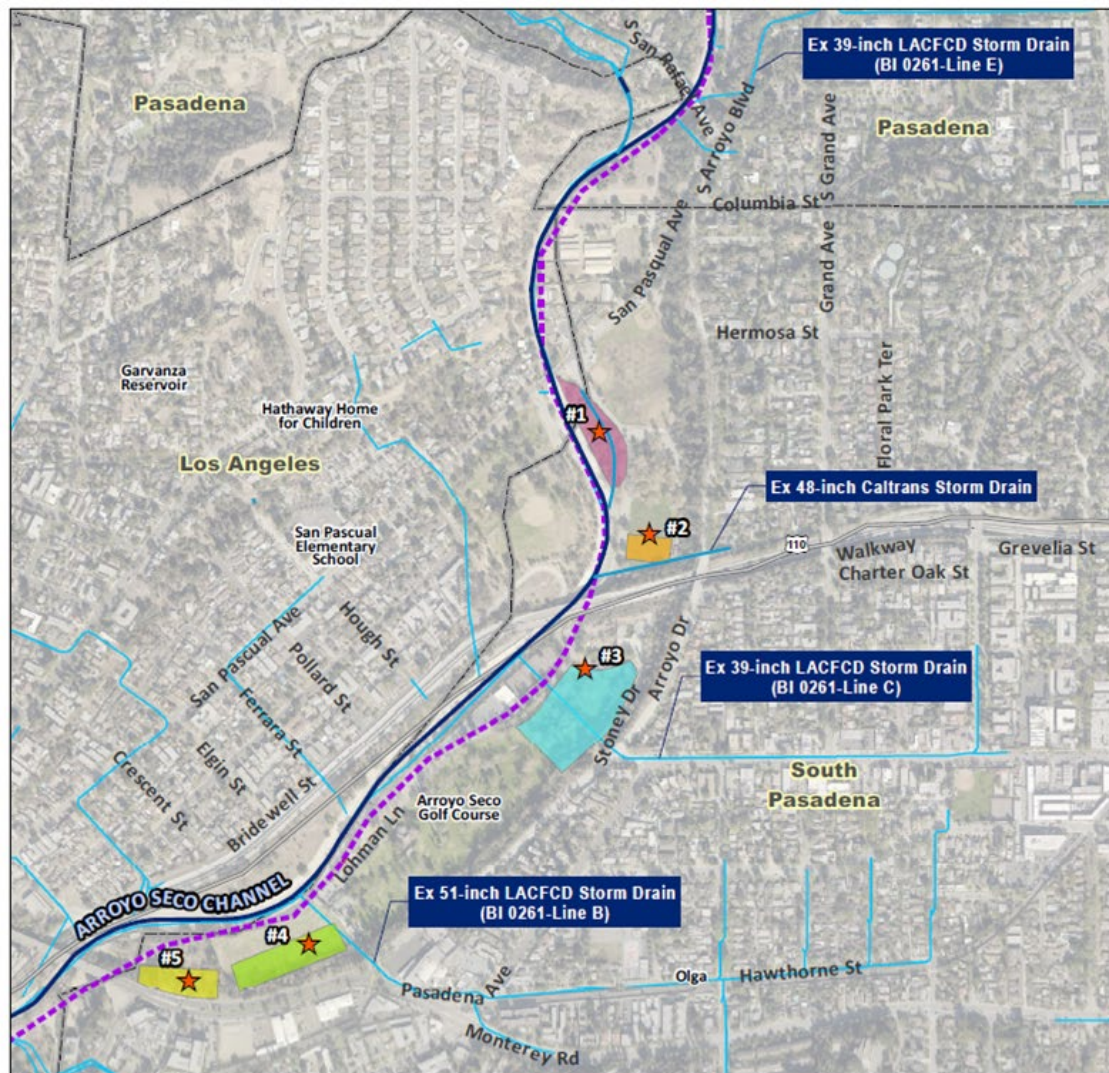


Partners

- City of South Pasadena and LACFCD are implementation partners already identified.
- Caltrans and Active SGV have expressed support for the project.
- Received a letter of concurrence from the Flood Control District on 7/28/2022.
- Appropriate vector control district (GLACVCD) has not been notified about the project concept.

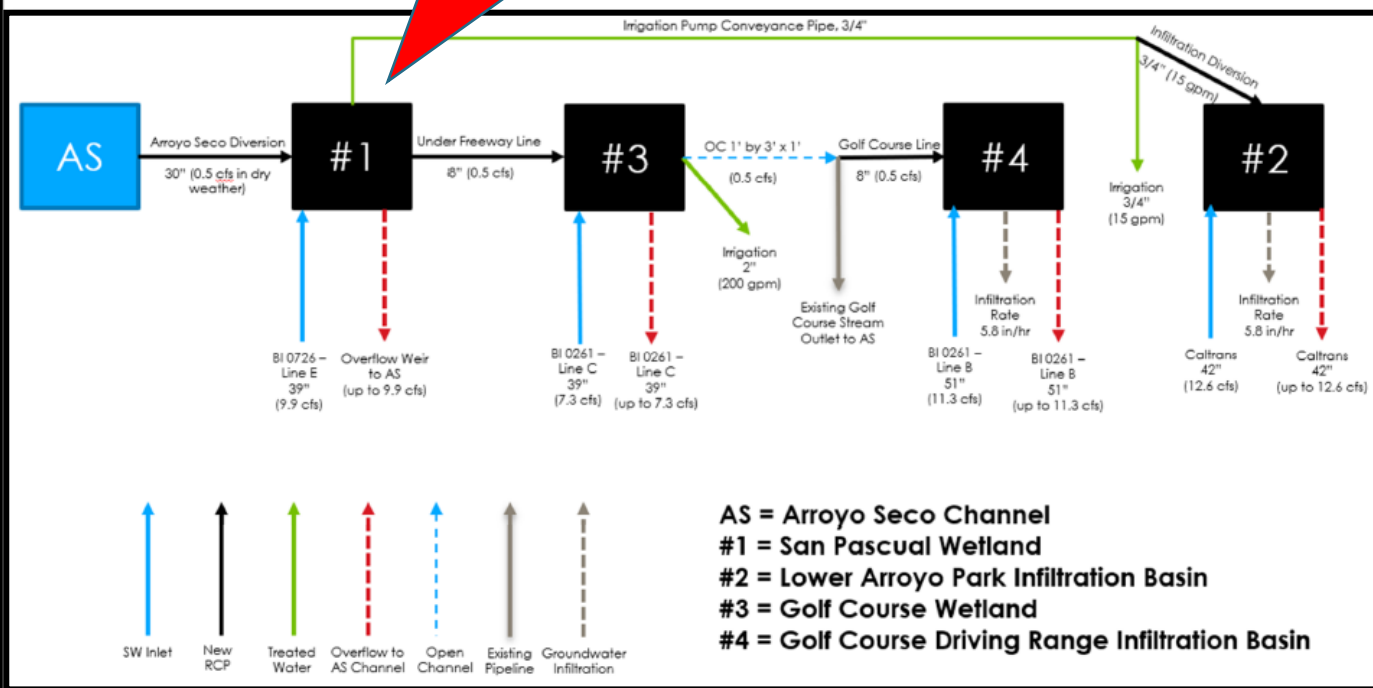


Project Details - Overview



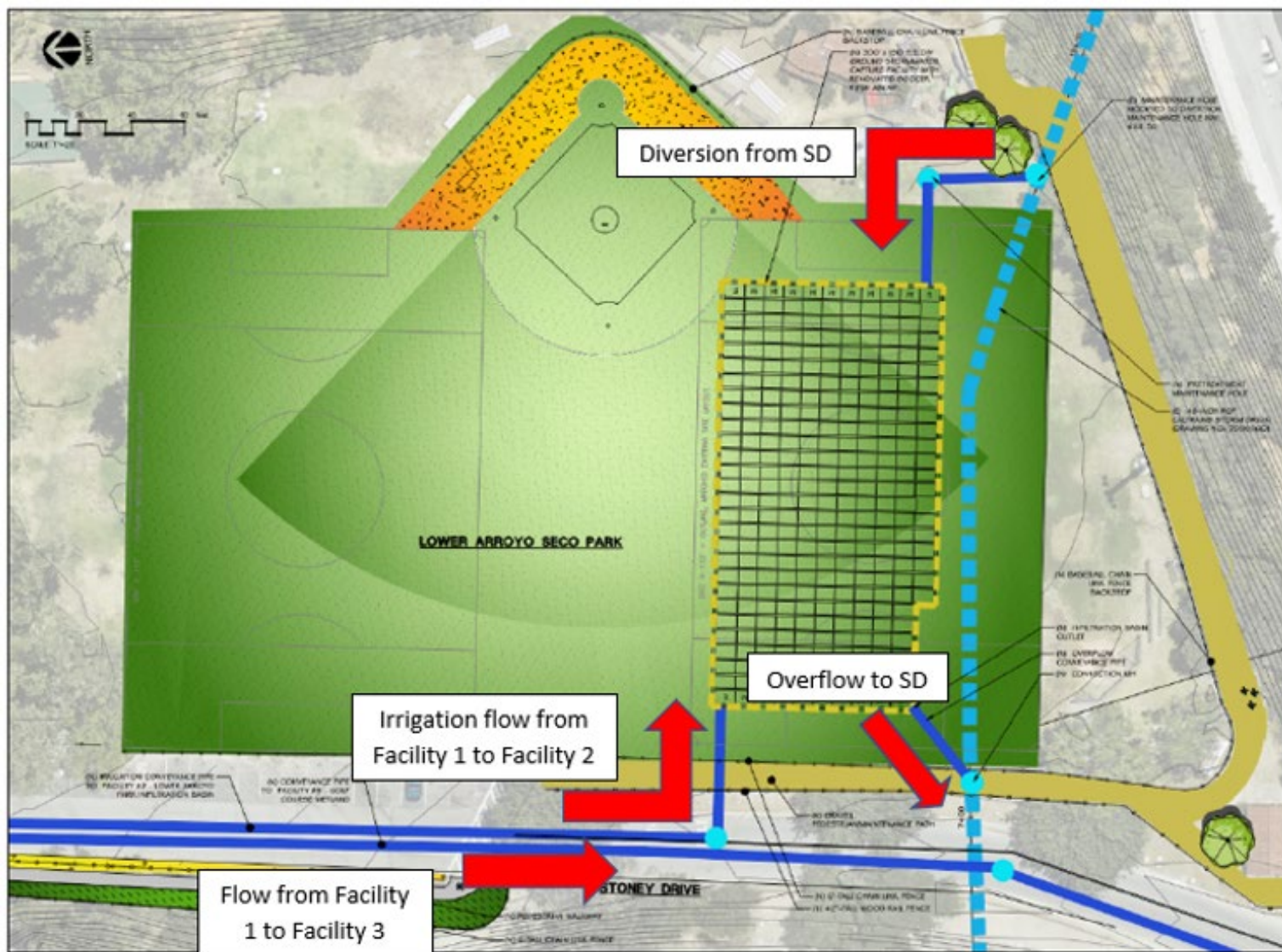
- ★ Facility
- #1 San Pascual Wetland
- #2 Lower Arroyo Park Infiltration Basin
- #3 Golf Course Wetland
- #4 Golf Course Driving Range Infiltration Basin
- #5 Nature Park Wetland
- Existing Stormdrain
- 303d Impaired Streams

Facility 1 already funded by SCW



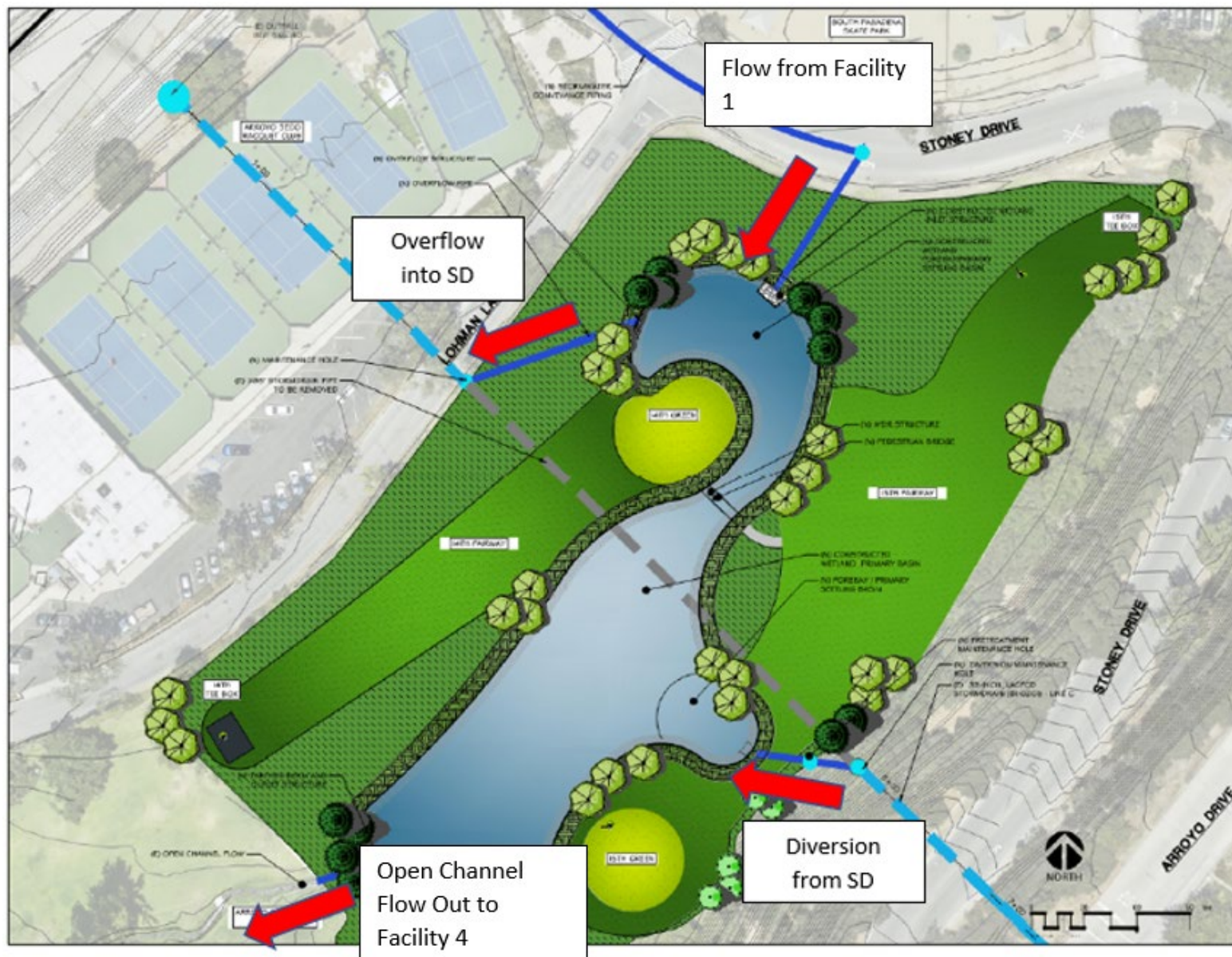


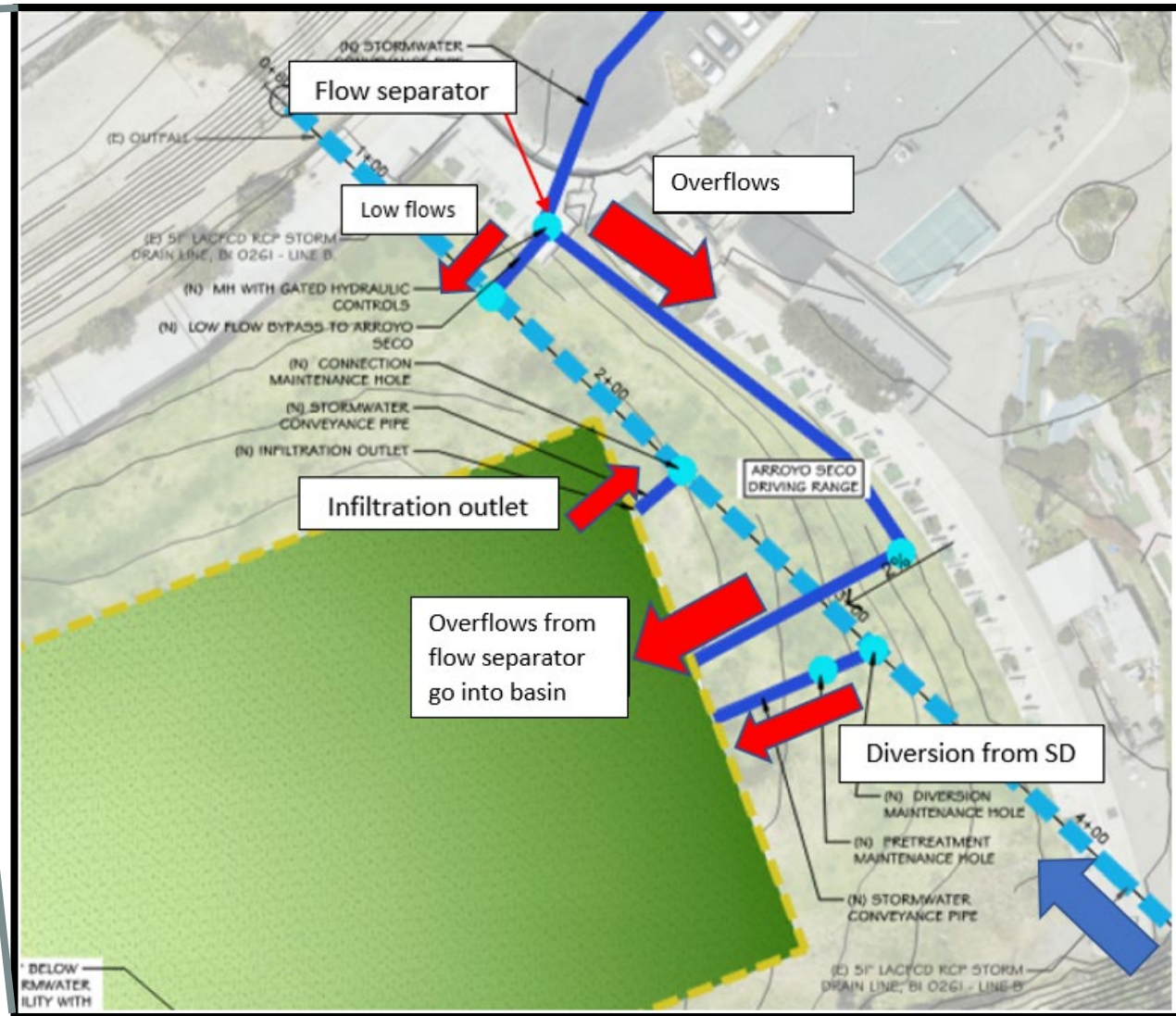
Project Details – Facility 2





Project Details – Facility 3





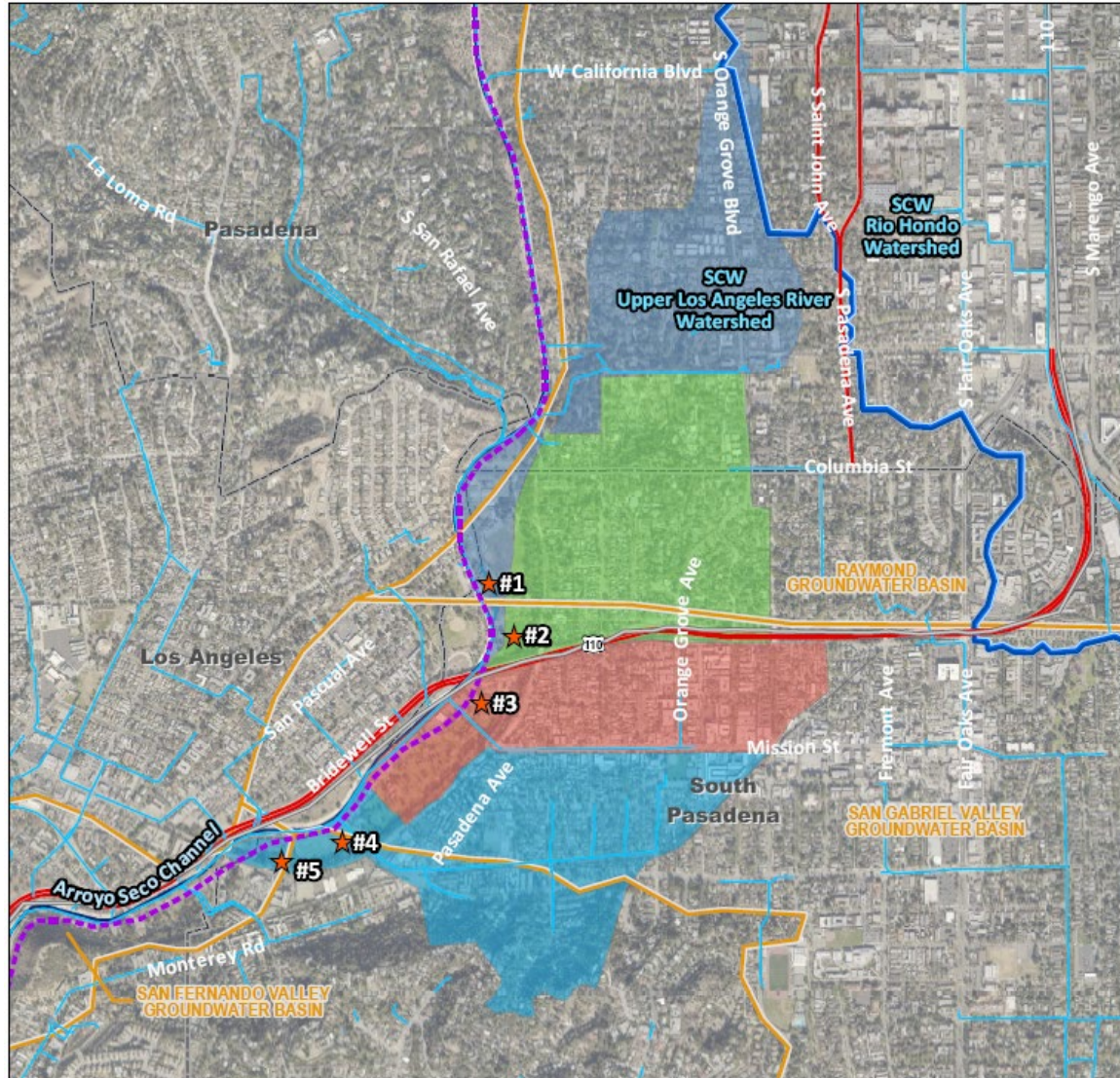


Project Details – Current Site Conditions

- A geotechnical investigation was conducted on 7/15/21
 - Infiltration Rate: 5.84 in/hr
 - Depth to Groundwater: > 50 ft
- A desktop study was completed for the initial engineering analysis of existing site conditions. This included analyzing the site ownership, slope, soil type, site size, proximity to stormwater infrastructure, depth to groundwater, and environmental challenges.
 - This site was deemed ideal due to the following:
 - The sites are located within the Main San Gabriel Groundwater Basin.
 - The sites are owned by the City of South Pasadena.
 - The sites have mild slopes (=10%).
 - The depth to groundwater is greater than 50 feet.
 - The surface soils at the sites promote infiltration.
 - The sites are in close proximity to existing storm drains.
 - The sites do not have plans for future development.



Project Details – Alternatives Evaluated



Criteria	Weight (%)	Alternative 1 (Facilities 1, 2, 3, & 4)	Alternative 2 (Facilities 1, 3, & 5)	Alternative 3 (Facilities 1 & 5)
Constructability	10%	3	4	4
Stormwater capture volume	30%	5	3	2
Prioritizing NBS	10%	5	4	2
Capital cost	20%	3	4	5
Public acceptance	15%	3	3	3
Regulatory requirements	15%	4	3	3
100% Weighted Total	100%	3.8	3.4	3.1
Alternative Rankings		#1	#2	#3
Criteria Rank: 1 - Least Favorable; 5 - Most Favorable				



Cost & Schedule

Phase	Description	Cost	Completion Date
Design	Assuming approval occurs in June 2023, the development of 30% design drawings will begin in July 2023. It is assumed that 100% design drawings will be finished by December 2025.	\$2,305,000.00	12/2025
Planning	For contingency costs including construction management, permit allowance, escalation costs, environmental compliance monitoring and unallocated contingencies.	\$8,205,710.00	07/2028
Construction	Assuming design finishes in December 2025, the project will be submitted to SCW for construction funding. Construction is expected to begin in July 2026.	\$23,484,376.06	07/2028
TOTAL		\$33,995,086.06	

- Total Life-Cycle Cost: \$41,897,069.36 over 50 years
- Annualized Life-Cycle Cost: \$1,746,154.99
- Annual Cost Breakdown for Maintenance and Operation: \$329,333.00



Funding Request

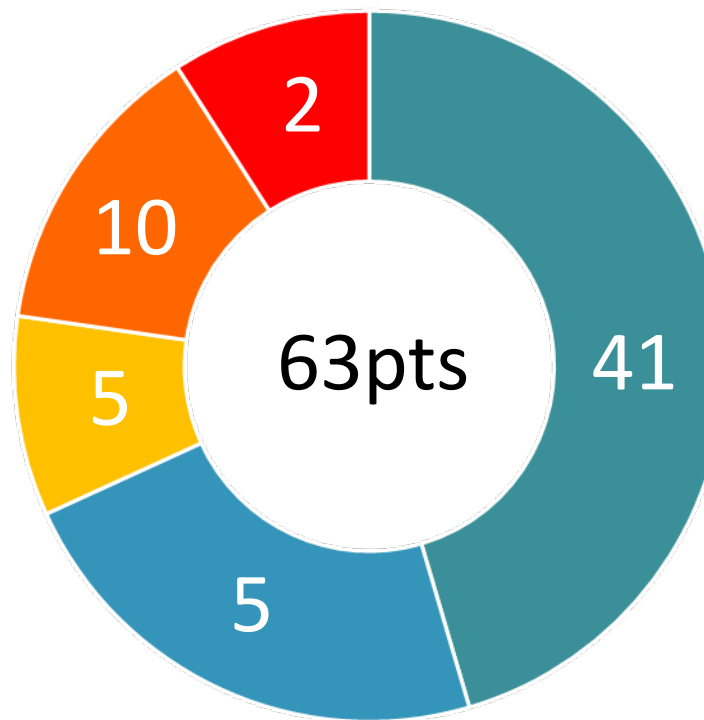
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$1,000,000.00	Design	Begin 30%-100% design drawing and permitting during 2023-2024.
2	\$1,305,000.00	Design	Complete 30%-100% design drawing and permitting during 2024-2025.
3	\$2,735,236.67	Planning	Facility 3 associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
3	\$5,988,125.35	Construction	Funding for Facility 3 construction including mobilization and demobilization allowances
4	\$2,735,236.67	Planning	Facility 2 and Nature Park Bioswale associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
4	\$5,988,125.35	Construction	Funding for Facility 2 and Nature Park Bioswale construction including mobilization and demobilization Allowances
5	\$2,735,236.66	Planning	Facility 4 associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
5	\$11,698,125.36	Construction	Funding for Facility 4 construction including mobilization and demobilization allowances
TOTAL	\$33,995,086.06		



Score as confirmed by the Scoring Committee

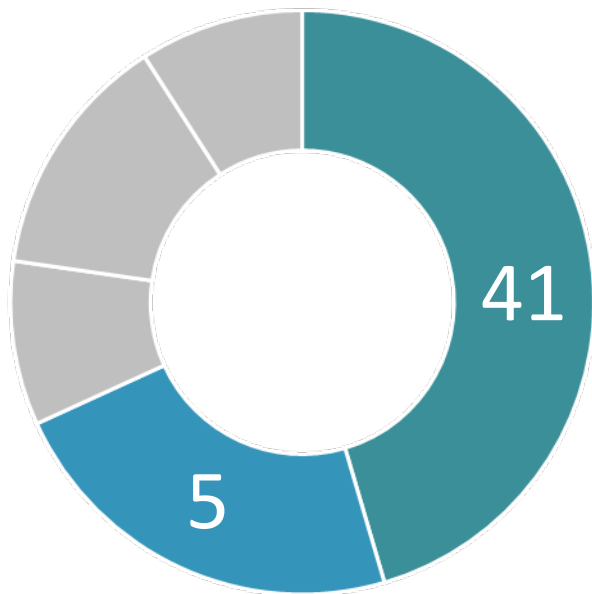
The Scoring Committee confirmed this score on **12/1/2022**

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support





Water Quality & Water Supply Benefits

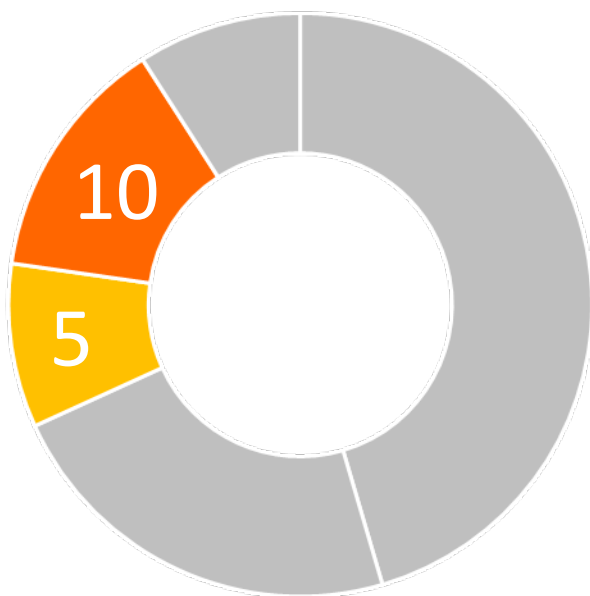


The Scoring Committee confirmed this score on 12/1/2022

- Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
- The project will be sized to capture, bioretain, and infiltrate runoff associated with the 24-hour, 85th percentile storm.
- Wet Weather
- **Tributary Area:** 437 acres
- **24- hour Capacity:** 16.36 acre-feet
- **10-year Primary Pollutant Reduction (Total Copper):** 86.5%
- **10-year Secondary Pollutant Reduction (Total Zinc):** 84.5%
- **Annual Water Supply Volume:** 108.7 acre-feet/year
- Water Supply Aquifer in **San Gabriel Valley Groundwater Basin**
- Water Supply Cost Effectiveness: \$11,118.60/acre-feet
- Water Quality Cost Effectiveness:



Community Investment Benefits and Nature Based Solutions

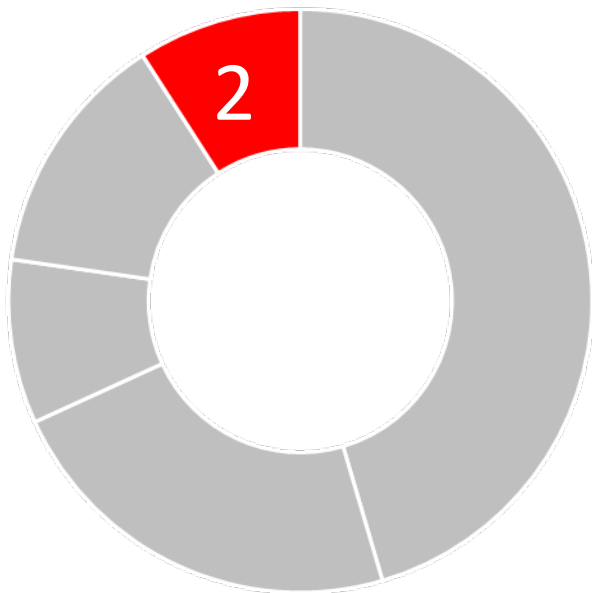


The Scoring Committee confirmed this score on **12/1/2022**

- Community Investment Benefits
 - Enhance park space through addition of native plants
 - Construction of trails along Arroyo Seco Channel for wetland projects
 - Enhance existing soccer fields, golf course and driving range
 - Increase number of trees and vegetation to increase shade and reduce local heat island effects
- Nature Based Solutions
 - Installation of a below-ground infiltration system to decrease the impact of pollutants in stormwater
 - Installation of constructed wetlands as a natural detention basin for native vegetation
 - Addition of native vegetation, including trees and shrubs.

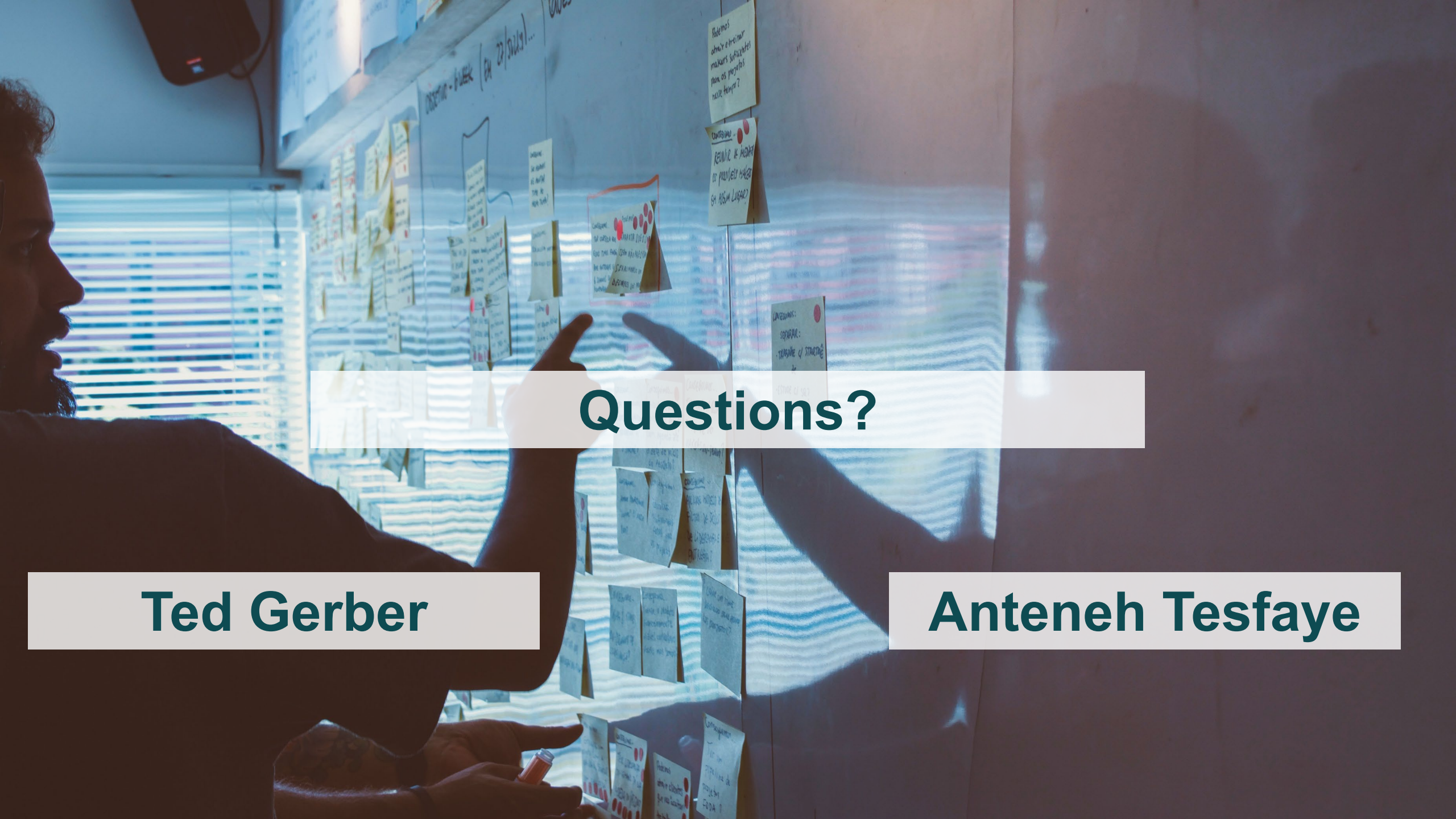


Leveraging Funds and Community Support



The Scoring Committee confirmed this score on **12/1/2022**

- Leveraging Funds
 - This project is in the preliminary design phase and therefore other funding sources have not yet been explored or secured
 - No funding matched
- Community Support
 - This project is supported by Caltrans and Active SGV.
 - City of South Pasadena and LACFCD met with several key stakeholders during 12/2021 and implemented into the preliminary design report.
 - If funded, this project will continue outreach to the impacted community to seek input on construction scheduling and other potential impacts.



Questions?

Ted Gerber

Anteneh Tesfaye