Draft Initial Study/Mitigated Negative Declaration

Mayberry Parker Bridge Access Improvements Project
City of Pasadena, California

Prepared for | City of Pasadena Public Works Department
100 North Garfield Avenue
Pasadena, California 91101

Prepared by | Psomas
225 South Lake Avenue, Suite 1000
Pasadena, California 91101

May 2024

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CITY OF PASADENA
100 NORTH GARFIELD AVENUE PASADENA, CA 91101

INITIAL STUDY

In accordance with the Environmental Policy Guidelines of the City of Pasadena, this analysis, the associated "Master Application Form," and/or Environmental Assessment Form and supporting data constitute the Initial Study (IS) pursuant to the California Environmental Quality Act (CEQA) for the subject Mayberry Parker Bridge Access Improvements Project (Project). This IS provides the assessment for a determination whether the Project may have a significant effect on the environment.

SECTION 1.0 PROJECT INFORMATION

1. Project Title:	Mayberry Parker Bridge Access Improvements Project
2. Lead Agency Name and Address:	City of Pasadena Public Works Department 100 North Garfield Avenue Pasadena, California 91101
3. Contact Person and Phone Number:	Hayden Melbourn, P.E., Principal Engineer 626.744.7345
4. Project Location:	Beneath and adjacent to the Colorado Street Bridge overpass of the Arroyo Seco Channel, accessed via South Arroyo Boulevard near the intersection with Westminster Drive, Pasadena, California 91103
5. Project Sponsor's Name and Address:	City of Pasadena Public Works Department 100 North Garfield Avenue Pasadena, California 91101
6. General Plan Designation:	Open Space
7. Zoning:	OS (Open Space)

8. Description of the Project:

Project Location

The Project site encompasses approximately 0.61 acres located below and immediately to the north and south of the Colorado Street Bridge overpass of the Arroyo Seco Channel, in the northernmost portion of the Lower Arroyo Seco, City of Pasadena (City), County of Los Angeles (County). The site is located on City parkland/open space, which is open daily from sunrise to sunset. The Project area is fully accessible to the public via public and private transportation routes, as well as by various trails for pedestrians, bicyclists, and/or equestrians. The Mayberry Parker Bridge is formally accessible from the north and west via established, open paths; and the Bridge is closed to public access to the east and south via a gate on Arroyo Boulevard and a chain-link fence installed adjacent to the Bridge rails, respectively. The gate is opened by City personnel only for maintenance activities. Therefore, at present the Bridge cannot be used by the

public to traverse the Arroyo Seco from one side to the other. It is noted that the chain link fencing on the southeast end of the Bridge has been vandalized to facilitate access under this fencing and onto the Bridge.

South Arroyo Boulevard, Westminster Drive, and Desiderio Park are situated immediately to the east of the site. The site is regionally accessible via State Route 134 (SR-134), which is located less than 250 feet to the north and northwest. Exhibit 1, Regional Location and Local Vicinity, and Exhibit 2, Aerial Photograph, illustrate the Project site location and surrounding uses.

Project Background

The Mayberry Parker Bridge Access Improvements Project was initially contemplated as part of the One Arroyo Trail Demonstration project (trail project); with both projects proposed in cooperation with One Arroyo Foundation. However, the two projects proceeded on different paths with separate CEQA review processes, as they have independent purpose and utility. A Categorical Exemption pursuant to CEQA was prepared for the trail project, and a Notice of Exemption was filed on May 23, 2023. Because of the historic nature of the Mayberry Parker Bridge (Bridge), the City concluded a Categorical Exemption was not the appropriate CEQA documentation for the proposed improvements. Accordingly, this IS/Mitigated Negative Declaration (MND) has been prepared for the Bridge Project.

Also, it is noted that in Fall 2023, while this IS/MND was in preparation, the One Arroyo Foundation began preliminary discussions with the City regarding an updated signage plan for the Arroyo Seco. Currently, the adopted sign design standards are described in the *Arroyo Seco Design Guidelines*, part of the City Council-adopted 2003 *Arroyo Seco Master Plan*. In the early 2000's, the *Arroyo Seco Master Sign Plan* was prepared as a comprehensive sign program for the Arroyo Seco, which included the sections of Pasadena's Arroyo Seco as well as Hahamongna Watershed Park, Central Arroyo Seco, and Lower Arroyo Seco. However, this plan was not adopted by the City. The updated sign plan contemplated by One Arroyo Foundation would be prepared in coordination with City staff and considered by City of Pasadena decision-makers as a separate action from the proposed Project. The updated sign plan is in the preliminary conceptual phase at this time; as such the type, number, or other details of possible signage proposed in the location(s) of either the trail project or Bridge Project would be speculative. Further, the installation of signs via the One Arroyo Foundation pursuant to an updated sign plan is not presently reasonably foreseeable, based on the sensitivity of the topic in the community and the extensive level of effort that would be required to prepare a quality plan.

The Bridge Project does not propose any signage, and as such the potential impacts of signs associated with the Project is not analyzed herein. Further, no signage would be installed in the Arroyo Seco, either as part of the proposed Project or other efforts by One Arroyo Foundation and/or the City, until the updated sign plan is approved, or other sign-related plans are prepared pursuant to the *Arroyo Seco Design Guidelines* and approved.

Project Components

The Project proposes to (1) provide new pedestrian access to the historic Mayberry Parker Bridge; (2) rehabilitate existing trails through stabilization of deteriorated trail segments, stairways, stone walls, and eroded slopes; and (3) provide a new crosswalk at Arroyo Boulevard and Westminster Drive. All aspects of Project design and implementation would be in conformance with the *Lower Arroyo Seco Master Plan* (Pasadena 2015a) and associated *Arroyo Seco Design Guidelines* (Guidelines) (Pasadena 2003), the City's *Arroyo Seco Public Lands Ordinance* and *Historic Preservation Ordinance*, and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic*

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Regional Location and Local Vicinity

Exhibit 1

Mayberry Parker Bridge Access Improvements Project

N W E S

500 250 0 500 Feet

PSOMAS

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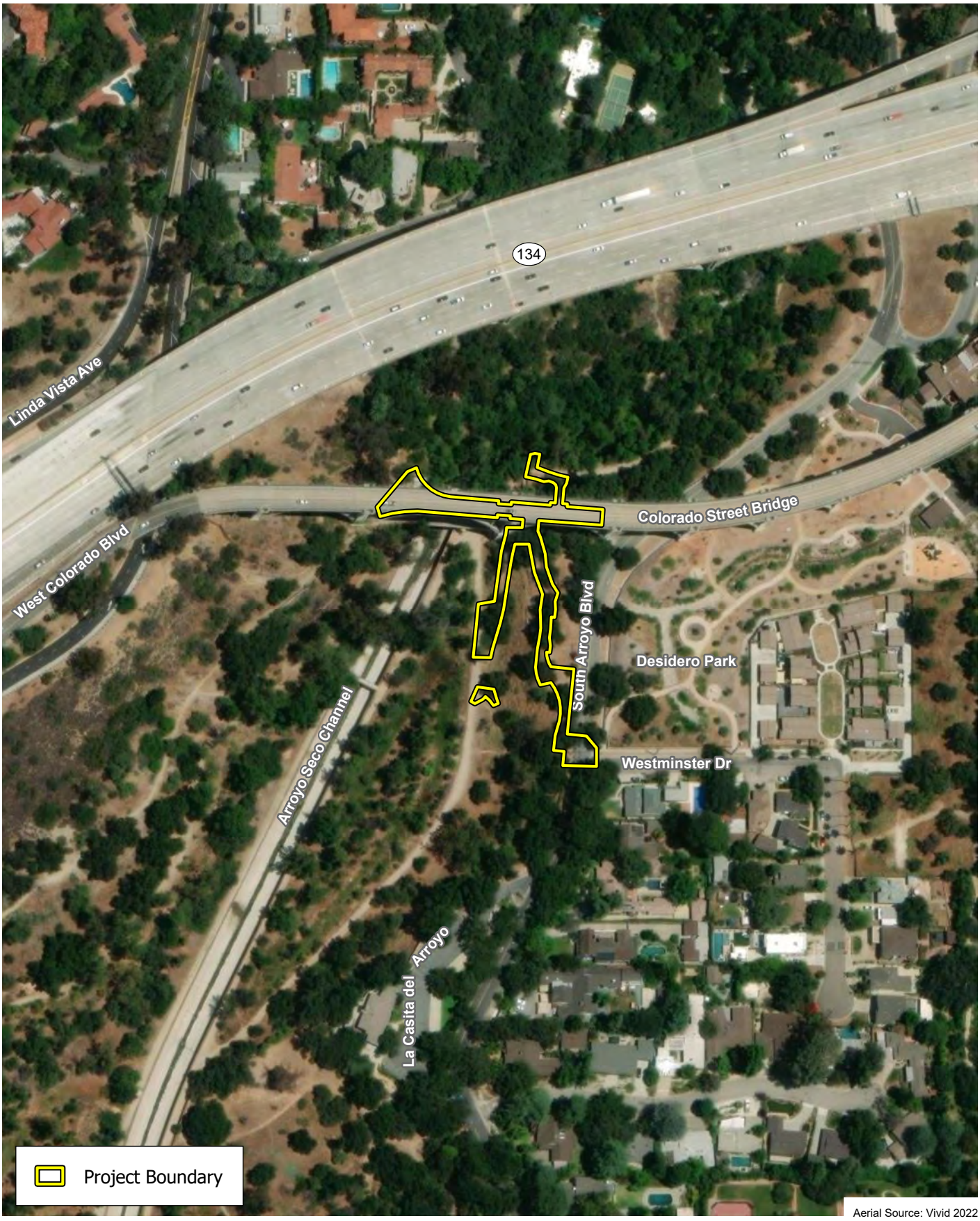

Aerial Source: Vivid 2022

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Aerial Photograph

Exhibit 2

Mayberry Parker Bridge Access Improvements Project

N W E S

200 100 0 200 Feet

PSOMAS

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Buildings (SOIS, Standards) (Weeks and Grimmer 1995, revised 2017). It is noted that the steel pipe railing, discussed further below, is proposed to be steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck. Additionally, no tree removals or vegetation clearing would be required for Project implementation. All existing vegetation would be avoided to the extent feasible; however, limited trimming may be necessary to access construction sites and/or complete construction of proposed improvements. Refer to Section 2.4, Biological Resources, of this IS/MND for further discussion.

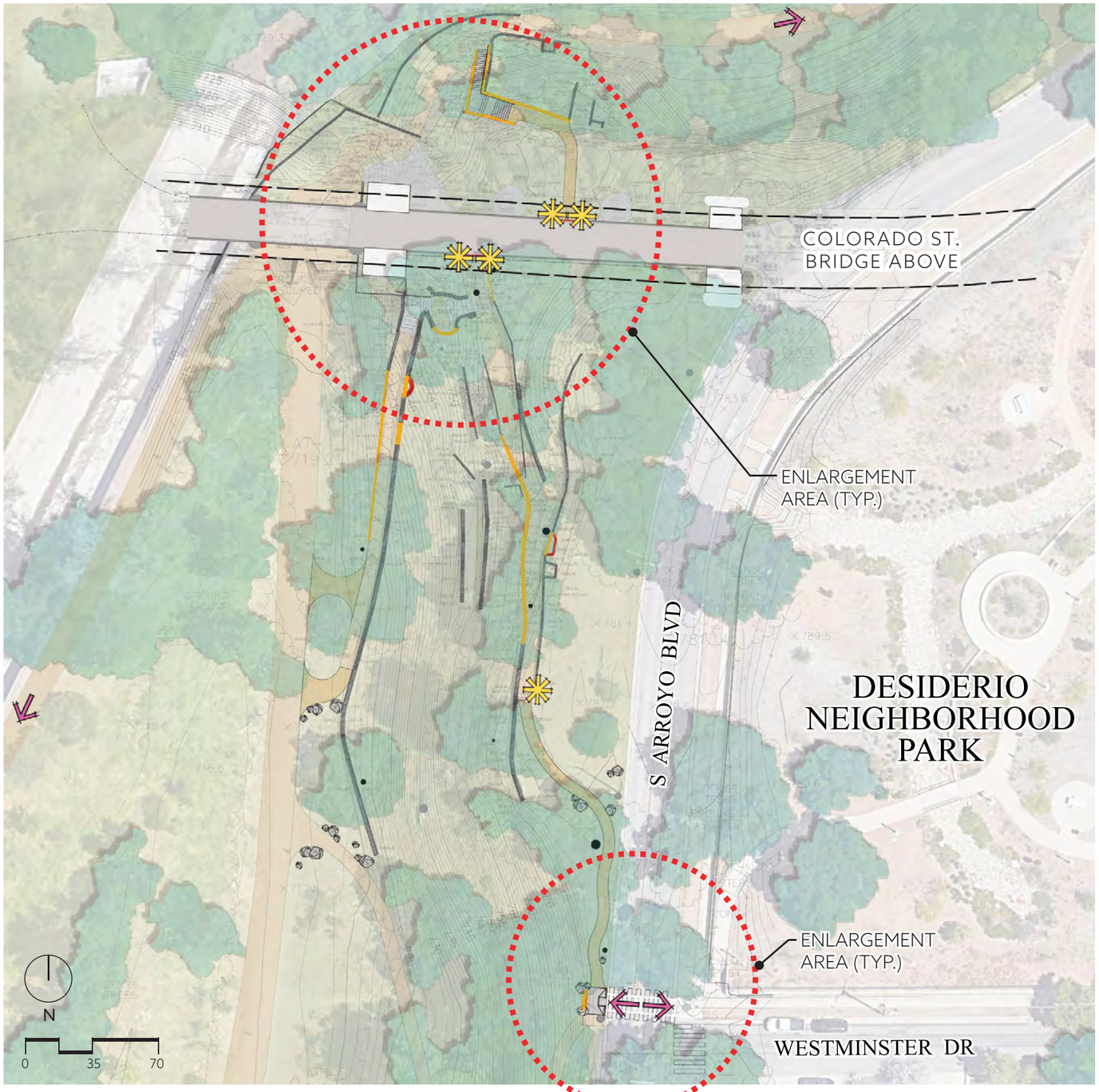
The Bridge is known as both the Parker Mayberry Bridge and the Mayberry Parker Bridge; this IS/MND uses "Mayberry Parker Bridge" or "Mayberry & Parker Bridge" to be consistent with the language used in the National Register of Historic Places (National Register) listing of the resource. Exhibits 3a through 3c, Illustrative Plan of Proposed Project, and Exhibits 4a through 4d, Proposed Project Overview, presents the Project's overall footprint and design. Note that Exhibit 4d provides a detailed legend for the features shown on Exhibits 4a through 4c. The proposed components of the Project are described further below.

Trail Rehabilitation and Disintegrated Granite (DG) Paving: The Project proposes rehabilitating existing trail segments within the site through stabilization of deteriorated trail segments. This would be accomplished by shallow grading to remove trail ruts and other unevenness and establish a sustainable drainage pattern that reduces erosion potential. The Project proposes to add disintegrated granite (formerly referred to as decomposed granite) to the surface of select sections of the trail within the Project site. This surface remains pervious but provides greater resistance to erosion. This feature is shown on Exhibits 4a through 4c.

Pedestrian Crosswalk: The Project would establish a crosswalk between Desiderio Park and the Arroyo Seco. Specifically, a high-visibility crosswalk with a rectangular rapid-flashing beacon would be constructed across the north leg of South Arroyo Boulevard at Westminster Drive. The crosswalk would be striped in conformance with current safety codes and an Americans with Disabilities Act (ADA) compliant ramp with truncated domes and colored concrete paving would be installed on the west side of Arroyo Drive to formalize an existing trailhead into the Arroyo Seco. The east side of Arroyo Drive at this intersection already has an ADA-compliant ramp and would remain in its existing condition. The north-south crosswalk on Westminster Drive would also be striped in conformance with current safety codes. This feature is shown on Exhibits 3a, 3c, and 4c.

Improve Pedestrian Access Across the Mayberry Parker Bridge: The Project would improve pedestrian access to the Mayberry Parker Bridge, which has limited accessibility via formally established paths. The Project proposes to remove two, 16-foot-long portions of the existing concrete bridge rail–one portion removed from both the north and south side of the bridge– on the east approach span of the bridge to allow direct pedestrian connection to the existing trail system (refer to Exhibits 3a, 3b, and 4a). New asphalt paving would be added where the concrete bridge rail would be removed to provide a smooth transition to the trail surface.

A 42-inch-tall stone pilaster would be installed on each side of each access point as a trail marker, for a total of four pilasters along the Bridge. A single stone pilaster is also proposed along the eastern trail alignment at the end of an existing span of stone wall. The pilasters would be faced with Arroyo stone from the City stockpile, if available, or stone boulders and cobble also derived from San Gabriel Mountain granite would be sourced from other vendors. This feature is shown on Exhibits 3a, 3b, and 4b. Exhibit 5, Stone Pilasters and Steel Fencing Details, shows the construction details of the proposed stone pilasters.



LEGEND

- PROPOSED PILASTERS / TRAIL ACCESS
- CONNECTION TO EXISTING TRAIL OR WALKWAY
- PROPOSED STONE WALL IMPROVEMENTS

Source: RJM Design Group, Inc. 2023

Illustrative Plan for Proposed Project

Exhibit 3a

Mayberry Parker Bridge Access Improvements Project

N
W E
S

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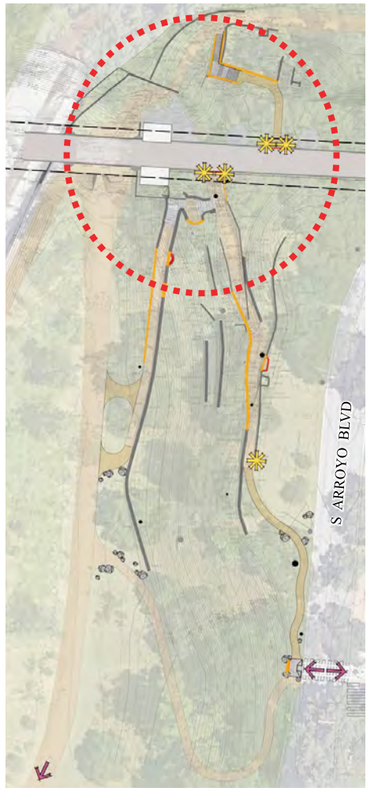


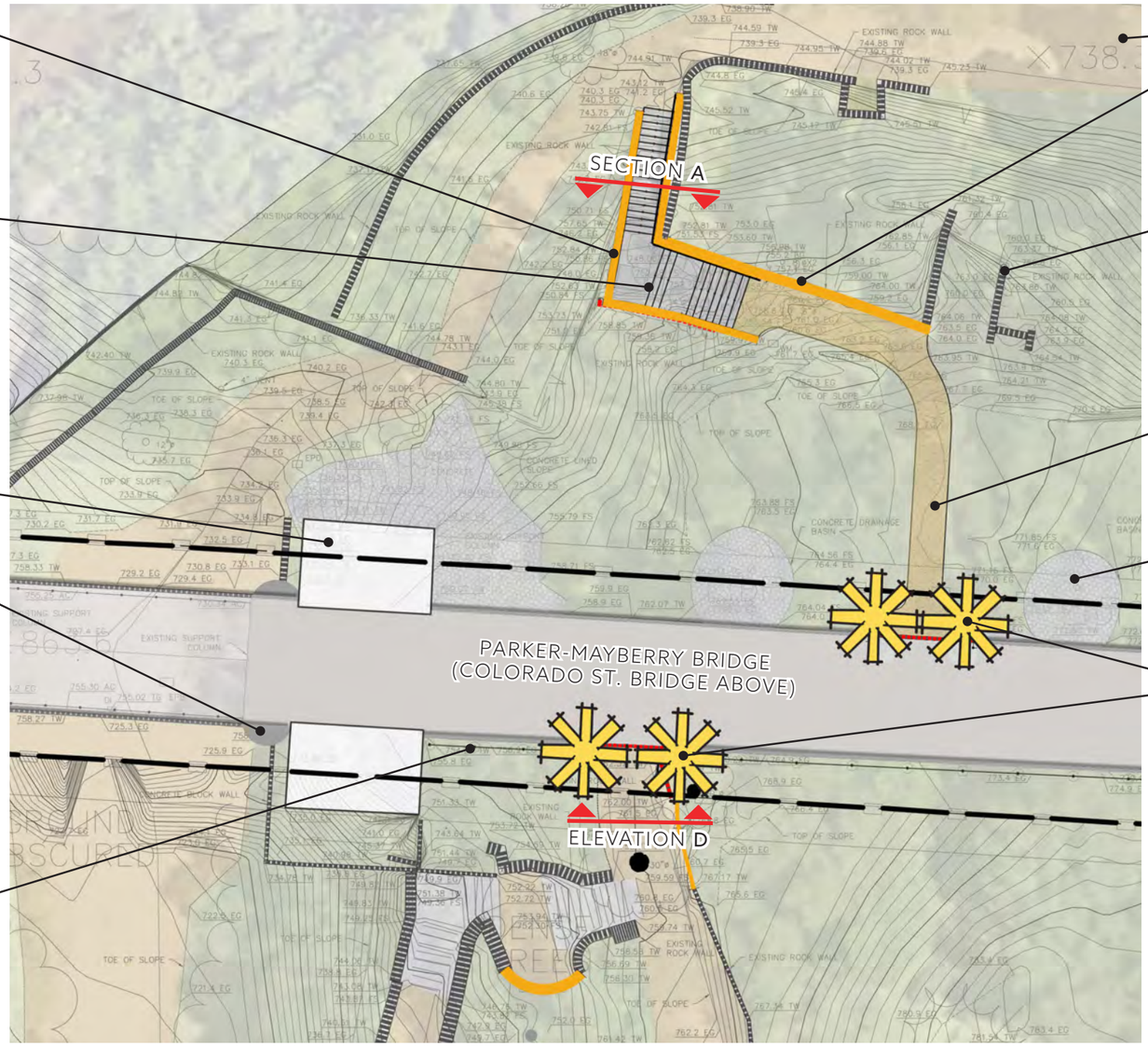
REMOVE EXISTING WALL AND CONCRETE CAP. CONSTRUCT MASONRY RETAINING WALL WITH RIVER ROCK COBBLE VENEER

RECONSTRUCT EXISTING CONCRETE STAIRS WITH HANDRAIL

EXISTING COLORADO STREET BRIDGE SUPPORTS

EXISTING PARKER -MAYBERRY BRIDGE SUPPORTS

NEW TUBULAR STEEL FENCING - TO REPLACE EXISTING CHAIN LINK FENCE



EXISTING TRAIL

REMOVE EXISTING WALL. CONSTRUCT DRY STACKED WALL WITH RIVER ROCK COBBLE VENEER

EXISTING STONE WALLS - TO REMAIN, PROTECT IN PLACE

NEW DECOMPOSED GRANITE TRAIL CONNECTION TO BRIDGE

EXISTING STONE COBBLE PAVING - TO REMAIN, PROTECT IN PLACE

NEW TRAIL MARKERS - REMOVE PORTION OF EXISTING PARKER-MAYBERRY BRIDGE RAIL TO ALLOW FOR DIRECT CONNECTION TO TRAILS

Source: RJM Design Group, Inc. 2023

Illustrative Plan for Proposed Project

Exhibit 3b

Mayberry Parker Bridge Access Improvements Project

N W E S

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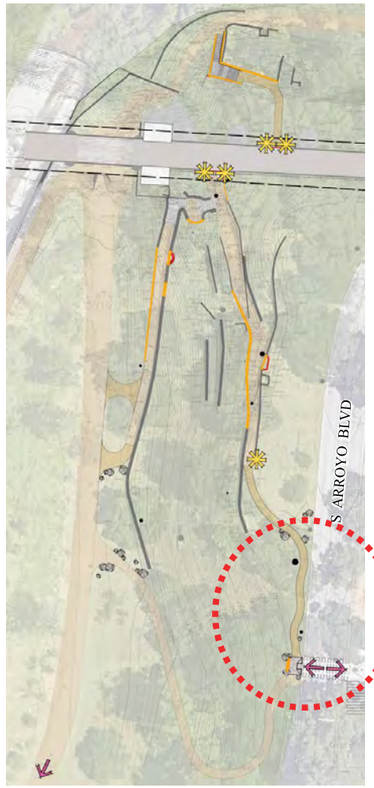
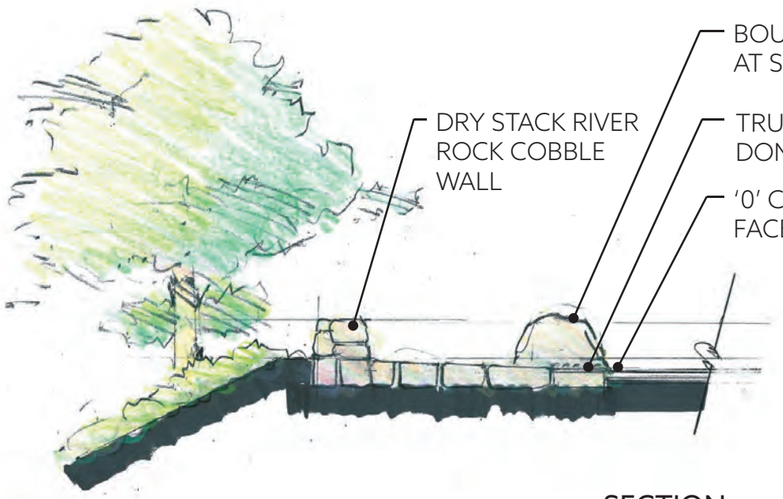
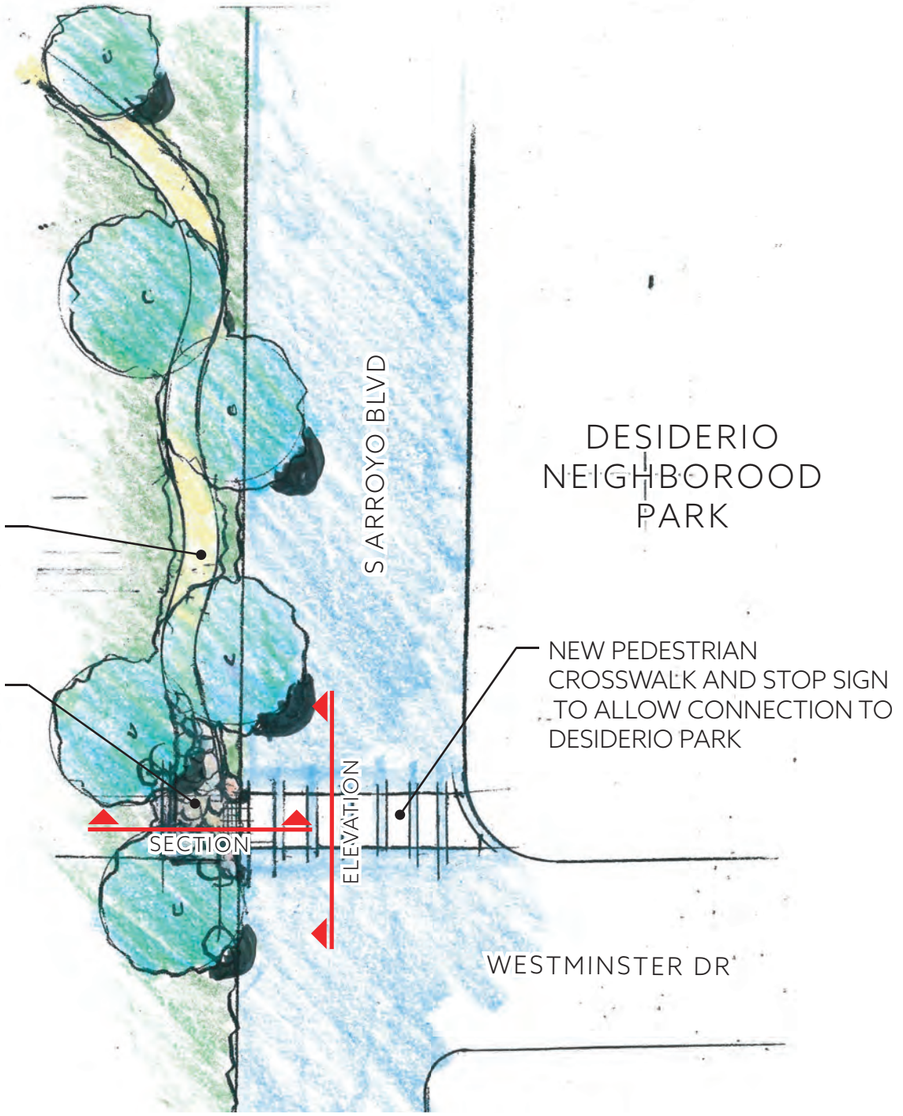




SECTION

ELEVATION



PLAN

Source: RJM Design Group, Inc. 2023

Illustrative Plan for Proposed Project

Exhibit 3c

Mayberry Parker Bridge Access Improvements Project

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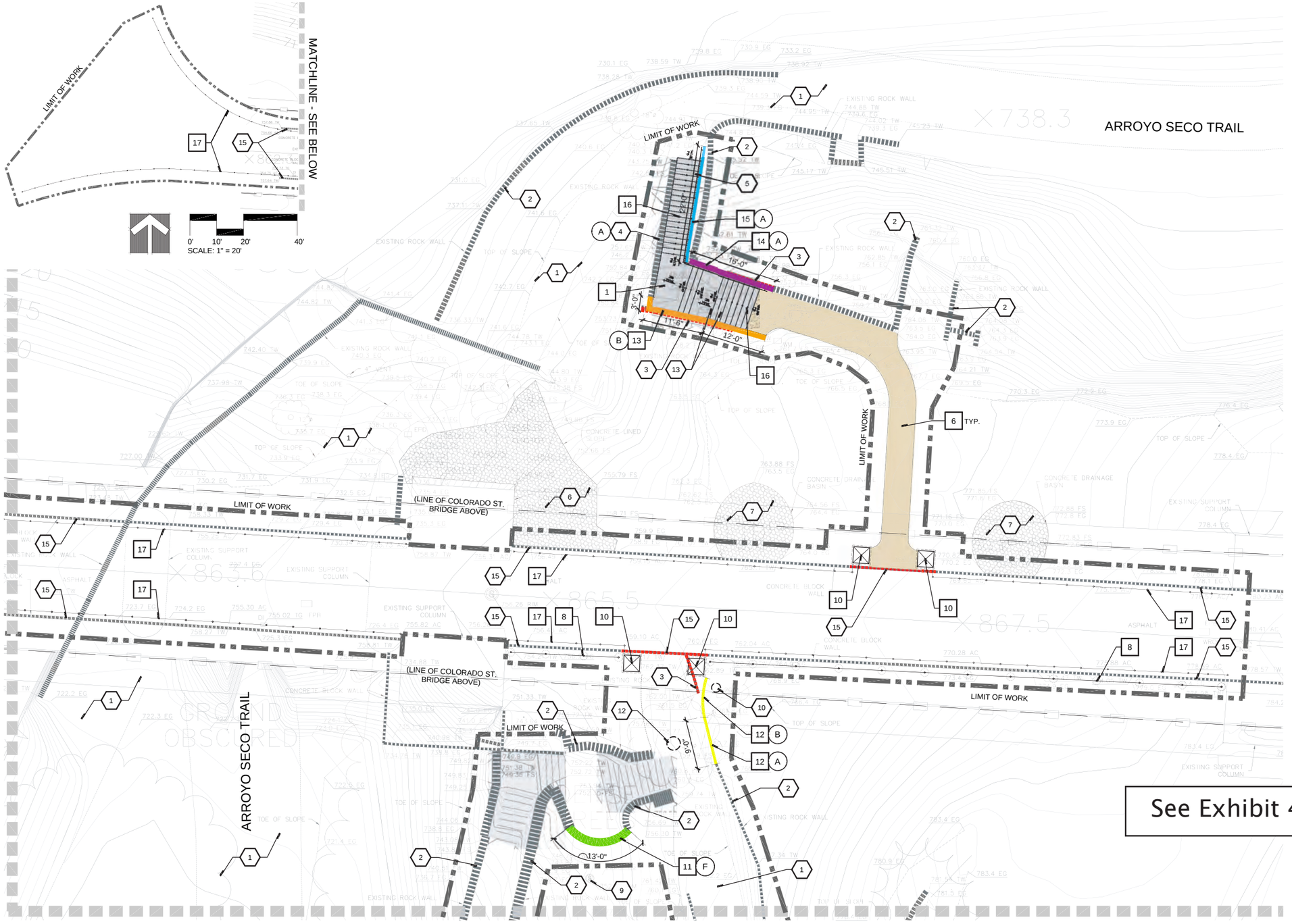

See Exhibit 4d for Legend

Source: RJM Design Group, Inc. 2023

Proposed Project Overview

Exhibit 4a

Mayberry Parker Bridge Access Improvements Project

N W E S

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MATCHLINE - SEE SHEET L-1.01

ARROYO SECO TRAIL

S ARROYO BLVD

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

10'-0"

10'-0"

77'-0"

30'-0"

20'-0"

11'-0"

24'-0"

23'-0"

TYP.

TYP.

TYP.

TYP.

DENSE TREES

GROUND OBSCURED

ASPH

EXISTING ROCK WALL

TOE OF SLOPE

TOP OF SLOPE

See Exhibit 4d for Legend

MATCHLINE - SEE SHEET L-1.03

Source: RJM Design Group, Inc. 2023

Proposed Project Overview

Exhibit 4b

Mayberry Parker Bridge Access Improvements Project

N W E S

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MATCHLINE - SEE SHEET L-1.02

ARROYO SECO TRAIL

S ARROYO BLVD

DESIDERIO PARK

WESTMINSTER DR

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

12'-0"

DENSE TREES

GROUND OBSCURED

STEPS

ASPH

CONC

See Exhibit 4d for Legend

Source: RJM Design Group, Inc. 2023

Proposed Project Overview

Exhibit 4c

Mayberry Parker Bridge Access Improvements Project

N W E S

PSOMAS

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CONSTRUCTION LEGEND

	CONSTRUCT:	DETAIL REFERENCE:
1	4" PEDESTRIAN CONCRETE PAVING	DETAIL 1, SHEET L-2.01
2	SAWCUT CONTROL JOINT	DETAIL 2, SHEET L-2.01
3	EXPANSION JOINT	DETAIL 2, SHEET L-2.01
4	COLD JOINT	DETAIL 2, SHEET L-2.01
5	ADA ACCESSIBLE RAMP	DETAIL 4, SHEET L-2.01
6	DISINTEGRATED GRANITE PAVING	DETAIL 3, SHEET L-2.01
7	LANDSCAPE BOULDERS	DETAIL 2, SHEET L-2.02
8	TUBULAR STEEL FENCING	DETAIL 2, SHEET L-2.05
9	PEDESTRIAN CROSSWALK STRIPING	DETAIL 3, SHEET L-2.05
10	42" HT. STONE PILASTER / TRAIL MARKER	DETAIL 3, SHEET L-2.03
11	MASONRY STONE BARRIER	DETAIL 1, SHEET L-2.03
12	STONE GRAVITY RETAINING WALL	DETAIL 2, SHEET L-2.03
13	CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER	DETAIL 1 & 2, SHEET L-2.04
14	MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VEENER	DETAIL 3, SHEET L-2.04
15	ROCK COBBLE VENEER ON EXISTING WALL	DETAIL 1, SHEET L-2.05
16	RECONSTRUCTED CONCRETE STAIRS AND HANDRAIL	DETAIL 1 & 2, SHEET L-2.06
17	STEEL PIPE RAILING ADJACENT TO EXISTING PARKER-MAYBERRY BRIDGE RAIL	DETAIL 1, SHEET L-2.07

EXISTING CONDITIONS

	DESCRIPTION:	COMMENT:
1	EXISTING TRAIL	PROTECT-IN-PLACE
2	EXISTING STONE WALL	PROTECT-IN-PLACE
3	EXISTING STONE WALL	DEMOLISH / REMOVE PORTION AS INDICATED. SEE DETAIL 1, SHEET L-.202
4	EXISTING STONE WALL	PROTECT-IN-PLACE W/ MODIFICATIONS SEE DETAIL 1, SHEET L-2.02
5	EXISTING CONCRETE STAIRS	DEMOLISH / REMOVE
6	EXISTING GROUTED ROCK COBBLE SLOPE STABILIZATION	PROTECT-IN-PLACE
7	EXISTING GROUTED ROCK COBBLE DRAINAGE BASIN	PROTECT-IN-PLACE
8	EXISTING ELECTRICAL UTILITIES	PROTECT-IN-PLACE
9	EXISTING SEWER UTILITIES	PROTECT-IN-PLACE
10	EXISTING CONCRETE WALKWAY	PROTECT-IN-PLACE
11	EXISTING CURB/GUTTER	PROTECT-IN-PLACE
12	EXISTING TREE	PROTECT-IN-PLACE
13	EXISTING TREE	DEMOLISH / REMOVE
14	EXISTING CONCRETE BRIDGE RAIL	PROTECT-IN-PLACE
15	EXISTING CONCRETE BRIDGE RAIL	DEMOLISH / REMOVE PORTION AS INDICATED

Source: RJM Design Group, Inc. 2023

Proposed Project Overview

Exhibit 4d

Mayberry Parker Bridge Access Improvements Project

PSOMAS

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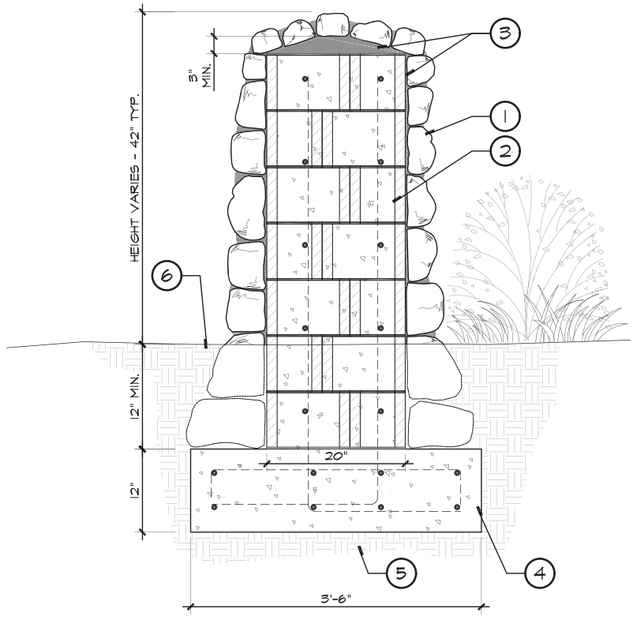
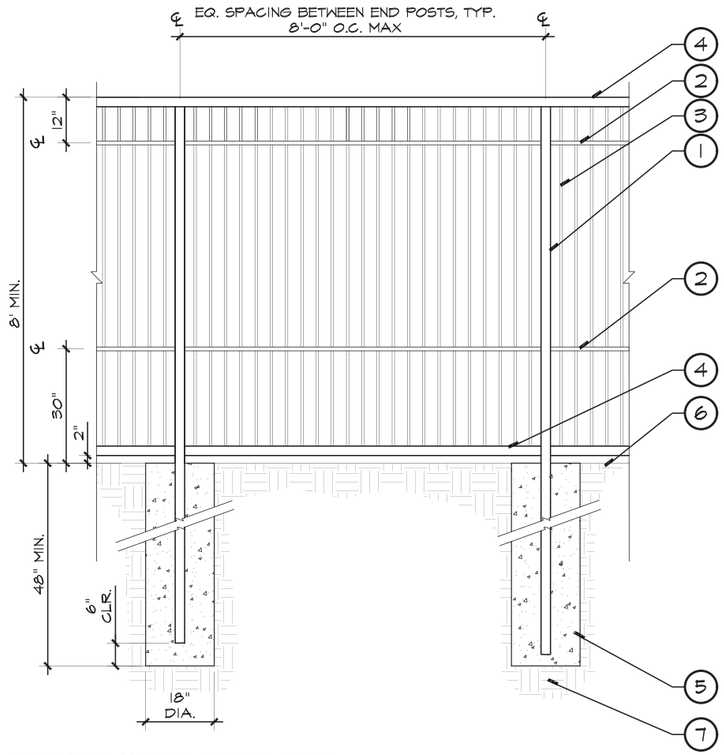
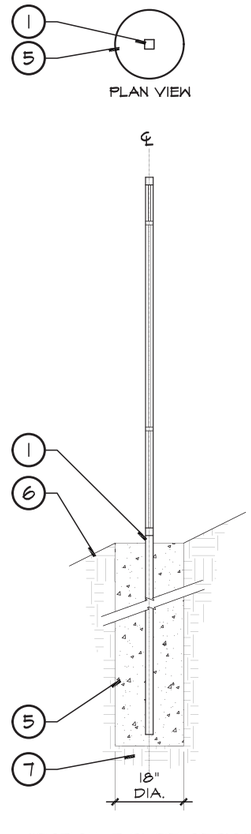


SECTION VIEW - STONE PILASTER
SCALE: 1" = 1'-0"



ELEVATION: TYPICAL FENCING PANEL
SCALE: 1/2" = 1'-0"



SECTION: TYP. FENCE POST
SCALE: 1/2" = 1'-0"

LEGEND:

1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
2. 12"x8"x16" PRECISION CONCRETE BLOCK. SOLID GROUT ALL CELLS.
3. 1" MINIMUM MORTAR SETTING BED, 3" MINIMUM AT TOP OF PILASTER AS SHOWN THIS DETAIL. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
4. POURED-IN-PLACE CONCRETE FOOTING. REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
5. 90% MINIMUM COMPACTED, MOISTURE CONDITIONED NATIVE SUB-GRADE.
6. ADJACENT FINISH GRADE - NATURAL GRADE.

NOTES:

A. USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

B. CONTRACTOR TO PROVIDE NON-PRODUCTION MOCK UP OF PILASTER WITH FINISH FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

42" HT. STONE PILASTER/TRAIL MARKER

LEGEND:

1. 2½"X2½"X5/16" SQ. TUBULAR STEEL FENCE POST AT 8'-0" O.C. MAXIMUM.
2. 1" X 2½" TUBULAR STEEL MID RAILS AS INDICATED.
3. 5/8" SQ. TUBULAR STEEL PICKETS AT 4" O.C. (16 GAUGE).
4. 2½" SQ. TUBULAR STEEL TOP AND BOTTOM RAIL.
5. CONCRETE FOOTING AND REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
6. FINISH GRADE.
7. 90% COMPACTED, MOISTURE-CONDITIONED NATIVE SUBGRADE.

TUBULAR STEEL FENCING

NOTES

A. ALL HORIZONTAL ALIGNMENTS SHALL PARALLEL FINISH GRADE. POSTS AND PICKETS SHALL BE VERTICAL. PROVIDE CUSTOM SHOP DRAWINGS AND CONSTRUCTIONS BASED UPON FIELD MEASURMENTS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

B. ALL FENCE MEMBERS TO BE 11 GAUGE UNLESS OTHERWISE NOTED.

C. WELDING: BEVEL ALL MEMBERS PRIOR TO WELDING. ALL WELDS SHALL BE CONTINUOUS AND GROUND SMOOTH.

D. FABRICATION SHALL BE PER FIELD MEASUREMENTS CONDUCTED BY CONTRACTOR.

E. ALL TUBULAR STEEL FENCING SHALL RECEIVE THE FOLLOWING APPLICATIONS TO ALL TUBULAR MEMBERS:
SURFACE PREPARATION: ALL METAL RAILINGS AND POSTS SHALL BE FINISHED PER SPECIFICATIONS (METALIZED AND COATED WITH TNEMEC TWO COAT SYSTEM. PRIMER TO BE L69. TOP COAT TO BE SERIES 750). SEE SPECIFICATIONS.
CONTACT: DUSTIN. (310)-804-2325

Source: RJM Design Group, Inc. 2023

Stone Pilasters and Steel Fencing Details

Exhibit 5

Mayberry Parker Bridge Access Improvements Project

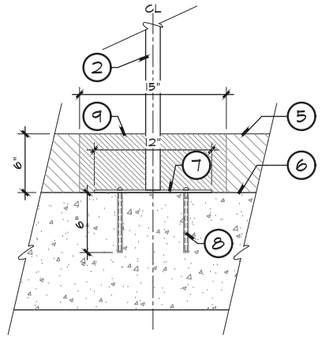
PSOMAS

Tubular Steel Fencing Along Portion of Mayberry Parker Bridge: The Project would remove the existing chain link fence present along the southern perimeter of the Mayberry Parker Bridge and east of the Colorado Street Bridge abutment and replace it with tubular steel fencing. This would serve two functions: (1) to provide an improved aesthetic alternative and (2) to better regulate access across the Bridge to increase the safety of visitors compared to the existing condition. The Project proposes to place the replacement fencing supports, which would extend 48 inches below grade, adjacent to the existing Bridge rail without touching or otherwise affecting the Bridge structure. Section 7.2.2 Fences of the Arroyo Seco Design Guidelines states that existing chain link fencing "should be replaced with a more aesthetic alternative." Examples of aesthetic alternatives that would be acceptable for the Project include "a well-designed wrought iron fence" or "polyvinyl coated chain link (in black or forest green)". The historic resources design review prepared for the Project concluded that if finishes are applied to the proposed steel fencing to ensure that the look mimics wrought iron versus standard brushed metal finishes used in steel fencing, the proposed tubular steel fencing would be in conformance with the Guidelines (South Environmental 2023a). Exhibit 5 shows the construction details of the proposed tubular steel fencing.

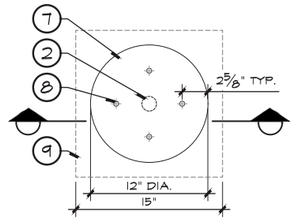
Steel Pipe Railing Adjacent to Existing Mayberry Parker Bridge Rail: The Project would install a steel pipe railing system onto the Mayberry Parker Bridge deck to allow for safe pedestrian access. Exhibit 6, Steel Pipe Railing Details, shows the construction details of the proposed steel pipe railing on the Bridge. To minimize the effect on the Bridge structure, the proposed railing would only connect to the existing deck when necessary for structural stability. The railing would be offset from the existing concrete rail by nine inches on each side and extend approximately six inches above the railing to minimize the visual effect while meeting safety requirements. However, the height of the existing bridge deck varies and the height difference between the existing and proposed railing would be less apparent due to the space between the two structures. Finally, the Project proposes to use steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck. However, when considering the design and context as a whole, the currently proposed steel pipe railing is considered to be in conformance with the Guidelines (South Environmental 2023a).

Repair Concrete Stairs, Handrail, and Walls: The Project would repair the stairs, handrail, and walls located immediately north of, and leading to, the Mayberry Parker Bridge (refer to Exhibit 3b). Exhibit 7, Handrail and Reconstructed Stair Details, shows the construction details of the proposed stairway improvements. These features are in a severely deteriorated condition. As such, the intent of the proposed repairs is both to ensure the material integrity of a historic resource into the future and to provide safer pedestrian access. The Project proposes to reconstruct the concrete stairs, as the current stairs exhibit structural failure and require reconstruction to provide safe access for pedestrians. The existing stairs would be replaced with poured-in-place, four-inch-thick, concrete steps with a non-slip trowel finish. A replacement steel handrail would also be installed and would be anchored through the exterior wall of the staircase. Presently, the walls of the staircase are rock cobble that were covered with concrete at an unknown date and are also deteriorated.

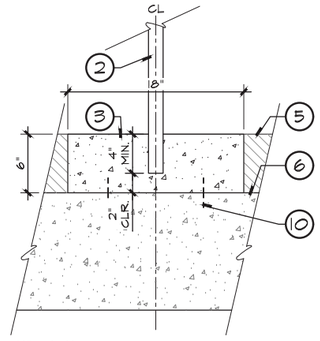
The existing concrete and rock cobble walls would be protected in place and repaired to the maximum extent feasible; however, assessment by a structural engineer has determined there are portions of the existing walls along the stairs that are too deteriorated to be repaired in place and provide a sufficient level of safety for public use and would be replaced. The 22-foot-long segment of wall along the steps from the ground to the first landing would have rock cobble veneer added to the existing wall, which will remain in place (see blue line on Exhibits 4a and 7). On the second segment of stairs from the landing to the top, portions of the existing wall would be removed and replaced. Specifically, on the north side a 16-foot-long masonry block retaining wall with rock cobble veneer would be constructed; within this segment approximately half of this



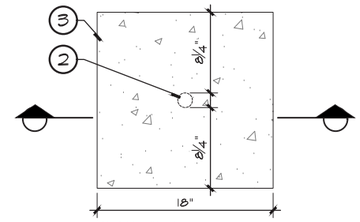
SECTION
SCALE: 1-1/2" = 1'-0"



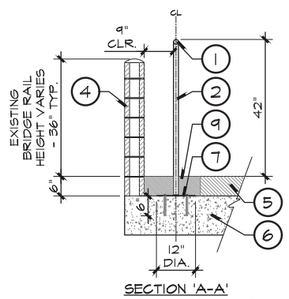
PLAN VIEW
SCALE: 1-1/2" = 1'-0"



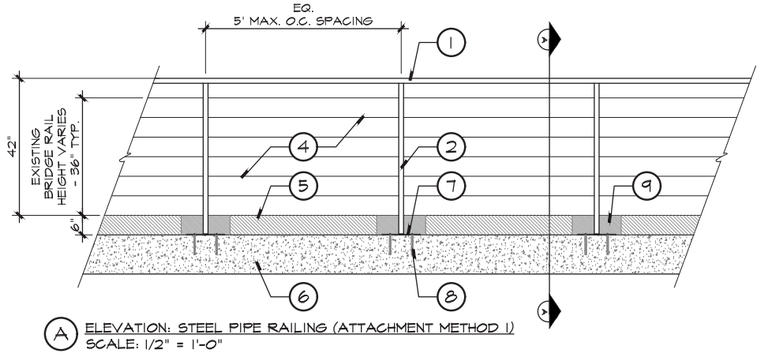
SECTION
SCALE: 1-1/2" = 1'-0"



PLAN VIEW
SCALE: 1-1/2" = 1'-0"

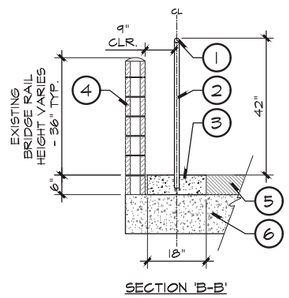


SECTION 'A-A'
SCALE: 1/2" = 1'-0"

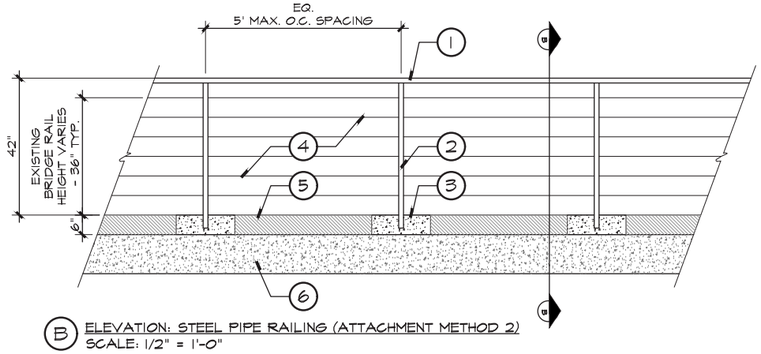


A ELEVATION: STEEL PIPE RAILING (ATTACHMENT METHOD 1)
SCALE: 1/2" = 1'-0"

ATTACHMENT METHOD 1



SECTION 'B-B'
SCALE: 1/2" = 1'-0"



B ELEVATION: STEEL PIPE RAILING (ATTACHMENT METHOD 2)
SCALE: 1/2" = 1'-0"

ATTACHMENT METHOD 2

STEEL PIPE RAILING ADJACENT TO EXISTING BRIDGE RAIL

LEGEND:

1. 1-1/2" DIA. (1-7/8" O.D.) SCH. 40 GALVANIZED STEEL RAIL, WELD TO POST, CONTINUOUS.
2. 1-1/2" DIA. (1-7/8" O.D.) SCH. 40 GALVANIZED STEEL POST, SPACED 6'-0" O.C. MAX. WELD TO STEEL BASE, CONTINUOUS.
3. 18" DIA. CONCRETE FOOTING PER STRUCTURAL ENGINEER.
4. EXISTING PARKER-MAYBERRY CONCRETE BRIDGE RAIL. PROTECT-IN-PLACE.
5. EXISTING 6" ASPHALT PAVING ON PARKER-MAYBERRY BRIDGE.
6. EXISTING PARKER-MAYBERRY BRIDGE DECK STRUCTURE. PROTECT-IN-PLACE.
7. 12" DIA. X 1/4" STEEL BASE PLATE.
8. (4) 1/4" X 6" BOLTS EPOXY SET INTO PRE-DRILLED HOLE IN EXISTING CONCRETE BRIDGE STRUCTURE.
9. 6" ASPHALT PAVING.
10. #4 DOWELS AT 9" O.C. EPOXY SET INTO EXISTING CONCRETE BRIDGE STRUCTURE, TWO (2) PER CONCRETE FOOTING PER STRUCTURAL ENGINEER.

NOTES:

- A. PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION BASED ON FIELD MEASUREMENTS FOR CITY ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
- B. FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
- C. ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
- D. ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
- E. ALL STEEL MEMBERS TO RECEIVE EASED, ROLLED EDGES AND ENDS.
- F. BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
- G. ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
- H. SEE SPECIFICATIONS FOR VIBRATION MONITORING AND BRIDGE PROTECTION MEASURES.

Source: RJM Design Group, Inc. 2023

Steel Pipe Railing Details

Exhibit 6

Mayberry Parker Bridge Access Improvements Project

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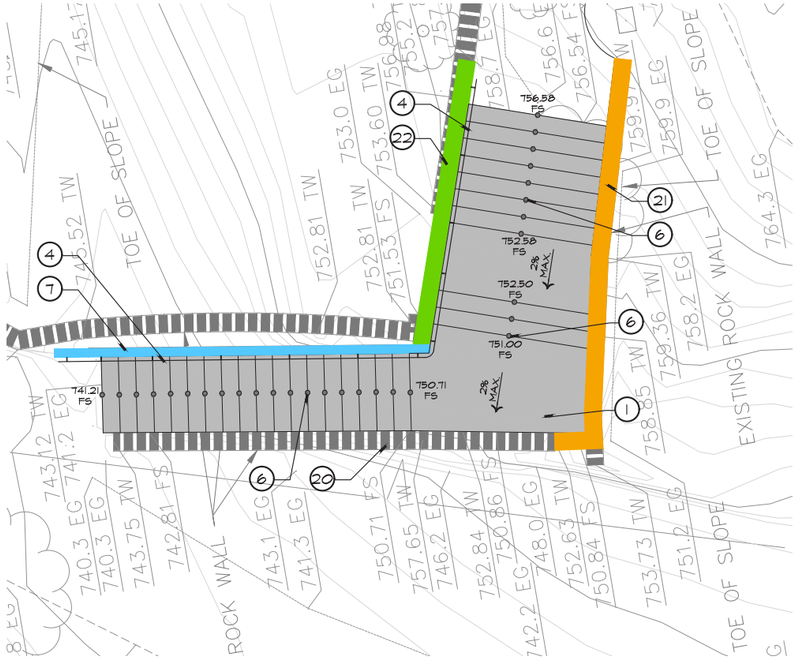
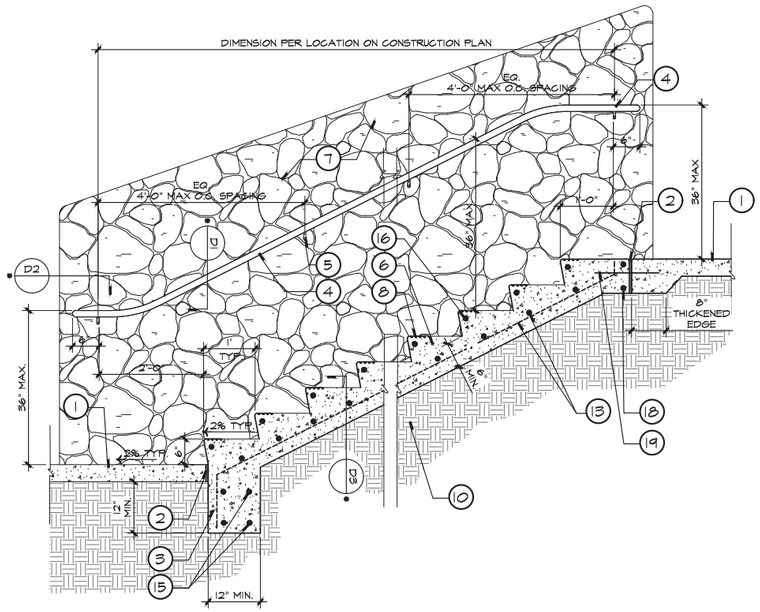
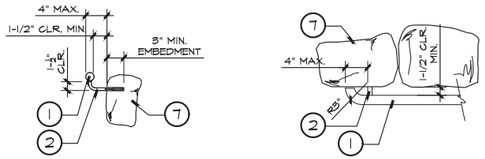


PLAN ENLARGEMENT - RECONSTRUCTED STAIRS AND HANDRAIL
SCALE: 1/4" = 1'-0"

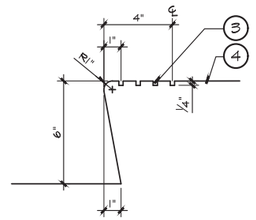


SECTION - RECONSTRUCTED CONCRETE STAIRS WITH WALL MOUNTED HANDRAIL
SCALE: 3/4" = 1'-0"



D1 - HANDRAIL SECTION VIEW
SCALE: 1" = 1'-0"

D2 - HANDRAIL END CONDITION PLAN VIEW
SCALE: 1" = 1'-0"



D3 - SAFETY STRIP GROOVES AT TREADS
SCALE: 3" = 1'-0"

LEGEND

1. 1-1/2" DIA. (1-7/8" O.D.) METAL RAIL, WELD AND HANDRAIL SUPPORT BRACKET CONTINUOUS.
2. 3/4" SCH 40 STEEL HANDRAIL BRACKET, CORE DRILL AND EPOXY SET INTO 'ARROYO BOULDER', EMBED MIN. 5" IN, SPACED 4'-0" O.C. MAX. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK** BACKFILL (800) 523-6510. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH 'ARROYO BOULDERS'.
3. PROVIDE TOOL GROOVED TREADS AS DIMENSIONED ON ALL TREADS. TREADS SHALL RECEIVE 3" WIDE NON-SLIP SAFETY PAINTED STRIP, CONTINUOUS ALONG LENGTH OF EACH STEP. COLORS: YELLOW AT TOP AND BOTTOM RISERS / BLACK ON ALL INTERMEDIATE RISERS. PAINT BY: **MONOPOLE INC.**, TYPE: **FLOORCOAT**, MODEL: 2400 / 2500, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS (618) 500-8585
4. STAIR PAVING NATURAL GREY CONCRETE WITH STEEL TROWEL, NON-SLIP FINISH. SEE DETAIL 1, SHEET L-2.01.
5. 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED SUBGRADE PER GEOTECHNICAL REPORT. SEE SPECIFICATIONS.
6. REBAR AND REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
7. ADJACENT ROCK COBBLE VENEER ON EXISTING WALL. SEE DETAIL 1, SHEET L-2.05.

NOTES:

- (A) PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION FOR CNB ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
- (B) FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
- (C) ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
- (D) ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
- (E) BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
- (F) ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
- (G) SEE GEOTECHNICAL REPORT (PAVEMENT RECOMMENDATIONS) FOR CONCRETE TYPE AND STRENGTH. SEE SPECIFICATIONS.
- (H) CONCRETE AND REINFORCING INFORMATION INDICATED HEREIN, ARE MINIMUMS AND ARE BASED ON INFORMATION CONTAINED IN THE PROJECT GEOTECHNICAL REPORT AVAILABLE AT THE TIME OF PREPARATION OF THESE DOCUMENTS.
- (I) SEE CONSTRUCTION PLAN FOR LOCATION.

HANDRAIL DETAILS

LEGEND:

1. CONCRETE PAVING. SEE CONSTRUCTION PLANS AND DETAIL 1, SHEET L-2.01.
2. CONTINUOUS COLD JOINT. PER DETAIL 2, SHEET L-2.01.
3. CONCRETE FOOTING AND REINFORCEMENT AS SHOWN.
4. HANDRAIL. SEE DETAILS D1 - D2 ON DETAIL 2, THIS SHEET.
5. STEEL HANDRAIL BRACKET. SEE DETAIL 2, THIS SHEET.
6. POURED-IN-PLACE CONCRETE STEPS. SEE CIVIL PLANS FOR GRADES / FINISH SURFACE ELEVATIONS. NON-SLIP STEEL TROWEL FINISH. SEE DETAIL 2, ENLARGEMENT D3, THIS SHEET FOR TREAD.
7. ROCK COBBLE ON EXISTING WALL. SEE DETAIL 1, SHEET L-2.05.
8. TOOL GROOVED TREADS. SEE DETAIL 2 ENLARGEMENT D3, THIS SHEET.
9. FINISH GRADE, SEE CIVIL ENGINEERS PLANS.
10. 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED SUBGRADE.
11. (2) #5 TOP AND BOTTOM REBAR, CONTINUOUS.
12. #4 REBAR x J AT 12" O.C. VERTICAL, CENTERED IN WALL. ALTERNATE BEND AT FOOTING AS SHOWN.
13. #4 REBAR AT 12" O.C. EACH WAY, AT MID HEIGHT OF SLAB.
14. (2) #4 CONTINUOUS REBAR. 2" CLEAR FROM TOP OF WALL.
15. (2) #4 CONTINUOUS, TOP & BOTTOM REBAR.
16. #4 NOSING BAR, CONTINUOUS, TYPICAL.
17. #4 REBAR AT 12" O.C. HORIZONTAL.
18. (2) #4 CONTINUOUS REBAR.
19. SPEED DOWEL AT 24" O.C. SPACING. SEE DETAIL 2, SHEET L-2.01.
20. EXISTING STONE WALL TO BE PROTECTED-IN-PLACE.
21. CONCRETE PIER FOOTING RETAINING WALL WITH ROCK COBBLE VENEER. SEE DETAIL 1, SHEET L-2.04.
22. MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VENEER. SEE DETAIL 3, SHEET L-2.04.

NOTES:

- (A) PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION FOR CNB ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
- (B) FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
- (C) ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
- (D) ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
- (E) BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
- (F) ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
- (G) HEIGHT OF HANDRAIL FROM FINISH SURFACE OF TREAD TO TOP OF HANDRAIL SHALL BE MAX 36
  - FOR "DX" CALLOUTS, REFER TO DETAIL 2, THIS SHEET FOR HANDRAIL ENLARGEMENT DETAILS AND CONNECTIONS.
- (H) ALL CONCRETE TO BE TYPE II/V, MINIMUM COMPRESSIVE STRENGTH PER SPECS. MAXIMUM WATER CEMENT RATIO (W/C) TO BE 0.5. SEE GEOTECH REPORT.
- (I) CONCRETE AND REINFORCING INFORMATION INDICATED HEREIN, ARE MINIMUMS AND ARE BASED ON INFORMATION CONTAINED IN THE PROJECT GEOTECHNICAL REPORT AVAILABLE AT THE TIME OF PREPARATION OF THESE DOCUMENTS.
- (J) SEE CONSTRUCTION PLANS FOR LOCATION.

RECONSTRUCTED CONCRETE STAIRS WITH WALL MOUNTED HANDRAIL

Source: RJM Design Group, Inc. 2023

Handrail and Reconstructed Stair Details

Mayberry Parker Bridge Access Improvements Project

Exhibit 7

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length of existing wall would require demolition (see orange line on Exhibits 4a and 7). On the south side of this segment of stairs, an approximately 27-foot-long concrete caisson retaining wall with rock cobble veneer would be constructed; and within this segment approximately three-quarters of this length of existing wall would require demolition (see green line on Exhibits 4a and 7). Concrete footings, rebar, and other structural reinforcements would be used only when necessary to meet current structural and building code requirements. As discussed for the pilasters, stone needed for the rock cobble veneer on repaired or replaced walls would be Arroyo stone from the City stockpile, if available, or stone boulders and cobble also derived from San Gabriel Mountain granite would be sourced from other vendors.

Installation of New or Replacement Stone Walls: The Project would construct or replace stone walls along the trail segments immediately south of the Mayberry Parker Bridge to improve a variety of existing issues. These include providing visual and material continuity along a length of existing wall, extending an existing stone wall along an existing trail, and/or providing a barrier for safety due to local elevation changes. These walls would include masonry stone barrier walls, stone gravity retaining walls, or concrete caisson retaining wall with rock cobble veneer. Exhibits 8a through 8c, Stone Wall Types and Construction Details, show the construction details of the different types of stone wall construction methods proposed as part of the Project.

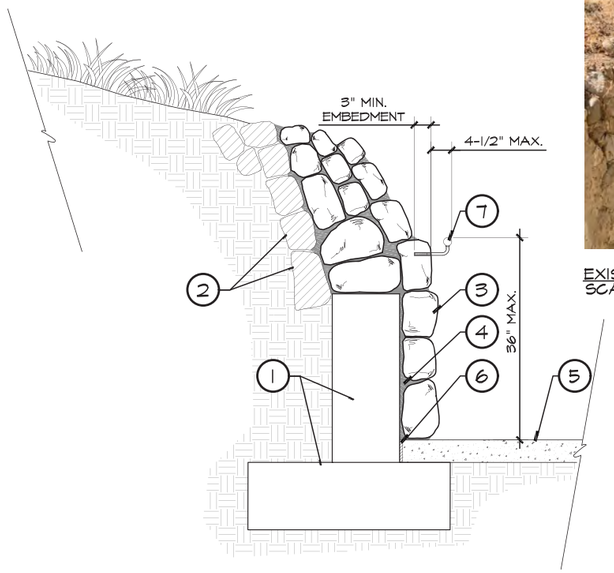
There are three locations along the trail segments south of Mayberry Parker Bridge where existing walls are proposed to be replaced as part of the project (refer to Exhibit 3a). In two locations, with widths of 10 feet and 11 feet, the existing stone retaining wall has fully collapsed and is proposed to be removed and replaced with a stone gravity retaining wall and concrete caisson retaining wall with rock cobble veneer, respectively. The third location is an approximate 20-foot-long segment of an existing 87-foot-long stretch of masonry stone barrier, which is proposed to be demolished and replaced due to the level of deterioration. In all other locations, the proposed wall would be newly built and not replace any existing infrastructure.

Installation of Landscape Boulders: The Project would place boulders of different sizes in strategic locations where visually appropriate in the setting. The boulders would also be intended to help indicate the preferred path of travel by visitors and to provide seating. The landscape boulders will be sourced from the City stockpile of Arroyo stone, if available in the appropriate sizes, shapes, and rock types for this purpose.

Construction Activities

Project construction is anticipated to begin in Summer 2024 at the earliest over a period of approximately nine months, barring unforeseen delays such as weather and/or supply chain issues. For purposes of this analysis, the Project is assumed to be completed in a single phase as a conservative approach. However, it is possible that proposed improvements would be implemented incrementally over a longer period, as funds, materials, and/or necessary approvals and agreements are available.

Project construction would occur from Monday through Saturday, without activity on Sundays or federal holidays, within an 8-hour period between the hours defined in Section 9.36.070 of the City of Pasadena Municipal Code (PMC) (7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 5:00 PM on Saturday). Construction and demolition debris to be exported would be disposed at Scholl Canyon Landfill, located approximately two miles from the site, at 3001 Scholl Canyon Road in Glendale. Consistent with the City's *Construction and Demolition Waste Management Ordinance* (Section 8.62 et. seq. of the PMC), a minimum of 75 percent of the construction and demolition debris generated during construction would be diverted through recycling or reuse.



SECTION VIEW - EXISTING CONCRETE WALL WITH ROCK COBBLE VENEER
SCALE: 3/4" = 1'-0"

EXISTING CONDITIONS
SCALE:N.T.S.

LEGEND:

(1) EXISTING CONCRETE WALL AND FOOTING. TO REMAIN, PROTECT-IN-PLACE.

(2) EXISTING GROUTED RIVER ROCK COBBLE. TO REMAIN, PROTECT-IN-PLACE.

(3) 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.

(4) MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.

(5) ADJACENT CONCRETE STAIRS. SEE DETAIL 1, SHEET L-2.06 AND CONSTRUCTION PLAN FOR LOCATION.

(6) CONTINUOUS EXPANSION JOINT PER DETAIL 2, SHEET L-2.01.

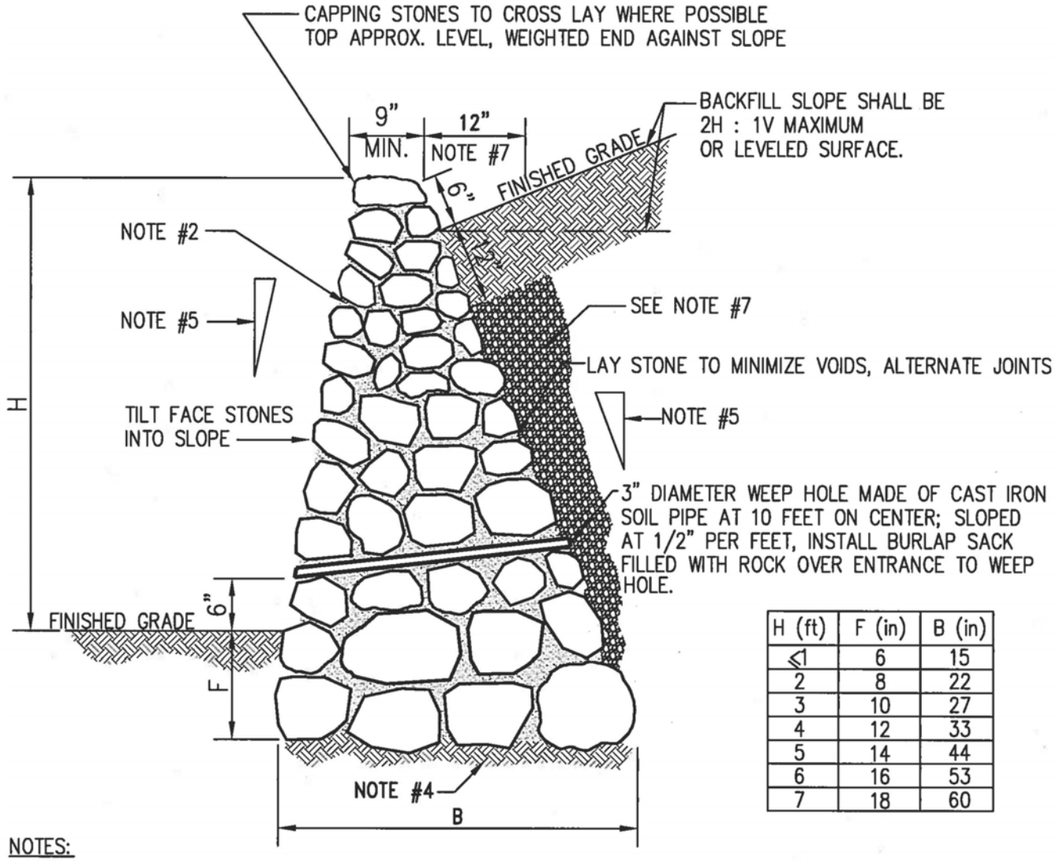
(7) 3/4" SCH 40 STEEL HANDRAIL BRACKET. CORE DRILL AND EPOXY SET INTO 'ARROYO BOULDER', EMBED MIN. 3" IN. SPACED 4'-0" O.C. MAX. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK** BACKFILL (800) 523-6570. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH 'ARROYO BOULDERS'. SEE HANDRAIL DETAIL - DETAIL 2, SHEET L-2.06.

NOTES:

(A) USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

(B) CONTRACTOR TO PROVIDE NON-PRODUCTION MOCK UP OF ROCK COBBLE VENEER FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

ROCK COBBLE VENEER ON EXISTING WALL



H (ft)	F (in)	B (in)
≤1	6	15
2	8	22
3	10	27
4	12	33
5	14	44
6	16	53
7	18	60

NOTES:

1. THIS STANDARD PLAN SHALL GENERALLY BE USED ONLY FOR PARK TRAILS. IT SHALL NOT BE USED TO PROVIDE SUPPORT FOR STRUCTURES, ROADS, OR OTHER FACILITIES.
2. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. ARROYO STONE SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.
4. WALL SHALL BE BUILT ON UNDISTURBED NATIVE, OR SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION.
5. WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.
6. CROSSLAY STONE FOR EACH 3 FEET TO 4 FEET OF WIDTH AND HEIGHT.
7. BACKFILL WITH FREE DRAINING GRANULAR MATERIAL.

STONE GRAVITY RETAINING WALLS

Source: RJM Design Group, Inc. 2023

Stone Wall Types and Construction Details

Exhibit 8a

Mayberry Parker Bridge Access Improvements Project

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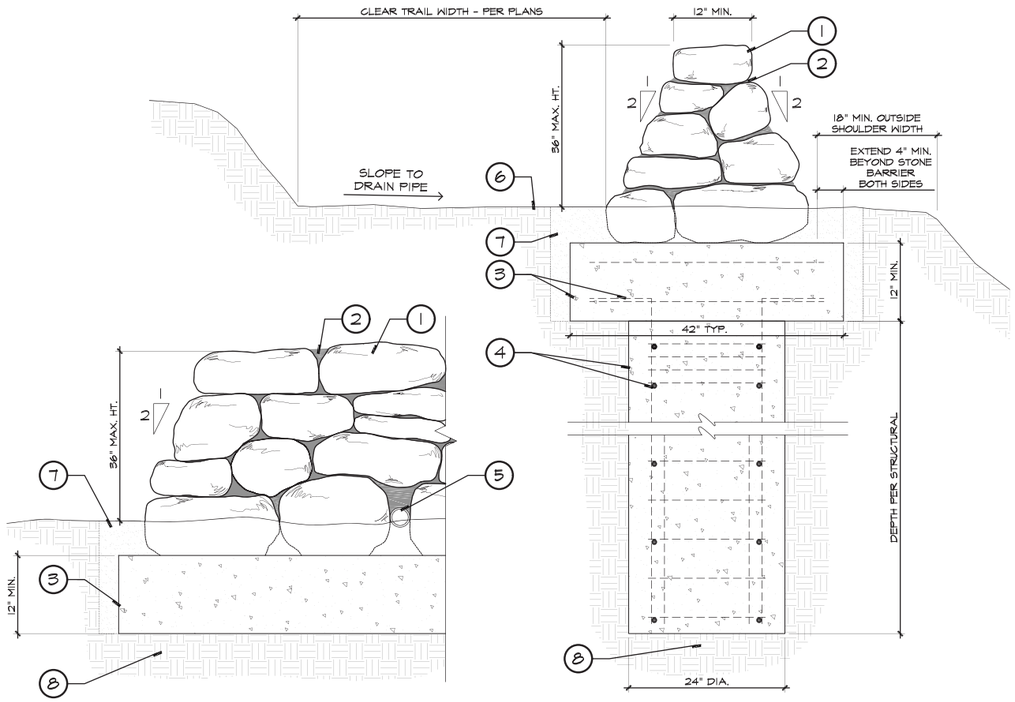


ELEVATION VIEW - MASONRY STONE BARRIER
SCALE: 1" = 1'-0"

SECTION VIEW - MASONRY STONE BARRIER
SCALE: 1" = 1'-0"

LEGEND:

1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. EMBED ROCKS 4" MINIMUM, PER THIS DETAIL.
2. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. 12" CONCRETE PEDESTAL - SLOPE AT 1% MIN. INTO SLOPE. EXTEND 4" BEYOND LIMITS OF MORTARED STONE BARRIER, BOTH SIDES. REINFORCEMENT PER STRUCTURAL.
4. 24" DIA. CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.
5. 3" DIA. CAST IRON DRAIN PIPE SET 1" BELOW TRAIL TREAD. OUTSLOPE DRAIN PIPE AT 2%-3% MINIMUM. LOCATE DRAIN PIPE EVERY 25 FEET.
6. ADJACENT FINISH GRADE - NATURAL GRADE.
7. BACKFILL WITH FREE DRAINING GRANULAR MATERIAL.
8. UNDISTURBED NATIVE SUBGRADE.

NOTES:

A. ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.

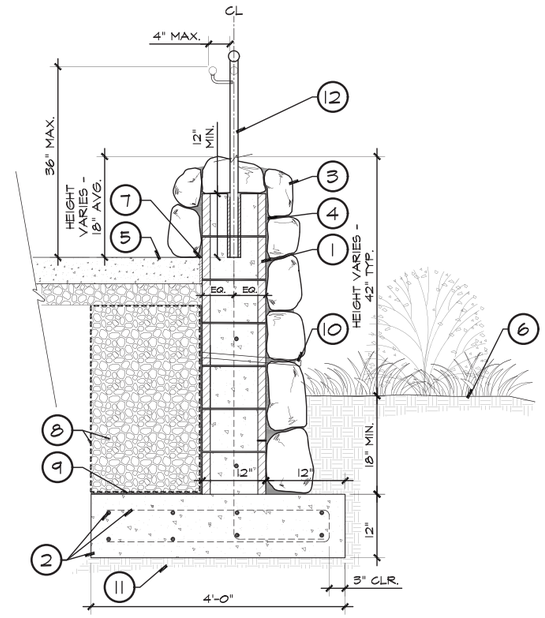
B. USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

C. PROVIDE ORGANIC-FREE, FREE DRAINING GRANULAR BACKFILL MATERIAL FOR LEVELING AND SUPPORT OF BASE ROCK, PER THIS DETAIL.

D. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.

E. CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

MASONRY STONE BARRIER



SECTION VIEW - BLOCK RETAINING WALL WITH ROCK COBBLE VENEER
SCALE: 3/4" = 1'-0"

LEGEND:

1. 12" X 8" X 16" PRECISION CONCRETE BLOCK (EXTERIOR OF WALLS). SOLID GROUT ALL CELLS. REINFORCEMENT PER STRUCTURAL PLANS.
2. POURED-IN-PLACE CONCRETE FOOTING WITH (4) #5 CONTINUOUS REBAR AND #5 REBAR AT 16" O.C. TOP AND BOTTOM PER STRUCTURAL PLANS.
3. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
4. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
5. ADJACENT CONCRETE STAIRS. SEE DETAIL 1, SHEET L-2.06 AND CONSTRUCTION PLAN FOR LOCATION.
6. ADJACENT FINISH GRADE.
7. CONTINUOUS EXPANSION JOINT PER DETAIL 2, SHEET L-2.01.
8. PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
9. PROVIDE CONTINUOUS **MIRADRI 860** WATERPROOF MEMBRANE AND **MIRADRAIN 6200** DRAINAGE COMPOSITE BY **CARLISLE, INC.** OR APPROVED EQUAL, AT BACK OF WALL AND TOP OF FOOTING. INSTALL PER MANUFACTURER'S SPECIFICATIONS. CONTACT: JAMES HEIDT AND ASSOCIATES (818)248-9677.
10. 1" SCH. 40 PVC WEEPHOLE AT 4' O.C. SPACING. SLOPE 1% TO 2% TO DRAIN.
11. UNDISTURBED NATIVE SUBGRADE, OR SUBGRADE COMPACTED TO 90% RELATIVE COMPACTION.
12. 1-1/2" DIA. (1-7/8" O.D.) GALVANIZED STEEL POST, SPACED 4'-0" O.C. MAX. EMBED MIN. 12" IN CONCRETE BLOCK WALL. CORE DRILL OR PROVIDE 3" SCH. 40 PVC SET 1/2" BELOW ADJACENT FINISH SURFACE. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL, TO 1/2" BELOW ADJACENT FINISH SURFACE. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK** BACKFILL (800) 523-6570. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH ADJACENT CONCRETE. INSTALL POSTS SPACED EVENLY. SEE DETAIL 2, SHEET L-2.06 FOR HANDRAIL DETAIL.

CONCRETE BLOCK RETAINING WALL WITH ROCK COBBLE VENEER

Source: RJM Design Group, Inc. 2023

Stone Walls Types and Construction Details

Exhibit 8b

Mayberry Parker Bridge Access Improvements Project

PSOMAS

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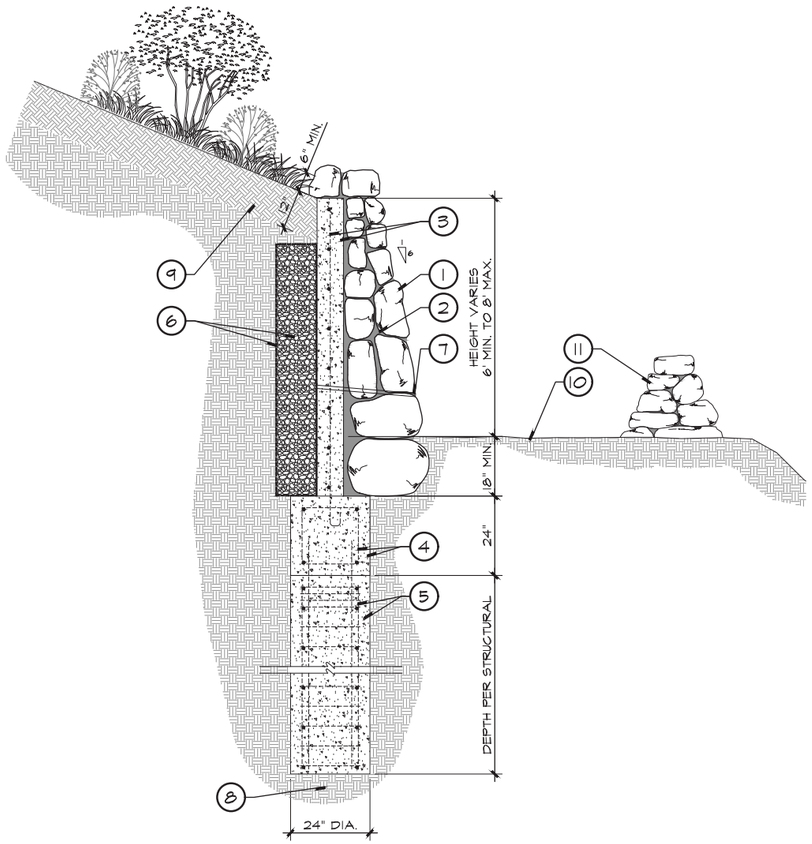


SECTION VIEW - CONCRETE CAISSON (UPSLOPE RETAINING CONDITION)
SCALE: 1/2" = 1'-0"

NOTES:

(A) ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.

(B) USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

(C) WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.

(D) CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

LEGEND:

(1) 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.

(2) MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.

(3) 8" CONCRETE STEM WALL. REINFORCEMENT PER STRUCTURAL.

(4) 24" SQ. CONCRETE GRADE BEAM. REINFORCEMENT PER STRUCTURAL.

(5) 24" DIA CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.

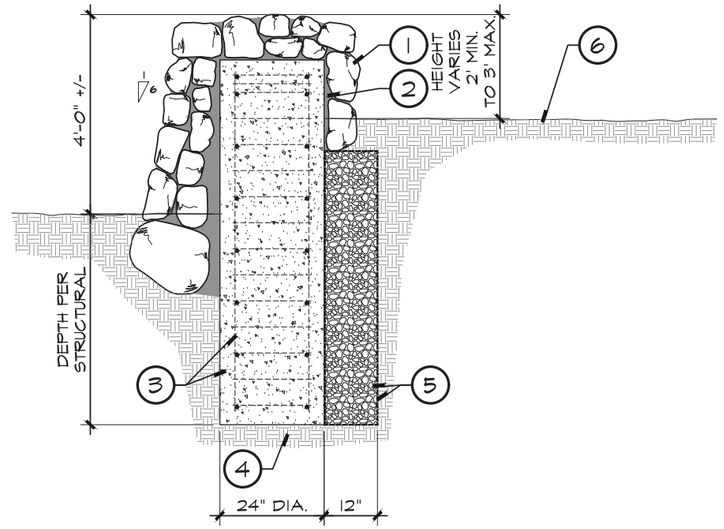
(6) PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

(7) 2" SCH. 40 PVC WEEPHOLE AT 10' O.C. SPACING. SLOPE 1% TO 2% TO DRAIN.

(8) UNDISTURBED NATIVE SUBGRADE.

(9) 12" BACKFILL. SLOPE SHALL BE 2 HORIZONTAL : 1 VERTICAL MAXIMUM.

CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER (UPSLOPE RETAINING CONDITION)



SECTION VIEW - CONCRETE CAISSON (DOWNSLOPE RETAINING CONDITION)
SCALE: 1/2" = 1'-0"

LEGEND:

(1) 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.

(2) MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.

(3) 24" DIA CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.

(4) UNDISTURBED NATIVE SUBGRADE.

(5) PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

(6) ADJACENT TRAIL - FINISH GRADE.

NOTES:

(A) ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.

(B) USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

(C) WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.

(D) CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER (DOWNSLOPE RETAINING CONDITION)

Source: RJM Design Group, Inc. 2023

Stone Walls Types and Construction Details

Exhibit 8c

Mayberry Parker Bridge Access Improvements Project

PSOMAS

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The majority of trail and bridge improvement activities would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, except possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. Grading would be minimal and localized to provide level trail surfaces and structural support for paved surfaces, fenceposts, stone pilasters, and stone walls. Earthmoving is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained to previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet deep, would be required. No import or export of soil would be necessary to implement the Project; soils generated by grading would be redistributed evenly at the surface within the immediate area of each activity. However, import of disintegrated granite, concrete, aggregate backfill, and stone/boulders would be required. Steel fencing, steel railing, steel handrail, and crosswalk infrastructure would be among the new or replacement materials installed as part of the Project.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the Project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco within existing parking areas, on trails in the vicinity of construction activity, and/or other existing disturbed areas near ongoing construction activity. No vegetation removal or trimming would occur to provide areas for staging. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and rectangular rapid-flashing beacon would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements and one lane of through traffic would be available at all times.

Project Operation

The proposed improvements would be available for public use from sunrise to sunset, which is consistent with the Arroyo Seco as a whole. The proposed Project has been designed to provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco and is not anticipated to directly increase use of the area. The same locations and amounts of parking in the immediate area, similar circulation and access, and same types and extent of facilities would be provided with the sole exception of the high-visibility crosswalk. Non-vehicular circulation and access would be improved with Project implementation. As such, operation of the Project would be essentially the same as the existing condition.

Discretionary Actions by the City

The Project would require the following discretionary approvals by the City of Pasadena:

- Approval of the Mayberry Parker Bridge Access Improvements Project,
- Adoption of the Mayberry Parker Bridge Access Improvements Project IS/MND,
- Design Review Approval,
- Award of contract for construction of the Mayberry Parker Bridge Access Improvements Project, and

- Other discretionary and ministerial permits and approvals that may be deemed necessary, including but not limited to, grading permit, foundation permit, and building permit.

See Section 10, below, for a list of other public agencies whose approval is required.

9. Surrounding Land Uses and Setting:

Exhibits 1 and 2 illustrate the Project site location and setting. Surrounding land uses include the historic Colorado Boulevard Bridge located overhead across the Arroyo Seco; the Central Arroyo Seco and SR-134 to the north; South Arroyo Drive and the 3.8-acre Desiderio Park to the east; single-family residential land uses to the southeast (zoning of RS-4 [Single-Family Residential, up to 4 dwelling units per acre]); the Lower Arroyo Seco to the south; and the Arroyo Seco Channel and Lower Arroyo Seco to the west and southwest. The nearest residences to the Project site are located approximately 50 ft to the southeast at the nearest points from the edge of the proposed crosswalk installation to the closest structure.

10. Other public agencies whose approval is required:

This IS/MND is intended to serve as the primary environmental document pursuant to CEQA for actions associated with the Project, including all discretionary approvals required to implement the Project, including those made by responsible, trustee, and other public agencies. In addition, this IS/MND is the primary reference document for the formulation and implementation of a mitigation monitoring and reporting program for the Project, in accordance with Section 15097 of the State CEQA Guidelines.

Additionally, the following approvals will be sought as part of the Project:

- Los Angeles Regional Water Quality Control Board (National Pollutant Discharge Elimination System [NPDES] permitting/Construction General Permit).

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code Section 21080.3.1? If so, has consultation begun?

Consultation pursuant to Section 21080.3.1 of the *Public Resources Code* and Assembly Bill (AB) 52 was initiated and has been completed with the California Native American tribes affiliated with the City of Pasadena, and who have requested consultation. Refer to Section 2.18, Tribal Cultural Resources, of this IS/MND for a complete discussion of the Native American consultation process for the Project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forestry Resources	☐ Hazards and Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology and Soils	☐ Population and Housing	☐ Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	X
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment., but at least effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Jillian K Neary 5/8/2024 — 5/8/24

Prepared By | Date | Reviewed By | Date

Jillian K. Neary — JEFF KHUN

Printed Name | Printed Name

Negative Declaration/Mitigated Negative Declaration adopted on: _____

Adoption attested to by: _____ _____

Signature | Date

_____

Printed Name

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact' is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 21, "Earlier Analysis," may be cross-referenced).

5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. See CEQA Guidelines Section 15063(c)(3)(D). Earlier analyses are discussed in Section 21 at the end of the checklist.

    a) Earlier Analysis Used. Identify and state where they are available for review.

    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) Mitigation Measures. For effects that are "less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier documents and the extent to which address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify the following:

    a) The significance criteria or threshold, if any, used to evaluate each question; and

    b) The mitigation measure identified, if any, to reduce the impact to less than significant

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SECTION 2.0 ENVIRONMENTAL CHECKLIST FORM

2.1 AESTHETICS

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

WHY? A scenic vista is generally defined as a viewpoint that provides panoramic or focused views of a highly valued landscape or scenic resource for the benefit of the general public. The EIR for the Pasadena General Plan provides the following description of the existing scenic features and visual resources in the City: "The City of Pasadena affords a variety of views of scenic landscapes and built environments. The San Gabriel Mountains, near the north City boundary, dominate the skyline from most of the City. The San Rafael Hills are along the western City boundary, and the Verdugo Mountains are further to the west. In addition, the Arroyo Seco corridor and Eaton Canyon traverse the western and eastern portions of the City, respectively. The City also offers scenic views of distinct architecture in the built environment, such as the Old Pasadena Historic District, Pasadena City Hall, Castle Green, St. Andrew Catholic Church bell tower, and Bungalow Heaven" (City of Pasadena 2015a). For purposes of this analysis, views by visitors within the Lower Arroyo Seco are considered views of a valued landscape and thus a scenic vista.

The proposed Project would improve the existing Mayberry Parker Bridge by rehabilitating existing trails in the vicinity through stabilizing deteriorated trail segments, stairways, stone walls and eroded slopes; and providing additional pedestrian access to the Bridge and a new crosswalk at Arroyo Boulevard and Westminster Drive. The Project would improve the existing visual conditions and enhance the aesthetic features of the site through replacing the existing chain link fence with tubular steel fencing; repairing the stairs, handrail and walls immediately north of the Bridge, installing/replacing stone walls along the southern trail segments; and installing landscape boulders of different sizes at strategic locations. All aspects of Project design and implementation would be in conformance with the *Lower Arroyo Seco Master Plan* (Pasadena 2015a) and associated *Arroyo Seco Design Guidelines* (Pasadena 2003), the City's *Arroyo Seco Public Lands Ordinance* and *Historic Preservation Ordinance*, and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Weeks and Grimmer 1995, revised 2017).

The steel pipe railing proposed to be installed on the Bridge deck to allow for safe pedestrian access would be offset from the existing concrete rail by nine inches on each side and extend approximately six inches above the railing to minimize the visual effect while meeting safety requirements. However, the height of the existing bridge deck varies and the height difference between the existing and proposed railing would be less apparent due to the space between the two structures. Finally, the Project proposes to use steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck. However, when considering the design and context as a whole, the currently proposed steel pipe railing is considered to be in conformance with the Guidelines (South Environmental 2023a). As such, the installation, materials, and scale of the railing would not detract from the scenic vistas within the Lower Arroyo Seco.

No tree removals or vegetation clearing would be required for Project implementation. All existing vegetation would be avoided to the extent feasible; however, limited trimming may be necessary to access construction sites and/or complete construction or proposed improvements. This is discussed further in Section 2.4, Biological Resources, of this IS/MND.

Public views of the site are available from portions of South Arroyo Boulevard, the Colorado Street Bridge (located above the Project site), and from existing trails within the surrounding area. Given the low-rise scale of all proposed improvements and the context-sensitive selection of construction materials (e.g., arroyo stones/boulders, disintegrated granite), the Project would not obstruct or distinctly alter existing views within the Lower Arroyo Seco, as the Project would improve the existing conditions on the site. Although there would be short-term changes in visual quality during temporary construction activities, the long-term change in visual quality is considered a beneficial impact of the Project. As such, implementation of the proposed Project would not result in a substantial adverse effect on a scenic vista. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

WHY? There are portions of two designated State scenic highways in the City: 1) the Angeles Crest Highway (State Route [SR] 2) is located north of Arroyo Seco Canyon and transects the extreme northernmost portion of the City and SR-2); and 2) a segment of SR-110 from approximately East California Boulevard to Pasadena's southern City boundary is identified as a Historic Parkway (the Arroyo Seco Historic Parkway) (Caltrans 2023). Additionally, SR-110 from Colorado Boulevard in the City to U.S. Highway 101 in downtown Los Angeles is also identified as a National Scenic Byway by the Federal Highway Administration (USDOT 2020). Due to distance, the Project site is not within the viewshed of the Angeles Crest Highway or the Arroyo Seco Historic Parkway (SR-110). There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

WHY? The Project site is located in an urbanized area. As discussed under Threshold 2.1(a) above, although there would be short-term changes in visual quality during construction activities, the long-term change in visual quality is considered a beneficial impact of the Project. The Project

has been designed to provide visual continuity consistent with the Lower Arroyo Seco Master Plan and improve the aesthetic quality of the Bridge and surrounding areas. Moreover, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality established in the City of Pasadena. As such, implementation of the proposed Project would not substantially degrade the existing visual character or quality of public views of the Lower Arroyo Seco. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

WHY? The only lighting improvements included in the proposed Project are those associated with the proposed pedestrian crossing at the Arroyo Boulevard and Winchester Drive intersection. As part of this proposed improvement, the existing overhead streetlight on the west side of Arroyo Boulevard may be replaced and a flashing crossing sign would be installed. If the streetlight is replaced, the fixture would be consistent with other streetlights in the vicinity. The proposed crosswalk would include a pedestrian-operated flashing beacon on the west side of Arroyo Boulevard that would be oriented to be visible to north-south traveling vehicles. The flashing lights would be illuminated by light-emitting-diodes (LEDs) and would neither be bright enough to be considered a substantial new source of light nor cause glare.

The site improvements as part of Project would be available for public use from sunrise to sunset, same as the Arroyo Seco as a whole. Additionally, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. Therefore, it would not change the number or timing of vehicles coming into and out of the Lower Arroyo Seco in the Project area. As there would be no added vehicular traffic, there would be no additional sources of glare due to reflected sunlight from car windshields and headlights. There would be a less than significant impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to aesthetics, and no mitigation is required.

2.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less than Significant Impact**	**No Impact**
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

WHY? The Lower Arroyo Seco provides passive and active recreation features, built environment resources such as La Casita del Arroyo and San Pasqual Stables, natural open space uses, and is transected by the LACFCD's Arroyo Seco Channel. The entirety of the Arroyo Seco, south of Devil's Gate Dam, is identified as Urban and Built-Up Land on the most recent maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The City contains no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) (FMMP 2023). There would be no impact, and no mitigation is required.

	Potentially Significant Impact	**Less than Significant with Mitigation**	**Less than Significant Impact**	**No Impact**
Would the project:				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

WHY? The City has no land zoned for agricultural use other than commercial growing areas and land within certain specific plan areas. The Project site is within the Open Space (OS), which is not one of the zones that permits commercial growing areas (Pasadena 2023). Accordingly, there is no agricultural zoning, and Williamson Act contracts are not applicable to the Project site. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?	☐	☐	☐	☒

WHY? There is no forest land, timberland, or any Timberland Production Zones, in the City; therefore, the Project would not result in the loss of forest land, timberland, or Timberland Production areas. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

WHY? There is no forest land in the City; therefore, the Project would not result in the conversion or loss of forest land as defined by the State, including forest land (Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or Timberland Production (as defined by Government Code section 51104[g]). There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

WHY? As discussed in Threshold 2.2(a), there is no designated Farmland in the City. Therefore, the Project would not indirectly result in the conversion of farmland to a non-agricultural use. Likewise, as discussed in Thresholds 2.2(c) and 2.2(e), there are no forestry resources that would be converted to non-forest use by the Project. There would be no impact and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to agricultural and forestry resources, and no mitigation is required.

2.3 AIR QUALITY

ENVIRONMENTAL SETTING

The Project site is in the Los Angeles County portion of the South Coast Air Basin (SoCAB) and, for air quality regulation and permitting, is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SoCAB is a 6,600-square-mile area bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south. The SoCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County. The SoCAB's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive semi-arid climate, which is characterized by moderate temperatures, oceanic influence, and precipitation that is limited to a few storms during the winter (i.e., November through April).

Both the State and federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. These pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse particulate matter with a diameter of 10 microns or less (PM10), fine particulate matter less than 2.5 microns in diameter (PM2.5), and lead. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Regional air quality is defined by whether the area has attained State and federal air quality standards, as determined by air quality data from various monitoring stations. Areas that are considered "nonattainment" are required to prepare plans and implement measures that will bring the region into "attainment". When an area has been reclassified from nonattainment to attainment for a federal standard, the status is identified as "maintenance", and there must be a plan and measures established that will keep the region in attainment for the next ten years. For the California Air Resources Board (CARB), an "unclassified" designation indicates that the air quality data for the area are incomplete and there are no standards to support a designation of attainment or nonattainment. Table 1, Attainment Status of Criteria Pollutants in the South Coast Air Basin, further below summarizes the attainment status of the SoCAB for the criteria pollutants.

TABLE 1
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1-hour)	Nonattainment	Nonattainment
O_3 (8-hour)		
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Attainment/Nonattainment*
All others	Attainment/Unclassified	No Standards

O_3: ozone; PM10: respirable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; CO: carbon monoxide; NO_2: nitrogen dioxide; SO_2: sulfur dioxide.

* Los Angeles County is classified nonattainment for lead; the remainder of the SoCAB is in attainment of the State and federal standards.

Sources: USEPA 2023.

Impact Analysis

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

WHY? The air quality plan that applies to the Project is the SCAQMD's Air Quality Management Plan (AQMP). The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP" (SCAQMD 1993). The SCAQMD CEQA Handbook identifies two key indicators of consistency:

1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

With respect to the first criterion, based on the qualitative air quality analysis provided under Thresholds 2.3b and 2.3c below, construction and operation of the Project would not exceed the SCAQMD's CEQA thresholds of significance and consequently would not result in an increase in the frequency or severity of existing air quality violations nor cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emissions reductions in the AQMP. Therefore, the Project would be consistent with the first criterion.

With respect to the second criterion, the Project was assessed as to whether it would exceed the assumptions in the AQMP. The SCAQMD's current air quality planning document for the SoCAB where the Project site is located is the 2022 Air Quality Management Plan (2022 AQMP) (SCAQMD 2022). The 2022 AQMP is a regional and multi-agency effort among the SCAQMD, CARB, Southern California Association of Governments (SCAG), and the United States Environmental Protection Agency (USEPA). The 2022 AQMP includes an analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The purpose of the 2022 AQMP is to set forth a comprehensive program that would promote reductions in criteria pollutants, greenhouse gases, and toxic risk and efficiencies in energy use, transportation, and goods movement. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); updated emission inventory methods for various source categories; and SCAG's latest growth forecasts. The 2022 AQMP includes strategies and measures necessary to meet the National Ambient Air Quality Standards. The AQMP is based on projections of energy usage and vehicle trips from land uses within the SoCAB.

The primary land use planning documents that govern the Project site are the City's General Plan and the Pasadena Zoning Code. The Project site's General Plan land use designation is Open Space and zoning designation is OS (Open Space). As discussed in Section 2.11, Land Use and Planning, of this IS/MND, the Project would be consistent with the applicable land use plans,

policies, or regulations. Implementation of the Project would not require a change in land use designations or zoning and consequently would be consistent with the assumptions in the 2022 AQMP. Project implementation would not result in population growth nor increases in the number of emission sources in the surrounding cities. As such, the Project is not anticipated to exceed the AQMP assumptions for the site and is found to be consistent with the 2022 AQMP for the second criterion. The Project would not conflict with or obstruct implementation of the 2022 AQMP. There would be a no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐

WHY? The SCAQMD has developed quantitative construction and operations thresholds to determine whether projects would potentially contribute toward a violation of ambient air quality standards for criteria pollutants. However, based on the minimal extent and depths of earthmoving; use of almost solely hand tools except possibly bobcat(s), large truck(s), or similar equipment to move larger or heavier materials; and lack of off-site export of soils, a qualitative analysis was conducted to assess the impacts of project-related air pollutant emissions.

Construction Emissions

Minor construction emissions would occur from the repair and other small-scale alterations of existing public facilities. The proposed trail improvements would involve stabilizing deteriorated trail segments and features, providing additional pedestrian access to the Bridge, and providing a new crosswalk. The majority of trail and bridge improvement activities would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, except possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. Although a majority of the equipment utilized would be hand tools, the Project would result in minor construction emissions related to construction equipment exhaust and automobiles and light trucks driven to and from the Project site by construction workers. Additionally, grading would be minimal and is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained within the previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet, deep would be required. Additionally, no import or export of soil would be necessary to implement the Project, as soils generated would be redistributed evenly at the surface within the immediate area of each activity. Import of DG, concrete, aggregate backfill, and stone/boulders would be required. Steel fencing, steel railing, steel handrail, and crosswalk infrastructure would be among the new or replacement materials installed as part of the Project. Construction and demolition debris to be exported would be disposed at Scholl Canyon Landfill, located approximately two miles from the site, at 3001 Scholl Canyon Road in Glendale. As grading, excavation, and debris import/export would be minimal, the Project would result in nominal daily regional construction emissions and be well below the SCAQMD thresholds.

There are no sensitive receptors within the immediate vicinity of the Project site, except for the residences located in the southeast corner of Arroyo Boulevard and Winchester Drive. The nearest receptor would be located approximately 50 feet away, measured at the nearest points between the structure and the proposed crosswalk striping on Winchester. The crosswalk striping would generate a nominal amount of emissions, limited to the paint itself. However, the installation of the rectangular rapid-flashing beacon and possible replacement streetlight would be approximately 100 feet from the nearest residence. Because of the small scale of construction activity necessary for the crosswalk and the distance between the nearest receptor and construction activity involving any earthmoving and related equipment, the emissions would also be expected to be well below the localized significance threshold (LST) thresholds.

The Project would comply with applicable SCAQMD rules and regulations, including Rule 402 for nuisance and Rule 403 for fugitive dust control, which measures include regular watering of active grading areas and unpaved roads, limiting vehicle speeds on unpaved surfaces, stabilizing stockpiled earth, and curtailing grading operations during high wind conditions (SCAQMD 2005). Overall, the Project would result in nominal regional and local construction emissions. Accordingly, daily emissions would not exceed the SCAQMD thresholds for all criteria air pollutants and would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, there would be less than significant impacts related to regional emissions of criteria pollutant during construction, and no mitigation is required.

Operational Emissions

Operational emissions would not occur, as the proposed Project has been designed to provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco and is not anticipated to directly increase use of the area. The same locations and amounts of parking in the immediate area, similar circulation and access, and same types and extent of facilities would be provided with the sole exception of the high-visibility crosswalk. The existing air pollutant emissions occurring at the site from use of the trails and open space would remain the same under the proposed Project and no increase in air pollutant emissions would occur. As such, ongoing operation of the Project would not result in a long-term increase in air quality emissions. Therefore, the Project would not exceed SCAQMD thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant. Impacts would be less than significant related to regional and local emissions of criteria pollutants during construction, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

WHY? Sensitive receptors include, but are not limited to, children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. As discussed above, the nearest sensitive receptors are residences located approximately 50 feet to the southeast at the nearest points from the edge of the proposed crosswalk installation to the closest structure. As discussed in Threshold 2.3(b). above, construction emissions would be minimal, and operations would not generate additional emissions as operation of the Project would be essentially the same as the existing condition.

Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

WHY? The SCAQMD's *CEQA Air Quality Handbook* lists land uses that are typically associated with odor complaints. They include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The Project does not include any uses identified by the SCAQMD as being associated with odors and, therefore, would not produce emissions which would lead to odors. The proposed recreation and open space uses are not anticipated to involve any sources of odorous emissions. The Project uses are also regulated from nuisance odors or other objectionable emissions by SCAQMD Rule 402, which prohibits any discharge from any source of air contaminants or other material which, would cause injury, detriment, nuisance, or annoyance to the public. The Project would result in a less than significant impact related to odors, and no mitigation is required.

Mitigation Measures

There would be no significant impacts related to air quality, and no mitigation is required.

2.4 BIOLOGICAL RESOURCES

This analysis is based on literature review, database searches, and field observations conducted as part of the following two technical studies prepared for the approved One Arroyo Trail Demonstration project, which includes the entirety of the Mayberry Parker Bridge Access Improvements Project site:

- *Biological Assessment for the One Arroyo Trail Demonstration Project in the City of Pasadena, California* (Biological Assessment), prepared by Psomas and dated August 2022 (Psomas 2022a); and
- *Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project, Pasadena, California* (Jurisdictional Delineation), prepared by Psomas and dated August 2022 (Psomas 2022b).

Therefore, the surveys and related documentation for the One Arroyo assessment have been used in analyzing the Bridge Project. These reports for the trail project are provided in their entirety in Appendices A-1 and A-2, respectively. Additionally, Psomas biologists reviewed aerial photography and performed site reconnaissance in Summer 2023 as part of the Bridge Project-specific analysis in this IS/MND.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

WHY? Based on the Biological Assessment, the Project site does not contain potentially suitable habitat for any plant or wildlife species that are federally and/or State-listed Endangered, Threatened, or candidate for listing. There are U.S. Fish and Wildlife Service (USFWS) Designated Critical Habitat areas located near the Project site. Specifically, Nevin's barberry (*Berberis nevinii*) Critical Habitat occurs approximately 0.50 mile south of the Project site and least Bell's vireo (*Vireo bellii pusillus*) Critical Habitat occurs approximately 0.45 mile north of the Project site (CNDDB 2023). However, there are no Designated Critical Habitat areas within or immediately adjacent to the Project site. As discussed, based on the Biological Assessment, there is no potentially suitable habitat for any listed or candidate for listing species, including Nevin's barberry and least Bell's vireo. Several other non-listed special status wildlife species, such as California Species of Special Concern designated by California Department of Fish and Wildlife (CDFW), may occur within the Project site. However, they are expected to move through the area temporarily and not shelter from prey, breed, or roost within the Project area and therefore would not be adversely affected by Project construction activities (Psomas 2022a). There would be less than significant impacts to special status species, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

WHY? A reconnaissance survey identified five different vegetation communities on the Project site. Table 2, Summary of Vegetation Types and Other Areas in the Project Site, provides the vegetation communities and the amount of each vegetation community identified within the Project site. Exhibit 9, Vegetation Types and Other Areas, illustrates the distribution of the vegetation communities.

TABLE 2
SUMMARY OF VEGETATION TYPES AND OTHER AREASIN THE PROJECT SITE

Vegetation Type / Other Areas	Vegetation Impacts (acres)
Coast live oak - California sycamore woodland	0.052
Riparian herb	0.004
Coast live oak woodland	0.285
Developed	0.235
Disturbed	0.031
Total	**0.608**
Note: Italics indicate special status vegetation type	

As noted in Table 2, two special status vegetation types are located within the Project site: riparian herb and the coast live oak-California sycamore woodland, which collectively represent 0.056 acre or approximately 9 percent of the site. Coast live oak woodland, while not a special status vegetation type, is also documented and represents approximately 0.285 acre. The developed and disturbed areas represent 0.266 acre or approximately 44 percent of the site. It is noted that the acreages of vegetation types shown in Table 2 include both the Project site and a 50-foot-wide buffer around the site boundary. Additionally, vegetation mapping based on on-site surveys and review of aerial maps defines polygons and not individual trees or plants, or other more detailed information, available at the ground level (i.e., 2-D versus 3-D view). Even with these caveats that result in a conservative estimation of these vegetation communities, the Project is estimated to include a very small area of special status vegetation types, a total of 0.056 acre (approximately 2,439 square feet). Nearby areas include the open space areas of the Lower Arroyo Seco and nearby Arroyo Seco Channel. Outside the Lower Arroyo Seco, there is predominantly residential development and Desiderio Park is located across Arroyo Boulevard.

As shown on Exhibit 9, construction activities on the north side of the Mayberry Parker Bridge–including repair of the concrete stairs, handrails, and walls leading to the bridge–and the western extent of the new railing on the bridge would be within the mapped extents of the Coast live oak-California sycamore woodland. Construction activities along the west side of the southwestern portion of the site would be adjacent to the mapped area of riparian herb and a portion of the

Vegetation Types and Other Areas

Exhibit 9

Mayberry Park Bridge Access Improvement Project

N W E S

40 20 0 40 Feet

PSOMAS

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coast live oak-California sycamore woodland. The proposed trail improvement activities in this portion of the Project site involve shallow, localized grading within the existing trail limits to repair erosion, placing DG paving in selected areas, and/or installing landscape boulders. Vegetation removal or other damage to the existing vegetation outside the existing trail and wall alignments within the site is not proposed.

The understory is primarily unvegetated in the coast live oak-California sycamore woodland- and coast live oak woodland-mapped areas. While the Project does not propose any tree removal or trimming, because of the density of trees in portions of the site and the proximity of trees to the locations of some proposed improvements (e.g., trees next to existing stone wall to be repaired, low hanging branches across a trail that limits circulation), it may be necessary for engineering and/or safety reasons to prune branches of individual trees in some locations. Such trimming would be minimized, would only occur if not feasible to avoid, and would be in consultation with the City. The analysis of this threshold is regarding vegetation types, which represent a community or mosaic of plant species rather than focusing on individual trees or plants. Limited branch trimming of a small number of individual trees, as a worst-case scenario would not adversely affect the woodland vegetation types, including the approximate five hundredth of an acre of special status coast live oak-California sycamore woodland. Potential impacts to individual trees are discussed further below under Threshold 2.4(e). As discussed further below, MM BIO-1 would be required and would help minimize the potential impacts to individual trees, including coast live oaks, therefore also helping to minimize impacts to the coast live oak-California sycamore woodland and coast live oak woodland vegetation types.

Similarly, while trimming of vegetation along the west side of the southwestern trail segment that is mapped as riparian herb is not proposed and is not anticipated to be necessary, there is a possibility that minor trimming on individual plants may be necessary to implement the Project. As noted above, the vegetation mapping shown on Exhibit 9 includes a 50-foot-wide buffer around the site boundary and therefore the extent of impacts is overestimated compared to what would occur during construction activities. Also, there is almost no understory adjacent to the trail alignment on the west when viewed at the ground level (i.e., 3-D view). Minor trimming of understory vegetation in that area is possible but it would be nominal and not to the extent illustrated on Exhibit 9. This would not constitute a significant impact to this special status vegetation type.

Regardless, due to the proximity of a special status vegetation types to the Project site, there is a potential for a significant impact to the vegetation type to occur. Therefore, MM BIO-1 would be required to protect the coast live oak-California sycamore woodland in the vicinity of construction activities. Implementation of MM BIO-1 would reduce the potential impact to a special status vegetation type to a less than significant level.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

WHY? As noted above, a Jurisdictional Delineation was conducted as part of the One Arroyo project. Drainage features (i.e., jurisdictional “waters”) were identified near the Project site (see

Exhibit 9) and include the Arroyo Seco Channel, which is concrete-lined downstream of the Mayberry and Parker Bridge and is soft-bottomed immediately upstream of the bridge (Psomas 2022b, Appendix A-2). The Jurisdictional Delineation identified canopies of riparian and woodland vegetation extending on the east and west flanks of the Arroyo Seco Channel and into the northwest corner of the Project site that would be under CDFW jurisdiction when affected in conjunction with impacts to a jurisdictional feature under the Clean Water Act. However, the Project would not affect the Arroyo Seco Channel, related vegetation under CDFW jurisdiction, or any other jurisdictional feature in the area, directly or indirectly. Accordingly, the Project would have no impact on State or federally protected wetlands, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

WHY? Wildlife movement typically consists of (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water; defending territories; or searching for mates, breeding areas, or cover). This movement is necessary to maintain healthy wildlife populations, especially where open space is limited in size or otherwise isolated from other open space areas.

The Project site is located at the urban-wildland interface. As discussed previously, residential development, community parks, parking lots, roadways, highways, and flood control facilities surround the site. Within the site, pedestrian use ranges from low to high while noise from adjacent vehicular traffic is moderate to high. Wildlife movement through the area consist largely of species common in urban or suburban landscapes such as common birds and flying invertebrates, reptiles, and amphibians able to persist in small habitat patches and within developed lands as well as mammals such as fox, squirrels, coyote, common raccoon, striped skunk, and Virginia opossum, among others. Regional movement for these species may occur to a greater degree along green belts such as the Arroyo Seco but movement is also expected to occur throughout the suburban landscape. Therefore, the Project site is not expected to support a critical regional movement pathway for any local native species. The Project's improvements would not create an additional barrier to wildlife movement as local wildlife are expected to move throughout the site and surrounding areas in a similar manner to existing conditions.

The federal Migratory Bird Treaty Act of 1918 (MBTA) protects the nests of all U.S. native bird species, including common species such as mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), and house finch (*Haemorhous mexicanus*). Nesting birds and raptors have the potential to occur in natural and non-natural features within and adjacent to the Project site. In addition to the MBTA, Sections 3503 and 3503.5 of the *California Fish and Game Code* protect nesting migratory birds and raptors. The take of nesting birds or destruction of an active nest or eggs, both on and adjacent to the Project site, would be considered a significant impact. Therefore, if Project construction is initiated during the typical breeding season for nesting birds (i.e., March 1–September 15) or nesting raptors (i.e., January 1–July 31), MM BIO-2 requires a pre-construction nesting bird/raptor survey to ensure compliance with the MBTA and

describes the process for protecting any identified active nests while construction is ongoing. If construction activities are initiated during the non-breeding season, implementation of MM BIO-2 would not be required, and there would be no potential impact to nesting birds or raptors. With implementation of MM BIO-2, there would be a less than significant impact related to nesting migratory birds and raptors during their breeding seasons.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

WHY? The only local ordinance protecting biological resources in the Project area is the City of Pasadena Ordinance No. 6896 “City Trees and Tree Protection Ordinance” (codified in Chapter 8.52 of the PMC) (Pasadena Tree Ordinance). Under the Pasadena Tree Ordinance, public trees such as those on the Project site (in addition to native, landmark, specimen, and mature trees) are considered protected and would require approval by the City Manager to remove or trim.

While the Project site does contain trees that qualify as “public trees” protected under the Pasadena Tree Ordinance, no trees of any species would be removed. Additionally, Project construction is expected to result in minimal disturbance within the driplines of existing trees near the Project site boundaries. At most, there may be understory branches trimmed of some of the oak and sycamore trees where they intersect with existing trails within the Project site and would obstruct safe passage along the existing trail alignment and/or obstruct movement of construction materials or activities. However, the intent is to minimize any tree trimming to the extent feasible and all trimming would require City review and approval. Although the potential minimal trimming of understory branches would not be considered a significant impact, MM BIO-1 required above would ensure construction activities do not inadvertently impact protected trees. Therefore, there would be less than significant impacts on trees protected by City ordinance and no mitigation is required.

Tree resources are also considered to be protected under California Fish and Game Code and regulated by the Clean Water Act permitting processes. However, as previously discussed, jurisdictional drainages and associated tree canopies/riparian habitat would not be significantly impacted by the Project.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

WHY? The Project does not conflict with any local, regional, or state habitat conservation plan as none exists within the Project site and surrounding area. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans within the City. Therefore, the Project would not conflict with any regional or State plans protecting biological resources. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

MM BIO-1 **Biological Monitoring/Best Management Practices**. Prior to initiation of Project construction activities, a qualified Biologist shall ensure the limits of construction are clearly marked in the vicinity of the site to avoid impacts to sensitive natural resources such as special status vegetation types (i.e., coast live oak – California sycamore woodland and riparian herb) and protected trees. Field marking shall include four-foot high, orange construction safety fencing (i.e., snow fencing) staked at sufficient intervals to prevent failure of the boundary during the construction period. Safety fencing shall be maintained by the construction contractor throughout the construction phase and replaced or moved as needed. The Biologist shall monitor work activities on the first day of construction, during all vegetation trimming (if needed), and on an as-needed basis thereafter.

Any gear, tools, or equipment temporarily stored on unvegetated soils shall be removed at the end of each workday. If the construction contractor encounters the root systems of any tree protected under the City of Pasadena Ordinance No. 6896 “City Trees and Tree Protection Ordinance”, they shall avoid the root systems to the maximum extent feasible. In the case that avoidance is not feasible, then impacts to the root systems up to 15 percent of total root mass would be permissible. At the end of each workday, all trash (including micro trash) and debris associated with the work done by the construction contractor, shall be picked up, removed from the Project site, and disposed of in the proper manner.

MM BIO-2 **Nesting Birds/Raptors.** The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and *California Fish and Game Code* with methods approved by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to protect active bird/raptor nests. If the Project requires that work be initiated during the breeding season for nesting birds (i.e., March 1–September 15) and nesting raptors (i.e., January 1–July 31), the lead agency shall perform, or direct the performance of, a pre-construction survey for nesting birds and/or raptors, which shall be conducted by a qualified Biologist within three days prior to any construction activities on the Project site and in the immediately surrounding area (i.e., perform survey within 300 ft for nesting birds and within 500 ft for nesting raptors). A qualified Biologist

shall be knowledgeable and experienced in conducting nesting bird surveys within Southern California and in determining appropriate buffer size to prevent bird nesting failure. If the Biologist does not find any active nests in or immediately adjacent to the Project site, the construction work shall be allowed to proceed, and no further mitigation is required.

If the Biologist finds an active nest in or immediately adjacent to the Project site and determines that the nest may be impacted or breeding activities substantially disrupted due to planned construction activities, the Biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) construction limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 ft for nesting birds and 300–500 ft for nesting raptors), unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction in a buffer area can proceed when the qualified Biologist has determined that fledglings have left the nest, or the nest has failed. These requirements shall be monitored by the City of Pasadena.

2.5 CULTURAL RESOURCES

Information in this section is based upon the records searches and literature reviews of information available from the South-Central Coastal Information Center (SCCIC) and the Native American Heritage Commission (NAHC) (Appendix B-1). Additionally, information in this section is derived from the *Historic Built Environmental Impacts Assessment for the Mayberry & Parker Bridge Access Improvements Project* (Historic Review), prepared by South Environmental and dated January 2024, which is provided in its entirety in Appendix B-2 (South Environmental 2024a); and the *Historical Resources Avoidance and Protection Plan, Mayberry & Parker Bridge Access Improvements Project* (Protection Plan), prepared by South Environmental and dated January 2024, which is provided in its entirety as Attachment B to the Historic Review(provided as Appendix B-2) (South Environmental 2024b).

Existing Conditions

A literature review of documents on file at the SCCIC at California State University, Fullerton, was completed on January 18, 2022, for the approved One Arroyo Trail Demonstration project, which includes the entirety of the Bridge Project site (Appendix B-1). The results of the records search identified 33 previous studies that have been conducted within a half-mile of the search area, including 10 previous studies (LA-02513, LA-05231, LA-05249, LA-5640, LA-08252, LA-08928, LA-10541, LA-11194, LA-11231 and LA-13048) covering all or a portion of the area searched. These studies are described in more detail in Table 3, Cultural Resource Studies Covering the Search Area. In general, prior studies within a half-mile consist of archaeological field studies and literature reviews, historic-period building surveys, cultural resource monitoring, and resource evaluations conducted between 1952 and 2014.

TABLE 3
CULTURAL RESOURCE STUDIES COVERING THE SEARCH AREA

Report No	Affiliation	Year	Author	Title
LA-02513	University of California, LA	1965	Crabtree, Robert H.	Highway Construction Survey Foothill Freeway UCAS-082-D
LA-05231	Melvyn Green & Associates	1980	Green, Melvyn	Rehabilitation Options for the Colorado Street Bridge
LA-05249	Caltrans District 7	2000	Smith, Philomene C.	Negative Archaeological Survey Report: Route 210:KP30.3/40.2-170-129971
LA-05640	Caltrans District 7	2001	Sylvia, Barbara	Negative Archaeological Survey Report
LA-08252	Caltrans	1986	Snyder, John W., Mikesell, Stephen, and Pierzinski	Request for Determination of Eligibility for Inclusion in the National Register of Historic Places/Historic Bridges in California: Concrete Arch, Suspension, Steel Girder and Steel Arch
LA-08928	McKenna et al.	2007	McKenna, Jeanette A.	A Phase I (CEQA) and Class III (NEPA) Cultural Resources Investigation for the Lower Arroyo Seco Trail and Trailhead Improvements Project Area in the City of Pasadena, Los Angeles County, California
LA-10541	EDAW, Inc.	2005	Dolan, Christy and Monica Strauss	Finding of Effect for the Proposed Arroyo Seco Bike Path, Los Angeles County, California
LA-11194	Takata Associates	2002	Unknown	Hahamongna Watershed Park Master Plan, A Component of the Arroyo Seco Master Plan
LA-11231	EDAW, Inc.	2009	Meiser, M.K.	Historic American Engineering Record Arroyo Seco Flood Control Channel, Los Angeles County, California
LA-13048	W. H. Bonner Associates	1998	Bonner, Wayne H.	Cultural Resources Investigation, Los Angeles County Tax Parcel 5704-1-44, Pasadena, California

Source: SCCIC 2022, Appendix B-1.

The SCCIC records searches also identified five previously recorded cultural resource sites (as opposed to studies) within a half-mile of the One Arroyo Trail Demonstration project site. Table 4, Previously Recorded Cultural Resources Within a Half-Mile of the Search Area, summarizes these sites. The previously recorded resources include one historic-era archaeological site, two historic-era structures, one historic-era district, and one prehistoric archaeological site. The historic-era archaeological site and historic-era structures consist of historic refuse (i.e., trash), water conveyance systems (i.e., Arroyo Seco Flood Control Channel), and a bridge (Colorado Street Bridge). The historic-era district is the Pasadena Arroyo Parks and Recreation District. The one prehistoric archaeological resource consists of a habitation site and a cemetery. Three of the five cultural resources are located within the Bridge Project site. The three cultural resources identified within the Project site are P-19-180037, P-19-186859, and P-19-190590; and are discussed further below in the impacts analysis.

TABLE 4
PREVIOUSLY RECORDED CULTURAL RESOURCES
WITHIN A HALF-MILE OF THE SEARCH AREA

Primary Numbers	Trinomial	Resource Description	Recording of Events	Proximity to Project Site
P-19-000026	CA-LAN-000026	Prehistoric: habitation site; cemetery	E. Walker (1951)	Outside
P-19-003346	CA-LAN-003346H	Historic: privies/dumps/trash scatters	K. Warren (2005)	Outside
P-19-180037	-	Historic: Colorado Street Bridge	M. Zimny (1980); N. Impastato (1987)	Within
P-19-186859	-	Historic: Arroyo Seco Flood Control Channel	M. Strauss (2003)	Within
P-19-190590	-	Historic: Pasadena Arroyo Parks & Recreation District	RT Factfinders (1994)	Within
Source: SCCIC 2022, Appendix B-1				

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on November 23, 2021, for the approved One Arroyo Trail Demonstration project (Appendix B-1). On January 12, 2022, the NAHC replied that the results of the SLF check conducted through the NAHC are positive for sacred land in the vicinity of the Project site and recommended contacting the Gabrieleno Band of Mission Indians – Kizh Nation. Additionally, the NAHC provided a list of nine Native American tribes or individuals to contact for further information.

Impacts Analysis

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐

WHY? Section 15064.5 of the CEQA Guidelines generally defines a historic resource as a resource that is (1) listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register); (2) included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code); or (3) identified as significant in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code). Additionally, any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register. The California Register automatically includes all properties listed in the National Register and those formally determined to be eligible for listing in the National Register.

As noted above, three of the five cultural resources are built environment resources located within the Project site: P-19-180037, P-19-186859, and P-19-190590. These are discussed below.

P-19-180037

Cultural resource P-19-180037 is the Colorado Street Bridge. The purpose of the Colorado Street Bridge was to connect Pasadena to Los Angeles. This bridge was completed in 1913 and has been named a Cultural Heritage Landmark by the City of Pasadena. The Colorado Street Bridge was placed on the National Register on February 12, 1981. The Project would not directly impact the Colorado Street Bridge. However, the Colorado Street Bridge has physical connections to the Mayberry Parker Bridge. As such, vibration that may be generated by construction equipment has the potential to indirectly affect the Colorado Street Bridge. The Protection Plan that would be incorporated into the Project, and required as a condition of Project approval, includes requirements for construction activity that may create vibration affecting the Colorado Street Bridge abutments. Specifically, the Protection Plan requires:

- The use of large or vibration-producing equipment (e.g., excavators. Earth movers, compactors, jack hammers) in proximity to District elements must first be approved by the project architectural historian in consultation with the Project engineer;
- Heavy equipment will not be staged or used immediately adjacent to Arroyo stone walls or storage location(s) to avoid ground borne vibration that could adversely impact the stone walls; and
- Vibration monitoring by a qualified engineering professional is required when working on or within 25 feet of historical resources in and near the project like the Mayberry & Parker Bridge, the Colorado Street Bridge, and the Arroyo stone walls/staircase.

With implementation of the Protection Plan, required by MM CUL-1, there would be less than significant indirect impacts to the Colorado Street Bridge related to vibration generation during construction.

P-19-186859

Cultural resource P-19-186859 is the Arroyo Seco Flood Control Channel. The channel is a 10-mile-long masonry-lined open channel with two soft-bottom natural segments. This channel extends from the base of the Devil's Gate Dam to its confluence at the Los Angeles River. The channelization of the Arroyo Seco was completed in 1947. This channel was recommended eligible for the National Register by M. Strauss in 2003 under Criterion A. The Project would not directly or indirectly impact the Arroyo Seco Flood Control Channel. No mitigation would be required for this known resource.

P-19-190590

Cultural resource P-19-190590 is the Pasadena Arroyo Parks and Recreation District, which is comprised of a variety of elements including 27 contributing and 57 non-contributing features. Individual contributing resources within or near the Project site include Brookside Golf Club, Pioneers Bridge, Colorado Street Bridge, Mayberry Parker Bridge, La Casita del Arroyo, Arroyo Stone retaining walls, circulation system (inclusive of roads, bridges, and trails), and Lower Arroyo Seco Park as a whole. The Colorado Street Bridge was individually listed in the National Register in 1981. The Arroyo Seco Flood Control Channel is not considered a contributing resource since it not associated in the context of parks and recreation at the local level. In 1979, the Lower Arroyo Seco was added to the City of Pasadena's Designated Landmarks and Treasures as a Cultural Heritage Landmark (although not listed on the California Register of Historical Resources [California Register] or National Register). The City has declared that Cultural Heritage Landmarks shall conform to the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties (Pasadena 2015). In 2008, the Pasadena Arroyo Parks and Recreation

District, which is comprised of the Central and Lower Arroyo Seco, was added to the National Register as a cultural landscape district pursuant to the Criterion A: "Property that is associated with events that have made a significant contribution to the broad patterns of our history".

As detailed in the description of the Project in Section 1.0, the Project proposes physical alteration to segments of the circulation system (i.e., trails), some segments of Arroyo Stone retaining walls, and the Mayberry Parker Bridge. Because there would be Project-related activity within and/or adjacent to these contributing resources, a Historic Review (South Environmental 2024a, Appendix B-2) was conducted by architectural historians that meet the Secretary of the Interior's Professional Qualification Standards for Architectural History. Specifically, the Project was reviewed for conformance with the Standards for Rehabilitation in the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards for Rehabilitation) and the *Arroyo Seco Design Guidelines* to ensure impacts to historical resources pursuant to CEQA and the State CEQA Guidelines are avoided or minimized to a less than significant level. The architectural historians informed the design of the proposed Project's components and/or construction practices to preserve the District and any individually listed area or resource in the Project site. All proposed components of the Project were individually reviewed, and a determination was made regarding their conformance with these standards, including noting any deviation in recommended actions, features, materials, and/or finishes. The results of the Historic Review are discussed below. Additionally, the Project will be reviewed by the Design and Historic Preservation section of the City's Planning and Community Development Department. Because the Project involves alterations to listed historic features, it is required to go through the City's Design Review process with staff who will make the final determination of consistency with the Arroyo Seco Design Guidelines and the Standards for Rehabilitation. This review will occur after this IS/MND has been circulated for public review. However, if City staff do not find the Project is in conformance with all applicable standards, the Project would not receive Design Review Approval and, thus, could not be undertaken. As discussed in Section 1.0, Project Information, of this IS/MND, the Project would remove the existing chain link fence present along the southern perimeter of the Mayberry Parker Bridge and east of the Colorado Street Bridge abutment and replace it with tubular steel fencing. The Project proposes to place the replacement fencing supports, which would extend 48 inches below grade, adjacent to the existing Bridge rail without touching or otherwise affecting the Bridge structure. The Historic Review prepared for the Project states that if finishes are applied to the proposed steel fencing to ensure that the look mimics wrought iron versus standard brushed metal finishes used in steel fencing, the proposed tubular steel fencing would be considered in conformance with the Guidelines (South Environmental 2024a). Therefore, MM CUL-1 includes a requirement that the finish of the tubular steel fencing included in the final plans and specifications for the Project is reviewed by a qualified architectural historian to determine whether it retains conformance with the Guidelines. Additionally, as discussed previously, the steel pipe railing proposed to be installed on the Bridge deck to allow for safe pedestrian access is proposed to be steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck. However, when considering the design and context as a whole, the Historic Review concluded the currently proposed steel pipe railing would be considered in conformance with the Guidelines (South Environmental 2024a). As such, the installation, materials, and scale of the railing would not be anticipated to detract from the setting within the Lower Arroyo Seco. The Historic Review concluded that all other Project components would conform with the Guidelines as proposed. As discussed above, the final and binding determination of conformance with applicable standards will be made through the City's Design Review process, and the Project would not be approved if this finding is not made.

Additionally, a Protection Plan has been prepared, by architectural historians meeting the Secretary's Standards, pertaining to contributing resources to the District in or near the Project site. The Protection Plan details the specific methods, equipment, and materials that would be

used to ensure the existing historic resources within the Project site are adequately protected during construction activities. The Protection Plan would be required to be implemented as a condition of Project approval pursuant to MM CUL-1. With incorporation of the refinements recommended through the Historic Review and implementation of the Protection Plan during construction (MM CUL-1), the Historic Review concluded the Project would be in conformance with both the Arroyo Seco Design Guidelines and the Standards for Rehabilitation such that the Mayberry Parker Bridge, Pasadena Arroyo Parks and Recreation District, and the larger Arroyo Seco, would continue to retain all of their major character-defining features, paths of circulation, spatial relationships, and important historical associations. The Historic Review therefore concluded the Project would have a less than significant impact on historical resources under CEQA (South Environmental 2024a). As mentioned previously, all aspects of Project design and implementation would be consistent with the *Arroyo Seco Design Guidelines* (Pasadena 2003) and the *Lower Arroyo Seco Master Plan* (Pasadena 2015b). As discussed, if the City's Design Review process determines the Project is not consistent with all applicable standards, it could not be approved. With implementation of MM CUL-1, the proposed Project would not cause an adverse change in the significance of a historic resource or historic designation, including the contributing resources of the Pasadena Arroyo Parks and Recreation District within or near the Project site.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐

WHY? As discussed above, the record search at the SCCIC identified four previously recorded cultural resources within one-half mile of the Project site. The previously recorded resources include one historic-era archaeological site, two historic-era structures, and one historic-era district. The historic-era archaeological site and historic-era structures consist of historic refuse (i.e., trash), water conveyance systems (i.e., Arroyo Seco Flood Control Channel), and a bridge (Colorado Street Bridge); and the historic-era district is the Pasadena Arroyo Parks and Recreation District. The one prehistoric archaeological resource consists of a habitation site and a cemetery. As discussed above in Threshold 2.5(a), three of the five cultural resources identified within the Project site are historic-era built environment resources (i.e., not buried) or a historic-era district and are addressed above. The two remaining resources in the area are discussed below. The historic-era archaeological site (P-19-003346) was identified as a historic refuse scatter of discarded household trash. None of the known archaeological resources (i.e., P-10-000026 discussed immediately above and P-19-003346) are located within the Project site. Therefore, the proposed Project would not cause a substantial adverse change in the significance of a known archaeological resource pursuant to Section 15064.5.

No precontact archaeological sites were identified nearby; however, the sacred lands files search identified the area surrounding the Project site as positive for sacred lands important to the local Native American community. It has been well documented since historic-era times that several Native American villages existed over two miles from the Project site (Walker 1973) as indicated on early maps of the region (Kirkman 1938). Thus, excavation in native (i.e., previously undisturbed) soils has the potential to encounter unknown, intact, archaeological resources, the destruction of which would be a significant impact. Therefore, MM CUL-2, which requires

monitoring of earthmoving activities in native (i.e., undisturbed) soils and describes the treatment of intact archaeological resources that may be inadvertently discovered during construction, would be required. With implementation of MM CUL-2, there would be less than significant impacts to unknown archaeological resources.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

WHY? There are no known human remains on the site. The Project site is not part of a formal cemetery and is not known to have been used for burial of historic or prehistoric human remains. Thus, the Project would not impact known human remains or cemeteries. If any possible human remains are encountered during Project construction, those remains would require proper treatment in accordance with applicable laws. Sections 7050.5 through 7055 of the *California Health and Safety Code* describe the general provisions for human remains. Specifically, Section 7050.5 of the *California Health and Safety Code* describes the protocols to be followed if human remains are accidentally discovered during excavation of a site. In addition, the requirements and procedures set forth in Section 5097.98 of the *California Public Resources Code* would be implemented. If human remains are found during excavation, construction activities must stop in the vicinity of the find and in any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been notified, the remains have been investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. While these are State regulations, as part of the mitigation developed as part of Native American consultation pursuant to AB 52, MM TCR-3 in Section 2.18, Tribal Cultural Resources, of this IS/MND, incorporates these requirements and expands the State-required process to be applicable to the unanticipated discovery of funerary or ceremonial objects. Therefore, with implementation of MM TCR-3 there would be less than significant impacts related to encounter of human remains.

MITIGATION MEASURES

MM CUL-1 The *Historic Built Environmental Impacts Assessment for the Mayberry & Parker Bridge Access Improvements Project*, prepared by South Environmental and dated October 2023, concluded that if finishes are applied to the proposed tubular steel fencing that mimics wrought iron versus standard brushed metal finishes used in steel fencing, the proposed tubular steel fencing would be in conformance with the *Arroyo Seco Design Guidelines*. Prior to issuance of Design Review approval by the City of Pasadena, the final plans and specifications for the proposed tubular steel fencing Project shall be reviewed by an architectural historian meeting the Secretary of the Interior's (SOI) Professional Qualification Standards for Architectural History to confirm the finishing is in conformance with the *Arroyo Seco Design Guidelines* (Guidelines). If the fencing finish is not in conformance, the plans and specifications shall be revised until the finish meets the Guidelines.

Additionally, prior to award of the construction contract, the City of Pasadena shall ensure all requirements specified in the *Historical Resources Avoidance and Protection Plan, Mayberry & Parker Bridge Access Improvements Project*

*(*Attachment B to Appendix B-2 of this IS/MND), prepared by South Environmental and dated January 2024, are included in the contractor specifications.

MM CUL-2 Prior to the initiation of any earthmoving activity in which native soil is disturbed, the City shall be responsible for retaining an Archaeologist that meets the Secretary of the Interior's qualifications for archaeology to observe grading activities and to salvage and catalogue archaeological resources, as necessary. The Archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the City or its designee, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of any discovered artifacts as appropriate. If archaeological resources are found to be significant pursuant to Section 15064.5 of the State CEQA Guidelines, the Archaeologist shall determine appropriate actions, in cooperation with the City or its designee, for exploration and/or recovery. The Archaeologist shall also prepare a report of findings. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The Archaeologist shall prepare excavated material to the point of identification and curation. The City or its designee shall pay curatorial fees associated with the cost of curation.

The following mitigation measures from Section 2.18, Tribal Cultural Resources, are also applicable to the analysis of cultural resources.

TCR-3 Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects:

If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the County coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment for human remains and/or burial goods. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any discovery of human remains/burial goods that are Native American in origin shall be kept confidential to prevent further disturbance.

Any historic archaeological material that is not Native American in origin (non-Tribal Cultural Resource) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

2.6 ENERGY

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

WHY? The Project involves the repair and minor alteration of existing public facilities and would result in minor energy consumption during construction related to construction equipment use and vehicle trips, including worker trips, equipment delivery, and export of demolition debris. Fuel energy consumed during construction would be temporary and finite, and the nominal amount of fuel consumption would not represent a substantial demand on energy resources. Furthermore, there are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, the Project's construction would not result in inefficient, wasteful, or unnecessary fuel consumption.

Operation of the Project would not result in additional energy consumption, as the proposed Project has been designed to provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco and is not anticipated to directly increase use of the area. The same locations and amounts of parking in the immediate area, similar circulation and access, and same types and extent of facilities would be provided with the sole exception of the proposed high-visibility crosswalk. The existing energy consumption occurring at the site from use of the site would remain the same under the proposed Project; the Project would not create an increase in energy consumption. Therefore, the Project's operation would not result in inefficient, wasteful, or unnecessary consumption of energy resources. There would be less than significant impacts, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

WHY? As Pasadena is the CEQA Lead Agency, the following analysis considers the applicable City of Pasadena policy documents, including the Pasadena's Climate Action Plan (CAP) and the Green City Action Plan. Consistency with specific measures identified in the CAP are presented in Section 2.8, Greenhouse Gas Emissions, of this IS/MND. The City has adopted policies related to renewable energy and/or energy efficiency in the *Green City Action Plan* (Pasadena 2006):

- Action 1 – Increase the use of renewable energy to meet 10% of the City's peak electric load within seven years.

- Action 2 – Reduce the City's peak electric load by 10% within seven years through energy efficiency, shifting the timing of energy demands, and conservation measures.
- Action 3 – Reduce greenhouse gas emissions by 25% by 2030 and include a system for accounting and auditing these emissions.

As discussed above, the Project would not involve excessive long-term energy use and would only generate a nominal amount of greenhouse gas (GHG) emissions (refer to Section 2.8, Greenhouse Gas Emissions, of this IS/MND). As such, the Project would not obstruct implementation of the City's policies related to increased energy use and, consequently, would neither obstruct nor conflict with City or State policies related to energy use. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to energy, and no mitigation is required.

2.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒

WHY? The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS) for the Alquist-Priolo Earthquake Fault Zone Program. An active fault is defined as one that has had surface displacement within Holocene time (about the last 11,700 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive. Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake.

The Project site is not within an Alquist-Priolo Zone, nor do traces of any known active or potentially active faults traverse through or project toward the site. The nearest mapped active fault to the Project site is the Raymond fault located approximately 0.6 mile to the southeast (CGS 2023a). Therefore, the potential for surface rupture is relatively low at this location. Lurching or cracking of the ground surface due to nearby seismic events is possible, as with all sites located within seismically active Southern California. The surface rupture of a known fault within the Project site that would result in substantial adverse effects is not considered reasonably foreseeable. Further, the Project proposes only minor alterations of existing public facilities, and no new or more intense land uses would be developed. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: ii) Strong seismic ground shaking?	☐	☐	☐	☒

WHY? The Project site is located in Southern California, a known seismically active region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active faults. As stated in Threshold 2.7(a) above, the closest active fault is the Raymond Fault located approximately 0.6 miles from the site.

Consistent with its location in a seismically active region, the site may be subject to strong ground shaking resulting from a major earthquake on one or more faults in the area within the lifetime of the Project. Seismic ground shaking from major earthquakes in the region is not anticipated to be greater than at any other sites in Southern California. The potential for strong ground shaking is an existing seismic hazard that affects the site, and the Project would not exacerbate this condition. The Project would not involve construction of habitable structures or structures whose height, mass, or materials would pose a hazard in the event of an earthquake. The Project would include only minor alterations to existing public facilities. Further, the proposed repair or replacement of portions of existing stone walls and the stairs, handrail, and walls of the path on the north side of the Bridge would make these features more structurally resilient in the event of an earthquake than in the existing conditions. Earthquake-resistant design and materials used in new construction must meet the current seismic engineering standards of the California Building Code (CBC) Seismic Zone 4 requirements (incorporated by reference in the PMC), in effect at the time of design and construction of the Project. Compliance with these standards would reduce the risk to people and structures to the maximum extent practicable under current engineering practice. Therefore, the Project would not directly or indirectly cause substantial adverse effects due to strong seismic ground shaking. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

WHY? Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Loose, relatively clean granular soils are susceptible to liquefaction and dynamic (seismic) settlement, and liquefaction is generally known to occur in saturated cohesionless soils at depths shallower than approximately 50 ft. Settlement is often caused when loose to medium-dense granular soils are densified during

ground shaking. Dynamic settlement due to earthquake shaking can occur in both dry and saturated soils.

The Earthquake Zones of Required Investigation Map prepared by the CGS determined the Project site is located in an area mapped as being potentially susceptible to liquefaction (CGS 2023b). As discussed under Threshold 2.7(a)(ii), the Project would not involve construction of habitable structures, and proposes only minor alterations of existing public facilities. Operations of the Project would be essentially the same as existing conditions. Earthquake-resistant design and materials used in new construction must meet the current seismic engineering standards of the California Building Code Seismic Zone 4 requirements (incorporated by reference in the PMC), in effect at the time of design and construction of the Bridge improvements. Compliance with these standards would reduce the risk to people and structures (i.e., the Bridge and related public improvements) to the maximum extent practicable. Furthermore, the Project would not exacerbate any liquefaction hazards or risks. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	**Less than Significant with Mitigation**	**Less than Significant Impact**	**No Impact**
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iv) Landslides?	☐	☐	☒	☐

WHY? The Earthquake Zones of Required Investigation Map prepared by the CGS determined the Project site is located in a landslide zone (CGS 2023b). However, as stated above, the Project would not involve construction of habitable structures, and would involve only minor alterations to existing public facilities. The Project proposes to stabilize existing trail segments, eroded slopes, failing stone walls, and structurally unsound stairs, handrail, and walls (on the Bridge's north side) which would ultimately reduce the likelihood of landslide related impacts. The proposed pedestrian crosswalk would be installed on relatively flat and even topography, where the potential for landslide related impacts would be unlikely. In addition, earthquake-resistant design and materials used in new construction must meet the current seismic engineering standards and Project site plans would be reviewed and approved by the City prior to construction to ensure all Project improvements are geotechnically sound based on locations relative to any adjacent slopes and chosen construction methods. Moreover, any potential for landslides on the site is an existing environmental condition, which Project would not exacerbate. As such, the Project would not cause substantial adverse effects related to landslides. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

WHY? The largest source of erosion and topsoil loss, particularly in a developed environment, is uncontrolled drainage during construction activities. The Project may temporarily expose soils on the Project site to wind and/or water erosion from minimal grading and other construction activities (e.g., erosion, spills, and leaks from construction equipment). Because the Project site would disturb less than one acre of land–the construction footprint is approximately 0.61 acre–the Project would not require compliance with State Water Resources Control Board's (SWRCB's) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities. However, consistent with Section 8.70 of the PMC, the Stormwater Management and Discharge Control Ordinance, the Project would be required to implement stormwater management and pollution control best management practices (BMPs), as described in Section 8.70.095 of the PMC, which would ensure the Project would not result in substantial erosion or loss of topsoil. The Project would also comply with the SCAQMD Rule 403 for fugitive dust control, which measures include regular watering of active grading areas and unpaved roads, limiting vehicle speeds on unpaved surfaces, stabilizing stockpiled earth, and curtailing grading operations during high wind conditions (SCAQMD 2005). Operation of the Project would not result in substantial soil erosion or loss of topsoil during construction. Operation of the Project would have no effect on the rate of soil erosion. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐

WHY? Secondary seismic hazards related to the underlying geologic unit include several types of ground failure that can occur due to severe ground shaking. These hazards include landslides, collapse, ground lurching, shallow ground rupture, and liquefaction. The probability for each type of ground failure depends on the severity of the earthquake, the site's distance from the fault, the local topography, and subsoil and groundwater conditions, among other factors. In addition, there can be soil engineering characteristics inherent in the underlying sediments on a site that can adversely affect structures if not appropriately managed during construction, including expansive soils. Liquefaction and landslide are addressed above under Thresholds 2.7(a)(iii) and 2.7(a)(iv). Lateral spreading is a liquefaction-related phenomenon; therefore, the above analysis in Threshold 2.7(a)(iii) would also apply to this secondary seismic hazard. As shown on Plate 2-1 of the Safety Element Technical Background Report, the Project site, lies on alluvium and unconsolidated floodplain deposits of silt, sand and gravel, which is expected to be stable (Pasadena 2002a). Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to

subsidence include those with high silt or clay content. The Project site is not underlain by clay. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. As noted previously, the Project would not involve construction of any habitable structures or structures whose height, mass, or materials would pose a hazard in the event of an earthquake. Modern engineering practices and compliance with California Building Code, incorporated by reference into the PMC, for construction of all built structures (i.e., the bridge and public improvements) would minimize adverse safety effects associated with unstable geologic units or soils to the maximum extent practicable. Moreover, the Project would not exacerbate the risk or potential hazards of landslides, lateral spreading, subsidence, liquefaction, or collapse. As stated previously, the Project includes repair and stabilization of existing features, which would ultimately reduce the likelihood of adverse effects related to secondary seismic hazards. There would a less than significant impact and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

WHY? Expansive soils are soils that swell when they absorb water and shrink as they dry, such as pure clay soils and claystone. The hazard associated with expansive soils is that they can overstress and cause damage to the foundation of buildings set on top of them. According to the Pasadena General Plan Safety Element Technical Background Report, most of Pasadena is underlain by sediments consisting of unconsolidated coarse sand and pebble, cobble, and boulder gravel, which are in the low to moderately low range for expansion potential (Pasadena 2002a). Modern engineering practices and compliance with California Building Code, incorporated by reference into the PMC, for construction of all built structures (i.e., the bridge and public improvements) would minimize adverse safety effects associated with expansive soils, if present, to the maximum extent practicable. In addition, the Project would not involve construction of any habitable structures or structures whose height, mass, or materials would pose a hazard in the event of an earthquake. Operations of the Project would be essentially the same as existing conditions and would not create substantial direct or indirect risks to life or property. There would a less than significant impact and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

WHY? The Project would not involve septic tanks or alternative wastewater disposal systems, and the Project would not generate wastewater. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

WHY? Project grading would be minimal and localized to provide structural support for paved surfaces, fenceposts, stone pilasters, and stone walls. Earthmoving, where required, would be minimal and range from three inches to one foot deep for most of the proposed improvements, and from approximately two feet to ten feet deep in small (e.g., four to five square feet or less) and localized areas to provide structural support such as for pilasters, fenceposts, and walls. Additionally, no import or export of soil would be necessary to implement the Project, as soils generated would be redistributed evenly at the surface within the immediate area of each activity. As grading would be minimal and excavation would be relatively shallow, it would be unlikely to uncover fossils during ground disturbing activities. Additionally, the City's General Plan EIR states that "Although Quaternary Old Alluvial Deposits [such as those beneath the site] in general have the potential to yield fossils, the paleontological sensitivity in these areas of the City is considered low due to its proximity to the mountains to the north. Since the older Quaternary alluvial sediments are close to the sediment source, the uppermost layers of these deposits are likely too coarse-grained to preserve fossils. However, abundant fossils occur in the Topanga Formation. The Topanga Formation is in the southwesternmost portions of the City and near the South Fair Oaks specific plan area. Grading and excavations deeper than six feet into the Topanga Formation have the potential to impact significant fossils" (Pasadena 2015d). Accordingly, the City requires monitoring for projects that could excavate within the Topanga Formation; however, the Project would not involve excavation in the Topanga Formation. There would be less than significant impacts related to paleontological resources, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to geology and soils, and no mitigation is required.

2.8 GREENHOUSE GAS EMISSIONS

Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

WHY? The following discussions of the environmental setting and the evaluation of Project consistency with the City's adopted Climate Action Plan (CAP) addresses the potential GHG related impacts associated with the Project.

Climate change refers to any significant change in measures of climate (e.g., average temperature, precipitation, or wind patterns) over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's AB 32, include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. General discussions on climate change often include water vapor, atmospheric ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, or climate change groups, such as the California Climate Action Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided.

Consistency with Pasadena Climate Action Plan

The City of Pasadena has prepared and adopted a CAP (Pasadena 2018). The CAP includes the following components: a summary of existing state and local initiatives addressing climate change; community-wide GHG inventory and emissions forecasts; GHG reduction goals, measures, and actions; means of implementing and monitoring the plan; and adaptation strategies and climate change preparedness. This document builds upon the City's existing sustainability efforts, such as the Green City Action Plan and provides a framework to further reduce GHG emissions throughout the City. It is accepted as very unlikely that any individual development project of the size and character of the proposed Project would have GHG emissions of a magnitude to directly impact global climate change; therefore, any impact would be considered on a cumulative basis.

The CAP Consistency Checklist (Checklist) is intended to be a tool for new development projects to demonstrate consistency with Pasadena's CAP, which is a qualified GHG emissions reduction plan in accordance with Section 15183.5 of the State CEQA Guidelines. A project that meets the

requirements of the Consistency Checklist would be deemed to be consistent with the City's CAP. The following options are provided by the City for new development projects to establish consistency with the CAP.

- Option A requires that the new development project apply sustainable development actions, as deemed appropriate by the CAP, which would become conditions of the entitlement for approval of a project.
- Option B requires that a project demonstrate consistency with the applicable Pasadena per service population GHG efficiency threshold.
- Option C requires that a project achieve Net Zero GHG Emissions, which requires quantifying a project's GHG emission levels and demonstrate that a project would not result in a net increase in GHG emissions.

A consistency analysis for Option A is detailed below. This analysis only considers the Project against Option A criteria, which is considered most applicable. It is acknowledged that the Project may be consistent with the CAP via Options B and/or C regardless of whether the Project achieves consistency via Option A.

The Checklist is intended to be a tool for new development projects to demonstrate consistency with Pasadena's CAP, which is a qualified GHG emissions reduction plan in accordance with Section 15183.5 of the State CEQA Guidelines. However, this Checklist was developed for land development projects and not for public infrastructure projects such as the Project. Thus, certain Checklist requirements are not applicable to the Project, including the mandatory actions, energy efficiency and conservation, sustainable mobility and land use, water conservation, waste reduction and urban greening strategies. The Project's consistency with these strategies is shown in Table 5, Pasadena Climate Action Plan Consistency Analysis.

TABLE 5
PASADENA CLIMATE ACTION PLAN CONSISTENCY ANALYSIS

GHG Reduction Strategy	Project Consistent?
Energy Efficiency and Conservation	
E-1.1: Increase energy efficiency requirements of new buildings to perform better than 2016 Title 24 Standards	**Not applicable.** Energy efficiency and conservation strategies do not apply to the Project, as operation of the Project would not result in additional long-term energy consumption.
E-1.1: Increase energy efficiency requirements of new buildings to perform better than 2016 Title 24 Standards	
E-4.1: Increase city-wide use of carbon neutral energy by encouraging and/or supporting carbon-neutral technologies	
Sustainable Mobility and Land Use	
T-1.1: Continue to expand Pasadena's bicycle and pedestrian network	**Consistent.** Although the Project does not involve construction of new land uses, the Project would establish a new, high-visibility pedestrian crosswalk with rectangular rapid-flashing beacon between Desiderio Park and the Arroyo Seco. The crosswalk has been proposed at the Arroyo Boulevard and Winchester Drive intersection to provide, in combination with the enhanced trailhead into the Arroyo Seco on the east end of the crosswalk, a safer location to cross Arroyo Boulevard than further north where the curved roadway reduces driver visibility. The Project would also improve Mayberry Parker Bridge access and improve the existing trail system. Collectively, the Project components would improve
T-3.1: Decrease annual commuter miles traveled by single occupancy vehicles	
T-4.1: Expand the availability and use of alternative fuel vehicles and fueling infrastructure	
T-5.1: Facilitate high density, mixed-use, transit-oriented, and infill development	
T-6.1: Reduce GHG emissions from heavy duty construction equipment and vehicles	

TABLE 5
PASADENA CLIMATE ACTION PLAN CONSISTENCY ANALYSIS

GHG Reduction Strategy	Project Consistent?
	pedestrian facilities within and near existing public open space.
Water Conservation	
WC-1.1: Reduce potable water use throughout Pasadena	**Not applicable.** The Project would not affect long-term potable or non-potable water efficiency and would not result in changes to drainage. However, the Project would incorporate DG paving, which provides a surface that remains permeable but is more resistant to erosion than the unpaved trail segments. Additionally, the Project's proposed stabilization of eroded slopes and trail segments would reduce the flow of sediment into the Arroyo Seco, which can contribute to water quality impacts.
WC-2.1: Increase access to and use of non-potable water	
WC-3.1: Improve storm water to slow, sink, and treat water run-off, recharge groundwater, and improve water quality	
Waste Reduction	
WR-1.1: Continue to reduce solid waste and landfill GHG emissions	**Not applicable.** Waste reduction strategies do not apply to the Project, as the Project would not result in additional long-term solid waste generation.
WR-3.1: Implement a city-wide composting program to limit the amount of organic material entering landfills	
Urban Greening	
UG-1.1: Continue to preserve, enhance, and acquire additional green space throughout Pasadena to improve carbon sequestration, reduce the urban heat-island effect, and increase opportunities for active recreation	**Not applicable.** Urban greening strategies do not apply to the Project as it would not preserve, enhance, or acquire additional green space in a way that improves carbon sequestration. The Project does not include tree removals or vegetation clearing, although it may involve minor vegetation trimming necessary to access construction sites and/or complete construction of proposed improvements.
UG-2.1: Continue to protect existing trees and plant new ones to improve and ensure viability of Pasadena's urban forest	
Source: Pasadena 2017.	

As shown in Table 5, the majority of GHG reduction strategies incorporated in the City's CAP would not apply to the Project, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The Project would be consistent with the one applicable strategy related to sustainable mobility and land use. There would be less than significant impacts, and no mitigation is required.

Other Regulations and Policies

Pasadena's Green City Action Plan was adopted in 2006 and provides a list of environmental initiatives intended to guide Pasadena towards sustainability and accelerate its environmental commitment. The framework for and goals contained in this plan follow the United Nations Urban Environmental Accords (UNUEA), which include 21 actions that address energy, waste reduction, urban design, urban nature, transportation, environmental health, and sustainability. Of the 21 actions, like the discussion of the City's CAP above, the majority are not applicable to the Project. However, there are two actions that would be broadly applicable:

- **Action 8**–Adopt urban planning principles and practices that advance higher density, mixed-use, walkable, bikeable, and disabled-accessible neighborhoods which coordinate land use and transportation with open space systems for recreation and ecological restoration.

- **Action 10**–Ensure that there is an accessible public park or recreational open space within half-a-kilometer of every city resident by 2015.

The Project's inclusion of a high-visibility crosswalk and restriping at the Arroyo Boulevard and Westminster Drive intersection would be consistent with Action 8 by providing improved accessibility to the open space resources in the Arroyo Seco. The Project's enhancement of accessibility both across the Mayberry Parker Bridge and along existing trails immediately to the north and south of the Bridge would be consistent with Action 10.

Because the Project is consistent with Pasadena's CAP and Green City Action Plan, the Project satisfies the demonstration of Sustainable Development Actions under Option A. As such, the Project would result in less than significant impacts related to GHG emissions or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and no mitigation is required.

Mitigation Measures

There would be no significant impacts related to GHG emissions, and no mitigation is required.

2.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

WHY? With Project implementation, the Bridge and surrounding areas would continue operations as a recreational and open space area, which does not use or store hazardous substances other than occasional, localized use of herbicides. The City of Pasadena would be required to continue adherence to applicable zoning and fire regulations for the use and storage of any hazardous substances as part of maintenance of the Project site. As such, upon compliance with applicable regulations, the routine use, disposal, and transport of small amounts of commonly used hazardous materials associated with Project operation would not result in a significant hazard to the public or to the environment. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

WHY? Construction of the Project would involve the use of common hazardous substances such as petroleum-based fuels and hydraulic fluid. However, the level of risk associated with the accidental release of hazardous substances during construction is considered low due to the small volume of hazardous materials that would be used during construction. The construction contractor would be required to use standard construction controls and safety procedures during any transport, use, or disposal of hazardous materials. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and federal law. As such, the transport, use, and disposal of hazardous substances required for construction and the risk of release of these substances into the environment would not represent a significant hazard. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	☐	☐	☐	☒

WHY? There are no schools within ¼-mile of the Project site. The nearest school is the San Rafael Elementary School located approximately 0.6 miles southwest of the Project site. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

WHY? Based on review of the Cortese List data resources, the Project site is not located on the State of California Hazardous Waste and Substances Sites List published by California Environmental Protection Agency (CalEPA) and compiled pursuant to Section 65962.5 of the *California Government Code* (referred to as the Cortese List) (CalEPA 2023). The site is not known or anticipated to have been contaminated with hazardous materials, and no hazardous material storage facilities are known to exist on-site. For these reasons, the Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒

WHY? The Project site is not within an airport land use plan or within two miles of a public airport or public use airport. The nearest public use airport is the San Gabriel Valley Airport located approximately 8.5 miles southeast of the Project site. Therefore, the Project would not result in a safety hazard for people residing or working in the Project area, nor for people visiting the Project. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

WHY? The City of Pasadena Emergency Operations Plan addresses the City's planned response to emergencies associated with natural disasters and technological incidents. It provides an overview of operational concepts, identifies components of the City's emergency management organization within the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS), and describes the overall responsibilities of the federal, State, county entities, and the City for protecting life and property and ensuring the overall well-being of the population (Pasadena 2011). Further, the City maintains a SEMS/NIMS Emergency Response Plan, which addresses planned responses to emergency/disaster situations associated with natural disasters, technological incidents, and national security emergencies. In case of a disaster, the Pasadena Fire Department is responsible for implementing the plan, and the Pasadena Police Department devises evacuation routes based on the specific circumstance of the emergency.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the Project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and rectangular rapid-flashing beacon would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements and one lane of through traffic would be available at all times. As such, the Project would not obstruct any emergency evacuation or response activities, and Project construction would not obstruct

circulation along South Arroyo Boulevard, Westminster Drive, or any other nearby roadways. For these reasons, the Project would not interfere with any emergency response or emergency evacuation plans. There would be less than significant impacts, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
h) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

WHY? The Project site is located within a Very High Fire Hazard Severity Zone (VHFHSZ) designated area (CAL FIRE 2023). The Project improves accessibility into and through an existing public open space area through enhancement of existing trail segments and construction paths, providing new access onto the Bridge, and providing a new crosswalk. However, the new or improved access would not increase use of the Arroyo Seco nor provide access to currently inaccessible areas. Operation of the Project would not exacerbate the wildfire risk in and near the Lower Arroyo Seco.

Construction activities within the VHFHSZ would primarily be limited to hand tools. However, any use of construction equipment in a VHFHSZ presents a risk of accidental fire. Therefore, the use of all construction equipment that can create a spark, in particular engine-operated equipment, would be subject to the Project's construction contract specifications, which would include fire prevention practices some of which are derived from Caltrans' *Standard Specifications* (Caltrans 2023), including, but not limited to:

- Submit the names and emergency telephone numbers of the nearest fire suppression agencies before the start of job site activities as an informational submittal. Post the names and phone numbers at a prominent place at the job site;
- Submit a copy of your fire prevention plan required by Cal/OSHA as an informational submittal before the start of job site activities;
- Cooperate with fire prevention authorities in performance of the work;
- Immediately report fires occurring within and near the project limits by dialing 911 and to the nearest fire suppression agency by using the emergency phone numbers retained at the job site;
- Prevent project personnel from setting open fires that are not part of the work; and
- Prevent the escape of and extinguish fires caused directly or indirectly by job site activities.
- Except for motor trucks, truck tractors, buses, and passenger vehicles, equip all hydrocarbon-fueled engines, both stationary and mobile including motorcycles, with spark arresters that meet USFS standards as specified in the *Forest Service Spark Arrester Guide*. Maintain the spark arresters in good operating condition;
- Locate flammable materials at least 50 feet away from equipment service, parking, and gas and oil storage areas. Each small mobile or stationary engine site must be cleared of flammable material for a radius of at least 15 feet from the engine;

- Furnish a pickup truck and driver that will be available for fire control during working hours. The pickup truck and operator must patrol the area of construction for at least one-half hour after job site activities have ended.
- If the fire danger rating reaches very high:
    - Falling of dead trees or snags must be discontinued.
    - Welding must be discontinued except in an enclosed building or within an area cleared of flammable material for a radius of 15 feet.
    - Smoking is allowed only in automobiles and cabs of trucks equipped with an ashtray or in cleared areas immediately surrounded by a fire break unless prohibited by other authority.
    - Vehicular travel is restricted to cleared areas except in case of emergency.
- If the fire danger rating reaches extreme, take the precautions specified for a very high fire danger rating except smoking is not allowed in an area immediately surrounded by a firebreak and work of a nature that could start a fire requires that properly equipped fire guards be assigned to such operation for the duration of the work.

In the event a fire begins during construction of the Project, the nearest fire station is the Pasadena Fire Department Station 31, located approximately one mile east of the site at 135 Fair Oaks Avenue in Pasadena. Also, being located within a dense urban area, there are several fire protection facilities in the Project vicinity that could respond to an emergency at the site. The Project would not involve construction of habitable structures and would involve only minor alterations to existing public facilities. Therefore, with implementation of fire prevention practices as part of contract specifications as identified above, the Project would not expose people or structures to a significant risk of wildfire. There would be less than significant impacts, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to hazards and hazardous materials, and no mitigation is required.

2.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐

WHY? The Project site is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). The Project could result in short-term, construction-related impacts to surface water quality from minimal grading and other construction activities (e.g., erosion, spills, and leaks from construction equipment). Because the Project site would disturb less than one acre of land–the construction footprint is approximately 0.61 acre–the Project would not require compliance with State Water Resources Control Board's (SWRCB's) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities. However, consistent with Section 8.70 of the PMC, the Stormwater Management and Discharge Control Ordinance, the Project would be required to implement stormwater management and pollution control BMPs, as described in Section 8.70.095 of the PMC, which would ensure the Project would not substantially degrade water quality. The Project would also comply with the SCAQMD Rule 403 for fugitive dust control, which measures include regular watering of active grading areas and unpaved roads, limiting vehicle speeds on unpaved surfaces, stabilizing stockpiled earth, and curtailing grading operations during high wind conditions (SCAQMD 2005). Operation of the Project would not violate any water quality standards, as the Project would not introduce new contaminants to the runoff from the site. Construction and operation of the Project would not degrade surface or groundwater quality. There would be less than significant impacts, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒

WHY? The Project site is situated on the Raymond Groundwater Basin, which is PWP's source of groundwater and is defined by the California Department of Water Resources (DWR) as very-low priority pursuant to the 2019 Sustainable Groundwater Management Act (DWR 2023). The proposed Project would not increase the impervious surface area in the Project area, such that groundwater recharge from infiltration would be affected. Operation of the Project would be essentially the same as the existing condition. A nominal amount of water may be used during construction for dust suppression during construction activities, but additional water supplies would be utilized during long-term operations. There would be no adverse impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river or through the addition of impervious surfaces, in a manner that would: i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

WHY? The Project would not alter the drainage pattern of the site, as it would improve and rehabilitate existing trails and pedestrian access to the Mayberry Parker Bridge. Further, implementation of the Project would improve the drainage pattern to reduce erosion, by placement of DG paving in selected segments of existing trails and shallow grading within the existing trail limits to repair erosion damage. DG paving remains pervious but provides greater resistance to erosion. Overall, the Project operations would be essentially the same as existing conditions, and storm water runoff would continue to sheet flow towards the west and south onto the adjacent areas. The portion of runoff that does not infiltrate into the undeveloped portions of the Project site would continue to enter the City's municipal storm drainage system, including the Arroyo Seco Channel. Additionally, the Project would not alter the course of a stream or river. Therefore, the Project would not result in substantial erosion or siltation on- or off-site. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river or through the addition of impervious surfaces, in a manner that would:				
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

WHY? As discussed under Threshold 2.10(c)(i) above, the Project would not significantly alter the existing drainage pattern of the site, as operations would be essentially the same as existing conditions. Stormwater runoff would still continue to sheet flow towards the west and south onto the adjacent areas. The portion of runoff that does not infiltrate into the undeveloped portions of the Project site would continue to enter the City's municipal storm drainage system, including the Arroyo Seco Channel. Therefore, there would be no adverse effects related to storm water drainage capacity and the Project would not substantially increase the rate or amount of runoff

such that on- or off-site flooding would occur. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river or through the addition of impervious surfaces, in a manner that would: iv) Impede or redirect flood flows?	☐	☐	☐	☒

WHY? As discussed under Threshold 2.10(c)(i) above, the Project would not alter the existing drainage pattern of the site. The Federal Emergency Management Agency (FEMA) prepares Flood Insurance Rate Maps (FIRMs) for 100-year floods, meaning an area has a one percent chance of being inundated during a 12-month period, and 500-year floods, which means that in any given year, the risk of flooding in a designated area is 0.2 percent. FEMA has determined that the City of Pasadena is not located within a 100-year floodplain (Pasadena 2015b). In addition, as demarcated by FEMA, the Project is not within a flood hazard zone and is determined as "Zone X," meaning areas determined to be outside the 0.2 percent annual chance floodplain (FEMA 2008). Therefore, the Project would not impede or redirect flood flows. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

WHY? As stated above, the Project site is not located within a 100-year or 500-year flood hazard zone. Additionally, the site is not located downslope of any large body of water that could affect the site in the event of a tsunami or seiche and is located more than 25 miles from the Pacific Ocean. However, according to the General Plan Draft EIR Figure 5.7-4, the entirety of the Arroyo Seco, including the Project site, is within the inundation zone for failure of the Devil's Gate Dam (Pasadena 2015d). Because implementation of the Project would not introduce new uses or otherwise alter the existing features in a way that would risk release of pollutants, there would be a less than significant impact related to inundation risking a pollutant release. There would be no impacts related to flooding, tsunami, and seiche, and a less than significant impact related to inundation, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

WHY? Operation of the Project would not violate any water quality standards, as the Project would not introduce new land uses or other sources of new contaminants to the runoff from the site. The Project would neither conflict with nor obstruct implementation of the LARWQCB's Water Quality Control Plan. The Raymond Basin, PWP's source of groundwater, is defined by the California DWR as very-low priority pursuant to the 2019 Sustainable Groundwater Management Act (DWR 2023). As such, there is currently no sustainable groundwater management plan applicable to the Project site. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to hydrology and water quality, and no mitigation is required.

2.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒

WHY? The Project would not physically divide an existing community, as the Project consists of the Bridge access and improvements within the existing recreation/open space areas. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

WHY? The primary land use planning documents that govern the Project site are the City's General Plan and the Pasadena Zoning Code. The Project site's General Plan land use designation is Open Space, and zoning designation is OS (Open Space). Per Section 17.26.020(A) of the Pasadena Municipal Code, "[t]he OS district is applied to sites with open space, parks, and recreational facilities of a landscaped, open character having a minimum contiguous site area of two acres."

The Project would not develop any new facilities and would be consistent with the existing public uses available at the Lower Arroyo Seco. Operation of the Project would be essentially the same as the existing condition. As such, the City has determined a Conditional Use Permit would not be required, pursuant to Section 17.26.030 of the Pasadena Municipal Code. Therefore, the Project would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to land use and planning, and no mitigation is required.

2.12 MINERAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

WHY? No active mining operations exist in the City, as mining is not a permitted use in the City's Zoning Code. There are two areas in Pasadena that have been identified by the CGS as Mineral Resource Zone (MRZ) 2, which is defined as areas where geologic data indicate that significant Portland Cement Concrete-Grade aggregate resources are present. These two areas are Eaton Wash and Devil's Gate Reservoir, which were both formerly mined for aggregate (CGS 1982, 2010). The Project site is not identified as MRZ-2 (CGS 2010). Therefore, the Project would not result in the loss of an available known mineral resource with value to the region, including concrete aggregate. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

WHY? The City's General Plan Land Use Element does not identify any mineral recovery sites within the City. No active mining operations exist in the City, and mining is not currently allowed within any of the City's designated land uses. There are no active mining operations in the Lower Arroyo Seco. Therefore, the Project would not result in significant impacts from the loss of a locally important mineral resource recovery site. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to mineral resources, and no mitigation is required.

2.13 NOISE

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

WHY? The Project would generate noise from temporary construction activity. Construction of the Project would include demolition, grading, import of permeable paving material, and repair or replacement of facilities.

Existing Noise Levels

The existing noise environment in the Project area is primarily influenced by traffic noise on nearby roads. The roadway contributing the most noise to the Project site is Colorado Boulevard, particularly where it crosses above the Mayberry Parker Bridge. Traffic on SR-134, located less than 250 feet to the north and northwest, and local residential roadways, including South Arroyo Boulevard and Westminster Drive, also contribute to the ambient noise level but to a lesser extent. The existing uses at the nearby Desiderio Park also generate noise from children playing, people talking, and dog barking. However, the land uses are situated at least 50 feet from most of the Project site. The Project site is located within the Lower Arroyo Seco, which is a passive use park with natural features and public recreational facilities, including trails. Existing noise levels at the Project site are considered low and typical of recreational areas.

Noise-Sensitive Receptors

The State of California defines noise-sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. The City attempts to minimize exposure to excessive noise levels to residents, workers, and visitors in Pasadena. The land use categories that typically desire the lowest noise levels are schools, libraries, churches, hospitals, and residences. The nearest noise sensitive uses to the Project site are residential properties located directly to the east, at a distance of approximately 50 feet at the nearest points from the edge of the proposed crosswalk installation to the closest structure.

Applicable Noise Standards

The Project would be required to adhere to all applicable noise standards as set forth in the City General Plan and Municipal Code, as discussed below.

City of Pasadena General Plan

The City is affected by several different sources of noise, including automobile traffic, Rose Bowl events, commercial activity, and periodic nuisances such as construction, loud parties, and other events. The Noise Element is intended to identify these sources and provide objectives and policies that ensure that noise from these sources does not create an unacceptable noise

environment (Pasadena 2002). The Noise Element contains guidelines for noise compatible land use for long-term operations as shown in Table 3.

The Noise Element of the General Plan acknowledges that noise from major roadways may affect sensitive receptors. The following policy and implementation measures are applicable to the Project:

Policy 2a: The City will encourage noise-compatible land uses along major roadways.

Measure 1: The City will consult the guidelines for noise compatible land use shown on Figure 1 [Table 3 of the Noise Analysis] to guide the appropriateness of land uses relative to roadway noise.

The Noise Element of the General Plan recognizes that construction activity is a source of occasional temporary nuisance noise throughout the City and that these and other such nuisance noises are common to cities and, because of their unpredictable nature, must be addressed on a case-by-case basis. The following General Plan policies are applicable to the Project:

Policy 7b: The City will encourage limitations on construction activities adjacent to sensitive noise receptors.

Policy 7c: The City will encourage construction and landscaping activities that employ techniques to minimize noise.

City of Pasadena Municipal Code

Chapter 9.36, Noise Restrictions, of the PMC is the City's Noise Ordinance. It states it is the City's policy "[. . .] to prohibit unnecessary, excessive and annoying noises from all sources. Noise at certain levels is detrimental to the health and welfare of the general public." The following sections of the Noise Ordinance are applicable to the Project:

Section 9.36.040, Ambient Noise Level, of the PMC states:

A. When "ambient noise level" is referred to in this chapter, it means the actual measured ambient noise level.

B. Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the A weighting.

    1. Where the sound alleged to be offending is of a type or character set forth below, the following values shall be added to the sound level measurement of the offending noise:

        a. Except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to the effective date of the ordinance codified herein, any steady audible tone: + 5;

        b. Repeated impulsive noise: + 5;

        c. Noise occurring more than 5 but less than 15 minutes per hour: - 5;

        d. Noise occurring more than 1 but less than 5 minutes per hour: - 10;

        e. Noise occurring less than 1 minute per hour: -20.

2. Values of subsections (B)(1)(c), (B)(1)(d) and (B)(1)I of this section shall be added to the sound level measurements during daytime (6 AM to 11 PM) periods only.

Section 9.36.050, General Noise Sources, of the PMC states:

9. It is unlawful for any person to create, cause, make or continue to make or permit to be made or continued any noise or sound which exceeds the ambient noise level at the property line of any property by more than 5 decibels.

Section 9.36.070, Construction Projects, of the PMC states:

A. No person shall operate any pile driver, power shovel, pneumatic hammer, derrick power hoist, forklift, cement mixer or any other similar construction equipment within a residential district or within a radius of 500 ft therefrom at any time other than as listed below:
   1. From 7:00 AM to 7:00 PM Monday through Friday;
   2. From 8:00 AM to 5:00 PM on Saturday; and
   3. Operation of any of the listed construction equipment is prohibited on Sundays and holidays.

B. No person shall perform any construction or repair work on buildings, structures or projects within a residential district or within a radius of 500 ft there from in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance at any time other than as listed below:
   1. From 7:00 AM to 7:00 PM Monday through Friday;
   2. From 8:00 AM to 5:00 PM on Saturday; and
   3. Performance of construction or repair work is prohibited on Sundays and holidays.

C. For purposes of this section, holidays are New Year's Day, Martin Luther King Jr. Day, Lincoln's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, and Christmas.

Section 9.36.080, Construction Equipment, of the PMC states:

> It is unlawful for any person to operate any powered construction equipment if the operation of such equipment emits noise at a level in excess of 85 dBA when measured within a radius of 100 ft from such equipment.

Construction (Temporary) Noise

Construction of the Project would result in noise generated primarily from operation of construction equipment and private vehicles of construction workers. The majority of proposed improvements would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, except possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. Additionally, grading would be minimal and is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained within the previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet

deep, would be required. The Project would require limited truck trips for delivery of construction equipment and materials as well as the export of construction debris. The construction of the Project is anticipated to begin in Summer, pending funding and materials availability, and take up to approximately nine months to construct.

Table 6, Typical Maximum Construction Equipment Noise Levels, shows noise levels for construction equipment occurring at 50 feet. Noise levels would be further attenuated by 6 dBA at 100 feet away from the equipment.

TABLE 6
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Noise Level (dBA) at 50 ft	Noise Level (dBA) at 100 ft	Acoustic Usage Factor
Auger Drill Rig	85	79	20%
Backhoe	80	74	40%
Blasting	94	88	1%
Chain Saw	85	79	20%
Clam Shovel	93	87	20%
Compactor (ground)	80–82	74-76	20%
Compressor (air)	80	74	40%
Concrete Mixer Truck	85	79	40%
Concrete Pump	82	76	20%
Concrete Saw	90	84	20%
Crane (mobile or stationary)	85	79	20%
Dozer	85	79	40%
Dump Truck	84	78	40%
Excavator	85	79	40%
Front-End Loader	80	74	40%
Generator (25 KVA or less)	70	64	50%
Generator (more than 25 KVA)	82	76	50%
Grader	85	79	40%
Hydra Break Ram	90	84	10%
In Situ Soil Sampling Rig	84	78	20%
Jackhammer	85	79	20%
Mounted Impact Hammer (hoe ram)	90	84	20%
Paver	85	79	50%
Pile Driver, Impact (diesel or pneumatic)	95–101	89-95	20%
Pile Driver, Vibratory	95	89	20%
Pneumatic Tools	85	79	50%
Pumps	77	71	50%
Rock Drill	85	79	20%
Scraper	85	79	40%
Tractor	84	78	40%
Vacuum Excavator (vac-truck)	85	79	40%
Vibratory Concrete Mixer	80	74	20%

dBA: A-weighted decibels; ft: foot/feet; KVA: kilovolt amps.
Sources: Thalheimer 2000, FTA 2006

As shown, the construction equipment types or activities that typically result in noise generation greater than 85 dBA at 100 feet include blasting, clam shovel (excavator type), and pile drivers. Construction of the Project would not involve blasting, pile driving, or use of large-scale excavators with attachments such as clam shovel, ram, or hoe ram that have the potential to result in noise levels exceeding 85 dBA at 100 feet alone or in combination. Because the decibel scale is logarithmic, the combined noise level of two sources is not calculated by adding the two sound pressure levels (i.e., noise levels in decibels). Based on the formulas used to calculate decibels, doubling or halving the sound pressure level results in a three decibel increase or decrease, respectively. A noise level change of three dBA is considered just perceptible to human hearing. Two construction noise sources operating nearby each other with noise levels of 78 dBA would generate a combined noise level of 81 dBA at a distance of 100 feet from the source(s).

Although local receptors would be subject to slightly elevated noise levels due to the operation of Project-related construction equipment, based on the small scale of activity, type of construction equipment, and minimal extent of grading and excavation, temporary construction noise would not be anticipated to exceed 85 dBA at 100 feet consistent with Section 9.36.080 of the PMC. Additionally, construction would occur during the least noise-sensitive portions of the day consistent with Section 9.36.070, Construction Projects, of the PMC. Because the Project would comply with the City's construction noise limit and be limited to the least noise-sensitive hours of the day consistent with the PMC, construction noise generation would result in a less than significant impact, and no mitigation is required.

Operational (Permanent) Noise Increases

The proposed improvements would be available for public use from sunrise to sunset, same as the Arroyo Seco as a whole. Operational noise increases would not occur, as the proposed Project would provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco but is not anticipated to directly increase use of the area. The same locations and amounts of parking in the immediate area, similar circulation and access, and same types and extent of facilities would be provided with the sole exception of the high-visibility crosswalk. The existing noise levels occurring at the site from use of the trails and open space would remain the same under the proposed Project and would not create an increase in operational noise levels. Therefore, the Project would not result in a substantial permanent increase in ambient noise levels due to the operational use. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐

WHY? Depending on the type of construction activities employed, construction can generate groundborne vibration. Vibration can be considered in the context of annoyance to persons and of damage to historic and/or older structures that may be more susceptible to damage. Pile driving and blasting are generally the sources of the most severe vibration during construction, however, neither would be used for the Project. As previously discussed, the majority of trail and bridge improvement activities would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, with the

exception being possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. The vibration levels generated by the small-scale, conventional construction equipment would be infrequent and temporary, and the hand tools would not generate perceptible vibration levels. As such, construction of the Project would not cause vibration levels that would be perceptible, and therefore an annoyance, to visitors of the Arroyo Seco in the Project area.

Further, the historic resources Protection Plan that would be incorporated into the Project and required as a condition of Project approval, ensured by MM CUL-1, requires vibration monitoring to be performed by a qualified engineer during selected construction activities near or on existing resources that would be susceptible to vibration-induced damage.

Therefore, vibration generated by the Project's construction equipment would not be expected to generate either strongly perceptible levels of vibration or result in structural damage at the nearest uses with implementation of MM CUL-1. With implementation MM CUL-1, there would be a less than significant impact.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

WHY? There are no public or private airports located within two miles of the Project site. The Project site is located approximately 8.5 miles northwest of the San Gabriel Valley Airport. The Project site is located well outside the existing and projected 65-dBA CNEL noise contour of this airport and is not located within the vicinity of a private airstrip. Aircraft overflights do not significantly contribute to the noise environment at the Project site, and the Project would not expose future park users to excessive noise levels. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to noise, and no mitigation is required.

2.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	☐	☐	☐	☒

WHY? The proposed Project would provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco and is not anticipated to directly increase use of the existing area. Development of the Project would not require extending or improving infrastructure in a manner that would facilitate off-site growth in Pasadena. Implementation of the Project would maintain the existing open space uses. As such, the Project would not generate population or directly induce unplanned population growth. Additionally, the Project would not indirectly induce growth, such as through provision of employment or extension of infrastructure. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

WHY? The Project site is currently occupied by the Mayberry Park Bridge and nearby recreational amenities, such as trails, within the Lower Arroyo Seco. The Project site does not contain any existing housing and there are no persons currently residing at the site. Therefore, the Project would not displace any people or housing that would require construction of replacement housing elsewhere. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to population and housing, and no mitigation is required.

2.15 PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. The Project would not result in increased demand for fire protection services such that new or expanded facilities would be needed to maintain the Pasadena Fire Department's performance objectives. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. The Project would not result in increased demand for police protection services such that new or expanded facilities would be needed to maintain the Pasadena Police Department's performance objectives. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. Therefore, there would be no additional demand for school services that would result in impacts pertaining to the provision of new or altered facilities, construction of which would adversely affect the environment. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. Therefore, there would be no additional demand for parks due to new population. The Project itself proposes improvements to existing recreation areas within the Lower Arroyo Seco, whose environmental impacts are addressed in this IS/MND. There would not be a noticeable increase in use of the improved facilities that could drive changes to the physical conditions of the Arroyo Seco nor increase traffic or other trips to the Arroyo Seco. The Project would not directly or indirectly increase the demand for or usage of other parks or other recreation facilities in the area such that new parks and recreational facilities would be required, construction of which would adversely affect the environment. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. Therefore, there would be no additional demand for other public facilities, such as libraries. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to public services, and no mitigation is required.

2.16 RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

WHY? As discussed in Section 2.14, Population and Housing, above, the Project would not result in direct or indirect population growth. Therefore, there would be no additional demand for parks due to new population. The Project itself proposes improvements to existing of recreation areas within the Lower Arroyo Seco, whose environmental impacts are addressed in this IS/MND. The Project would not directly or indirectly increase the demand for or usage of other parks or other recreation facilities such that existing neighborhood and regional parks or other recreational facilities would experience substantial physical deterioration. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☒	☐	☐

WHY? As discussed under Threshold 2.15(a) above, the Project would not result in direct or indirect population growth and would not therefore directly or indirectly increase the demand for or usage of existing parks and other recreational facilities. The Project itself proposes improvements to existing of recreation areas within the Lower Arroyo Seco, whose environmental impacts are addressed in this IS/MND. As discussed in Section 2.1 through 2.20 of this IS/MND, there would be less than significant impacts with implementation of the identified mitigation measures for biological resources (refer to Section 2.4) and cultural resources (refer to Section 2.5).

MITIGATION MEASURES

There would be less than significant impacts with implementation of the identified mitigation measures for biological resources (refer to Section 2.4) and cultural resources (refer to Section 2.5).

2.17 TRANSPORTATION

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐

WHY? Pasadena developed and adopted its *Transportation Impact Analysis Current Practice and Guidelines* (TIA Guidelines) to ensure that transportation system improvements necessary to support new development while maintaining the quality of life within the community are identified prior to project approval and funded prior to construction. As the CEQA Lead Agency, Pasadena's transportation guidelines apply to the Project. Pursuant to Senate Bill (SB) 743, Pasadena TIA Guidelines establish CEQA transportation analysis metrics including: vehicle miles traveled (VMT) per Capita, vehicle trips (VT) per Capita, Proximity and Quality of the Bicycle and Transit Networks, and Pedestrian Accessibility (Pasadena 2022).

Per the Pasadena TIA Guidelines, a CEQA transportation analysis shall be conducted for development projects which satisfy any of the following conditions: (1) proposes 50 or more net new residential dwelling units, or (2) project proposes 50,000 or more net new non-residential square feet (Pasadena 2022). The Project is not a development project and does not meet any conditions requiring a full traffic analysis for long-term operation.

As discussed in Section 1.0 of this IS/MND, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. The proposed Project would provide improved physical facilities and open space resources to existing users of the Lower Arroyo Seco. The same locations and amounts of parking in the immediate area, similar circulation and access, and same types and extent of facilities would be provided with the sole exception of the high-visibility crosswalk. As such, trip generation from operation of the Project would be essentially the same as the existing condition. Therefore, no Project-level analysis of CEQA impacts related to transportation is required. In addition, the City's CEQA transportation metrics do not apply to construction, as construction trip generation is considered to have a less than significant impact related to VMT per Capita, VT per Capita, Proximity and Quality of the Bicycle and Transit Networks, and Pedestrian Accessibility.

Pasadena has set forth policies for public transit, bicycle, and pedestrian facilities in its General Plan. One of the eight guiding principles of the General Plan is that "Pasadena will be a city where people can circulate without cars." More specific policies regarding non-vehicular transportation modes are provided in the Mobility Element of the General Plan. Objective 2 of the Mobility Element is to "Encourage walking, biking, transit and other alternatives to motor vehicles." This objective is supported by policies including: "Continue to strengthen the marketing and promotion of non-auto transportation to residents, employees and visitors," "Ensure that secure and convenient bicycle parking is available at destinations," and "Provide convenient, safe and accessible transit stops" (Pasadena 2015c). The Project would not conflict with the City's policies to encourage walking, biking, and transit. The Project would not obstruct the implementation of any of these policies and, in some cases, would support their implementation, as it would improve ease of access and safety of alternative transportation (bicycle and pedestrian) use within the Lower Arroyo Seco. Therefore, the Project would not conflict with the City's policies to encourage

walking, biking, and transit. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	☐	☐	☐	☒

WHY? Section 15064.3(b)(1) of the State CEQA Guidelines refers to evaluating transportation impacts using vehicle miles traveled for land use projects. The City's *Transportation Impact Analysis Current Practice and Guidelines* were prepared to reflect the requirements of SB 743. The Project is not a land use project and would not generate any long-term change in traffic associated with the Lower Arroyo Seco.

As discussed under Threshold 2.16(a) above, the Project does not meet any conditions requiring a full traffic analysis, as the Project would not increase the number of operational trips from the existing condition. As such, the Project would not conflict with or be inconsistent with Section 15064.3(b)(1) of the State CEQA Guidelines or the City's transportation plans and policies. As such, there would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

WHY? The Project would alter an existing public roadway by establishing a pedestrian crosswalk between Desiderio Park and the Arroyo Seco. Specifically, a high-visibility crosswalk with a rectangular rapid-flashing beacon would be constructed across the north leg of South Arroyo Boulevard at Westminster Drive. The crosswalk would be striped in conformance with current safety codes and an ADA-compliant ramp with truncated domes and colored concrete paving would be installed on the west side of Arroyo Drive to formalize an existing trailhead into the Arroyo Seco. The north-south crosswalk on Westminster Drive would also be striped in conformance with current safety codes. The City of Pasadena Department of Transportation (PDOT) issued a Traffic Engineering Report on May 4, 2023, regarding the crosswalk installation and recommended the high-visibility crosswalk be installed, as it meets the pedestrian volume guidance, connects two pedestrian generators including the Arroyo Seco Trailhead and Desiderio Park, and helps direct the public to the Arroyo Seco Trailhead entrance (PDOT 2023).

Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and sign would require temporary lane closures on Arroyo Boulevard and

Westminster Drive. However, traffic control would be implemented consistent with City requirements and one lane of through traffic would be available at all times.

In addition, the Project is consistent with the current zoning designation, and operation of the Project would be essentially the same as the existing condition with improvements related to safety and access into and within the Arroyo Seco. Therefore, the Project would not increase hazards due to a geometric design feature or incompatible use. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Result in inadequate emergency access?	☐	☐	☒	☐

WHY? As discussed under Threshold 2.9(g), the City of Pasadena Emergency Operations Plan addresses the City's planned response to emergencies associated with natural disasters and technological incidents. In case of a disaster, the Pasadena Fire Department is responsible for implementing the plan, and the Pasadena Police Department devises evacuation routes based on the specific circumstance of the emergency.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the Project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and rectangular rapid-flashing beacon would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements and one lane of through traffic would be available at all times. As such, the Project would not result in inadequate emergency access construction staging would not interfere with circulation along South Arroyo Boulevard, Westminster Drive or any other nearby roadways. There would be less than significant impacts, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to transportation, and no mitigation is required.

2.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	☒

WHY? As mentioned in Section 2.5, Cultural Resources, the Project is subject to compliance with AB 52, which requires consideration of impacts to "tribal cultural resources" (TCRs), defined in Section 21074 of the *Public Resources Code,* as part of the CEQA process. AB 52 requires the City to notify any groups (who have requested notification) who are traditionally or culturally affiliated with the geographic area of a project for which a negative declaration, mitigation negative declaration, or environmental impact report is required pursuant to CEQA. The AB 52 process was initiated on July 5, 2023, and this consultation process has been completed. Based on the cultural resources analysis conducted for the Project (refer to Section 2.5, Cultural Resources, of this IS/MND), there are no known tribal cultural resources within the Project site and therefore no tribal cultural resources listed or eligible for listing in the California Register of Historic Resources (CRHR) or other local register of historical resources. There would be no impact to a known tribal cultural resource, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

WHY? As discussed under Threshold 2.18(a), on July 5, 2023, the City sent notification of the Project to Native American tribal contacts pursuant to AB 52. A response dated July 11, 2023, was received from the Gabrieleno Band of Mission Indians-Kizh Nation (Kizh Nation) to request scheduling consultation on the Project regarding tribal cultural resources. The City received no other response to City's other outreach to schedule a meeting to discuss the Project.

Kizh Nation has indicated that the City of Pasadena lies within an area where ancestral territories of Gabrieleño Tribe villages adjoined and overlapped, at least during the Late Prehistoric (i.e., before European contact) and Protohistoric Periods (i.e., Post-contact). Kizh Nation has stated that several Native American burials, foot trails, and water conveyance systems known as *zanja* irrigation systems built by the local Native American population under the supervision of the Spanish are documented nearby. Maps and documents have been provided by Kizh Nation, and while the documentation does not conclusively identify these resources within the City, they do highlight the overall sensitivity of the area.

This area of Los Angeles County was inhabited by Native Americans, but existing site records and field surveys do not indicate archaeological resources significant to Native Americans on the Project site. It should be noted, though, there is always the possibility that undiscovered intact cultural resources, including tribal cultural resources, may be present below the surface in native sediments.

On July 19, 2023, at the request of Kizh Nation the consultation with the City was initially conducted via e-mail correspondence, which continued into November 2023. On November 30, 2023, the City provided the Kizh Nation with the internal draft of Section 2.18, Tribal Cultural Resources, of this IS/MND for review and consideration. Between the end of November 2023 and March 1, 2024, consultation with the Kizh Nation regarding the proposed mitigation measures related to tribal cultural resources continued via numerous e-mail communications and a total of three conference calls between representatives of the City and Kizh Nation. On March 1, 2024, the City provided updated language for the mitigation measures, per the conference call held on February 29, 2024, and indicated that the City was concluding the consultation for the Project.

As discussed in Section 1.0 of this IS/MND, grading would be minimal and is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained within the previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet deep, would be required. Given the lack of evidence of known resources at the Project site and the minimal extent and depths of earthmoving, the City's assessment is that the impacts would be less than significant. Although impacts would be less than significant, MMs TCR-1 through TCR-3 would be implemented during construction activities in recognition of Kizh Nation's concerns. With implementation of MMs TCR-1 through TCR-3, impacts to tribal cultural resources would remain less than significant.

MITIGATION MEASURES

TCR-1 Retain a Native American Monitor Prior to Commencement of Ground Disturbing Activities

Prior to the commencement of any ground disturbing activities on the Project site, the Project applicant shall retain a Native American Monitor ancestrally affiliated with the geographic area of the proposed Project as recognized by the Native American Heritage Commission and/or a recognized scientific entity such as the South Central Coastal Information Center or the California State Office of Historic

Preservation. The tribal monitor will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the tribe as activities that may include demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching within the Project areas.

The tribal monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including type of construction activities performed, location of activities, soil types, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project site is completed, or when the tribal monitor has indicated that all upcoming ground-disturbing activities at the project site has little to no potential for impacting Tribal Cultural Resources. Copies of the monitor logs will be provided to the lead agency upon written request to the consulting tribe.

TCR-2 Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):

Upon discovery of any Tribal Cultural Resources, all construction activities shall cease in the immediate vicinity of the discovery (not less than the surrounding 50 feet) and shall not resume until the find can be assessed. All Tribal Cultural Resources unearthed by Project activities shall be evaluated by the tribal monitor and a qualified archaeologist if one is present. If the resources are Native American in origin, the consulting tribe will retain it/them in the form and/or manner the tribe deems appropriate, for educational, cultural, and/or historic purposes.

TCR-3 Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects:

If human remains and/or grave goods are discovered or recognized at the Project site, all ground disturbance shall immediately cease, and the County coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the Project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment for human remains and/or burial goods. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any discovery of human remains/burial goods that are Native American in origin shall be kept confidential to prevent further disturbance.

Any historic archaeological material that is not Native American in origin (non-Tribal Cultural Resource) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

2.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

WHY? The Project would minimally increase demand for water associated with a nominal amount of water during construction for dust suppression. However, this demand would not result in the need for new or expanded water supply infrastructure. The Project would not generate wastewater, therefore there would be no need for expanded wastewater infrastructure. As discussed previously under Threshold 2.10(c)(iii), the Project would not alter the drainage pattern of the site, as operations would be essentially the same as existing conditions, and storm water runoff would continue to sheet flow towards the west and south. The Project would not result in the need for new or expanded stormwater drainage facilities. The Project would not require natural gas or telecommunications facilities. The proposed high-visibility crosswalk with rectangular rapid-flashing beacon would involve a new electrical connection, however the anticipated electrical demand for this feature would be nominal.

Implementation of the Project would not result in the need for new or expanded water, wastewater, storm water drainage, natural gas, or telecommunication facilities, the construction of which could cause significant effects. There would be less than significant impacts, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐

WHY? As discussed under Threshold 2.19(a) above, the Project would minimally increase demand for water associated with a nominal amount of water used during construction for dust suppression. However, this demand would not result in insufficient water supplies, such that the City would be unable to meet the Project's demands and existing and foreseeable demands for potable water. Impacts would be less than significant, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

WHY? As discussed under Threshold 2.19(a) above, the Project would not generate wastewater. Therefore, the Project would not result in inadequate wastewater treatment capacities. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

WHY? As discussed previously, grading and excavation would be minimal and localized to provide structural support for paved surfaces, fenceposts, stone pilasters, and stone walls. Additionally, no import or export of soil would be necessary to implement the Project, as soils generated would be redistributed evenly at the surface within the immediate area of each activity. Import of DG, concrete, aggregate backfill, and stone/boulders would be required.

As discussed in Section 1.0, Project construction and demolition debris and soil to be exported would be disposed at Scholl Canyon Landfill, located approximately two miles from the site, at 3001 Scholl Canyon Road in Glendale. Consistent with the City's *Construction and Demolition Waste Management Ordinance* (Section 8.62 et. seq. of the PMC), a minimum of 75 percent of the construction and demolition debris generated during construction would be diverted through recycling or reuse. Therefore, implementation of the Project would result in a nominal construction waste stream requiring landfill disposal.

As of the end of 2020, the Scholl Canyon Landfill has a maximum daily capacity of 3,400 tons and a remaining permitted capacity of approximately 5.8 million cubic yards (3.4 million tons) (LACPW 2021). As such, the Project's minimal construction waste stream represents a nominal portion of the landfill's remaining capacity. Operation of the Project would not generate additional solid waste. The volume of waste disposed at Scholl Canyon Landfill after diversion would not result in inadequate landfill capacity. Therefore, construction and operation of the Project would not directly exceed capacity of Scholl Canyon Landfill. There would be less than significant impacts, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

WHY? As discussed under Threshold 2.19(d) above, the Project would be subject to, and comply with, the City's C&D ordinance. Neither the finite amount of construction waste nor the modest volume of long-term solid waste requiring landfill disposal after diversion efforts would interfere with the City's attainment of its waste management goals pursuant to AB 939, the California Integrated Waste Management Act. As such, the Project would comply with federal, State, and local regulations related to solid waste. There would be no impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to utilities and service systems, and no mitigation is required.

2.20 WILDFIRE

As discussed previously under Threshold 2.9(h), the Project site is located within Local Responsibility Area (LRA) Very High Fire Hazard Severity Zone (VHFHSZ) designated area (CAL FIRE 2023).

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

WHY? The Project does not propose any structures, or alter the existing topography or vegetation types, in such a manner that would impair emergency response or evacuation. The Project improves accessibility into and through an existing public open space area through enhancement of existing trail segments and construction paths, providing new access onto the Bridge, and providing a new crosswalk. However, the new or improved access would not increase use of the Arroyo Seco nor provide access to currently inaccessible areas. the Project does not propose any habitable structures, change the topography or vegetation types within the site, or change uses or activities in a VHFHSZ-designated area. Therefore, Project implementation would not exacerbate the existing wildfire risk. The Project site's surrounding area maintains the primarily single-family residential land uses and would not negatively affect the logistical nature of emergency response or evacuation due to wildfire.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the Project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and rectangular rapid-flashing beacon would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements and one lane of through traffic would be available at all times. As such, the Project would not obstruct any emergency response plan or emergency evacuation plan. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

WHY? There would be no occupants associated with the Project as it involves improvements to an existing open space area. As discussed above under Threshold 2.20(a), Project implementation would not exacerbate the existing wildfire risk. As discussed under Threshold 2.9(h), the Project's construction specifications would include fire prevention practices. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:				
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

WHY? The Project would not require the installation of any additional roads, fuel breaks, emergency water source, or power lines. The Project would require the installation of a high-visibility pedestrian crosswalk between Desiderio Park and the Arroyo Seco. However, this public infrastructure would not exacerbate the fire risk as it is situated in a fully developed suburban area and provides access to an open space area that is already heavily used. There would be no impact, and no mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

WHY? The Project would not introduce people or habitable structures within a VHFHSZ-designated area. As stated in Threshold 2.10(d), the Project site is not within a flood hazard zone. However, as stated in Threshold 2.7(a)(iv), the Project site is within an area identified as susceptible to earthquake-induced landslides, but the Project would not increase the risk of landslides. As discussed above under Threshold 2.20(a), Project implementation would not exacerbate the existing wildfire risk. There would be no drainage changes or other alteration of the VHFHSZ area, that would result in downslope or downstream flooding or landslides, because of runoff or post-fire slope instability. There would no be impact, and no mitigation is required.

MITIGATION MEASURES

There would be no significant impacts related to wildfire, and no mitigation is required.

2.21 EARLIER ANALYSIS

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. See CEQA Guidelines Section 15063(c)(3)(D). The CEQA review for the Project is not being tiered from a Program EIR, Master EIR, or other, prior CEQA document. All documents used in the preparation of this IS/MND are provided in Section 3.0, Initial Study Reference Documents.

2.22 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Does the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

WHY? As discussed in Section 2.4, Biological Resources, construction of the Project has the potential to affect natural habitat. With implementation of MMs BIO-1 and BIO-2, such potential impacts would be less than significant. Construction and operation of the Project would not degrade the quality of the environment; would not substantially reduce the habitat of fish or wildlife species; would not cause a fish or wildlife population to drop below self-sustaining levels; would not threaten to eliminate a plant or animal community; and would not reduce the number of or restrict the range of a Rare or Endangered plant or animal with implementation of mitigation.

As discussed in Section 2.5, Cultural Resources, Section 2.7, Geology and Soils, and Section 2.18, Tribal Cultural Resources, no impacts would occur to known historic, archaeological, tribal cultural, and/or paleontological resources. Potential impacts to unknown human remains from implementation of the Project would be less than significant through compliance with State regulations. Potential impacts to unknown archaeological resources would be less than significant with implementation of MM CUL-1. Potential impacts to known paleontological resource would be less than significant with implementation of MM GEO-1. There are no significant impacts related to tribal cultural resources; however, MM TCR-1 would be implemented to further recognize the Kizh Nation concerns during construction activities. Therefore, the Project does not have the potential to eliminate important examples of the major periods of California history or prehistory with implementation of mitigation.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the project:				
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

WHY? As shown in the analysis in Sections 2.1 through 2.20 above, all construction-related impacts would be either less than significant or mitigated to a less than significant level. In addition, all construction-related impacts would be localized to the Project site and would not contribute to any cumulative impacts. As demonstrated by the analysis in this IS/MND, there would be no long-term significant operational impacts, as Project operation of the Project would be essentially the same as the existing condition. As such, there is no potential contribution to long-term cumulative impacts from operation of the Project. There are no City-sponsored projects or other known projects within approximately one mile of the Project site. Based on the small scale of the Project and limited impacts, only projects ongoing within this relatively close distance could potentially result in cumulatively considerable impacts. Therefore, the Project would not result in impacts that are individually limited but cumulatively considerable. There would be a less than significant impact, and no mitigation is required.

	Potentially Significant Impact	**Less than Significant with Mitigation**	**Less than Significant Impact**	**No Impact**
Would the project:				
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

WHY? As shown in the analysis in Sections 2.1 through 2.20 above, the Project would not have environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly. There would be no impact, and no mitigation is required.

SECTION 3.0 INITIAL STUDY REFERENCE DOCUMENTS

California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP). 2023 (July 12, last accessed). *California Important Farmland Finder*. Sacramento, CA: FMMP. https://maps.conservation.ca.gov/DLRP/CIFF/.

California Department of Forestry and Fire Protection (CAL FIRE). 2023 (July 12, last accessed). FHSZ Viewer. Sacramento, CA: CAL FIRE. https://egis.fire.ca.gov/FHSZ/.

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Appendix A-1

Biological Assessment (One Arroyo Trail Demonstration Project)

August 24, 2022

Mr. Hayden Melbourn, P.E.
Principal Engineer
City of Pasadena Department of Public Work
100 North Garfield Avenue, Room N306
Pasadena, California 91109

VIA EMAIL
HMelbourn@cityofpasadena.net

Subject: Biological Assessment for the One Arroyo Trail Demonstration Project in the City of Pasadena, California

Dear Mr. Melbourn:

This Letter Report presents the findings of a biological and jurisdictional waters resources assessment for The One Arroyo Trail Demonstration Project (hereinafter referred to as the "Project") located in the City of Pasadena, Los Angeles County, California (Exhibit 1, Regional Location and Local Vicinity). The purpose of the biological assessment is to document biological resources, evaluate potential biological constraints on the Project, identify potential impacts to biological and jurisdictional water resources that could result from implementation of the Project; and recommend protective measures to ensure avoidance of or minimize impacts to a less than significant level.

PROJECT DESCRIPTION AND LOCATION

The One Arroyo Trail Demonstration Project is divided into two separate areas, the Upper and Lower Loop Trails. The purpose of the Project is to make trail improvements designed to enhance and better connect the existing trail network. These improvements will be executed in a manner that is consistent with the regional character of the area and previous planning efforts. Significant opportunity exists in trail improvements with careful grade modifications to allow for the flow of water and stabilization of trail segments. Most of these elements would significantly increase the longevity of the trail by reducing damage due to incorrect waterflow. Strategic grade reversals, trail outsloping, and rock armoring segments would enhance the trail stability and preserve the natural character.

The Project is within the Arroyo Seco Watershed, which stretches from the San Gabriel Mountains to downtown Los Angeles. Surrounding land uses of the Upper and Lower Loops include Brookside Golf Course that is located directly adjacent to the Upper Loop Trail, along with residential structures in the areas above the trails, flood control structures (e.g., channelized Arroyo Seco Channel), equestrian facilities, and transportation corridors such as Interstate-210 and State Route-134. The Project occurs on the U.S. Geological Survey's (USGS') Pasadena 7.5-minute quadrangle (Exhibits 2a and 2b, U.S. Geological Survey Quadrangle Topographic Map). Topography in the survey area is mostly flat and includes a sandy wash, steep slopes raising up adjacent to the trail; elevations range from approximately 700 feet above mean sea level (msl) in the southern portion of the Lower Loop Trail to 1,050 feet above msl in the northern portion of the Upper Loop Trail.

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METHODS

Research and field studies were conducted to document the biological resources as well as jurisdictional features on and adjacent to the site using the methods described below.

Literature Review

Prior to the survey, a literature review was conducted to identify special status plants, wildlife, and habitats that have been reported to occur in the vicinity of the survey area. The California Native Plant Society's (CNPS') Inventory of Rare and Endangered Plants (CNPS 2022) and the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CDFW 2022a) were reviewed. Database searches included the USGS' Pasadena and Los Angeles 7.5-minute quadrangles. Resources reviewed to assist in the delineation of jurisdictional features included the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA NRCS') Web Soil Survey, the USDA NRCS' Hydric Soils List (USDA NRCS 2022), and the U.S. Fish and Wildlife Service's (USFWS') National Wetlands Inventory (NWI) Wetland Mapper (USFWS 2022).

Vegetation Mapping and General Survey

Psomas Senior Biologist Sarah Thomas conducted a general plant and wildlife survey and mapped vegetation within the Project's survey area on February 4, and March 10, 2022. The survey area included the trail alignment plus a 25-foot buffer on both sides. Representative site photographs are provided in Attachment A.

Vegetation was mapped on a 1-inch equals 100-foot (1″=100′) scale color aerial. Nomenclature for vegetation types generally follows that of *A Manual of California Vegetation* (Sawyer et. al. 2009) when feasible. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Baldwin et. al. (2012). Nomenclature of plant taxa conforms to the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022c) for special status species and the Jepson eFlora (Jepson Flora Project 2021) for all other taxa.

All wildlife species detected during the survey were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows the *Special Animals List* (CDFW 2022b) for special status species; for other species, Center for North American Herpetology (2015) for amphibians and reptiles, the American Ornithological Society (2021) for birds, and the Smithsonian National Museum of Natural History (2011) for mammals.

Jurisdictional Delineation

Section 404 of the federal Clean Water Act (CWA) and Section 1602 of the *California Fish and Game Code* regulate activities affecting resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the CDFW, respectively. Waters of the United States under the jurisdiction of the USACE include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes. Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate, through a Water Quality Certification, any proposed federally

permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters of the State under the Porter-Cologne Water Quality Control Act.

A delineation of jurisdictional water resource boundaries was conducted by Psomas Senior Regulatory Specialist David Hughes on January 28, 2022 to describe the type and extent of waters regulated by the USACE, the RWQCB, and/or the CDFW. Jurisdictional features were mapped on the aerial. Non-wetland waters of the United States under the jurisdiction of the USACE were assessed based on the presence of an Ordinary High Water Mark (OHWM). The presence of wetland waters of the United States was assessed using a three-parameter approach for wetland hydrology, hydrophytic vegetation, and hydric soils, as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If conditions indicating isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methods. The CDFW's jurisdiction is generally defined as the top of the bank of a river, stream, or lake or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, or lake.

SURVEY RESULTS

Vegetation Types and Other Landcovers

The survey area consists of coast live oak woodland, coast live oak–arroyo willow woodland, coast live oak–California sycamore woodland, coast live oak - Fremont cottonwood forest and woodland, coast live oak–non-native ornamental woodland, California buckwheat scrub, golden current thickets, laurel sumac–arroyo willow thickets, laurel sumac–blue elderberry chaparral, lemonade berry scrub, mule fat thickets, non-native grassland, riparian herb, developed/non-native ornamental woodland, disturbed, and developed (Exhibits 3a and 3b, Soils Map; Exhibits 4a-4d, Vegetation Types and Other Areas). These areas are described below.

Coast Live Oak Woodland

Coast live oak woodland occurs directly adjacent to portions of the trails and on slopes above the trails. This vegetation type consists of a coast live oak (*Quercus agrifolia*) as the dominant tree, with a mostly closed overstory. Other tree species also occurring include shamel ash (*Fraxinus uhdei*), southern California black walnut (*Juglans californica*), Chinese elm (*Ulmus parvifolia*), and tree of heaven (*Ailanthus altissima*). Understory species include but are not limited to western poison oak (*Toxicodendron diversilobum*), California polypody (*Polypodium californicum*), coffee fern (*Pellaea andromedifolia*), goldback fern (*Pentagramma triangularis*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), chilicothe (*Marah macrocarpa*), common castor bean (*Ricinus communis*), bitter gooseberry (*Ribes amarum*), hillside gooseberry (*Ribes californicum*), blue passion flower (*Passiflora caerulea*), heart-leaved bush penstemon (*Keckiella cordifolia*), hollyleaf redberry (*Rhamnus ilicifolia*), toyon (*Heteromeles arbutifolia*), dwarf nettle (*Urtica urens*), and foxtail chess (*Bromus madritensis*).

This vegetation type corresponds to the *Quercus agrifolia* Woodland Alliance in Sawyer et. al. (2009). It is not considered a sensitive natural community by the CDFW.

Coast Live Oak–Arroyo Willow Woodland

Coast live oak–arroyo willow woodland within a small swale adjacent to the Lower Loop Trail. This vegetation type has an open canopy and is co-dominated by relatively small coast live oak trees and arroyo willow trees. The oak trees appear to have been planted in this aera. The ground cover in this area consists mostly of brome, but also includes high cover of various riparian herb species such as sedge

(*Cyperus* sp.), and dock (*Rumex* sp.). Common castor bean and date palm (*Phoenix dactylifera*) also occur.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the *Salix lasiolepis* Shrubland Alliance and the *Quercus agrifolia* Forest and Woodland Alliance, though the cover of arroyo willow and coast live oak is less than the required cover (i.e., greater than 50 percent) for each alliance. Since neither alliance are considered sensitive natural communities by the CDFW, the Coast live oak–arroyo willow woodland in the survey area is not considered sensitive.

Coast Live Oak–California Sycamore Woodland

Coast live oak–California sycamore woodland occurs throughout a large portion of the Lower Loop Trail. This vegetation type consists mostly of areas with large coast live oaks and large California sycamore (*Platanus racemosa*) trees with a closed canopy. Some areas appear to have been planted and contain small oaks and sycamores with an open canopy. Other tree species also occurring include arroyo willow, white alder (*Alnus rhombifolia*), shamel ash, and Chinese elm. The understory is relatively sparse with species such as but not limited to mule fat (*Baccharis salicifolia* ssp. *salicifolia*), sisymbrium (*Sisymbrium* sp.), bitter gooseberry, common horehound (*Marrubium vulgare*), toyon, and brome.

This vegetation type corresponds to the *Platanus racemosa* - *Quercus agrifolia* Alliance in Sawyer et. al. (2009). It is considered a sensitive natural community by the CDFW.

Coast Live Oak - Fremont Cottonwood Forest and Woodland

Coast live oak-Fremont cottonwood forest and woodland occurs in the Lower Loop Trail. This is a relatively small area dominated by coast live oak and Fremont cottonwood trees. This area has limited understory species such as brome.

This vegetation type does not correspond to a named alliance or association in Sawyer et al. (2009). Its composition is similar to the *Populus fremontii - Fraxinus velutina - Salix gooddingii* Forest & Woodland Alliance, and the *Quercus agrifolia* Forest and Woodland Alliance, though the cover of Fremont cottonwood and coast live oak is less than the required cover (i.e., greater than 50 percent) for each alliance. The *Populus fremontii - Fraxinus velutina - Salix gooddingii* Forest & Woodland Alliance is considered a sensitive natural community by the CDFW, therefore coast live oak-Fremont cottonwood forest and woodland would be considered sensitive.

Coast Live Oak–Non-Native Ornamental Woodland

Coast live oak–non-native ornamental woodland in the Upper Loop Trail. This vegetation type consists of an equal canopy cover of coast live oak and various non-native trees. Non-native trees occurring in these areas include Chinese elm, tree of heaven (*Ailanthus altissima*), shamel ash, Victorian box (*Pittosporum undulatum*), Mexican fan palm, non-native pine tree (*Pinus* spp.), and Peruvian pepper (*Schinus molle*). Understory species include castor bean, blue passion flower, English ivy (*Hedera helix*), greater periwinkle (*Vinca major*), Catalina cherry (*Prunus ilicifolia* ssp. *lyonii*), and brome.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the *Quercus agrifolia* Forest and Woodland Alliance, though the cover of coast live oak is less than the required cover (i.e., greater than 50 percent) for that alliance. Since the *Quercus agrifolia* alliance is not considered a sensitive natural community by the CDFW, the Coast live oak–non-native ornamental woodland in the survey area is not considered sensitive.

California Buckwheat Scrub

California buckwheat scrub occurs in the far northern portion of the Upper Loop Trail survey area. This area is a steep south facing slope and appears to have been restored. The dominant shrub is California buckwheat (*Eriogonum fasciculatum*), with other species also occurring such as California sagebrush (*Artemisia californica*), jimsonweed (*Datura wrightii*), laurel sumac (*Malosma laurina*), short-podded mustard (*Hirschfeldia incana*), horehound (*Marrubium vulgare),* wishbone bush (*Mirabilis laevis*), and Spanish broom (*Spartium junceum*).

This vegetation type corresponds to the *Eriogonum fasciculatum* Shrubland Alliance in Sawyer et al. (2009). It is not considered a sensitive natural community by the CDFW.

Golden Current Thickets

Golden current thickets occurs in a single small patch along the Lower Loop Trail survey area. This vegetation type is dominated by golden current (*Ribes aureum*) which appears to have been planted. Non-native brome grass comprises the understory.

This vegetation type does not correspond to a named alliance or association in Sawyer et al. (2009) and is not similar to any alliances in Sawyer et. al. (2009). It is not considered a sensitive natural community by the CDFW.

Laurel Sumac–Arroyo Willow Thickets

Laurel sumac–arroyo willow thickets occurs in the Lower Loop Trail. This vegetation type consists of large individuals of laurel sumac and an equal cover of arroyo willow trees. Understory is sparse in this area, mainly comprised of brome.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the *Malosma laurina* Shrubland Alliance, and the *Salix lasiolepis* Shrubland Alliance, though the cover of arroyo willow and laurel sumac is less than the required cover (i.e., greater than 50 percent) for each alliance. Since neither alliance are considered sensitive natural communities by the CDFW, the laurel sumac–arroyo willow thickets in the survey area are not considered sensitive.

Laurel Sumac–Blue Elderberry Chaparral

Laurel sumac–blue elderberry chaparral occurs in the northern portion of the Upper Loop Trail. These areas are dominated by laurel sumac and blue elderberry and have a closed canopy. The understory is sparse, but some other species also occurring include California sagebrush, toyon, and horehound.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the *Malosma laurina* Shrubland Alliance, though the cover of laurel sumac is less than the required cover (i.e., greater than 50 percent) for this alliance. Since this alliance is not considered a sensitive natural community by the CDFW, the laurel sumac–blue elderberry chaparral in the survey area is not considered sensitive.

Lemonade Berry Scrub

Lemonade berry scrub occurs along the Lower Loop Trail on a west facing slope. The dominant shrub in this area is lemonade berry (*Rhus integrifolia*), with toyon and blue elderberry also occurring. The understory is comprised of brome grass.

This vegetation type corresponds to the *Rhus integrifolia* Shrubland Alliance in Sawyer et. al. (2009). It is considered a sensitive natural community by the CDFW.

Mule Fat Thickets

Mule fat thickets occurs at the northern portion of the Upper Loop Trail on stream banks. This vegetation type shows disturbance from human foot traffic and trash. Mule fat shrubs are the dominant shrub, with giant reed (*Arundo donax*) also occurring.

This vegetation type corresponds to the *Baccharis salicifolia* Shrubland Alliance in Sawyer et. al. (2009). It is not considered a sensitive natural community by the CDFW.

Non-Native Grassland

Wild oats grassland occurs in a small strip in the Upper Loop Trail along the trail. This vegetation type is dominated by brome.

This vegetation type corresponds to the *Bromus rubens - Schismus (arabicus, barbatus)* Herbaceous Semi-Natural Alliance in Sawyer et. al. (2009). Being dominated by a non-native species, it is not considered a sensitive natural community by the CDFW.

Riparian Herb

Riparian herb occurs in and adjacent to the swale in the Lower Loop Trail. This area is comprised of low growing herbaceous species such as sedge (*Cyperus* sp.), and dock (*Rumex* sp.).

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). It is not considered a sensitive natural community by the CDFW.

Developed/Non-Native Ornamental Woodland

Developed/non-native ornamental woodland consists of paved roads with non-native ornamental landscaped trees. Trees such as non-native pine trees and Chinese elm can be found in these areas.

Disturbed

Disturbed landcover consists of graded dirt areas such as foot paths and areas adjacent to parking lots. These areas are unvegetated or contain sparse weedy vegetation.

Developed

Developed landcover consists of paved roads and highways, as well as concrete flood control facilities in the survey area.

Jurisdictional Resources

The survey area is centered around the Arroyo Seco which runs in a north-south direction from Devil's Gate Dam at the upstream end of the northern portion of the survey area down through Lower Arroyo Park at the southern end of the survey area. The Arroyo Seco consists of a wide sandy wash dominated by mulefat and willow trees at the northern end of the survey area. This feature drains into a detention basin at the northern end of Brookside Golf Course and then transitions to a concrete-lined storm drain channel.

A total of nine drainage features were identified by the jurisdictional delineation (Exhibits 5a through 5d, Jurisdictional Resources.

Four drainage features occur along the western edge of the Upper Loop Trail in the northern portion of the survey area. These include a hardened (i.e., concrete bottom) storm drain channel at the southern end of the Upper Loop Trail near West Washington Boulevard (Feature A), an erosional feature that conveys water from a pipe on the adjacent hillside onto the trail and adjacent golf course (Feature B), an oak-dominated drainage (Feature C) that leads to the Arroyo Seco detention basin described above, and an erosional feature (Feature D) that discharges storm water from a pipe under the Interstate 210 overpass. Additionally, another small ephemeral drainage (Feature E) flows over the Upper Loop Trail on the east side of the Arroyo Seco near the northern end of the survey area.

Drainage features along the Lower Loop Trail include the Arroyo Seco, which transitions from a concrete channel at the upstream end of the Lower Loop Trail to an earthen bottom channel that is dominated by willow trees and other riparian vegetation. Midway through this southern portion of the survey area, the Arroyo Seco changes back to a concrete channel with vertical sidewalls. Other drainages adjacent to the Lower Loop Trail (Features F through I) are artificial streams that were created by diverting water from the Arroyo Seco to create meandering streams that pass through Lower Arroyo Park before discharging water back into the Arroyo Seco.

Soil test pits were excavated at three locations of the northern survey area to determine if wetland conditions are present. These test pits were excavated at locations where the Upper Loop Trail intersects with the existing drainage features. Wetland conditions were not detected anywhere within the survey area.

Wildlife Habitat

The survey area provides moderate quality habitat for wildlife. The presence of human intrusion into the area on dirt trails and surrounding urban development decreases the wildlife value relative to undisturbed areas.

No fish species were observed during the biological survey and the drainages in the survey area provide minimal habitat for fish due to the limited amount of surface water present and the isolated nature of the drainages in the survey area. During storm events or releases from Devil's Gate Dam just upstream of the survey area, fish may pass through the Arroyo Seco stream. No native fish breeding habitat occurs in the survey area. Species that may occur include but are not limited to common fish species such as the non-native, historically stocked rainbow trout (*Onocorhynchus mykiss*); green sunfish (*Lepomis cyanellus*); and western mosquitofish (*Gambusia affinis*).

No amphibian species were observed during the biological survey. Common species that may occur include black-bellied slender salamander (*Batrachoseps nigriventris*), garden slender Salamander (*Batrachoseps major major*), California toad (*Anaxyrus boreas halophilus*), and Baja California treefrog (*Pseudacris hypochondriaca*).

One reptile species was observed during the survey, the common side-blotched lizard (*Uta stansburiana*). Other common species that may occur include western fence lizard (*Sceloporus occidentalis*), western skink (*Plestiodon skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), California kingsnake (*Lampropeltis californiae*), gopher snake (*Pituophis catenifer*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

Bird species observed on or adjacent to the survey area include mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), Steller's jay (*Cyanocitta stelleri*), California scrub-jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltriparus minimus*), common raven (*Corvus corax*), California thrasher (*Toxostoma redivivum*), northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), and yellow-rumped warbler (*Setophaga coronata*).

One mammal species was observed during the survey, the California ground squirrel (*Otospermophilus beecheyi*). Other common species that may occur include but are not limited to Botta's pocket gopher (*Thomomys bottae*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), and coyote (*Canis latrans*). Common bat species with potential to forage in the survey area include canyon bat (*Parastrellus hesperus*).

Wildlife Movement

Within large open space areas where few or no man-made or naturally occurring physical constraints to wildlife movement are present, wildlife corridors may not yet exist. However, once open space areas become constrained and/or fragmented as a result of urban development or the construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The survey area is located at the urban-wildland interface. Residential development, a golf course, community parks, parking lots, roadways, and flood control facilities surround the area. Within the survey area, vehicular and/or pedestrian use is moderate to high in some segments and low to moderate in other segments. Wildlife movement through the area consist largely of species common in urban or suburban landscapes such as common birds and flying invertebrates, reptiles, and amphibians able to persist in small habitat patches and within developed lands as well as mammals such as coyote, common raccoon, striped skunk, and Virginia opossum among others. Regional movement for these species may occur to a greater degree along green belts such as the Arroyo Seco but movement is also expected to occur throughout the suburban landscape. Therefore, the survey area is not expected to support a critical regional movement pathway for any local native species.

Special Status Vegetation Types

The CDFW Vegetation Classification and Mapping Program provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat (CDFW 2021). Information on rarity is based on the range and distribution of a given type of vegetation, and the proportion of occurrences that are of good ecological integrity. Threats and trends are considered in categories like residential and commercial development; agriculture, energy production and mining; and invasive and other problematic species. Two vegetation types in the survey area, (1) coast live oak-Fremont cottonwood forest and woodland and (2) lemonade berry scrub are considered sensitive by the CDFW.

Special Status Plant and Wildlife Species

Plants or wildlife may be considered "special status" due to declining populations, vulnerability to habitat change, or restricted distributions. Certain special status species have been listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts.

Special Status Plants

Thirty-two special status plant species have been reported in the vicinity of the survey area (CNPS 2022; CDFW 2022a).

Of the species reported from the literature review, two species are federally and/or State-listed Endangered, Threatened, or are candidates for listing: Nevin's barberry (*Berberis nevinii*), and slender-horned spineflower (*Dodecahema leptoceras*). Marginally suitable habitat for Nevin's barberry occurs in the survey area. There are three historical records from adjacent to the survey area. These records were potentially planted, as records of planted Nevin's barberry in this area have been documented (CDFW 2022a). One historical record of slender-horned spineflower occurs in the Arroyo Seco. This species is not expected to occur in the survey area because the survey area does not support suitable habitat for this species. The small portion of the survey area that contains sandy soils (e.g., the northern portion of the Upper Loop Trail) is highly disturbed by human presence and is not potentially suitable for spineflower.

In addition to species formally listed by the resource agencies, 12 species reported in the vicinity of the survey area have a California Rare Plant Rank (CRPR) of 1B or 2B. None of these species have potential to occur in the survey area due to a lack of potentially suitable soils or habitat.

Several plant species with a CRPR of 3 or 4 are also known from the vicinity. Two list 4 species, southern California black walnut and Coulter's matilija poppy (*Romneya coulteri*), were observed within the survey area. Several southern black California walnut trees and a large patch of matilija poppy occur directly adjacent to both the Upper and Lower Loop Trails.

Special Status Wildlife

Twenty-three special status wildlife species have been reported in the vicinity of the survey area (CDFW 2022a). Of the species reported from the literature review, five species are federally and/or State-listed Endangered or Threatened or are candidates for listing: southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), southern mountain yellow-legged frog (Rana muscosa), bank swallow (*Riparia riparia*), and least Bell's vireo (*Vireo bellii pusillus*). None of these species are expected to occur due to either a lack of potentially suitable habitat.

In addition to species formally listed by the resource agencies, 18 special status species (i.e., California Species of Special Concern) have been reported near the survey area. Nine of these species—coast range newt (*Taricha torosa*), California legless lizard (*Anniella* sp.), and coastal whiptail (*Aspidoscelis tigris stejnegeri*), yellow warbler (*Setophaga petechia*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), and San Diego desert woodrat (*Neotoma lepida intermedia*)—have potential to occur in the survey area due to potentially suitable or marginally suitable habitat present. The remaining species are not expected to occur in the survey area because the survey area does not provide suitable habitat for the species.

Additional species, such as Watch List species or those lacking formal status but tracked by the CDFW, may occur in the survey area.

Critical Habitat

Critical Habitat is designated by the United States Fish and Wildlife Service (USFWS) for the survival and recovery of species listed as Threatened or Endangered under the Federal Endangered Species Act (FESA). Areas designated as Critical Habitat include the physical or biological features that are essential to the survival and eventual recovery of that species. The survey area is not located within areas designated or proposed as Critical Habitat for any species.

PROJECT IMPACTS

In order to evaluate the entire extent of potential impacts on biological and jurisdictional water resources, it is necessary to understand the various Project components and whether their effects are direct or indirect and/or temporary or permanent. As discussed further below, the Project components would have no net effect on biological resources because (1) they would not represent any permanent conversions from native to non-native vegetation/unvegetated landcover or (2) because the effects are temporary.

Vegetation Types and Other Areas

Based on Project design plans, the Project would not impact vegetation to any measurable degree. The only vegetation impacts that are anticipated are to the weeds growing within and directly adjacent to the trail network proposed for improvement. Project impacts on this vegetation is not a potential constraint on development.

Jurisdictional Areas

The proposed trail improvements will occur on the existing Upper and Lower Loop Trails and are not expected to impact any drainages in the survey area. Generally, the loop trails run adjacent to the drainage features; the only drainages that cross the trails are Features A through E which cross the Upper Loop Trail.

Feature A is partially covered with a concrete slab that allow pedestrians to cross without affecting the drainage. Feature B contained flowing water at the time of the field survey. Flows reach this drainage via a pipe that conveyed approximately 0.1 cubic feet per second of water at the time of the survey. Upon reaching the trail, some water flowed over the trail toward the golf course on the east side of the trail, while a portion of the water flowed in a southerly direction on the trail causing mild erosion. Feature C is a short ephemeral drainage that did not contain flowing water at the time of the survey. Water that would flow through the channel during storm conditions passes over the trail toward a basin located just upstream of the golf course.

Improvements to the trail at the Feature B location are not expected to require the removal of any native vegetation. Various non-native trees occur in the vicinity of the trail in this location, including shamel ash, that would likely not need to be removed. As described above, water that reaches the trail via Feature B comes out of a pipe approximately 200 feet west and upslope of the trail. The origin of the water that flows out of this pipe could not be determined in the field. Because this drainage has an artificial source and does not connect to other drainages, it would not be subject to USACE jurisdiction. Improvements to the trail that would affect Feature B would require a Waste Discharge Requirements (WDR) permit from the RWQCB. Modifications to the drainage or removal of native vegetation would require a Streambed Alteration Agreement from the CDFW. However, if the source of water at this location can be discovered and discontinued, permitting from the regulatory agencies would likely not be required. Trail improvements at Features C, D, and E may also need coverage under the WDR permit if work is proposed that has the potential to affect water quality. Implementation of measures to prevent any

potential effect on water quality, such as dry-weather only construction period or 100 percent containment methods, would need to be implemented to prevent the need for a WDR permit.

Improvements to the trails that run adjacent to the artificial drainages in the Lower Loop Trail area are expected to occur entirely outside the jurisdictional limits of the USACE and RWQCB and would not require permitting. Removal of native vegetation would require a Streambed Alteration Agreement from the CDFW. Best Management Practices should be implemented during all trail work to prevent inadvertent sediment charges to the adjacent drainages.

Wildlife Movement

The trail improvements in the survey area would not create an additional barrier to wildlife movement and local wildlife are expected to move throughout the survey area and surrounding areas in a similar manner to existing conditions.

Special Status Plant Species

No impacts on federally or State listed, or CRPR 1B or 2B plant species are expected to occur. Impacts on species with a CRPR of 3 or 4 are not typically considered constraints on development. The two CRPR list 4 species that occur within the survey area (southern California black walnut and Coulter's matilija poppy) are not expected to be impacted based on the proposed Project design.

Special Status Wildlife Species

No impacts on federally or State listed species are expected to occur.

Although several special status wildlife species may occur within the survey area, they are expected only to be moving through the area (e.g., to get from one place to another) and not sheltering from prey, breeding, or roosting within Project areas, which are limited to highly disturbed unvegetated dirt trails. Therefore, Project construction and operational activities are not expected to impact any of these special status species.

OTHER CONSIDERATIONS

Protected Trees

The City of Pasadena maintains tree preservation ordinance as part of the Pasadena Municipal Code (Ord. No. 7184, § 10, 3-15-2010), which sets forth requirements for obtaining a tree removal permit for all "protected trees," which includes trees whose trunk (or collective trunks) exceed a diameter of eight inches measured four and one-half feet above natural ground level. The following native tree species are considered protected under this ordinance: coast live oak (*Quercus agrifolia*), Engelmann oak (*Quercus englemannii*), canyon oak (*Quercus chrysolepis*), western sycamore (*Platanus racemosa*), California walnut (*Juglans californica*), scrub oak (*Quercus berberidifolia*), valley oak (*Quercus lobata*), California bay (*Umbellularia californica*), Fremont cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), black cottonwood (*Populus trichocarpa*), arroyo willow (*Salix lasiolepis*), and California buckeye (*Aesculus californica*). In addition to these protected native trees, there are an additional 103 non-native tree species addressed by the ordinance. These non-native species are protected at various sizes. The survey area is known to contain some of the above-listed species and City approval may be required prior to any Project-related activities that would trim or remove these trees. However, based on review of the Project design, no protected trees are expected to be impacted by the Project.

Nesting Raptors

Raptor species (i.e., birds of prey) have the potential to nest within mature trees in and adjacent to the survey area and their nests may be impacted by the Project. If construction activities would occur during the raptor nesting season (i.e., generally February 1 to June 30), the loss of an active nest of any raptor species, including common raptor species, would be considered a violation of Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code*.

Nesting Birds

The Migratory Bird Treaty Act (MBTA) protects migratory birds and their nests and eggs, both common and special status. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (50 *Code of Federal Regulations* [CFR] §10.13, as amended). Birds have the potential to nest in the vegetation in the survey area, and their nests may be impacted by the Project. The loss of an active migratory bird nest, including common species, would be considered a violation of the MBTA.

Roosting Bats

Several bat species may forage throughout the survey area and roost in mature trees or under bridges in the survey area. However, large roosting colonies have not been documented in the survey area and are not expected to occur. Impacts on individual roosting bats, or small colonies (less than ten individuals,) are a potential constraint on development. However, no individual roosting bats or small colonies are expected to be directly impacted by the Project due to the avoidance of impacts to trees. In addition, indirect impacts on individual roosting bats or small colonies, may occur and may result in bats avoiding the site temporarily. These impacts are considered less than significant.

Noise

During active construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for a variety of wildlife species. Construction noise could deter wildlife from using habitat adjacent to construction. This impact would be considered adverse but would not represent a constraint on development because a substantial amount of similar habitat is present in the vicinity of the survey area where the animals may disperse. Following construction, the ambient noise levels adjacent to the Project areas are not expected to increase above current conditions.

RECOMMENDATIONS

While significant impacts on biological resources under the California Environmental Quality Act (CEQA) have not been identified, the following measures are recommended to ensure any effects on biological resources during construction of the Project are minimized to the maximum extent practicable:

1) Project construction activities shall occur outside of the avian breeding season, which generally runs from February 1–August 31 (as early as January 1 for some raptors) to avoid take of nesting birds or their eggs. “Take” means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (*California Fish and Game Code*, Section 86), and includes take of eggs or young resulting from disturbances that cause abandonment of active nests. A Biological Monitor shall be present on site prior to all work activities adjacent to nesting habitat to ensure that these activities remain within the Project footprint; and to minimize the likelihood that active nests in adjacent habitat are abandoned or fail due to Project activities.

2) In addition, a Biological Monitor shall be present prior to work activities near special status plant species (Coulter's matilija poppy and southern California walnut) to flag these resources to ensure no special status plants are inadvertently impacted.

3) Pre-construction flagging of the protected drainage features shall be conducted by a qualified biologist prior to initiation of construction activity in the vicinity of protected features to facilitate avoidance. If drainage features cannot be avoided, consultation with applicable agency shall be initiated to determine if permits will be required. If feasible, to avoid potential constraints of Drainage Feature B, the source pipe origin should be analyzed and capped if possible.

4) If removal of a tree is required based on the future construction plans and specifications,, a certified arborist shall determine if the tree is protected under City of Pasadena ordinance. If protected, removal shall not occur without City permission. In addition, if trimming/pruning of any trees is required, trimming/pruning shall not occur without approval from the City Manager (the person ultimately responsible for the protection of public trees per Pasadena Municipal Code). Trimming/pruning of any trees shall adhere with the City's Pruning Guidelines listed below:

    a. Pruning of all trees should be in accordance with industry standards (International Society of Arboriculture or ANZI 1).

    b. Pruning of oaks should be limited to the removal of dead wood and the correction of potentially hazardous conditions, as evaluated by a qualified arborist. Excessive pruning is harmful to tree health. Removal or reduction of major structural limbs should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the tree.

    c. Pruning of trees other than oaks should be limited to the removal or reduction of major structural limbs and should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the trunk.

    d. Landmark Trees must be pruned by or under the direction of a qualified arborist.

5) If tree removal shall occur, a two-step removal process shall be implemented to prevent bat mortality. Prior to tree removal, a qualified biologist shall conduct a pre-construction bat habitat assessment. If the tree potentially supports roosting bats, at the direction of the biologist, some level of disturbance (such as trimming of lower branches of trees) shall be applied three days prior to removal to allow bats to escape. The trees shall be removed on day three (i.e., there shall be no less or more than two nights between initial disturbance and the tree removal). On each of the three days of the tree removal process, the tree to be removed will be visually inspected by a qualified biologist to confirm no bats are roosting immediately prior to removal.

If you have any questions or comments, please contact Marc Blain at 626.351.2000.

Sincerely,
PSOMAS

Ann M. Johnston
Vice President, Resource Management

Marc T. Blain
Senior Project Manager

Enclosures: Exhibit 1 – Regional Location and Local Vicinity
Exhibit 2a–2b – U.S. Geological Survey Quadrangle Topographic Map
Exhibit 3a–3b – Soils Map
Exhibit 4a–4d – Vegetation Types and Other Areas
Exhibit 5a–5d – Jurisdictional Resources
Attachment A-1–A-5 – Representative Site Photographs

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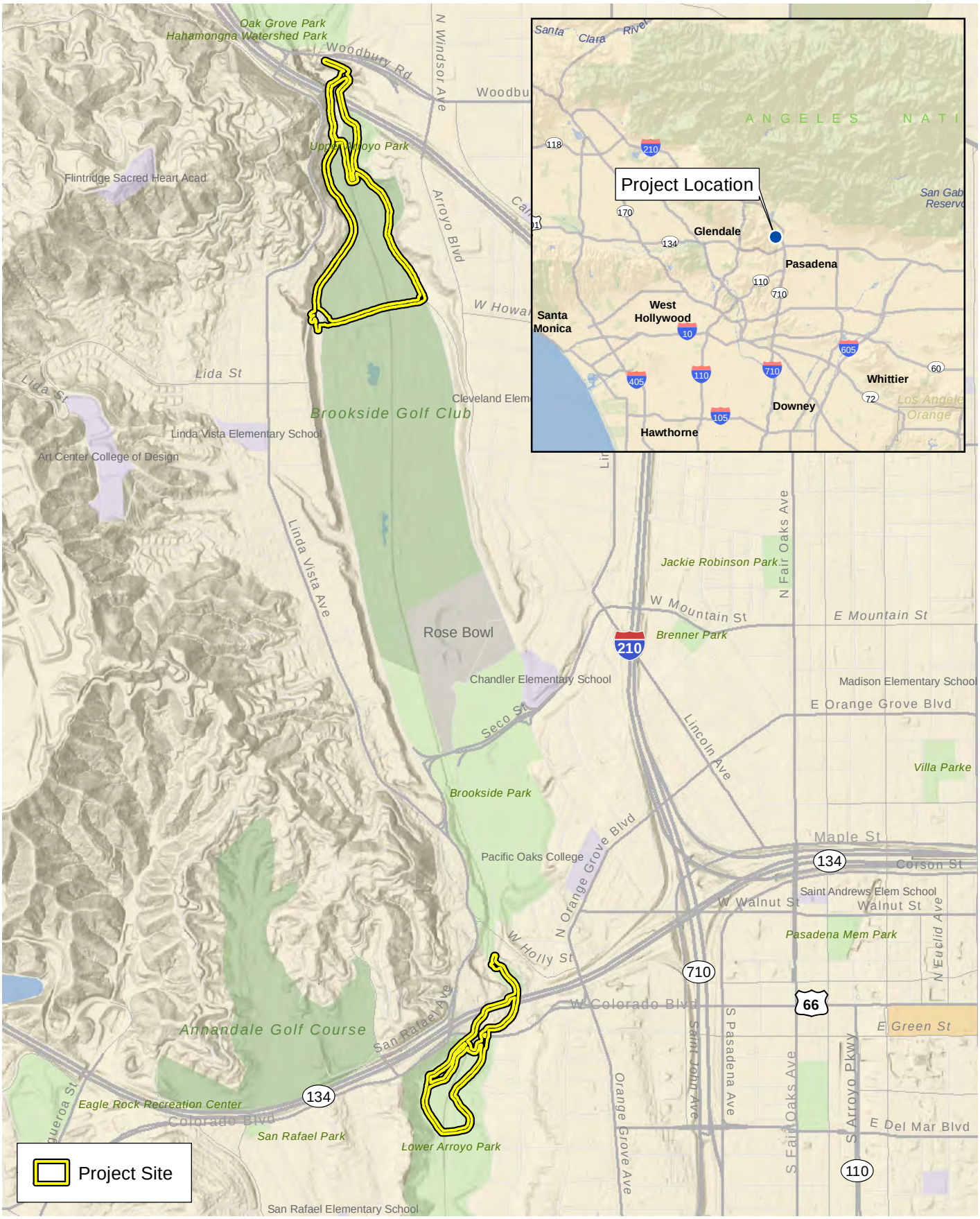

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Regional Location and Local Vicinity

Exhibit 1

One Arroyo Trail Demonstration Project

N W E S

2,000 1,000 0 2,000 Feet

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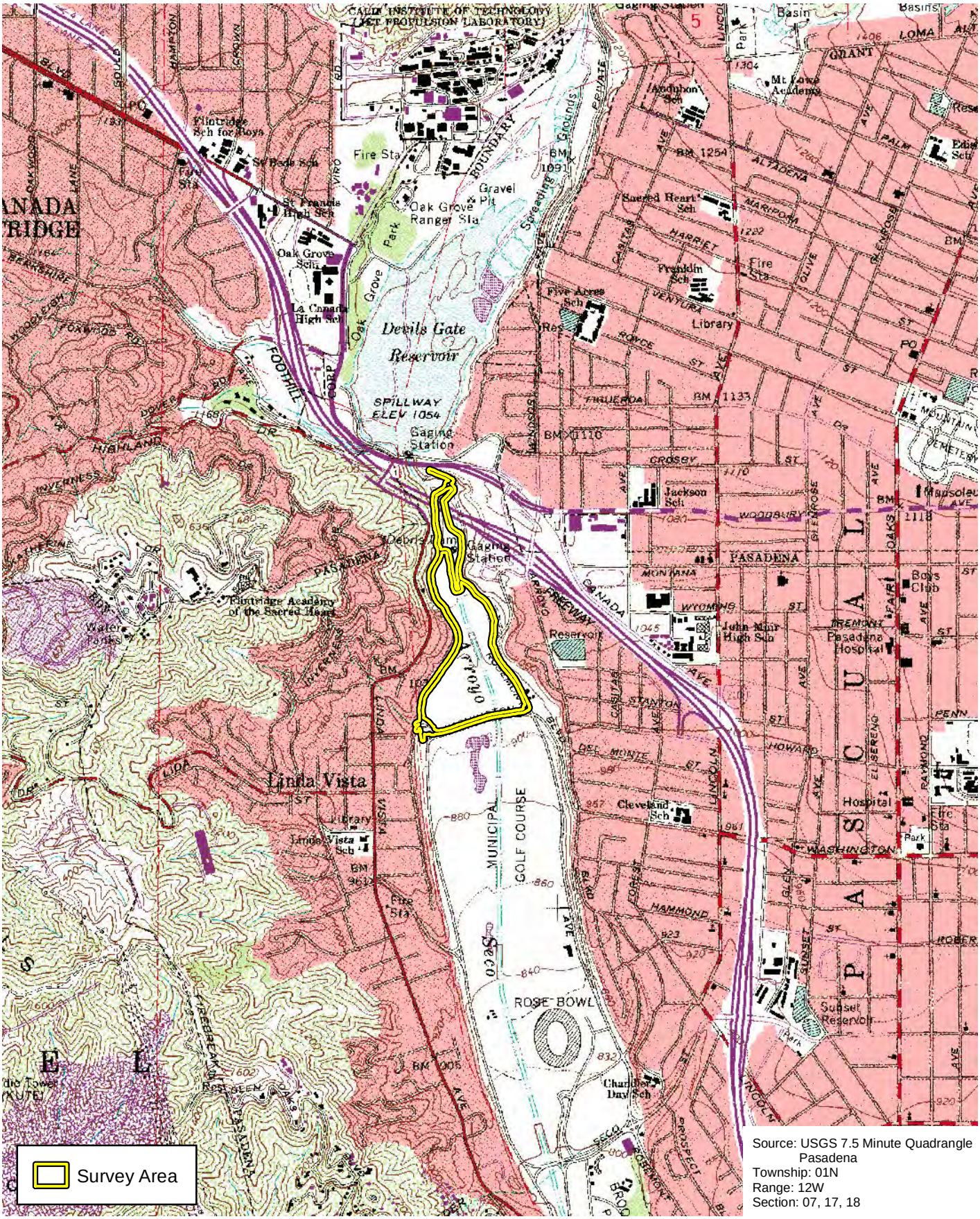

Source: USGS 7.5 Minute Quadrangle
Pasadena
Township: 01N
Range: 12W
Section: 07, 17, 18

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U.S. Geological Survey Quadrangle Topographic Map

Exhibit 2a

One Arroyo Trail Demonstration Project

N
W E
S

2,000 1,000 0 2,000
Feet

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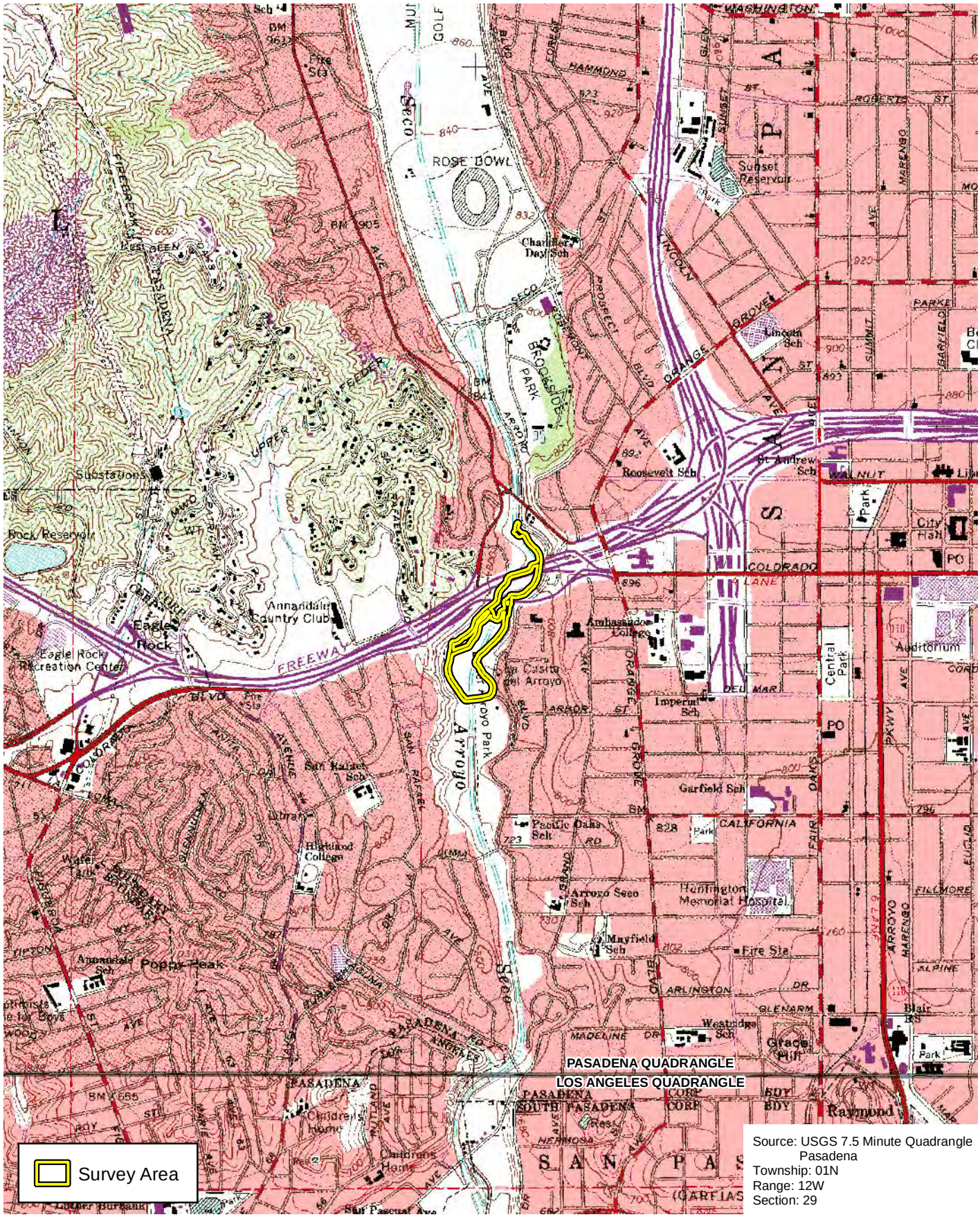

U.S. Geological Survey Quadrangle Topographic Map

Exhibit 2b

One Arroyo Trail Demonstration Project

N
W E
S

2,000 1,000 0 2,000 Feet

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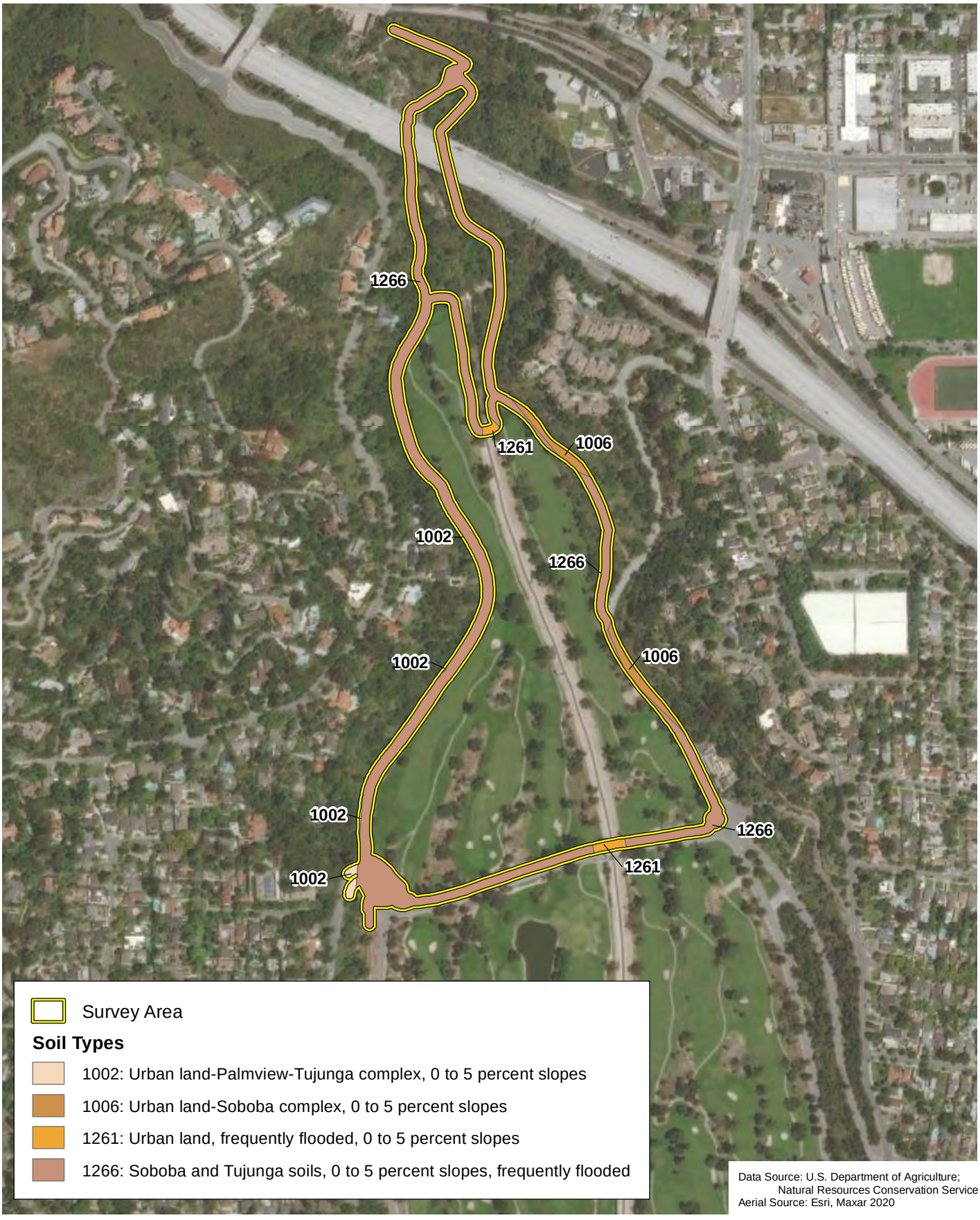

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Soils Map

Exhibit 3a

One Arroyo Trail Demonstration Project

N W E S

600 300 0 600

Feet

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Data Source: U.S. Department of Agriculture; Natural Resources Conservation Service
Aerial Source: Esri, Maxar 2020

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Soils Map

Exhibit 3b

One Arroyo Trail Demonstration Project

N W E S

400 200 0 400 Feet

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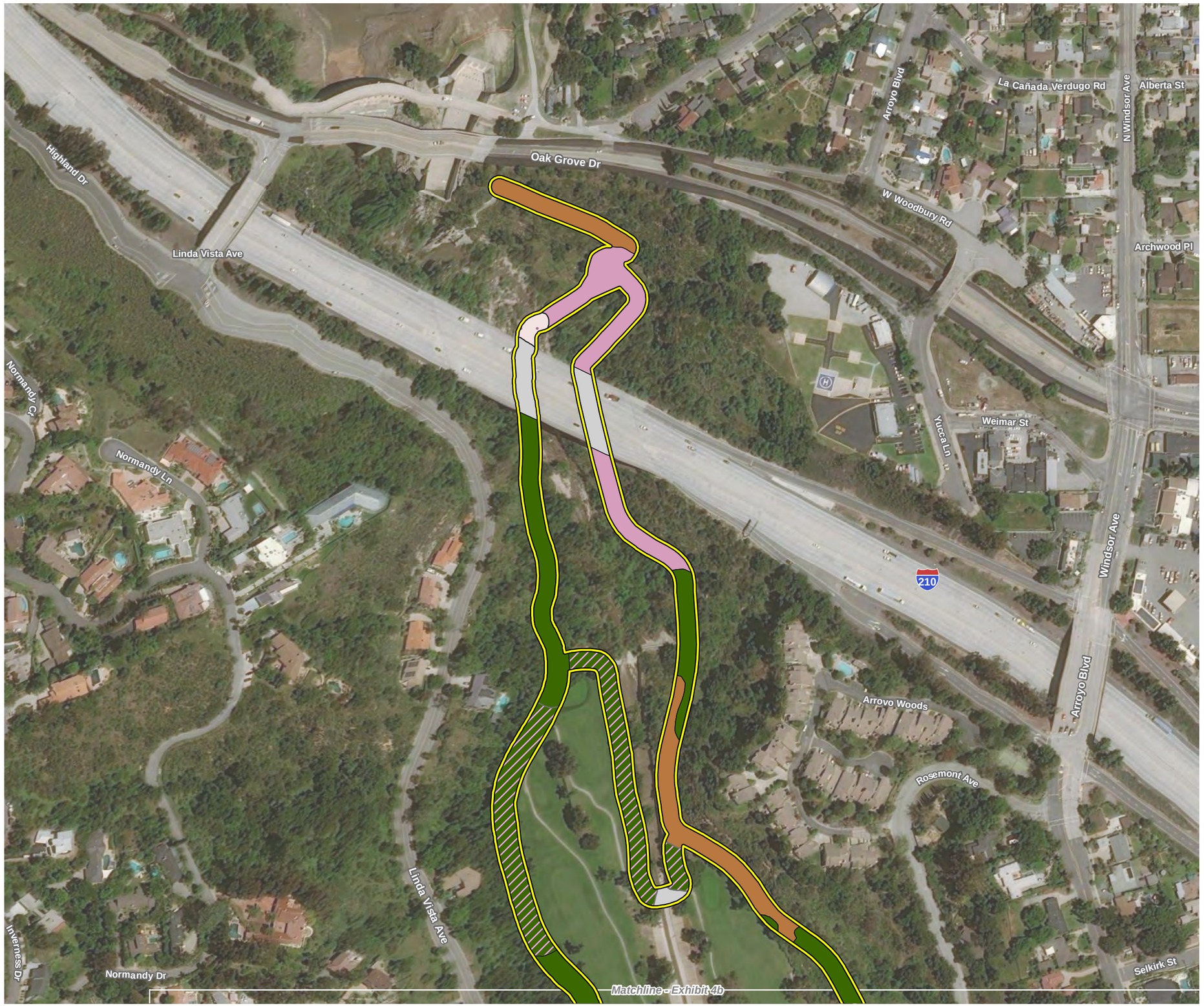

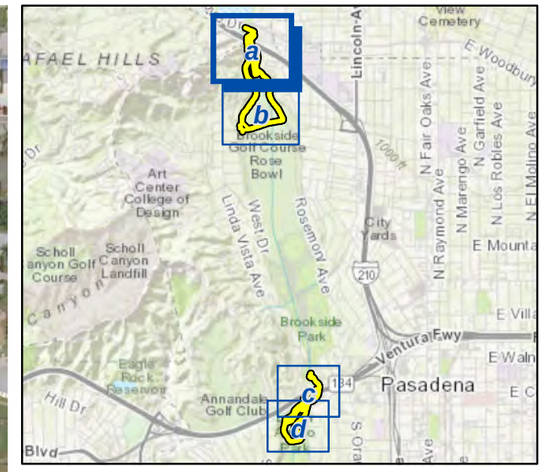

Survey Area

Vegetation Types and Other Areas

Woodland and Forest Alliances and Associations

- Coast live oak - non-native ornamental woodland
- Coast live oak woodland

Shrubland Alliances and Associations

- California buckwheat scrub
- Laurel sumac - blue elderberry chaparral
- Mule fat thickets

Other

- Developed

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020
Map Grid: NAD83 CA State Plane Zone 5 (feet)

Vegetation Types and Other Areas — Exhibit 4a

One Arroyo Trail Demonstration Project

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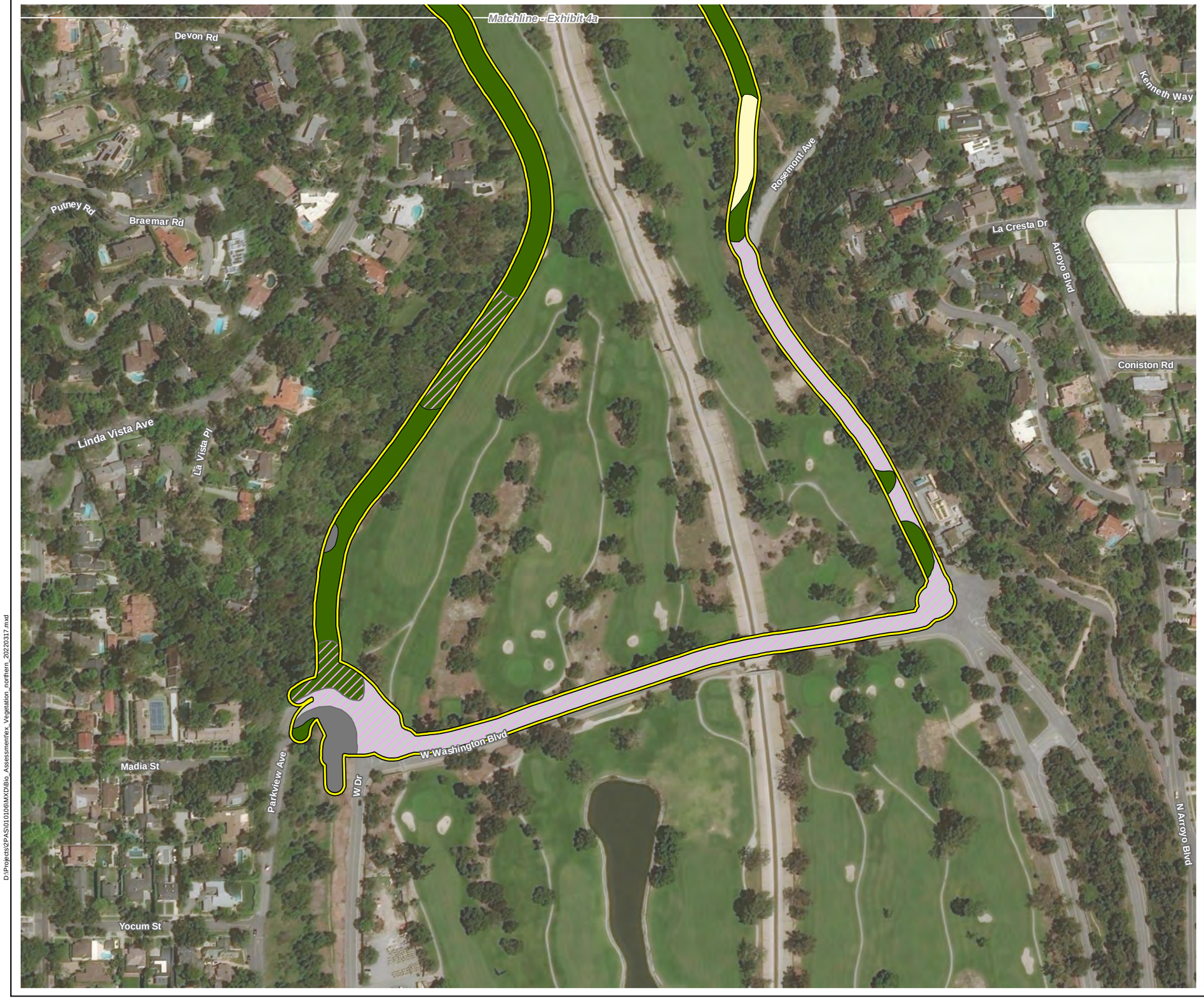

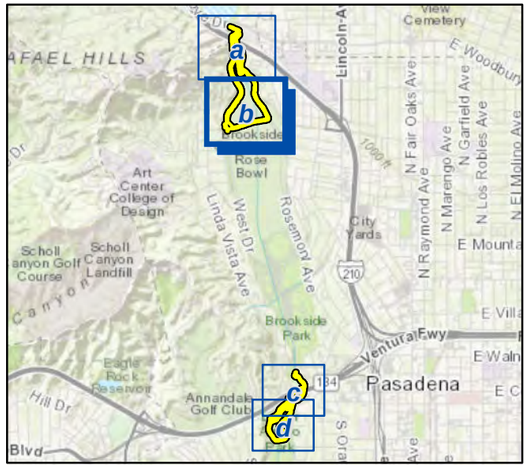

Survey Area

Vegetation Types and Other Areas

Woodland and Forest Alliances and Associations

- Coast live oak - non-native ornamental woodland
- Coast live oak woodland

Other/Woodland and Forest Alliances and Associations

- Developed/non-native ornamental woodland

Other

- Disturbed

Herbaceous Alliance

- Non-native grassland

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020
Map Grid: NAD83 CA State Plane Zone 5 (feet)

Vegetation Types and Other Areas

Exhibit 4b

One Arroyo Trail Demonstration Project

PSOMAS

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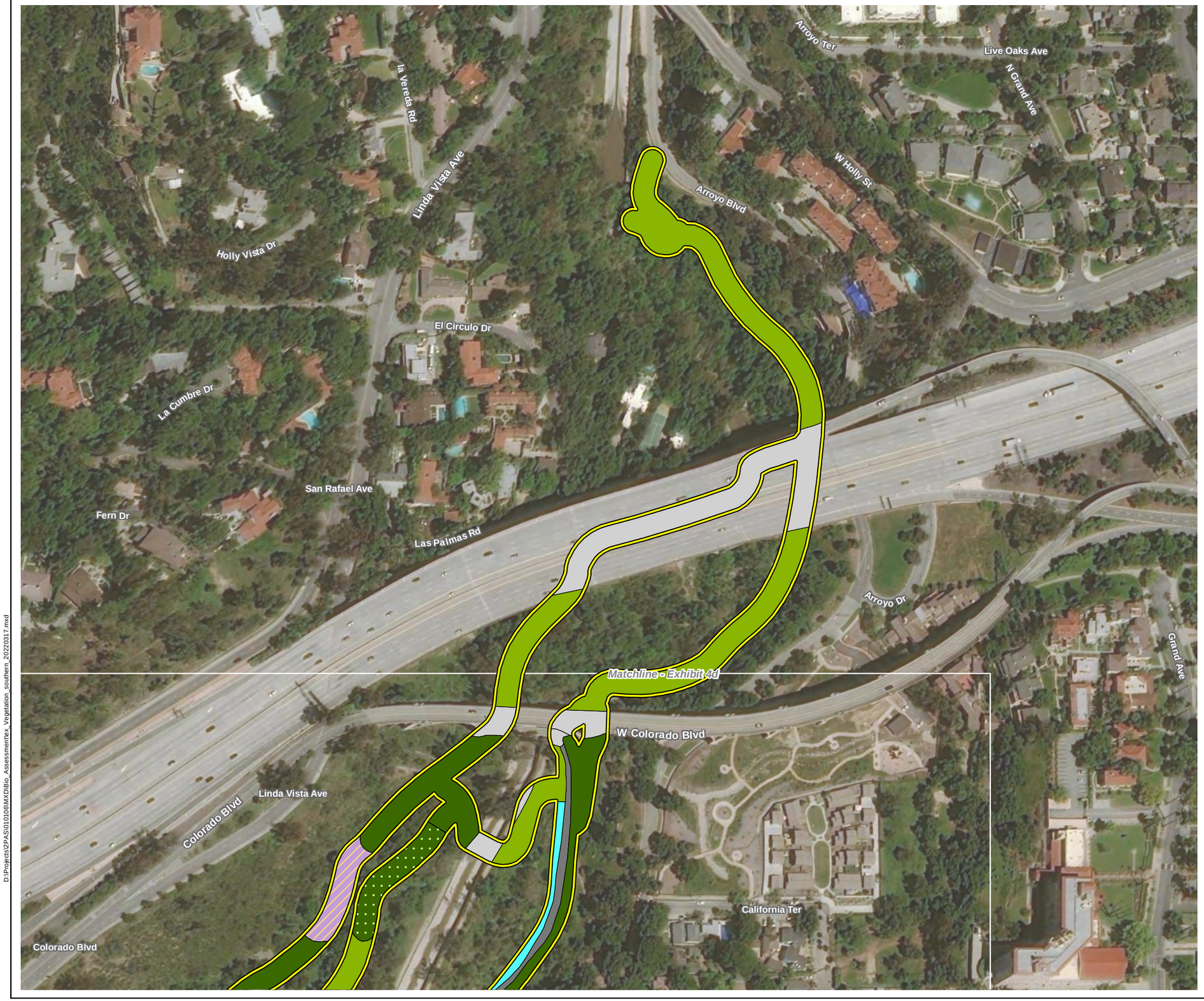

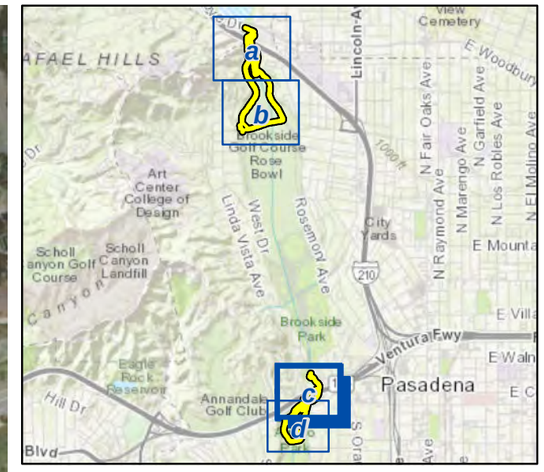

Survey Area

Vegetation Types and Other Areas

Woodland and Forest Alliances and Associations

- Coast live oak - California sycamore woodland
- Coast live oak - Fremont cottonwood forest and woodland
- Coast live oak woodland

Shrubland Alliances and Associations

- Laurel sumac - arroyo willow thickets

Herbaceous Alliance

- Riparian herb

Other

- Developed
- Disturbed

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020
Map Grid: NAD83 CA State Plane Zone 5 (feet)

Vegetation Types and Other Areas

Exhibit 4c

One Arroyo Trail Demonstration Project

PSOMAS

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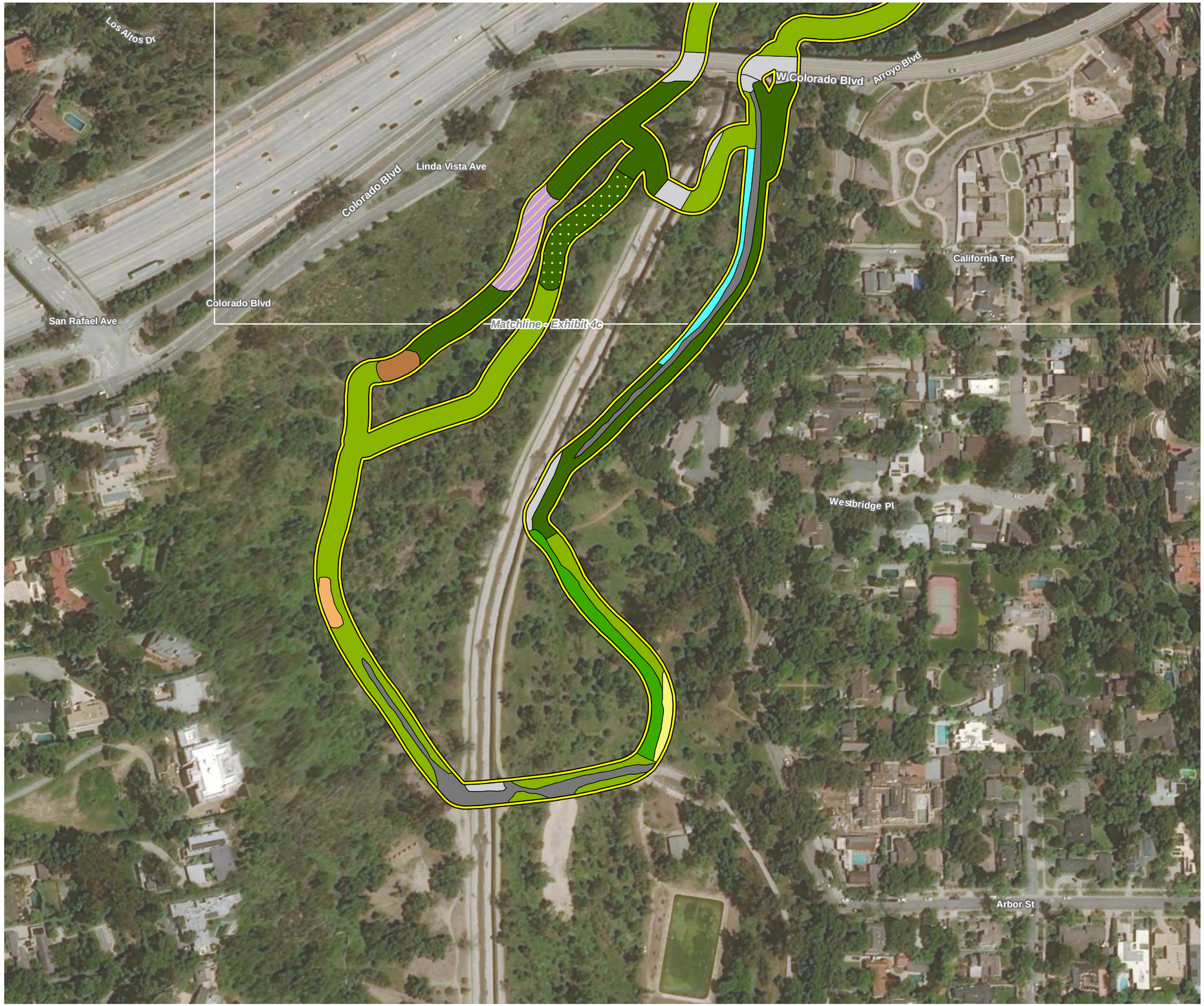

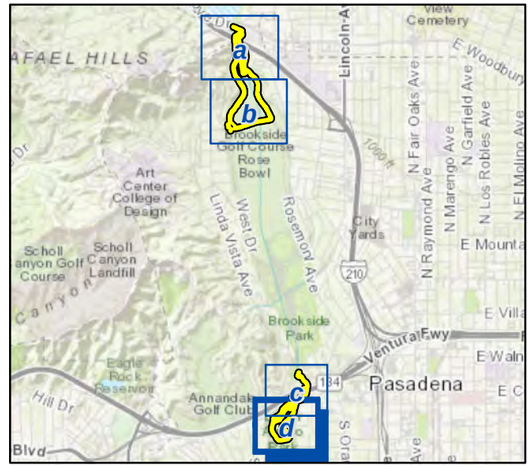

Survey Area

Vegetation Types and Other Areas

Woodland and Forest Alliances and Associations

- Coast live oak - California sycamore woodland
- Coast live oak - Fremont cottonwood forest and woodland
- Coast live oak - arroyo willow woodland
- Coast live oak woodland

Shrubland Alliances and Associations

- California buckwheat scrub
- Golden current thickets
- Laurel sumac - arroyo willow thickets
- Lemonade berry scrub

Herbaceous Alliance

- Riparian herb

Other

- Developed
- Disturbed

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020
Map Grid: NAD83 CA State Plane Zone 5 (feet)

Vegetation Types and Other Areas

Exhibit 4d

One Arroyo Trail Demonstration Project

PSOMAS

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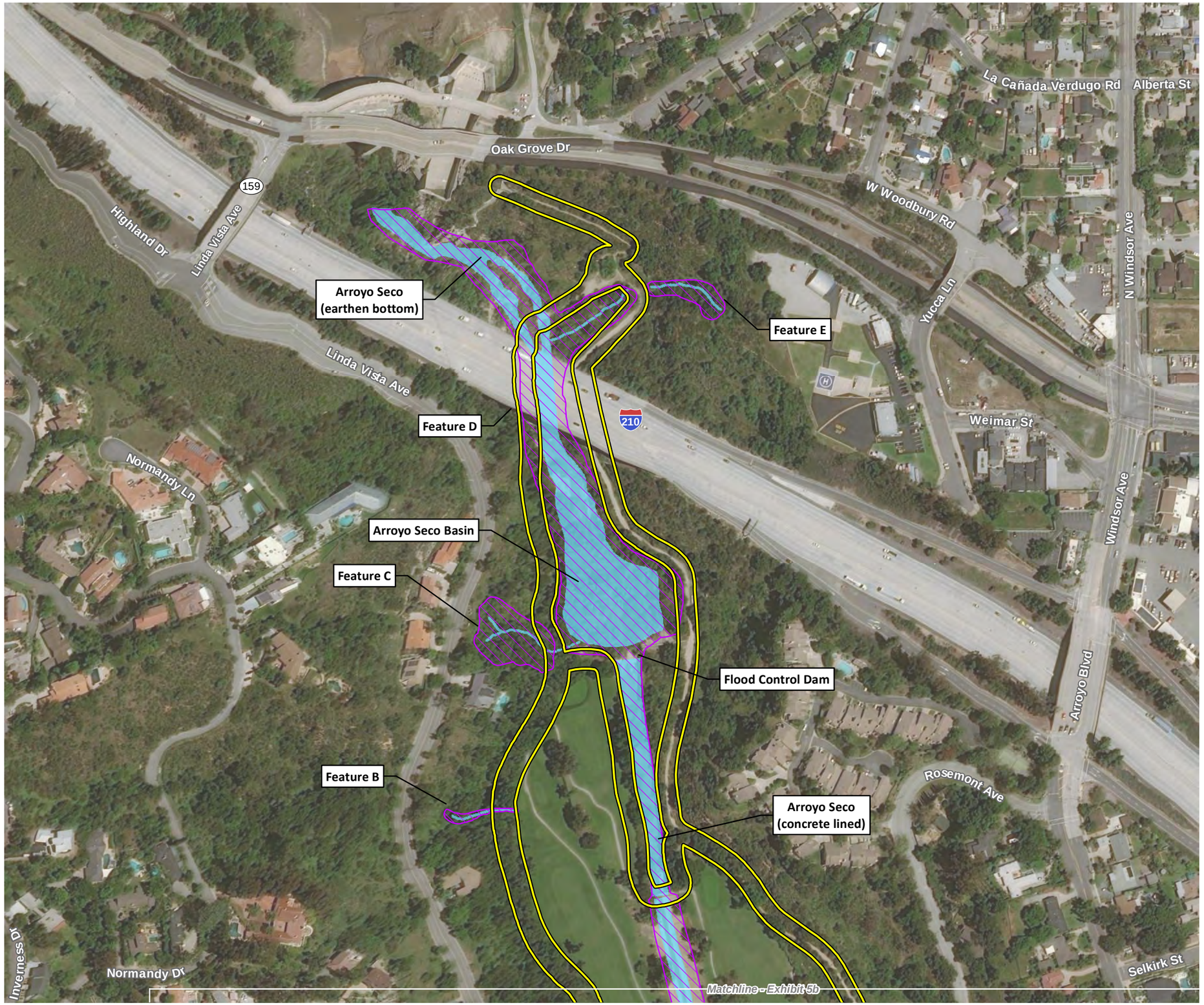

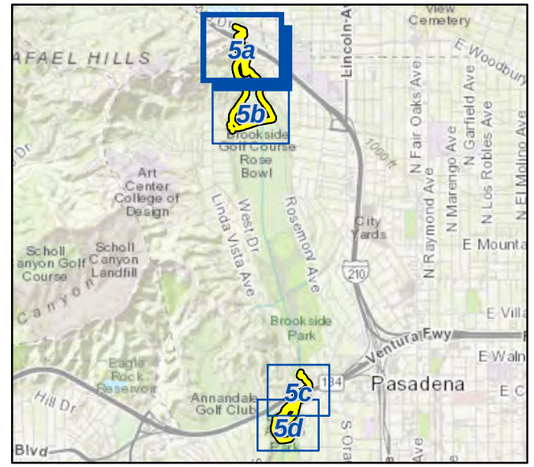

Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

250 125 0 250
Feet

Aerial Source: Esri, Maxar 2020

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Jurisdictional Resources Exhibit 5a

One Arroyo Trail Demonstration Project

PSOMAS

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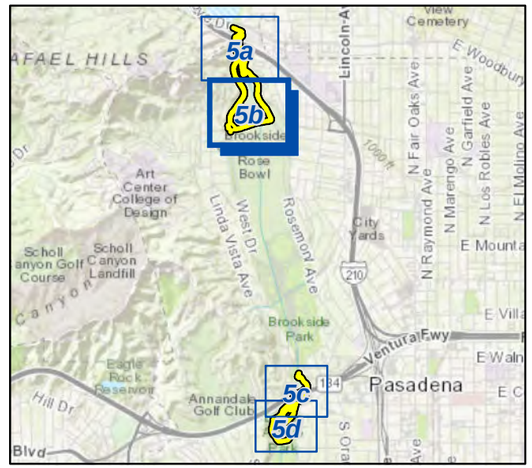


Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

250 125 0 250
Feet

Aerial Source: Esri, Maxar 2020

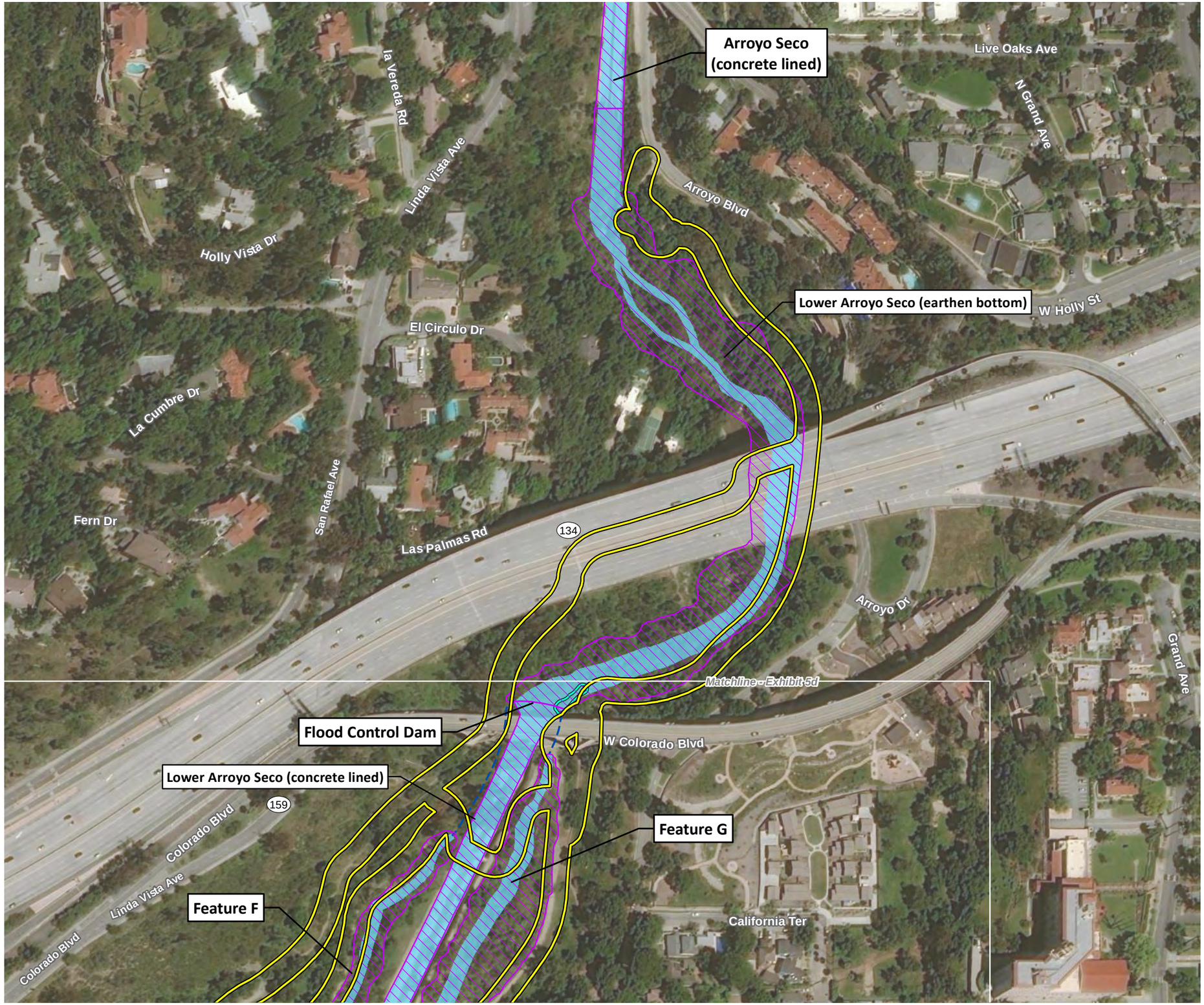
D:\Projects\2PAS\010106\MXD\Bio_Assessment\ex_JD_northern_20220719.mxd

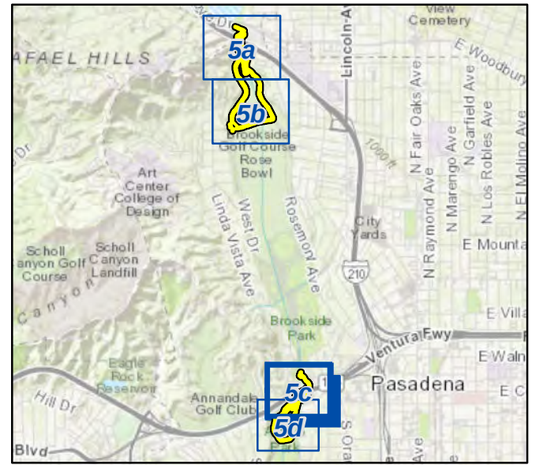
Jurisdictional Resources Exhibit 5b

One Arroyo Trail Demonstration Project

PSOMAS

(Rev: 08/24/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\Bio_Assessment\ex_JD.pdf





- Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020

Jurisdictional Resources Exhibit 5c

One Arroyo Trail Demonstration Project

PSOMAS

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Flood Control Dam

Lower Arroyo Seco (concrete lined)

Feature G

Feature F

Feature H

Feature I

Lower Arroyo Seco (concrete lined)

Matchline - Exhibit 5c

Los Altos Dr

Linda Vista Ave

San Rafael Ave

Colorado Blvd

134

159

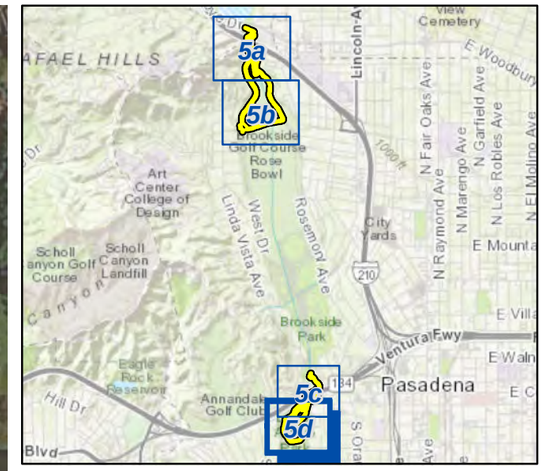
W Colorado Blvd

Arroyo Blvd

California Ter

Westbridge Pl

Arbor St



Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020

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Jurisdictional Resources Exhibit 5d

One Arroyo Trail Demonstration Project

PSOMAS

(Rev: 08/24/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\Bio_Assessment\ex_JD.pdf

ATTACHMENT A-1

REPRESENTATIVE SITE PHOTOGRAPHS

View of existing Lower Loop Trail showing SR-134 and Colorado Street Bridge in the background.

View of the existing pedestrian bridge under the Colorado Street Bridge along the Lower Loop Trail.

D:\Projects\2PAS\010106\GRAPHICS\Bio_Assessment\Att_SP1_20220315.ai

Representative Site Photographs

Attachment A-1

One Arroyo Trail Demonstration Project

PSOMAS

ATTACHMENT A-2

REPRESENTATIVE SITE PHOTOGRAPHS

View of the Lower Loop Trail just south of the pedestrian bridge; showing historical boulder retaining wall.

View of the Upper Loop Trail.

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Representative Site Photographs

Attachment A-2

One Arroyo Trail Demonstration Project

PSOMAS

(03/15/2022 MMD) R:\Projects\2PAS\2PAS010106\Graphics\Bio_Assessment\Att_SP.pdf

ATTACHMENT A-3

REPRESENTATIVE SITE PHOTOGRAPHS

Coulter's Matilija poppy adjacent to the Upper Loop Trail.

View of a drainage area along the Upper Loop Trail.

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Representative Site Photographs

Attachment A-3

One Arroyo Trail Demonstration Project

PSOMAS

ATTACHMENT A-4

REPRESENTATIVE SITE PHOTOGRAPHS

View under the I-210 Freeway showing the sandy portion of the Upper Loop trail.

View of mule fat thickets north of the I-210 Freeway along the Upper Loop Trail.

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Representative Site Photographs

Attachment A-4

One Arroyo Trail Demonstration Project

PSOMAS

(03/15/2022 MMD) R:\Projects\2PAS\2PAS010106\Graphics\Bio_Assessment\Att_SP.pdf

ATTACHMENT A-5

REPRESENTATIVE SITE PHOTOGRAPHS

View of California buckwheat scrub at the very northern tip of the Upper Loop Trail.

Appendix A-2

Jurisdictional Delineation Report
(One Arroyo Trail Demonstration Project)

Jurisdictional Delineation Report

One Arroyo Trail Demonstration Project
Pasadena, California

Prepared for

City of Pasadena
Department of Public Works
100 North Garfield Avenue, Room N306
Pasadena, California 91101
Contact: Mr. Hayden Melbourn, P.E.

Prepared by

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August 2022

TABLE OF CONTENTS

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TABLES

EXHIBITS

ATTACHMENTS

1.0 INTRODUCTION

This Jurisdictional Delineation Report has been prepared for the Pasadena Department of Public Works to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Los Angeles Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) for the One Arroyo Trail Demonstration Project site (Project site) located in the city of Pasadena, California.

1.1 PROJECT LOCATION

The Project site occurs in two separate areas of the Arroyo Seco (Exhibits 1 and 2). The northern survey area contains the Upper Loop Trail and occurs north of West Washington Boulevard and extends approximately 0.7 mile northward near the base of Devil's Gate Dam. The southern survey area contains the Lower Loop Trail. This area begins south of Holly Street and extends southward approximately 0.6 mile to the parking lot for Lower Arroyo Park. Both portions of the Project site occur on the U.S. Geological Survey's (USGS') Pasadena 7.5-minute quadrangle of the San Bernardino Meridian. The northern survey area is found at Township 1 North, Range 12 West, Sections 7, 17, and 18 while the southern survey area is at Township 1 North, Range 12 West, Section 29 (Exhibits 3a and 3b).

1.2 EXISTING CONDITIONS

The northern survey occurs along the periphery of the northernmost portion of Brookside Golf Course. At the northern end of this survey area, the Arroyo Seco is a sandy bottom wash whose flow regime is largely dependent on releases from Devils Gate Dam. This portion of the Arroyo Seco is vegetated with mule fat (*Baccharis salicifolia*), giant reed (*Arundo donax*) and black willow (*Salix gooddingii*). The Arroyo Seco flows into a detention basin just north of the golf course and then transitions to a trapezoidal concrete-lined storm drain. A few small drainages originate from the slopes that borders the western edge of the northern survey area.

The concrete-lined portion of the Arroyo Seco extends southward approximately two miles where it transitions back to an earthen-bottom channel. This transition point marks the upstream end of the southern survey area. The earthen-bottom channel is dominated by native willow riparian vegetation. The Arroyo Seco proceeds another 0.25 mile, where it again changes back to a concrete channel. At this transition point, water is also diverted to artificial channels on either side of the Arroyo Seco in the Lower Arroyo Park area. The constructed channels contain a combination of native coast live oaks (*Quercus agrifolia*), western sycamores (*Platanus racemosa*), and willow trees (*Salix* spp.) with several non-native tree species.

1.3 PROJECT DESCRIPTION

As described above, the One Arroyo Trail Demonstration Project consists of two separate areas: (1) the Upper Loop Trail area that is located adjacent to the northernmost portion of Brookside golf course and (2) the Lower Loop Trail area which is located in Lower Arroyo Park extending northward to an area just north of the State Route 134 overpass. The purpose of the project is to make trail improvements that are designed to enhance and connect the existing trail network of the area. Proposed trail improvements are intended to be implemented with careful grade modifications to allow for the flow of water and stabilization of trail segments. The majority of these elements will significantly increase the longevity of the trail by reducing damage due to incorrect waterflow. Strategic grade reversals, trail outsloping, and rock armoring segments will enhance the trail stability and preserve the natural character.

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Regional Location

Exhibit 1

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N W E S

10 5 0 10 Miles

PSOMAS

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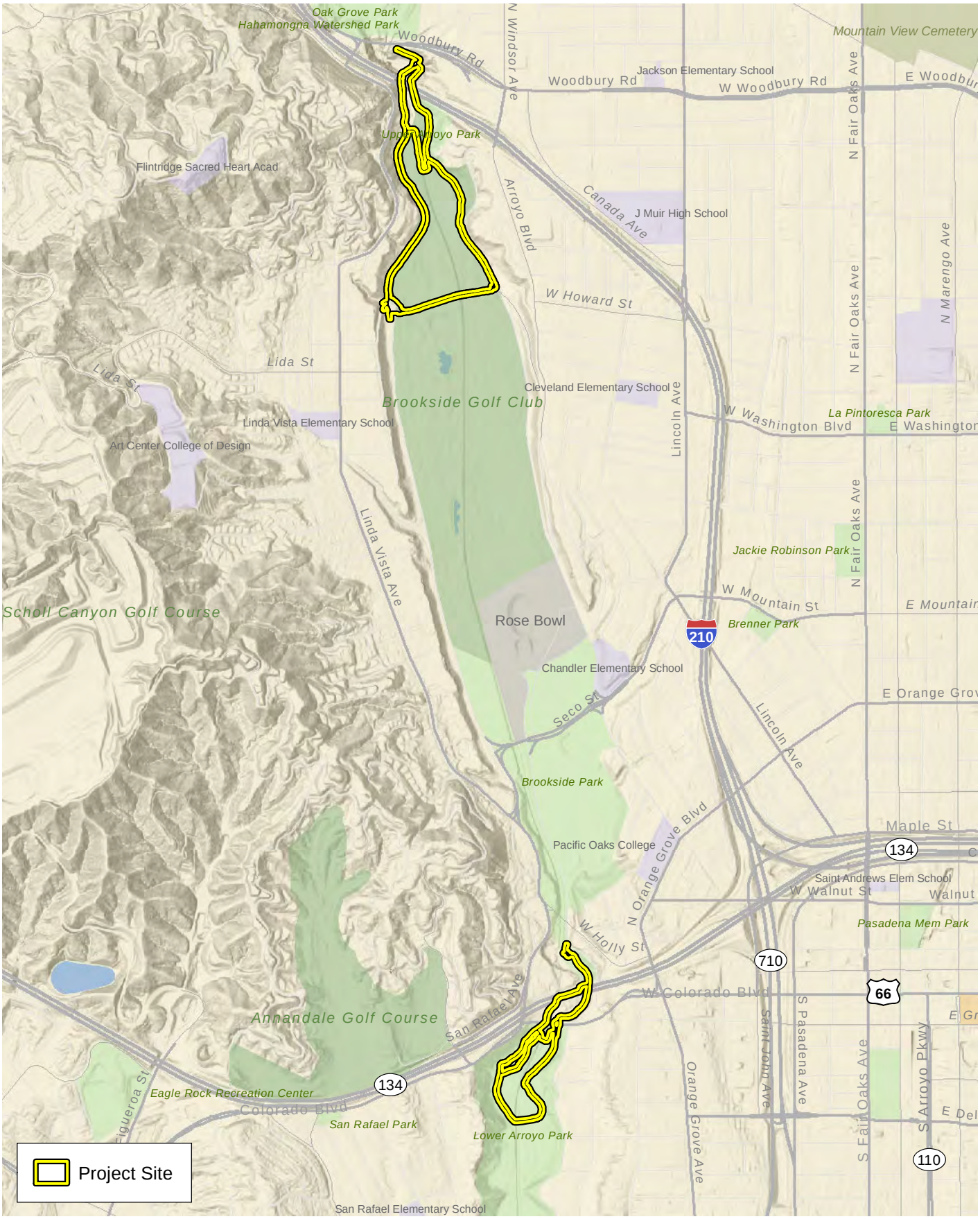

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Local Vicinity

Exhibit 2

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

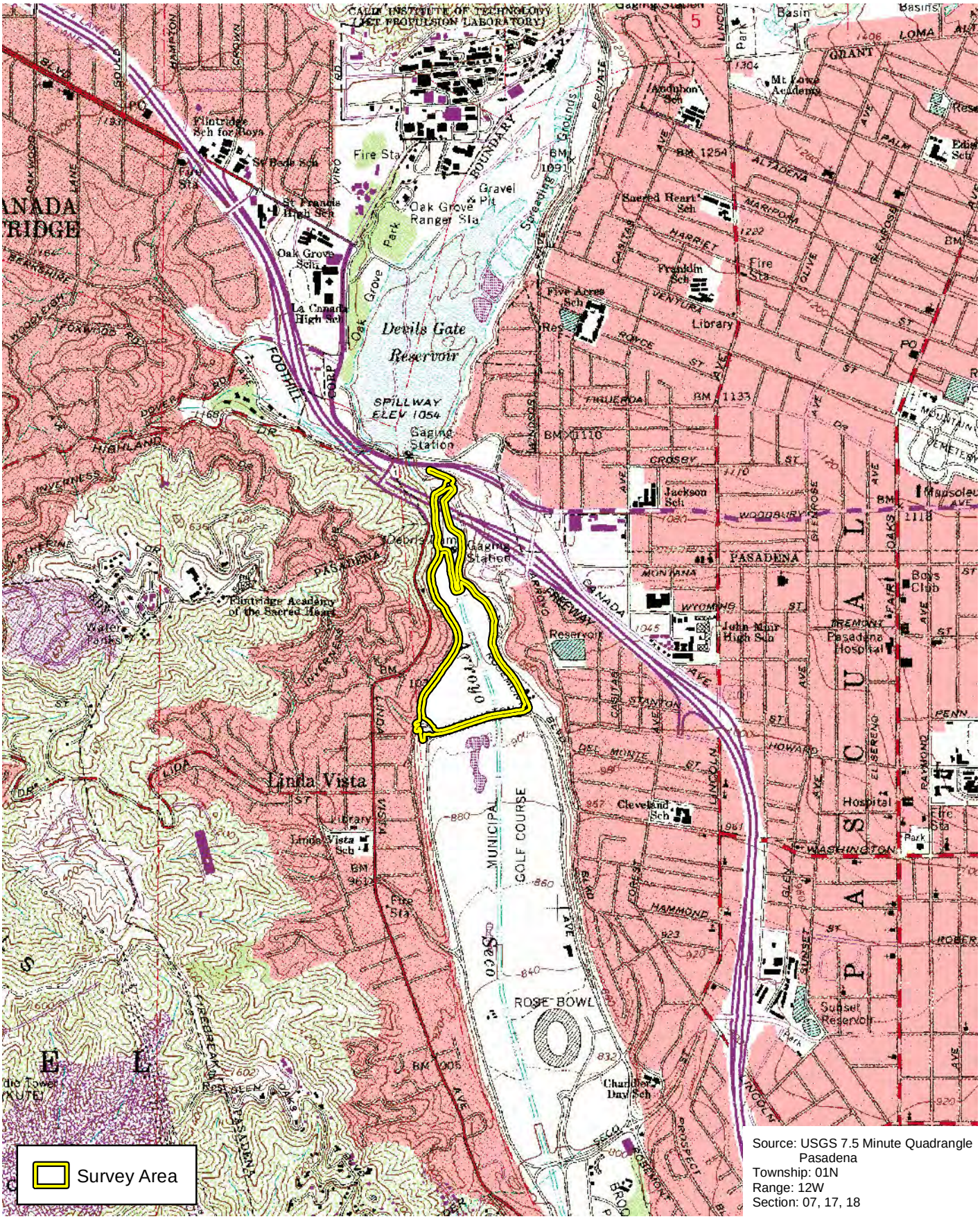
N
W
E
S

2,000 1,000 0 2,000

Feet

PSOMAS

(Rev: 08/24/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\ex_LV.pdf



Source: USGS 7.5 Minute Quadrangle Pasadena
Township: 01N
Range: 12W
Section: 07, 17, 18

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U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 3a

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

2,000 1,000 0 2,000
Feet

PSOMAS

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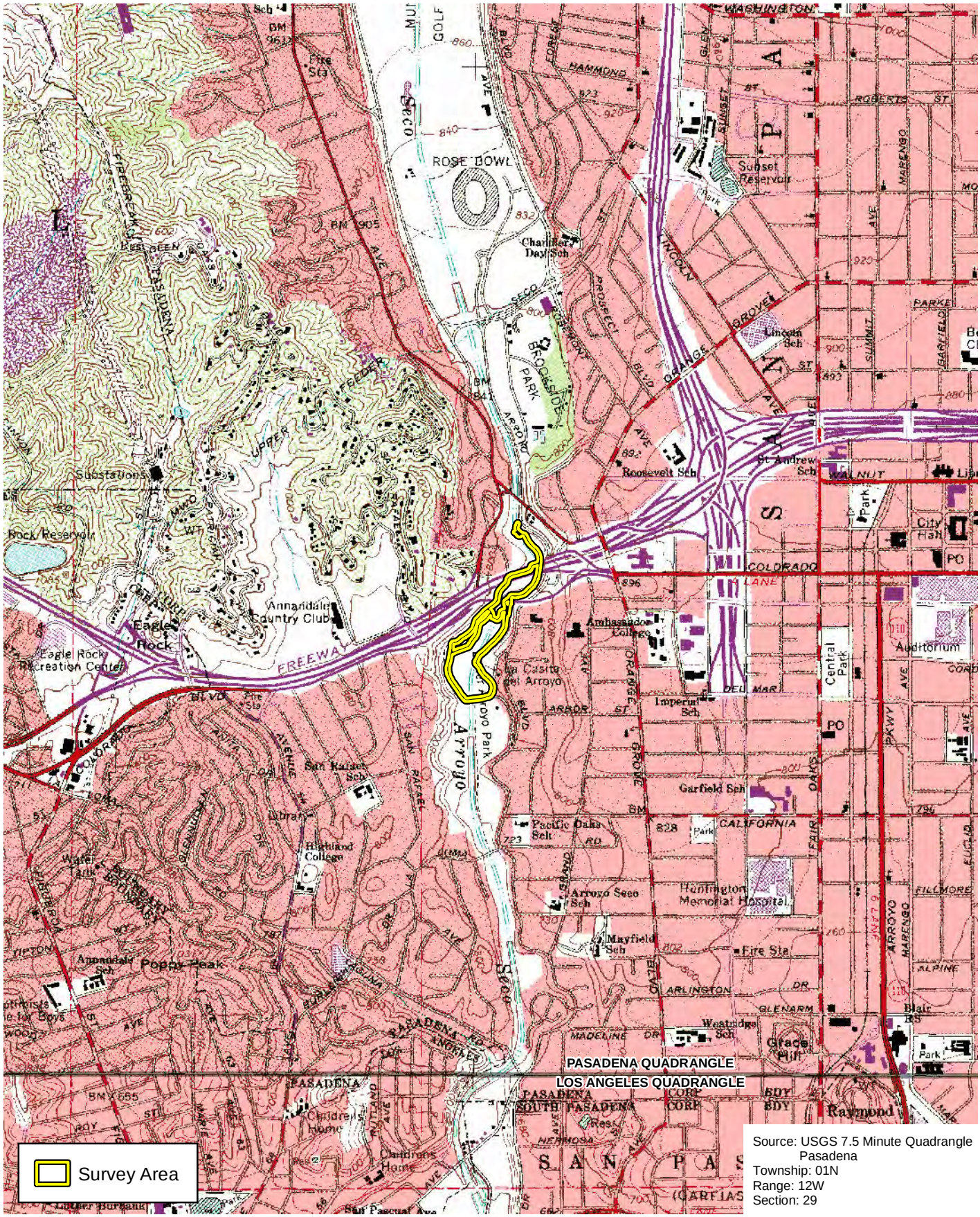

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U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 3b

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

2,000 1,000 0 2,000

Feet

PSOMAS

(Rev: 8-24-2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\ex_USGS_Project_Location.pdf

1.4 REGULATORY AUTHORITY

This section summarizes the federal and State agencies' regulatory jurisdiction over activities that have a potential to impact jurisdictional resources. A detailed explanation of each agency's regulatory authority is provided in Attachment A.

1.4.1 U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the United States" (WOTUS) under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Its authority applies to all WOTUS where the material (1) replaces any portion of a WOTUS with dry land or (2) changes the bottom elevation of any portion of any WOTUS. Activities that result in fill or dredge of WOTUS require a permit from the USACE.

As of August 30, 2021, the USACE is utilizing the definition of WOTUS that was in use prior to the Obama Administration's 2015 Water Rule. This definition of WOTUS is informed by the following two Supreme Court decisions (also discussed in Attachment A): (1) *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (commonly referred to as the SWANCC decision) and (2) *Rapanos v. United States* (referred to as the Rapanos decision). In the SWANCC decision, the Court held that the use of a feature by migratory birds was not sufficient cause for an isolated non-navigable intrastate pond to be considered WOTUS. In the Rapanos decision, the Court issued separate opinions arguing that channels with intermittent or ephemeral flows should not be considered WOTUS and that adjacent wetlands should be considered jurisdictional when they "affect the chemical, physical, or biological integrity of other waters" (i.e., a "significant nexus").

The current definition of WOTUS includes the following: (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all other waters which could affect interstate or foreign commerce; (4) impoundments of waters otherwise defined as WOTUS under this definition; (5) tributaries of waters that are identified in points 1 through 4; (6) the territorial sea; and (7) wetlands adjacent to waters identified in points 1 through 6 of this section. Attachment A provides additional information on the current status of this regulatory definition. Related to item 5, the USACE will assert jurisdictional over tributaries that have a relatively permanent (i.e., seasonal) flow. For tributaries exhibiting intermittent or ephemeral flows, the USACE will determine on a case-specific basis whether a "significant nexus" exists between the drainage feature and a navigable waterway.

1.4.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB), in conjunction with the nine RWQCBs, is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The SWRCB's and RWQCBs' jurisdictions extend to all "waters of the State" and to all WOTUS, including wetlands (isolated and non-isolated).

The Porter-Cologne Act broadly defines "waters of the State" as any surface water or groundwater, including saline waters, within the boundaries of the State." Additionally, the SWRCB asserts jurisdiction over wetland features that meet any historical definition of wetlands utilized by the USACE and USEPA.

Impacts to WOTUS are authorized by the RWQCBs through a Water Quality Certification per Section 401 of the CWA. Impacts to "waters of the State" that are not considered WOTUS would be authorized by Waste Discharge Requirements issued by the RWQCB.

1.4.3 California Department of Fish and Wildlife

The CDFW regulates activities that may affect rivers, streams, and lakes pursuant to the *California Fish and Game Code* (§§1600–1616). According to Section 1602 of the *California Fish and Game Code,* the CDFW has jurisdictional authority over any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

2.0 METHODS

2.1 LITERATURE REVIEW

Prior to conducting the delineation and during the course of report preparation, Psomas reviewed the following documents to identify areas that may fall under agency jurisdiction: the USGS' Pasadena 7.5-minute topographic quadrangle map; color aerial photography provided by Google Earth; soil data provided by the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA NRCS 2022a); the National Hydric Soils List (USDA NRCS 2022b); the National Wetlands Inventory's Wetland Mapper (USFWS 2022); and the Water Quality Control Plan for the Los Angeles Region (Los Angeles RWQCB 1994).

2.2 FIELD SURVEY

The analysis contained in this report uses the results of a field survey conducted by Psomas Regulatory Specialist David Hughes on January 28, 2022. Jurisdictional features were delineated using a 1 inch equals 100 feet (1″ = 100′) scale aerial photograph. Jurisdictional drainage features were mapped as a line and the width of the agency jurisdiction was noted; other waterbodies (basins) were mapped as polygons.

Photographs that show conditions in the Project boundary are provided in Attachment B.

2.3 JURISDICTIONAL DELINEATION

2.3.1 Non-Wetlands

Non-wetland WOTUS are delineated based on the limits of the Ordinary High Water Mark (OHWM), which can be determined by a number of factors, including the presence of a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; and the presence of litter and debris. The OHWM limits (i.e., active floodplain) occurring on the Project site as based on methods contained in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, *A Delineation Manual* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Curtis and Lichvar 2010).

It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands method pursuant to the 1987 Wetlands Manual. The CDFW's jurisdiction is defined as the top of the bank on either side of a stream, channel, or basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, lake, or other impoundment.

2.3.2 Wetlands

Technical methods and guidelines to determine the presence and extent of wetlands is described by the USACE in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). The presence of wetlands is determined by a three-parameter approach requiring evidence of (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils.

Wetland hydrology is determined by the presence of indicators such as observed surface water; presence of past surface flow; and the depth to saturated soils or free water in soil test pits.

Procedures for determining whether the hydrophytic vegetation criterion is met is based three potential indicators as described in *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). These include the "Dominance Test", using the "50/20 Rule"; the "Prevalence Index"; or the presence of "Morphological Adaptation" of vegetation that is present. These indicators are based on determining the presence and relative abundance of plant species that are categorized as Obligate Wetland (typically associated with wetland conditions); Facultative Wetland (predominantly present in wetland conditions); Facultative (equally likely to occur in wetland or non-wetland areas); Facultative Upland (predominantly found in non-wetland areas); or Upland (typically found in mesic to xeric non-wetland habitats). Plant species are categorized in the National Wetland Plant List, created by the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture.

Soils are determined to be hydric when they form under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation (USDA NRCS 2022c). The presence of hydric soil conditions is determined where various indicators are observed by digging soil test pits to a depth of approximately 20 inches. Common hydric soil indicators include presence of redoximorphic features (i.e., areas where iron is reduced under anaerobic conditions and oxidized following a return to aerobic conditions); buried organic matter; organic streaking; reduced soil conditions; or sulfuric odor.

3.0 LITERATURE REVIEW

This section provides a summary of literature review results that were reviewed prior to the field survey and during report preparation that have helped inform the analysis provided in this report.

3.1 USGS TOPOGRAPHIC QUADRANGLE

The USGS topographic quadrangle maps show geological formations and their characteristics; they describe the physical settings of an area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations, latitude and longitude, and Universal Transverse Mercator (UTM) Grid coordinates.

The Project site occurs on the USGS' Pasadena 7.5-minute topographic quadrangle map. The Arroyo Seco appears as a blueline stream, but no other features that occur within the Project boundary are shown on the quadrangle map. Elevations on the Project site range from approximately 700 to 980 feet above mean sea level.

3.2 SOIL SURVEY

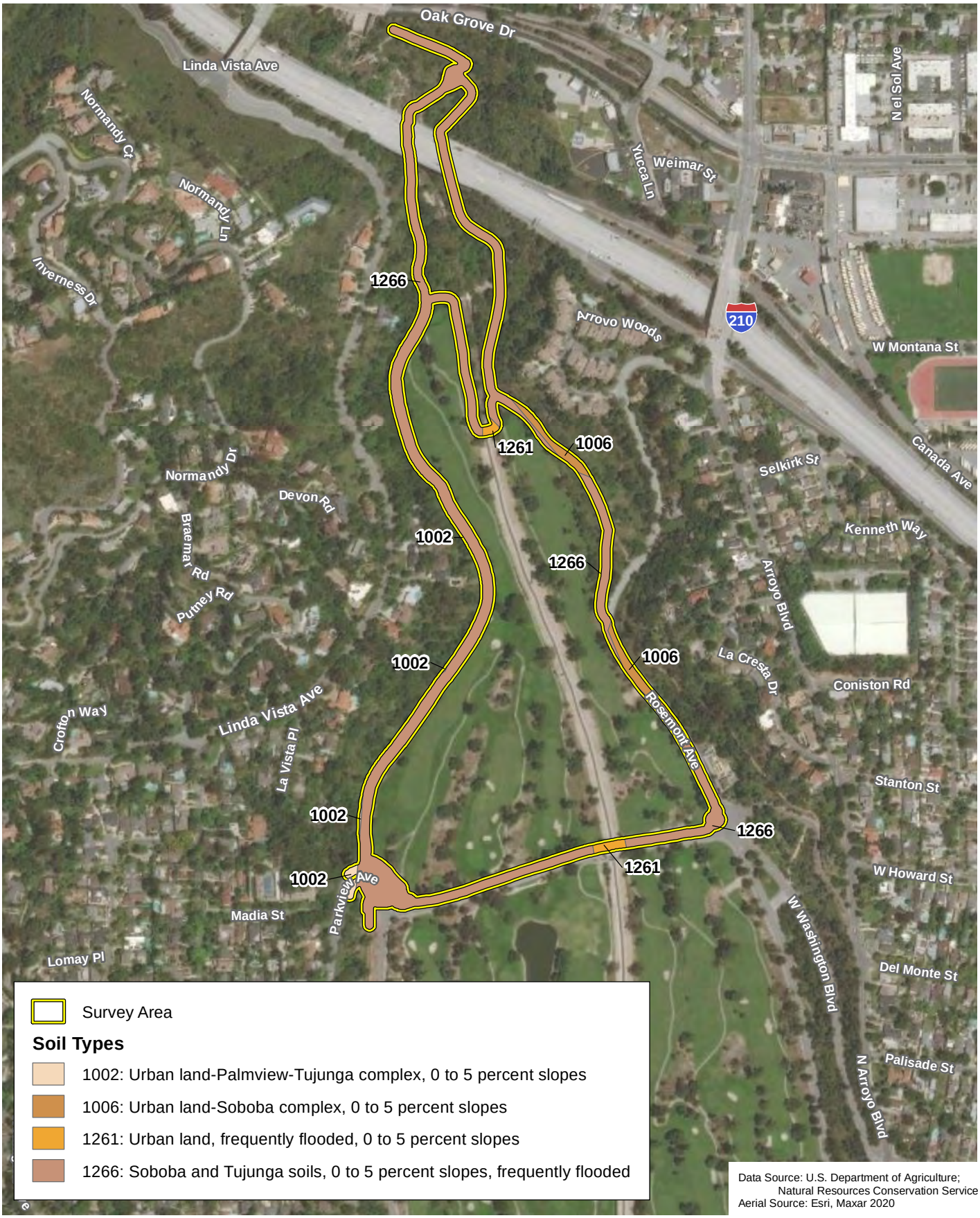
The presence of hydric soils is one of the chief indicators of jurisdictional wetlands. Psomas reviewed the USDA's soil data for areas within the Project boundary (Exhibits 4a and 4b). The Project boundary contains the following soil types: Urban land-Palmview-Tujunga complex, 0 to 5 percent slopes; Urban land-Soboba complex, 0 to 5 percent slopes; Urban land, frequently flooded, 0 to 5 percent slopes; Soboba and Tujunga soils, 0 to 5 percent slopes, frequently flooded; and Vista-Fallbrook-Cieneba complex, 30 to 75 percent slopes.

The National Hydric Soils List identifies a soil map unit as "hydric" if it contains either a major or minor component that is at least in part hydric (USDA NRCS 2022c). The survey area occurs in the Los Angeles County, Southeastern Soil Survey Area. None of the soil types listed above that occur in the Project boundary are listed on the National Hydric Soils List. A brief description of these soils is provided in Attachment C of this report.

3.3 NATIONAL WETLANDS INVENTORY

The U.S. Fish and Wildlife Service's Wetland Mapper (USFWS 2022) shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure. This resource provides the classification of known wetlands following the Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) Subclasses; and (5) Dominance Types, which are named for the dominant plant or wildlife forms. In addition, there are modifying terms applied to Classes or Subclasses.

Jurisdictional features that occur in the National Wetland Inventory include the Arroyo Seco and the various artificial drainages that are adjacent to the Arroyo Seco in the Lower Arroyo Park area (Exhibits 5a and 5b). In the northernmost portion of the survey area, north of Brookside golf course, the Arroyo Seco is described as R4SBA (Riverine, Intermittent Streambed, Temporary Flooded) and Rp1FO (Riparian, Lotic, Forested). Where the Arroyo Seco transitions to a



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Soil Map

Exhibit 4a

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

600 300 0 600

Feet

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Soil Map

Exhibit 4b

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

400 200 0 400

Feet

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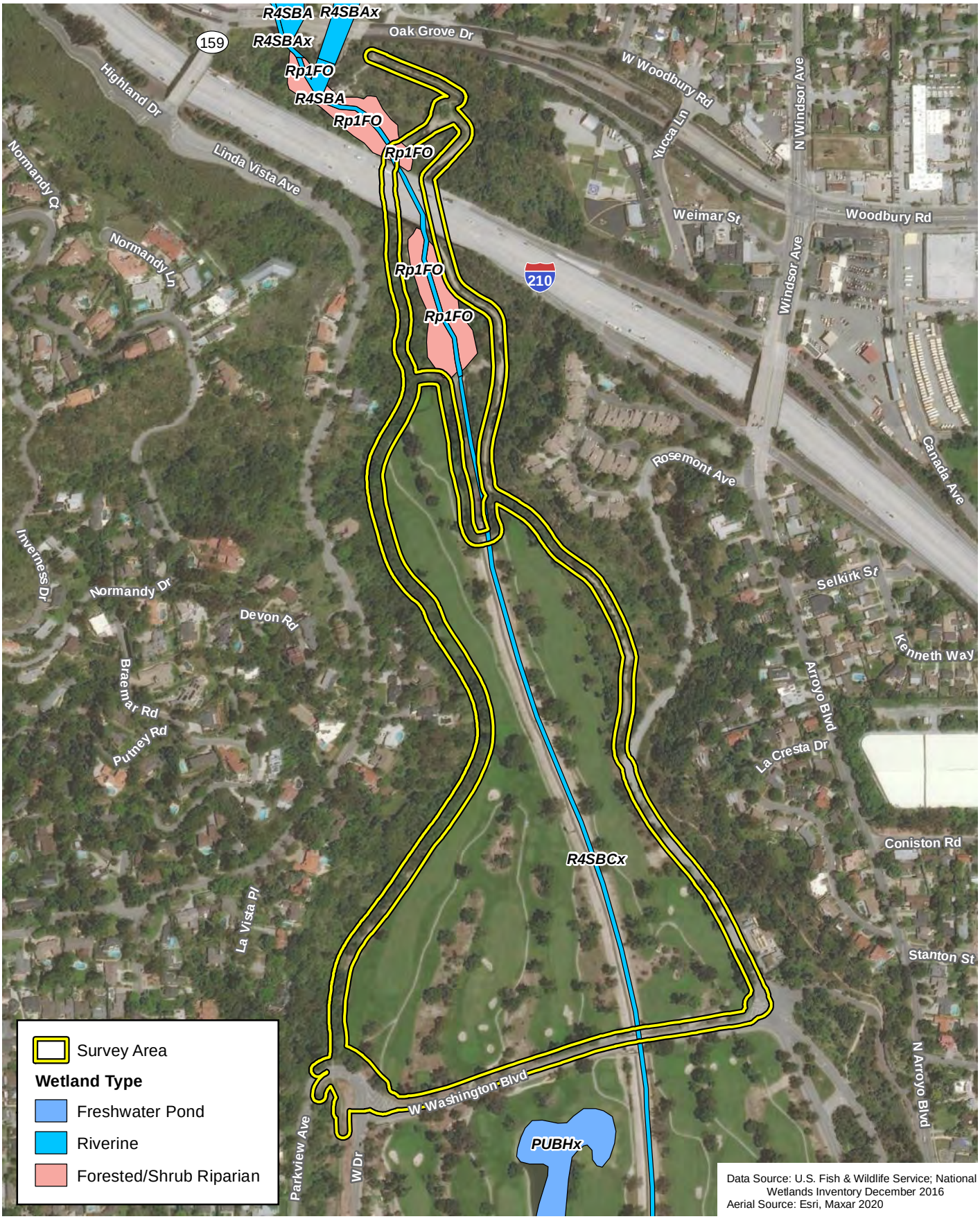

Data Source: U.S. Fish & Wildlife Service; National Wetlands Inventory December 2016
Aerial Source: Esri, Maxar 2020

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National Wetland Inventory

Exhibit 5a

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

500 250 0 500
Feet

PSOMAS

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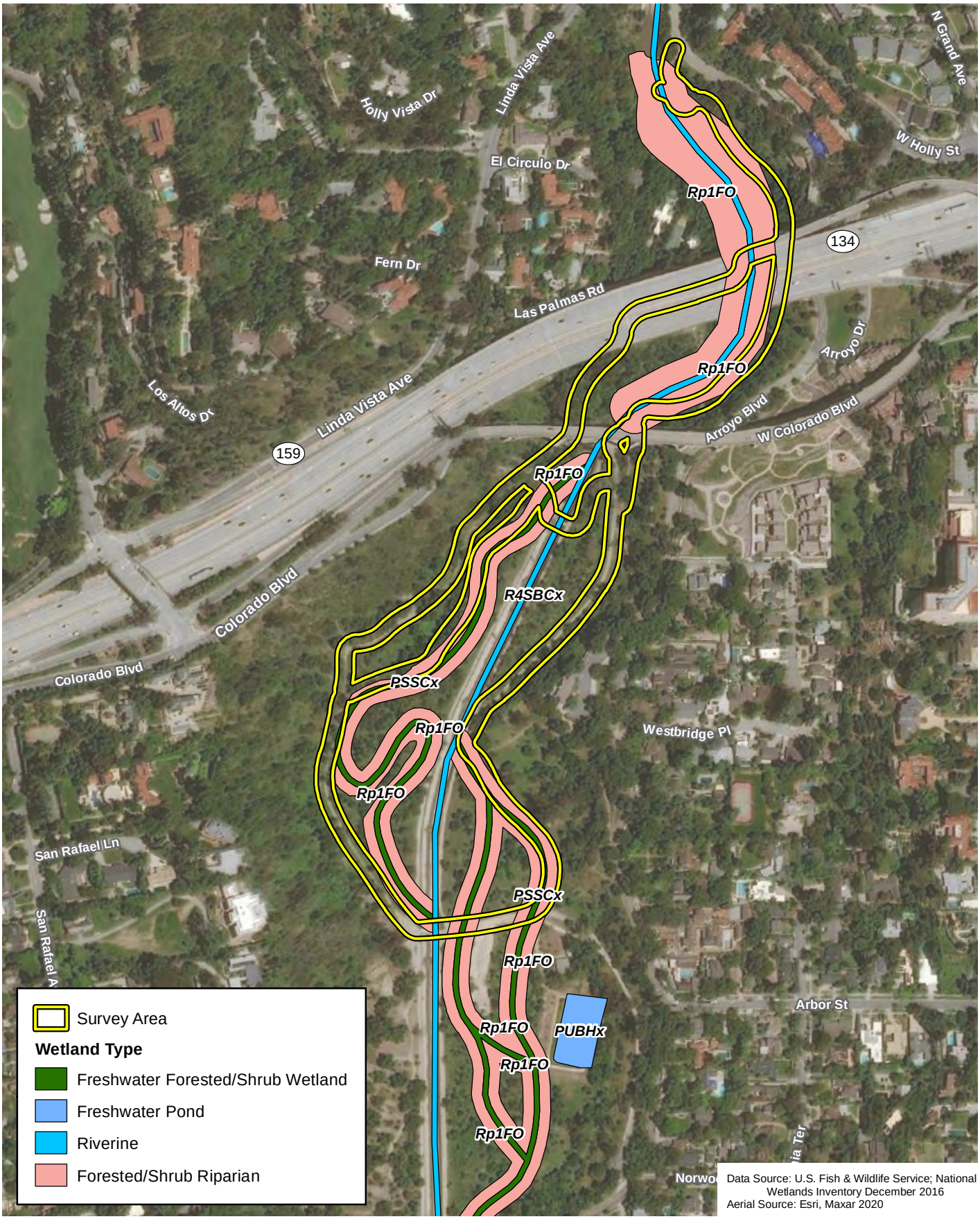

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National Wetland Inventory

Exhibit 5b

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N W E S

400 200 0 400

Feet

PSOMAS

(Rev: 08/24/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\ex_NWI.pdf

concrete-lined channel, it is described as R4SBCx (Riverine, Intermittent Streambed, Seasonally Flooded, Excavated).

In the southern survey area, the Arroyo Seco transitions to an earthen bottom channel with riparian vegetation and is described as R4SBCx (Riverine, Intermittent Streambed, Seasonally Flooded, Excavated) and Rp1FO (Riparian, Lotic, Forested).

The artificial channels in the Lower Arroyo Park area are mapped as PSSCx (PSSA (Palustrine, Scrub-Shrub, Seasonally Flooded, Excavated) and Rp1FO (Riparian, Lotic, Forested).

A complete description of the wetland classifications that describe these resources is provided in Attachment C.

3.4 REGIONAL WATER QUALITY CONTROL PLAN

There are nine Regional Water Quality Control Boards in California. The Project site is located within Regional Water Quality Control Board Region 4, the Los Angeles Region. The SWRCB and the Los Angeles RWQCB have adopted a Water Quality Control Plan (or "Basin Plan") for the Los Angeles Region. The Basin Plan contains goals and policies, descriptions of conditions, and proposed solutions to surface and groundwater issues. The Basin Plan also establishes water quality standards for surface and groundwater resources and includes beneficial uses and levels of water quality that must be met and maintained to protect these uses. These water quality standards are implemented through various regulatory permits pursuant to CWA Section 401 for Water Quality Certifications and Section 402 for Report of Waste Discharge permits.

The northern survey area contains Arroyo Seco Reach 2 and the southern survey area contains Arroyo Seco Reach 1. Both reaches are identified as Watershed Boundary Dataset (WBD) 180701050209 (Los Angeles RWQCB 1994).

Potential, Intermittent, and Existing Beneficial Uses for Arroyo Seco Reaches 1 and 2 are summarized in Table 1 and include: Municipal Water Supply (MUN); Warm Freshwater Habitat (WARM); and Wildlife Habitat (WILD). Rare, Threatened, or Endangered Species (RARE); Limited Water Contact Recreation (REC1); and Non-Contact Water Recreation (REC2). Proposed trail improvement activities are not expected to affect any of these Beneficial Uses.

TABLE 1
SUMMARY OF BENEFICIAL USES

WBD	Beneficial Uses					
	MUN	WARM	WILD	RARE	REC1	REC2
180701050209 Arroyo Seco Reach 1	P	P	P		I	I
180701050209 Arroyo Seco Reach 2	P	P	P	E	I	I

WBD: Watershed Boundary Dataset; I: Intermittent Beneficial Use; P: Potential Beneficial Use

MUN: Municipal Water Supply; WARM: Warm Freshwater Habitat; WILD: Wildlife Habitat; RARE: Rare, Threatened, or Endangered Species; REC1: Limited Water Contact Recreation; REC2: Non-Contact Water Recreation

Source: Los Angeles RWQCB 1994.

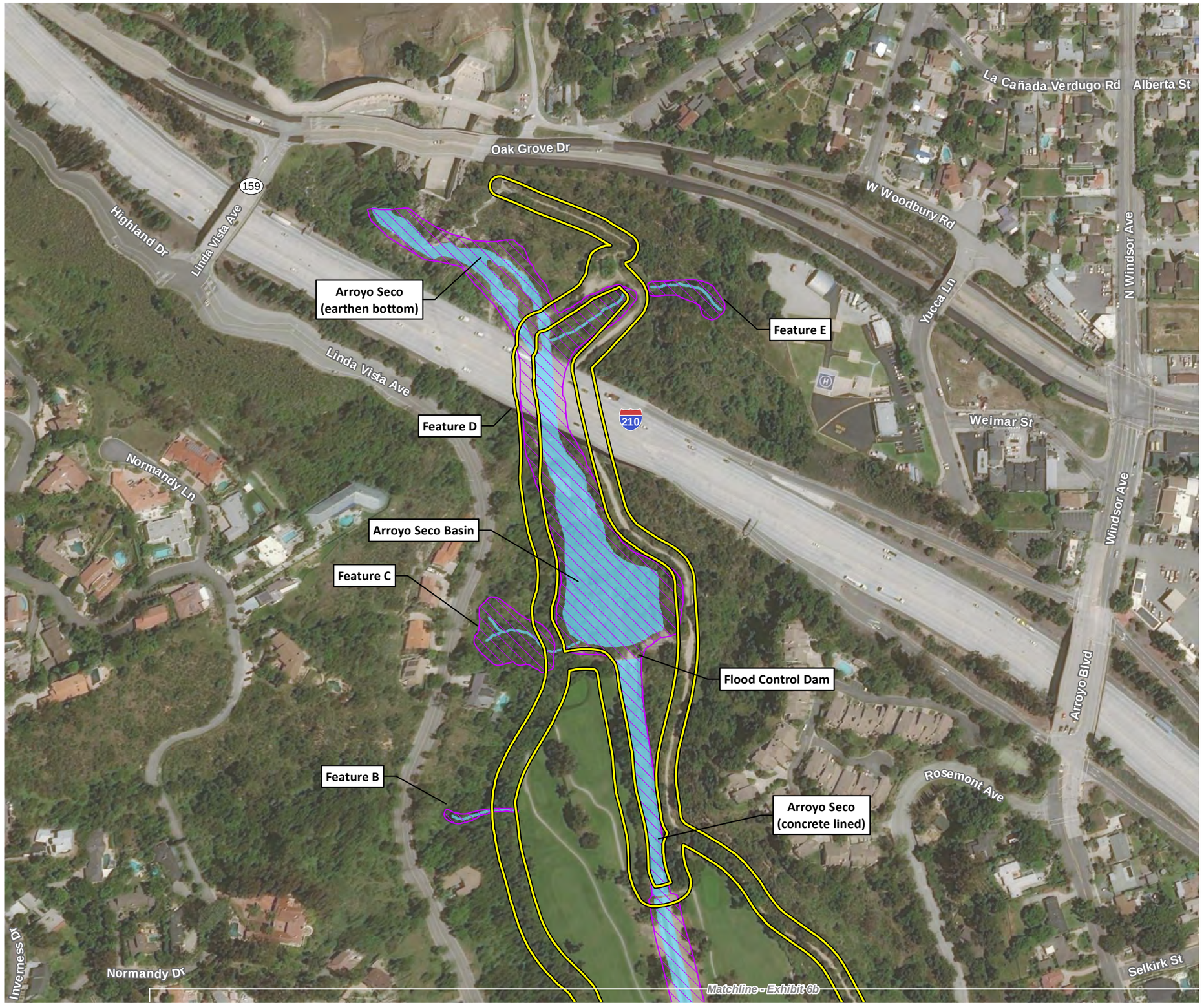
Descriptions of the various Beneficial Uses are provided in Attachment C.

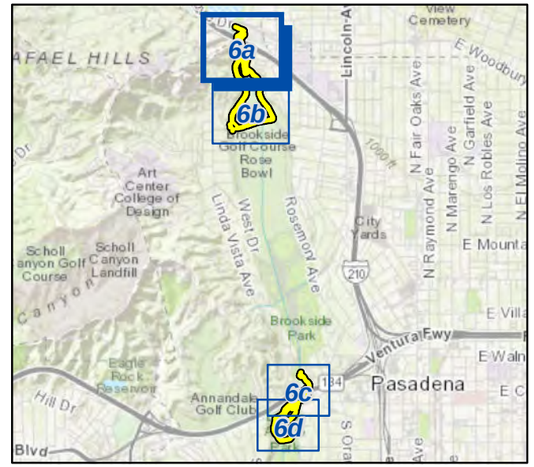
4.0 JURISDICTIONAL ANALYSIS

The Project survey areas are centered around existing trails in the Arroyo Seco that are proposed for various improvements. To provide a complete context of the area's drainage system, all drainages that are in the vicinity of the survey areas are illustrated in Exhibit 6, rather than simply showing the small drainage sections that are within the survey area boundaries. In addition to the various sections of the Arroyo Seco, additional drainage features that drain into the Arroyo Seco are noted as Drainage Features A through I for ease of reference.

The various drainage features are described below.

- **Upper Arroyo Seco (earthen bottom)**. In the northernmost section of the survey area, the Arroyo Seco consists of a sandy wash with intermittent flows that is dominated by mule fat, black willow, and giant reed. The Upper Loop Trail passes along the western bank of this section of the Arroyo Seco under the overpass for Interstate 210 and ends north of this overpass. Pedestrians appear to cross the Arroyo Seco at this location to continue on the trail on the eastern side of the Arroyo Seco. Surface water was present in this portion of the Arroyo Seco as shallow isolated pools. No flowing water was present at the time of the field survey.
- **Arroyo Seco Basin**. Downstream of the Interstate 210 overpass, the Arroyo Seco continues as an earthen bottom channel as it reaches a detention basis at the northern edge of Brookside golf course. The detention basin is dominated by mule fat, black willows, and western sycamores. The downstream end of the basin is bounded by a flood control dam. No surface water was present in the upper part of the basin during the field survey, but a small amount of water was passing through the flood control dam indicating that surface water was present in the downstream portion of the basin.
- **Arroyo Seco (concrete-lined)**. Downstream of the flood control dam, the Arroyo Seco transitions to a concrete-lined storm drain that continues approximately two miles before reaching the southern survey area. Flowing water was present in the concrete channel, though it was limited to the center low-flow portion of the channel.
- **Lower Arroyo Seco (earthen bottom)**. In the southern survey area, the Arroyo Seco transitions from a concrete channel to an earthen bottom channel that is dominated by willow woodland. This section of the Arroyo Seco continues downstream until it reaches a flood control dam that is located under the Colorado Boulevard bridge. Flowing water was present in this section of the Arroyo Seco as it appears to contain perennial flows due to the downstream flood control dam.
- **Lower Arroyo Seco (concrete-lined)**. Downstream of the flood control dam, the Arroyo Seco again transitions to a concrete-lined storm drain with vertical sidewalls. A small amount of flowing water was present during the survey.
- **Feature A.** In the northern survey area, this drainage feature crosses the Upper Loop Trail immediately north of West Washington Boulevard. It consists of a hardened storm drain (concrete and river rock) that measures four feet wide with vertical side walls. Just east of the Upper Loop Trail, this channel flows into an underground culvert that presumably connects to the concrete-lined Arroyo Seco. Several mature coast live oaks overhang the channel. A concrete slab covers a portion of this feature to let pedestrians on the trail pass over the channel. No surface water was present during the survey.
- **Feature B.** Along the western side of the northern survey area, this drainage feature consists of an apparent erosional area that is fed by water being discharged about 200 feet east of the Upper Loop Trail from a pipe outlet. At the time of the survey, water was being discharged at an apparent rate of 0.1 cubic feet per second. This area is vegetated by several non-native





Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

250 125 0 250
Feet

Aerial Source: Esri, Maxar 2020

Jurisdictional Resources Exhibit 6a

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

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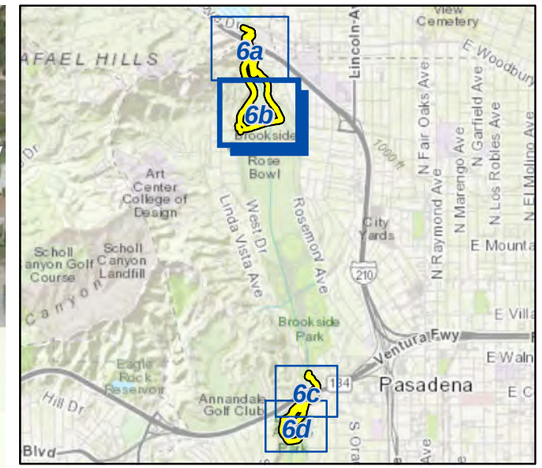

Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

250 125 0 250
Feet

Aerial Source: Esri, Maxar 2020

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Jurisdictional Resources Exhibit 6b

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

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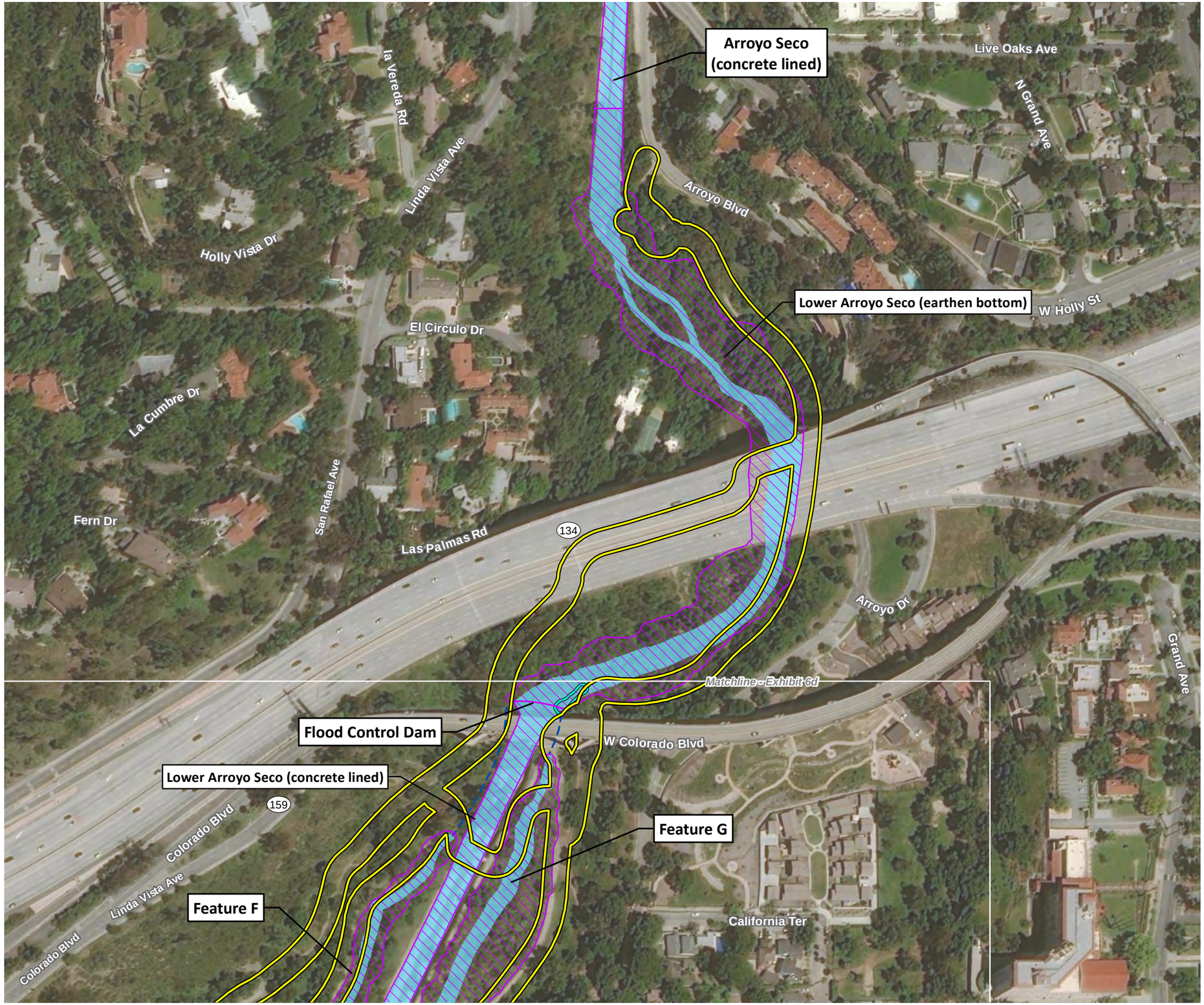

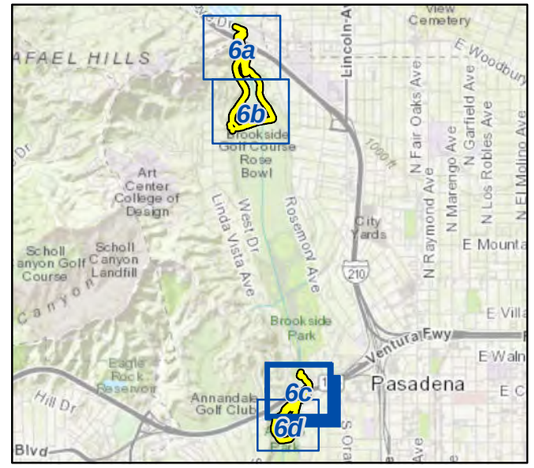

Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020

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Jurisdictional Resources — Exhibit 6c

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

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Flood Control Dam

Lower Arroyo Seco (concrete lined)

Feature G

Feature F

Feature H

Feature I

Lower Arroyo Seco (concrete lined)

Matchline - Exhibit 6c

Los Altos Dr

Linda Vista Ave

San Rafael Ave

Colorado Blvd

134

159

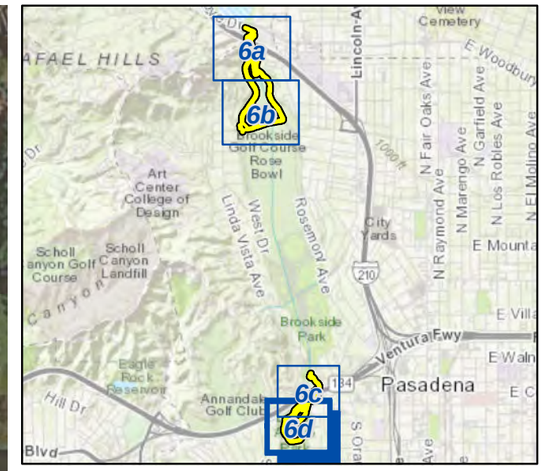
W Colorado Blvd

Arroyo Blvd

California Ter

Westbridge Pl

Arbor St



Survey Area

Jurisdictional Resources

- USACE/RWQCB
- CDFW
- Wetlands
- Underground Flows

N
W E
S

200 100 0 200
Feet

Aerial Source: Esri, Maxar 2020

Jurisdictional Resources Exhibit 6d

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

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trees. The steady flow of water through the area supports a dense understory of crofton weed (*Ageratina adenophora*) and California blackberry (*Rubus ursinus*). Water flows down the slope toward the trail – a narrow channel of water (1-2 feet wide) passes over the trail toward the golf course and also flows in a southerly direction down the trail itself resulting in erosion that was observed extending several hundred feet down the trail.

- **Feature C.** Just west of the Arroyo Seco Basin, this ephemeral drainage flows from west to east toward the basin. Vegetation along this feature is dominated by several large coast live oaks with a sparse understory containing golden currant (*Ribes aureum*) and barley grass (*Hordeum murinum*). No water was present during the field survey, but very minor erosion on the trial suggests that water flows through this drainage and passes over the trail before reaching the Arroyo Seco Basin.
- **Feature D.** Under State Route 134, a 36-inch drainage pipe extends from the slope and likely conveys storm flows from the roads above. Water from this pipe flows down the slope above the Upper Loop Trail and flows across the sandy trail before reaching the Upper Arroyo Seco. Water flows down the hill, but no OHWM or streambed is associated with this feature. No water was present at the time of the field survey.
- **Feature E.** This drainage feature is located on the east side of the Arroyo Seco near the northern end of the northern survey area. This ephemeral drainage flows from east to west and contains some coast live oaks and other scattered native shrubs such as toyon (*Heteromeles arbutifolia*). Water from the drainage crosses over the Upper Loop Trail, and then passes through a narrow channel that is dominated by mule fat before reaching the Upper Arroyo Seco. No erosion was observed on the trail as this feature likely generates only infrequent and modest storm flows.
- **Feature F.** This drainage feature is one of three artificial streams that convey water that is diverted from the Lower Arroyo Seco (earthen bottom). This feature is located on the western side of the Arroyo Seco and is generally dominated by native species such as mule fat, western sycamore, and coast live oak. The water regime in the artificial channels is controlled by valves in the flood control dam at the downstream end of the Lower Arroyo Seco (earthen bottom). Water passes through this meandering channel before discharging into the Arroyo Seco near the Lower Arroyo Park parking area. No water was present at the time of the field survey.
- **Feature G.** This drainage feature is similar to Feature F but is located on the eastern side of the Lower Arroyo Seco. This drainage is also dominated by mule fat, western sycamore, and coast live oak. No water was present at the time of the field survey.
- **Feature H.** This feature is a short channel that is east of Feature G with the Lower Loop Trail passes between these drainages. This channel drains water that runs off the adjacent hillside. Water flows downstream for approximately 200 feet, then passes under the Lower Loop Trail to connect with Drainage G. Due to the lack of significant flows in this channel, no indicators of an OHWM were observed, so that this feature should be considered a swale. No water was present at the time of the field survey.
- **Feature I.** This feature is the continuation of Feature G after water passes underground for approximately 400 feet. Similar to the other artificial channels, Feature I is dominated by mule fat, western sycamore, and coast live oak. This feature flows down past the parking lot for Lower Arroyo Park and discharges into the Arroyo Seco south of the limits of the southern survey area. No water was present at the time of the field survey.

A summary of jurisdictional resources in the vicinity of the Project site is provided in Table 2 and photographs are provided in Attachment B of the various jurisdictional features.

TABLE 2
SUMMARY OF JURISDICTIONAL RESOURCES IN THE PROJECT VICINITY

Jurisdictional Feature	Latitude/Longitude (decimal degrees)		Feature Length (linear feet)	OHWM Width Range (feet)	CDFW Jurisdiction Width Range (feet)
	Upstream End	Downstream End			
Upper Arroyo Seco (earthen bottom)	34.184244 °, -118.174007°	34.182289 °, -118.173157°	735	35–90	95–140
Arroyo Seco Basin	34.182289 °, -118.173157°	34.181391°, -118.172876°	325	135–245	150–340
Arroyo Seco (concrete lined)	34.181391°, -118.172876°	34.174123°, -118.170616°	2,600	40–45	50–80
Lower Arroyo Seco (earthen bottom)	34.147666°, -118.165712°	34.144706°, -118.166804°	1,450	20–65	95–210
Lower Arroyo Seco (concrete lined)	34.144706°, -118.166804°	34.139493°, -118.167813°	1,800	50	50
Feature A	34.174522°, -118.174761°	34.174253°, -118.174061°	250	4	30–75
Feature B	34.180241°, -118.174229°	34.180164°, -118.173925°	125	2–4	6–20
Feature C	34.181641°, -118.173793°	34.181511°, -118.173533°	140	3–5	80–155
Feature D	34.183185°, -118.173724°	34.183156°, -118.173582°	25	0	0
Feature E	34.183935°, -118.172233°	34.183563°, -118.173391°	410	3–6	60–85
Feature F	34.144455°, -118.166506°	34.140655°, -118.167979°	2,000	12–35	60–95
Feature G	34.144363°, -118.166089°	34.142647°, -118.167141°	580	15–40	60–140
Feature H	34.143019°, -118.166226°	34.142469°, -118.166921°	250	0	20–25
Feature I	34.141827°, -118.167481°	34.140683°, -118.166833°	510	15–50	50–250

OHWM: Ordinary High Water Mark; CDFW: California Department of Fish and Wildlife

4.1 "WATERS OF THE UNITED STATES" DETERMINATION

Connectivity to a Traditional Navigable Water

The Arroyo Seco conveys water from north to south through the Project area and travels approximately 5 miles before draining into the Los Angeles River, a Traditional Navigable Waterway (TNW)[1]. Portions of the Arroyo Seco appear to contain perennial flows (where flood control dams are holding back water) while other portions appear to contain relatively permanent flows (flowing water present on a seasonal basis at minimum). Given this relatively permanent water regime and connectivity to a TNW, the Arroyo Seco is considered WOTUS and subject to the jurisdiction of the USACE. Features A, C, and E drain directly into the Arroyo Seco. Though these features support ephemeral or intermittent flows, they would likely be considered WOTUS as they are tributaries of the Arroyo Seco. Features F through I would also be considered WOTUS

[1] Traditional Navigable Waters are "all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide" (33 CFR 328.3).

because –though they are constructed streambeds– they convey water that is diverted from the Arroyo Seco and then discharge water back into the Arroyo Seco at their downstream end.

Feature B is not considered WOTUS because there is no connectivity to downstream waters and flowing water in this drainage is only due to a pipe that is discharging water. Feature D is not considered WOTUS because there is no OHWM present. Water associated with this drainage is only the result of stormwater being discharged down a fill slope.

Wetlands Determination

Three sampling points were assessed for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Sampling points were located in areas where the drainage features described herein flow over the Arroyo Seco Loop Trails (i.e., locations where trail improvement activities would have the potential to affect wetlands). Hydrophytic vegetation was present only in the Arroyo Seco where willow trees and mule fat are the dominant species. The other drainages are dominated by upland vegetation species such as coast live oak trees or ornamental tree species. Though wetland hydrology indicators were present (either the presence of flowing water or evidence of drainage patterns/sediment deposits), no indicators of hydric soils were noted at any of the locations. Therefore, wetlands were not detected anywhere within the Project survey areas.

Wetland determination data forms that document conditions at each sampling point are provided in Attachment D, while a summary of observations is provided below in Table 3.

TABLE 3
SUMMARY OF WETLAND SAMPLING POINT DATA

Sampling Point	Vegetated	Dominance Test Result*	Prevalence Index Result	Hydrophytic Vegetation Present	Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland?
1 (Upper Arroyo Seco)	Yes	100%	2.8	Yes	None	B2, B10	No
2 (Feature C)	Yes	25%	4.8	No	None	B2, B10	No
3 (Feature B)	Yes	25%	4.7	No	None	A1	No

* Percent of dominant species that are OBL, FACW, or FAC.

Wetland Hydrology Indicators
A1 Surface Water
B2 Sediment Deposits
B10 Drainage Patterns

4.2 REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

The RWQCB generally shares jurisdiction with the USACE, though the definition of “waters of the State” provides the RWQCB with greater latitude to regulate waters. As a result, all of the features described in this report would be considered “waters of the State” and the RWQCB would require a permit to be issued for any activities that would affect these features or the quality of the water that flows through.

4.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

The CDFW assets jurisdiction over the bed and bank of any stream features along with native riparian vegetation or aquatic habitat that is associated with a stream. As a result, the CDFW would assert jurisdiction over any activity that would affect a streambed or associated native vegetation. The Arroyo Seco is under the CDFW's jurisdiction along with the vegetation that is growing in the earthen bottom portions of the stream. Features A, C, and E in the Upper Loop Trail area have identifiable streambeds with native tree and shrub species. Feature B has flowing water but most of the associated vegetation consisted of non-native vegetation through some native shrubs and herbaceous species were also present. Feature D has native shrubs associated with it, but no identifiable streambed or streambanks as this feature consists of a pipe outlet that appears to convey stormwater from a nearby road.

In the Lower Loop Trail area, Features F through I are all subject to CDFW jurisdiction as these drainages all have obvious streambanks and are dominated by native tree and shrub species.

5.0 DISCUSSION

This section provides a discussion of potential regulatory agency permitting requirements for each of the drainage features described herein.

5.1 U.S. ARMY CORPS OF ENGINEERS

Though most of the features described in this report meet the definition of WOTUS, a permit from the USACE is not expected to necessary based on the nature of the proposed activities. the need for obtaining permit from the USACE for this Project. Trail improvement activities are expected to occur within the footprint of existing trails so that no discharges to any nearby WOTUS are expected.

If trails are proposed to be widened which would affect WOTUS or other activities are undertaken that would affect the flow of water through WOTUS, then a USACE permit would likely be required. Because any potential impacts would be expected to be very minor, making the Project eligible to be authorized under Nationwide Permit No. 18 (Minor Discharges) which can be issued if less than 10 cubic yards of material would be placed in WOTUS.

5.2 REGIONAL WATER QUALITY CONTROL BOARD

As described above, the RWQCB has much greater latitude to assert jurisdiction over drainage features based on the expansive definition of “waters of the State”. If, as expected, a USACE permit will not be required for the proposed Project, then the RWQCB would issue Waste Discharge Requirements (WDR) rather than a more extensive Water Quality Certification to comply with the federal Clean Water Act.

Because water flows over the Upper Loop Trail at Features B, C, D, and E, the RWQCB will likely require a WDR permit because of the potential for trail improvements to interact with flowing water. Other trail improvements in the Lower Loop Trail area would be expected to occur on existing trails outside the RWQCB’s jurisdictional limits. Precautions should be taken for any trail improvements that occur outside of jurisdictional limits to ensure that this work does not result in any inadvertent sediment discharges to waters which would require RWQCB permitting.

The only drainage feature that consistently contains surface water (possibly perennial) is Feature B where water flows across and on the Upper Loop Trail. Water reaches this site through a drainage pipe that extends from the adjacent hillside. It is recommended that the source of this water is determined so that it can be discontinued to prevent future and ongoing damage to the trail.

5.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW requires the submittal of a Notification of Lake or Streambed Alteration for any project that would (1) substantially modify a streambed or channel or (2) impact any riparian vegetation or aquatic habitats. All of the drainage features described in this report are subject to CDFW jurisdiction except Feature D which does not have an identifiable streambed or streambanks and does not have any riparian vegetation.

The CDFW’s jurisdictional limits extend into many portions of the northern and southern survey areas though this is generally the result of riparian vegetation overhanging the Upper and Lower Loop Trails that are otherwise outside the upper banks of the various stream features. Some exceptions include the northern portion of the Upper Loop Trail along the Upper Arroyo Seco near the Interstate 210 overpass. The trail in this area is located above the OHWM (USACE jurisdictional limit) but within the CDFW’s jurisdictional limits, though there is no significant riparian

vegetation along the trail and any trail improvements would not be expected to "substantially modify" the streambank. Trail improvements near Feature B may require a change to how water flows across the Upper Loop Trail that would require CDFW notification. CDFW notification would also be required for the removal of any native trees, shrubs, or herbaceous vegetation that is associated with this feature. Other trail improvements are expected to occur outside the upper streambank limits and would not impact native riparian vegetation so that CDFW permitting would not be necessary.

5.4 COMPENSATORY MITIGATION

Projects that result in a loss of jurisdictional waters typically require compensatory mitigation to offset this reduction. Proposed trail improvements will generally consist of re-establishing trail conditions that would not result in a permanent loss of streambed area or native vegetation. As a result, while regulatory agency permits would be expected to include conditions to minimize direct or indirect impacts on jurisdictional resources, proposed trail improvements are not expected to require any compensatory mitigation.

6.0 REGULATORY APPROVAL PROCESS

This section summarizes the various permits, agreements, and certifications that may be required prior to initiation of the proposed Project activities that involve impacts to jurisdictional waters, including:

- USACE Section 404 Permit
- RWQCB Section 401 Water Quality Certification
- CDFW Section 1602 Notification of Lake or Streambed Alteration

It should be noted that all regulatory permit applications can be processed concurrently.

6.1 U.S. ARMY CORPS OF ENGINEERS

If impacts to WOTUS are expected to occur, a Section 404 permit from the USACE is required. Regulatory authorization in the form of a Nationwide Permit (NWP) would be expected to authorize any trail improvements. NWPs are permits that are pre-authorized if proposed projects fall within certain limits. Any trail improvements would be expected to be authorized by NWP 18 (Minor Discharges).

Issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Los Angeles RWQCB. The RWQCB requires certification of the proposed project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

As noted above, issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Los Angeles RWQCB. However, since Project activities are not expected to require issuance of a Section 404 permit, the RWQCB would authorize proposed trial improvements via a WDR permit, which consists of various Best Management Practices to be implemented that would avoid or minimize impacts on "waters of the State".

Please note that the application would also require the payment of an application fee, which would be based on Project impacts.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Prior to construction, Notification of a Lake or Streambed Alteration (LSA) must be submitted to the CDFW through CDFW's Environmental Permit Information Management System (EPIMS) website. The notification needs to describe any proposed streambed alterations contemplated by the proposed Project. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

In addition to the formal application materials and the application fee, a copy of the appropriate environmental document (e.g., Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The CDFW will not deem the application to be complete until the application fees have been paid and the agency is provided with a certified CEQA document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD). CDFW will likely consider each separate crossing as an individual project for fee purposes.

Once the application materials are considered complete by the CDFW, they will have 60 days to issue a Streambed Alteration Agreement. For certain projects that have extremely minor impacts on the environment, the CDFW often does not issue a SAA and instead authorizes a project to proceed via a Lawful Operation letter.

6.4 RECOMMENDATIONS

Based on the conclusions of this Jurisdictional Delineation Report, the following recommendations are identified:

1. Regulatory agency staff should be consulted to confirm the findings of this Jurisdictional Delineation Report, to determine if the proposed Project activities would require a permit, and to determine if minor modifications to the proposed Project can be made that would minimize or avoid permitting requirements.
2. Once permitting requirements have been determined from agency staff, the following should be prepared and processed (if needed): a USACE Section 404 Permit; an RWQCB Section 401 Water Quality Certification; a CDFW Section 1602 Notification of LSA; and the appropriate jurisdictional determination form approved by the USACE.

7.0 REFERENCES

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ATTACHMENT A

SUMMARY OF REGULATORY AUTHORITY

REGULATORY AUTHORITY

This attachment summarizes the regulatory authority of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) over activities that have potential to impact jurisdictional resources.

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the United States" (WOTUS) under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all WOTUS where the material (1) replaces any portion of WOTUS with dry land or (2) changes the bottom elevation of any portion of any WOTUS. These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters.

Waters of the United States

WOTUS can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term WOTUS is defined by the *Code of Federal Regulations*[1] (CFR).

The U.S. Supreme Court has issued three decisions that provide context and guidance in determining the appropriate scope of WOTUS. In *United States v. Riverside Bayview Homes*,[2] the Court upheld the inclusion of adjacent wetlands in the regulatory definition of WOTUS. In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC),[3] the Court held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not, by itself, sufficient basis for the exercise of federal regulatory authority under the CWA. In *Rapanos v. United States* (Rapanos),[4] a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted WOTUS under the CWA. In his plurality opinion, Justice Scalia argued that WOTUS should not include channels through which water flows intermittently or ephemerally or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote WOTUS based on a mere hydrologic connection. Justice Kennedy authored a separate concurring opinion concluding that wetlands are WOTUS if they, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable". Lacking a majority opinion, regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's "significant nexus" standard is satisfied.

In 2015, the USACE and the U.S. Environmental Protection Agency (USEPA) published a final rule (2015 Rule) clarifying the scope of WOTUS protected under the CWA. One of the major changes was to make all tributaries and adjacent waters jurisdictional, by rule.

In December 2018, the USEPA and the Department of the Army (DOA) proposed a new definition of WOTUS to clarify federal authority under the federal CWA consistent with the February 2017 Presidential Executive Order entitled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States' Rule". On September 12, 2019, the USEPA and DOA signed a final "Step One Rule" to repeal the 2015 Rule and re-codify the regulatory text

1 Specifically, Title 33, Navigation and Navigable Waters; Part 328, Definition of waters of the United States; §328.3, Definitions.

2 *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985)

3 *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers,* 531 U.S. 159 (2001)

4 Consolidated cases: *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208 2006) refer to the U.S. Supreme Court's decision concerning USACE jurisdiction over waters of the United States under the CWA.

defining WOTUS that existed prior to the 2015 Rule. The new regulations went into effect on December 23, 2019.[5] With this new final rule, the regulations defining the scope of federal CWA jurisdiction are those portions of the CFR as they existed before the amendments promulgated in the 2015 rule.

The Step One Rule was replaced by the Navigable Waters Protection Rule (Step Two Rule) (NWPR). On January 23, 2020, the USEPA and DOA finalized the Step Two Rule defining WOTUS. This rule was published in the *Federal Register* on April 21, 2020 and went into effect on June 22, 2020 (60 days following publication). The Step Two Rule changed the definition of WOTUS to include territorial seas and Traditional Navigational Waters (TNWs); perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Under this new definition, the following notable changes were implemented:

1. Rivers and streams that contribute perennial or intermittent flow to downstream TNWs are jurisdictional but ephemeral features are not considered jurisdictional.
2. The process of determining whether a "significant nexus" exists between a water and a downstream TNW as directed under the agencies' 2008 *Rapanos* guidance or whether a water has a significant nexus to a TNW, interstate water, or territorial sea has been eliminated.
3. No ditches constructed in upland and no ditches with ephemeral flow would be considered jurisdictional.
4. Wetlands must either abut jurisdictional waters or have a direct hydrological surface connection to jurisdictional waters in a typical year to be jurisdictional themselves; wetlands physically separated from jurisdictional waters by a berm, dike, or other barrier are not adjacent if they lack a direct hydrologic surface connection to a jurisdictional water in a typical year.

On June 9, 2021, the USEPA and DOA announced their intent to revise the definition of WOTUS in accordance with the January 2021 Presidential Executive Order entitled "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis". The stated intent of the Order is to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. Until a new rule is in effect, WOTUS would be defined by the NWPR. However, on August 30, 2021, the U.S. District Court for the District of Arizona vacated and remanded the NWPR for reconsideration to the USEPA and the USACE.[6] In light of this order, the agencies have halted implementation of the NWPR and are interpreting WOTUS consistent with the pre-2015 regulatory regime until further notice. Pre-2015 WOTUS includes the following:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or

[5] 40 CFR 230.3(s).

[6] *Pasqua Yaqui Tribe, et al. v. U.S. Environmental Protection Agency, et al*.

natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
c. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters that are identified in points 1 through 4;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in points 1 through 6 of this section.

Until further guidance is provided or the USEPA and USACE finalize a new rule defining WOTUS, the pre-2015 regulatory regime will be followed.

The agencies will apply the significant nexus standard by assessing the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream TNWs.

The agencies will assert jurisdiction over the following types of waters when they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent, (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent, and (3) wetlands adjacent to, but not directly abutting, a relatively permanent tributary (e.g., separated by uplands, a berm, dike or similar feature).

Excluded Waters

The pre-2015 WOTUS definition indicates that waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not WOTUS. Additionally, swales, ditches (including roadside ditches), or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) are generally not WOTUS because they are not tributaries or they do not have a significant nexus to downstream TNWs.

Ordinary High Water Mark

The landward limit of tidal “waters of the U.S.” is the high-tide line. In non-tidal waters where adjacent wetlands are absent, the lateral limits of USACE jurisdiction extend to the ordinary high water mark (OHWM).[7] The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the

[7] U.S. Army Corps of Engineers (USACE). 2005 (December 7). Regulatory Guidance Letter. Ordinary High Water Mark Identification. Washington, D.C.: USACE.

characteristics of the surrounding areas".[8] When wetlands are present, the lateral limits of USACE jurisdiction extend beyond the OHWM to the limits of the adjacent wetlands.[9]

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions".[10] Wetlands generally include swamps, marshes, bogs, and areas containing similar features.

The definition and methods for identifying wetland resources can be found in the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*,[11] a supplement to the 1987 *Corps of Engineers Wetlands Delineation Manual*.[12] Both the 1987 Wetlands Manual and the 2008 Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of wetland "waters of the U.S.". Pursuant to these manuals, a three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. In order to be considered a wetland, an area must exhibit one or more indicators of all three of these parameters. However, problem areas may periodically or permanently lack certain indicators for reasons such as seasonal or annual variability of rainfall, vegetation, and other factors. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement.

Section 404 Permit

Except as specified in Section 323.4 of the CFR, impacts to "waters of the U.S." require a Section 404 Permit. Permit authorization may be in the form of (1) a "general permit" authorizing a category of activities in a specific geographical region or nationwide or (2) an "individual permit" (IP) following a review of an individual application form (to be obtained from the district office having jurisdiction over the waters in which the activity is proposed to be located).

Regulatory authorization in the form of a Nationwide Permit (NWP) is provided for certain categories of activities such as repair, rehabilitation, or replacement of a structure or fill which was previously authorized; utility line placement; or bank stabilization. NWPs authorize only those activities with minimal adverse effects on the aquatic environment and are valid only if the conditions applicable to the permits are met or waivers to these conditions are provided in writing from the USACE. Please note that waivers may require consultation with affected federal and State agencies, which can be a lengthy process with no mandated processing time frames. Certain activities do not require submission of an application form but may require a separate notification. If the NWP conditions cannot be met, an IP will be required. "Waters of the U.S." temporarily filled, flooded, excavated, or drained but restored to pre-construction contours and elevations after construction are not included in the measurement of loss of "waters of the U.S.". The appropriate permit authorization will be based on the amount of impacts to "waters of the U.S.", as determined by the USACE. There is no filing fee for the Section 404 Permit.

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8 *Code of Federal Regulations* (CFR), Title 33, §328.3(e)

9 USACE 2005

10 33 CFR §328.3(b)

11 USACE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. (J.S. Wakeley, R.W. Lichvar, and C.V. Noble, Eds.). Vicksburg, MS: U.S. Army Engineer Research and Development Center.

12 Environmental Laboratory. 1987. Cor*ps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

Approximately three or four months are typically required to process a routine permit application; large or complex activities may take longer to process. When a permit application is received, it will be assigned an identification number and reviewed for completeness by the District Engineer. If an application is incomplete, additional information will be requested within 15 days of receipt of the application. If an application is complete, the District Engineer will issue a public notice within 15 days unless specifically exempted by provisions of the CFR. Public comments will be accepted no more than 30 days but not less than 15 days from the date of public notice; these will become part of the administrative record of the application. Generally, the District Engineer will decide on the application no later than 60 days after receipt of the completed application. Additional permit situations may increase the permit processing time (e.g., projects involving a Section 401 Water Quality Certification, a coastal zone management consistency analysis, historic properties, a federal agency, and/or Endangered species). The Project Applicant will be given time, not to exceed 30 days, to respond to requests of the District Engineer.

On January 31, 2007, the USACE published a memorandum clarifying the Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) implementing regulations.[13] The Interim Guidance applies to all Department of the Army requests for authorization/verification, including Individual Permits (IPs, i.e., standard permits and letters of permission) and all Regional General Permits (RGPs) and Nationwide Permits (NWPs). The State or Tribal Historic Preservation Officer (SHPO/THPO) has 30 days to respond to a determination that a proposed activity, which otherwise qualifies for an NWP or an RGP, has no effect or no adverse effect on a historic property. If the SHPO/THPO does not respond within 30 days of notification, the Los Angeles District may proceed with verification. If the SHPO/THPO disagrees with the District's determination, the District may work with the SHPO/THPO to resolve the disagreement or request an opinion from the ACHP. The USACE will submit the Draft Jurisdictional Delineation Report to the SHPO/THPO for review prior to initiating the actual regulatory process.

Please note that, if the USACE determines that the drainages/waterbodies are jurisdictional and would be impacted by project implementation, the Applicant will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 Permit. If the USACE determines that the impacted drainage/waterbody is not jurisdictional, the Applicant will be required to obtain RWQCB authorization under the provisions of a Report of Waste Discharge (ROWD).

Jurisdictional Determinations

Pursuant to USACE Regulatory Guidance Letter (RGL) 08-02 (dated June 26, 2008), the USACE can issue two types of jurisdictional determinations to implement Section 404 of the CWA: Approved Jurisdictional Determinations and Preliminary Jurisdictional Determinations.[14] An Approved Jurisdictional Determination is an official USACE determination that jurisdictional "waters of the U.S.", "Navigable Waters of the U.S.", or both are either present or absent on a site. An Approved Jurisdictional Determination also identifies the precise limits of jurisdictional waters on a project site.

The USACE will provide an Approved Jurisdictional Determination when (1) an Applicant requests an official jurisdictional determination; (2) an Applicant contests jurisdiction over a particular water body or wetland; or (3) when the USACE determines that jurisdiction does not exist over a particular water body or wetland. The Approved Jurisdictional Determination then becomes the

[13] USACE. 2007 (January 31). Memorandum: Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) Implementing Regulations. Washington, D.C.: USACE.

[14] USACE. 2008b (June 26). Regulatory Guidance Letter. Jurisdictional Determinations. Washington, D.C.: USACE.

USACE's official determination that can then be relied upon over a five-year period to request regulatory authorization as part of the permit application.

In addition, an Applicant may decline to request an Approved Jurisdictional Determination and instead obtain a USACE IP or General Permit Authorization based on a Preliminary Jurisdictional Determination or, in certain circumstances (e.g., authorizations by non-reporting nationwide general permits), with no Jurisdictional Determination.

Preliminary Jurisdictional Determinations are non-binding, advisory in nature, and may not be appealed. They indicate that there may be "waters of the U.S." on a project site. An Applicant may elect to use a Preliminary Jurisdictional Determination to voluntarily waive or set aside questions regarding CWA jurisdiction over a site, usually in the interest of expediting the permitting process. The USACE will determine what form of Jurisdictional Determination is appropriate for a particular project site.

The USACE Regulatory Branch Offices will coordinate with the USEPA Regional Office and USACE Headquarters (HQ), as outlined in its January 28, 2008, memorandum entitled "Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the *Rapanos* and *SWANCC* Supreme Court Decisions".[15] The guidance provided in this memorandum is quoted as follows:

1. Effective immediately, unless and until paragraph 5(b) of the June 5, 2007, Rapanos guidance coordination memorandum is modified by a joint memorandum from Army and EPA, we will follow these procedures:
    a. For jurisdictional determinations involving significant nexus determinations, USACE districts will send copies of draft jurisdictional delineations via e-mail to appropriate EPA regional offices. The EPA regional office will have 15 calendar days to decide whether to take the draft jurisdictional delineation as a special case under the January 19, 1989, "Memorandum of Agreement Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act." If the EPA regional office does not respond to the district within 15 days, the district will finalize the jurisdictional determination.
    b. For jurisdictional determinations involving isolated waters determinations, the agencies will continue to follow the procedure in paragraph 5(b) of June 5, 2007, coordination memorandum, until a new coordination memorandum is signed by USACE and EPA. (In accordance with paragraph 6 of the June 5, 2007, coordination memorandum, this is a 21-day timeline that can only be changed through a joint memorandum between agencies).
2. Approved JDs are not required for non-reporting NWPs, unless the project proponent specifically requests an approved JD. For proposed activities that may qualify for authorization under a State Programmatic General Permit (SPGP) or RGP, an approved JD is not required unless requested by the project proponent.

[15] USACE. 2008c (January 28). *Memorandum for Commander, Major Subordinate Commands and District Commands. Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the Rapanos and SWANCC Supreme Court Decisions.* Washington, D.C.: USACE.

3. The USACE will continue to work with EPA to resolve the JDs involving significant nexus and isolated waters determinations that are currently in the elevation process.
4. USACE districts will continue posting completed Approved JD Forms on their web pages.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance that an activity which may result in discharge to navigable waters will not violate water quality standards. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC (Solid Waste Agency of Northern Cook Counties vs. Unites States Army Corps of Engineers) and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file an ROWD when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

Section 401 Water Quality Certification

Issuance of the USACE Section 404 Permit would be contingent upon the approval of a Section 401 Water Quality Certification from the RWQCB. Also, the RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA-compliance requirements.

On June 1, 2020, the USEPA finalized the "Clean Water Act Section 401 Certification Rule" to implement the water quality certification process consistent with the text and structure of the Clean Water Act (CWA). The final rule establishes procedures that promote consistent implementation of CWA section 401 and regulatory certainty in the federal licensing and permitting process. The new regulation includes reviews and approvals by the USACE prior to the RWQCB issuing a 401 Certification and reviews and approvals by the EPA prior to the USACE issuing a 404. The new 401 rule went into effect on September 11, 2020.

The new certification rule defines a discharge subject to 401 Certification as a discharge from a point source into a water of the United States. The new rule also states that States with additional water quality regulations cannot use these to expand the certification request.

The new rule requires all project proponents to request a pre-filing meeting with the RWQCB at least 30 days prior to filing a 401 "Certification Request". The filing procedure has been simplified

to require the filing of a "Certification Request", rather than the acceptance of a "complete application". The certification request has nine mandatory components:

1. identify the project proponent(s) and a point of contact;
2. identify the proposed project;
3. identify the applicable federal license or permit;
4. identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;
5. include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge;
6. include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received;
7. include documentation that a pre-filing meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request;
8. contain the following statement: 'The project proponent hereby certifies that all information contained herein is true, accurate, and complete, to the best of my knowledge and belief; and
9. contain the following statement: 'The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.'

There is a mandatory 30 day wait period between a pre-filing meeting request and the filing of a Certification Request. A Certification Request must be filed with the RWQCB and the USACE concurrently. USACE reviews the Certification Request for the nine required components. The USACE has 15 days to review the Certification Request. The USACE then notifies the RWQCB that request is complete. And concurrently notifies the RWQCB of the reasonable time period to act on the Certification Request. The reasonable time period is not to exceed 1 year. Within 15 days of receipt of the Certification Request, the RWQCB must provide the applicant with the following: 1) date of receipt; 2) applicable reasonable period of time to act on the Certification Request; and 3) date upon which waiver will occur if the certifying authority fails or refuses to act on the Certification Request.

Once the RWQCB issues the 401 Certification, the USACE has 5 days to notify the USEPA that the 401 Certification has been issued. The USEPA then has 30 days to notify neighboring jurisdictions of the 401 Certification. Neighboring jurisdictions have 60 days to respond. If there are no objections to the 401 Certification, then the USACE would issue the 404 permit.

On June 2, 2021, the USEPA published a notice of intention to reconsider and revise the Clean Water Act Section 401 Certification Rule. At this time, they are currently accepting public comment. Until a new rule goes into effect, the current 401 Certification Rule stands.

The RWQCB is required under the *California Code of Regulations* (CCR) to have a "minimum 21-day public comment period" before any action can be taken on the Section 401 application.[16] This period closes when the RWQCB acts on the application. Since projects often change or are revised during the Section 401 permit process, the comment period can remain open. The public comment period starts as soon as an application has been received. Generally, the RWQCB

[16] 23 CCR §3858(a)

Section 401, USACE Section 404, and CDFW Section 1602 permit applications are submitted at the same time.

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that filing an application would also require the payment of an application fee which would be based on project impacts. The fee schedule calculator is available at https://www.waterboards.ca.gov/resources/fees/water_quality/docs/dredgefillcalculator.xlsm.

California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the *California Fish and Game Code*.[17] Activities of State and local agencies as well as public utilities that are project proponents are regulated by the CDFW under Section 1602 of the *California Fish and Game Code.* This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW takes jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake or within or in the vicinity of tributaries to a river, stream, or lake. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 Lake or Streambed Alteration Agreement

The CDFW enters into a Lake or Streambed Alteration (LSA) Agreement with a project proponent to ensure protection of wildlife and habitat values and acreages.

Prior to construction, a Notification of an LSA must be submitted to the CDFW that describes any proposed lake or streambed alteration that would occur with implementation of a project. The Notification of an LSA must address the initial construction and long-term operation and maintenance of any structures (such as a culvert or a desilting basin) included in the project design that are located within any river, stream, or lake and that may require periodic maintenance. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., a Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The complete notification package must be completed on CDFW's Environmental Permit Information Management System (EPIMS). This notification will serve as the basis for the CDFW's issuance of a Section 1602 LSA Agreement.

[17] See §§1600–1616.

Note that notification is not required before beginning emergency work, but the CDFW must be notified in writing within 14 days after beginning the work.

After receiving Notification of an LSA Agreement, the CDFW will determine whether an LSA Agreement will be required for the proposed activity. An LSA Agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

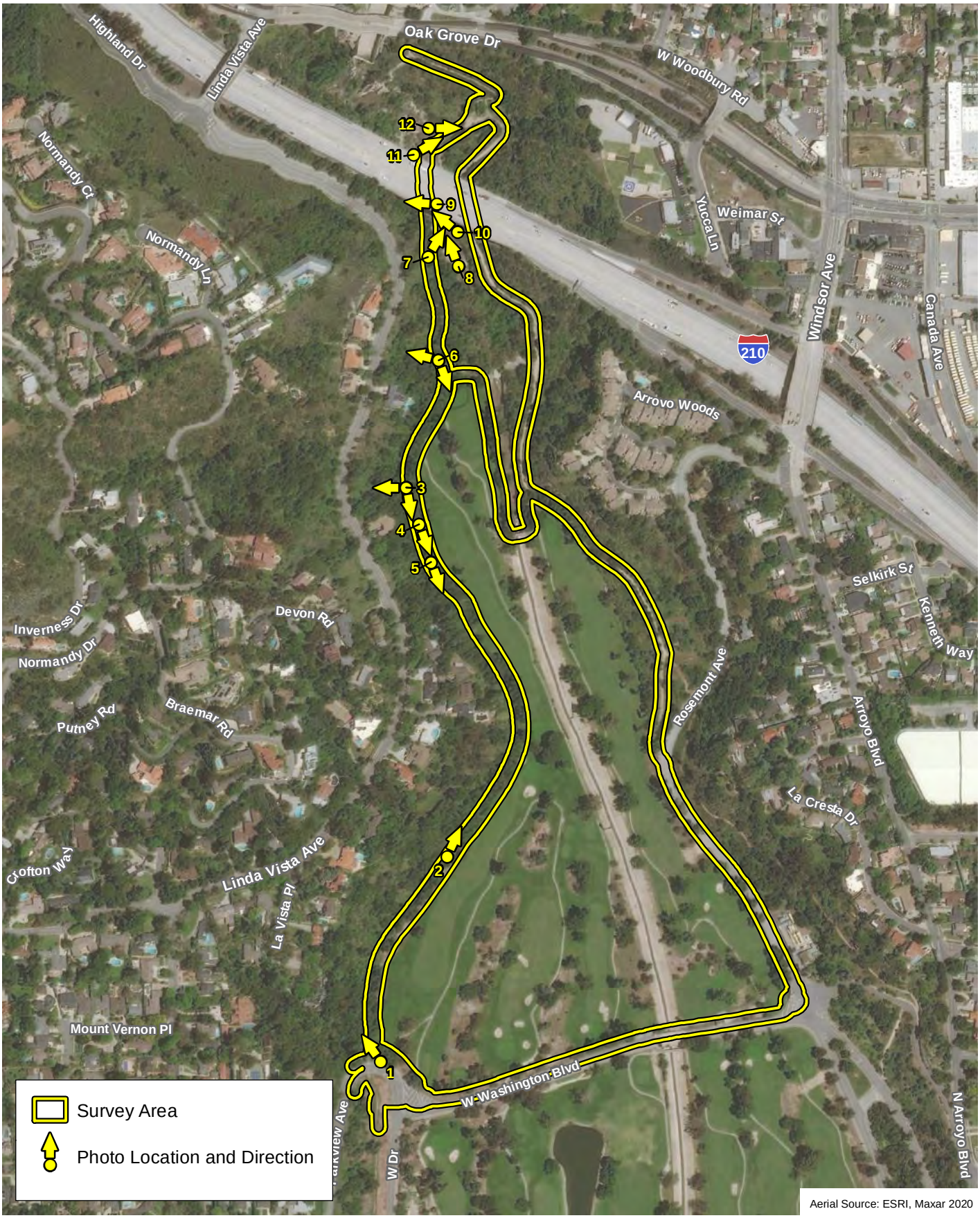
If the CDFW does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFW does not submit a draft LSA Agreement to the Applicant within 60 days of the determination of a completed Notification package, the CDFW will issue a letter that either (1) identifies the final date to transmit a draft LSA Agreement or (2) indicates that an LSA Agreement was not required. The CDFW will also indicate that it was unable to meet this mandated compliance date and that, by law, the Applicant is authorized to complete the project without an LSA Agreement as long as the Applicant constructs the project as proposed and complies with all avoidance, minimization, and mitigation measures described in the submitted Notification package. Please note that, if the project requires revisions to the design or project construction, the CDFW may require submittal of a new Notification/application with an additional 90-day permit process.

If determined to be necessary, the CDFW will prepare a draft LSA Agreement, which will include standard measures to protect fish and wildlife resources during project construction and during ongoing operation and maintenance of any project element that occurs within a CDFW jurisdictional area. The draft Agreement must be transmitted to the Applicant within 60 calendar days of the CDFW's determination that the notification is complete. It should be noted that the 60-day timeframe might not apply to long-range agreements.

Following receipt of a draft LSA Agreement from the CDFW, the Applicant has 30 calendar days to notify the CDFW concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions and measures, the Agreement must be signed and returned to the CDFW. The Agreement becomes final once the CDFW executes it and an LSA Agreement is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFW's execution of the Agreement.

ATTACHMENT B

SITE PHOTOGRAPHS



Aerial Source: ESRI, Maxar 2020

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Photo Locations

Exhibit B-1a

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N
W E
S

500 250 0 500

Feet

PSOMAS

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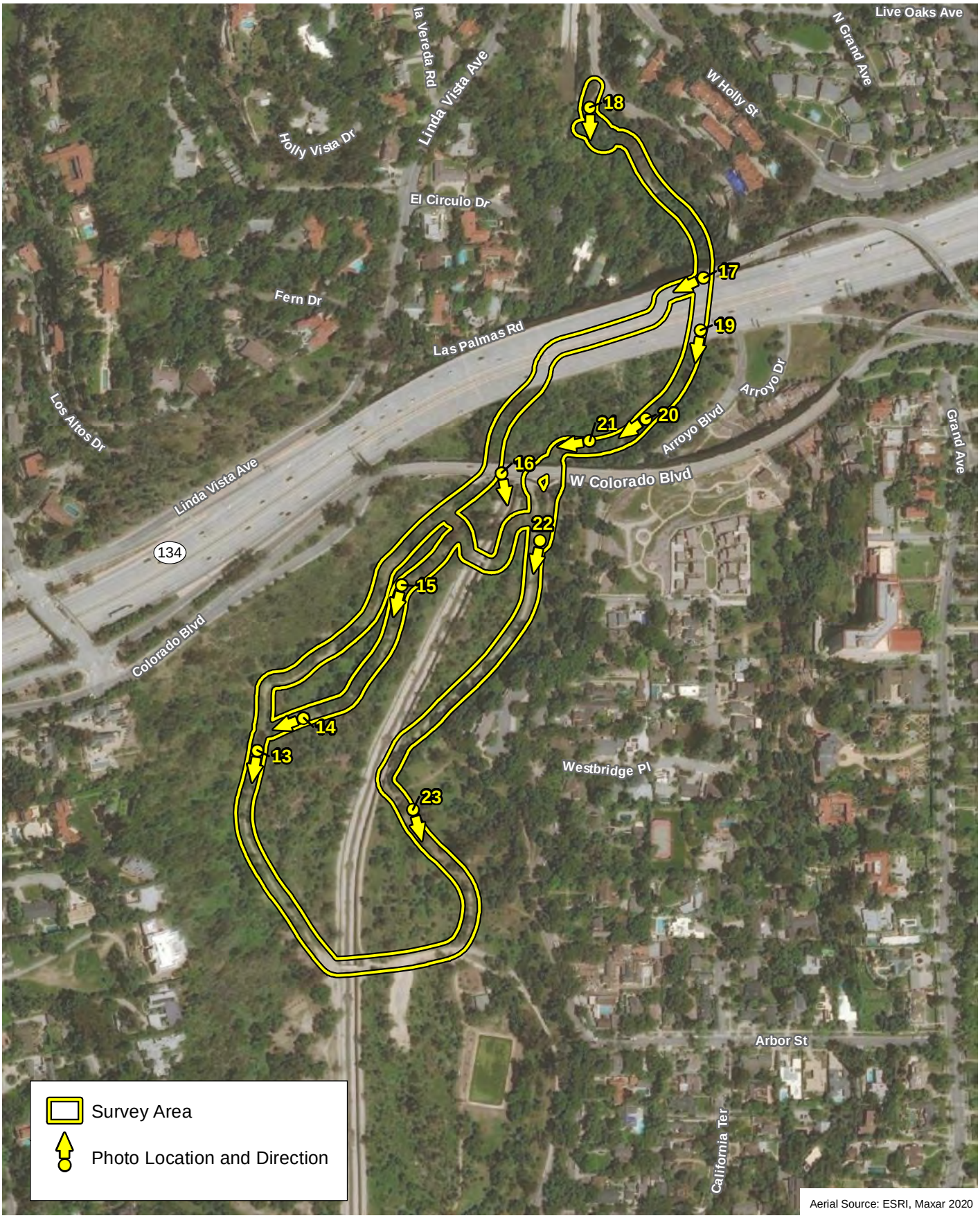

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Photo Locations

Exhibit B-1b

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

N W E S

400 200 0 400

Feet

PSOMAS

(Rev: 08/24/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\ex_Photo_Locations.pdf

Photo Location 1. January 21, 2022. View of Feature A, a hardened drain with vertical sides. The concrete slab in foreground serves as a bridge across the drain.

Photo Location 2. January 21, 2022. View of typical conditions on trail that runs along western edge of arroyo.

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Site Photos

Exhibit B-2

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

(02/10/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\Att_SP.pdf

Photo Location 3. January 21, 2022. View of Feature B, facing upstream (west from trail).

Photo Location 3. January 21, 2022. View of Feature B, facing downstream, showing water just east of trail.

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Site Photos

Exhibit B-3

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

Photo Location 4. January 21, 2022. View of trail, facing south from Feature B. Some water emanating from hillside ends up flowing south on trail.

Photo Location 5. January 21, 2022. View of trail, facing south. Erosion was observed on trail that is apparently the result of water that has flowed along trail.

Photo Location 6. January 21, 2022. View of Feature C, facing upstream (west from trail).

Photo Location 6. January 21, 2022. View of Feature C, where water sheet flows over the trail. Arroyo Seco basin is shown to the left.

Photo Location 7. January 21, 2022. View of trail as it runs alongside the western bank of earthen-bottom Arroyo Seco. The eastern bank of the Arroyo Seco can be seen in background where it is a concrete wall as it passes under the freeway bridge.

Photo Location 8. January 21, 2022. Ground level view of trail as it runs along the western bank of Arroyo Seco. Trail is 2-3 feet above the grade of the adjacent stream bottom.

Photo Location 9. January 21, 2022. View of Feature D. A metal pipe that likely drains nearby roads can be seen among vegetation in background.

Photo Location 9. January 21, 2022. View of area where water that comes out of Feature D pipe crosses the trail and causes minor erosion.

Site Photos

Exhibit B-7

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

Photo Location 10. January 21, 2022. View of the relation between the trail under the freeway bridge and the adjacent Arroyo Seco. Shelving along bank can be seen that indicates the level of the Ordinary High Water Mark.

Photo Location 11. January 21, 2022. View of Arroyo Seco in uppermost portion of northern survey area where pedestrians cross the stream.

Photo Location 12. January 21, 2022. View of Arroyo Seco in uppermost portion of northern survey area where pedestrians cross the stream.

Photo Location 13. January 21, 2022. View of Feature F (to the left) and its relation to the adjacent trail.

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Site Photos

Exhibit B-9

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

Photo Location 14. January 21, 2022. View of Feature F (to the right) and its relation to the adjacent trail.

Photo Location 15. January 21, 2022. View of Feature F (to the left) and its relation to the adjacent trail.

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Site Photos

Exhibit B-10

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

(02/10/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\Att_SP.pdf

Photo Location 16. January 21, 2022. Overview of concrete-lined section of Arroyo Seco with Feature G visible to the left.

Photo Location 17. January 21, 2022. View of earthern-bottom section of Arroyo Seco where trail crosses it under the freeway bridge.

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Photo Location 18. January 21, 2022. View of riparian conditions in northern portion of southern survey area.

Photo Location 19. January 21, 2022. View of the relation between trail that runs along eastern bank of Arroyo Seco and the adjacent riparian habitat.

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Site Photos

Exhibit B-12

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

(02/10/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\Att_SP.pdf

Photo Location 20. January 21, 2022. View of the relation between trail that runs along eastern bank of Arroyo Seco and the adjacent riparian habitat.

Photo Location 21. January 21, 2022. Trail that runs along top of concrete bank of Arroyo Seco near flood control dam.

Photo Location 22. January 21, 2022. View of Feature G (to the right) and its relation to the adjacent trail.

Photo Location 23. January 21, 2022. View of Feature I (to the right) and its relation to the adjacent trail.

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Site Photos

Exhibit B-14

Jurisdictional Delineation Report for the One Arroyo Trail Demonstration Project

PSOMAS

(02/10/2022 JVR) R:\Projects\2PAS\2PAS010106\Graphics\JD_Report\Att_SP.pdf

ATTACHMENT C

LITERATURE REVIEW DETAILS

DESCRIPTIONS OF SOILS IN SURVEY AREA

Urban land-Palmview-Tujunga complex, 0 to 5 percent slopes

Map Unit Setting

- National map unit symbol: 2pt3t
- Elevation: 240 to 1,990 feet
- Mean annual precipitation: 15 to 30 inches
- Mean annual air temperature: 63 to 66 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Prime farmland if irrigated

Map Unit Composition

- Urban land: 45 percent
- Palmview and similar soils: 25 percent
- Tujunga and similar soils: 20 percent
- Minor components: 10 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

- Landform: Alluvial fans

Properties and qualities

- Slope: 0 to 5 percent
- Depth to restrictive feature: 0 inches to manufactured layer
- Runoff class: Very high
- Frequency of flooding: Rare, None

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 8
- Ecological site: R019XG911CA - Loamy Fan
- Hydric soil rating: No

Description of Palmview

Setting

- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Discontinuous human-transported material over alluvium derived from granite

Typical profile

- ^A - 0 to 5 inches: fine sandy loam
- ^Au - 5 to 15 inches: fine sandy loam
- 2C1 - 15 to 45 inches: fine sandy loam
- 2C2 - 45 to 55 inches: fine sandy loam
- 2C3 - 55 to 79 inches: fine sandy loam

Properties and qualities

- Slope: 0 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Runoff class: Very low
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Rare, None
- Frequency of ponding: None
- Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 3e
- Hydrologic Soil Group: B
- Ecological site: R019XG911CA - Loamy Fan
- Hydric soil rating: No

Description of Tujunga

Setting

- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Discontinuous human-transported material over alluvium derived from granite

Typical profile

- ^Au - 0 to 6 inches: sandy loam
- 2C1 - 6 to 35 inches: loamy sand
- 2C2 - 35 to 72 inches: loamy sand

Properties and qualities

- Slope: 0 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat excessively drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Rare, None
- Frequency of ponding: None
- Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 3e
- Hydrologic Soil Group: A
- Ecological site: R019XG911CA - Loamy Fan
- Hydric soil rating: No

Minor Components

San emigdio

- Percent of map unit: 5 percent
- Landform: Flood plains
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Typic xerorthents, sandy substratum

- Percent of map unit: 5 percent
- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Urban land-Soboba complex, 0 to 5 percent slopes

Map Unit Setting

- National map unit symbol: 2pt3v
- Elevation: 310 to 2,080 feet
- Mean annual precipitation: 16 to 30 inches
- Mean annual air temperature: 63 to 66 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition

- Urban land: 45 percent
- Soboba and similar soils: 40 percent
- Minor components: 15 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

- Landform: Alluvial fans
- Landform position (three-dimensional): Tread

Properties and qualities

- Slope: 0 to 5 percent
- Depth to restrictive feature: 0 inches to manufactured layer
- Runoff class: Very high
- Frequency of flooding: Rare, None

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 8
- Ecological site: R019XG911CA - Loamy Fan
- Hydric soil rating: No

Description of Soboba

Setting

- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Discontinuous human-transported material over alluvium derived from granite

Typical profile

- A - 0 to 4 inches: gravelly sand
- C1 - 4 to 47 inches: very cobbly sand
- C2 - 47 to 79 inches: extremely cobbly sand

Properties and qualities

- Slope: 0 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat excessively drained
- Runoff class: Very low

- Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Rare, None
- Frequency of ponding: None
- Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 6s
- Hydrologic Soil Group: A
- Ecological site: R019XG912CA - Sandy Fan
- Hydric soil rating: No

Minor Components

Tujunga

- Percent of map unit: 5 percent
- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Palmview

- Percent of map unit: 5 percent
- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Typic xerorthents, very cobbly

- Percent of map unit: 5 percent
- Landform: Alluvial fans
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Urban land, frequently flooded, 0 to 5 percent slopes

Map Unit Setting
- National map unit symbol: 2myv7
- Elevation: 0 to 1,190 feet
- Mean annual precipitation: 12 to 24 inches
- Mean annual air temperature: 63 to 66 degrees F
- Frost-free period: 320 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition
- Urban land, frequently flooded: 95 percent
- Minor components: 5 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land, Frequently Flooded

Setting
- Landform: Channels
- Properties and qualities
- Slope: 0 to 5 percent
- Depth to restrictive feature: 0 inches to manufactured layer
- Runoff class: Very high
- Frequency of flooding: Frequent, None

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 8
- Hydrologic Soil Group: B
- Hydric soil rating: No

Minor Components

Water
- Percent of map unit: 5 percent

Soboba and Tujunga soils, 0 to 5 percent slopes, frequently flooded

Map Unit Setting
- National map unit symbol: 2rshk
- Elevation: 400 to 2,350 feet
- Mean annual precipitation: 17 to 29 inches
- Mean annual air temperature: 64 to 66 degrees F
- Frost-free period: 300 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition
- Soboba and similar soils: 60 percent
- Tujunga and similar soils: 25 percent
- Minor components: 15 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Soboba

Setting
- Landform: Washes, debris flows, stream terraces
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium derived from granite

Typical profile
- A - 0 to 3 inches: very gravelly sand
- C1 - 3 to 15 inches: very gravelly sand
- C2 - 15 to 61 inches: extremely gravelly sand
- C3 - 61 to 79 inches: extremely cobbly sand

Properties and qualities
- Slope: 0 to 2 percent
- Surface area covered with cobbles, stones or boulders: 0.8 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Excessively drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 59.94 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Frequent, None
- Frequency of ponding: None
- Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 6s
- Hydrologic Soil Group: A
- Ecological site: R019XG905CA - Riparian
- Hydric soil rating: No

Description of Tujunga

Setting
- Landform: Stream terraces, inset fans, washes
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium derived from granite

Typical profile
- A - 0 to 9 inches: loam
- 2C1 - 9 to 14 inches: sand
- 2C2 - 14 to 17 inches: gravelly sand
- 2C3 - 17 to 79 inches: stratified sand

Properties and qualities
- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat excessively drained
- Runoff class: Low
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Frequent, None
- Frequency of ponding: None
- Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 4e
- Hydrologic Soil Group: B
- Ecological site: R019XG909CA - Terrace
- Hydric soil rating: No

Minor Components

Aquic xerofluvents
- Percent of map unit: 5 percent
- Landform: Stream terraces
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Hydric soil rating: No

Typic psammaquents
- Percent of map unit: 5 percent
- Landform: Washes, flood plains
- Landform position (three-dimensional): Rise
- Down-slope shape: Linear
- Across-slope shape: Linear

- Hydric soil rating: No

Dam

- Percent of map unit: 3 percent
- Hydric soil rating: No

Urban land

- Percent of map unit: 2 percent
- Landform: Washes
- Hydric soil rating: No

Vista-Fallbrook-Cieneba complex, 30 to 75 percent slopes

Map Unit Setting

- National map unit symbol: 2rshp
- Elevation: 590 to 2,610 feet
- Mean annual precipitation: 18 to 23 inches
- Mean annual air temperature: 62 to 66 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition

- Vista and similar soils: 45 percent
- Fallbrook and similar soils: 25 percent
- Cieneba and similar soils: 15 percent
- Minor components: 15 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vista

Setting

- Landform: Hillslopes
- Landform position (two-dimensional): Backslope
- Landform position (three-dimensional): Side slope
- Down-slope shape: Convex
- Across-slope shape: Convex
- Parent material: Colluvium and/or residuum weathered from diorite

Typical profile

- A1 - 0 to 4 inches: sandy loam
- A2 - 4 to 9 inches: sandy loam
- Bw - 9 to 21 inches: sandy loam
- C1 - 21 to 25 inches: sandy loam
- C2 - 25 to 31 inches: sand
- Cr - 31 to 41 inches: bedrock

Properties and qualities

- Slope: 35 to 75 percent
- Depth to restrictive feature: 20 to 35 inches to paralithic bedrock
- Drainage class: Well drained
- Runoff class: Medium
- Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7e
- Hydrologic Soil Group: B
- Hydric soil rating: No

Description of Fallbrook

Setting

- Landform: Hillslopes
- Landform position (two-dimensional): Backslope
- Landform position (three-dimensional): Side slope
- Down-slope shape: Convex
- Across-slope shape: Convex
- Parent material: Residuum weathered from diorite

Typical profile

- A1 - 0 to 4 inches: sandy loam
- A2 - 4 to 19 inches: sandy loam
- Bt1 - 19 to 31 inches: sandy clay loam
- Bt2 - 31 to 43 inches: sandy clay loam
- Bt3 - 43 to 58 inches: sandy clay loam
- Cr - 58 to 68 inches: bedrock

Properties and qualities

- Slope: 30 to 75 percent
- Depth to restrictive feature: 37 to 65 inches to paralithic bedrock
- Drainage class: Well drained
- Runoff class: High
- Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7e
- Hydrologic Soil Group: C
- Hydric soil rating: No

Description of Cieneba

Setting

- Landform: Hillslopes
- Landform position (two-dimensional): Summit, shoulder
- Landform position (three-dimensional): Crest
- Down-slope shape: Convex
- Across-slope shape: Convex
- Parent material: Colluvium and/or residuum weathered from diorite

Typical profile

- A - 0 to 6 inches: sandy loam
- C - 6 to 13 inches: sandy loam
- Cr - 13 to 23 inches: bedrock

Properties and qualities

- Slope: 15 to 75 percent

- Depth to restrictive feature: 10 to 17 inches to paralithic bedrock
- Drainage class: Well drained
- Runoff class: Medium
- Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
- Available water supply, 0 to 60 inches: Very low (about 1.7 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7e
- Hydrologic Soil Group: D
- Hydric soil rating: No

Minor Components

Urban land

- Percent of map unit: 5 percent
- Landform: Hillslopes
- Hydric soil rating: No

Rock outcrop

- Percent of map unit: 5 percent
- Landform: Hillslopes
- Landform position (three-dimensional): Side slope
- Hydric soil rating: No

Exchequer

- Percent of map unit: 5 percent
- Landform: Hillslopes
- Landform position (two-dimensional): Summit, shoulder
- Landform position (three-dimensional): Crest
- Down-slope shape: Convex
- Across-slope shape: Convex
- Hydric soil rating: No

DESCRIPTION OF WETLAND RESOURCES CLASSIFICATIONS

The following is a complete description of the wetland codes from the National Wetland Inventory provided in Section 3.3.

Upper Arroyo Seco (R4SBA and Rp1FO)

- **R: System RIVERINE.** The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
    - **4: Subsystem INTERMITTENT.** This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.
        - **SB: Class STREAMBED.** Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.
            - **A: Water Regime Modifier TEMPORARILY FLOODED.** This modifier refers to areas in which surface water is present for brief periods during growing season, but the water table usually lies well below the soil surface for most of the growing season. Plants that grow both in uplands and wetlands may be characteristic of this water regime.
- **Rp: System RIPARIAN.** The Riparian System includes plant communities (trees, shrubs and/or herbaceous plants) that are contiguous to rivers, streams, lakes, or drainage ways. Riparian areas are influenced by both surface and below surface hydrology. The plant species present in riparian areas are distinctly different from plant species found in adjacent areas. Plants in riparian areas demonstrate more vigorous or robust growth forms than in adjacent areas.
    - **1: Subsystem LOTIC.** This subsystem includes any riparian area adjacent to a stream or river system with intermittent or perennial water flow.
        - **FO: Class FORESTED.** This Class is characterized by woody vegetation that is 6 meters (20 feet) tall or taller.

Arroyo Seco, Concrete Lined (R4SBCx)

- **R: System RIVERINE.** The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
    - **4: Subsystem INTERMITTENT.** This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.
        - **SB: Class STREAMBED.** Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.

- □ **C: Water Regime Modifier SEASONALLY FLOODED.** This modifier refers to areas in which surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.
  - x**: Special Modifier EXCAVATED.** This modifier is used to identify wetland basins or channels that were excavated by humans.

Lower Arroyo Seco (R4SBCx and Rp1FO)

- **R: System RIVERINE.** The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
  - **4: Subsystem INTERMITTENT.** This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.
    - **SB: Class STREAMBED.** Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.
      - □ **C: Water Regime Modifier SEASONALLY FLOODED.** This modifier refers to areas in which surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.
        - x**: Special Modifier EXCAVATED.** This modifier is used to identify wetland basins or channels that were excavated by humans.
- **Rp: System RIPARIAN.** The Riparian System includes plant communities (trees, shrubs and/or herbaceous plants) that are contiguous to rivers, streams, lakes, or drainage ways. Riparian areas are influenced by both surface and below surface hydrology. The plant species present in riparian areas are distinctly different from plant species found in adjacent areas. Plants in riparian areas demonstrate more vigorous or robust growth forms than in adjacent areas.
  - **1: Subsystem LOTIC.** This subsystem includes any riparian area adjacent to a stream or river system with intermittent or perennial water flow.
    - **FO: Class FORESTED.** This Class is characterized by woody vegetation that is 6 meters (20 feet) tall or taller.

Artificial Channels Adjacent to Lower Arroyo Seco (PSSCx and Rp1FO)

- **P: System PALUSTRINE.** The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 part per trillion (ppt). Wetlands lacking (such vegetation) are also included if they exhibit all of the following characteristics: (1) are less than 8 hectares (20 acres); (2) do not have an active wave-formed or bedrock shoreline feature; (3) have at low water a depth of less than 6.6 feet in the deepest part of the basin; and (4) have salinity due to ocean-derived salts of less than 0.5 ppt.

- **SS: Class SCRUB-SHRUB.** Includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.
  - **C: Water Regime Modifier SEASONALLY FLOODED.** This modifier refers to areas in which surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.
    - x**: Special Modifier EXCAVATED.** This modifier is used to identify wetland basins or channels that were excavated by humans.

- **Rp: System RIPARIAN.** The Riparian System includes plant communities (trees, shrubs and/or herbaceous plants) that are contiguous to rivers, streams, lakes, or drainage ways. Riparian areas are influenced by both surface and below surface hydrology. The plant species present in riparian areas are distinctly different from plant species found in adjacent areas. Plants in riparian areas demonstrate more vigorous or robust growth forms than in adjacent areas.
  - **1: Subsystem LOTIC.** This subsystem includes any riparian area adjacent to a stream or river system with intermittent or perennial water flow.
    - **FO: Class FORESTED.** This Class is characterized by woody vegetation that is 6 meters (20 feet) tall or taller.

BASIN PLAN BENEFICIAL USES

The *Water Quality Control Plan: Los Angeles Region* (Basin Plan) identifies a number of beneficial uses, some or all of which may apply to a specific hydrologic subarea (HSA), including: Municipal and Domestic Water Supply (MUN) waters; Agricultural Supply (AGR) waters; Industrial Process Supply (PROC) waters; Industrial Service Supply waters (IND); Groundwater Recharge (GWR) waters; Freshwater Replenishment (FRSH); Navigation (NAV) waters; Hydropower Generation (POW) waters; Water Contact Recreation (REC1) waters; Non-Contact Water Recreation (REC2) waters; Commercial and Sport Fishing (COMM) waters; Aquaculture (AQUA) waters; Warm Fresh Water Habitat (WARM) waters; Cold Fresh Water Habitat (COLD) waters; Inland Saline Water Habitat (SAL) waters; Estuarine Habitat (EST) waters; Wetland Habitat (WET) waters; Marine Habitat (MAR) waters; Wildlife Habitat (WILD) waters; Preservation of Biological Habitats of Special Significance (BIOL) waters; Rare, Threatened or Endangered Species (RARE) waters; Migration of Aquatic Organisms (MIGR) waters; Spawning, Reproduction and Development (SPWN) waters; and Shellfish Harvesting (SHELL) waters.

Beneficial Uses associated with Arroyo Seco Reaches 1 and 2 are described below; beneficial uses not described below do not apply to these areas.

- MUN waters support community, military, or individual water supply systems including, but not limited to, drinking water supply.
- WARM waters support warm water ecosystems that may include, but are not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, and wildlife (including invertebrates).
- WILD includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- RARE includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- REC-1 waters are used for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- REC-2 waters are used for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

ATTACHMENT D

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: One Arroyo Trail City/County: Pasadena / Los Angeles Sampling Date: Jan 28, 2022

Applicant/Owner: City of Pasadena State: CA Sampling Point: 1

Investigator(s): David Hughes Section, Township, Range: Section 7, Township 1N, Range 12W

Landform (hillslope, terrace, etc.): canyon Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): Mediterranean California Lat: 34.183715° Long: -118.173754° Datum: NAD 83

Soil Map Unit Name: Soboba and Tujunga Soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	10	Y	FACW
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Baccharis salicifolia	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Plantago major	5	Y	FAC
2. Artemisia douglasiana	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 10	x 2 =	20
FAC species 30	x 3 =	90
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 40 (A)		110 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 4/3	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: rock

Depth (inches): 10

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): ____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: One Arroyo Trail City/County: Pasadena / Los Angeles Sampling Date: Jan 28, 2022

Applicant/Owner: City of Pasadena State: CA Sampling Point: 2

Investigator(s): David Hughes Section, Township, Range: Section 7, Township 1N, Range 12W

Landform (hillslope, terrace, etc.): canyon Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): Mediterranean California Lat: 34.181539° Long: -118.173581° Datum: NAD 83

Soil Map Unit Name: Soboba and Tujunga Soils NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Soil pit located in Feature C

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	60	Y	UPL
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Ribes aureum	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Hordeum murinum	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Marah macrocarpa	5	Y	UPL
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	5	x 4 =	20
UPL species	65	x 5 =	325
Column Totals:	75 (A)		360 (B)

Prevalence Index = B/A = 4.80

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 3/4	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: One Arroyo Trail City/County: Pasadena / Los Angeles Sampling Date: Jan 28, 2022

Applicant/Owner: City of Pasadena State: CA Sampling Point: 3

Investigator(s): David Hughes Section, Township, Range: Section 7, Township 1N, Range 12W

Landform (hillslope, terrace, etc.): canyon Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): Mediterranean California Lat: 34.180313° Long: -118.174027° Datum: NAD 83

Soil Map Unit Name: Soboba and Tujunga Soils NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Soil pit located at Feature B

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus uhdei	25	Y	UPL
2. Ceratonia siliqua	15	Y	UPL
3. Ulmus parvifloa	10	Y	UPL
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Hedera helix	15	Y	FACU
2. Toxicodendron diversilobum	10	Y	FACU
	25	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	50	x 5 =	250
Column Totals:	75 (A)		350 (B)

Prevalence Index = B/A = 4.67

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10 YR 3/1	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: rock

Depth (inches): 8

Hydric Soil Present? Yes ____ No ✓

Remarks:

At least one inch of undecomposed leaf litter present, but not enough to be considered a histosol.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): 1

Water Table Present? Yes ✓ No ____ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): ____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix B-1

Cultural and Paleontological Resources Records

ReportNum	DocAddlCitLetter	Status	OtherIDs	Xrefs	Authors	CitYear	CitMonth	CitTitle	CitPublisher
LA-00108					Clewlow, William C. Jr.	1973		Cultural Resources Report on Pasadena Helioport Site Los Angeles County, California	University of California, Los Angeles Archaeological Survey
LA-00694					Pence, Robert L.	1979		Archaeological Assessment of Roe Property Pasadena, California	Pence Archaeological Consulting
LA-01903					Blodgett, Leslie M.	1987		Preliminary Assessment of the Prehistoric Cultural Resources of the Devil's Gate Reservoir, Pasadena, California.	
LA-02513					Crabtree, Robert H.	1965		Highway Construction Survey Foothill Freeway Ucas-082-d	University of California, Los Angeles Archaeological Survey
LA-02665					Cottrell, Marie G., James N. Hill, Stephen Van Wormer, and John Cooper	1985		Cultural Resource Overview and Survey for the Los Angeles County Drainage Area Review Study	ARMC
LA-02886					Walker, Edwin Francis	1952		A Cemetery at the Sheldon Reservoir Site in Pasadena - Five Prehistoric Archaeological Sites in Los Angeles County, California	Southwest Museum
LA-03508					Van Wormer, Stephen R.	1985		Historical Resource Overview and Survey for the Los Angeles County Drainage Area Review Study	Archaeological Resource Management Corp.
LA-04357					McLean, Deborah K.	1999		Cultural Resource Assessment for Pacific Bell Mobile Services Telecommunications Facility La 657-01, San Rafael Elementary School, 1090 Nithsdale Road, City of Pasadena, County of Los Angeles, California	LSA Associates, Inc.
LA-04469					Romani, John F.	1977		Assessment of the Archaeological Impact by the Installation of a Sewer Pipeline in La Crescenta and Glendale	California State University, Northridge
LA-05231					Green, Melvyn	1980		Rehabilitation Options for the Colorado Street Bridge	Melvyn Green & Associates
LA-05233					McKenna, Jeanette A.	2000		Phase I Cultural Resources Investigations for the Proposed Sanitary Sewer Improvements Project in the City of La Canada-flintridge, Los Angeles County, Ca	McKenna et al.
LA-05236					Storey, Noelle	2001		Negative Archaeological Survey Reoprt:3n5001	Calrans Disctrict 7
LA-05243					Duke, Curt	2001		Cultural Resource Assessment Cingular Wireless Facility No. La 657-02 Los Angeles County, Ca	LSA Associates, Inc.
LA-05249					Smith, Philomene C.	2000		Negative Archaeological Survey Report: Route 210:kp30.3/40.2-170-129971	Caltrans District 7
LA-05639					McKenna, Jeanette A. and David Brunzell	2001		A Phase I Cultural Resources Investigation of the Parker and Johnson Property in La Canada Flintridge Area Los Angeles County, California	McKenna et al.
LA-05640					Sylvia, Barbara	2001		Negative Archaeological Survey Report	Caltrans District 7
LA-06950					McKenna, Jeanette A.	2003		La Canada-flintridge Sewer Improvement Project Summary	McKenna et al.
LA-06951					Maki, Mary K.	2003		Negative Phase 1 Archaeological Survey of Approximately 2.5 Acres for the Windsor Woodbury Development Project Altadena, Los Angeles County, California	Conejo Archaeological Consultants
LA-07430					Feldman, J., Hope, A.	2004		Caltrans Historic Bridges Inventory Update: Concrete Box Girder Bridges	Myra L. Frank & Associates, Inc.
LA-07451					Kyle, Carolyn E.	2002		Cultural Resource Assessment for Cingular Wireless Facility Vy256-01 City of Pasadena Los Angeles County, California	Kyle Consulting
LA-07455					Strauss, Monica and Angel Torres	2005		Historic Property Survey Report for the Oak Grove Drive Bridges 53c-1829 and 53c-1851 Seismic Retrofit Project Los Angeles County, California District 7, Expense Authorization Ep04-013	EDAW, Inc.

ReportNum	DocAddlCitLetter	Status	OtherIDs	Xrefs	Authors	CitYear	CitMonth	CitTitle	CitPublisher
LA-07466					Bonner, Wayne H.	2006		Cultural Resources Records Search and Site Visit Results for Cingular Wireless Candidate Lsanca0337a (Ioma Rd. & South Grand) 558 South Grand Avenue, Pasadena, Los Angeles County, California	Michael Brandman Associates
LA-07469					Wlodarski, Robert J.	2006		Record Search and Field Reconnaissance Program for the Proposed Bechtel Corporation Wireless Telecommunications Site Lsanca0301 (wells Fargo Building), Located at 350 West Colorado Boulevard, Pasadena, California 91105	Cellular, Archaeological Resource, Evaluations
LA-08252					Snyder, John W., Mikesell, Stephen, and Pierzinski	1986		Request for Determination of Eligibility for Inclusion in the National Register of Historic Places/Historic Bridges in California: Concrete Arch, Suspension, Steel Girder and Steel Arch	Caltrans
LA-08898					Baker, Cindy and Mary L. Maniery	2007		Cultural Resource Inventory and Evaluation of United States Army Reserve 63d Regional Readiness Command Facilities	PAR Environmental Services, Inc.
LA-08928					McKenna, Jeanette A.	2007		A Phase I (ceqa) and Class Iii (nepa) Cultural Resources Investigation for the Lower Arroyo Seco Trail and Trailhead Improvements Project Area in the City of Pasadena, Los Angeles County, California	McKenna et al.
LA-09561					Wlodarski, Robert J.	2008		Records Search and Field Reconaissance Phase for the Proposed Bechtel Wireless Telecommunications Site LA0267 (JPL), Located at 740 West Woodbury Road, Pasadena, California 91103	C. A. R. E
LA-10541			OHP PRN - FHWA040514A		Dolan, Christy and Monica Strauss	2005		Finding of Effect for the Proposed Arroyo Seco Bike Path, Los Angeles County, California	EDAW, Inc.
LA-10541	A				Monica Strauss and Christy Dolan	2003	Dec	Historic Property Survey Report Proposed Arroyo Seco Bike Path County Of Los Angeles, California	EDAW
LA-10541	B				Monica Strauss and Christy Dolan	2003	Dec	Arroyo Seco Bike Path Historic Resources Evaluation Report HRER - Appendix 1	EDAW
LA-10541	C				OHP - Steve Mikesell acting SHPO	2004	Jun	HPSR / Determinations of Eligibility for Arroyo Seco Bike Path Project	Caltrans
LA-10833					Chasteen, Carrie	2006		Finding of Effect for the La Loma Bridge over the Arroyo Seco Channel, City of Pasadena, Los Angeles County, California, from Arroyo Boulevard to Rockwood Road	Jones & Stokes Associates
LA-10834					Andrews, Sherri	2007		Phase I archaeological study for the Flint Canyon Trail Improvements Project, City of La Canada Flintridge, Los Angeles County, California	ASM Affiliates
LA-10895					unknown	2003		Roof Replacement Specification for: The Gamble House, 4 Westmoreland Place, Pasadena, CA	Independent Roofing Consultants
LA-10969					Bonner, Wayne	2011		Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE05372-C (Rose Pole ROW), 588 South Grand Avenue, Pasadena, Los Angeles County, California	Michael Brandman Associates
LA-11050					Lehman, Jane	2009		Lighting in the Main Lobby of the Chambers Courthouse in Pasadena, CA	GSA
LA-11194					Unknown	2002		Hahamongna Watershed Park Master Plan, A Component of the Arroyo Seco Master Plan	Takata Associates
LA-11231					Meiser, M.K.	2009		Historic American Engineering Record Arroyo Seco Flood Control Channel, Los Angeles County, California	EDAW, Inc.
LA-11276					Lee, Jon	2010		Memorandum of Agreement Between the Department of the Army and the California State Historic Preservation Officer for the Disposition of the Desiderio Army Reserve Center, Pasadena, California	U.S. Amy Reserve
LA-11387					Wlodarski, Robert J.	2011		JPL - LA0267 740 West Woodbury Road, Pasadena, CA 91103	CARE
LA-11625					Mckenna, Jeanette	2012		A Phase I (CEQA) and Class III (NEPA) Cultural Resources Investigation for the Hahamongna Multi-Benefit/Multi-Use Project in the Hahamongna Watershed Park, City of Pasadena, Los Angeles County, California	McKenna et al
LA-11802					Hosseinion, Namat	2012		Supplemental Archaeological Survey Report for the La Loma Bridge Rehabilitation and Retrofit Project City of Pasadena, Los Angeles County, California	Dokken Engineering
LA-12427					Bonner, Wayne and Crawford, Kathleen	2013		Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate IE04517A (Caltrans) 2122 North Windsor Avenue, Altadena, Los Angeles County, California	EAS
LA-12779					Tang, Tom and Hogan, Michael	2013	6	Historical/Archaeological Resources Survey Report Foothill Municipal Water District Recycled Water Project, City of La Canada Flintridge and Unicorporated La Crescenta-Montrose and Altadena Areas Los Angeles County, California	CRM Tech
LA-13048					Bonner, Wayne H.	1998		CULTURAL RESOURCES INVESTIGATION, LOS ANGELES COUNTY TAX PARCEL 5704-1-44, PASADENA, CALIFORNIA	W. H. BONNER ASSOCIATES
LA-13050					Bonner, Diane F., Carrie D. Wills, and Kathleen A. Crawford	2014		Cultural Resources Records Search and Site VIsit Results for T-Mobile West, LLC Candidate LA74321A (Replacement IE04559- Wells Fargo/Colorado), 350 West Colorado Boulevard, Pasadena, Los Angeles County, CaiHornla	Environmental Assessment Specialists, Inc.

ReportNum	CitPages	CitMaps	ReportType	InventorySize	InventoryDisclosure	InventoryCollections	InventoryNotes	Resources	ResourceCount	HasInformals	Counties	Maps	Address	PLSS
LA-00108			Archaeological, Field study						0	No	Los Angeles	PASADENA		
LA-00694			Archaeological, Field study	4 ac					0	No	Los Angeles	PASADENA		
LA-01903	16		Archaeological, Field study	250 ac					0	No	Los Angeles	PASADENA		
LA-02513			Archaeological, Field study	12 li mi					0	No	Los Angeles	BURBANK, PASADENA		
LA-02665	123		Archaeological, Field study	QC	Not for publication	Unknown	Mapped to resources	19-000026, 19-000075, 19-000163, 19-000164, 19-000166, 19-000167, 19-000173, 19-000182, 19-000208, 19-000221, 19-000230, 19-000240, 19-000241, 19-000300, 19-000339, 19-000347, 19-000348, 19-000397, 19-000522, 19-000524, 19-000657, 19-000693, 19-000694, 19-000695, 19-000697, 19-000858, 19-001009, 19-001014, 19-001044, 19-001045, 19-001046, 19-001109	32	No	Los Angeles	BALDWIN PARK, EL MONTE, GLENDORA, PASADENA, SAN DIMAS, SAN FERNANDO, SUNLAND		
LA-02886	11		Excavation			Yes		19-000026	1	No	Los Angeles	PASADENA		
LA-03508	175		Literature search, Other research	QC			Mapped using LA-2665 as a reference. Removed from unmappable folder.		0	No	Los Angeles	AZUSA, BALDWIN PARK, BURBANK, CONDOR PEAK, EL MONTE, GLENDORA, HOLLYWOOD, LONG BEACH, LOS ANGELES, MT BALDY, MT WILSON, PASADENA, SAN DIMAS, SAN FERNANDO, SUNLAND, VAN NUYS, WHITTIER		
LA-04357			Archaeological, Field study	1 ac				19-180676	1	No	Los Angeles	PASADENA		
LA-04469	19		Archaeological, Field study	80 limi	Not for publication	Unknown	Not enough locational info to map to project APE. Mapped to 5 resources listed.	19-000026, 19-000032, 19-000132, 19-150417, 19-186113, 19-186576	6	No	Los Angeles	BURBANK, PASADENA		
LA-05231	52		Field study, Other research	<1 li mi					0	No	Los Angeles	PASADENA		
LA-05233	52		Literature search	1,280 ac				19-000004, 19-000007, 19-002189, 19-150321	4	No	Los Angeles	PASADENA		
LA-05236			Literature search	?				19-000132	1	No	Los Angeles	PASADENA		
LA-05243			Literature search	<1 ac					0	No	Los Angeles	PASADENA		
LA-05249	4		Literature search	5.5 li mi					0	No	Los Angeles	PASADENA		
LA-05639			Archaeological, Field study	~48 AC					0	No	Los Angeles	PASADENA		
LA-05640				~ 1 MILE					0	No	Los Angeles	PASADENA		
LA-06950	8		Literature search, Monitoring	4 limi	Not for publication	No	Removed from unmappable folder, mapped to LA-5233.	19-000004, 19-000007, 19-002189, 19-003037, 19-150321, 19-186576	6	No	Los Angeles	PASADENA		
LA-06951			Archaeological, Field study	2.5 ac			19-000026 is .25 mile S (53 burials), location sketch due to poor scale map		0	No	Los Angeles	PASADENA		
LA-07430			Architectural/historical, Evaluation	0			See oversized reports	19-187559, 19-187560, 19-187561, 19-187562, 19-187563, 19-187564, 19-187565, 19-187566, 19-187567, 19-187568, 19-187569, 19-187570, 19-187571, 56-152833	14	No	Los Angeles	HOLLYWOOD, LOS ANGELES, PASADENA, SANTA PAULA, VAN NUYS		
LA-07451			Literature search	~.25 ac					0	No	Los Angeles	PASADENA		
LA-07455	110		Architectural/historical, Evaluation	~234 m	Not for publication	No		19-187693	1	No	Los Angeles	PASADENA		

ReportNum	CitPages	CitMaps	ReportType	InventorySize	InventoryDisclosure	InventoryCollections	InventoryNotes	Resources	ResourceCount	HasInformals	Counties	Maps	Address	PLSS
LA-07466			Archaeological, Field study	<1 ac			12 historic buildings listed as being with in 1/2 mile of the candidate		0	No	Los Angeles	PASADENA		
LA-07469			Archaeological, Field study	<1 ac			62 Historic Buildings listed as being within 1/2 mile radius of site		0	No	Los Angeles	PASADENA		
LA-08252			Architectural/historical, Evaluation, Other research						0	No	Los Angeles	HOLLYWOOD, LOS ANGELES, PASADENA		
LA-08898			Archaeological, Evaluation, Field study	375 ac			Same as report OR3486	19-003659, 19-186589, 19-187950, 19-187951, 19-187952, 19-187953, 19-187954, 19-187955, 19-187956, 30-176836, 30-176837	11	No	Los Angeles	BEVERLY HILLS, EL MONTE, LONG BEACH, LOS ALAMITOS, LOS ANGELES, PASADENA, SOUTH GATE, TUSTIN, VAN NUYS		
LA-08928	75		Archaeological, Field study	< 2.5 ac				19-003057, 19-180037	2	No	Los Angeles	PASADENA		
LA-09561	10		Archaeological, Field study					19-000026, 19-186859, 19-187571, 19-187693	4	No	Los Angeles	PASADENA	740 West Woodbury Rd. Pasadena	
LA-10541	169		Archaeological, Field study		Not for publication	No		19-003100, 19-003101, 19-003102, 19-186110, 19-186721, 19-186858, 19-186859	7	No	Los Angeles	LOS ANGELES, PASADENA		
LA-10541	15		Architectural/Historical, Field study											
LA-10541	185		Architectural/Historical, Field study											
LA-10541	4		Evaluation											
LA-10833	92		Other research		Not for publication	No		19-187577	1	No	Los Angeles	PASADENA	Pasadena	
LA-10834	29		Archaeological, Field study		Not for publication	No		19-186859	1	No	Los Angeles	PASADENA		
LA-10895	222		Management/planning						0	No	Los Angeles	PASADENA	4 Westmoreland Pl Pasadena, CA	
LA-10969	2011		Archaeological, Field study		Not for publication	No			0	No	Los Angeles	PASADENA	588 South Grand Avenue Pasadena	
LA-11050	23		Architectural/historical, Evaluation		Not for publication	No		19-180053	1	No	Los Angeles	PASADENA	125 South Grand Ave. Pasadena	
LA-11194	12		Other research					19-000026, 19-000342	2	No	Los Angeles	PASADENA		
LA-11231	42		Architectural/historical, Evaluation		Not for publication	No		19-186859	1	No	Los Angeles	LOS ANGELES, PASADENA		
LA-11276	12		Management/planning		Not for publication	No			0	No	Los Angeles	PASADENA	Pasadena	
LA-11387	60		Archaeological, Field study		Not for publication	No		19-000026, 19-186859, 19-187571, 19-187693	4	No	Los Angeles	PASADENA	740 West Woodbury Road Pasadena	
LA-11625	131		Archaeological, Field study					19-000026, 19-000342, 19-001599, 19-002055, 19-002056, 19-002189, 19-002679, 19-003086, 19-180024, 19-180710, 19-186859, 19-186870, 19-186872, 19-186873, 19-186878, 19-186893, 19-187571, 19-187694, 19-188157, 19-188404, 19-189942	21	No	Los Angeles	PASADENA		
LA-11802	173		Archaeological, Field study					19-003346, 19-186859, 19-187577	3	No	Los Angeles	PASADENA		
LA-12427	40		Archaeological, Architectural/historical, Evaluation, Field study					19-186859, 19-187591, 19-189942, 19-190633	4	No	Los Angeles	PASADENA	2122 N Windsor Ave Altadena, CA	
LA-12779	18		Archaeological, Architectural/Historical, Evaluation, Field study		Unrestricted	No		19-187571, 19-188404	2	No	Los Angeles	PASADENA		
LA-13048	13		Archaeological, Field study		Not for publication	No			0	No	Los Angeles	PASADENA		
LA-13050	26		Archaeological, Architectural/Historical, Field study		Not for publication	No			0	No	Los Angeles	PASADENA	350 West Colorado Boulevard Pasadena 91105	

PrimaryString	TrinomialString	ResourceName	Status	OtherIDs	Xrefs	ResType	Age	InfoBase	Attribs	ResourceDisclosure	ResourceCollections	AccessionNo	CollectionsFacility	ResourceNotes	RecordingEvents	Reports	CountyName	Maps	Address	PLSS	UTM
P-19-000026	CA-LAN-000026	Walker's Sheldon Reservoir Site		Resource Name - Walker's Sheldon Reservoir Site		Site	Prehistoric	Excavation	AP09	Not for publication	Yes				1951 (WALKER); 1962 (RHC)	LA-00031, LA-02665, LA-02886, LA-03509, LA-04469, LA-05179, LA-08816, LA-09561, LA-11194, LA-11387, LA-11625, LA-12592	Los Angeles	PASADENA			
P-19-003346	CA-LAN-003346H	AE-LLB-1H		Resource Name - AE-LLB-1H		Site	Historic	Survey, Testing, Excavation	AH04	Not for publication	Yes			ADOE - LAN-Z00164H	2005 (Keith Warren, Applied Earthworks)	LA-11802	Los Angeles	PASADENA	La Loma Bridge Pasadena		

Appendix B-2

Historic Review

January 16, 2024

Jillian K. Neary
Project Manager / Senior Environmental Planner
P S O M A S
Email: jillian.neary@psomas.com

RE: Historic Built Environmental Impacts Assessment for the Mayberry & Parker Bridge Access Improvements Project, City of Pasadena, California

Dear Jillian:

South Environmental was retained by Psomas to conduct a design review and impacts assessment of the proposed Mayberry & Parker Bridge Access Improvements Project (project) located in the City of Pasadena, California. The project proposes multiple improvements and repairs to the Lower Loop Trail and the Mayberry & Parker Bridge, including establishment of pedestrian crosswalk, installation of new trail markers, expansion of the trail to cross the Mayberry & Parker Bridge, and repair of a staircase and Arroyo stone retaining walls that have structural failure. All proposed project components fall within or are immediately adjacent to the existing National Register of Historic Places (NRHP) Pasadena Arroyo Parks and Recreation District. Because the project proposes improvements within and adjacent to a historic district, all proposed project improvements require design review for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, specifically the Standards for Rehabilitation, and the Arroyo Seco Design Guidelines, to avoid/minimize impacts to historical resources in accordance with the California Environmental Quality Act (CEQA).

This design conformance review was conducted by Principal Architectural Historian Sarah Corder, MFA, who meets the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61).

Introduction

Project Location

The project site encompasses approximately 0.61 acres located below and immediately to the north and south of the Colorado Street Bridge overpass of the Arroyo Seco Channel, in the northernmost portion of the Lower Arroyo Seco, City of Pasadena (City), County of Los Angeles (County). The site is located on City parkland/open space, which is open daily from sunrise to sunset. The project area is fully accessible to the public via public and private transportation routes, as well as by various trails for pedestrians, bicyclists, and/or equestrians. South Arroyo Boulevard, Westminster Drive, and

Desiderio Park are situated immediately to the east of the site. The site is regionally accessible via State Route 134 (SR-134), which is located less than 250 feet to the north and northwest.

Project Description

The project proposes to (1) provide new pedestrian access to the historic Mayberry Parker Bridge (Bridge); (2) rehabilitate existing trails through stabilization of deteriorated trail segments, stairways, stone walls, and eroded slopes; (and (3) provide a new crosswalk at Arroyo Boulevard and Westminster Drive. All aspects of project design and implementation would be in conformance with the *Lower Arroyo Seco Master Plan* (Pasadena 2015) and associated *Arroyo Seco Design Guidelines* (Guidelines) (Pasadena 2003), the City's *Arroyo Seco Public Lands Ordinance* and *Historic Preservation Ordinance*, and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (SOIS, Standards) (Weeks and Grimmer 1995, revised 2017). It is noted that the steel pipe railing, discussed further below, is proposed to be steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck.

The following project components are proposed:

- Trail Rehabilitation and Disintegrated Granite (DG) Paving
- Pedestrian Crosswalk
- Improve Pedestrian Access Across the Mayberry Parker Bridge
- Tubular Steel Fencing Along Portion of Mayberry Parker Bridge
- Steel Pipe Railing Adjacent to Existing Mayberry Parker Bridge Rail
- Repair Concrete Stairs, Handrail, and Walls
- Installation of New or Replacement Stone Walls
- Installation of Landscape Boulders

Construction Activities

Project construction is anticipated to begin in Summer 2024 over a period of approximately nine months, barring unforeseen delays such as weather and/or supply chain issues. For purposes of this analysis, the project is assumed to be completed in a single phase as a conservative approach. However, it is possible that proposed improvements would be implemented incrementally over a longer period, as funds, materials, and/or necessary approvals and agreements are available.

Project construction would occur from Monday through Saturday, without activity on Sundays or federal holidays, within an 8-hour period between the hours defined in Section 9.36.070 of the City of Pasadena Municipal Code (PMC) (i.e., 7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 5:00 PM on Saturday). Construction and demolition debris to be exported would be disposed at Scholl Canyon Landfill, located approximately two miles from the site, at 3001 Scholl Canyon Road in Glendale. Consistent with the City's *Construction and Demolition Waste Management Ordinance* (Section 8.62 et. seq. of the PMC), a minimum of 75 percent of the construction and demolition debris generated during construction would be diverted through recycling or reuse.

The majority of trail and bridge improvement activities would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, except possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. Grading would be minimal and localized to provide structural support for paved surfaces, fenceposts, stone pilasters, and stone walls. Earthmoving is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained to previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet deep, would be required.

No import or export of soil would be necessary to implement the project; soils generated by grading would be redistributed evenly at the surface within the immediate area of each activity. However, import of disintegrated granite, concrete, aggregate backfill, and stone/boulders would be required. Steel fencing, steel railing, steel handrail, and crosswalk infrastructure would be among the new or replacement materials installed as part of the project.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco within existing parking areas, on trails in the vicinity of construction activity, and/or other existing disturbed areas near ongoing construction activity. No vegetation removal or trimming would occur to provide areas for staging. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and sign would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements, and one lane of through traffic would be available at all times.

Regulatory Setting

National Register of Historic Places

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service under the U.S. Department of the Interior, the

NRHP was authorized under the National Historic Preservation Act (NHPA), as amended. Its listings encompass all National Historic Landmarks and historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

"Integrity" is defined in NRHP guidance, How to Apply the National Register Criteria, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity." NRHP guidance further states that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible,

from substantial adverse change" (California Public Resources Code Section 5024.1(a)). The criteria for listing resources on the CRHR (enumerated below) were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP. According to California Public Resources Code Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing, in the CRHR, a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does

not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, CEQA Guidelines section 15064.5(b)(2) states the significance of an historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

Secretary of the Interior's Standards for the Treatment of Historic Properties

Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the *Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the Standards, Weeks and Grimmer 1995, revised 2017), the project's impact on historical resources would be considered mitigated to below a level of significance and, thus, not significant (14 CCR 15126.4(b)(1)). In most cases, a project that demonstrates conformance with the Standards is categorically exempt from CEQA (14 CCR 15331), as described in the CEQA Guidelines:

The Standards are a series of concepts focused on maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. They function as common-sense

historic preservation principles that promote historic preservation best practices. There are four distinct approaches that may be applied to the treatment of historical resources:

- Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
- Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
- Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods.
- Reconstruction recreates vanished or non-surviving portions of a property for interpretive purposes.

The choice of treatment depends on a variety of factors, including the property's historical significance, physical condition, proposed use, and intended interpretation. Rehabilitation was determined to be the most appropriate treatment option for the proposed project because it allows for a compatible use for the property through repair, alterations, and additions while preserving those portions or features that conveys its historical and architectural values.

The Secretary of the Interior's Guidelines provide general design and technical recommendations to assist in applying the Secretary of the Interior's Standards to a specific property. Together, the Standards and the Guidelines provide a framework that guides important decisions concerning proposed changes to a historic property.

Standards for Rehabilitation

The Standards and Guidelines for Rehabilitation (below), taken together with the Arroyo Seco Design Guidelines, provide the framework in which project design plans were reviewed.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

City of Pasadena Historic Preservation Ordinance (Chapter 17.62)

This study was completed in consideration of all sections of the Pasadena Historic Preservation Ordinance (Chapter 17.62). Sections most relevant to this review are provided below.

17.62.010 - Purpose of Chapter

The purpose of this Chapter is to specify significance criteria for the designation of historic resources, procedures for designation, and review procedures to:

A. Encourage and promote the adaptive reuse of the City's historic resources;

B. Enhance, perpetuate, and preserve architecturally and historically significant structures and promote revitalization of historic neighborhoods and commercial areas;

C. Ensure that the rights of the owners of historic resources and owners of properties adjacent to historic resources are safeguarded;

D. Foster civic pride in the beauty and noble accomplishments of the past by promoting private stewardship of historic resources that represent these accomplishments;

E. Fulfill the City's responsibilities:

1. As a Certified Local Government under Federal preservation laws; and
2. For Federal Section 106 reviews and for the California Environmental Quality Act regarding historic resources.

F. Promote the identification, documentation, and evaluation of the significance of individual historic resources and districts;

G. Implement the historic preservation goals, policies, and programs of the General Plan;

H. Promote the City as a destination for tourists and as a desirable location for business;

I. Promote public awareness of the value of rehabilitation, restoration, and maintenance of the existing building stock as a means to conserve reusable material and energy resources;

J. Recognize the City's historic resources as economic assets; and

K. Stabilize and improve property values, and enhance the aesthetic and visual character and environmental amenities of the City's historic properties and areas.

17.62.040 - Criteria for Designation of Historic Resources

A. Evaluation of Historic Resources.

When considering applications to designate a historic monument, landmark, historic sign, landmark tree or landmark district, the Historic Preservation Commission shall apply the criteria below according to applicable National Register of Historic Places Bulletins for evaluating historic properties, including the seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association (National Park Service 1990, revised 1995).

B. Historic monuments.

1. A historic monument shall include all historic resources previously designated as historic treasures before adoption of this Chapter, historic resources that are listed in the National Register at the State-wide or Federal level of significance (including National Historic Landmarks) and any historic resource that is significant at a regional, State, or Federal level, and is an exemplary representation of a particular type of historic resource and meets one or more of the following criteria:

   a. It is associated with events that have made a significant contribution to the broad patterns of the history of the region, State, or nation.

   b. It is associated with the lives of persons who are significant in the history of the region, State, or nation.

   c. It is exceptional in the embodiment of the distinctive characteristics of a historic resource property type, period, architectural style, or method of construction, or that

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is an exceptional representation of the work of an architect, designer, engineer, or builder whose work is significant to the region, State, or nation, or that possesses high artistic values that are of regional, State-wide or national significance.

d. It has yielded, or may be likely to yield, information important in prehistory or history of the region, State, or nation.

2. A historic monument designation may include significant public or semi-public interior spaces and features.

C. Landmarks.

1. A landmark shall include all properties previously designated a landmark before adoption of this Chapter and any historic resource that is of a local level of significance and meets one or more of the criteria listed in Subparagraph 2., below.

2. A landmark may be the best representation in the City of a type of historic resource or it may be one of several historic resources in the City that have common architectural attributes that represent a particular type of historic resource. A landmark shall meet one or more of the following criteria:

a. It is associated with events that have made a significant contribution to the broad patterns of the history of the City, region, or State.

b. It is associated with the lives of persons who are significant in the history of the City, region, or State.

c. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the City or, to the region or possesses artistic values of significance to the City or to the region.

d. It has yielded, or may be likely to yield, information important locally in prehistory or history.

F. Landmark districts.

1. A landmark district shall include all landmark districts previously designated before adoption of this Chapter and any grouping of contiguous properties that also meet the following criteria:

a. Within its boundaries, a minimum of 60 percent of the properties qualify as contributing; and

b. The grouping represents a significant and distinguishable entity of Citywide importance and one or more of a defined historic, cultural, development and/or architectural context(s) (e.g., 1991 Citywide historic context, as amended, historic

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context prepared in an intensive-level survey or historic context prepared specifically for the nominated landmark district).

2. When determining the boundaries of a landmark district, the Historic Preservation Commission shall use the National Register of Historic Places Bulletin #21: "Defining Boundaries for National Register Properties".

City of Pasadena Arroyo Seco Public Lands Ordinance

3.32.020 Purpose

The purpose of this chapter is to establish regulations for preservation, enhancement and enjoyment of the Arroyo Seco as a unique environmental, recreational and cultural resource of the city surrounded by residential neighborhoods. Such resources and the neighborhoods must be preserved, protected and properly maintained. These regulations are designed to identify uses, activities, facilities and structures as well as their limitations. (Ord. 6403 § 2 (part), 1990).

3.32.050 Sub-areas defined

Because of the wide variety of environmental situations and activities that are to be found in publicly owned portions of the Arroyo Seco, the Arroyo Seco is divided into the following 4 sub-areas or classifications:

A. Natural preservation area;

B. Brookside Park area;

C. Rose Bowl area;

D. Brookside Golf Course. (Ord. 6403 § 2 (part), 1990)

Arroyo Seco Master Plan

The Arroyo Seco Master Plans are a set of documents defining the community vision for the Arroyo Seco Natural Park. The set is comprised of four separate planning documents: the Lower Arroyo Master Plan, Central Arroyo Master Plan, Hahamongna Watershed Park Master Plan, and Design Guidelines.

Arroyo Seco Design Guidelines

The Arroyo Seco Design Guidelines (City of Pasadena 2003) provide a unifying set of criteria for the site development improvements set forth in the Arroyo Seco Master Plan for on-going, long-range improvements for the Arroyo Seco. These guidelines will lead to a unified park design that reflects the heritage of the Arroyo Seco and its relationship to the tradition of the City of Pasadena. The Arroyo Seco Design Guidelines provide specific site design solutions that are consistent with the

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existing Arroyo Seco Ordinance and a vehicle by which practical inputs for ongoing improvements can take place. The Design Guidelines document gives more specific instances dictating how decorative cobblestone walls, gates, and fences should be utilized.

1.0 Purpose and Intent

The purpose of the Arroyo Seco Design Guidelines is to provide:

1.1 Design criteria for preservation, restoration, and conservation of the Arroyo Seco leading to a unified park design that reflects the natural environment, the heritage of the site, and its relationship to the traditions of the City of Pasadena; and

1.2 A unifying set of design criteria for improvements set forth in the Arroyo Seco Master Plans consistent with preservation and restoration of the natural environment.

3.0 Implementation Process

3.1 Park Improvements and Capital Improvement Projects

All projects shall be subject to the requirements for design review pursuant to the Pasadena Municipal Code. Park improvements shall be subject to the City's Capital Improvements Projects (CIP) review process. As such, the Parks and Natural Resources Division Administrator (under the Department of Public Works) shall find that the major improvements and/or CIP project is in substantial conformance with the Arroyo Seco Design Guidelines and will initiate reviews by the City's Design Commission, Recreation and Parks Commission, and the Historic Preservation Commission (if appropriate). Reference to commission review in specific sections of these guidelines does not imply that commission review is unnecessary with respect to other areas.

3.2 Minor Park Improvements

All projects shall be subject to the requirements for design review pursuant to the Pasadena Municipal Code. Minor Park improvement activities will be subject to a substantial conformance review by the Parks and Natural Resources Administrator and the Planning and Development Director for compliance with the Arroyo Seco Design Guidelines. These minor improvements include repair of existing structures and replacement of plant materials.

Methods

Background Research

Limited background research was completed on the history of the Pasadena Arroyo Parks and Recreation District and the general history and historical uses of the Arroyo Seco. Research was also completed on the history of the Mayberry & Parker Bridge. Research included review of the NRHP

Registration Form completed for the district (Grimes 2007). South Environmental also reviewed all applicable plans and ordinances relative to the improvements within the Arroyo Seco, including the City of Pasadena's Historic Preservation Ordinance, Arroyo Seco Public Lands Ordinance, and Arroyo Seco Master Plan and associated Arroyo Seco Design Guidelines.

Survey

Principal Architectural Historian, Sarah Corder, MFA and Cultural Resources Director, Samantha Murray, MA, completed a pedestrian survey of the project site on January 12, 2023, and February 14, 2023. The built environment survey entailed walking areas of the Arroyo Seco proposed for improvement and documenting contributing elements of the district with notes and photographs, paying attention to character-defining features, spatial relationships, landscaping features, and paths of circulation.

Identified Historical Resources

The Pasadena Arroyo Parks and Recreation District

The proposed project overlaps the Pasadena Arroyo Parks and Recreation District (district), which was listed in the NRHP in 2008 under Criterion A for its significance in the context of parks and recreation at the local level. Specifically, the district is significant for its critical role in the development of Pasadena as a recreational destination, stemming from national movements to protect scenic places and open spaces and has a period of significance of 1909-1939. A general description of the district as presented in the NRHP Registration Form is provided below (Grimes 2007:2):

> The district is located on the western edge of the City of Pasadena and includes two distinct geographical areas: the Lower Arroyo and Central Arroyo. The Central Arroyo is an approximate 2.5-mile stretch, and is bounded on the north by the Foothill Freeway, and to the east by the City of Pasadena. It is bounded to the south by the Colorado Street Bridge and to the west by the City of Pasadena. The Lower Arroyo, an approximate 1.75-mile stretch, is bounded on the north by the Colorado Street Bridge, to the east by the City of Pasadena, to the south by the City of South Pasadena, and to the west by the City of Pasadena. The concrete flood control channel runs through the entire length of the Lower and Central Arroyo, dividing the canyon into east and west sides. The two areas are linked by a system of roads, bridges, and trails. The Central Arroyo functions as an urban park with recreational facilities including the Rose Bowl Stadium, while the Lower Arroyo has been set aside for more passive activities and has a more naturalistic landscape. The district is comprised of a variety of elements including twenty-seven contributing and fifty-seven noncontributing features. Most of the original features of the district still remain from the period of significance and retain a high degree of physical integrity. Most of the

noncontributing features are the small buildings around the Rose Bowl Stadium and the pedestrian bridges over the flood control channel.

Contributing elements of the district identified within the proposed project area include the following:

- Mayberry & Parker Bridge
- Colorado Street Bridge
- Arroyo Stone Retaining Walls
- Circulation System

Impacts Assessment

Application of the Arroyo Seco Design Guidelines

The Arroyo Seco Design Guidelines (City of Pasadena 2003) provide a unifying set of criteria for the site development improvements set forth in the Arroyo Seco Master Plan for on-going, long-range improvements for the Arroyo Seco. The following analyzes each proposed project improvement (as presented in Attachment A) for conformance with the Arroyo Seco Design Guidelines.

Proposed Project Improvements

- **Pedestrian Crosswalk:** The project proposes to establish a pedestrian crosswalk between Desiderio Park and the Arroyo Seco. There would be a high-visibility crosswalk with a rectangular-rapid flashing beacon construction across the north leg of South Arroyo Boulevard at Westminster Drive. The crosswalk would be striped in conformance with current safety codes and an Americans with Disabilities Act (ADA) compliant ramp with truncated domes and rock cobble paving would be installed on the west side of Arroyo Drive to formalize an existing trailhead into the Arroyo Seco proposed as part of the project. Section 8.2 provides general guidelines for roads and trails and states that "All nonmotorized routes connecting recreation facilities to parking areas shall meet ADA standards where feasible." The proposed pedestrian crosswalk and accessibility ramps appear to be in conformance with the Arroyo Seco Design Guidelines.

- **Disintegrated Granite (DG) Paving:** The project proposes to add DG paving to select sections of the trail. This subtle modification will not impact any historical features of the trails. Section 8.2 provides general guidelines for roads and trails and states that "Drainage and slope conditions shall be taken into consideration when selecting appropriate surface materials. Materials selected shall control erosion, ensure safety, and minimize maintenance." The proposed DG paving appears to be in conformance with the Arroyo Seco Design Guidelines.

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- **Improve Pedestrian Access Across the Mayberry & Parker Bridge:** The project proposes to improve pedestrian access to the Mayberry & Parker Bridge. Currently, there are no defined access points from the north and south sides of the bridge. The project proposes two, 16-foot-long portions of the existing concrete bridge rail to be removed–one portion removed from each side of the bridge–to allow direct pedestrian connection to the existing trail system. As part of the removal of the bridge rail, the project proposes to overcut the ends of the existing bridge railing by 4" and dowel into it in three locations (top, middle, and bottom) to create a new concrete cap. The new concrete cap will be scored to match the existing scoring lines and painted to match the rest of the existing railing. New asphalt paving will be added where the concrete bridge rail was removed to provide a smooth transition to the trail surface. Vibration monitoring and protection measures will be established to protect the Mayberry & Parker Bridge and the Colorado Street Bridge during demolition, paving, and finishing activities.

  The proposed modifications would occur on the east approach span of the bridge. This portion of the bridge is not part of the principal bridge span and is not visible from any other viewsheds. Therefore, the proposed modifications, including proposed stone pilasters at each bridge access point as discussed further below, would not change the appearance of the bridge from any significant vantage points. Although the proposed modifications would remove original materials from the bridge, this alteration would not impact the overall design of the bridge and would not remove a distinctive feature of the bridge, as the same type of concrete rail continues along its entirety.

  Section 1.5 of the Arroyo Seco Design Guidelines provides general design guidelines for improvements in the Arroyo Seco and states that improvements should provide accessibility. The proposed project will create a new path of circulation that provides access to the bridge, which is currently inaccessible to pedestrians via formally established paths. Additionally, Section 4.2.1 Cultural Resources Preservation General Guidelines state that "the cultural and historical heritage of the Arroyo Seco will be preserved and enhanced." The proposed project will protect the important character-defining features of the existing bridge and will enhance it by providing access to pedestrians so that they can experience this important historical resource.

  According to the Arroyo Seco Design Guidelines Section 3.1.3 Unique Settings, "All changes to existing structures within the Lower Arroyo are subject to the Historical Landmark review process." Therefore, while the proposed bridge modifications appear to be in conformance with the Arroyo Seco Design Guidelines, this modification will ultimately require approval from the City's Planning Department.

- **Steel Pipe Railing Adjacent to Existing Mayberry & Parker Bridge Rail:** The project proposes to add a steel pipe railing system to the bridge deck of the Mayberry & Parker Bridge to allow for safe pedestrian access to the bridge. To minimize the impacts to the bridge,

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the project proposes to install the railing so that it will only connect to the existing bridge deck in limited intervals for structural stability. The project further proposes to use steel versus the Guidelines preferred "well designed wrought iron" fencing to minimize the weight and load of the new structure on the existing bridge deck. Furthermore, the height of the railing will only rise approximately six inches above the existing concrete bridge railing so that the visual impact to the bridge is minimal, but safety requirements are still met. The currently proposed steel pipe railing appears to be in conformance with the Arroyo Seco Design Guidelines.

- **Installation of Stone Pilasters/Trail Markers:** The proposed project will install a total of five, 42-inch-high, stone pilasters/trail markers are proposed for the following locations within the project footprint:

    - One on the east side along the current trail
    - Four at the proposed access points to the Mayberry & Parker Bridge (two on each side of each access point)

  The proposed trail markers will be faced with Arroyo Stone. Boulders (i.e., Arroyo Stone) of various sizes are expected to be imported from Hahamongna Watershed Park via the City's stockpile for use in the project. Alternatively, stone boulders and cobble from other locations in the San Gabriel Valley foothills that derive from the same geologic units, and therefore would have the same visual character as "Arroyo Stone", may be sourced for use in the project. The trail markers are proposed to follow the General Guiding Principles for Design Guidelines as they will be simplistic in design and materials, scaled appropriately so that they do not detract from the surrounding features of the Arroyo, use natural materials (i.e., Arroyo stone veneer), and will be easy to maintain. There is no proposed signage associated with the stone pilaster/trail markers. The proposed stone pilaster/trail markers appear to be in conformance with the Arroyo Seco Design Guidelines.

- **Reconstructed Concrete Stairs, Handrail, and Walls:** The project proposes to repair the stairs and related features along the path located immediately north of and leading to the Mayberry & Parker Bridge. The project proposes to reconstruct the concrete stairs as the current stairs have a significant structural failure and require reconstruction to provide safe access for pedestrians. The project proposes to replace the existing stairs with poured in place, four-inch-thick, concrete stairs with a non-slip trowel finish. A replacement steel handrail will also be installed and anchored through the exterior wall of the staircase. Presently, the walls of the staircase are rock cobble that were covered with concrete at an unknown date and are also significantly deteriorated. Appendix E: Arroyo Stone Walls & Steps Specifications provides detailed requirements for Arroyo stone walls.

  The existing concrete and rock cobble walls will be protected in place and repaired as part of the project to the maximum extent feasible; however, assessment by a structural engineer

has determined there are portions of the existing walls along the stairs that are too deteriorated to be repaired in place and provide a sufficient level of safety for public use. The 22-foot-long segment of wall along the steps from the ground to the first landing will have rock cobble veneer added to the existing wall, which will remain in place. On the second segment of stairs, from the landing to the top, portions of the existing wall will be removed and replaced. Specifically, on the north side a 16-foot-long masonry block retaining wall with rock cobble veneer will be constructed; within this segment approximately half the length of the existing wall will require demolition. On the south side of this segment of stairs, an approximately 27-foot-long concrete caisson retaining wall with rock cobble veneer will be constructed; and within this segment approximately three-quarters of this length of existing wall will require demolition. Concrete footings, rebar, and other structural reinforcements will be used only when necessary to meet current structural and building code requirements. In addition, the project proposes to repair and preserve the existing retaining walls adjacent to and part of the staircase. All repairs will be completed in compliance with the General Guidelines for Walls in Section 7.2.1 of the Arroyo Seco Design Guidelines.

- **Installation of Tubular Steel Fencing:** The project proposes to replace the existing chain link fence along the southern perimeter of the Mayberry & Parker Bridge, east of the Colorado Street Bridge abutment, to better control access to and from the bridge thereby increasing the safety of visitors. The project proposes to place the supports for the new fencing adjacent to the existing bridge without impacting or touching the bridge. Section 7.2.2 Fences states that existing chain link fencing "should be replaced with a more aesthetic alternative." Examples of aesthetic alternatives that would be acceptable for the project include "a well designed wrought iron fence" or "polyvinyl coated chain link (in black or forest green)". While wrought iron is the preferred alternative for fencing, it is recommended that finishes be applied to the proposed steel fencing to ensure that the look mimics wrought iron versus standard brushed metal finishes used in steel fencing. If this change is made, the proposed tubular steel fencing appears to be in conformance with the Arroyo Seco Design Guidelines.

- **Installation of New or Replacement Stone Walls:** The project proposes to construct stone walls along the trail segments immediately south of the Mayberry & Parker Bridge to improve a variety of existing issues. These include providing visual and material continuity along a length of existing wall, extending an existing stone wall along an existing trail, and/or providing a barrier for safety due to local elevation changes. These walls will include masonry stone barrier walls, stone gravity retaining walls, or concrete caisson retaining wall with rock cobble veneer. There are three locations along the trail segments south of Mayberry & Parker Bridge where existing walls are proposed to be replaced as part of the project. In two locations, with widths of 10 feet and 11 feet, the existing stone retaining wall has fully collapsed and is proposed to be removed and replaced with a stone gravity retaining wall and concrete caisson retaining wall with rock cobble veneer, respectively. The third location is an approximate 20-foot-long segment of a proposed 87-foot-long stretch of masonry stone

barrier is proposed to be demolished and replaced due to the level of deterioration. In all other locations, the proposed wall will be newly built and not replace any existing infrastructure. Appendix E: Arroyo Stone Walls and Steps Specifications details all requirements for the preservation, rehabilitation, and rebuilding of Arroyo Stone Walls. Given the level of deterioration, rebuilding sections of the walls is the only feasible option. The following specifications from Appendix E are most relevant to the proposed work:

> When rebuilding any stone wall or steps use galvanized seismic metal ties at sixteen inches on center, each way, each face. Retaining walls greater than three feet in height shall be engineered with a six or eight inch reinforced block wall on a footing engineered to support an Arroyo Stone veneer anchored to the block wall (Appendix E, Page E-2).

All repairs will be completed in compliance with the General Guidelines for Walls in Section 7.2.1 and Appendix E of the Arroyo Seco Design Guidelines. As such, the proposed work related to the construction and replacement of Arroyo Stone walls appears to be in conformance with the Arroyo Seco Design Guidelines.

- **Installation of Landscape Boulders:** The project proposes to place boulders at strategic locations to help indicate the preferred path of travel by visitors. Boulders of various sizes are expected to be imported from Hahamongna Watershed Park via the City's stockpile for use in the project. Alternatively, stone boulders and cobble from other locations in the San Gabriel Valley foothills that derive from the same geologic units, and therefore would have the same visual character as "Arroyo Stone", may be sourced for use in the project. Boulders are referenced throughout the Arroyo Seco Design Guidelines as an appropriate choice for perimeter barriers. The proposed installation of landscape boulders appear to be in conformance with the Arroyo Seco Design Guidelines.

Historical Resource Avoidance and Protection Plan

To ensure that the proposed project will not impact any contributing elements of the Pasadena Arroyo Parks and Recreation District, a detailed Historical Resources Avoidance and Protection Plan (Attachment B) was developed for character-defining features of the district that have the potential to be inadvertently damaged by project-related construction activities. These features include the Mayberry & Parker Bridge, the Colorado Street Bridge, Arroyo stone walls, trails, and paths of circulation. The Avoidance and Protection Plan details the methods and materials that will be used to ensure that elements of the historic district within the proposed project site will be adequately protected during all construction activities. These methods and materials include, but are not limited to:

- Clearly indicating the locations of historic features on all construction plans.

- Protecting historic features such as the bridge abutments, Arroyo stone walls, walkways, trails, and trees with k-rails, pylons, flagging, or sacrificial plywood or lumber as deemed feasible by the contractor and design team.

- Avoiding the use of heavy construction equipment that could damage surrounding features.

- Operating vibration monitors during all demolition and construction activities to ensure that the peak particle velocity is not exceeded at areas near the Mayberry & Parker Bridge, Colorado Street Bridge, or Arroyo stone walls.

- Completing all Arroyo stone wall rehabilitation/reconstruction in accordance with the guidance provided in Appendix E of the Arroyo Seco Design Guidelines.

- Completing all fence replacements in accordance with the guidance provided in the Arroyo Seco Design Guidelines Chapter 7.

The associated project Avoidance and Protection Plan (Attachment B) is expected to provide adequate protection for historical resources within and adjacent to the proposed project site.

Application of the Standards for Rehabilitation

The Pasadena Arroyo Parks and Recreation District is listed in the NRHP and the CRHR and is considered an historical resource per CEQA Guidelines § 15064.5. For this reason, the project requires review of proposed design plans for conformance with the Secretary of the Interiors Standards for the Treatment of Historic Properties (the Standards) to ensure that project-related impacts to the historical resource are less than significant. The Standards for Rehabilitation, applied here, acknowledge the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character. The proposed project description and associated project design plans (Attachment A) were reviewed for conformance with the Standards for Rehabilitation by a qualified architectural historian in consideration of potential impacts to the existing Pasadena Arroyo Parks and Recreation District. Table 1 provides an analysis of the proposed project in consideration of each Standard for Rehabilitation.

Table 1. Project Design Review for Conformance with the Standards for Rehabilitation

Standard	Project in Conformance?	Analysis	Recommendations?
1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.	Yes	The district will continue to be used as it was historically, providing a mecca of recreation within natural setting of the Arroyo Seco. Minimal changes will be required to the district, its distinctive materials, features, and spatial relationships. Changes to the paths of circulation will facilitate new connections that allow for safer pedestrian access that supports the district's ability to continue its historical and current function.	No
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.	Yes	The historic character of the district will be retained and preserved, with distinctive materials such as the Arroyo stone walls and hiking/pedestrian trails, and the Mayberry & Parker Bridge being maintained and repaired throughout. Although two portions of the Mayberry & Parker Bridge rail will be removed to facilitate trail connections, the alteration will occur on the approach span that is primarily obscured behind existing vegetation and will occur on a character-defining feature (the concrete railing) that is repeated throughout the entirety of the bridge. The important spatial relationships of the walls and trails to the larger district will remain intact.	No
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.	Yes	No conjectural features are proposed as part of the new design that would create a false sense of historical development within the district. The proposed new Arroyo stone walls, stairs, and trail markers will be clearly distinguished as new construction, will adhere to the Arroyo Seco Design Guidelines, and will not incorporate elements from other historic properties. The new railing and fencing on and adjacent to the Mayberry & Parker Bridge will be distinguished as new construction, will adhere to the Arroyo Seco Design Guidelines, and will not incorporate elements from other historic properties.	No

Table 1. Project Design Review for Conformance with the Standards for Rehabilitation

Standard	Project in Conformance?	Analysis	Recommendations?
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.	n/a	The district's period of significance is 1909-1939. However, the Arroyo stone walls and hiking trails have been continually maintained over the years in order for the district to maintain its current and historical function. All repaired and replaced Arroyo stone walls within the district are assumed to have acquired significance in their own right and will be retained and preserved.	No
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.	Yes	The distinctive materials, features, and construction techniques that characterize the district will be preserved. Arroyo stone from the city stockpile or similar will be used/reused when making repairs to retaining walls or steps. Although two portions of the Mayberry & Parker Bridge are proposed for removal, the distinctive craftsmanship of the larger resource will remain intact.	No
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.	Yes	The district-contributing Arroyo stone walls and hiking/pedestrian trails throughout the project site will be repaired rather than replaced where possible. In instances where the severity of deterioration requires replacement of a distinctive feature (for example, the Arroyo stone staircase behind the Mayberry & Parker Bridge), the replacement feature will be in conformance with Appendix E of the Arroyo Seco Design Guidelines for details on Arroyo stone construction, Section 7.2.2 for design requirements for walls, and Chapter 8 for design requirements for roads and trails.	No
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.	Yes	No harsh chemical or physical treatments are proposed.	No

Table 1. Project Design Review for Conformance with the Standards for Rehabilitation

Standard	Project in Conformance?	Analysis	Recommendations?
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.	n/a	No archaeological resources have been identified within the proposed project site.	No
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.	Yes	The project proposes to remove two portions of the Mayberry & Parker Bridge's concrete railing to facilitate connection of a trail across the bridge. Although this would require removal of historic materials, the amount of material removed would be minimal and would occur on the approach span of the bridge that is concealed by dense vegetation. The most visible and significant portions of the bridge would remain unchanged when viewed from the trails along the Arroyo Seco channel. The bridge will continue to be an important contributing resource to the larger district and will maintain all of its important character-defining features. The new railing system on the Mayberry & Parker Bridge will not destroy historic materials, features, or spatial relationships. Additionally, all new construction for the railing system will be distinguished from the historic and is designed to cause the least amount of aesthetic impact as possible. New construction near the bridge includes Arroyo stone trail markers at the new bridge wall openings. This proposed design feature is consistent with the Arroyo Seco Design Guidelines and is compatible with the adjacent Mayberry & Parker Bridge. New Arroyo stone walls will be clearly distinguished from the historic walls by their new construction but will still adhere to the specific requirements outlined in the Arroyo Seco Design Guidelines.	Refer to Protection Plan provided in Appendix B.

Table 1. Project Design Review for Conformance with the Standards for Rehabilitation

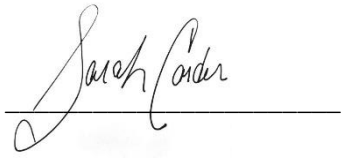
Standard	Project in Conformance?	Analysis	Recommendations?
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.	Yes	The new railing system on the Mayberry & Parker Bridge will be installed adjacent to the existing bridge railing and will be attached to the existing bridge deck. Therefore, the proposed addition is reversible and can be removed in the future. If so desired in the future, all of the proposed design elements would be removable/reversible and allow for the district and its environment to remain unimpaired. It is feasible to remove the proposed stone trail markers, boulders, and other proposed new elements to return the property to its original condition. This also applies to changes such as the railing on the Mayberry & Parker Bridge, which could be removed without impairment of its surroundings.	Refer to Protection Plan provided in Appendix B.

Summary of Impacts Assessment

The proposed project description and associated design plans (Attachment A) were reviewed, and the Historical Resource Avoidance and Protection Plan (Attachment B) were prepared by a qualified architectural historian for conformance with the Arroyo Seco Design Guidelines and the Secretary of the Interior's Standards for Rehabilitation. As demonstrated in Table 1 above and as illustrated in the design plans, the proposed project is in conformance with both the Arroyo Seco Design Guidelines and the Standards for Rehabilitation such that the Mayberry & Parker Bridge, Pasadena Arroyo Parks and Recreation District, and the larger Arroyo Seco, will continue to retain all of their major character-defining features, paths of circulation, spatial relationships, and important historical associations. Therefore, this assessment finds that the proposed project will have a less than significant impact on historical resources under CEQA. All modifications will require approval from the City's Planning Department. The review and determination by the City's Planning Department will be part of the City's consideration of the project's approval and adoption of the CEQA document.

Should you have any questions regarding this report or its findings, please do not hesitate to contact me at scorder@southenironmental.com or (760) 336-3355.

Sincerely,



Sarah Corder, MFA
Principal Architectural Historian

Samantha Murray, MA
Cultural Resources Director

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Attachments

A. Project Design Plans (September 2023)

B. Historical Resources Avoidance and Protection Plan

ATTACHMENT A.

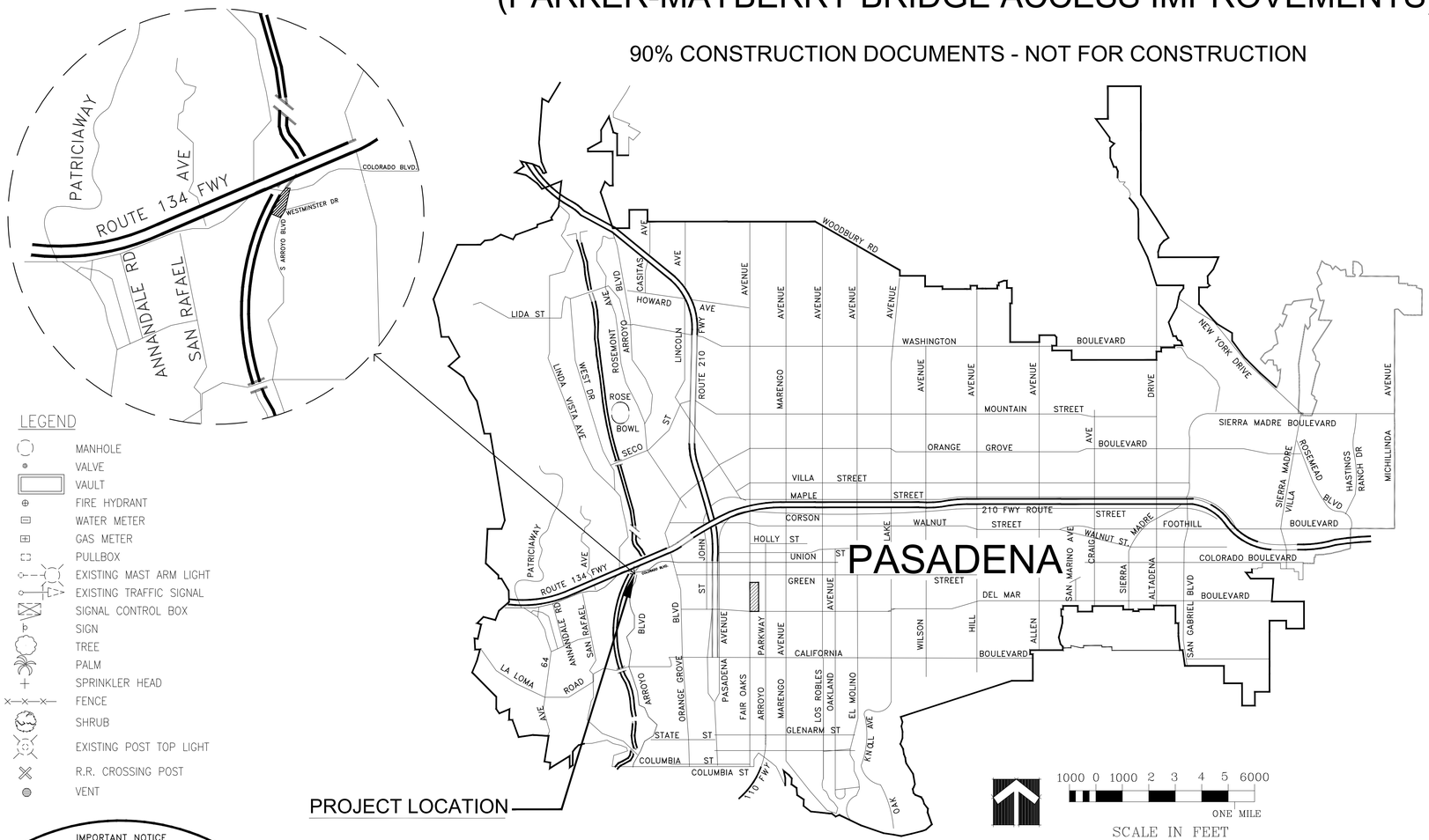
Project Design Plans (September 2023)

SUBMITTED	APPROVED
	M. KRIS MARKARIAN CITY ENGINEER — DATE

CITY OF PASADENA
DEPARTMENT OF PUBLIC WORKS

ONE ARROYO TRAIL DEMONSTRATION PROJECTS
(PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS)

90% CONSTRUCTION DOCUMENTS - NOT FOR CONSTRUCTION



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ONE MILE
SCALE IN FEET

NOTE

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION GREENBOOK, INCLUDING ANY SUPPLEMENT, THE CITY OF PASADENA SUPPLEMENTS AND MODIFICATIONS TO THE ABOVE WHICH IS AVAILABLE ONLINE AT http://ww5.cityofpasadena.net/public-works/engineering-and-construction/engineering/forms-and-applications/ AND THE "PROJECT SPECIFICATIONS FOR ANNANDALE CANYON OPEN SPACE TRAIL ACCESS IMPROVEMENTS PROJECT IN THE CITY OF PASADENA, CALIFORNIA."

INDEX OF SHEETS

LEGEND

- MANHOLE
- VALVE
- VAULT
- FIRE HYDRANT
- WATER METER
- GAS METER
- PULLBOX
- EXISTING MAST ARM LIGHT
- EXISTING TRAFFIC SIGNAL
- SIGNAL CONTROL BOX
- SIGN
- TREE
- PALM
- SPRINKLER HEAD
- FENCE
- SHRUB
- EXISTING POST TOP LIGHT
- R.R. CROSSING POST
- VENT

IMPORTANT NOTICE

Section 4216/4217 of the Government Code requires a Dig Alert Identification Number be issued before a "Permit to Excavate" will be valid For your Dig Alert I.D. Number Call Underground Service Alert TOLL FREE-1-800-422-4133 Two working days before you dig.

TITLE SHEET

DESIGNED BY: CS	REVISIONS					CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS	
DRAWN BY: TP	MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED	PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS — SHEET 1 OF 13
CHECKED BY: ZM							LIMITS — T-0.01
							SCALE AS NOTED — ACCOUNT NO.

SUBMITTED	APPROVED
	M. KRIS MARKARIAN CITY ENGINEER — DATE

CITY OF PASADENA
DEPARTMENT OF PUBLIC WORKS

ONE ARROYO TRAIL DEMONSTRATION PROJECTS
(PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS)

GENERAL NOTES

A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE 2021 "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CITY OF PASADENA STANDARD PLANS, UNIFORM BUILDING CODE, 1994 EDITION, UNIFORM PLUMBING CODE, NATIONAL ELECTRICAL CODE, ALL SAFETY ORDERS OF THE STATE INDUSTRIAL COMMISSION, TITLE 3, RULES AND REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITING, STATE OF CALIFORNIA TITLE 24, SECTION T-20-1401 THROUGH T-20-1406, AND TITLE 20, SECTION 1401-1406 ENERGY REGULATIONS.

B. THE DESIGN ADEQUACY AND SAFETY OF EXCAVATION, ERECTION, BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE LANDSCAPE ARCHITECT OR STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY SAFETY PRECAUTIONS AND MEASURE NECESSARY TO EXECUTE THE WORK. OBSERVATION VISITS TO THE SITE BY THE LANDSCAPE ARCHITECT OR ANY OF HIS CONSULTANTS SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

C. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN AND / OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CITY'S REPRESENTATIVE.

D. THE CONTRACTOR SHALL NOTIFY THE CITY TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION.

E. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OPERATIONS IN SUCH A MANNER SO AS TO PREVENT DAMAGE TO EXISTING SUBSTRUCTURES. IN THE EVENT OF SUBSTRUCTURE DAMAGE, THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND TOTAL EXPENSE FOR REPAIR AND / OR REPLACEMENT OF SAID SUBSTRUCTURE.

F. THE CONTRACTOR SHALL PROVIDE 72-HOUR NOTICE TO AFFECTED UTILITIES WHEN RELOCATION IS REQUIRED.

G. THE CONTRACTOR SHALL NOT CONDUCT ANY OPERATIONS OR PERFORM ANY WORK PERTAINING TO THE PROJECT BETWEEN THE HOURS OF 4:30 P.M. AND 7:30 A.M. ON ANY DAY NOR SATURDAY, SUNDAY, OR HOLIDAYS AT ANY TIME EXCEPT AS APPROVED BY THE CITY.

H. THE CONTRACTOR SHALL NOT BLOCK DRIVEWAYS OR VEHICULAR TRAFFIC DURING THE PROCESS OF CONSTRUCTION.

I. THE CONTRACTOR WILL COMPLY TO HPWH, APWA WATCH TRAFFIC CONTROL HANDBOOK DURING CONSTRUCTION.

J. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT BEFORE START OF CONSTRUCTION (800)422-4133.

K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL DURING CONSTRUCTION AND MAINTENANCE PERIOD.

L. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A 6' HIGH TEMPORARY CHAINLINK CONSTRUCTION FENCE WITH LOCKABLE GATES AROUND ALL CONSTRUCTION AREAS. FENCING SHALL BE PROVIDED WITH CONTINUOUS GREEN MESH WINDSCREEN. CONTRACTOR SHALL REVIEW ALIGNMENT / LOCATION OF CONSTRUCTION FENCING WITH CITY'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL MAINTAIN FENCING UNTIL THE CITY'S ACCEPTANCE OF THE WORK.

M. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS.

N. MAINTAIN SANITARY TOILET FACILITIES DURING CONSTRUCTION AS REQUIRED BY APPLICABLE REGULATIONS.

O. THE GENERAL CONTRACTOR WARRANTS TO THE CITY AND THE LANDSCAPE ARCHITECT THAT ALL MATERIALS AND EQUIPMENT FURNISHED WILL BE NEW UNLESS OTHERWISE SPECIFIED, AND THAT ALL WORK WILL BE OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS.

P. PAVING, MASONRY AND CONCRETE SUBCONTRACTORS ARE TO COORDINATE WITH THE ELECTRICIAN, DRAINLINE SUBCONTRACTOR AND IRRIGATION SUBCONTRACTOR FOR SLEEVING, PIPING AND/OR CONDUIT INSTALLATION UNDER OR THROUGH HARDSCAPE ELEMENTS.

Q. VERIFY ALL PROPERTY LINES OR LIMIT OF WORK LINES PRIOR TO COMMENCING WORK.

R. IN THE CASE OF DISCREPANCIES IN THE DRAWINGS, SPECIFICATIONS SHALL TAKE PRECEDENCE OVER DETAILS, AND DETAILS SHALL TAKE PRECEDENCE OVER PLANS.

S. SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE CITY.

T. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED PROJECT UNLESS OTHERWISE SHOWN; THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT AND HIS ENGINEERS SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR SAME, WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT AND HIS ENGINEERS DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES, WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT AND HIS ENGINEERS, WHETHER OF MATERIALS OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING OR AFTER COMPLETION OF CONSTRUCTION, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS BUT THEY DO NOT GUARANTEE GENERAL CONTRACTOR'S PERFORMANCE, AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

NOTICE TO CONTRACTOR

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE SITE PRIOR TO MOBILIZATION AND THE BEGINNING OF CONSTRUCTION. ANY EXISTING ELEMENTS TO BE PROTECTED IN PLACE, WHICH SHOW ANY TYPE OF DAMAGE (E.G. CRACKED CONCRETE, DAMAGE TO TREES, ETC.), SHOULD BE BROUGHT TO THE ATTENTION OF THE COUNTY. OTHERWISE, CONTRACTOR MAY BE HELD RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED EXISTING ELEMENTS-TO-REMAIN AT HIS EXPENSE.

B. A DIGITAL FILE OF THE HORIZONTAL CONTROL INCLUDING HARDSCAPE WALKWAYS AND PARKING WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION TO ASSIST THE SURVEYOR IN THE LAYOUT OF THESE AREAS AND THE PREPARATION OF THE STAKING PLAN.

C. EXISTING UTILITIES WERE OBTAINED FROM OWNER AND AGENCY RECORDS - NOT 'AS BUILT' DRAWINGS. CONTRACTOR MUST POTHOLE AND HAND EXCAVATE WHEN COMPLETING ANY SUB-SURFACE WORK. RELOCATE, LOWER, OR REALIGN ANY UTILITY ENCOUNTERED. MINIMUM DEPTH OVER NEW OR RELOCATED UTILITY IS 24". THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION AND SIZE OF ANY UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.

D. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE OF ANY DIMENSIONAL ERRORS, OMISSIONS, OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK.

E. DO NOT SCALE THESE DRAWINGS.

ABBREVIATIONS

@	AT	EX.	EXISTING	R.C.V.	REMOTE CONTROL VALVE
A.B.	ANCHOR BOLT	EXC.	EXCAVATION		
A.B.S	ACRYLONITRILE BUTADIENE STYRENE PIPE	FFE	FINISH FLOOR ELEVATION	REF.	REFERENCE
		FG	FINISH GRADE	REQ.	REQUIRED
A.C.	ASPHALTIC CONCRETE	F.H.	FIRE HYDRANT	RR	RAILROAD
AC	ACRE	FL	FLOW LINE	RT.	RIGHT
A.C.P.	ASBESTOS CEMENT PIPE	F.O.B.	FACE OF BUILDING	RWD	REDWOOD
ALT.	ALTERNATIVE	F.O.C.	FACE OF CURB	R/W, R.O.W.	RIGHT OF WAY
ALUM	ALUMINUM	FS	FINISH SURFACE	ROS	ROUGH SAWN
APPROX.	APPROXIMATE	FT	FEET/FOOT	S	SOUTH
AVE	AVENUE	FTG.	FOOTING	SCH.	SCHEDULE
AVG	AVERAGE	GA.	GAUGE	SD	STORM DRAIN
B.A.	BEGINNING OF CURVE	GALV.	GALVANIZED	SEC.	SECTION
BC	BOTTOM OF CURB	GC	GROUNDCOVER	SG	SUBGRADE
B.A.P.	BEGINNING OF CURB RETURN	G.L.B.	GLUE LAMINATED BEAM	SHT	SHEET
BLDG	BUILDING	G.P.M.	GALLONS PER MINUTE	SF	SQUARE FEET
BLVD	BOULEVARD	GR	GRADING	SPEC	SPECIFICATIONS
B.M.	BENCH MARK	GRND	GROUND	SQ.	SQUARE
BS	BOTTOM OF STEP	GUY	GUY WIRE	ST.	STREET
BW	BACK OF WALK	HT.	HEIGHT	STA.	STATION
C	CENTER	HDR	HEADER	STD.	STANDARD
C., COND.	CONDUIT	HORIZ	HORIZONTAL	S4S	SURFACE FOUR SIDE
CB	CATCH BASIN	HP	HIGH POINT		
C.F.	CURB FACE	I.D.	INSIDE DIAMETER	TC	TOP OF CURB
C&G	CURB AND GUTTER	INV.	INVERT	T.C.B.	TOP OF CATCH BASIN
C.J.	CONTROL JOINT	IRR.	IRRIGATION		
CIR	CIRCLE	J.B.	JUNCTION BOX	TF	TOP OF FOOTING
CL	CENTER LINE	JT.	JOINT	TG	TOP OG GRATE
C.I.	CAST IRON	L.	LENGTH OF ARC	T&G	TONGUE AND GROOVE
C.M.P.	CORREGATED METAL PIPE	L.A.	LANDSCAPE ARCHITECT		
C.M.U.	CONCRETE MASONRY UNIT	LAT.	LATERAL	TS	TOP OF STEP
C.O.	CLEANOUT	LF	LINEAR FEET	TW	TOP OF WALL
CONC.	CONCRETE	LT	LEFT	TYP.	TYPICAL
CONST.	CONSTUCT/CONSTRUCTION	MAX.	MAXIMUM	V.	VOLTAGE
CONT.	CONTINUOUS	MFG.	MANUFACTURER	V.C.	VERTICAL CURVE
C.A.	CONCRETE PIPE	M.H.	MAN HOLE	VERT.	VERTICAL
C.R.	CURB RETURN	MIN.	MINIMUM	W/	WITH
CSK	COUNTERSINK	N	NORTH	W	WEST
CU.	CUBIC	N.I.C.	NOT IN CONTRACT	W.P.	WATERPROOFING
CU. FT.	CUBIC FEET	NO., #	NUMBER	WWM	WELDED WIRE MESH
CY	CUBIC YARDS	N.T.S.	NOT TO SCALE		
DET.	DETAIL	O.C.	ON CENTER		
D.F.	DRINKING FOUNTAIN	O.D.	OUTSIDE DIAMETER		
DF	DOUGLAS FIR	OPP.	OPPOSITE		
DG	DECOMPOSED GRANITE	P.A.	PLANTING AREA		
DIA., Ø	DIAMETER	P.B.	PULL BOX		
DR.	DRIVE	P.C. CONC.	PORTLAND CEMENT CONCRETE		
DS	DOWNSPOUT	P.C.C.	POINT OF COMPOUND CURVE		
E	EAST	PL	PROPERTY LINE		
EA	EACH	P.P.	POWER POLE		
E.C.	END OF CURB	P.S.I.	POUNDS PER SQUARE INCH		
E.C.R.	END OF CURB RETURN	PT.	POINT		
E.J.	EXPANSION JOINT	P.T.	POINT OF TANGENCY		
ELEV.	ELEVATION	PVC	POLYVINAL CHLORIDE		
EQ.	EQUAL	R., RAD.	RADIUS		
EST.	ESTIMATE	R.C.P.	REINFORCED CONCRETE PIPE		
E.W.	EACH WAY	RD	ROAD		

GENERAL NOTES

DESIGNED BY: CS	
DRAWN BY: TP	
CHECKED BY: ZM	

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER—MAYBERRY BRIDGE ACCESS IMPROVEMENTS — SHEET 2 OF 13

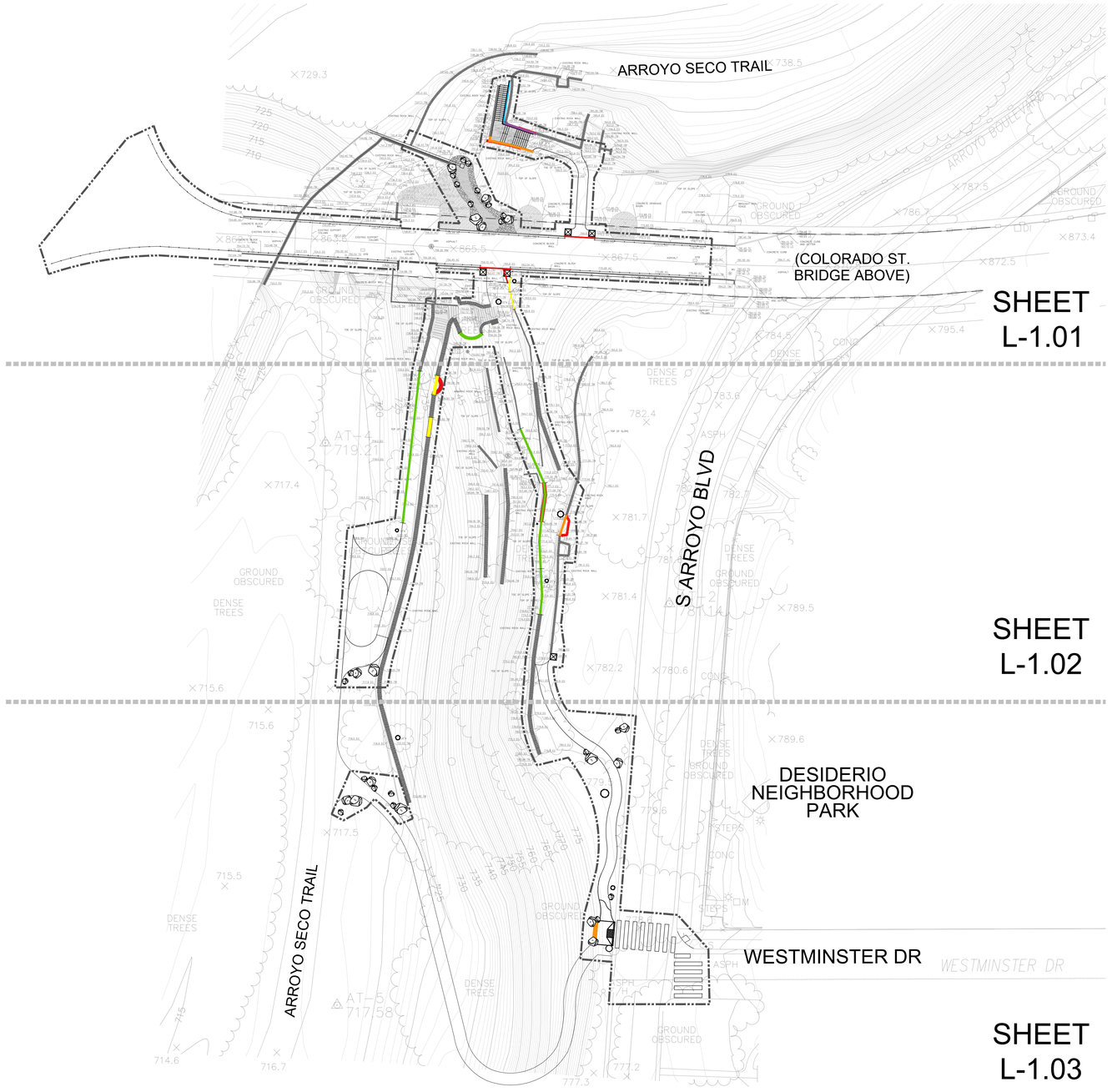
LIMITS

SCALE AS NOTED — ACCOUNT NO.

T-0.02

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023



SITE INDEX MAP

0' 15' 30' 60'
SCALE: 1" = 30'

LICENSED LANDSCAPE ARCHITECT
CRAIG SENSENBACH LICENSE NO. 2547
Signature
08/31/2023
Renewal Date
4/26/2023
Date
STATE OF CALIFORNIA

DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

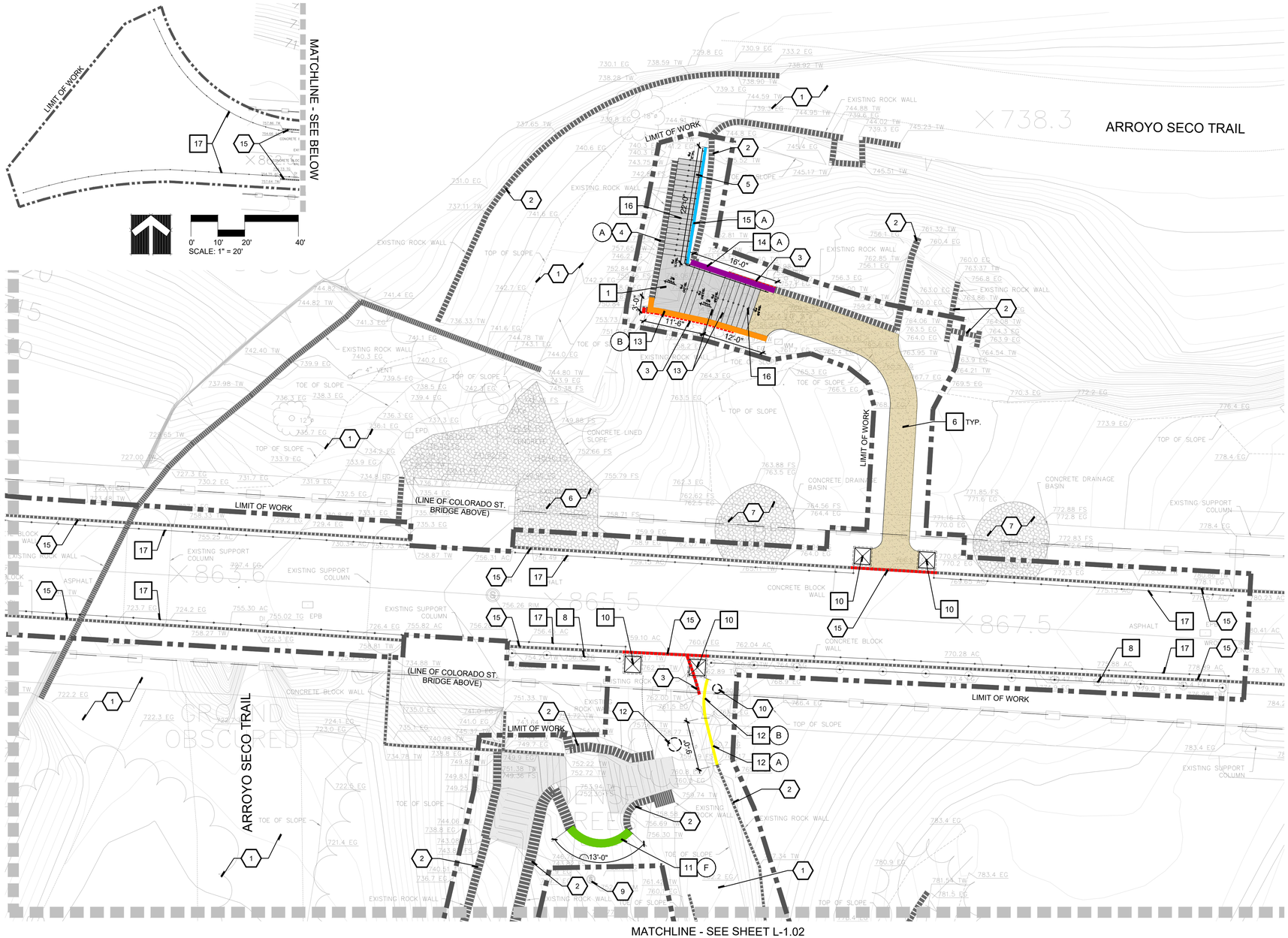
REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED ACCOUNT NO.

SHEET 3 OF 13
DWG. NO. L-1.00



NOTE:
SEE 'STONE WALL SCHEDULE' DETAIL 1, SHEET L-2.02 FOR MORE INFORMATION

A-F

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

CONSTRUCTION LEGEND

	CONSTRUCT:	DETAIL REFERENCE:
1	4" PEDESTRIAN CONCRETE PAVING	DETAIL 1, SHEET L-2.01
2	SAWCUT CONTROL JOINT	DETAIL 2, SHEET L-2.01
3	EXPANSION JOINT	DETAIL 2, SHEET L-2.01
4	COLD JOINT	DETAIL 2, SHEET L-2.01
5	ADA ACCESSIBLE RAMP	DETAIL 4, SHEET L-2.01
6	DISINTEGRATED GRANITE PAVING	DETAIL 3, SHEET L-2.01
7	LANDSCAPE BOULDERS	DETAIL 2, SHEET L-2.02
8	TUBULAR STEEL FENCING	DETAIL 2, SHEET L-2.05
9	PEDESTRIAN CROSSWALK STRIPING	DETAIL 3, SHEET L-2.05
10	42" HT. STONE PILASTER / TRAIL MARKER	DETAIL 3, SHEET L-2.03
11	MASONRY STONE BARRIER	DETAIL 1, SHEET L-2.03
12	STONE GRAVITY RETAINING WALL	DETAIL 2, SHEET L-2.03
13	CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER	DETAIL 1 & 2, SHEET L-2.04
14	MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VEENER	DETAIL 3, SHEET L-2.04
15	ROCK COBBLE VENEER ON EXISTING WALL	DETAIL 1, SHEET L-2.05
16	RECONSTRUCTED CONCRETE STAIRS AND HANDRAIL	DETAIL 1 & 2, SHEET L-2.06
17	STEEL PIPE RAILING ADJACENT TO EXISTING PARKER-MAYBERRY BRIDGE RAIL	DETAIL 1, SHEET L-2.07

EXISTING CONDITIONS

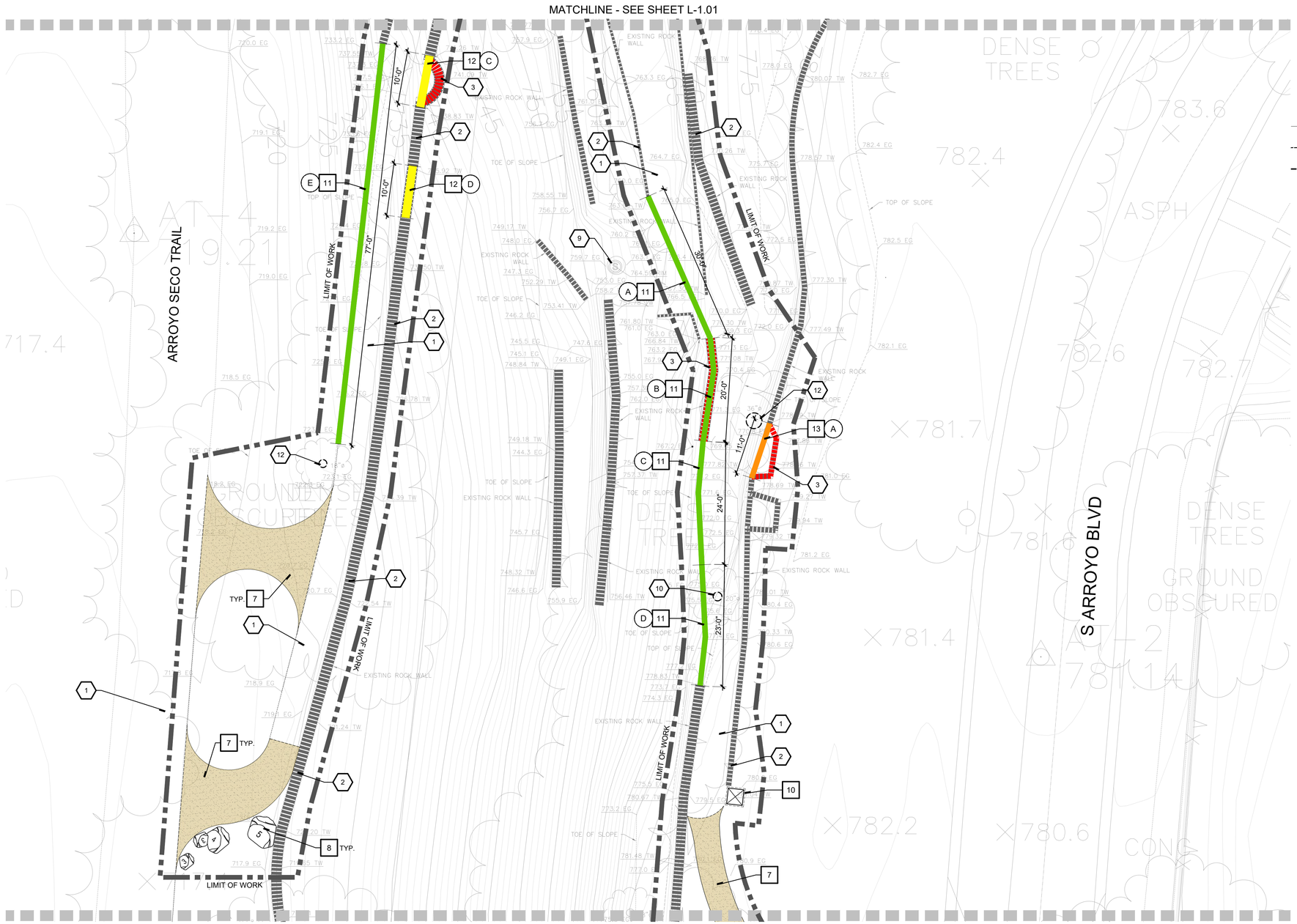
	DESCRIPTION:	COMMENT:
1	EXISTING TRAIL	PROTECT-IN-PLACE
2	EXISTING STONE WALL	PROTECT-IN-PLACE
3	EXISTING STONE WALL	DEMOLISH / REMOVE PORTION AS INDICATED. SEE DETAIL 1, SHEET L-.202
4	EXISTING STONE WALL	PROTECT-IN-PLACE W/ MODIFICATIONS SEE DETAIL 1, SHEET L-2.02
5	EXISTING CONCRETE STAIRS	DEMOLISH / REMOVE
6	EXISTING GROUTED ROCK COBBLE SLOPE STABILIZATION	PROTECT-IN-PLACE
7	EXISTING GROUTED ROCK COBBLE DRAINAGE BASIN	PROTECT-IN-PLACE
8	EXISTING ELECTRICAL UTILITIES	PROTECT-IN-PLACE
9	EXISTING SEWER UTILITIES	PROTECT-IN-PLACE
10	EXISTING CONCRETE WALKWAY	PROTECT-IN-PLACE
11	EXISTING CURB/GUTTER	PROTECT-IN-PLACE
12	EXISTING TREE	PROTECT-IN-PLACE
13	EXISTING TREE	DEMOLISH / REMOVE
14	EXISTING CONCRETE BRIDGE RAIL	PROTECT-IN-PLACE
15	EXISTING CONCRETE BRIDGE RAIL	DEMOLISH / REMOVE PORTION AS INDICATED

0' 5' 10' 20'
SCALE: 1" = 10'

LICENSED LANDSCAPE ARCHITECT
CRAIG SENSENBACH LICENSE NO. 2547
Signature
08/31/2023
Renewal Date
9/05/2023
Date
STATE OF CALIFORNIA

CONSTRUCTION PLAN AT PARKER-MAYBERRY BRIDGE

DESIGNED BY: CS	REVISIONS	CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS	
DRAWN BY: TP	MARK DATE DESCRIPTION BY CHKD. APPROVED	PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS	SHEET 4 OF 13
CHECKED BY: CS/ZM		LIMITS	DWG. NO. L-1.01
		SCALE AS NOTED ACCOUNT NO.	



NOTE:
SEE 'STONE WALL SCHEDULE' DETAIL 1, SHEET L-2.02 FOR MORE INFORMATION

A-F

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

CONSTRUCTION LEGEND

	CONSTRUCT:	DETAIL REFERENCE:
1	4" PEDESTRIAN CONCRETE PAVING	DETAIL 1, SHEET L-2.01
2	SAWCUT CONTROL JOINT	DETAIL 2, SHEET L-2.01
3	EXPANSION JOINT	DETAIL 2, SHEET L-2.01
4	COLD JOINT	DETAIL 2, SHEET L-2.01
5	RANDOM STONE PAVING OVER CONCRETE BASE	DETAIL 3, SHEET L-2.01
6	ROCK COBBLE DRY CREEK BED	DETAIL 2, SHEET L-2.02
7	DISINTEGRATED GRANITE PAVING	DETAIL 4, SHEET L-2.01
8	LANDSCAPE BOULDERS	DETAIL 3, SHEET L-2.02
9	DRAINAGE CULVERT UNDER EXISTING TRAIL	PER CITY STD.
10	42" HT. STONE PILASTER / TRAIL MARKER	DETAIL 3, SHEET L-2.03
11	MASONRY STONE BARRIER	DETAIL 1, SHEET L-2.03
12	STONE GRAVITY RETAINING WALL	DETAIL 2, SHEET L-2.03
13	CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER	DETAIL 1 & 2, SHEET L-2.04
14	MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VEENER	DETAIL 3, SHEET L-2.04
15	ROCK COBBLE VENEER ON EXISTING WALL	DETAIL 1, SHEET L-2.05
16	RECONSTRUCTED CONCRETE STAIRS AND HANDRAIL	DETAIL 1 & 2, SHEET L-2.06
17	STEEL PIPE RAILING ADJACENT TO EXISTING PARKER-MAYBERRY BRIDGE RAIL	DETAIL 1, SHEET L-2.07
18	TUBULAR STEEL FENCING	DETAIL 2, SHEET L-2.05
19	ADA ACCESSIBLE RAMP WITH TRUNCATED DOMES	DETAIL 5, SHEET L-2.01
20	PEDESTRIAN CROSSWALK STRIPING	DETAIL 3, SHEET L-2.05

EXISTING CONDITIONS

	DESCRIPTION:	COMMENT:
1	EXISTING TRAIL	PROTECT-IN-PLACE
2	EXISTING STONE WALL	PROTECT-IN-PLACE
3	EXISTING STONE WALL	DEMOLISH / REMOVE PORTION AS INDICATED. SEE DETAIL 1, SHEET L-.202
4	EXISTING STONE WALL	PROTECT-IN-PLACE W/ MODIFICATIONS SEE DETAIL 1, SHEET L-2.02
5	EXISTING CONCRETE STAIRS	DEMOLISH / REMOVE
6	EXISTING GROUTED ROCK COBBLE SLOPE STABILIZATION	PROTECT-IN-PLACE
7	EXISTING GROUTED ROCK COBBLE DRAINAGE BASIN	PROTECT-IN-PLACE
8	EXISTING ELECTRICAL UTILITIES	PROTECT-IN-PLACE
9	EXISTING SEWER UTILITIES	PROTECT-IN-PLACE
10	EXISTING CONCRETE WALKWAY	PROTECT-IN-PLACE
11	EXISTING CURB/GUTTER	PROTECT-IN-PLACE
12	EXISTING TREE	PROTECT-IN-PLACE
13	EXISTING TREE	DEMOLISH / REMOVE
14	EXISTING CONCRETE BRIDGE RAIL	PROTECT-IN-PLACE
15	EXISTING CONCRETE BRIDGE RAIL	DEMOLISH / REMOVE PORTION AS INDICATED

SCALE: 1" = 10'
0' 5' 10' 20'

LICENSED LANDSCAPE ARCHITECT
CRAIG SENSENBACH LICENSE NO. 2547
Signature
08/31/2023
Renewal Date
4/27/2023
Date
STATE OF CALIFORNIA

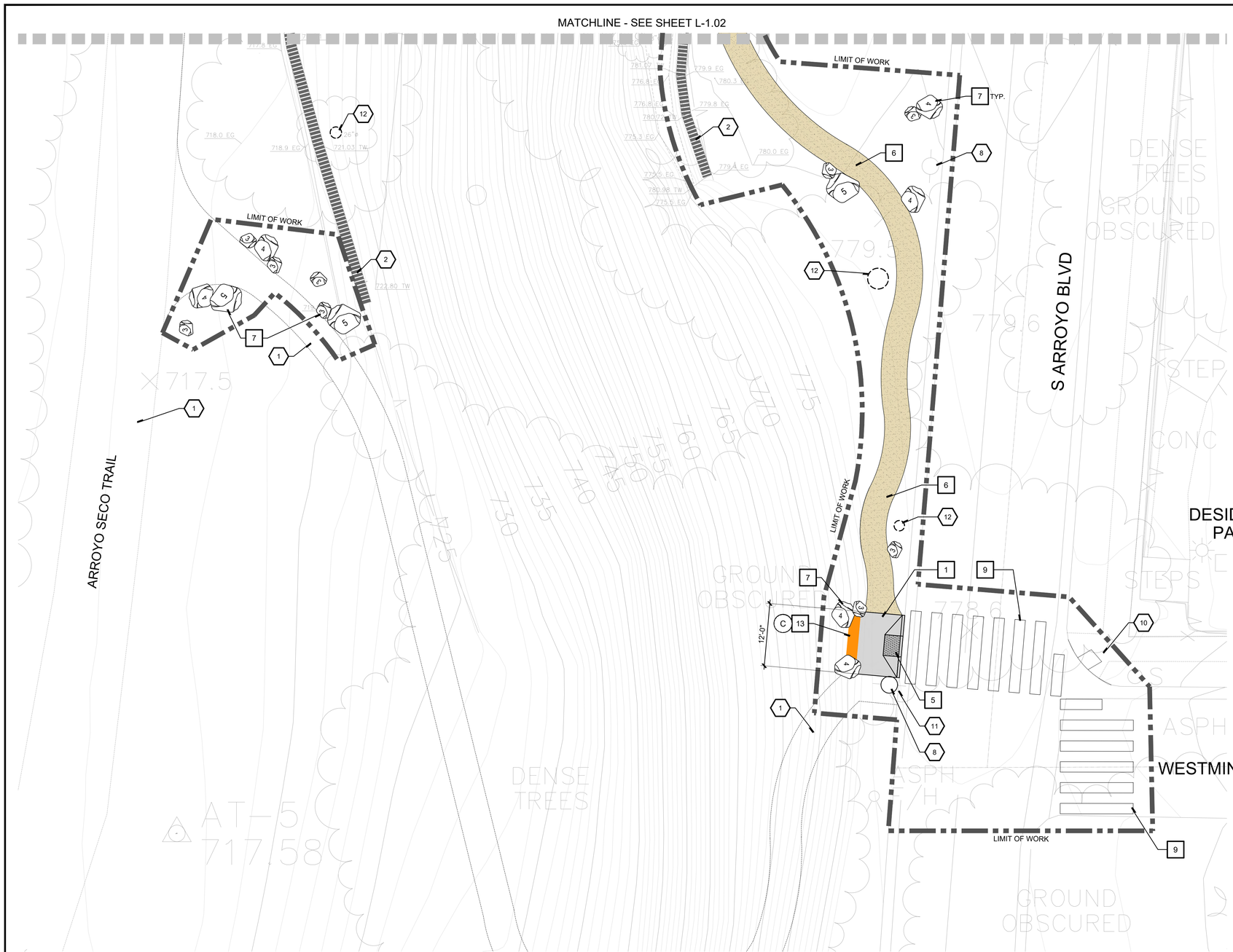
CONSTRUCTION PLAN AT ARROYO SECO TRAIL CONNECTION

DESIGNED BY:	CS	REVISIONS			
DRAWN BY:	TP	MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED
CHECKED BY:	CS/ZM						

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED
ACCOUNT NO.

SHEET 5 OF 13
DWG. NO. L-1.02



A-F

NOTE:
SEE 'STONE WALL SCHEDULE' DETAIL 1, SHEET L-2.02 FOR MORE INFORMATION

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

CONSTRUCTION LEGEND

	CONSTRUCT:	DETAIL REFERENCE:
1	4" PEDESTRIAN CONCRETE PAVING	DETAIL 1, SHEET L-2.01
2	SAWCUT CONTROL JOINT	DETAIL 2, SHEET L-2.01
3	EXPANSION JOINT	DETAIL 2, SHEET L-2.01
4	COLD JOINT	DETAIL 2, SHEET L-2.01
5	ADA ACCESSIBLE RAMP	DETAIL 4, SHEET L-2.01
6	DISINTEGRATED GRANITE PAVING	DETAIL 3, SHEET L-2.01
7	LANDSCAPE BOULDERS	DETAIL 2, SHEET L-2.02
8	TUBULAR STEEL FENCING	DETAIL 2, SHEET L-2.05
9	PEDESTRIAN CROSSWALK STRIPING	DETAIL 3, SHEET L-2.05
10	42" HT. STONE PILASTER / TRAIL MARKER	DETAIL 3, SHEET L-2.03
11	MASONRY STONE BARRIER	DETAIL 1, SHEET L-2.03
12	STONE GRAVITY RETAINING WALL	DETAIL 2, SHEET L-2.03
13	CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER	DETAIL 1 & 2, SHEET L-2.04
14	MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VEENER	DETAIL 3, SHEET L-2.04
15	ROCK COBBLE VENEER ON EXISTING WALL	DETAIL 1, SHEET L-2.05
16	RECONSTRUCTED CONCRETE STAIRS AND HANDRAIL	DETAIL 1 & 2, SHEET L-2.06
17	STEEL PIPE RAILING ADJACENT TO EXISTING PARKER-MAYBERRY BRIDGE RAIL	DETAIL 1, SHEET L-2.07

EXISTING CONDITIONS

	DESCRIPTION:	COMMENT:
1	EXISTING TRAIL	PROTECT-IN-PLACE
2	EXISTING STONE WALL	PROTECT-IN-PLACE
3	EXISTING STONE WALL	DEMOLISH / REMOVE PORTION AS INDICATED. SEE DETAIL 1, SHEET L-.202
4	EXISTING STONE WALL	PROTECT-IN-PLACE W/ MODIFICATIONS SEE DETAIL 1, SHEET L-2.02
5	EXISTING CONCRETE STAIRS	DEMOLISH / REMOVE
6	EXISTING GROUTED ROCK COBBLE SLOPE STABILIZATION	PROTECT-IN-PLACE
7	EXISTING GROUTED ROCK COBBLE DRAINAGE BASIN	PROTECT-IN-PLACE
8	EXISTING ELECTRICAL UTILITIES	PROTECT-IN-PLACE
9	EXISTING SEWER UTILITIES	PROTECT-IN-PLACE
10	EXISTING CONCRETE WALKWAY	PROTECT-IN-PLACE
11	EXISTING CURB/GUTTER	PROTECT-IN-PLACE
12	EXISTING TREE	PROTECT-IN-PLACE
13	EXISTING TREE	DEMOLISH / REMOVE
14	EXISTING CONCRETE BRIDGE RAIL	PROTECT-IN-PLACE
15	EXISTING CONCRETE BRIDGE RAIL	DEMOLISH / REMOVE PORTION AS INDICATED

SCALE: 1" = 10'
0' 5' 10' 20'

LICENSED LANDSCAPE ARCHITECT
CRAIG SENSENBACH LICENSE NO. 2547
STATE OF CALIFORNIA
Signature
08/31/2023
Renewal Date
9/05/2023
Date

CONSTRUCTION PLAN AT DESIDERIO PARK CONNECTION

DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

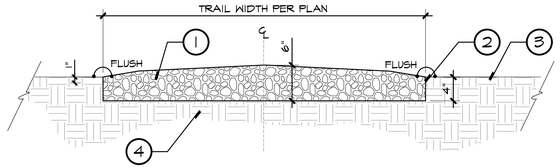
REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER—MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED
ACCOUNT NO.

SHEET 6 OF 13
DWG. NO. L-1.03



SECTION VIEW - DISINTEGRATED GRANITE PAVING
SCALE: 1" = 1'-0"

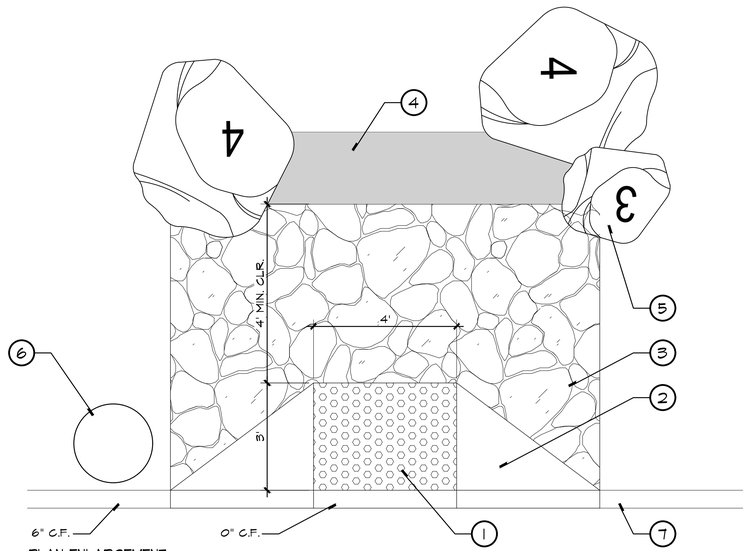
LEGEND:

1. 3/8" STABILIZED COMPACTED DISINTEGRATED GRANITE WITH **ORGANIC-LOCK** ORGANIC BINDER BY: **GAIL MATERIALS** OR APPROVED EQUAL. PROVIDE CENTERLINE CROWN, AS SHOWN THIS DETAIL. 4" MINIMUM DEPTH, 6" DEPTH AT CENTERLINE. D.G. TO BE ROLLED IN PLACE. SEE SPECIFICATIONS. COLOR: MAGNOLIA GOLD. APPLY PER MANUFACTURER'S SPECIFICATIONS. CONTACT: DAVE DZWILEWSKI, (951) 667-6106.
2. SCARIFIED EDGE OF NATIVE SUBGRADE.
3. ADJACENT FINISH GRADE - NATURAL GRADE.
4. 90% MINIMUM COMPACTED, MOISTURE CONDITIONED NATIVE SUB-GRADE.

NOTES:

- (A) CONTRACTOR TO SUBMIT SAMPLE OF STABILIZED DISINTEGRATED GRANITE FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO ACQUISITION AND DELIVERY.
- (B) CONTRACTOR TO PROVIDE 4' x 4' MOCKUP OF DISINTEGRATED GRANITE FOR OWNER'S REPRESENTATIVE'S APPROVAL PRIOR TO CONSTRUCTION. SEE SPECIFICATIONS.

4 DISINTEGRATED GRANITE PAVING

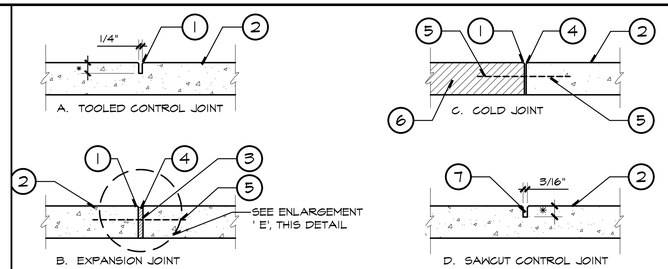


PLAN ENLARGEMENT
SCALE: 1/2" = 1'-0"

LEGEND:

1. TRUNCATED DOMES BY **WAUSAU TILE**, STANDARD TEXTURE; ADA-3, STANDARD COLOR: U3008. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. LOCATION PER CONSTRUCTION PLAN.
2. PEDESTRIAN CONCRETE PER DETAIL 1, SHEET L-2.01.
3. RANDOM ROCK COBBLE PAVING PER DETAIL 3, SHEET L-2.01.
4. CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER. SEE DETAIL 2, SHEET L-2.04.
5. ADJACENT LANDSCAPE BOULDERS PER 2, SHEET L-2.02. SEE CONSTRUCTION PLAN FOR LOCATIONS.
6. EXISTING UTILITY POLE LOCATION, PROTECT-IN-PLACE.
7. EXISTING 6" CONCRETE CURB, PROTECT-IN-PLACE.

5 ADA ACCESSIBLE RAMP



NOTES:

- (A) LOCATE JOINTS PER SPECIFICATIONS UNLESS OTHERWISE INDICATED ON PLAN.
- (B) SEALANT COLOR TO MATCH ADJACENT PAVING.
- (C) ALL EXPANSION JOINT SEALANT TO BE SEEDED WITH SILICA SAND.
- (D) PROVIDE DOUBLE BLADE SAWCUT JOINTS AT POSTS AND CENTERED BETWEEN POSTS, TYP.

LEGEND:

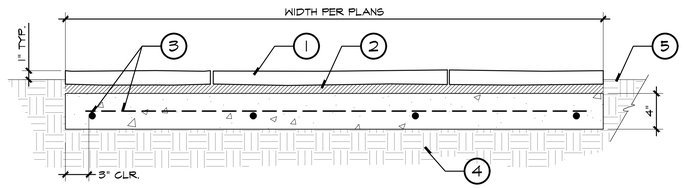
1. 1/4" RADIUS EDGE.
2. PAVING FINISH SURFACE PER PLAN.
3. 1/4" **DECK-O-FOAM** EXPANSION MATERIAL BY: **W.R. MEADOWS** OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS. (909) 469-2606.
4. "GUN-GRADE" TWO-PART POLYURETHANE SEALER BY: **PECORA CORPORATION** (800) 523-6688, OR APPROVED EQUAL.

   FOR BID PURPOSES:
   COLOR SHALL BE:
   A. "LIMESTONE" (039) IN FIELDS OF NATURAL GREY CONCRETE.
   B. "BEIGE" (545) IN FIELDS OF COLORED CONCRETE.

   FINAL SEALANT COLOR SELECTION SHALL BE PER COUNTY UPON REVIEW AND APPROVAL OF CONTRACTOR PROVIDED PAVING SAMPLES IN THE FIELD. SEE SPECIFICATIONS.
5. **SPEED-DOWEL** AT 18" O.C. AT ALL JOINTS W/#4 REBAR, MODEL NO. PSD09/#4TX SPEED DOWEL SLEEVE WITH PSD/#4BX BASE AS PROVIDED BY **GREENSTREAK GROUP** OR APPROVED EQUAL. (800) 325-4504.
6. EXISTING CONCRETE PAVING.
7. SAWCUT JOINT, SINGLE BLADE WITH 1/16" BEVEL AND CONTINUOUS CRACK CHASER.

✳ 3/4" IF PAVING LESS THAN 4" THICK. 1" IF PAVING 4" THICK OR GREATER.

2 CONCRETE JOINTS



SECTION - RANDOM STONE PAVING OVER CONCRETE BASE
SCALE: 1-1/2" = 1'-0"

LEGEND:

1. RANDOM STONE PAVING - PATTERN PER CONSTRUCTION PLAN, SHEET L-1.01. HANDTIGHT, SAND-SWEPT JOINTS.
2. 1" MORTAR SETTING BED.
3. 4" NATURAL GRAY CONCRETE SUB-BASE. SEE DETAIL 1, THIS SHEET.
4. 90% MINIMUM COMPACTED, MOISTURE CONDITIONED NATIVE SUBGRADE.
5. FINISH GRADE.

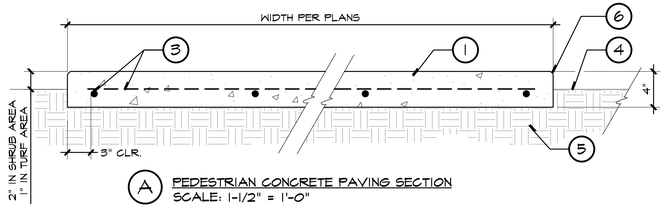
NOTES:

- (A) CONTRACTOR SHALL PROVIDE 4'X4' MOCK-UP OF CONCRETE PAVING W/ RANDOM STONE FINISH FOR REVIEW AND APPROVAL.

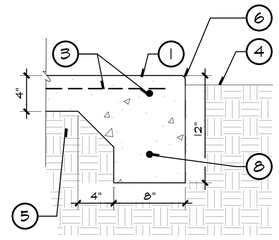
3 RANDOM STONE PAVING - CONCRETE BASE

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023



(A) PEDESTRIAN CONCRETE PAVING SECTION
SCALE: 1-1/2" = 1'-0"



(B) THICKENED EDGE
SCALE: 1-1/2" = 1'-0"

LEGEND:

1. 4" PEDESTRIAN CONCRETE PAVING WITH SAND FINISH. CONCRETE CLASS SHALL BE 520-C-2500.
2. EXPANSION JOINT PER DETAIL 2, THIS SHEET.
3. #3 REBAR AT 18" O.C., IN BOTH DIRECTIONS.
4. FINISH GRADE.
5. MINIMUM 18" DEPTH, 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED SUBGRADE.
6. 1/2" TOOLED RADIUS.
7. ADJACENT CONCRETE PAVING. THICKENED EDGE ONLY AS REQUIRED PER GEOTECHNICAL REPORT. NO THICKENED EDGE TO OCCUR ADJACENT TO PEDESTRIAN CONCRETE.
8. #3 REBAR, CONTINUOUS, PER GEOTECHNICAL REPORT.

NOTES:

- (A) PROVIDE 12'x12' MOCKUP PER SPECIFICATIONS.
- (B) SEE PLANS AND SPECIFICATIONS FOR SEALERS AND FINISHES.
- (C) SEE GEOTECHNICAL REPORT (PAVEMENT RECOMMENDATIONS) FOR CONCRETE TYPE AND STRENGTH.
- (D) AT CONCLUSION OF ROUGH GRADING OF SITE, CONTRACTOR TO SCHEDULE SITE SOIL TESTING TO TEST SITE SOIL EXPANSION INDEX. HARDSCAPE CONSTRUCTION SHALL NOT COMMENCE UNTIL TEST RESULTS HAVE BEEN REVIEWED BY PROJECT GEOTECHNICAL ENGINEER.
- (E) PROVIDE 1/4" CROSS FALL PER 12" RUN ON ALL PAVING - MINIMUM. SEE CIVIL PLANS.
- (F) CONCRETE JOINTS PER DETAIL 2, THIS SHEET.
- (G) MISCELLANEOUS CRUSHED AGGREGATE BASE SHALL COMPLY/BE INSTALLED PER THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION LATEST EDITION.

1 CONCRETE PAVING

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT — CRAIG SENSENBACH LICENSE NO. 2547 — Signature — 08/31/2023 Renewal Date — 4/27/2023 Date — STATE OF CALIFORNIA

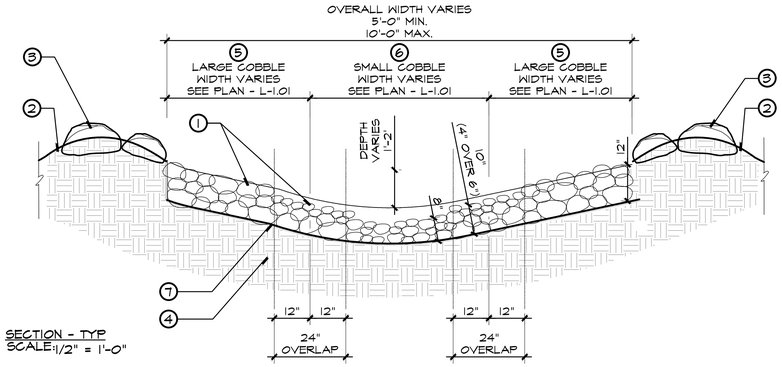
DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER—MAYBERRY BRIDGE ACCESS IMPROVEMENTS		SHEET 7 OF 13
LIMITS		DWG. NO. L-2.01
SCALE AS NOTED	ACCOUNT NO.	



SECTION - TYP
SCALE: 1/2" = 1'-0"

LEGEND:

1. ROCK COBBLE (SIZES VARY PER 'COBBLE SCHEDULE', THIS SHEET)
2. LANDSCAPE MOUNDING OF NATURAL GRADE - TYP.
3. ADJACENT LANDSCAPE BOULDERS. SEE CONSTRUCTION PLAN, SHEET L-1.01 FOR LOCATIONS AND DETAIL 3, THIS SHEET.
4. 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED NATIVE SUBGRADE.
5. LARGE COBBLE PER 'COBBLE SCHEDULE' THIS SHEET.
6. SMALL COBBLE PER 'COBBLE SCHEDULE' THIS SHEET.
7. PROVIDE CONTINUOUS **MIRAFI 140N** PERMEABLE MEMBRANE OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS. AVAILABLE FROM: **TENCATE GEOSYNTHETICS**, CONTACT KELLY LITTLE (706) 693-2226

NOTES:

A. CONTRACTOR TO CONSTRUCT A 5' WIDE BY 10' LONG MOCK-UP OF DRY CREEK BED (N / ALL COBBLE AND BOULDER SIZES) FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO COMMENCING WORK.

B. CONTRACTOR SHALL PROVIDE CHALK LINES ON FINISH GRADE OF PROPOSED BOULDER LOCATIONS AND LIMITS OF DRY CREEK BED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

C. ALL ROCK PLACEMENT SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO FINAL INSTALLATION.

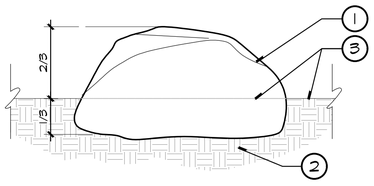
D. BOULDERS AND COBBLE SHALL BE SMOOTH, ROUNDED AND FREE OF OBJECTIONABLE DISFIGURATIONS AND EXCESSIVE IRON CONTENT.

E. REFER TO COBBLE SCHEDULE, THIS SHEET, FOR TYPE OF COBBLE AND SIZE. REFER TO BOULDER SCHEDULE, THIS SHEET, FOR TYPE OF BOULDER AND SIZE.

COBBLE SCHEDULE	LARGE 4"-8"	SMALL 2"-4"
SIZE		
QUANTITY	340 SF	168 SF
SYMBOL		

DRY CREEK COBBLE SHALL BE **'SANTA FE'** AVAILABLE FROM **SOUTHWEST BOULDER AND STONE**, OR APPROVED EQUAL. CONTACT: KRISTINE ALBINO 760-451-3333 EXT. 1030

2 ROCK COBBLE DRY CREEK BED



SECTION - BOULDER ON GRADE
SCALE: 1/2" = 1'-0"

LEGEND:

1. 'ARROYO BOULDERS', LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112.
2. 90% MINIMUM COMPACTED, MOISTURE CONDITIONED NATIVE SUBGRADE.
3. ADJACENT FINISH GRADE - NATURAL GRADE.

NOTE:

A. SEE CONSTRUCTION PLAN, SHEET L-1.01 FOR BOULDER LOCATIONS. PLAN LOCATIONS ARE DIAGRAMMATIC. FINAL BOULDER PLACEMENT & INSTALLATION SHALL BE UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.

B. ALL BOULDERS TO HAVE 1/3 EMBEDMENT.

C. BOULDERS SHALL BE PLACED/POSITIONED IN TIGHT PROXIMITY TO ADJACENT BOULDERS IN ORDER TO REPRESENT NATURAL BOULDER OUTCROPPINGS.

BOULDER SCHEDULE	#3 3'Lx3'Wx3'D	#4 4'Lx4'Wx3'D	#5 5'Lx5'Wx3'D
SIZE			
QUANTITY	20	11	5
SYMBOL	3	4	5

'ARROYO BOULDERS' SHALL BE LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM: **ROCK STRUCTURES**, CONTACT (951) 371-1112

3 LANDSCAPE BOULDERS

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

11 **CONSTRUCTION LEGEND #11:**
MASONRY STONE BARRIER (FREESTANDING)
SEE DETAIL 1, SHEET L-2.03

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	2 FT.	30 FT.	NO EXISTING WALL.
B	2 FT.	20 FT.	REMOVE EXISTING DAMAGED WALL - APPROX. 20 L.F.
C	2 FT.	24 FT.	NO EXISTING WALL.
D	3 FT.	23 FT.	NO EXISTING WALL.
E	2 FT.	77 FT.	NO EXISTING WALL.
F	3 FT.	3 FT.	NO EXISTING WALL. JOIN EXISTING STONE WALLS.

12 **CONSTRUCTION LEGEND #12:**
STONE GRAVITY RETAINING WALL
SEE DETAIL 2, SHEET L-2.03

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	4 FT.	9 FT.	NO EXISTING WALL.
B	2 FT.	7 FT. 6 IN.	NO EXISTING WALL.
C	3 FT.	10 FT.	REMOVE PORTION OF EXISTING DAMAGED WALL - APPROX. 10 L.F.
D	3 FT.	10 FT.	REMOVE PORTION OF EXISTING DAMAGED WALL.

13 **CONSTRUCTION LEGEND #13:**
CONCRETE CAISSON WITH RIVER ROCK COBBLE VENEER (UPSLOPE RETAINING CONDITION)
SEE DETAIL 1, SHEET L-2.04.

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	6 FT.	11 FT.	REMOVE PORTION OF EXISTING DAMAGED WALL - APPROX. 14 L.F.
B	4 FT TO 6 FT.	24 FT.	REMOVE EXISTING DAMAGED WALL - APPROX. 18 L.F.
C	3 FT 6 IN.	12 FT.	NO EXISTING WALL.

14 **CONSTRUCTION LEGEND #14:**
MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VENEER
SEE DETAIL 3, SHEET L-2.04.

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	3 FT. 6 IN.	16 FT.	REMOVE PORTION OF EXISTING DAMAGED WALL - APPROX. 9 L.F.

15 **CONSTRUCTION LEGEND #15:**
ROCK COBBLE VENEER ON EXISTING WALL
SEE DETAIL 1, SHEET L-2.05.

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	5 FT.	22 FT.	EXISTING CONCRETE WALL TO RECEIVE ROCK COBBLE VENEER.

4 **EXISTING CONDITION LEGEND #14:**
EXISTING ROCK WALL TO BE PROTECTED IN PLACE WITH MODIFICATIONS

	HEIGHT (+/-)	LENGTH (+/-)	EXISTING CONDITION DESCRIPTION:
A	EXISTING	26 FT.	REMOVE CONCRETE CAP - APPROX. 26 L.F. EXISTING ROCK WALL TO BE PROTECTED-IN-PLACE.
B	EXISTING	26 FT. 6 IN.	REMOVE PORTION OF EXISTING WALL - APPROX. 9 L.F. GALVANIZED STEEL PIPE RAIL TO BE CORE DRILLED INTO EXISTING STONE WALL. ADD ONE COURSE OF ARROYO STONE TO TOP OF WALL. TOP OF WALL TO BE 1' HT. ABOVE ADJACENT FINISHED TRAIL SURFACE.

1 STONE WALL SCHEDULE

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT
CRAIG SENSENBACH LICENSE NO. 2547
STATE OF CALIFORNIA
Signature
08/31/2023
Renewal Date
4/26/2023
Date

DESIGNED BY:	CS	REVISIONS				
DRAWN BY:	TP	MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED
CHECKED BY:	CS/ZM						

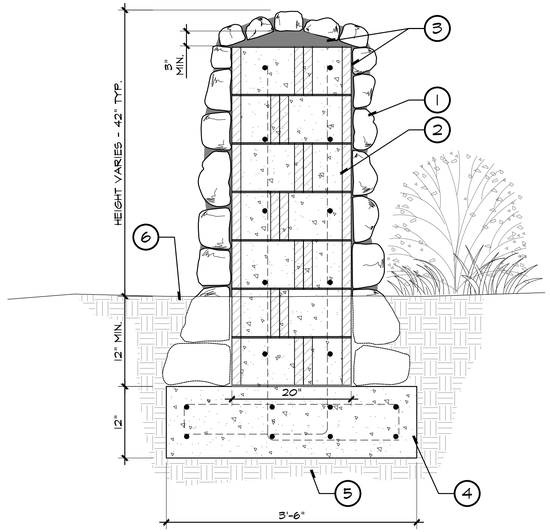
CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER—MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED
ACCOUNT NO.

SHEET 8 OF 13
DWG. NO. L-2.02

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023



SECTION VIEW - STONE PILASTER
SCALE: 1" = 1'-0"

LEGEND:

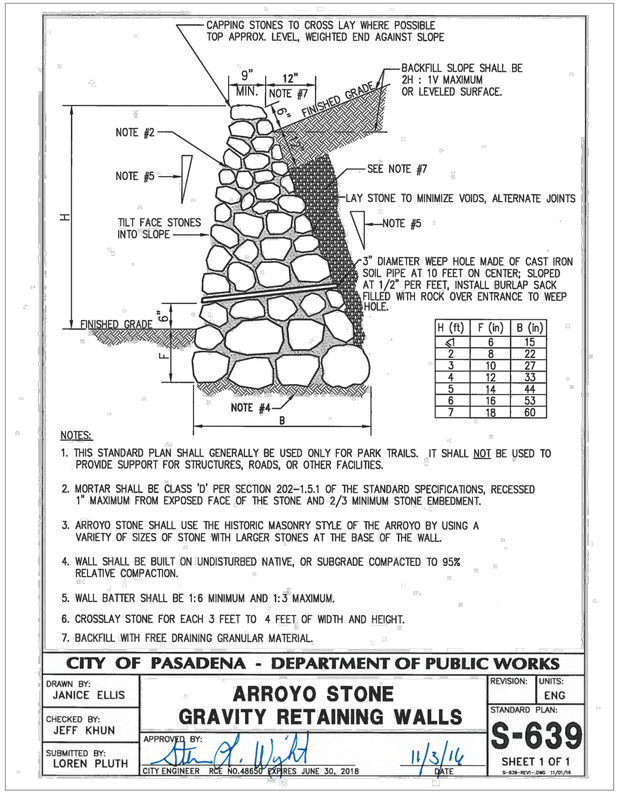
1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
2. 12"x8"x16" PRECISION CONCRETE BLOCK. SOLID GROUT ALL CELLS.
3. 1" MINIMUM MORTAR SETTING BED, 3" MINIMUM AT TOP OF PILASTER AS SHOWN THIS DETAIL. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
4. POURED-IN-PLACE CONCRETE FOOTING. REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
5. 90% MINIMUM COMPACTED, MOISTURE CONDITIONED NATIVE SUB-GRADE.
6. ADJACENT FINISH GRADE - NATURAL GRADE.

NOTES:

A. USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

B. CONTRACTOR TO PROVIDE NON-PRODUCTION MOCK UP OF PILASTER WITH FINISH FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

3 | 42" HT. STONE PILASTER / TRAIL MARKER



H (ft)	F (in)	B (in)
≤1	6	15
2	8	22
3	10	27
4	12	33
5	14	44
6	16	53
7	18	60

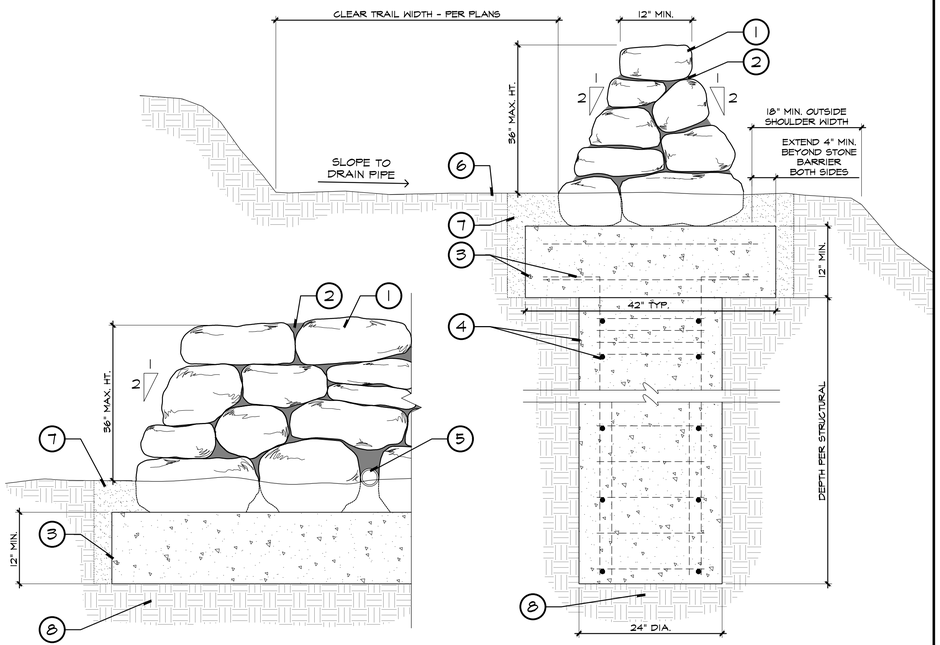
NOTES:

1. THIS STANDARD PLAN SHALL GENERALLY BE USED ONLY FOR PARK TRAILS. IT SHALL NOT BE USED TO PROVIDE SUPPORT FOR STRUCTURES, ROADS, OR OTHER FACILITIES.
2. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. ARROYO STONE SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.
4. WALL SHALL BE BUILT ON UNDISTURBED NATIVE, OR SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION.
5. WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.
6. CROSSLAY STONE FOR EACH 3 FEET TO 4 FEET OF WIDTH AND HEIGHT.
7. BACKFILL WITH FREE DRAINING GRANULAR MATERIAL.

CITY OF PASADENA - DEPARTMENT OF PUBLIC WORKS

DRAWN BY: JANICE ELLIS	**ARROYO STONE GRAVITY RETAINING WALLS**	REVISION: / UNITS: ENG
CHECKED BY: JEFF KHUN	APPROVED: CITY ENGINEER RCE NO.48650 EXPIRES JUNE 30, 2018 — 11/3/14 DATE	STANDARD PLAN: **S-639**
SUBMITTED BY: LOREN PLUTH		SHEET 1 OF 1

2 | STONE GRAVITY RETAINING WALLS



ELEVATION VIEW - MASONRY STONE BARRIER
SCALE: 1" = 1'-0"

SECTION VIEW - MASONRY STONE BARRIER
SCALE: 1" = 1'-0"

LEGEND:

1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. EMBED ROCKS 4" MINIMUM, PER THIS DETAIL.
2. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. 12" CONCRETE PEDESTAL - SLOPE AT 1% MIN. INTO SLOPE. EXTEND 4" BEYOND LIMITS OF MORTARED STONE BARRIER, BOTH SIDES. REINFORCEMENT PER STRUCTURAL.
4. 24" DIA. CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.
5. 3" DIA. CAST IRON DRAIN PIPE SET 1" BELOW TRAIL TREAD. OUTSLOPE DRAIN PIPE AT 2%-3% MINIMUM. LOCATE DRAIN PIPE EVERY 25 FEET.
6. ADJACENT FINISH GRADE - NATURAL GRADE.
7. BACKFILL WITH FREE DRAINING GRANULAR MATERIAL.
8. UNDISTURBED NATIVE SUBGRADE.

NOTES:

A. ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.

B. USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

C. PROVIDE ORGANIC-FREE, FREE DRAINING GRANULAR BACKFILL MATERIAL FOR LEVELING AND SUPPORT OF BASE ROCK, PER THIS DETAIL.

D. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.

E. CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

1 | MASONRY STONE BARRIER

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT — CRAIG SENSENBACH LICENSE NO. 2547 — STATE OF CALIFORNIA
Signature
08/31/2023 Renewal Date
4/26/2023 Date

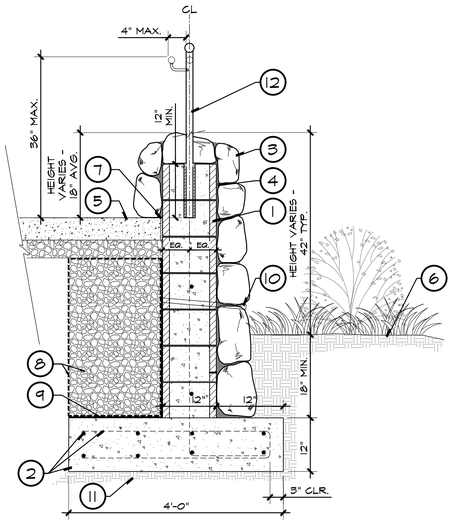
DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER–MAYBERRY BRIDGE ACCESS IMPROVEMENTS		SHEET 9	OF 13
LIMITS		DWG. NO.	L-2.03
SCALE AS NOTED	ACCOUNT NO.		



SECTION VIEW - BLOCK RETAINING WALL WITH ROCK COBBLE VENEER
SCALE: 3/4" = 1'-0"

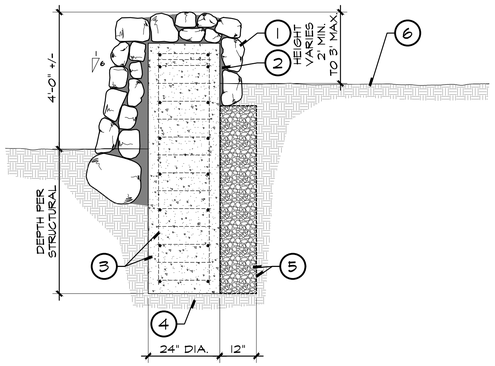
LEGEND:

1. 12" X 8" X 16" PRECISION CONCRETE BLOCK (EXTERIOR OF WALLS). SOLID GROUT ALL CELLS. REINFORCEMENT PER STRUCTURAL PLANS.
2. POURED-IN-PLACE CONCRETE FOOTING WITH (4) #5 CONTINUOUS REBAR AND #5 REBAR AT 16" O.C. TOP AND BOTTOM PER STRUCTURAL PLANS.
3. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
4. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
5. ADJACENT CONCRETE STAIRS. SEE DETAIL 1, SHEET L-2.06 AND CONSTRUCTION PLAN FOR LOCATION.
6. ADJACENT FINISH GRADE.
7. CONTINUOUS EXPANSION JOINT PER DETAIL 2, SHEET L-2.01.
8. PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
9. PROVIDE CONTINUOUS **MIRADRI 860** WATERPROOF MEMBRANE AND **MIRADRAIN 6200** DRAINAGE COMPOSITE BY **CARLISLE, INC.** OR APPROVED EQUAL, AT BACK OF WALL AND TOP OF FOOTING. INSTALL PER MANUFACTURER'S SPECIFICATIONS. CONTACT: JAMES HEIDT AND ASSOCIATES (818)248-9677.
10. 1" SCH. 40 PVC WEEPHOLE AT 4' O.C. SPACING. SLOPE 1% TO 2% TO DRAIN.
11. UNDISTURBED NATIVE SUBGRADE, OR SUBGRADE COMPACTED TO 90% RELATIVE COMPACTION.
12. 1-1/2" DIA. (1-7/8" O.D.) GALVANIZED STEEL POST, SPACED 4'-0" O.C. MAX. EMBED MIN. 12" IN CONCRETE BLOCK WALL. CORE DRILL OR PROVIDE 3" SCH. 40 PVC SET 1/2" BELOW ADJACENT FINISH SURFACE. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL, TO 1/2" BELOW ADJACENT FINISH SURFACE. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK**. BACKFILL (800) 523-6570. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH ADJACENT CONCRETE. INSTALL POSTS SPACED EVENLY. SEE DETAIL 2, SHEET L-2.06 FOR HANDRAIL DETAIL.

NOTES:

- (A) CONTRACTOR TO PROVIDE SHOP DRAWINGS AND COLOR / FINISH SAMPLE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- (B) CONTRACTOR SHALL PROVIDE 6' X 6' MOCK OF WALL WITH STONE FINISH FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

3 CONCRETE BLOCK RETAINING WALL WITH ROCK COBBLE VENEER



SECTION VIEW - CONCRETE CAISSON (DOWNSLOPE RETAINING CONDITION)
SCALE: 1/2" = 1'-0"

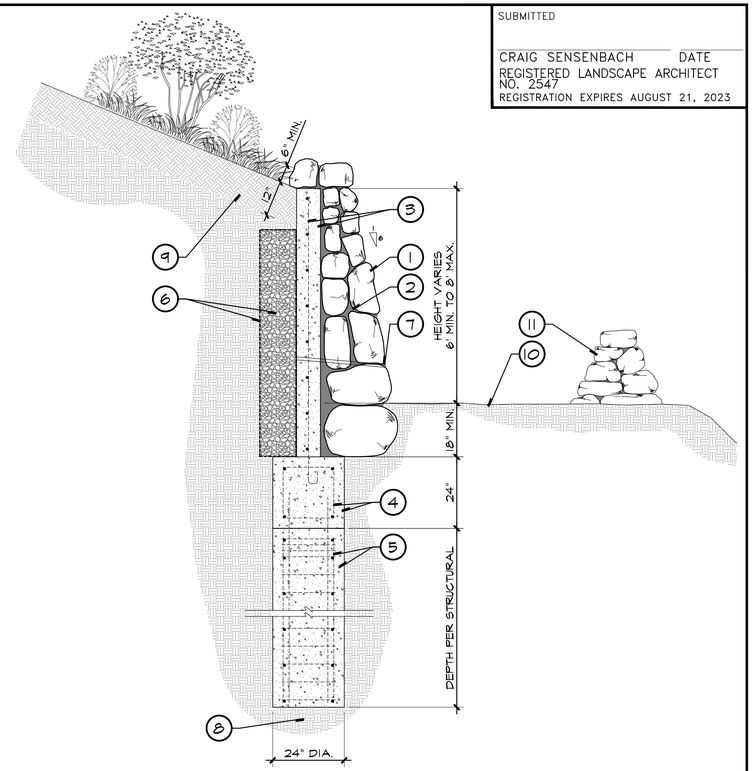
LEGEND:

1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
2. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. 24" DIA CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.
4. UNDISTURBED NATIVE SUBGRADE.
5. PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
6. ADJACENT TRAIL - FINISH GRADE.

NOTES:

- (A) ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.
- (B) USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.
- (C) WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.
- (D) CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

2 CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER (DOWNSLOPE RETAINING CONDITION)



SECTION VIEW - CONCRETE CAISSON (UPSLOPE RETAINING CONDITION)
SCALE: 1/2" = 1'-0"

NOTES:

- (A) ARROYO STONE WALLS SHALL USE THE HISTORIC MASONRY STYLE OF THE ARROYO BY USING A VARIETY OF SIZES OF STONE WITH LARGER STONES AT THE BASE OF THE WALL.
- (B) USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.
- (C) WALL BATTER SHALL BE 1:6 MINIMUM AND 1:3 MAXIMUM.
- (D) CONTRACTOR TO PROVIDE MOCK UP FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

LEGEND:

1. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
2. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
3. 8" CONCRETE STEM WALL. REINFORCEMENT PER STRUCTURAL.
4. 24" SQ. CONCRETE GRADE BEAM. REINFORCEMENT PER STRUCTURAL.
5. 24" DIA CONCRETE CAISSON. SPACING, DEPTH, AND REINFORCEMENT PER STRUCTURAL.
6. PROVIDE CONTINUOUS 3/4" CRUSHED AGGREGATE BACKFILL. PROVIDE CONTINUOUS FILTER FABRIC WRAP, **MIRAFI 140N** BY **TENCATE GEOSYNTHETICS**. PROVIDED BY **TRIUMPH GEO-SYNTHETICS, INC**, CONTACT: **MARIA FLORES** AT **(714) 257-1550**. SECURE TO BACKSIDE OF CONCRETE PIER FOOTING WITH 8D CONCRETE STAPLES AT 12" O.C. SPACING. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
7. 2" SCH. 40 PVC WEEPHOLE AT 10' O.C. SPACING. SLOPE 1% TO 2% TO DRAIN.
8. UNDISTURBED NATIVE SUBGRADE.
9. 12" BACKFILL. SLOPE SHALL BE 2 HORIZONTAL : 1 VERTICAL MAXIMUM.

1 CONCRETE CAISSON RETAINING WALL WITH ROCK COBBLE VENEER (UPSLOPE RETAINING CONDITION)

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT
CRAIG C. SENSENBACH LICENSE NO. 2547
Signature
08/31/2023
Renewal Date
4/26/2023
Date
STATE OF CALIFORNIA

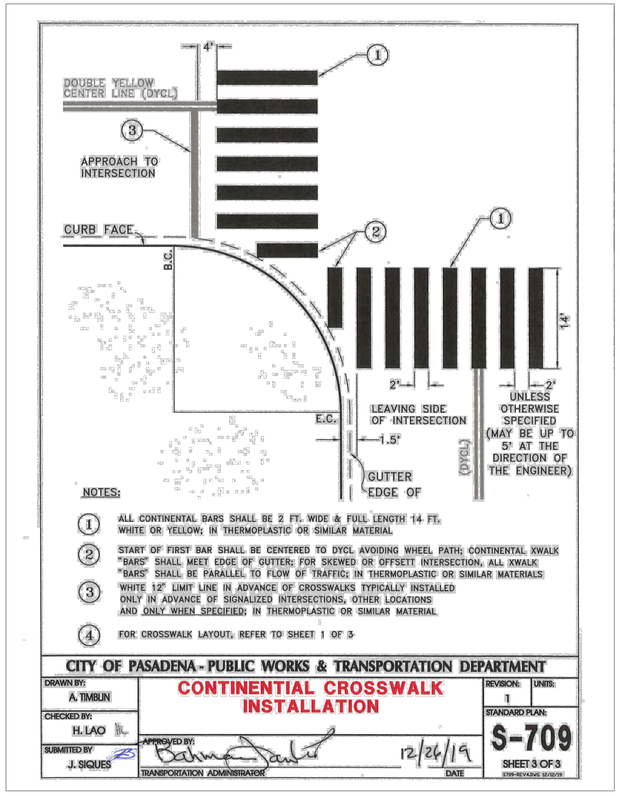
DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT	PARKER—MAYBERRY BRIDGE ACCESS IMPROVEMENTS	SHEET	10 OF 13
LIMITS		DWG. NO.	L-2.04
SCALE	AS NOTED	ACCOUNT NO.	



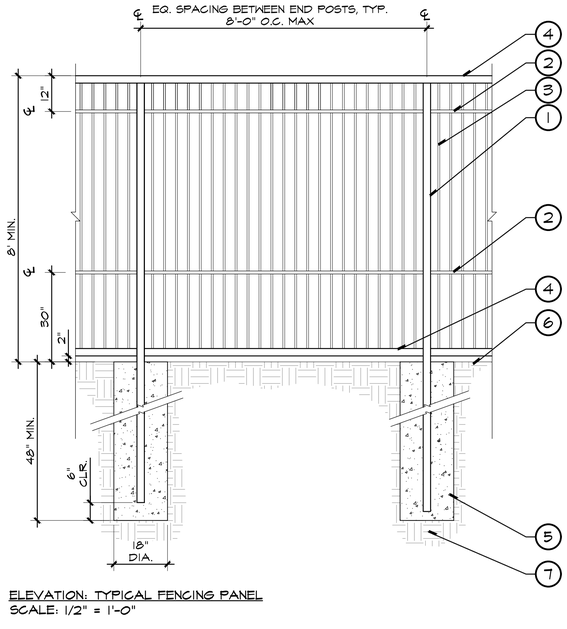
NOTES:

1. ALL CONTINENTAL BARS SHALL BE 2 FT. WIDE & FULL LENGTH 14 FT. WHITE OR YELLOW; IN THERMOPLASTIC OR SIMILAR MATERIAL
2. START OF FIRST BAR SHALL BE CENTERED TO DYCL AVOIDING WHEEL PATH; CONTINENTAL XWALK "BARS" SHALL MEET EDGE OF GUTTER; FOR SKEWED OR OFFSETT INTERSECTION, ALL XWALK "BARS" SHALL BE PARALLEL TO FLOW OF TRAFFIC; IN THERMOPLASTIC OR SIMILAR MATERIALS
3. WHITE 12" LIMIT LINE IN ADVANCE OF CROSSWALKS TYPICALLY INSTALLED ONLY IN ADVANCE OF SIGNALIZED INTERSECTIONS, OTHER LOCATIONS AND ONLY WHEN SPECIFIED; IN THERMOPLASTIC OR SIMILAR MATERIAL
4. FOR CROSSWALK LAYOUT, REFER TO SHEET 1 OF 3

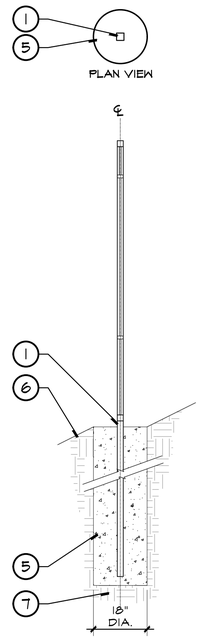
CITY OF PASADENA - PUBLIC WORKS & TRANSPORTATION DEPARTMENT

DRAWN BY: A. TIMBLIN	CONTINENTIAL CROSSWALK INSTALLATION	REVISION: 1	UNITS:
CHECKED BY: H. LAO		STANDARD PLAN: S-709	
SUBMITTED BY: J. SIQUES	APPROVED BY: TRANSPORTATION ADMINISTRATOR — DATE 12/26/19	SHEET 3 OF 3	

3 PEDESTRIAN CROSSWALK STRIPING



ELEVATION: TYPICAL FENCING PANEL
SCALE: 1/2" = 1'-0"



SECTION: TYP. FENCE POST
SCALE: 1/2" = 1'-0"

LEGEND:

1. 2½"X2½"X⅜" SQ. TUBULAR STEEL FENCE POST AT 8'-0" O.C. MAXIMUM.
2. 1" X 2½" TUBULAR STEEL MID RAILS AS INDICATED.
3. 5/8" SQ. TUBULAR STEEL PICKETS AT 4" O.C. (16 GAUGE).
4. 2½" SQ. TUBULAR STEEL TOP AND BOTTOM RAIL.
5. CONCRETE FOOTING AND REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
6. FINISH GRADE.
7. 90% COMPACTED, MOISTURE-CONDITIONED NATIVE SUBGRADE.

NOTES

A. ALL HORIZONTAL ALIGNMENTS SHALL PARALLEL FINISH GRADE. POSTS AND PICKETS SHALL BE VERTICAL. PROVIDE CUSTOM SHOP DRAWINGS AND CONSTRUCTIONS BASED UPON FIELD MEASUREMENTS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

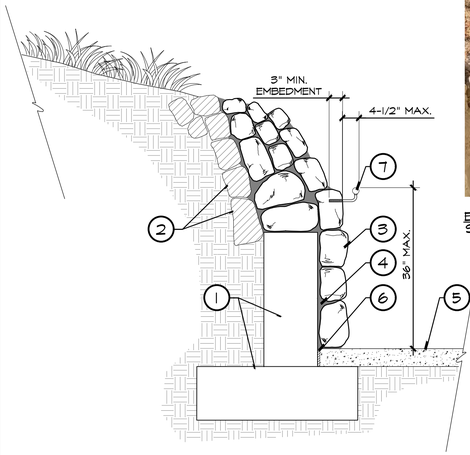
B. ALL FENCE MEMBERS TO BE 11 GAUGE UNLESS OTHERWISE NOTED.

C. WELDING: BEVEL ALL MEMBERS PRIOR TO WELDING. ALL WELDS SHALL BE CONTINUOUS AND GROUND SMOOTH.

D. FABRICATION SHALL BE PER FIELD MEASUREMENTS CONDUCTED BY CONTRACTOR.

E. ALL TUBULAR STEEL FENCING SHALL RECEIVE THE FOLLOWING APPLICATIONS TO ALL TUBULAR MEMBERS.
SURFACE PREPARATION: ALL METAL RAILINGS AND POSTS SHALL BE FINISHED PER SPECIFICATIONS (METALIZED AND COATED WITH TNEMEC TWO COAT SYSTEM. PRIMER TO BE L69. TOP COAT TO BE SERIES 750). SEE SPECIFICATIONS.
CONTACT: DUSTIN. (310)-804-2325

2 TUBULAR STEEL FENCING



SECTION VIEW - EXISTING CONCRETE WALL WITH ROCK COBBLE VENEER
SCALE: 3/4" = 1'-0"

EXISTING CONDITIONS
SCALE: N.T.S.

LEGEND:

1. EXISTING CONCRETE WALL AND FOOTING. TO REMAIN, PROTECT-IN-PLACE.
2. EXISTING GROUTED RIVER ROCK COBBLE. TO REMAIN, PROTECT-IN-PLACE.
3. 'ARROYO BOULDERS'. LOCAL SAN GABRIEL MOUNTAIN GRANITE BOULDERS FROM CITY STOCKPILE IF AVAILABLE, OR VULCAN QUARRY IN AZUSA, CA. AVAILABLE FROM **ROCK STRUCTURES**, CONTACT (951) 371-1112. ROCKS PROXIMITY TO ONE ANOTHER SHALL BE HANDTIGHT, WITH SAND SWEPT JOINTS.
4. MORTAR SETTING BED. MORTAR SHALL BE CLASS 'D' PER SECTION 202-1.5.1 OF THE STANDARD SPECIFICATIONS, RECESSED 1" MAXIMUM FROM EXPOSED FACE OF THE STONE AND 2/3 MINIMUM STONE EMBEDMENT.
5. ADJACENT CONCRETE STAIRS. SEE DETAIL 1, SHEET L-2.06 AND CONSTRUCTION PLAN FOR LOCATION.
6. CONTINUOUS EXPANSION JOINT PER DETAIL 2, SHEET L-2.01.
7. 3/4" SCH 40 STEEL HANDRAIL BRACKET. CORE DRILL AND EPOXY SET INTO 'ARROYO BOULDER', EMBED MIN. 3" IN. SPACED 4'-0" O.C. MAX. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK** BACKFILL (800) 523-6570. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH 'ARROYO BOULDERS'. SEE HANDRAIL DETAIL - DETAIL 2, SHEET L-2.06.

NOTES:

A. USE ROCKS OF GENERAL RECTANGULAR SHAPE BETWEEN 45 AND 120 LBS. PLACE LARGER ROCKS ON BOTTOM.

B. CONTRACTOR TO PROVIDE NON-PRODUCTION MOCK UP OF ROCK COBBLE VENEER FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

1 ROCK COBBLE VENEER ON EXISTING WALL

SUBMITTED

CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT — CRAIG A. SENSENBACH LICENSE No. 2547 — STATE OF CALIFORNIA
Signature
08/31/2023 Renewal Date
4/26/2023 Date

DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

REVISIONS

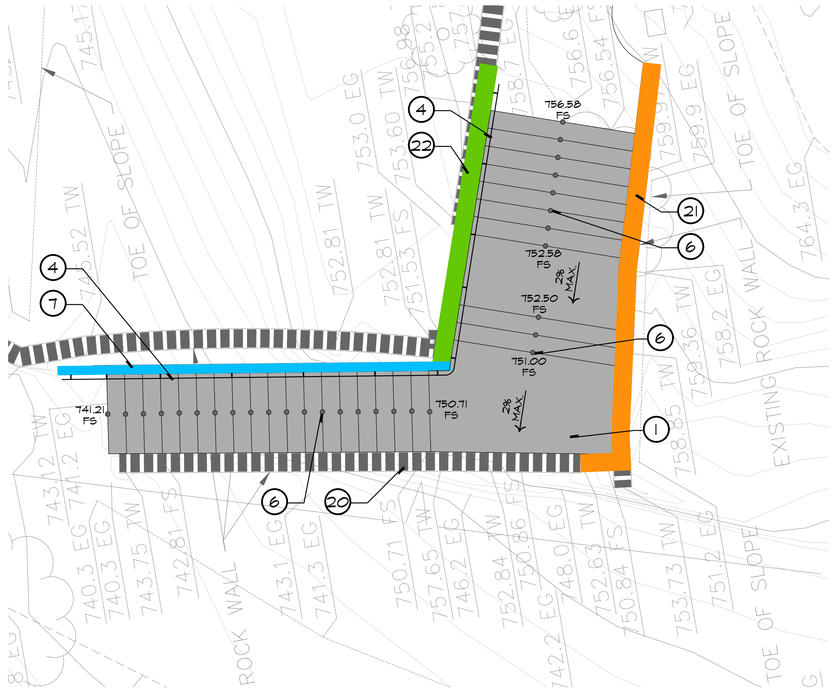
MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

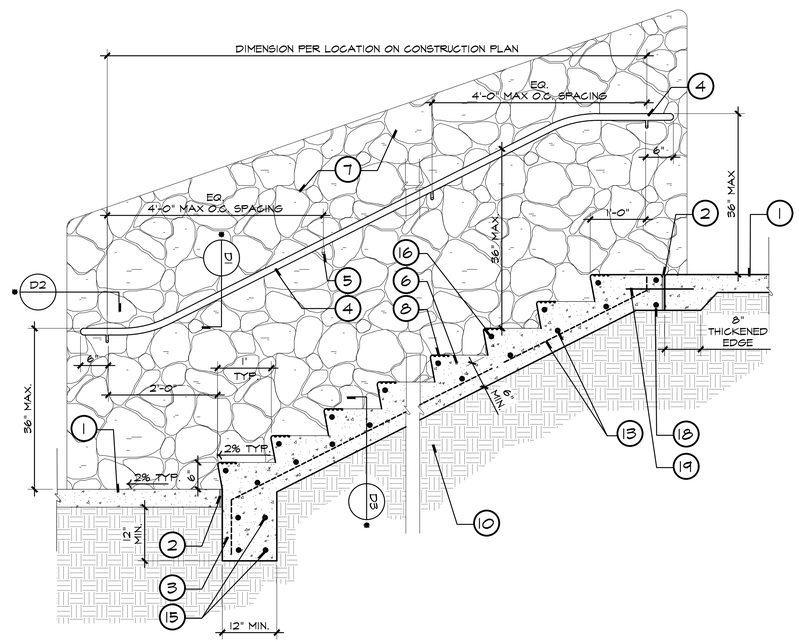
PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS		SHEET 11 OF 13	
LIMITS		DWG. NO. L-2.05	
SCALE AS NOTED	ACCOUNT NO.		

SUBMITTED

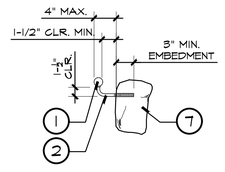
CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023



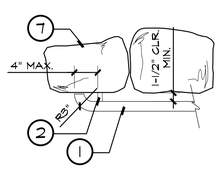
PLAN ENLARGEMENT - RECONSTRUCTED STAIRS AND HANDRAIL
SCALE: 1/4" = 1'-0"



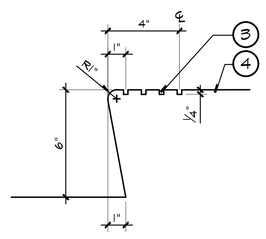
SECTION - RECONSTRUCTED CONCRETE STAIRS WITH WALL MOUNTED HANDRAIL
SCALE: 3/4" = 1'-0"



D1 - HANDRAIL SECTION VIEW
SCALE: 1" = 1'-0"



D2 - HANDRAIL END CONDITION PLAN VIEW
SCALE: 1" = 1'-0"



D3 - SAFETY STRIP GROOVES AT TREADS
SCALE: 3" = 1'-0"

LEGEND

1. 1-1/2" DIA. (1-7/8" O.D.) METAL RAIL, WELD AND HANDRAIL SUPPORT BRACKET CONTINUOUS.
2. 3/4" SCH 40 STEEL HANDRAIL BRACKET. CORE DRILL AND EPOXY SET INTO 'ARROYO BOULDER', EMBED MIN. 3" IN. SPACED 4'-0" O.C. MAX. SECURE WITH **SUPER POR-ROK** OR APPROVED EQUAL. APPLY 1/2" BEAD OF "GUN GRADE" POLYMER SEALANT BY: **PECORA**, OR APPROVED EQUAL, TO TOP OF **SUPER POR-ROK** BACKFILL *(800)* 523-6570. COVER SURFACE OF WET SEALANT WITH SILICA SAND. SEALANT COLOR: TO MATCH 'ARROYO BOULDERS'.
3. PROVIDE TOOL GROOVED TREADS AS DIMENSIONED ON ALL TREADS. TREADS SHALL RECEIVE 3" WIDE NON-SLIP SAFETY PAINTED STRIP, CONTINUOUS ALONG LENGTH OF EACH STEP. COLORS: YELLOW AT TOP AND BOTTOM RISERS / BLACK ON ALL INTERMEDIATE RISERS. PAINT BY: **MONOPOLE INC.**, TYPE: **FLOORCOAT**, MODEL: 2400 / 2500, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS *(818)* 500-8585
4. STAIR PAVING NATURAL GREY CONCRETE WITH STEEL TROWEL, NON-SLIP FINISH. SEE DETAIL 1, SHEET L-2.01.
5. 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED SUBGRADE PER GEOTECHNICAL REPORT. SEE SPECIFICATIONS.
6. REBAR AND REINFORCEMENT PER STRUCTURAL ENGINEER, AS SHOWN THIS DETAIL.
7. ADJACENT ROCK COBBLE VENEER ON EXISTING WALL. SEE DETAIL 1, SHEET L-2.05.

NOTES:

- (A) PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION FOR CNB ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
- (B) FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
- (C) ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
- (D) ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
- (E) BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
- (F) ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
- (G) SEE GEOTECHNICAL REPORT (PAVEMENT RECOMMENDATIONS) FOR CONCRETE TYPE AND STRENGTH. SEE SPECIFICATIONS.
- (H) CONCRETE AND REINFORCING INFORMATION INDICATED HEREIN, ARE MINIMUMS AND ARE BASED ON INFORMATION CONTAINED IN THE PROJECT GEOTECHNICAL REPORT AVAILABLE AT THE TIME OF PREPARATION OF THESE DOCUMENTS.
- (I) SEE CONSTRUCTION PLAN FOR LOCATION.

2 HANDRAIL DETAILS

LEGEND:

1. CONCRETE PAVING. SEE CONSTRUCTION PLANS AND DETAIL 1, SHEET L-2.01.
2. CONTINUOUS COLD JOINT. PER DETAIL 2, SHEET L-2.01.
3. CONCRETE FOOTING AND REINFORCEMENT AS SHOWN.
4. HANDRAIL. SEE DETAILS D1 - D2 ON DETAIL 2, THIS SHEET.
5. STEEL HANDRAIL BRACKET. SEE DETAIL 2, THIS SHEET.
6. POURED-IN-PLACE CONCRETE STEPS. SEE CIVIL PLANS FOR GRADES / FINISH SURFACE ELEVATIONS. NON-SLIP STEEL TROWEL FINISH. SEE DETAIL 2, ENLARGEMENT D3, THIS SHEET FOR TREAD.
7. ROCK COBBLE ON EXISTING WALL. SEE DETAIL 1, SHEET L-2.05.
8. TOOL GROOVED TREADS. SEE DETAIL 2 ENLARGEMENT D3, THIS SHEET.
9. FINISH GRADE, SEE CIVIL ENGINEERS PLANS.
10. 90% MINIMUM COMPACTED, MOISTURE-CONDITIONED SUBGRADE.
11. (2) #5 TOP AND BOTTOM REBAR, CONTINUOUS.
12. #4 REBAR x J AT 12" O.C. VERTICAL, CENTERED IN WALL. ALTERNATE BEND AT FOOTING AS SHOWN.
13. #4 REBAR AT 12" O.C. EACH WAY, AT MID HEIGHT OF SLAB.
14. (2) #4 CONTINUOUS REBAR. 2" CLEAR FROM TOP OF WALL.
15. (2) #4 CONTINUOUS, TOP & BOTTOM REBAR.
16. #4 NOSING BAR, CONTINUOUS, TYPICAL.
17. #4 REBAR AT 12" O.C. HORIZONTAL.
18. (2) #4 CONTINUOUS REBAR.
19. SPEED DOWEL AT 24" O.C. SPACING. SEE DETAIL 2, SHEET L-2.01.
20. EXISTING STONE WALL TO BE PROTECTED-IN-PLACE.
21. CONCRETE PIER FOOTING RETAINING WALL WITH ROCK COBBLE VENEER. SEE DETAIL 1, SHEET L-2.04.
22. MASONRY BLOCK RETAINING WALL WITH ROCK COBBLE VENEER. SEE DETAIL 3, SHEET L-2.04.

NOTES:

- (A) PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION FOR CNB ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
- (B) FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
- (C) ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
- (D) ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
- (E) BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
- (F) ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
- (G) HEIGHT OF HANDRAIL FROM FINISH SURFACE OF TREAD TO TOP OF HANDRAIL SHALL BE MAX 36
  - FOR "DX" CALLOUTS, REFER TO DETAIL 2, THIS SHEET FOR HANDRAIL ENLARGEMENT DETAILS AND CONNECTIONS.
- (H) ALL CONCRETE TO BE TYPE II/V, MINIMUM COMPRESSIVE STRENGTH PER SPECS. MAXIMUM WATER CEMENT RATIO (W/C) TO BE 0.5. SEE GEOTECH REPORT.
- (I) CONCRETE AND REINFORCING INFORMATION INDICATED HEREIN, ARE MINIMUMS AND ARE BASED ON INFORMATION CONTAINED IN THE PROJECT GEOTECHNICAL REPORT AVAILABLE AT THE TIME OF PREPARATION OF THESE DOCUMENTS.
- (J) SEE CONSTRUCTION PLANS FOR LOCATION.

1 RECONSTRUCTED CONCRETE STAIRS WITH WALL MOUNTED HANDRAIL

LICENSED LANDSCAPE ARCHITECT
CRAIG D. SENSENBACH LICENSE NO. 2547
STATE OF CALIFORNIA
Signature
08/31/2023
Renewal Date
4/26/2023
Date

CONSTRUCTION DETAILS

DESIGNED BY:	CS
DRAWN BY:	TP
CHECKED BY:	CS/ZM

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

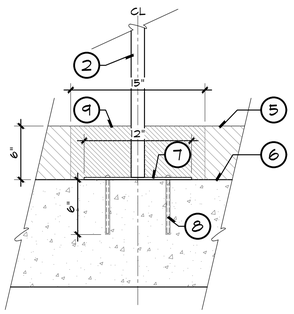
CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED
ACCOUNT NO.

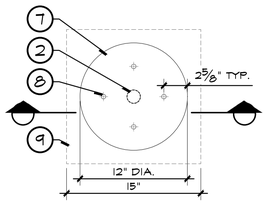
SHEET 12 OF 13
DWG. NO. L-2.06

SUBMITTED

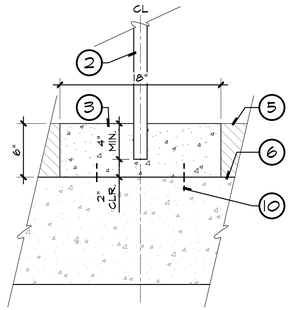
CRAIG SENSENBACH DATE
REGISTERED LANDSCAPE ARCHITECT
NO. 2547
REGISTRATION EXPIRES AUGUST 21, 2023



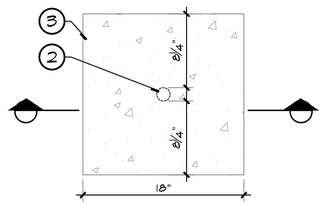
SECTION
SCALE: 1-1/2" = 1'-0"



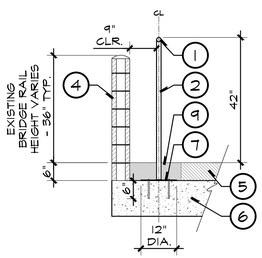
PLAN VIEW
SCALE: 1-1/2" = 1'-0"



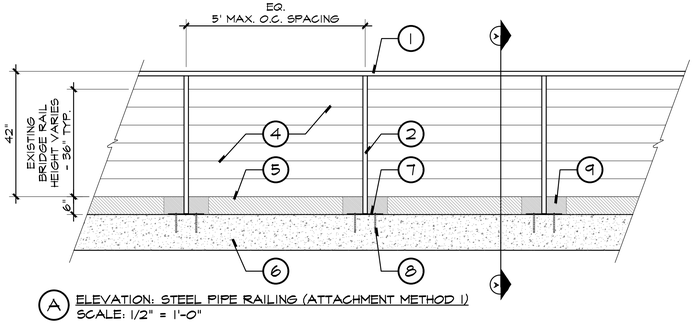
SECTION
SCALE: 1-1/2" = 1'-0"



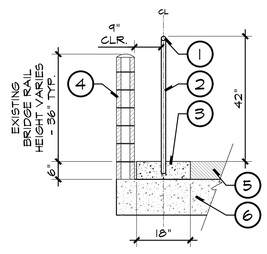
PLAN VIEW
SCALE: 1-1/2" = 1'-0"



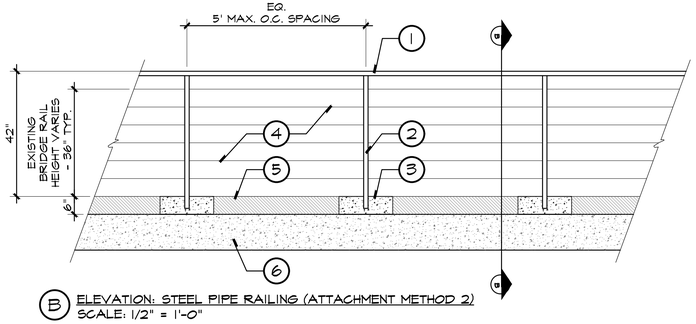
SECTION 'A-A'
SCALE: 1/2" = 1'-0"



A ELEVATION: STEEL PIPE RAILING (ATTACHMENT METHOD 1)
SCALE: 1/2" = 1'-0"



SECTION 'B-B'
SCALE: 1/2" = 1'-0"



B ELEVATION: STEEL PIPE RAILING (ATTACHMENT METHOD 2)
SCALE: 1/2" = 1'-0"

ATTACHMENT METHOD 1

ATTACHMENT METHOD 2

LEGEND:

1. 1-1/2" DIA. (1-7/8" O.D.) SCH. 40 GALVANIZED STEEL RAIL, WELD TO POST, CONTINUOUS.
2. 1-1/2" DIA. (1-7/8" O.D.) SCH. 40 GALVANIZED STEEL POST, SPACED 6'-0" O.C. MAX. WELD TO STEEL BASE, CONTINUOUS.
3. 18" DIA. CONCRETE FOOTING PER STRUCTURAL ENGINEER.
4. EXISTING PARKER-MAYBERRY CONCRETE BRIDGE RAIL. PROTECT-IN-PLACE.
5. EXISTING 6" ASPHALT PAVING ON PARKER-MAYBERRY BRIDGE.
6. EXISTING PARKER-MAYBERRY BRIDGE DECK STRUCTURE. PROTECT-IN=PLACE.
7. 12" DIA. X 1/4" STEEL BASE PLATE.
8. (4) 1/4" X 6" BOLTS EPOXY SET INTO PRE-DRILLED HOLE IN EXISTING CONCRETE BRIDGE STRUCTURE.
9. 6" ASPHALT PAVING.
10. #4 DOWELS AT 9" O.C. EPOXY SET INTO EXISTING CONCRETE BRIDGE STRUCTURE. TWO (2) PER CONCRETE FOOTING PER STRUCTURAL ENGINEER.

NOTES:

A. PROVIDE SCALED SHOP DRAWINGS OF HANDRAIL CONSTRUCTION BASED ON FIELD MEASUREMENTS FOR CITY ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION. SEE SPECIFICATIONS.
B. FABRICATION SHALL BE PER FIELD MEASUREMENTS VERIFIED BY THE CONTRACTOR.
C. ALL STEEL AND FITTINGS SHALL BE METALIZED AND ZINC/EPOXY TNEMEC COATED, BLACK, PER SPECS. SUBMIT SAMPLE OF POST AND RAIL FABRICATION TO SHOW WELDS AND FINISH. SEE SPECIFICATIONS.
D. ALL METALIZED STEEL PIPE SHALL BE SCH 40, UNLESS NOTED OTHERWISE.
E. ALL STEEL MEMBERS TO RECEIVE EASED, ROLLED EDGES AND ENDS.
F. BEVEL ALL MEMBERS PRIOR TO WELDING. WELD & GRIND FLUSH.
G. ALL METALIZED STEEL WELDS TO BE CONTINUOUS GROUND SMOOTH.
H. SEE SPECIFICATIONS FOR VIBRATION MONITORING AND BRIDGE PROTECTION MEASURES.

1 STEEL PIPE RAILING ADJACENT TO EXISTING BRIDGE RAIL

CONSTRUCTION DETAILS

LICENSED LANDSCAPE ARCHITECT
CRAIG D. SENSENBACH LICENSE NO. 2547
STATE OF CALIFORNIA
Signature
08/31/2023
Renewal Date
4/26/2023
Date

DESIGNED BY: CS
DRAWN BY: TP
CHECKED BY: CS/ZM

REVISIONS

MARK	DATE	DESCRIPTION	BY	CHKD.	APPROVED

CITY OF PASADENA—DEPARTMENT OF PUBLIC WORKS

PROJECT PARKER-MAYBERRY BRIDGE ACCESS IMPROVEMENTS
LIMITS
SCALE AS NOTED
ACCOUNT NO.

SHEET 13 OF 13
DWG. NO. L-2.07

ATTACHMENT B.

Historical Resources Avoidance and Protection Plan

Historical Resources Avoidance and Protection Plan

Mayberry & Parker Bridge Access Improvements Project, Pasadena, CA

January 2024

Prepared For:
P S O M A S
225 South Lake Avenue, Suite 1000
Pasadena, California 91101

Prepared By:
Sarah Corder, MFA and Samantha Murray, MA

South Environmental LLC
2061 N. Los Robles Avenue, Ste. 205
Pasadena, California 91104

Table of Contents

Appendix

1. Introduction

South Environmental was retained by Psomas to prepare a Historical Resources Avoidance and Protection Plan (Plan) for the Mayberry & Parker Bridge Access Improvements Project (project) located in the City of Pasadena, California. The project proposes to make improvements to existing trails, walls, bridges, and related elements that fall within the National Register of Historic Places (NRHP) Pasadena Arroyo Parks and Recreation District (District), which includes the Lower Arroyo and Central Arroyo as well as numerous contributing elements comprising buildings, sites, landscape elements, and structures throughout.

Because the project proposes improvements within an historic district, all proposed project improvements were reviewed for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, specifically the Standards for Rehabilitation (the Standards), and the Arroyo Seco Design Guidelines (Appendix A), to avoid/minimize impacts to historical resources in accordance with the California Environmental Quality Act (CEQA). Additionally, this Plan was prepared to ensure that that the proposed project will not impact any contributing elements of the District associated with the project, including the Arroyo stone walls, circulation system, the Mayberry & Parker Bridge, and the Colorado Street Bridge. Although the project does not include any changes to the Colorado Street Bridge, the Colorado Street Bridge is attached to and situated directly above the Mayberry & Parker Bridge.

This Plan was prepared by Principal Architectural Sarah Corder, MFA and Cultural Resources Director Samantha Murray, MA, who meet the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61).

Project Location

The project site encompasses approximately 0.61 acres located below and immediately to the north and south of the Colorado Street Bridge overpass of the Arroyo Seco Channel, in the northernmost portion of the Lower Arroyo Seco, City of Pasadena (City), County of Los Angeles (County). The site is located on City parkland/open space, which is open daily from sunrise to sunset. The project site is fully accessible to the public via public and private transportation routes, as well as by various trails for pedestrians, bicyclists, and/or equestrians. South Arroyo Boulevard, Westminster Drive, and Desiderio Park are situated immediately to the east of the site. The site is regionally accessible via State Route 134 (SR-134), which is located less than 250 feet to the north and northwest.

Project Description

The project proposes to (1) provide new pedestrian access to the historic Mayberry Parker Bridge (Bridge); (2) rehabilitate existing trails through stabilization of deteriorated trail segments, stairways, stone walls, and eroded slopes; and (3) provide a new crosswalk at Arroyo Boulevard and Westminster Drive. All aspects of project design and implementation would be in conformance with the Lower Arroyo Seco Master Plan (Pasadena 2003c) and associated Arroyo Seco Design Guidelines (Guidelines) (Pasadena 2003), the City's Arroyo Seco Public Lands Ordinance and Historic Preservation Ordinance, and the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (SOIS, Standards) (Weeks and Grimmer 1995, revised 2017). It is noted that the steel pipe railing, discussed further below, is proposed to be steel versus the Guidelines-preferred "well designed wrought iron" railing to minimize the weight and load of the new structure on the existing Bridge deck.

The following project components are proposed:

- Trail Rehabilitation and Disintegrated Granite (DG) Paving
- Pedestrian Crosswalk
- Improve Pedestrian Access Across the Mayberry Parker Bridge
- Tubular Steel Fencing Along Portion of Mayberry Parker Bridge
- Steel Pipe Railing Adjacent to Existing Mayberry Parker Bridge Rail
- Repair Concrete Stairs, Handrail, and Walls
- Installation of New or Replacement Stone Walls
- Installation of Landscape Boulders

Construction Schedule and Activities

Project construction is anticipated to begin in Summer 2024 over a period of approximately nine months, barring unforeseen delays such as weather and/or supply chain issues. For the purposes of this analysis, the project is assumed to be completed in a single phase as a conservative approach. However, it is possible that proposed improvements would be implemented incrementally over a longer period, as funds, materials, and/or necessary approvals and agreements are available.

Project construction would occur from Monday through Saturday, without activity on Sundays or federal holidays, within an 8-hour period between the hours defined in Section 9.36.070 of the City of Pasadena Municipal Code (PMC) (i.e., 7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 5:00 PM on Saturday). Construction and demolition debris to be exported would be disposed at Scholl Canyon Landfill, located approximately two miles from the site, at 3001 Scholl Canyon Road in Glendale. Consistent with the City's Construction and Demolition Waste Management Ordinance (Section 8.62 et. seq. of the PMC), a minimum of 75 percent of the construction and demolition debris generated during construction would be diverted through recycling or reuse.

The majority of trail and bridge improvement activities would be performed with hand tools (i.e., manual, non-powered or powered), such as chain saws, weed cutters, and walk-behind/handheld trencher, except possibly bobcat(s), large truck(s), or similar equipment to move boulders, larger scale materials (e.g., fencing, railing), and surficial soil. Grading would be minimal and localized to provide structural support for paved surfaces, fenceposts, stone pilasters, and stone walls. Excavation is estimated to range from 5 inches deep for the stone paving at the ADA ramp to a minimum of 4 feet deep and 18 inches wide for each fencepost. Earthmoving is estimated to range from three inches to one foot deep for most of the proposed improvements. The shallow excavation is expected to be contained to previously disturbed and/or man-made surficial materials. Deeper excavation in small (e.g., four to five square feet or less) and localized areas for fenceposts, pilasters, walls, and the ADA ramp, estimated to range from approximately two feet to ten feet deep, would be required.

No import or export of soil would be necessary to implement the project; soils generated by grading would be redistributed evenly at the surface within the immediate area of each activity. However, import of disintegrated granite, concrete, aggregate backfill, and stone/boulders would be required. Steel fencing, steel railing, steel handrail, and crosswalk infrastructure would be among the new or replacement materials installed as part of the project.

Private construction worker vehicles/pickup trucks, delivery vehicles, and haul trucks would access the project site via South Arroyo Boulevard. Equipment staging and parking for construction workers would be on City of Pasadena property within the Lower Arroyo Seco within existing parking areas, on trails in the vicinity of construction activity, and/or other existing disturbed areas near ongoing construction activity. No vegetation removal or trimming would occur to provide areas for staging. Any haul truck or delivery truck movement on or near the site would be limited to the existing dirt road adjacent to the Arroyo Seco channel unless necessary to move or deliver equipment or supplies. Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. Installation of the crosswalk striping, corner, and sign would require temporary lane closures on Arroyo Boulevard and Westminster Drive. However, traffic control would be implemented consistent with City requirements, and one lane of through traffic would be available at all times.

All aspects of project design and implementation are consistent with the Arroyo Seco Design Guidelines (Pasadena 2003a) and are consistent with the Central Arroyo Master Plan and the Lower Arroyo Seco Master Plan, respectively (Pasadena 2003b and 2003c).

To ensure that the proposed project will not impact any contributing elements of the District, this Historical Resources Avoidance and Protection Plan (Plan) was developed to protect character-defining features of the District that have the potential to be inadvertently damaged by project-related construction activities. These features include the Arroyo stone walls, circulation system, the Mayberry & Parker Bridge, and the Colorado Street Bridge.

Responsible Parties[1]

The following individuals have been identified as a responsible party for implementation of this Plan and are referenced throughout the Plan where applicable. Contact information has been provided for each party and should be updated as needed throughout the project.

Project Manager: Name, Company, Email, Phone Number

Project Engineer: Name, Company, Email, Phone Number

Construction Manager: Name, Company, Email, Phone Number

[1] These individuals will be determined through coordination between South Environmental, Psomas, the City, and One Arroyo Foundation.

Project Architectural Historian: Name, Company, Email, Phone Number (Note: the project architectural historian must meet the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61)).

2. Identified Historical Resources

The Pasadena Arroyo Parks and Recreation District

The proposed project overlaps the Pasadena Arroyo Parks and Recreation District (District), which was listed in the NRHP in 2008 under Criterion A for its significance in the context of parks and recreation at the local level. Specifically, the District is significant for its critical role in the development of Pasadena as a recreational destination, stemming from national movements to protect scenic places and open spaces and has a period of significance of 1909-1939. A general description of the District as presented in the NRHP Registration Form is provided below (Grimes 2007:2):

> The district [sic] is located on the western edge of the City of Pasadena and includes two distinct geographical areas: the Lower Arroyo and Central Arroyo. The Central Arroyo is an approximate 2.5-mile stretch, and is bounded on the north by the Foothill Freeway, and to the east by the City of Pasadena. It is bounded to the south by the Colorado Street Bridge and to the west by the City of Pasadena. The Lower Arroyo, an approximate 1.75-mile stretch, is bounded on the north by the Colorado Street Bridge, to the east by the City of Pasadena, to the south by the City of South Pasadena, and to the west by the City of Pasadena. The concrete flood control channel runs through the entire length of the Lower and Central Arroyo, dividing the canyon into east and west sides. The two areas are linked by a system of roads, bridges, and trails. The Central Arroyo functions as an urban park with recreational facilities including the Rose Bowl Stadium, while the Lower Arroyo has been set aside for more passive activities and has a more naturalistic landscape. The district is comprised of a variety of elements including twenty-seven contributing and fifty-seven noncontributing features. Most of the original features of the district still remain from the period of significance and retain a high degree of physical integrity. Most of the noncontributing features are the small buildings around the Rose Bowl Stadium and the pedestrian bridges over the flood control channel.

Contributing elements of the District identified within the proposed project area include the following:

- Mayberry & Parker Bridge
- Colorado Street Bridge
- Arroyo Stone Retaining Walls

- Circulation System

3. Required Protection

The following paragraphs detail the specific protection that must be implemented for all character-defining features within the District that have the potential to be adversely impacted by the proposed project. While avoidance of identified historical resources is preferred, complete avoidance is not always feasible. Therefore, proper implementation of the following protection measures will ensure that all project-related impacts to historical resources within the project site remain less than significant.

General Requirements

The following requirements form the basis for implementation of this Plan and must be adhered to throughout the project.

1. **Communication.** On-site meetings at the beginning of the project, during the project, and at the completion of the project are a key component of the Plan. The goal of on-site meetings is to identify potential risks and issues related to historic materials and elements. These meetings should include all responsible parties identified above in Section 1, at a minimum, and serve as an opportunity to discuss feasibility of installing and removing protection measures throughout the project. Communication is also important during the project if there is a compliance issue, inadvertent discovery of historical resources, and/or damage to an identified historical resource during construction activities.

2. **Documentation.** Conditions of all identified historical resources with the potential to be adversely impacted by the project will be documented by a qualified architectural historian[2] throughout the pre-construction, construction, and post-construction phases of the project.

3. **Implementation.** Due to the potential for impacts to historical resources, the implementation of the Plan is critical to protecting the identified historical resources and ensuring that all protection measures are feasible to be maintained for the duration of the construction activity involving any contributing element of the District.

4. **Monitoring.** Monitoring by a qualified architectural historian and vibration monitoring by a qualified engineering professional with experience with historic buildings and structures is required throughout the course of the project, as specified below:

[2] Meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61)

a. **Architectural Historian Monitoring** - On-site check-ins and monitoring will be undertaken by the project architectural historian. In general, all work with the potential to impact contributing elements of the District (i.e., work on the existing Arroyo stone walls, installation of landscape boulders, and trail improvements) will require, at a minimum, weekly check-ins and on-site monitoring of construction activities at the discretion of the project architectural historian in consultation with the project manager. However, all construction occurring on the Mayberry & Parker Bridge (i.e., all proposed improvements to the bridge railings and the adjacent installation of stone pilasters/trail makers) must be monitored by the architectural historian. During monitoring, the architectural historian will be provided safe access to all areas of the project site to observe construction activities and verify that historical resources are adequately protected.

b. **Vibration Monitoring** – Given the historic nature and age of the District components, vibration monitoring by a qualified engineering professional is required when working on or within 25 feet of historical resources in and near the project like the Mayberry & Parker Bridge, the Colorado Street Bridge, and the Arroyo stone walls/staircase. Caltrans has established thresholds, related to the Peak Particle Velocity (PPV), for construction vibration. (Caltrans 2020). The construction manager will ensure, in consultation with the project engineer, that all construction related vibration will not exceed the appropriate PPV thresholds established for single event sources and continuous or frequent sources.

   The project architectural historian and project engineer must be notified within at least 48 hours of any construction activities occurring on or within 25 feet of the Mayberry & Parker Bridge, the Colorado Street Bridge, or Arroyo stone walls/staircase.

Pre-construction Protection Requirements

The following protection requirements will be implemented by the construction manager and project architectural historian on site prior to the start of any construction activities occurring within 25 feet of contributing elements of the District (i.e., the Mayberry & Parker Bridge, Colorado Street Bridge, Arroyo stone retaining walls, and the trail/circulation system):

General Protection

- Identify and notify all responsible project contacts who will have an important role in implementation of the Plan prior to initiation of construction activities. Once identified, all responsible party contact information must be distributed to the construction manager and crew members, as applicable.

- Hold a pre-construction meeting with the project architectural historian to provide an overview of the construction schedule including the duration of work occurring within the District, the type of work that will be conducted, construction staging and laydown areas, and the type of equipment that will be used. If the project is implemented in phases, a pre-construction meeting will be held at the initiation of each phase and will address the protection measures applicable to the resources affected by that phase.

- Provide educational training for all construction crew members, informing them that they are working within the boundaries of a historic district that requires avoidance and protection in consideration of federal, State, and local environmental regulations. The training should also provide clear direction to all crew for avoiding important character-defining features of the District, including the Arroyo stone walls, paths of circulation, the Mayberry & Parker Bridge, and the attached Colorado Street Bridge.

- The use of large or vibration-producing equipment (e.g., excavators. earth movers, compactors, jack hammers) in proximity to District elements must first be approved by the project architectural historian in consultation with the project engineer. Vibration monitoring by a qualified engineering professional is always required when working on or immediately adjacent to the Mayberry & Parker Bridge, the Colorado Street Bridge, and all Arroyo stone walls/staircase.

- Provide the project architectural historian with at least 48 hours' notice for initial placement of physical barriers so that they, or a designee, may be present to monitor this work.

- The project architectural historian will oversee the placement of highly visible and reflective signage and/or flagging tape that clearly indicates which elements of the District should be avoided.

- The project architectural historian will photograph the existing conditions of all character-defining features prior to commencement of work. Photographs will be keyed to plans as necessary.

- All project plans and specifications must include details of identified historical resources and required protection measures such as flagging, avoidance, and signage.

- Temporary protection will not be directly attached to historic surfaces unless approved by the project architectural historian.

- All debris removal will be undertaken in a manner that avoids all identified historical resources whenever possible.

- Smoking on and within 100 feet of the project site boundary is prohibited to avoid potential fire damage to the historical resources.

Arroyo Stone Walls

- Per Appendix E of the Arroyo Seco Design Guidelines (see Appendix A of this Plan): "Rehabilitation of [the stone walls] is an ongoing process and, as a specific location is designated for maintenance and repair, the contract shall specify a sample test area of the work for review and approval of workmanship and materials by the Pasadena Parks & Natural Resources and Design & Historic Preservation staff before work proceeds on the entire contract." (City of Pasadena 2003a: E-1). Therefore, approval by the City is the first protection requirement for the Arroyo stone walls.

- Install concrete k-rails, pylons, flagging, fencing, or sacrificial plywood or lumber as appropriate to prevent damage to stone walls. While concrete k-rails may offer the most protection, installation of a k-rail may be infeasible in many portions of the narrow trails, leaving plywood or fencing as better protection options. Protection of the Arroyo stone walls is designed to be flexible to allow for adaptation to each unique circumstance where the walls require protection. The type of protection used will be based on the specific circumstances of each stone wall segment and will be determined in consultation with the project architectural historian.

- The project architectural historian will inspect and photograph the existing conditions of all Arroyo stone wall segments requiring protection prior to commencement of work.

Circulation System

- Existing trail segments adjacent to proposed trail repairs such as drainage improvements, installation of DG paving, and reconstruction of trail features like the staircase and retaining walls must be protected before construction begins to ensure they are not damaged during construction. Depending on the specific circumstances of each trail segment and the staircase, concrete k-rails, pylons, flagging, fencing, or sacrificial plywood or lumber may serve as appropriate forms of protection and will be determined in consultation with the project architectural historian.

- The project architectural historian will inspect and photograph the existing conditions of any character-defining features of historic paths of circulation within the project site prior to commencement of work.

Mayberry & Parker Bridge

- Prior to the start of construction activities, the project architectural historian will photograph any historical elements of the bridge proposed for removal or replacement as part of the project.

- Any areas of historical sensitivity will be clearly flagged by the project architectural historian prior to the start of construction activities.

- The project architectural historian and the construction manager will confirm that all proposed fencing complies with the Arroyo Seco Design Guidelines prior to commencement of construction activities.

- Construction staging and laydown must be a safe distance from the bridge and bridge abutments and determined in consultation with the project architectural historian prior to placement of any construction materials.

Colorado Street Bridge

- No work will occur on the Colorado Street Bridge, including the abutments, as part of this project.

- Construction staging and usage must be a safe distance from the Colorado Street Bridge abutments and determined in consultation with the project architectural historian.

- Any construction activities occurring below the Colorado Street Bridge on the Mayberry & Parker Bridge with the potential to produce vibration will require vibration monitoring by a qualified engineering professional for the Colorado Street Bridge, as the two structures are attached.

Construction Protection Requirements

The following protection requirements shall be implemented by the construction manager and overseen by the project architectural historian during all construction activities occurring within or adjacent to any contributing element of the District:

General Protection

- Ensure that the physical barriers required by this Plan, including concrete k-rails, flagging, fencing, and signage, remain in place for the duration of construction of each approved improvement.

- Notify the project architectural historian of any plans to modify, relocate, or remove the protective barriers, fencing, or signage from their original locations with at least 48 hours' notice.

- Only historically accurate repair and replacement materials and techniques will be used, in compliance with the Arroyo Seco Design Guidelines. The materials and techniques will be reviewed and approved by the City of Pasadena prior to commencement of construction activities.

- New construction will be undertaken in compliance with the Arroyo Seco Design Guidelines.

- Construction materials and equipment will not be stored or placed against bridge abutments or on the deck Mayberry & Parker Bridge or any other existing structures that are contributing elements to the District.

- In person monitoring and inspection will occur at a minimum on a weekly basis to ensure that no historical resources are adversely impacted during demolition and construction processes. All construction occurring on the Mayberry & Parker Bridge (i.e., all proposed improvements to the bridge railings and the adjacent installation of stone pilasters/trail makers) must be monitored by the architectural historian.

- Vibration monitoring is required for any work involving heavy or vibratory equipment on or near the Mayberry & Parker bridge.

- Any haul truck or delivery truck movement on the site will be limited to South Arroyo Boulevard and the existing dirt road adjacent to the flood control channel.

- Soils generated by shallow earthmoving will be redistributed evenly at the surface within the immediate area of each activity unless not geotechnically feasible as determined by the project engineer or City engineer.

- Construction debris will not be stored near elements to the District that have been flagged prior to initiation of construction by the project architectural historian.

- Construction staging activities will be placed a safe distance of at least 50 feet from identified historical resources and in consultation with the project architectural historian.

Arroyo Stone Walls

- All Arroyo stone wall repair and replacements will be made in accordance with Appendix E of the Arroyo Seco Design Guidelines, which provides detailed guidance for the stones, mortar, mortar caps, footings, and retaining walls.
- Stone will be removed using hand tools to the maximum extent possible.
- Stone will be removed in manageable sections to preserve the historic fabric and in consultation with the project architectural historian.
- Once removed, all stone will be placed in a secured and marked location to avoid damage during construction activities.
- Heavy equipment will not be staged or used immediately adjacent to Arroyo stone walls or storage location(s) to avoid ground borne vibration that could adversely impact the stone walls.
- Arroyo stone of various sizes will be imported from the City stockpile at Hahamongna Watershed Park or other City-recommended location that can provide stone boulders and cobble from other locations in the San Gabriel Valley foothills that derive from the same geologic units for use in the project.

Circulation System

- Existing soft shoulders or rolled curbs will be protected during construction.
- Existing vegetation adjacent to trails and roads will be protected/avoided to the maximum extent feasible. Any vegetation trimming or removal shall be approved by the City.
- Work in the vicinity of flagged historical elements will be undertaken with hand tools to the maximum extent possible.
- Construction staging of any equipment must be more than 50 feet from identified historic features.
- All trail rehabilitation and improvement activities will be performed with hand tools whenever feasible (i.e., manual, non-powered or powered). If boulders or surficial soil

require movement, it is permissible to use a bobcat (s), large truck(s) or similar equipment, provided that adjacent historical resources are adequately protected.

- Trail improvement and stair reconstruction activities will be completed in compliance with the Arroyo Seco Design Guidelines.

- New steel fencing will be completed in compliance with the Arroyo Seco Design Guidelines.

Mayberry & Parker Bridge

- Construction staging and laydown areas must be a minimum of 50 feet from the bridge and bridge abutments and determined in consultation with the project architectural historian.

- The use of large or vibratory equipment (i.e., excavators. earth movers, compactors, jack hammers, etc.) on the Mayberry & Parker Bridge will be avoided. In the event that heavy or vibratory equipment is required to be used on the bridge, the work must first be approved by the project architectural historian in consultation with the project engineer to ensure that it will not inadvertently damage the bridge or exceed appropriate PPV thresholds (Caltrans 2020). Vibration monitoring is always required when using construction equipment on or within 25 feet of the Mayberry & Parker Bridge.

- The project architectural historian must be notified within at least 48 hours of any proposed work adjacent to or on the bridge.

- The project architectural historian must be notified within at least 48 hours of the movement or removal of any physical barriers for the bridge abutments.

Colorado Street Bridge

- No work will occur on any portion of the Colorado Street Bridge as part of this trail improvement project.

- Construction staging and usage must be a safe distance of at least 50 feet from the bridge abutments and in consultation with the project architectural historian.

- Any construction activities occurring below on the Mayberry & Parker Bridge with the potential to produce vibration will require vibration monitoring for the Colorado Street Bridge, as the two structures are attached.

- The project architectural historian must be notified within at least 48 hours of the movement or removal of any physical barriers for the bridge abutments.

Post-construction Protection Requirements

The following protection requirements will be implemented by the construction manager and the project architectural historian upon completion of all construction activities occurring within the District:

General Protection

- The project architectural historian will be given at least 48 hours' notice for removal of physical barriers so that they, or a designee, may be present to monitor this work.

- All flagging and physical barriers will be removed with the oversight of the project architectural historian.

- Hold a post-construction meeting with the project architectural historian so the post-construction condition of the features and any final project issues are communicated for inclusion in the monitoring report.

- Within two weeks of completion of the project, or each portion of the project is implemented, the project architectural will prepare a monitoring report that will include a summary of the monitoring methodology, a summary of all monitoring spot-checks, photographs of features before and after construction occurred, a review of all project-related improvements for conformance and compliance with the Standards and the Arroyo Seco Design Guidelines, and a discussion of any deviations from the original plans or issues encountered during construction or that portion of construction.

Arroyo Stone Walls

- Per Appendix E of the Arroyo Seco Design Guidelines: "All stones moved to the work site and not used to complete the contract shall be returned to the stockpile and remain the property of the City of Pasadena." If stone from another location than the City stockpile is used, any excess stones may be managed at the discretion of the City project manager.

4. References

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Appendix A:
Arroyo Seco Design Guidelines

ARROYO SECO
MASTER PLANS

Arroyo Seco Design Guidelines

CITY OF PASADENA

Adopted February 28, 2003

THE CITY OF PASADENA

ARROYO SECO DESIGN GUIDELINES

Adopted: February 28. 2003

The Arroyo Seco Master Plans consist of the following:

Hahamongna Watershed Park Master Plan
Central Arroyo Master Plan
Lower Arroyo Master Plan
Rose Bowl Use Plan
Arroyo Seco Design Guidelines

Pasadena Department of Public Works
Parks and Natural Resources Division

Julie Gutierrez, *Past Director*
Martin Pastucha, Director
Kathy Woods, *Parks and Natural Resources Administrator*
Rosa Laveaga, *Arroyo Seco Park Supervisor, Project Manager*
John Cox, *Assistant Project Manager*

Prepared by

FORMA PLANNING & DESIGN

Cover Art by rhandi

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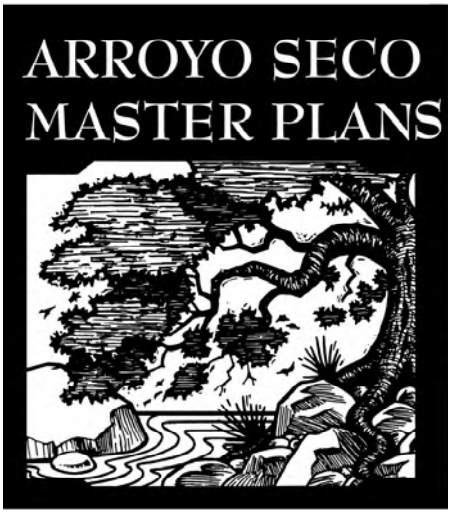


INTRODUCTION

1.0 PURPOSE AND INTENT

The purpose of the Arroyo Seco Design Guidelines is to provide:
1.1

1.1 Design criteria for preservation, restoration, and conservation of the Arroyo Seco leading to a unified park design that reflects the natural environment, the heritage of the site, and its relationship to the traditions of the City of Pasadena; and

1.2 A unifying set of design criteria for improvements set forth in the Arroyo Seco Master Plans consistent with preservation and restoration of the natural environment.

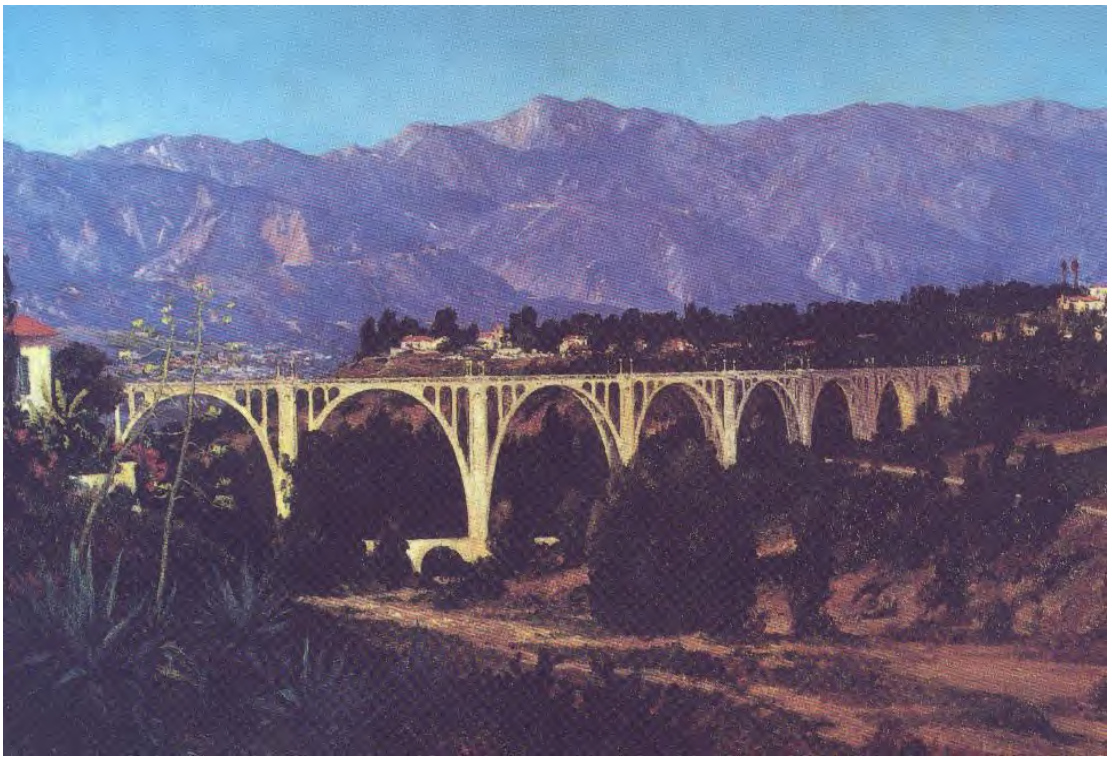


Figure 1 View of the Colorado Street Bridge in the Arroyo Seco.

2.0 FRAMEWORK

2.1 Arroyo Seco Master Plan

. The Arroyo Seco Master Plans include the following:

- Hahamongna Watershed Park Master Plan
- Central Arroyo Seco Master Plan
- Lower Arroyo Seco Master Plan
- Rose Bowl Use Plan
- Design Guidelines for the Arroyo Seco

2.2 Goals and Objectives of the Arroyo Seco Master Plan

These Design Guidelines are intended to provide guidance for implementation of the objectives set forth in the Arroyo Seco Master Plan and other applicable directives such as the Arroyo Seco Lands Ordinance, pertinent traffic management plans, multigovernment agreements, and other appropriate standards.

3.0 IMPLEMENTATION PROCESS

3.1 Park Improvements and Capital Improvement Projects

All projects shall be subject to the requirements for design review pursuant to the Pasadena Municipal Code. Park improvements shall be subject to the City's Capital Improvements Projects (CIP) review process. As such, the Parks and Natural Resources Division Administrator (under the Department of Public Works) shall find that the major improvements and/or CIP project is in substantial conformance with the Arroyo Seco Design Guidelines and will initiate reviews by the City's Design Commission, Recreation and Parks Commission, and the Historic Preservation Commission (if appropriate). Reference to commission review in specific sections of these guidelines does not imply that commission review is unnecessary with respect to other areas.

3.2 Minor Park Improvements

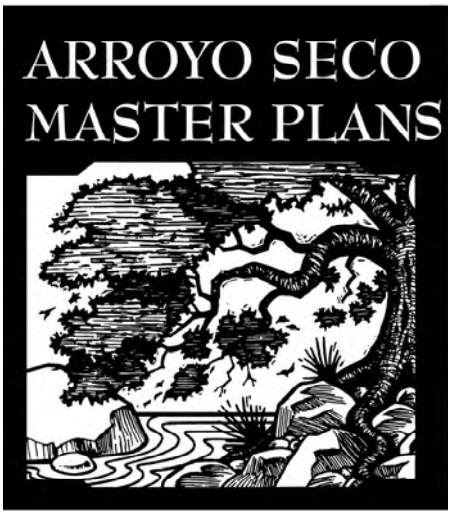
All projects shall be subject to the requirements for design review pursuant to the Pasadena Municipal Code. Minor park improvement activities will be subject to a substantial conformance review by the Parks and Natural Resources Administrator and the Planning and Development Director for compliance with the Arroyo Seco Design Guidelines. These minor improvements include repair of existing structures and replacement of plant materials.

Figure 2 The riparian nature of the Arroyo Seco.

4.0 AMENDMENT PROCESS

Amendments to the Arroyo Seco Design Guidelines shall be reviewed by the Design Commission, the Recreation and Parks Commission, and the Historic Preservation Commission (if appropriate), and then submitted to the City Council for approval.

Chapter 1. Over-Riding Design Principles



CHAPTER 1

OVER-RIDING DESIGN PRINCIPLES

1.1 OVERVIEW

These Design Guidelines seek to ensure an ongoing effort to preserve the unique character of the Arroyo Seco by providing a unifying set of design principles for the three sub-areas that make up Pasadena's Arroyo Seco. The commonalities between the three sub-areas are the backbone of these design guidelines. Factors to be considered are:

- Restoration of the Arroyo Seco Stream Course and Environment;
- Habitat Restoration;
- Preservation of Cultural Resources;
- Enhancement of Appropriate Recreational Opportunities;
- Limitation of Man-made Objects in the Natural Environment;
- Flood Management in Balance with the Natural Environment;
- The Challenge of Integrating and Regulating Private Use within the Arroyo Seco;
- Water Conservation and Protection of Water Resources, and
- Public Safety and Accessibility

Each of the three sub-areas also have the following unique elements which contribute to the formulation of the design principles.

1.2 Hahamongna Watershed Park

- As the largest undeveloped, though altered, wild area in the City of Pasadena, and the gateway to the wilderness area of the National Forest to the north, its character should minimize man-made modifications. Any improvements should be done to

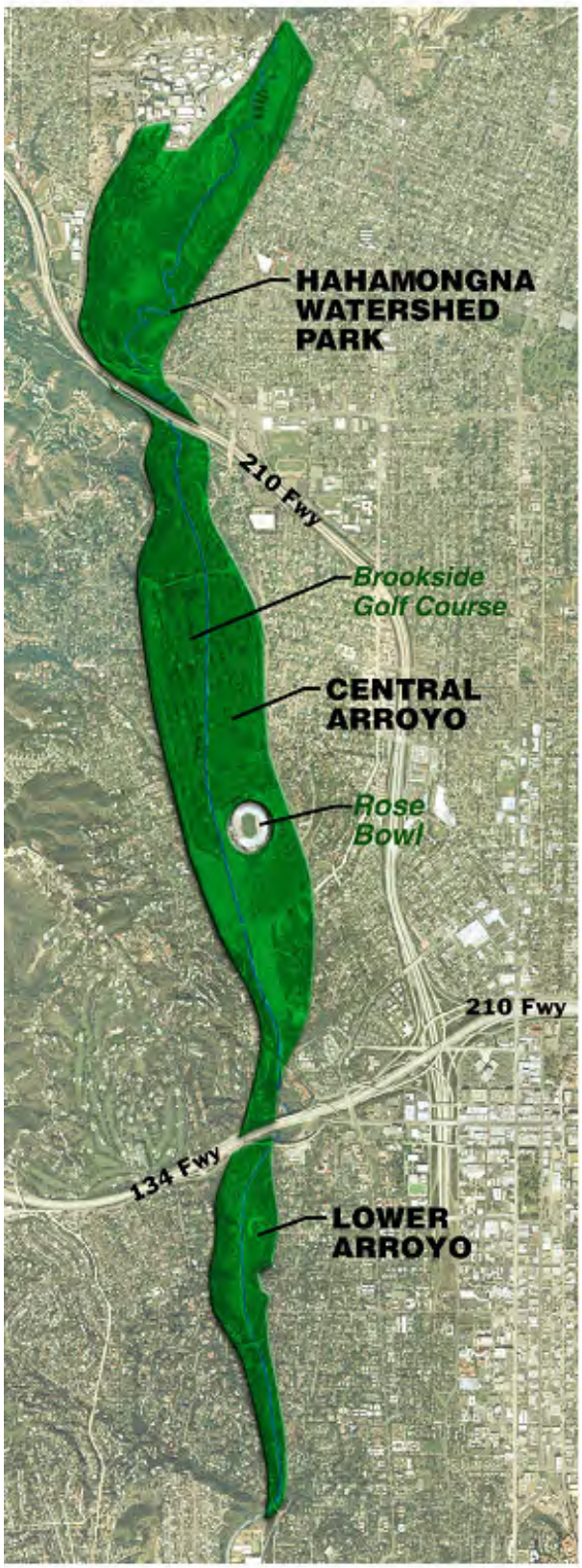


Figure 1-1 Pasadena's Arroyo Seco consists of three distinct but related sub-areas.

minimize their impact and dominance over any native plants or animals.

- The proximity to the San Gabriel Mountain range mandates close attention to flood and sediment management for the safety of downstream uses;

The rehabilitated Devils Gate Dam provides opportunities for the seasonal holding of water for water conservation and habitat restoration; and

- The area provides 40% of Pasadena's water supply.

1.3 Central Arroyo Seco

- The Rose Bowl is set in the midst of a natural preservation area and residential neighborhoods;

- This sub-area has:

    - The most developed park land and the greatest active recreational use;

    - The largest amount of paved parking;

    - The greatest amount of turf with the existence of Brookside Golf Course; and

    - Culturally significant structures, walls, and trails that need preservation.

    - Attention must be paid to traffic mitigation including public transportation.

1.4 Lower Arroyo Seco

- This area has been designated a cultural heritage landmark;

- This sub-area has:

    - The most confined area for competing recreational uses;

    - Culturally significant structures and walls that need preservation;

    - An experimental low-flow stream restoration project; and

      Residential neighborhoods in close proximity to natural preservation areas

1.5 General Guiding Principles for Design Guidelines

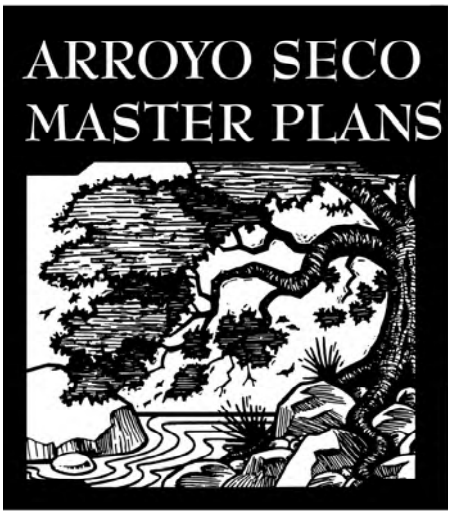
The chapters that follow set forth numerous guidelines to ensure a desirable result for future improvements in the Arroyo Seco. The following general guiding principles are at the core of each of the specific guidelines developed for the Arroyo Seco and its environment:

- Limit the creation of man-made objects and minimize any impact to the natural environment.
- Enrich and promote the unique natural character of the Arroyo Seco;
- Restore the Arroyo Seco stream course and its environment;
- Encourage simplicity of design and integrity of materials;
- Provide a safe and secure environment for people and animals within the limits of the natural environment;

Figure 1-2 La Casita in the Lower Arroyo embodies many of the general guiding principles.

- Avoid use of colors that distract from the natural environment;
- Use appropriate scale to ensure harmony with surroundings and the human scale;
- Use natural materials;
- Provide accessibility for all where possible;
- Preserve natural resources;
- Ensure that improvements can be maintained; and
- Preserve historical and cultural elements.

Chapter 2. Habitat Restoration and Landscape Improvements



CHAPTER 2

HABITAT RESTORATION AND LANDSCAPE IMPROVEMENTS

Consistent with the Arroyo Seco Ordinance and the Arroyo Seco Master Plans, new plantings within the Arroyo Seco shall be native species when practical. There are also unique settings which include long-established gardens and high-use recreation areas. This chapter seeks to clarify these distinctions and provide criteria to assist with the implementation of habitat restoration and ongoing park landscaping improvements which preserve the unique character of the Arroyo Seco.

This chapter is organized as follows:

Figure 2-1 Habitat restoration is planned for much of the Arroyo Seco in Pasadena including this reach in the Central Arroyo, south of Devil's Gate Dam.

Figure 2-2 Old stands of coast live oak trees shall be protected

2.1 HABITAT RESTORATION

The conservation and restoration of open space areas within the Arroyo Seco is the cornerstone of creating a cohesive park and one that embodies the natural heritage of this important watershed. Only if the natural areas are carefully restored and conserved in perpetuity, will the true potential for this park be realized. The Arroyo Seco can become an ecological living laboratory and a respite for Pasadena residents as well as a testimony to their commitment to ecological preservation.

2.1.1 Definition

Habitat restoration plans or projects for the Arroyo Seco Master Plan will:

1. Preserve the historical ecosystem of the Arroyo;
2. Reestablish, enhance, and manage the plant communities native to the Arroyo Seco Region of the San Gabriel foothills;
3. Protect and enhance the Arroyo Seco Watershed;
4. Allow public access to the natural habitats and open space consistent with the goal of protecting the habitat by considering the carrying capacity;
5. Enhance the habitat for greater biodiversity;
6. Create and/or maintain continuous transitions of natural habitat as a wildlife corridor that connects Pasadena's Arroyo Seco to the larger Arroyo Seco Watershed and the San Gabriel foothills; and
7. Provide for the maintenance, monitoring, and assessment of the plan andd its projects with special consideration for additional plantings.

Figure 2-3 Changes in habitat from summer to winter in the Hahamongna Watershed Park.

2.1.2 General Guidelines

1. All habitat restoration plans will comply with the special regulations for natural preservation areas from Pasadena City Ordinance, Chapter 3.32, Arroyo Seco Public Lands, or its amendment.

2. Native plant communities will be established in areas that previously supported their ecology but have become altered.

3. Habitat restoration will maintain local genetic diversity.

4. Habitat restoration plan criteria:

   a. All restoration plans shall have the benefit of specialty consultants to ensure viability of restoration efforts;
   b. Restoration efforts will promote better quality habitat for wildlife;
   c. Seed and other planting material (e.g., cuttings and container stock) will be collected from the project vicinity to the extent feasible, and/or, if necessary, will utilize plant stock material from reputable native plant nurseries;
   d. Site preparation and planting techniques for all restoration efforts will comply with the Biological Technical Report for the Hahamongna Watershed Park and the Plant Palettes found in Appendix A;
   e. Responsibility for maintenance of planting and for the monitoring of their progress is required;
   f. Habitat restoration plans will eliminate ruderal areas within the Arroyo Seco as much as possible due to their low habitat value for wildlife and native plant species;
   g. Seasonal timing (late fall, winter, and early spring rainy seasons) for planting will be anticipated to attain a successful restoration planting.

Figure 2-4 Opportunities for riparian habitat restoration and/or enhancement are prevalent throughout the Arroyo Seco

5. Restoration Plan projects shall be designed to restore the natural plant communities for improved habitat quality for biodiversity (flora and fauna), sustainability, landscape aesthetics, and the concomitant enjoyment by park users.

6. Any habitat restoration site that requires grading will apply landform-contouring principles found in Appendix C.

7. Any habitat restoration should strive to remove nonhistoric structures and return original grades where feasible.

Figure 2-5 Use of City-produced mulch is a valuable tool for successful habitat restoration projects.

2.2 LANDSCAPE IMPROVEMENTS

2.2.1 Definition

Landscape improvement areas are those areas that are not identified as habitat restoration areas but where planting is desired. Landscape improvement areas typically include areas around buildings, natural open space areas, grass areas not used as sports fields, roadways, specialty gardens, and planned beautification areas.

2.2.2 General Guidelines

1. Landscape improvements will preserve the historical heritage of the City of Pasadena and the Arroyo Seco.

2. Landscape improvements will preserve and protect the natural resources within the Arroyo Seco.

3. Landscape plantings in any area that is not a habitat restoration area or natural open space shall:

   a. Utilize species from plant communities native to the Arroyo Seco Watershed (see Appendix A);
   b. Use California native plants;
   c. Use drought-tolerant, water- conserving species;
   d. Keep use of nonnative species to a minimum and only specify when native species will not be in the best interest of the landscape improvement due to the need to blend with an existing adjoining landscape, maintenance constraints, environmental site conditions (soil, exposure, micro-climate, etc.) and/or desired aesthetics; and
   e. Any nonnative plants shall be selected so as not to pose a threat of excessive proliferation or threat to native species.

4. Multipurpose fields and open play areas within the Arroyo

Figure 2-6 Drainage solutions within park area shall utilize naturalized design solutions.

Seco will use turf as the predominate plant material; however, the use of turf should be kept to the minimum extent needed.

5. Turf varieties that are water conserving, tolerant of heavy use, and not dependent on chemical fertilizers for their success are preferred.

6. Heavy-use or vehicular-access turf areas will be constructed using products that provide added structure and resist compaction.

Figure 2-7 The landscape at La Casita is a fine example of native planting .

7. The use of herbicides and pesticides will be discouraged.

8. Where required, custom-mixed N-P-K ratios of organic fertilizer (such as Ultra-gro) in combination with irrigation best management practices are preferred to ensure complete absorption and to avoid impacts on groundwater.

9. Mulching in open areas and within the drip line of new plantings is highly encouraged for weed control. Mulch shall be of the highest quality and free of weed seeds and invasive seedpods, free of palm fronds and pine needles, and free of chips from invasive plants (castor bean, arundo dona, and tree tobacco).

10. Responsibility for maintenance of planting and monitoring the progress of new planting areas is required.

11. Landscaping will be used to provide screening, as needed, between identified park-usage areas such as active recreation areas, structures, and parking lots. Landscape screening criteria include:

    a. Choosing a plant palette indigenous to nearest open space area;
    b. Grouping trees to simulate natural stands;
    c. Planting canopy trees to unify an area choosing dominant tree type indigenous to the area;
    d. Installing intermediate trees for screening, windbreak, and visual interest;
    e. Planting shrubs as baffles and screens and to add visual interest with floral and foliage display; and

f. Installing ground cover to stabilize slopes and berms.

12. Vines should be permanently secured to vertical building/wall surfaces. At retaining walls, vines and shrubs shall be installed and spaced so as to completely cover walls at maturity.

13. Plantings should be arranged by similar moisture needs.

14. The arterial streets and collector roads within the Arroyo Seco shall be pedestrian oriented. Canopy shade trees are to be regularly spaced within beds of shrubs and/or groundcover. This treatment will also provide a canopy over the walkways for a more pleasant pedestrian environment. The use of similar understory plant materials will unite a landscape theme along a roadway.

15. Plantings of the slopes in the Arroyo Seco will be landscaped with:

a. Species from plant communities native to the Arroyo Seco Watershed (see Appendix A); and/or
b. California native species.

16. The slopes of the Arroyo Seco shall serve and contribute to the wildlife corridor of the Arroyo Seco Watershed.

17. Slopes that serve as buffers between developed park areas and surrounding residential neighborhoods will be landscaped with taller tree species in natural groupings to mitigate any impacts caused by the developed park areas.

18. Tree placement on slopes adjacent to parking lots will be landscaped to mitigate any impacts caused by the parking lots.

19. Irrigation Systems shall not be exposed.

Figure 2-8 Native flowers highlight trail-hiking experience.

2.3 FIRE MITIGATION

2.3.1 Definition

The sloped areas are the steep banks of the Arroyo Seco, some of which are identified as natural preservation areas by the Arroyo Seco Public Lands Ordinance. These areas have unique landscape requirements.

Fire Mitigation is the management of the threat of fire and is of great importance in the Arroyo Seco landscape.

2.3.2 General Guidelines for Sloped Areas

1. Fire protection efforts will not jeopardize the stability of the slopes.

2. Fire protection considerations shall not take precedence over appropriate habitat restoration.

3. Slopes adjacent to the new and existing park areas as well as residential neighborhoods will receive special landscape treatment to mitigate the visual impact on the park areas. The slopes will be landscaped at a greater density than the average interior project slopes. The slopes will have an informal quality relating to a more naturalized character.

4. Tree placement on slopes adjacent to parking lots will receive exceptional efforts to mitigate the visual impact of the parking lots.

Figure 2-9 Slopes adjacent to developed park areas, and separating park areas from a residential neighborhood, will incorporate taller trees in natural groupings.

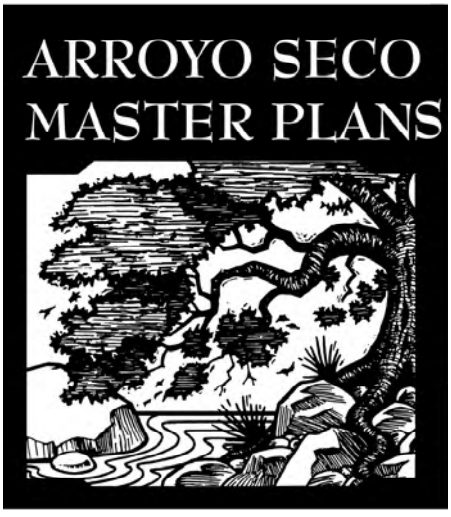
2.3.3 General Guidelines for Fire Mitigation

1. Fire mitigation shall be balanced with habitat conservation and slope protection.

2. Denuding of slopes shall be prohibited.

Figure 2-10 Brush clearing shall be balanced with habitat conservation and slope protection.

Chapter 3. Architecture



CHAPTER 3
ARCHITECTURE

Pasadena has played an important role in the evolution of its architecture. Architectural expression within and adjacent to the Arroyo Seco will continue to reflect this contribution and be an important part of the total effect of the park's impact on the community. Each structure should seek to demonstrate the harmony between what is built by man and what exists naturally.

This chapter is organized as follows:

Figure 3-1 Structures in the Arroyo Seco shall demonstrate a harmony with nature.

3.1 ARCHITECTURAL DESIGN CONCEPTS

3.1.1 Definition

These guidelines provide the direction for all new construction, renovations, alterations, improvements and replacements to existing structures and event-related facilities within the Arroyo Seco.

3.1.2 General Guidelines

1. All structures shall be of a scale and character appropriate to the Arroyo Seco and their location shall be environmentally sensitive and integrated to the site.

2. All facilities shall emphasize the natural setting and use of natural materials.

3. Structures and facilities that are replacements to existing buildings/facilities shall contribute to and enhance the park environment as a whole without any loss or degradation of habitat or openspace. Any such buildings shall not significantly increase the floor area or height over the original structure.

4. Structures serving the same function (such as restrooms) shall use the same color palette throughout the Arroyo Seco. Building color shall not use more than three colors and should be warm and earth-toned. When appropriate, arroyo stone should be incorporated into the design.

5. Architecture shall provide visual and textural interest discernable through site-sensitive massing, quality building detailing, materials, and colors.

6. The siting and layout of the improvement shall consider the microclimate of the Arroyo Seco and modifications to the microclimate induced by the improvement. The microclimate produced by a building in relation to its

Figure 3-2 This demonstrates a before and after of an existing restroom facility with the earthen tones and stone design specification simulated.

immediate surroundings will impact users. Microclimate factors include sun, shade, glare, precipitation, surface and ground water, and wind and breezes. Modifications to microclimate can be produced by landscaping, walls, grading, hardscape, water features, lighting, planting, irrigation, and other built or natural elements as well as the improvement itself.

9. The use of sustainable materials and sustainable design approaches is strongly encouraged.

3.1.3 Unique Settings

1. In the Central and Lower Arroyo Seco, new structures are currently restricted in the Natural Preservation Areas to those required for utility operations, park maintenance, and protection of plant and animal communities.

1. All changes to existing structures within the Lower Arroyo are subject to the Historical Landmark review process.

Figure 3-3 La Casita del Arroyo, is a popular landmark in the Lower Arroyo Seco and represents many positive architectural elements.

3.2 PUBLIC USE STRUCTURES

3.2.1 Recreational/Clubhouse Facilities

1. All structures shall have colors sympathetic to the Arroyo Seco color palette. (See 3.1.2 #4.)

2. All existing structures shall seek to incorporate ADA accessibility standards into improvement plans.

3.2.2 Restrooms

1. All bathroom structures will be of the same color palette. (See 3.1.2 #4.)

2. Design and layout of restrooms shall be easily accessible from picnic and primary activity areas. When adjacent to play areas, some consideration shall be given to providing limited sports equipment storage. Since the adoption of these guidelines, a storage policy was put into place; see Appendix F .

3. Restroom structures shall be accessible and comply with ADA requirements.

4. The use of doors and gates shall be avoided during hours of operation by locking them open.

5. Restroom structures shall be able to be secured when not in use.

6. In the upper and lower Arroyo Seco, sloped roofs with fire-retardant slate-colored shingles shall be used to prevent collection of leaves and trash. Gutters are not desirable.

7 Storage rooms for maintenance and recreational use storage should always be considered in the design to minimize the number of structures.

8. There shall be a landscape plan for every restroom.

Figure 3-4 Existing Restroom in the Oak Grove upper Arroyo Seco

3.2.3 Maintenance Facilities

Maintenance facilities include, but are not limited to, storage yards, maintenance field offices, and large bin-storage areas (Refer to Appendix F, Park Equipment Storage Facility Policy).

1. Maintenance facilities shall be located away from major areas of activity and from natural settings.

2. Maintenance facilities shall be accessible from an existing all-weather road.

3. Maintenance facilities shall be enclosed for safety. (Refer to Walls, Fencing, and Gates, Chapter 7)

4. Maintenance facilities shall provide an aesthetically designed enclosure or covered area to protect equipment and vehicles from the elements.

5. Maintenance facilities shall be located in as remote a location as possible and aesthetically designed and screened to minimize any visual impacts to the greater park area.

6. Site facilities shall be located or landscaped to provide tree canopy to minimize views from below and above.

3.2.4 Open Structures and Bridges

1. Wood and timber construction is preferred for overhead trellises.

2. Open structures shall use wood beams in combination with wood, concrete, brick, arroyo stone piers, unpainted weathering steel or other natural materials, i.e., copper and wrought iron.

3. Built-in grills, outdoor sinks, water fountains, and picnic tables shall be considered in the design and layout of picnic shelters. (Refer to Site Furnishings, Section 11.7.)

Figure 3-5 The trellis structure at La Casita in Lower Arroyo is a good example of heavy timber construction.

3.2.5 Permanent Storage Facilities

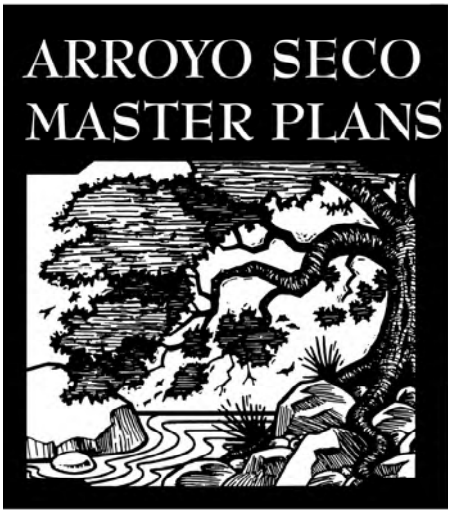
1. All storage facilities in the Arroyo Seco shall comply with the City's Park Equipment Storage Facility Policy, Appendix F.

.

3.2.6 Event-Related Facilities

1. Event-related facilities shall be defined as all those temporary structures and lights relating to the facilitation of temporary events including but not limited to fabric or fabric-like structures, tensile structures, inflatable structures, kiosks, directional devices (including temporary signs and way-finding signs), fencing, viewing stands, and corrals.

Chapter 4. Cultural Resources



CHAPTER 4
CULTURAL RESOURCES

The Cultural Resource Chapter gives general guidelines for the preservation of cultural resources associated with park improvements in the Arroyo Seco.

4.1 DEFINITION

Cultural resources refer to areas, places, buildings, structures, outdoor works of art, natural features, and other objects having a special historical, cultural, archaeological, architectural, community, or aesthetic value.

The organization of this chapter is as follows:

Figure 4-1 A heritage Live Oak circa 1900 stands as timeless reminder of Arroyo Seco's natural environment.

Figure 4-2 Here is an early photo, "Looking North" up the Arroyo Seco.

Figure 4-3 A turn of the century "Brookside Breakfast" photo documents traditional recreational use of the Arroyo Seco.

4.2 CULTURAL RESOURCES PRESERVATION

4.2.1 General Guidelines

1. The cultural and historical heritage of the Arroyo Seco will be preserved and enhanced.

2. The restoration and enhancement of the Arroyo Seco will balance the needs of the active and passive park users with the preservation of native plant and animal habitat for a sustainable ecosystem throughout the park.

3. Opportunities for interpretive sites and/or educational centers that provide public information about the cultural resources of the Arroyo Seco or their preservation, including Native American traditions, will be encouraged.

4. Preservation, conservation, or enhancement of cultural resource areas shall be undertaken with the assurance that they can be properly maintained.

5. All improvement plans will seek to preserve and protect any paleontological and archaeological resources and sites within the Arroyo Seco.

6. Proposed improvements or modifications to existing cultural resources in the Arroyo Seco will require additional review by the Historic Preservation Commission.

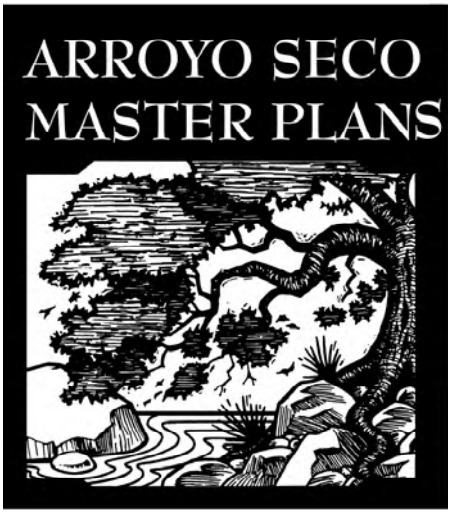
Figure 4-4 The Rockery in Brookside Parks is a valued cultural resource.

4.2.2 Unique Settings

1. The Lower Arroyo Seco (from Holly Street Bridge south to the South Pasadena boundary) is designated as a Landmark (Chapter 2.75 of the PMC). As such, all improvement plans in this area shall comply with Chapter 2.75 of the PMC.

Figure 4-5 The Colorado Street Bridge is an important icon that has become symbolic of the Arroyo Seco.

Chapter 5. Recreation



CHAPTER 5
RECREATION

5.1 DEFINITION

Recreation in the Arroyo Seco has an extensive history dating back to 1884 and the then famous Switzer's Camp. Current active and passive recreational use of the Arroyo Seco is substantial. Coordinating the balance between natural preservation and these recreational uses in the park is vital to the long-term integrity of the park. This chapter seeks to set criteria by which recreational use can successfully exist in a manner which protects the natural ecosystem of the Arroyo Seco.

This chapter is organized as follows:

Figure 5-1 Disc golf course in the Hahamongna Watershed Park is a popular recreational institution.

Figure 5-2 Many different types of active recreation share the facilities in the Central Arroyo Seco.

5.2 MULTI-PURPOSE FIELDS

Multi-purpose fields are large open grass (turf) areas that can be used for a variety of uses including but not limited to active recreational sports, staging area for events, large group gatherings, temporary RV parking, and model airplane/glider flying.

5.2.1 General Guidelines

1. Multi-purpose fields will utilize a resilient turf hybrid customized to withstand the rigors of high recreational use; and to protect groundwater will use minimal amounts of water, fertilizers, and pesticides..

2. Multi-purpose play fields will be designed with a public restroom in the near vicinity. Sports equipment storage shall comply with the City's Park Equipment Storage Facilities Policy in Appendix F.

3. Multi-purpose fields will be used for their intended primary use. The use of a multi-purpose field for parking shall be the exception rather than the norm and shall not damage the turf's ability to recover.

4. Multi-purpose fields shall have controlled access on at least two sides to accommodate field access by autos, equipment, and trucks.

5. Multi-purpose fields will have an adequate, water-conserving irrigation system that provides good head-to-head coverage.

6. There shall be no permanent seating around the perimeter of a multi-purpose field with the exception of historic structures.

Figure 5-3 Soccer is a popular active sport that is regularly scheduled on the multi-purpose fields of Arroyo Seco.

7. The perimeter of a multi-purpose field shall be protected from vehicles and trucks entering the field.

8. Where fields are grouped, at least one field will be supplied with electrical power for public gatherings, which complies with City code requirements.

9. Permanent or temporary lights are not allowed on multi-purpose fields.

5.2.2 Exceptions (To Standards)

1. Diamond #1 at Brookside Park is a baseball stadium (Jackie Robinson Baseball Stadium) where permanent seating exists and shall be restored.

2. The use of temporary lights in fields in the Central Arroyo sub-area is subject to the approval of the Recreation and Parks Commission.

3. Improvements to or the augmentation to existing permanent field lighting in the Central Arroyo sub-area are subject to the approval of the Recreation and Parks Commission and the Design Commission, and they shall be reviewed by appropriate environmental specialists for impacts on Arroyo ecosystems.

5.3 SPORTS COURTS AND SPECIAL FACILITIES

Athletic sports courts and several unique recreational facilities exist and are planned in the Arroyo Seco Master Plan. These include: tennis courts, a volleyball court, and a horseshoe court.

5.3.1 General Guidelines

1. Lighted facilities should be limited to designated high-use areas in the Central Arroyo sub-area and shall be subject to environmental evaluation and approved by the Recreation and Parks Commission and the Design Commission.

2. All sports courts and special facilities shall be designed to maximize ease of maintenance and for long-term durability.

3. Improvements to sports courts and special facilities shall be made under the regulation and industry standard for the sport the court/facility is serving.

4. ADA accessibility shall be provided where feasible to all sports courts and special facilities.

5. Improvements to sports courts and special facilities shall be of the highest quality craftsmanship and utilize the highest quality materials.

5.3.2 Unique Settings

TENNIS COURTS

Figure 5-4 The lighted tennis courts at Brookside Park provide an important nighttime recreational opportunity.

1. Heavy-duty nylon nets shall be used.

2. A drinking fountain with the capability to fill sports bottles shall be in close proximity of the tennis courts.

3. Fencing improvements shall be vinyl-coated fencing in black or forest green where screening is not needed; where screening on fence is needed, screening shall be forest green and meet the industry standard for this sport.

4. Landscaping for screening around the perimeter of the tennis courts is required and shall not interfere with play on the court.

Figure 5-5 Volleyball courts in Brookside Park.

VOLLEYBALL COURTS

1. The volleyball courts shall be regulation-size.

2. Permanent poles for nets shall be provided on the court; permit holders can use personal net or rent net from Recreation Department.

3. Court surface shall not be more than six inches lower than its surroundings.

HORSESHOE COURT

1. Horseshoe courts shall use wooden backstops painted forest green.

2. The primary surface material shall be native soil or decomposed granite (DG), but grass is also allowed.

3. The iron stake area shall be native soil or DG to withstand the weight of the horseshoes when thrown.

5.4 CHILDREN'S PLAY AREAS

The Arroyo Seco Plan calls for traditional children's play areas as well as "environmental play areas." Traditional play areas will have play equipment selected and installed. The environmental play areas will use natural materials in a confined space where children can learn and play.

5.4.1 General Guidelines

1. Children's play areas shall be safe, durable, and practical to maintain and replace.

2. Children's play areas shall be creative, attractive, and not distract from the surrounding park ambiance.

3. All children's play areas shall incorporate nearby perimeter seating.

4. The use of natural colors appropriate to the Arroyo shall be used for the color palette for all manufactured play equipment.

5. The use of natural materials is strongly encouraged in all areas and required in the upper and lower Arroyo Seco.

Figure 5-6 Children's play areas must be able to withstand high use.

5.4.2 Unique Settings

TRADITIONAL CHILDREN'S PLAY AREAS

1. Play equipment colors: Color samples shall be submitted to the Recreation and Parks Commission and the Design Commission for approval prior to installation.

2. Use of artifical play surfaces shall be kept to a minimum. Natural materials, i.e., "Fibar" is encouraged.

3. Play areas and equipment shall meet current ADA standards.

4. The largest play equipment area in Brookside Park shall be especially innovative, take advantage of park topography, and be reviewed by the Recreation and Parks Commission and the Design Commission.

CHILDREN'S ENVIRONMENTAL PLAY AREA

Natural materials shall be used to create innovative, active, fun, and playing and climbing areas for children.

5.5 RECREATIONAL COURSES AND RANGES

A number of historical courses and ranges exist in the Arroyo Seco that have greatly contributed to the heritage of the City and the sports they represent. These recreational courses and ranges include archery, golf, par courses, the casting pond, and disc golf.

5.5.1 General Guidelines

1. All recreational courses and ranges shall be designed to maximize ease of maintenance and provide long-term durability.

2. Improvements to the recreational courses and ranges in the Arroyo Seco shall be made under the regulation and industry standard for the sport the course/range is serving.

3. ADA accessibility shall be provided where feasible to all recreational courses and ranges.

4. Improvements to recreational courses and ranges shall be of the highest quality craftsmanship and utilize the highest quality materials.

5.5.2 Unique Settings

ARCHERY

1. A construction detail for targets will be established.

2. Targets will utilize hay bales.

3. Trails and shooting lanes will be clearly marked; a large map of the range will provided at a central location.

4. The range will be landscaped utilizing plant species from the plant community it is within.

5. Permanent physical barriers as well as a signage program will keep other recreational users of the range separated from targets and shooting lanes and shall be reviewed by the Recreation and Parks Commission and the Design Commission.

6. The designated seat for the archery range is shown in Section 11.5.

GOLF

1. Golf courses shall be designed to conserve water.

2. Improvements to golf course landscaping shall comprise a complete native/drought-tolerant landscape.

3. Improvements to the perimeter fencing of the golf course shall be of quality materials and be compatible with the materials and setting of the Arroyo Seco.

PAR COURSES

1. Par course stations shall be of natural, permeable materials.

2. Par course stations shall include signage at each station indicating a map of the overall par course circuit.

3. Par course stations shall not interfere with other park uses.

4. Par course equipment shall be attractive, well designed, and suitable for the Arroyo Seco identity and setting.

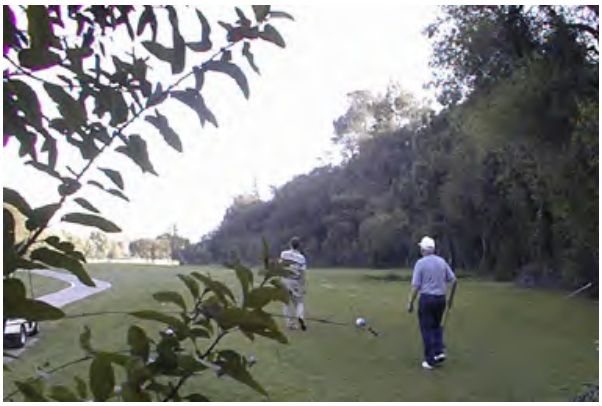


Figure 5-7 Physical fitness stations in Brookside Park should be safe and durable. Golf courses are encouraged to use plant palettes that are native and drought tolerant

DISC GOLF

1. Baskets will be placed to minimize conflicts with other park users, vegetation, and wildlife.

2. A comprehensive plan for the disc golf course in the Oak Grove area of Hahamongna will be prepared by a qualified professional and reviewed by the Design Commission.

3. The historical elements of the existing disc golf course in the Oak Grove area of Hahamongna will be incorporated into the new course where feasible.

4. Each hole will have two sleeve locations for a variety of play and to mitigate any impacts to surrounding trees and vegetation.

5. The designated seat for the disc golf course is shown in Section 11.5.

Figure 5-8 Disc golf course in the Oak Grove area of Hahamongna Watershed Park.

5.6 LAKES AND PONDS

These design guidelines have been prepared for all new permanent lakes and ponds in the Arroyo Seco as well as for the existing casting pond.

5.6.1 General Guidelines

1. All lakes and ponds shall be designed to maximize ease of maintenance and provide long-term durability.

2. ADA accessibility shall be provided where feasible to all lakes and ponds.

3. Improvements to lakes and ponds shall be of the highest quality craftsmanship and utilize the highest quality of materials.

4. All water bodies shall be evaluated by appropriate experts.

5. Lakes shall be designed to minimize loss of water.

CASTING POND

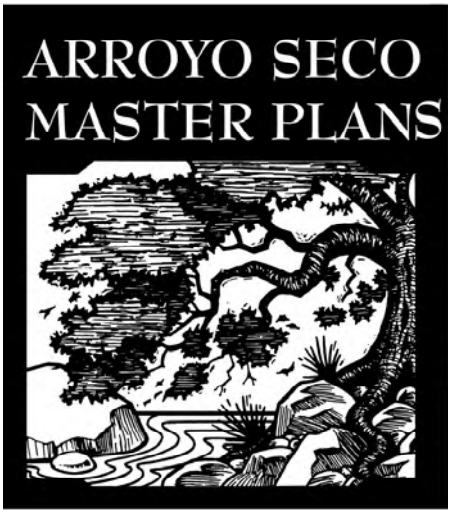
1. The casting pond in the Lower Arroyo Seco shall have a pond designed to hold water no more than 18 inches in depth.

2. The casting pond shall be improved and incorporate the following design guidelines:

   - The asphalt surrounding the pond will be removed and replaced with a permeable, sturdy surface that drains well and resists the elements.
   - The surface of the pond will be replaced with a material that holds water and is suitable to the Arroyo and holds water.
   - The drainage system for the pond will be improved to resolve the existing problems.
   - The aeration of the pond and collection of debris will be improved.
   - The shape and configuration of the pond should provide a more natural shape and setting.

Figure 5-9 Casting Pond in the Lower Arroyo Seco.

Chapter 6. Signage



CHAPTER 6
SIGNAGE

6.1 DEFINITION

Signage refers to all informational graphic and text displays within the park whether on the ground, suspended overhead, or attached to a structure or permanent site furnishing. A unified signage program represents an opportunity to unify the disparate components of the Arroyo Seco while informing and directing the visitor to all of the varied experiences in or about the park.

The organization of this chapter is as follows:

Figure 6-1 Informational kiosks can play an important role in educating and informing the public.

Figure 6-2 This signage at La Casita del Arroyo is consistent with the natural heritage of the Arroyo Seco and provides information about an ecological theme.

6.2 SIGNAGE PROGRAM GUIDELINES

6.2.1 Requirements

1. A Comprehensive Signage Program for the Arroyo Seco shall be prepared by a capable graphic design professional and submitted to the City of Pasadena Recreation and Parks Commission and Design Commission for review. At a minimum, the Signage Program shall be consistent with the guidelines that follow.

2. The Signage Program shall include a unique logo to represent the overall Arroyo Seco identity for Pasadena under which the secondary identities of the three sub-areas of the Arroyo Seco shall be depicted. The purpose of the Arroyo Seco identity is to preserve the unique character of the area to demonstrate an understanding of the elements that make the Arroyo one continuous environment.

3. The Signage Program shall contribute to a coordinated, coherent image of the Arroyo Seco. This includes limiting signage quantity and size to that which is necessary for information and safety purposes in order to avoid visual clutter and confusion. Existing signage not conforming to the standards of the sign program shall be eliminated.

4. The Signage Program shall be comprised of the fewest signs to be located in the most appropriate places. Messages shall be firm, direct, and positive.

5. Whenever feasible, the signs specified in the Signage Program shall be ADA certified. (See Figure 6-3 below.) Raised characters and Braille for the visually impaired should be used where possible on logos, maps, and other graphic information.

Figure 6-3 A good example of using natural materials and addressing ADA concerns with use of raised letters.

Figure 6-4 An example of sign clutter, that should be avoided.

6. The signage program shall require creativity, quality of craftsmanship, durable materials, simple design, and an economy of words.

7. The signage program shall demonstrate an understanding that in the natural preservation areas, the manmade (including signs) shall be largely invisible.

6.2.2 General Guidelines

1. A plan for locations of wayfinding signs shall be prepared and submitted to the City of Pasadena Parks and Natural Resources Division and the Design Commission.

2. Permanent signage shall:

    a. identify entry points along streets
    b. direct visitors to specific buildings and permanent facilities
    c. control automobile, service/emergency vehicle, bicycle, and pedestrian traffic
    d. identify parking areas for motorists, bicycles, motorcycles, and service/ emergency vehicles
    e. provide interpretive information
    f. list pertinent park rules and City codes

3. A recognizable system of wayfinding signs with a clear hierarchy to be self-guiding shall be utilized.

4. Signage at all key entrances of the Arroyo Seco shall be provided. The design of entrance signs must impart the uniqueness of the Arroyo landscape.

5. Park identification signs that identify the three park sub-areas as specific destinations` shall be provided.

6. Main and secondary park identification signs shall be located at the key entries to each park and within the park.

7. Safety rules and regulations signs shall be displayed to promote a safe and enjoyable park experience, protect park visitors and the park environment, and respond to liability issues.

8. The following Code Required Signs shall be displayed:

    a. Life safety signs for fire and other emergencies and for disabled access shall be provided.
    b. Code signs with the specific shapes, sizes, colors, and messages necessary to comply with the specific requirements for their use shall be provided.

9. Trail signs shall display safety information and identify specific trail user groups to prevent trail conflicts.

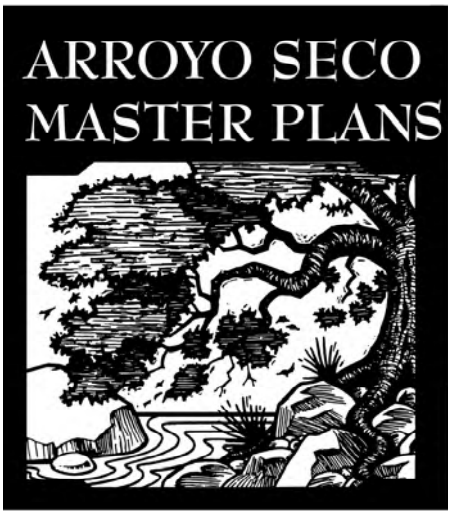
10. Elements for posting of reservations or other public information shall be integrated to other structures wherever feasible, i.e., buildings, fences, and walls.

11. Temporary signage for events with a seasonal duration, or New Year's related events, or events lasting more than three days shall:

    - have a coordinated signage program that is reviewed by the Parks and Natural Resources Division and the Recreation and Parks Commission;
    - shall not conflict with the approved Comprehensive Signage Program; and

12. Signage shall be designed to minimize vandalism and consider ease of replacement and cost for such.

Chapter 7. Walls, Fences, and Gates



CHAPTER 7

WALLS, FENCES, AND GATES

7.1 DEFINITION

Many of the existing walls and gates of the Arroyo Seco have great traditional character that has contributed to the heritage of the City. As these defining elements are repaired and constructed throughout the greater park area, a new sense of unification with the traditions of the past can be solidified.

This chapter seeks to guide wall repair efforts as well as new fence and gate improvements throughout the Arroyo Seco. Gates in this chapter refer to pedestrian "walk-thru" gates. A separate discussion of gates used for traffic control is found in Section 9.

Organization of this chapter is as follows:

Figure 7-1 The neighboring residential gates along the Arroyo Seco offer excellent examples of appropriate design.

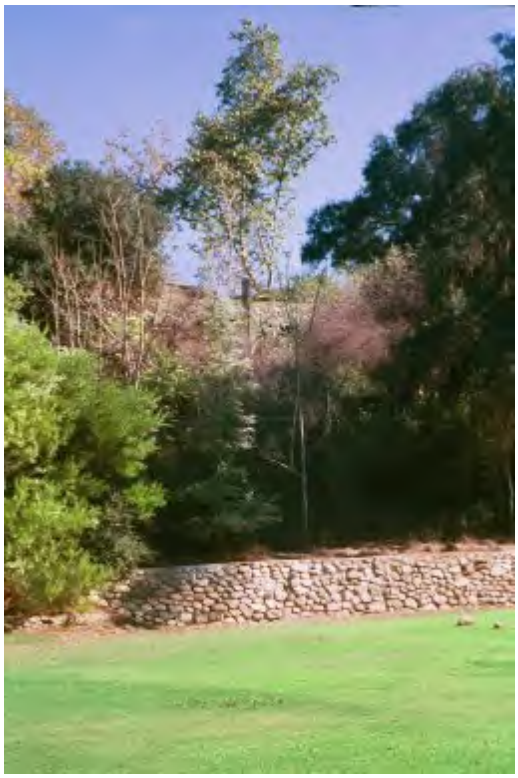


Figure 7-2 The traditional use of arroyo stone throughout the park will be continued.

7.2 GENERAL GUIDELINES

7.2.1 Walls

1. Where appropriate, vines and/or shrubs can be located against walls in areas where vandalism (graffiti) is a problem.

2. The stone walls in the Arroyo are culturally significant and shall be preserved.

3. Wall improvements in the Arroyo Seco shall primarily consist of walls that are faced in arroyo stone.

4. Walls constructed of split-faced block may be allowed in appropriate situations as determined by the Design Commission..

5. Wall improvements shall use the historic masonry style of the Arroyo by using a variety of sizes of stone, with large stones and boulders at the base of the wall including dry-stack techniques.

6. See the Wall Restoration Standards in Appendix E for improvements being considered to an existing stone wall or the construction of a new arroyo stone wall.

Figure 7-3 This low, well maintained perimeter wall is multifunctional, setting an open, friendly border to the park and offering a sitting space for the park user.

7. Where an existing stone retaining wall is in need of repair and posing a threat to the further degradation of the wall or to the public, the wall will be improved to ensure structural stability. See Appendix E, Wall Restoration Standards.

8. Wall improvements will consider drainage patterns immediate to the wall and provide weep holes at regular intervals and/or the appropriate drainage solution to protect the longevity of the wall.

9. Improvements to arroyo stone walls will be made by a qualified craftsman in the masonry trade with demonstrable experience with similar work.

10. Low stone walls will be finished so that the top of the wall is smooth, flat, and comfortable enough to be used as seating.

11. A well-crafted and proportionately sized cantilevered concrete cap atop an arroyo stone wall or pilaster is an acceptable design.

12. All construction and repair of the arroyo stone walls and steps shall be done in accordance with the current City of Pasadena's "Standard Specifications for Public Works Construction" (popularly known as the "Greenbook")..

13. Arroyo stone walls along neighborhood trails shall be restored.

Figure 7-4 The natural materials of the perimeter walls blend well with open space areas of the park.

7.2.2 Fences

1. All new fencing shall follow the standards below. In addition, all existing chain link fencing shall be evaluated as to whether fencing at that particular location is truly necessary or should be replaced with a more aesthetic alternative, such as:

    a. A planted hedge
    b. A well designed wrought iron fence
    c. A low arroyo stone garden wall in combination with wrought iron panels painted forest green or black
    d. Polyvinyl coated chain link (in black or forest green)

2. Where appropriate, vines and/or shrubs will be located against existing chain link fencing.

3. Fencing at special locations shall be creative and integrate an artistic element.

Figure 7-5 While functional, chain link fencing should eventually be removed and replaced by wrought iron or substituted with an arroyo stone wall design solution.

Figure 7-6 This type of low, arroyo stone interior wall is to be emulated in future park improvements.

7.2.3 Pedestrian Gates

1. All existing galvanized chain link gates shall be evaluated as to whether a gate at that particular location is truly necessary; if not, it shall be removed. If it is necessary, it will be replaced with material appropriate to the adjoining fence.

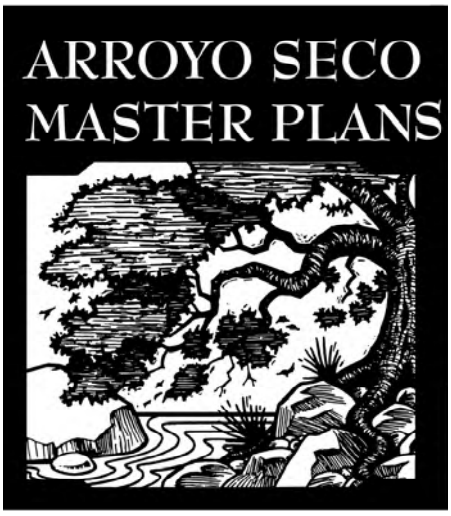
2. All pedestrian gates shall be designed to accommodate multiple locks.

3. All gate design should be durable, functional, consistent with the natural preservation theme of the Arroyo Seco, and consider ease of maintenance.

4. Gates that enclose park maintenance related facilities shall be solid and/or have screening to mitigate views of equipment, etc.

5. As much as possible, gates for similar purposes at multiple locations should be standardized to assist in unifying the Arroyo Seco.

Chapter 8. Roads and Trails



CHAPTER 8
ROADS AND TRAILS

8.1 DEFINITION

The roads and trails of the Arroyo Seco are important components in unifying the Arroyo Seco into a cohesive park. When the visitor can experience the totality of the Arroyo Seco on the human scale, unencumbered by urban influences, then the Arroyo Seco realizes its true potential.

This chapter seeks to implement unifying criteria for Pedestrian Walkways, Hiking Trails, Bikeways, Equestrian Trails, and Roadways. The guidelines in this chapter will define and give direction for refining and strengthening the trail network and roadways as ongoing improvements to the Arroyo Seco are implemented.

This chapter is organized as follows:

Figure 8-1 Carefully routed trails through natural habitat areas should heighten public awareness about respect for the ecology.

Figure 8-2 The "loop" around the Rose Bowl in the Central Arroyo is a heavily used route for multiple recreational uses, including bicycling.

8.2 GENERAL GUIDELINES

1. All nonmotorized routes connecting recreation facilities to parking areas shall meet ADA standards where feasible.

2. Nonmotorized routes shall ensure ease of park circulation and shall be functional and safe.

3. Trail design and routing shall be consistent with the aesthetic and environmentally sensitive open space areas of the Arroyo Seco. (Refer to Habitat Restoration, Section 2.1.)

4. Drainage and slope conditions shall be taken into consideration when selecting appropriate surface materials. Materials selected shall control erosion, ensure safety, and minimize maintenance. (See Figures 8-3 and 8-4.)

Figure 8-3 An example of erosion on a sloped decomposed-granite pedestrian path.

5. All routes, especially pedestrian walkways and trails, shall include natural barriers to shield habitat where appropriate and feasible.

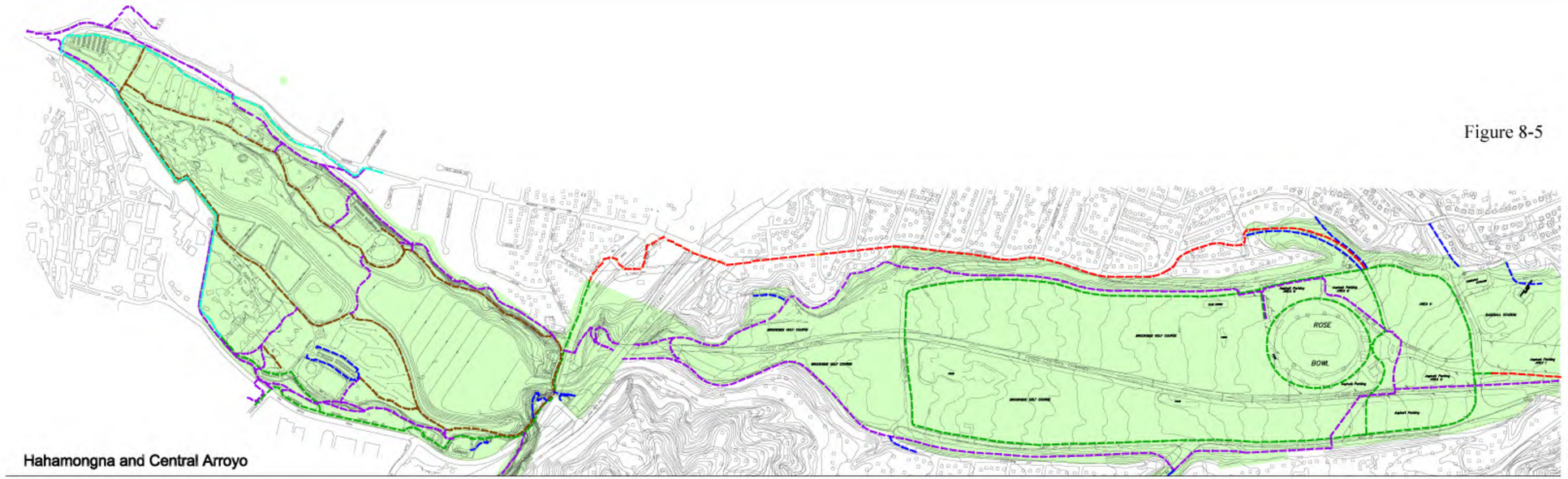
6. A predominantly nonmotorized access to the Arroyo Seco is encouraged.

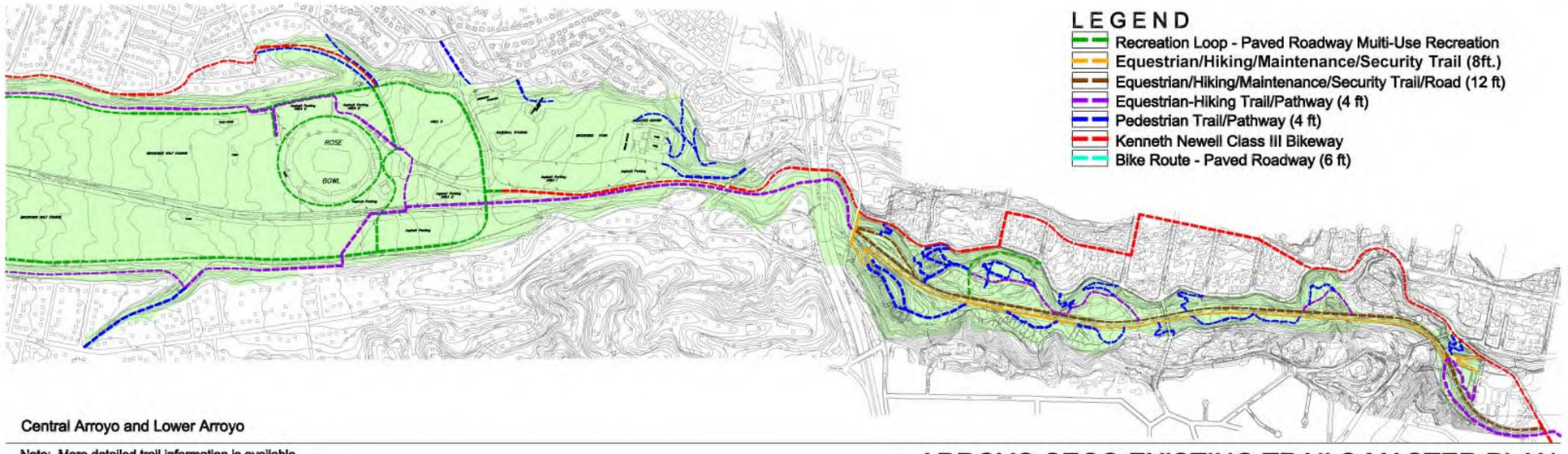
7. A comprehensive and final Master Plan of Trails shall be prepared, and reviewed and adopted by the necessary City Commissions and City Council. The Master Plan of Trails should be related closely to the comprehensive signage program described in Section 6.2.

8. The Master Plan of Trails shall consider providing links to the surrounding neighborhoods.

Figure 8-4 Trails that traverse steep slopes amplify the need for erosion control and drainage solutions.

Figure 8-5





Note: More detailed trail information is available in the individual Master Plan components.

ARROYO SECO EXISTING TRAILS MASTER PLAN

MAY 2002

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8.3 NONMOTORIZED ROUTES

8.3.1 Pedestrian Walkways

1. Use of asphalt and concrete on walkways shall be minimized. The use of permeable surfaces is preferred.

2. When asphalt, concrete, or any other impervious surface is the material of choice, it shall be of the highest quality and craftsmanship. Attempts shall be made to select colors and mixes that resemble older material (such as concrete with a high amount of aggregate to resemble an old walkway).

Figure 8-6 Note use of parkway and natural stone to separate pedestrian walkway from vehicular traffic.

Figure 8-7 A goal for the trail program shall be to greatly minimize the need for pedestrians to use the roadway.

Figure 8-8 Some walkways provide for a variety of recreational uses.

8.3.2 Hiking Trails

1. The width of the hiking trail tread shall vary depending on the conditions of the terrain and on the need to provide maintenance and emergency vehicle access. The minimum hiking trail tread width shall be two feet.

2. Brush, shrubs, and tree branches shall be cleared a maximum of two feet on each side of the hiking trail tread for safety and to allow hikers room to step to the side as necessary.

Figure 8-9 Trail linkage points are vital to unifying the Arroyo Seco. Here the trail in the Lower Arroyo ends in Pasadena and continues into South Pasadena and the Lower reaches of the Arroyo Seco.

3. All overhanging trees shall be pruned to allow for a maximum of eight foot clearance along the trail.

4. Trails shall be constructed using materials appropriate to their location; the preferred materials are natural soil, decomposed granite, road base, or a blend of any.

Figure 8-10 Destination points along trail routes should be clearly marked

8.3.3 Bikeways and Bike Paths

1. Bikeways shall be standardized to the extent feasible in a comprehensive Master Plan of Trails and submitted to the Parks and Natural Resources Division Administrator.

2. Bicycle roadways shall be separated from other slower moving nonmotorized routes with a physical barrier.

3. The Kenneth Newell bikeway shall be preserved.

Figure 8-11 Good example of a bikeway bordered by natural elements.

4. Bikeways and bike paths shall adhere to the City's Bicycle Master Plan.

5. The use of concrete curb and gutter should be avoided wherever possible, and the use of stone edges is encouraged.

Figure 8-12 The Central Arroyo Master Plan suggests improvements to separate bicyclists from pedestrians on "the loop."

8.3.4 Equestrian Trails

1. When space is limited, an equestrian trail adjacent to a roadway or parking lot shall have a barrier such as a line of boulders or a protective split-rail fence separating riders from cars and bicycles.

2. Soil or natural surfaces should predominate throughout the equestrian trails. Hard surfaces should be kept to a minimum.

Figure 8-13 Many of the existing equestrian trails are in need of improvement for safe access.

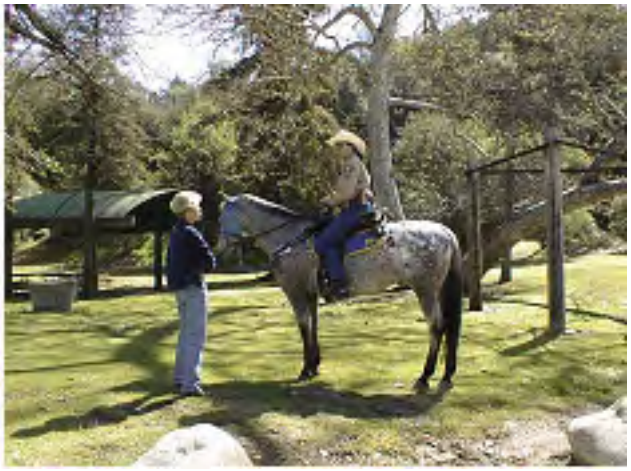


Figure 8-14 Equestrian Use of the Arroyo Seco is a time honored tradition.

3. The width of the equestrian trail tread shall vary depending on the conditions of the terrain and on the need to provide maintenance and emergency vehicle access. The minimum equestrian trail tread width shall be three feet.

4. Brush, shrub, and tree branches shall be cleared 30 inches on each side of the equestrian trail tread for safety and to allow equestrians and hikers room to move to the side as necessary.

5. All overhanging trees shall be pruned to allow a ten foot clearance along the trail.

8.3.5 Roads: Street Standards

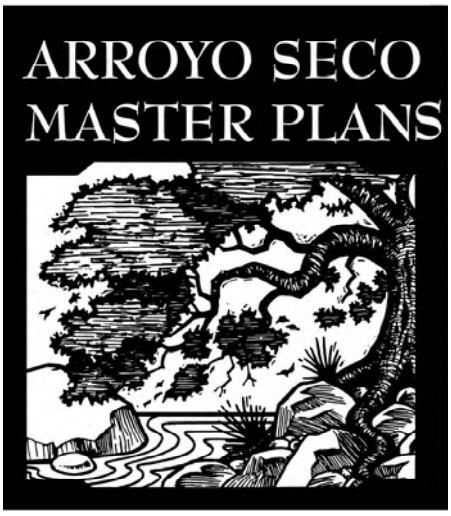
1. All roads shall be permeable and/or not paved when feasible.

2. Soft shoulders or rolled curbs, rather than curb and gutter, shall be utilized when feasible.

3. Concrete curb and gutter is undesirable and if needed should be constructed with a stone curb.

4. As practical, existing curb and gutter should be removed or replaced with a stone curb.

Chapter 9. Parking, Traffic Control, and Paving



CHAPTER 9
PARKING, TRAFFIC CONTROL, AND PAVING

9.1 DEFINITION

Parking represents a significant challenge to the Arroyo Seco. Daily visitors, as well as traditional event attendees, bring thousands of vehicles to the park. These guidelines seek to help guide ongoing parking lot and traffic control design, to integrate the suggested improvements, and to minimize impact on the Arroyo Seco's natural environment.

Chapter organization is as follows:

Figure 9-1 The need to accommodate high numbers of visitors on an irregular basis complicates design solutions.

Figure 9-2 Event traffic control will benefit from signage and parking lot program improvements.

9.2 GENERAL GUIDELINES

9.2.1 Parking Area Design

1. Small parking areas are to be encouraged in lieu of large hardscape parking lots.

2. Where large-event parking areas are necessary, every effort should be made to incorporate natural surfaces, such as decomposed granite, and to limit the amount of impermeable surfaces within the Arroyo Seco.

3. Parking designs should emphasize pedestrian access to, from, and within public parking lots along public sidewalks, trails, or passageways.

Figure 9-3 Smaller parking areas such as the one above at La Casita are to be encouraged.

4. Parking lots shall have a perimeter landscape buffer of not less than five feet in width and not less than eight feet in width in parking lots that accommodate more than 200 cars. The landscape buffer shall comply with the landscape guidelines in Section 2.2 and shall provide shade, visual relief, and collect runoff, but not totally block views into the parking lot.

5. Parking lots shall provide landscape medians between and at the ends of parking rows, whenever possible. Landscape designs should not be overly repetitive or regimented.

6. Tree wells in parking lots should be large enough to ensure the success of trees and shall have a raised planter to protect the tree. Tree wells that are flush with the parking lot grade are not encouraged. Grouping of trees is encouraged.

7. Parking lots shall provide landscaped swales to manage storm water runoff, and provide landscape relief and shade.

9.2.2 Traffic Control

1. Bollards may be used to separate motorized vehicles and pedestrians, warn of each other's presence and to control and/or limit access to specific portions of the Arroyo Seco. In all other circumstances, boulders and other natural barriers should be used.

2. Where practical, bollards shall be designed and installed to be removable in order to provide temporary service and emergency access.

3. Generally, all bollards shall be a standard 42-inch high, capped, and painted forest green. Two 1½-inch wide bands of bright yellow reflective tape shall be placed just below the cap to alert motorists in daylight and at night of the presence of bollards. In special locations, decorative bollards may be used.

4. Vehicle gates shall be a standard design, shall demonstrate design excellence, and shall be of a color appropriate to the location. Gates at special locations shall be creative and may integrate an artistic element.

5. Perimeter barriers will be needed when complete access is prevented. Boulders are preferred in establishing perimeter barriers. Typically, they are places to keep motorized vehicles out of an area. They should be randomly spaced to accomplish this goal and slightly buried to look natural and prevent rolling.

6. Metal barrier rails should be replaced wherever possible with a grouping of boulders or an arroyo stone wall.

7. Speed control buttons are recommended at equestrian crossings as a warning. Where speeds need to be reduced, speed bumps may be employed.

Figure 9-4 White capped bollards help to control regular vehicular access while still allowing passage by pedestrians.

Figure 9-5 Stones can also be used to control vehicular access.

9.2.3 Unique Settings

1. A redesigned landscape treatment of the Brookside Park parking lot should seek to consolidate trees into fewer, yet more aesthetically pleasing landscape islands, which reflect the natural character of the Arroyo Seco.

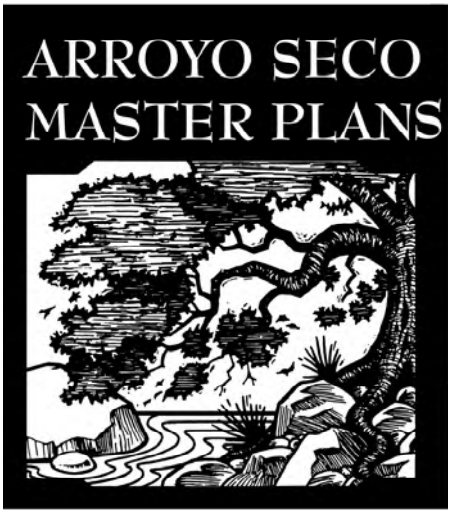
2. The utilization of parking areas by special events should be monitored to limit impacts on natural areas.

Figure 9-6 Brookside Park Lot I is in need of redesign.

Figure 9-7 Parking lots fulfill a variety of needs within the Arroyo Seco.

Figure 9-8 Specialized parking stalls here are a good example of balancing parking needs with the natural environment.

Chapter 10. Public Art



CHAPTER 10

PUBLIC ART

This chapter is organized as follows:

10.1 FRAMEWORK

The CIP Public Art Program provides the framework for the incorporation of art and culture in civic spaces. The guidelines for this program mandate that 1% of the construction cost of applicable CIP projects be deposited in the CIP Public Art Fund. Public art projects to be funded are identified in the Public Art Section of the CIP Plan.

In early 2005 it is anticipated that an updated community cultural plan will be completed. The plan is intended to identify needs and opportunities for infrastructure to support the creation, presentation of, and access to art and culture. This document will inform and prioritize the Public Art section of the CIP plan.

10.2 DEFINITION

Identification and Review: Art and culture projects identified in the Arroyo Seco Master Plan and its Design Guidelines shall comply with the CIP Public Art Program Guidelines. Identification of sites and project parameters will be approved by the Arts Commission as part of the annual CIP public art plan review. Other commissions, including the Parks and Recreation Commission, will review as appropriate. Private development in the Arroyo will be subject to the City's Guidelines for New Private Development.

10.3 GENERAL GUIDELINES

In the context of the Arroyo Seco Master Plan and these Design Guidelines, the following guidelines apply in addition to those set forth in the CIP Public Art Guidelines:

1. To the extent possible, physical and/or permanent art in the Arroyo should be limited. Pubic art should be located within the Central Arroyo or outside the Arroyo Seco entirely in order to minimize man-made elements in the Lower Arroyo and Hahamongna Watershed Park.

2. Site-Specific: Visual art projects will interpret the unique environmental conditions and the natural processes of the Arroyo environment and heritage using natural materials and compatible finishes when possible and appropriate. Artists may be

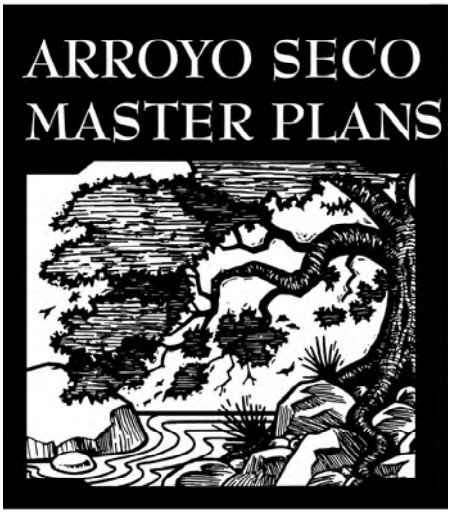
encouraged to create site-specific work that reveals and interprets the unique environmental condition, natural processes, and cultural responses to the environment of the Arroyo Seco.

3. Community Values: All forms of art and culture in the Arroyo will reflect community values and the intended use of this public space, and be available to the community at large.

4. Definition of art and culture: Art and culture in the Arroyo should be defined and interpreted in accordance with the CIP Public Art Guidelines, the mission of the Arts Commission and its programming goals, and the Arroyo Seco Master Plan. To this end, inclusion of art and culture in the Arroyo may include artists on design teams, artists in residence at facilities or within the park, programming, cultural facilities, temporary and permanent artwork, etc. It should be noted that there are currently a number of amphitheatres of varying sizes, quality and intended use throughout the Arroyo. These facilities should be renovated as soon as possible to accommodate appropriate programming.

Figure 10-1 Tot lot sitting walls are an excellent opportunity to incorporate artistic elements.

Chapter 11. Site Furnishings



CHAPTER 11
SITE FURNISHINGS

11.1 DEFINITION

Site furnishings are the man-made articles that are needed in a public park to service the needs of the public and/or that assist in the safe and orderly management of the park. The appearance and identity of the Arroyo Seco will benefit from the unifying of site furnishings throughout the park. Careful attention to detail and quality will help people feel more comfortable and at home in all areas of the park. Whether it is a picnic table or a trash can, each functional component adds to the experience . . . and the unanimity will increase with the gradual implementation of improvements.

This chapter is organized as follows:

Figure 11-1 New seating at the Brookside Tennis courts.

11.2 LIGHTING

11.2.1 Requirement

The Comprehensive Lighting Plan for the Arroyo Seco shall be prepared by a qualified professional and submitted to the City of Pasadena Parks and Natural Resources Division and Design Commission for review.

11.2.2 General Guidelines

The intent of these guidelines is to encourage effective, energy efficient, innovative and site appropriate lighting in the Arroyo Seco as an integral component of the Comprehensive Lighting Plan.

1. There is no lighting recommended within the natural areas of the Arroyo Seco. The Arroyo Seco is a wildlife corridor, and nocturnal wildlife is disrupted by lights. The natural areas of the Arroyo Seco (Lower Arroyo and Hahamongna) close at sunset per the Pasadena Municipal Code.

Figure 11-2 The La Casita parking lot light shown here is an example of a desired fixture for other areas in the Arroyo Seco.

- Lighting shall not be placed within the natural areas of the Arroyo Seco except where a need is demonstrated to exist and that such lighting shall not have an adverse impact on the environment.
- When lighting is required in the natural areas, it shall be understated and not excessively bright.
- Light fixtures shall be durable, easily maintainable, and of the highest quality and craftsmanship. Poles and fixtures that meet these criteria and represent the heritage of Pasadena and the Arroyo Seco are preferred.

2. Any lighting used in the natural areas of the Arroyo Seco shall be restricted to security lighting attached to structures.

3. Lighting near restrooms and other buildings shall be focused downward to limit illumination of surrounding open space areas.

4. Lighting shall consider surrounding residential areas and dark sky considerations and use appropriate shields.

5. All lighting improvements shall be energy conserving.

6. The aesthetic quality of exterior building lighting should be considered in relationship to adjacent streets and open spaces.

7. Building name signage shall be illuminated, where appropriate, to facilitate wayfinding.

8. Athletic field lighting (new installations and renovations) should be reduced to minimize impacts to the surrounding ecosystem.

9. Lighting improvements in Central Arroyo sub-area shall consider the impact to slopes in this area that serve as a wildlife corridor for the larger Arroyo Seco.

10. Exterior lighting around built structures and the surrounding ecosystem shall serve both safety and aesthetic purposes.

11. Lighting of structures of architectural or historical merit shall be done by a design professional and reviewed by the Design Commission for aesthetic sensitivities, to protect from over-illumination, and to ensure that the architectural integrity of the structure is maintained.

11.3 TRASH ENCLOSURES AND RECEPTACLES

11.3.1 General Guidelines

1. Trash enclosures shall use quality materials appropriate to the Arroyo Seco. Where feasible, trash enclosures shall be faced with Arroyo stone.

2. Trash enclosures shall be adjacent to paved roadways and near but not visible to group picnic areas.

3. The preferred trash receptacle for the Arroyo Seco is a 55-gallon oil drum. OSHA recommends use of the smaller drum for ease of handling as compared to the standard 55-gallon drum.

4. Trash receptacles shall be painted La Casita Green and have drainage openings at their base.

5. Trash enclosures shall provide adequate access for pick-up vehicles to maneuver safely.

6. Vines growing on the exterior walls of trash enclosures are encouraged.

11.4 DOG WASTE DISPOSAL

11.4.1 General Guidelines

1. Dog-waste disposal bags shall be provided in dispensers as illustrated in Figure 11-4.

2. Dog-waste disposal bag dispensers shall be mounted on a durable metal brown post. They shall be a dark color.

3. Dog waste disposal bag dispensers shall be conveniently located along walkways and trails that are known routes for dog walkers.

Figure 11-3 While well meaning, non-standard bag dispenser should be replaced by a standardized program.

Figure 11-4 This is an example of type of dog waste disposal dispenser to be used for the Arroyo Seco.

11.5 BENCHES AND SEATING

11.5.1 General Guidelines

1. Benches shall be constructed of appropriate materials (such as natural and/or recycled materials) and approved by the Recreation and Parks Commission and the Design Commission.

2. Bench and seat locations in the parks and along trailways shall take advantage of views and shall enhance landscape design.

3. In natural areas, a boulder or log or a grouping of such can be used to provide seating at rest stops.

4. Use of natural materials for proposed seating improvements are encouraged where appropriate with the exception of recycled plastics

5. Seats such as wood logs, poles, or planks in outdoor classrooms shall be supported off the ground to take appropriate loads and to allow for maintenance under these seating areas.

Figure 11-5 Two of the current bench designs in the Arroyo Seco.

11.5.2 Unique Settings

1. A custom bench shall be designed and approved for the stage area in Brookside Park as part of that area's improvements.

2. Seating at the Archery Range and at the Disc Golf Course shall use the same bench design. An example is shown in Figure 11-6.

3. Commemorative benches and seating in the Arroyo Seco can include:

    a. Any of the acceptable bench designs with a standard-sized plaque inserted in the center back of the bench. This request would require the approval of the Parks and Natural Resources Administrator and the Design Commission.

    b. A specially designed bench involving the participation of an artist. This would require a review by the Recreation and Parks Commission with an advisory design review by the Design Commission, and the Arts Commission.

Figure 11-6 Sample of a bench that would be suitable for both the Archery Range and the Disc Golf Course.

11.6 OPEN CLASSROOMS AND AMPHITHEATERS

11.6.1 General Guidelines

1. Outdoor classrooms can be located on a natural gradient or "bowl" or on flat terrain designated for such use by the Arroyo Seco Master Plan.

2. Outdoor classrooms shall use materials that convey a message of conservation and sustainability.

3. Public seating for outdoor classrooms shall be simple in design, scaled to the user, and incorporate natural materials such as arroyo stone, wood logs, or poles.

4. Outdoor classroom amenities could include a fire ring or a raised or at-grade stage area.

5. Outdoor classrooms shall use trees to provide protection from the sun and the elements.

6. No permanent enclosures or coverings shall be allowed over the seating areas of open classrooms and amphitheaters.

7. Stage enclosures, if any, shall be open and "airy."

11.6.2 Unique Settings

1. The stage area in Brookside Park will be the only outdoor amphitheater in the Arroyo with electrical power.

Figure 11-7 Amphitheatre seating is in need of repair.

Figure 11-8 Seats and stage structure are in need of repair at the stage area in Brookside Park.

11.7 PICNIC AND CAMPGROUND FACILITIES

11.7.1 General Guidelines

1. Picnic Tables:

   Picnic tables should be constructed of appropriate materials , and shall be reviewed by the Parks and Natural Resources Division and the Design Commission.

2. Fire Rings:

   Existing fire rings shall be retained and restored.

Figure 11-9 A good example of a table design to be used in the Arroyo Seco.

3. Existing group barbeques that incorporate Arroyo stone shall be restored.

Figure 11-10 Existing arroyo stone grill areas can be custom converted into improved facilities by replacing grill surfaces with a comparable standard model insert.

11.8 DRINKING FOUNTAINS AND SINKS

11.8.1 General Guidelines

1. New or existing drinking fountains scheduled for repair shall incorporate an Arroyo Seco stone facade.

2. Sinks in picnic areas shall incorporate Arroyo stone facade or other stone surface materials.

3. Drinking fountains shall be installed with a ground drain for water run-off.

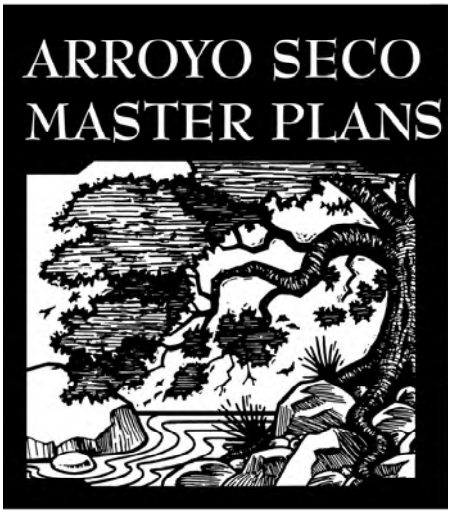
4. Drinking fountains that accommodate a lower fountain for dogs shall be considered in appropriate locations.

11.9 BIKE RACKS

11.9.1 Specifications

1. Bike racks shall be constructed of durable materials and approved by the Design Commission and the Recreation and Parks Commission.

Appendix



APPENDIX A: HABITAT RESTORATION PLANT PALETTTES

Table A-1. Coast Live Oak Woodland Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Canopy Layer							
Acer macrophyllum	Bigleaf maple	Occasional	25/acre	Groups: 2-3	20	5, 15	
Quercus agrifolia	Coast live oak	Dominant	100/acre	Groups: 3-6	20	1, 5, 15	
Quercus engelmannii	Engelmann oak	Occasional	15/acre	Groups: 2-3	20	5, 15	
Umbellularia californica	California bay/laurel	Occasional	15/acre	Groups: 2-3	20	5, 15	
Shrub Understory Layer							
Acer negundo	Boxelder	Occasional	20/acre	Groups: 2-4	4	5, 15	
Adenostoma fasciculatum	Chamise	Occasional	20/acre	Groups: 3-6	4	1, 5	2
Artemisia californica	California sagebrush	Occasional	30/acre	Groups: 3-6	4	1, 5	2
Ceanothus oliganthus	Hairyleaf ceanothus	Occasional	20/acre	Groups: 2-4	4	1, 5	
Heteromeles arbutifolia	Toyon	Subdominant	50/acre	Groups: 4-6	6	5, 15	
Malosma laurina	Laurel sumac	Occasional	20/acre	Groups: 6-8	6	5, 15	
Mimulus aurantiacus	Bush monkeyflower	Occasional	30/acre	Groups: 3-6	3	1	1
Quercus berberidifolia	Scrub oak	Subdominant	50/acre	Groups: 4-6	6	1, 5	
Rhamnus californica	California coffeeberry	Subdominant	50/acre	Groups: 4-6	6	5, 15	
Ribes malvaceum	Chaparral gooseberry	Occasional	25/acre	Groups: 2-4	4	1	
Rosa californica	California rose	Occasional	25/acre	Groups: 6-8	3	1	
Rubus ursinus	California blackberry	Occasional	25/acre	Groups: 4-8	4	1	
Salvia mellifera	Black sage	Occasional	30/acre	Groups: 4-8	4	1, 5	2
Sambucus mexicana	Mexican elderberry	Occasional	15/acre	Groups: 2-3	15	5, 15	
Toxicodendron diversilobum	Western poison oak	Occasional	10/acre	Groups: 2-3	15	1	
Herbaceous Understory Layer							
Bromus carinatus	California brome	Occasional					4
Eriophyllum confertiflorum	Golden yarrow	Occasional					3
Gnaphalium californicum	California everlasting	Occasional					1
Lathyrus vestitus	Wild pea	Occasional					6
Lotus scoparius	Deerweed	Occasional					6
Muhlenbergia rigens	Deergrass	Occasional					4
Nassella pulchra	Purple needlegrass	Occasional					4

[1] Plant species may be substituted with the concurrence of the project biologist/restoration specialist.
[2] Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.
[3] Refers to distance between plants of the same species; category applies only to species planted in groups.
[4] Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

Table A-2. Southern Willow Scrub Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Upper Canopy Layer							
Acer macrophyllum	Bigleaf maple	Occasional	15/acre	Groups: 1-3	20	5, 15	
Platanus racemosa	Western sycamore	Occasional	20/acre	Groups: 2-4	20	5, 15	
Populus balsamifera ssp. *trichocarpa*	Black cottonwood	Occasional	20/acre	Groups: 2-4	20	5, 15	
Populus fremontii ssp. *fremontii*	Fremont cottonwood	Occasional	25/acre	Groups: 3-4	20	5, 15	
Sambucus mexicana	Mexican elderberry	Occasional	25/acre	Groups: 3-4	15	5, 15	
Salix gooddingii	Black willow	Subdominant	50/acre	Groups: 5-10	10		
Umbellularia californica	California bay/laurel	Occasional	15/acre	Groups: 1-3	20	5, 15	
Lower Canopy Layer							
Salix exigua	Narrow-leaved willow	Occasional	25/acre	Groups: 3-4	6		
Salix laevigata	Red willow	Subdominant	50/acre	Groups: 5-10	10		
Salix lasiolepis	Arroyo willow	Dominant	250/acre	Scattered			
Salix lucida ssp. *lasiandra*	Shining willow	Occasional	25/acre	Groups: 3-4	8		
Shrub Understory Layer							
Baccharis pilularis	Coyote brush	Occasional	50/acre	Groups: 3-4	6	1	1
Baccharis salicifolia	Mule fat	Dominant	200/acre	Groups: 5-15	4	1	1
Rosa californica	California rose	Dominant	150/acre	Groups: 5-10	3	1	
Rubus ursinus	California blackberry	Subdominant	100/acre	Groups: 4-8	4	1	
Vitis girdiana	Desert grape	Subdominant	100/acre	Groups: 4-8	4	1	
Herbaceous Understory Layer							
Ambrosia psilostachya	Western ragweed	Occasional					10
Artemisia douglasiana	Mugwort	Occasional					10
Carex barbarae	Santa Barbara sedge	Occasional					5
Hordeum brachyantherum	Meadow barley	Occasional					15
Muhlenbergia rigens	Deergrass	Occasional					8
Urtica dioica ssp. *holosericea*	Hoary nettle	Occasional					5

1 Plant species may be substituted with the concurrence of the project biologist/restoration specialist.
2 Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.
3 Refers to distance between plants of the same species; category applies only to species planted in groups.
4 Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

Table A-3. Mule Fat Scrub Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Upper Canopy Layer							
Acer macrophyllum	Bigleaf maple	Occasional	20/acre	Groups: 1-3	20	5, 15	
Alnus rhombifolia	White alder	Occasional	25/acre	Groups: 2-4	20	5, 15	
Platanus racemosa	Western sycamore	Occasional	25/acre	Groups: 2-4	20	5, 15	
Populus fremontii ssp. *fremontii*	Fremont cottonwood	Occasional	25/acre	Groups: 3-4	20	5, 15	
Populus balsamifera ssp. *trichocarpa*	Black cottonwood	Occasional	20/acre	Groups: 2-4	20	5, 15	
Sambucus mexicana	Mexican elderberry	Subdominant	50/acre	Groups: 3-4	15	5, 15	
Umbellularia californica	California bay/laurel	Occasional	20/acre	Groups: 1-3	20	5, 15	
Lower Canopy Layer							
Salix lasiolepis	Arroyo willow	Dominant	250/acre	Scattered			
Shrub Understory Layer							
Baccharis salicifolia	Mule fat	Dominant	200/acre	Groups: 5-15	4	1	1
Rosa californica	California rose	Dominant	200/acre	Groups: 5-10	3	1	
Rubus ursinus	California blackberry	Subdominant	100/acre	Groups:4-8	4	1	
Vitis girdiana	Desert grape	Subdominant	100/acre	Groups:4-8	4	1	
Herbaceous Understory Layer							
Ambrosia psilostachya	Western ragweed	Occasional					10
Artemisia douglasiana	Mugwort	Occasional					10
Carex barbarae	Santa Barbara sedge	Occasional					5
Leymus condensatus	Giant wild rye	Occasional					20
Muhlenbergia rigens	Deergrass	Occasional					8
Urtica dioica ssp. *holosericea*	Hoary nettle	Occasional					5

[1] Plant species may be substituted with the concurrence of the project biologist/restoration specialist.
[2] Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.
[3] Refers to distance between plants of the same species; category applies only to species planted in groups.
[4] Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

Table A-4. Riversidian Alluvial Fan Sage Scrub Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Canopy Layer							
Acer macrophyllum	Bigleaf maple	Occasional	10/acre	Groups: 1-2	20	5, 15	
Alnus rhombifolia	White alder	Occasional	10/acre	Groups: 1-2	20	5, 15	
Juglans californica var. *californica*	Southern California black walnut	Occasional	10/acre	Groups: 1-2	20	5, 15	
Plantanus racemosa	Western sycamore	Occasional	15/acre	Groups: 2-3	20	5, 15	
Populus fremontii ssp. *fremontii*	Fremont cottonwood	Occasional	15/acre	Groups: 2-3	20	5, 15	
Sambucus mexicana	Mexican elderberry	Occasional	10/acre	Groups: 1-2	15	5, 15	
Shrub Understory Layer							
Artemisia californica	California sagebrush	Subdominant	30/acre	Groups: 2-4	4	1, 5	2
Atriplex canescens	Four-wing saltbush	Occasional	20/acre	Groups: 2-4	4	1, 5	
Cercocarpus betuloides	Birchleaf mountain-mahogany	Occasional	20/acre	Groups: 2-4	4	1, 5	
Encelia farinosa	Brittlebush	Occasional	20/acre	Groups: 2-4	4	1, 5	2
Eriodictyon crassifolium	Hairy yerba santa	Occasional	20/acre	Groups: 2-4	4	1, 5	
Eriogonum fasciculatum	California buckwheat	Subdominant	30/acre	Groups: 2-4	4	1, 5	3
Isomeris arborea	Bladderpod	Occasional	10/acre	Groups: 1-2	4	1, 5	
Lepidospartum squamatum	Scalebroom	Dominant	50/acre	Groups: 2-4	6	1, 5	1
Malosma laurina	Laurel sumac	Occasional	20/acre	Groups: 2-4	6	1, 5	
Opuntia littoralis	Coastal prickly pear	Occasional	20/acre	Groups: 1-2	4	1	
Rhus integrifolia	Lemonadeberry	Occasional	20/acre	Groups: 2-4	6	1, 5	
Rhus ovata	Sugar bush	Occasional	20/acre	Groups: 2-4	6	1, 5	
Salvia apiana	White sage	Occasional	20/acre	Groups: 2-4	4	1, 5	2
Salvia mellifera	Black sage	Subdominant	30/acre	Groups: 2-4	4	1, 5	2
Toxicodendron diversilobum	Western poison oak	Occasional	10/acre	Groups: 1-2	10	1	
Yucca whipplei	Chaparral yucca	Occasional	20/acre	Groups: 2-4	4	1	
Herbaceous Understory Layer							
Bromus carinatus	California brome	Occasional					4
Gnaphalium californicum	California everlasting	Occasional					1
Lotus scoparius	Deerweed	Occasional					6
Muhlenbergia rigens	Deergrass	Occasional					5

[1] Plant species may be substituted with the concurrence of the project biologist/restoration specialist.
[2] Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.
[3] Refers to distance between plants of the same species; category applies only to species planted in groups.
[4] Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

Table A-5. Coastal Sage-Chaparral Scrub Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Canopy Layer							
Juglans californica var. *californica*	Southern California black walnut	Subdominant	30/acre	Groups: 1-2	20	5, 15	
Sambucus mexicana	Mexican elderberry	Subdominant	30/acre	Groups: 1-2	15	5, 15	
Shrub Understory Layer							
Adenostoma fasciculatum	Chamise	Dominant	150/acre	Groups: 2-4	4	1, 5	2
Artemisia californica	California sagebrush	Dominant	150/acre	Groups: 2-4	4	1, 5	2
Ceanothus crassifolius	Hoaryleaf ceanothus	Occasional	20/acre	Groups: 2-4	4	1, 5	
Cercocarpus betuloides	Birchleaf mountain-mahogany	Occasional	30/acre	Groups: 2-4	4	1, 5	
Dendromecon rigida	Bush poppy	Occasional	20/acre	Groups: 2-4	4	1, 5	
Encelia californica	California encelia	Subdominant	75/acre	Groups: 2-4	4	1, 5	2
Eriogonum fasciculatum	California buckwheat	Subdominant	75/acre	Groups: 2-4	4	1, 5	8
Eriophyllum confertiflorum	Golden yarrow	Occasional	40/acre	Groups: 2-4	4	1, 5	2
Heteromeles arbutifolia	Toyon	Subdominant	50/acre	Groups: 2-4	4	1, 5	
Isocoma menziesii var. *menziesii*	Goldenbush	Occasional	20/acre	Groups: 2-4	4	1, 5	2
Keckiella cordifolia	Heartleaf penstemon	Occasional	20/acre	Groups: 2-4	4	1, 5	
Mahonia nevinii	Nevin's barberry	Occasional	20/acre	Groups: 2-4	4	1, 5	
Malosma laurina	Laurel sumac	Occasional	30/acre	Groups: 2-4	6	1, 5	
Mimulus aurantiacus	Bush monkeyflower	Occasional	50/acre	Groups: 2-4	6	1, 5	1
Opuntia littoralis	Coastal prickly pear	Occasional	30/acre	Groups: 1-2	4	1	
Prunus ilicifolia ssp. *ilicifolia*	Hollyleaf cherry	Occasional	30/acre	Groups: 2-4	6	1, 5	
Rhus integrifolia	Lemonadeberry	Occasional	30/acre	Groups: 2-4	6	1, 5	
Rhus ovata	Sugar bush	Occasional	30/acre	Groups: 2-4	6	1, 5	
Salvia apiana	White sage	Occasional	30/acre	Groups: 2-4	4	1, 5	2
Salvia mellifera	Black sage	Subdominant	50/acre	Groups: 2-4	4	1, 5	2
Quercus berberidifolia	Scrub oak	Occasional	30/acre	Groups: 2-4	6	1, 5	
Yucca whipplei	Chaparral yucca	Occasional	30/acre	Groups: 2-4	4	1	

Coastal Sage-Chaparral Scrub Plant Palette, cont.

Herbaceous Understory Layer							
Leymus condensatus	Giant wild rye	Occasional					6
Lotus scoparius	Deerweed	Occasional					8
Lupinus bicolor	Miniature lupine	Occasional					5
Nassella lepida	foothill needlegrass	Occasional					3
Nassella pulchra	Purple needlegrass	Occasional					3
Scrophularia californica	California figwort	Occasional					3

[1] Plant species may be substituted with the concurrence of the project biologist/restoration specialist.
[2] Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.
[3] Refers to distance between plants of the same species; category applies only to species planted in groups.
[4] Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

Table A-6. Southern Sycamore Riparian Woodland Plant Palette

Scientific Name[1]	Common Name[1]	Occurrence	Minimum Density	Distribution[2]	Spacing[3] (feet)	Container Size (gal.)	lb./acre[4]
Upper Canopy Layer							
Acer macrophyllum	Bigleaf maple	Occasional	10/acre	Groups: 1-3	20	5, 15	
Alnus rhombifolia	White alder	Occasional	15/acre	Groups: 1-3	20	5, 15	
Fraxinus dipetala	California ash	Occasional	10/acre	Groups: 1-3	20	5, 15	
Platanus racemosa	Western sycamore	Occasional	30/acre	Groups: 2-4	20	5, 15	
Populus balsamifera ssp. *trichocarpa*	Black cottonwood	Occasional	10/acre	Groups: 2-4	20	5, 15	
Populus fremontii ssp. *fremontii*	Fremont cottonwood	Occasional	10/acre	Groups: 3-4	20	5, 15	
Quercus agrifolia	Coast live oak	Occasional	10/acre	Groups: 1-3	20	5, 15	
Sambucus mexicana	Mexican elderberry	Occasional	15/acre	Groups: 3-4	15	5, 15	
Salix gooddingii	Black willow	Subdominant	10/acre	Groups: 2-4	10		
Umbellularia californica	California bay/laurel	Occasional	10/acre	Groups: 1-3	20	5, 15	
Lower Canopy Layer							
Salix laevigata	Red willow	Subdominant	15/acre	Groups: 5-10	10		
Salix lasiolepis	Arroyo willow	Dominant	25/acre	Scattered			
Salix lucida ssp. *lasiandra*	Shining willow	Occasional	15/acre	Groups: 3-4	8		
Shrub Understory Layer							
Baccharis salicifolia	Mule fat	Dominant	25/acre	Groups: 5-10	4	1	1
Rosa californica	California rose	Dominant	30/acre	Groups: 5-10	3	1	
Rubus ursinus	California blackberry	Subdominant	25/acre	Groups: 4-8	4	1	
Herbaceous Understory Layer							
Artemisia douglasiana	Mugwort	Occasional					10
Hordeum brachyantherum	Meadow barley	Occasional					15
Muhlenbergia rigens	Deergrass	Occasional					8
Urtica dioica ssp. *holosericea*	Hoary nettle	Occasional					5

1 Plant species may be substituted with the concurrence of the project biologist/restoration specialist.

2 Scattered distribution indicates that plantings should be distributed throughout the terrestrial natural community.

3 Refers to distance between plants of the same species; category applies only to species planted in groups.

4 Final specifications for the seed mix will be developed after tests for purity and seed germination of seed collected for each species.

APPENDIX B: ARROYO SECO PUBLIC LANDS ORDINANCE

CITY OF PASADENA MUNICIPAL CODE
TITLE 3 CIVIC EVENTS AND FACILITIES

Chapter 3.323 ARROYO SECO PUBLIC LANDS

Article I. General Provisions

Article II. Natural Preservation Area

Article III. Brookside Park Area

Article IV. Rose Bowl Area

Article I. General Provisions

This chapter shall be known as the "Arroyo Seco public lands ordinance." (Ord. 6403 § 2 (part), 1990)

3.32.020 Purpose.

The purpose of this chapter is to establish regulations for preservation, enhancement and enjoyment of the Arroyo Seco as a unique environmental, recreational and cultural resource of the city surrounded by residential neighborhoods. Such resource and the neighborhoods must be preserved, protected and properly maintained. These regulations are designed to identify uses, activities, facilities and structures as well as their limitations. (Ord. 6403 § 2 (part), 1990)

3.32.030 Definitions.

A. "Native plants" means those plants historically known to be indigenous to the Arroyo Seco of Pasadena and nearby arroyos of similar ecology and also those indigenous plants of Southern California or countries of similar climates that could naturally exist and flourish in the Arroyo Seco in its present ecology.

B. "Existing" means in place or in use on the date the ordinance codified in this chapter becomes effective.

C. "Commercial" means any use or activity related to the sale or barter of merchandise or service or the fabrication of structures.

D. "Facilities" include structures, grounds, play equipment, trails, walls and other improvements located on public property.

E. "Park" or "parklands" means those areas of the Arroyo Seco which have been formally dedicated as parks.

F. "Structure" means any manmade improvement.

G. "Natural features" include trees, rock out-croppings, riparian habitat, streams, springs, undisturbed slope banks.

H. "Motor vehicles" include cars, trucks, motorcycles, motorbikes. (Ord. 6403 § 2 (part), 1990)

3.32.040 Arroyo Seco defined.

"Arroyo Seco," for the purposes of this chapter, means those lands not in private ownership lying within the area generally bounded by Devil's Gate Dam on the north, Linda Vista Avenue, San Rafael Avenue and Hillside Terrace on the west, the city limits on the south, and Arroyo Boulevard, Arroyo Terrace, Scott Place, Prospect Boulevard and Armada Drive

on the east as shown on the map entitled "Lower Arroyo Park and Brookside Park," dated January 1, 1990, and on file with the city clerk. (Ord. 6403 § 2 (part), 1990)

3.32.050 Sub-areas defined.
Because of the wide variety of environmental situations and activities that are to be found in publicly owned portions of the Arroyo Seco, the Arroyo Seco is divided into the following 4 sub-areas or classifications:

A. Natural preservation area;
B. Brookside Park area;
C. Rose Bowl area;
D. Brookside Golf Course. (Ord. 6403 § 2 (part), 1990)

3.32.060 General regulations.
A. The general regulations contained herein shall apply only to public lands lying within the Arroyo Seco as described in Section 3.32.040. However, the application of certain regulations shall be limited to only those specific sub-areas in the Arroyo as further described in Section 3.32.050 and this chapter.

B. City water and power departments lands shall not be sold and shall remain available for public use pursuant to provisions of Article XIV of the Charter of the city; said lands may be licensed or leased for park purposes, if recommended by the parks and recreation commission and subsequently approved by the board of directors.

C. No portion of lands within the Arroyo Seco shall be used for any commercial, industrial or institutional purposes other than those which existed at the effective date of the ordinance codified in this chapter.

D. No new street or roadway, including any street for which there is dedication, shall be constructed within the Arroyo Seco except pursuant to provisions of Article XVI of City Charter.

E. Overnight camping or parking is prohibited without a permit from the city.

F. Any form of motor vehicle racing is prohibited unless such activity occurs as a Rose Bowl event pursuant to Sections 3.32.260--3.32.280 or activity approved by the board as a Rose Bowl event.

G. All new utility lines of any type shall be placed underground. (Ord. 6403 § 2 (part), 1990)

Article II. Natural Preservation Area

3.32.100 Natural preservation area established.

The natural preservation area consists of the Arroyo Seco slope banks, the Lower Arroyo from the south city limit to the Holly Street bridge, the flood control channel area west and south of Brookside Park, and the area north of Brookside Golf Course to Devil's Gate Dam. (Ord. 6403 § 2 (part), 1990)

3.32.110 Natural preservation area--Permitted uses on public lands.

A. Low intensity recreational activities within defined activity areas, including hiking, horseback riding, archery, casting, picnicking and jogging.

B. New structures shall be limited to those required for utility operations, park maintenance and protection of plant and animal communities. Such structures are to be adequately screened to conceal their visual presence.

C. All existing uses may be allowed to remain but not allowed to expand. (Ord. 6403 § 2 (part), 1990)

3.32.120 Natural preservation area--Special regulations.

All lands within the natural preservation area are to be designated as a natural preserve and shall be subject to the following limitations:

A. Planting shall be limited to native plants with the exception of the area around La Casita del Arroyo that may be planted with material appropriate to the Arroyo Seco and the semi-arid South California climate.

B. No plants may be removed without the approval of the City.

C. Wastes, fertilizers or polluted waters shall not be allowed to enter the waters or sources for the waters of this area.

D. Dumping of waste material or polluting waters in this area or entering this area is prohibited.

E. Use of pesticides or herbicides in this area shall comply with California Department of Agriculture and the U.S. Environmental Protection Agency regulations.

F. Hunting, trapping or collecting of animals is prohibited except for biological studies or other scientific purposes approved by the city manager or for pest control.

G. No excavation or landfill shall be permitted on the slope banks of the Arroyo Seco except for repairs to ensure public health and safety or for undergrounding of utilities as determined by the city manager.

H. The use or parking of motor vehicles outside existing paved streets, driveways, parking lots or other designated areas is prohibited, except for maintenance and emergency purposes.

I. Trails and roads shall not be paved.

J. Except for threat to privately owned lands, structures or public safety, nothing in this chapter shall preclude modification of the flood control channel to restore all or part of the natural stream in the lower Arroyo Seco. (Ord. 6403 § 2 (part), 1990)

Article III. Brookside Park Area

3.32.150 Brookside Park area established.

The Brookside Park area consists of Brookside Park and Brookside Playing Fields, commonly called "Area H." (Ord. 6403 § 2 (part), 1990)

3.32.160 Brookside Park area--Permitted uses.

The following uses are permitted in the Brookside Park area:

A. Active recreational uses including, but not limited to, organized sports, leisure sports and unorganized play;

B. Cultural events including plays, concerts, festivals, exhibitions, shows;

C. Passive recreational activities including picnics and public gatherings;

D. Parking in direct support of recreational uses and occasional support of Rose Bowl events. (Ord. 6403 § 2 (part), 1990)

3.32.170 Brookside Park area--Special regulations.

The following special regulations shall apply within the Brookside Park area:

A. Commercial uses other than those existing as of the effective date of the ordinance codified in this chapter are prohibited unless ancillary to the basic recreational uses.

B. Occasional use of Brookside facilities for parking shall be according to the priority order stated in Section 3.32.300. (Ord. 6403 § 2 (part), 1990)

3.32.180 Brookside Park area--Public hearings requirement for construction and changes in use.

A. A public hearing shall be held for any new construction, substantial alteration or addition to existing building or significant changes to existing park uses in the Brookside Park area.

B. The hearing shall be held before the parks and recreation commission with a recommendation forwarded to the board of directors. Proposed building or landscaping plans shall be reviewed by the city design committee.

C. A notice of public hearing shall be published in the local newspaper and posted at Brookside Park facilities. (Ord. 6403 § 2 (part), 1990)

Article IV. Rose Bowl Area

3.32.250 Rose Bowl area established.

This area consists of the Rose Bowl and adjoining parking areas B, D, F, G, I, J and K. (Ord. 6403 § 2 (part), 1990)

3.32.260 Rose Bowl area--Administration.

A. To achieve a balance of recreational programs, public parks use and to preserve the residential values in the area, evaluation criteria for proposed Rose Bowl events shall include the recreational and financial benefits to the community, the impact on the surrounding residential areas. The standards which shall be considered in evaluating proposed Rose Bowl events shall include, but are not limited to the following:

1. The displacement of activities normally conducted on improved turf areas, including area H and the golf course.

2. The impact upon surrounding residential areas and the Arroyo Seco resulting from traffic, noise, parking and any other anticipated impacts.

3. That displacement of recreational programs and activities within Brookside Park and the Brookside Golf Course has not occurred more than 12 times annually.

B. Each major Rose Bowl event shall be preceded by staff analysis which shall identify and consider traffic, noise, parking, recreational activity displacement and any other anticipated impacts. Specifically, staff analysis shall include the following elements:

1. A traffic management plan which restricts event nonresidential traffic to main arteries leading to and exiting from the Rose Bowl and event parking locations; provides for maximum ingress and egress for emergency vehicles to reach neighborhood residents and public facilities; establishes a paid parking program for all major events as specified in Section 3.32.300 of this code; provides for free shuttle bus service to tie in with off-site parking to be subsidized by revenues of paid parking; facilitates a clear

understanding of alternate parking plans during inclement weather through inclusion of flyers with event tickets and notification to the public through all available aspects of the media.

2. A litter containment plan which shall include a schedule of activities to be completed prior to, during and after the event in the affected areas of the Arroyo and in surrounding residential neighborhoods; a requirement that based on the type of event, all surrounding areas, including residential neighborhoods, have cleanup and trash removal within 24 hours after the event.

3. A public safety element to be developed in conjunction with the police department, the public works department, the staff of the Rose Bowl, and the event sponsors which shall include all relevant issues related to size of the crowd, unique characteristics regarding the anticipated crowd, past experiences at related Rose Bowl events, crowd control, traffic control, neighborhood traffic and security patrol, emergency preparedness and fire prevention.

C. The public and surrounding residential areas shall receive at least 30 days' advance notice of any major Rose Bowl event by suitable means of any such event that will curtail the availability of Brookside Park and the Brookside Golf Course.

D. The staff of the Rose Bowl and the staff of the recreation department shall coordinate the planning and rescheduling of youth and adult programs when major Rose Bowl events may require turf parking in Brookside Park and Brookside Golf Course.

E. A post-event evaluation shall be conducted by staff following each major event to determine the efficacy of the pre-event staff analysis identified in subsection A of this section and to make recommendations for future events. A preliminary evaluation shall be submitted to Rose Bowl Operating Company and to the parks and recreation commission within 30 days of each event and a final report within 120 days. These evaluations shall be reviewed at least annually by Rose Bowl Operating Company and the commission who shall make recommendations to the city council which may in turn limit or condition future events accordingly.

F. All proposed contracts involving the use of the Rose Bowl which anticipate an attendance of over 20,000 people shall be approved by the Rose Bowl Operating Company in conformance with this chapter. In addition, all proposed contracts involving the use of the Rose Bowl as the home stadium of any professional sports team or for a duration of more than 5 years must be approved by the city council with the recommendation of the Rose Bowl Operating Company. The Rose Bowl Operating Company may refer an event proposal to the parks and recreation commission or its designee for review, recommendation and comments prior to final approval.

G. Existing contracts are to be brought into compliance with the provisions of this chapter whenever legally possible at the earliest possible date. (Ord. 6627 §§ 2--4, 1995; Ord. 6403 § 2 (part), 1990)

3.32.270 Rose Bowl area--Number of permitted events.

A. No displacement of recreational programs and accessibility to Arroyo Seco facilities shall be allowed more than 12 times in any calendar year without permission of the city board of directors who must find that each additional permitted event meets all of the following requirements:

1. The additional event represents a unique opportunity that will enhance the stature of the Rose Bowl.

2. The revenue generating potential from the additional event justifies its consideration.

3. The event does not create undue conflicts with other Arroyo Seco activities taking place at the same time.

4. The event does not impose undue adverse impacts on surrounding residential areas.

B. To minimize adverse impacts on surrounding residential areas, scheduling of events at the Rose Bowl shall emphasize a minimum number of events which yield the maximum amount of new revenues to the city. (Ord. 6403 § 2 (part), 1990)

3.32.280 Rose Bowl area--Rental rates and charges.

The city council, by resolution, shall establish a schedule of minimum rents, charges and fees to be charged and collected for use of the Rose Bowl. Nothing herein shall prohibit rents, charges and fees in excess of those set forth in the aforementioned schedule. In addition, users of the Rose Bowl shall pay to the city all costs incurred by the city and Rose Bowl Operating Company in connection with their licensed use as determined by the general manager of the Rose Bowl and enumerated in a license agreement which also shall set forth the time and method of payment of all charges and the matter of accounting therefor. The minimum schedule of rents, fees and charges shall conform to the other provisions set forth in this section and chapter.

A. Services for which costs shall be charged as costs of operations shall include, but not be limited to, police and security, crowd control, groundskeepers and such other services which are required by the general manager of the Rose Bowl and set forth in the license agreement.

B. The aforementioned minimum schedule may provide for but shall not require a reduction of rents, fees and charges based on the following considerations:

1. Whether the event to be sponsored is for a local public purpose or benefit; or
2. Whether an admission fee is to be charged, collection taken or space or advertising sold or sublet; or
3. Whether the net proceeds of the event will be donated to nonprofit organizations; or
4. Whether the event is to be open to the public; or

5. Whether the event is of a cultural, civic or patriotic character; or
6. Whether the licensee is a nonprofit organization.

The general manager of the Rose Bowl shall determine whether or not a licensee is entitled to any reduced rent, fee or charge provided for hereunder and his or her decision shall be limited to a consideration of the foregoing factors. For purposes of this section, a "nonprofit organization" shall be defined as a nonprofit organization with an office in the city for at least 5 years preceding the date of the application for a license.

C. Every licensee shall be required to pay all costs of operations incurred by city and Rose Bowl Operating Company in connection with said licensee's use of the Rose Bowl, except as such costs are either reduced or waived by specific resolution of the city council as to city costs and of the Rose Bowl Operating Company as to Rose Bowl Operating Company costs. Nothing contained elsewhere in this chapter shall authorize an exception to this provision.

D. Every person using the Rose Bowl shall be required to indemnify, hold harmless and defend the city, Rose Bowl Operating Company, their respective officers, directors and employees from any loss, liability or damage resulting from the use of the premises by said licensee, and each user shall procure and maintain, in full force and effect, during the period of licensed use, a policy of insurance satisfactory to city which shall insure city and Rose Bowl Operating Company against any liability of whatsoever nature on account of bodily injury to or of damage to any property arising out of or in connection with the use of said premises by said user, including all costs of defending any claim arising as a result thereof. The insurance policies required herein shall be in an amount and on forms approved by the city, and each such policy shall provide that the policy shall not be cancelable for any cause until 30 days' written notice to the city and Rose Bowl Operating Company. Evidence of products' liability insurance coverage, or workers' compensation insurance coverage may be required, and if required by city, such coverage shall comply with the form requirements specified herein. City, at city's sole option, may waive all or part of the foregoing requirements regarding indemnity and insurance, and require the user to obtain similar insurance coverage, either through the city or by other arrangement approved by city, and the user shall be required to reimburse city for the cost of any insurance provided pursuant hereto.

E. No use of the Rose Bowl shall be permitted unless licensed and no license shall be granted unless such licensed use is in writing and on a form approved by the city attorney and executed by the Rose Bowl Operating Company or the general manager of the Rose Bowl, as agent of the city. The Rose Bowl Operating Company and the general manager of the Rose Bowl, as agent of the city, are authorized to execute all license agreements in conformance with this chapter for the Rose Bowl for and on behalf of the city.

F. No provision of this section shall limit or prohibit RBOC from charging a rental or use fee in excess of that set forth in the minimum schedule provided for herein, or basing the

rental fee or charge for use of the Rose Bowl upon a percentage of licensee's gross receipts; provided, that each licensee agreement shall provide that the minimum rental fee or charge set forth in the aforementioned schedule shall be collected from the licensee.

G. The general manager of the Rose Bowl or his or her designee shall use the authority granted hereunder to promote by all appropriate means greater use of the Rose Bowl for revenue-producing events. (Ord. 6627 § 5, 1995: Ord. 6403 § 2 (part), 1990)

3.32.300 Rose Bowl area--Parking limitations and charges.
A priority system for the use of the Rose Bowl and ancillary parking facilities shall be developed which shall include the following:

A. A paid parking program for all major events which includes unreserved parking at a fixed fee throughout the Rose Bowl/Brookside Park area regardless of proximity to the event and preferred reserved parking at a higher fee;

B. The possibility of paid parking for non-major events of less than 20,000 attendance;

C. The active promotion of alternative parking outside the Arroyo Seco for all major events with transportation to the Rose Bowl;

D. Priority order of use as follows:
1. Conventional Rose Bowl parking facilities, also known as areas A, F, G, J, K and D.
2. Brookside parking lot, also known as area I.
3. Turfed areas, including Brookside ball fields, playing fields, area H, and golf course.

E. Limitations on the use of turfed areas for parking shall be determined in accordance with the provisions of Section 3.32.280(D) of this chapter and by city board policy. In no case shall Brookside Golf Course, playing fields and Brookside Park be used for parking where such use may cause substantial or permanent damage to the turf.

F. A no parking policy shall be established in the residential and other areas surrounding the Rose Bowl/Brookside Park area during major events at the Rose Bowl. Temporary no parking restrictions shall be in force and signs shall be posted in the affected areas according to Section 10.40.100 of this code. This no parking restriction shall be enforced by towing and impounding the vehicles of violators at the violators' expense according to Section 10.40.030 of this code.

G. The parking area and all rights thereto in the areas adjacent to the Rose Bowl are reserved for the benefit of the city. The city may allow use thereof at rates and on terms approved by the city manager. (Ord. 6403 § 2 (part), 1990)

3.32.310 Rose Bowl area--Advertising, broadcast and recording.

All advertising, broadcast, television, transcription and/or recording rights are reserved for the benefit of the city, except as otherwise provided by contract with the user. (Ord. 6403 § 2 (part), 1990)

3.32.320 Rose Bowl area--Public address system.
The Rose Bowl public address system shall be used at events requiring a public address system. Any other system shall only be permitted in the Rose Bowl with the prior written permission of the general manager of the Rose Bowl. (Ord. 6627 § 6, 1995: Ord. 6403 § 2 (part), 1990)

3.32.330 Rose Bowl area--Concessions operation.
All concessions operated in the Rose Bowl are reserved for the benefit of the city, except as otherwise provided by contract with the user. (Ord. 6403 § 2 (part), 1990)

3.32.340 Rose Bowl area--Police protection.
Every licensee of the Rose Bowl shall furnish such police protection as shall be required by the city manager. (Ord. 6403 § 2 (part), 1990)

3.32.350 Rose Bowl area--Cancellation of use.
The city manager may cancel any right to use the Rose Bowl if in his opinion such use will unduly damage the premises or will be inimical to the public welfare. (Ord. 6403 § 2 (part), 1990)

3.32.360 Rose Bowl area--Alteration of facility.
No user shall erect, build, install, alter or change any structure or facility in the Rose Bowl without the written approval of the city manager. (Ord. 6403 § 2 (part), 1990)

3.32.370 Rose Bowl area--Rental charge when not in actual use.
Whenever the Rose Bowl is occupied by any licensee and is not in actual use and no equipment or services are required, no licensee fee shall be charged for a reasonable time of such nonuse as shall be determined by the general manager of the Rose Bowl. (Ord. 6627 § 7, 1995: Ord. 6403 § 2 (part), 1990)

3.32.380 Rose Bowl area--Terms of use.
The Rose Bowl Operating Company may, in conformance with this chapter, permit the use of the Rose Bowl for any event or series of events upon such terms as it determines to be reasonable, and the contract for such use shall state such terms. (Ord. 6627 § 8, 1995: Ord. 6403 § 2 (part), 1990)

Article V. Brookside Golf Course Area

3.32.450 Brookside Golf Course area established.

The Brookside Golf Course area consists of Brookside Golf Course and clubhouse and the adjoining parking lot south of the clubhouse. (Ord. 6403 § 2 (part), 1990)

3.32.460 Brookside Golf Course area--Permitted uses.
The following uses are permitted in the Brookside Golf Course area:

A. Golf and clubhouse related activities;

B. Parking under the same limitation as in Section 3.32.300;

C. Structures that are ancillary to golf related activities and maintenance and operation of the area. Any new structure or alteration of existing structures shall be subject to the hearing procedures of Section 3.32.180. (Ord. 6403 § 2 (part), 1990)

APPENDIX C: LANDFORM GRADING PRINCIPLES

The following articles appear with the permission of Steven Horst, Senior Vice President, Anaheim Hills, Inc.:

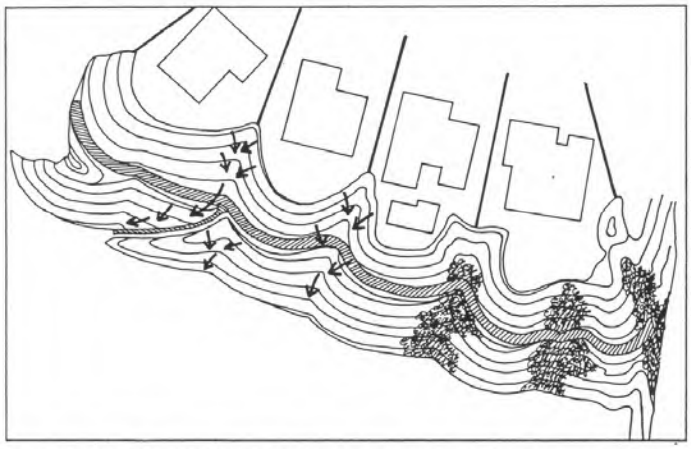
- *Landform Grading: Building Nature's Slopes*. Pacific Coast Builder, June 1980.
- *Landform Grading and Slope Evolution*. Journal of Geotechnical Engineering, October 1995.

Landform Grading: Building Nature's Slopes

By HORST SCHOR
Senior Vice President, Anaheim Hills, Inc.

The advantages and necessities of hillside living are becoming more widely evident as flatlands — the traditional building sites — are consumed by housing, industry and agribusiness.

However, hillside building can require massive grading that may become the focal point of local resistance, thus impeding planning approval. The innovative "landform" grading method was born of negative impressions gained in viewing the conventional, linear slopes commonly manufactured throughout the building industry.



TOPOGRAPHICAL REPRESENTATION of a section of landform-graded slope, showing radial water flow, foliage placement in swales and redistribution of land on lots to conform with landform configurations. Hatched area is concrete terrace drain required by building codes.

Anaheim Hills is situated in 4,300 acres of beautiful, undulating hillsides in northeastern Orange County, California. We, like every other developer, were taking natural terrain and transforming it into rigid, mathematical shapes for building. It was a practice based on the idea: "We've always done it that way." Since there was no specific reason, other than expediency, why it was being done, the time had come to examine ways of changing the accepted thinking about mass grading. The search for an alternative was an attempt to improve the aesthetics of graded hillsides. Anaheim Hills agreed to finance the experimentation and to use the results in the community.

There seemed to be no reason we couldn't grade the slopes to resemble natural slopes. The question then arose: what do natural slopes look like? Curiously, there was no published information about slope shapes as a total unit. We were on our own.

Project research involved study of slopes in such diverse areas as Death Valley, Brazil, Alaska, Hawaii and Anaheim Hills in an attempt to separate distinct features from among the natural slopes and to determine if there was any relationship between climate, soil type and vegetation and slope configuration. Yet it was two years before distinct, repeating patterns emeged from the jumble of forms. Simply stated, cones, pyramids, "elbows," ridges and various combinations of these elements produce natural slope shapes.

The challenge was now to apply these basic shapes to the grading process. Could they be designed and graded? We would have to retrain everyone concerned with the project. Designers, engineers, grading contractors and public officials had always worked in straight lines. Now we were saying, "the more irregular, the better."

Communication of the new ideas was difficult at times. Initially we made clay models in which we combined the basic slope shapes and took them out to the civil engineers and grading contractors. They, in turn, conveyed the ideas to their equipment operators in the field. However, the grading was not shaping up as we expected. We finally had to go into the field and call a bulldozer operator off his machine, show him the drawings and photos and explain the ideas. He then said, "Sure, I can do that. Why didn't you say that in the first place?" With each grading project, we improved and streamlined the operations.

We've now been doing the grading in Anaheim Hills for seven years. Contractors experienced in landform grading prefer it because the finished product doesn't need to meet precise slope-angle measurements, and it affords the operator more leeway in his bulldozing.

There is less finishing cost to the contractor, although there are more engineering, design and field control costs in landform grading. The cut and fill slopes are very complex to design. It is an art to assemble the various shapes on the slopes so they won't look unnatural. They have to blend together and work structurally. Landform grading gets its look not from one component shape or one gully but from a series of them. The landform shapes become a sequence of undulations, peaks and gulleys.

We have to deal with three planning commissions in Aanheim Hills: the cities of Anaheim and Orange and the County of Orange. The planners are delighted with the landform grading idea. At first they were doubtful, but once we'd graded several slopes, we invited them out for a look. They walked over the slopes, viewed them from different angles and saw the value of what we were doing.

The civil engineers were more skeptical. They felt that the shapes we were creating would cause severe erosion. We proved them wrong. Early on, we graded an experimental slope 70 feet high without the artificial drainage interception aids required by the building codes. Rather, we let the curves and elbow shapes of the landforms absorb the im-

pact of the running water, as happens in nature.

The rains from 1977 to this year have been heavy. From September through March 1977-78, it rained more than 31 inches. The same period in 1978-79 gave us more than 21 inches, and 1979-80 during the similar months put more than 22 inches of water on the slope. The slope is still in perfect condition. Nature doesn't follow building codes, but its designs still work.

Ironically, we found that conventional, angular grading tends to encourage erosion. Water generally will sheet flow on a flat surface and will tend to carve swales in the weakest sections of the slope. To compensate, building regulations require terrace drains every 25 feet to break the momentum of the water. Yet there is an entire set of building regulations predicated upon the efficiency of conventional, linear slopes.

On the other hand, the drainage pattern of a landform-graded slope is radial in nature and swales are already provided for the runoff. If the land is formed naturally, as in our process, the water follows the channels, which break its speed by virtue of their energy-dissipating shapes. Further, most foliage occurs in the channels or swales, and its presence breaks the speed of the running water. Our landscaping also follows this natural pattern. We also experimented with such ideas as planting Acacia Rosemary, a lush, low growth, to cushion the impact of rainfall.

Mother Nature is full of surprises. She knows how to control erosion without using the clumsy terrace drains we use in man-made slopes. We've minimized the visual impact of the required concrete drains by running them diagonally and curvilinearly across the slopes, which makes them considerably less visible. We also line them with river rock, so when they are visible they complement the landform slope aesthetics.

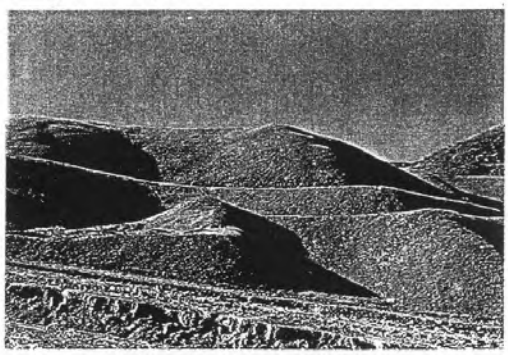
AERIAL PHOTO of landform-graded region in Anaheim Hills. Note irregular patterns formed by landform-graded slopes along perimeter of lot pads.

Initially, we and the builders were concerned about the buildable land that would be lost to the landform grading process on each lot. We solved that by reshaping backyards to conform with the grading configurations. The center sections of the lots, which are used most extensively, bulge outward with the ridgelines of the grading. The corners of the yard are taken up by the swales and these edges are characteristically used less often. In effect, we redistributed the lot pad square footage to our advantage.

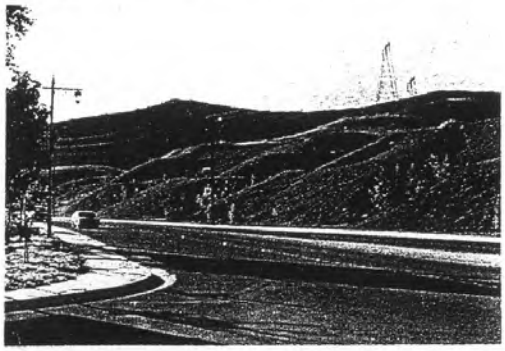
We are pleased with the results of our experiments. When covered with mature vegetation, our landform graded slopes appear very much like natural slopes. The grading has allowed us to move away from straight lines and abrupt angles in our community planning. The homes are positioned more irregularly, which discourages the monotonous look of row housing. And, importantly, we come very close to restoring the slopes to their natural conditions.

We believe that sooner or later developers will be required to use this type of landform grading. This method of grading is part of the future of land development in this country and eventually in all other countries because most urban and suburban flatland has been built upon in one way or another. Landform grading involves more effort to achieve, design, implement, construct and engineer. However, the cost in time and labor is well worth the results of aesthetics, structural integrity and the value to developers of public acceptance and municipal planning approval.

FRESHLY GRADED landform slopes show ridges, swales and pyramid shapes.



MATURE LANDFORM slopes with vegetation and foliage in swales.



LANDFORM GRADING AND SLOPE EVOLUTION

By Horst J. Schor[1] and Donald H. Gray,[2] Member, ASCE

ABSTRACT: Transportation corridors and residential developments in steep terrain both require that some grading be carried out to accommodate roadways and building sites. The manner in which this grading is planned and executed and the nature of the resulting topography or landforms that are created affect not only the visual or aesthetic impact of the development but also the long-term stability of the slopes and effectiveness of landscaping and revegetation efforts. Conventionally graded slopes can be characterized by essentially planar slope surfaces with constant gradients. Most slopes in nature, however, consist of complex landforms covered by vegetation that grows in patterns that are adjusted to hillside hydrogeology. Analysis of slope-evolution models reveals that a planar slope in many cases is not an equilibrium configuration. Landform-graded slopes on the other hand mimic stable natural slopes and are characterized by a variety of shapes, including convex and concave forms. Downslope drains either follow natural drop lines in the slope or are hidden from view in swale-and-berm combinations. Landscaping plants are placed in patterns that occur in nature as opposed to random or artificial configurations. The relatively small increase in the costs of engineering and design for landform grading are more than offset by improved visual and aesthetic impact, quicker regulatory approval, decreased hillside maintenance and sediment removal costs, and increased marketability and public acceptance.

INTRODUCTION

All slopes are subject to erosion and mass wasting. Various measures can be invoked to slow, if not completely prevent, this degradation. Biotechnical slope-protection methods, for example, have attracted increasing attention as a cost-effective and visually attractive means of stabilizing slopes. This approach has been used to stabilize and revegetate cut-and-fill slopes along highways as well as slopes in residential hillside developments. Kropp (1989) described the use of contour wattling in combination with subdrains to repair and stabilize a debris flow above a housing development in Pacifica, California. Gray and Sotir (1992) described the use of brush layering to stabilize a high, unstable cut slope along a highway in northern Massachusetts. Brush layering and other soil bioengineering measures have likewise been employed (Sotir and Gray 1989) to repair a failing fill embankment along a highway in North Carolina.

Transportation corridors and residential developments in steep terrain both require that some excavation and regrading be carried out to accommodate roadways and building sites. The manner in which this grading is planned and executed and the nature of the resulting topography or landforms that are created affect not only the visual or aesthetic impact of the development but also the stability of the slopes and effectiveness of landscaping and revegetation efforts.

Succinct descriptions and comparative definitions of grading designs are as follows.

Conventional Grading

Conventionally graded slopes are characterized by essentially linear (in plan), planar slope surfaces with unvarying gradients and angular slope intersections. Resultant pad configurations are rectangular.

Slope drainage devices are usually constructed in a rectilinear configuration in exposed positions.

Landscaping is applied in random or geometric patterns to produce "uniform coverage."

Contour Grading

Contour-graded slopes are basically similar to conventionally graded slopes except that the slopes are curvilinear (in plan) rather than linear, the gradients are unvarying, and profiles are planar. Transition zones and slope intersections generally have some rounding applied. Resultant pad configurations are mildly curvilinear.

Slope drainage devices are usually constructed in a geometric configuration and in an exposed position on the slope face.

Landscaping is applied in random or geometric patterns to produce "uniform coverage."

Landform Grading

Landform grading replicates irregular shapes of natural, stable slopes. Landform-graded slopes are characterized by a continuous series of concave and convex forms interspersed with swales and berms that blend into the profiles, nonlinearity in plan view, varying slope gradients, and significant transition zones between man-made and natural slopes. ~~Resultant pad configurations are irregular.~~

Slope drainage devices either follow "natural" slope drop lines or are tucked away in special swale-and-berm combinations to conceal the drains from view. ~~Exposed~~ segments ~~in high visibility areas~~ are treated with natural rock.

The ~~Landscaping becomes a~~ "revegetation" process ~~and~~ is applied in patterns that occur in nature: trees and shrubs are concentrated largely in concave areas, whereas drier convex portions are planted ~~mainly~~ with ~~ground covers~~. herbaceous and woody scrub species

GRADING APPROACHES

Conventional

Conventional grading practice often results in drastically altered slopes and the replacement of natural hillside forms with artificial, sterile, and uniform shapes and patterns. Conventionally graded slopes can be characterized by essentially planar slope surfaces with constant gradients and angular intersections as shown in Fig. 1. Slope-drainage devices are usually constructed in a rectilinear and exposed fashion.

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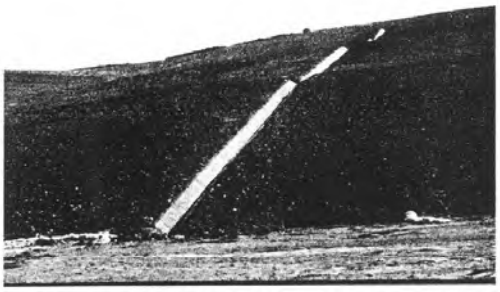

FIG. 1. Conventional Grading with Planar Slopes and Rectilinear Drainage Ditch in Highly Visible and Exposed Location

FIG. 2. Conventionally Graded Hill Slope with Planar Face, Rectilinear Drainage Ditch, and uniformly Spaced Plantings

Grading specifications in southern California, for example, typically call for flat, planar 2:1 ($H:V$) slopes with a midslope bench and a drainage ditch, commonly placed straight down the slope, that collects and conveys water from brow and midslope bench or terrace drains, respectively. Landscaping and plants are applied in random or geometric patterns as shown in Fig. 2.

Contour Grading

Contour grading offers a slight improvement over the sterile and simple geometry achieved by conventional grading. Some scalloping or curvilinear appearance is introduced onto the slope when seen in plan view; however, the slope gradients or profiles remain planar and unvarying. Transition zones at the bottom and top of slopes may also have some rounding applied. Slope drainage devices are still constructed in the same geometric configuration and exposed position on the slope face as in conventional grading. Landscaping and plants are also applied in random or geometric patterns.

Landform Grading

"Landform grading" essentially attempts to mimic nature's hills. This approach has been largely developed and pioneered by Schor (1980, 1992, 1993), who has successfully applied landform grading to several large hillside developments and planned communities in southern California. It is important to note that very few hillsides are found in nature with linear, planar faces. Instead, natural slopes consist of complex landforms covered by vegetation that grows in patterns that are adjusted to hillside hydrogeology, as shown in Figs. 3 and 4. Accordingly, landform-graded slopes are characterized by a variety of shapes including convex and concave forms interspersed with ridges and elbows in the slope.

Downslope drain devices either follow natural drop lines in the slope or are tucked away and hidden from view in special concave swale and convex berm combinations as shown in Fig. 5. Landscaping plants are not placed in random or artificial patterns. Instead they are applied in patterns that

FIG. 3. Natural Hill Slopes with Multiple and Complex Shapes and Profiles

FIG. 4. Natural Hill Slopes Showing Vegetation Patterns

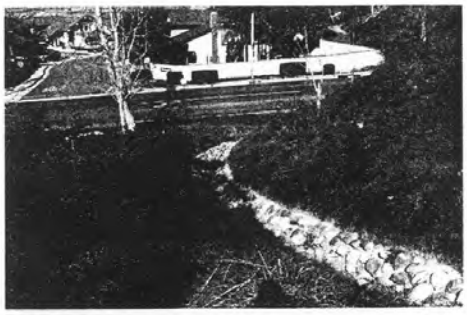

FIG. 5. Example of Landform Grading with Drainageway that is Placed in Special Swale-and-Berm Combination to Conceal it from View

occur in nature (see Fig. 6). Trees and shrubs are concentrated primarily in concave areas, where drainage tends to concentrate, while drier convex portions are planted primarily with herbaceous ground covers. A schematic depiction of conventional site planning versus landform site planning is shown in Fig. 7.

SLOPE-EVOLUTION CONSIDERATIONS

Landform-graded slopes present more than a varied and pleasing visual appearance. They also tend to be intrinsically more stable. The general lack of straight, planar slopes in nature says something. Slopes wear away or degrade over time by gravity-driven forces of erosion and mass wasting. The slopes proceed toward an equilibrium profile, which evidently does not include a linear and unvarying gradient.

Geomorphologists have been interested for some time in various slope-evolution models. The spatial and temporal variation of any point in a slope can be expressed by a number of two-dimensional mathematical models. These models predict the rate of change of elevation (dY/dT) of any point on a slope with elapsed time (T) and coordinate location (X, Y). Examples of these mathematical models are the following:

$$\text{Model \#1 } dY/dT = -A \tag{1}$$

$$\text{Model \#2 } dY/dT = -B\,(dY/dX) \tag{2}$$

$$\text{Model \#3 } dY/dT = -C\,(\text{height above base}) \tag{3}$$

$$\text{Model \#4 } dY/dT = -D\,(\text{distance from crest})^{0.6} \tag{4}$$

FIG. 6. Example of Landform Grading and Revegetation with Concave and Convex Slope Forms and Nonlinear, Varying Slope Gradients

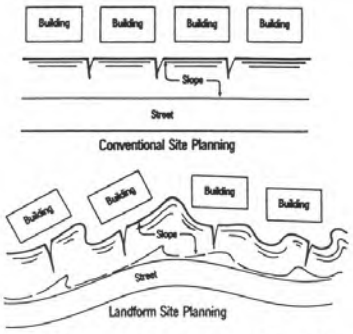

FIG. 7. Plan View of Conventional versus Landform Site Planning

$$\text{Model \#5 } dY/dT = -E\,(d^2Y/d^2X) \tag{5}$$

Graphical illustrations or simulations of these models are shown in Figs. 8–12. Each of these mathematical models has some physical basis. Model #2, for example, describes the "parallel retreat of slope" concept, which postulates that upon reaching its limiting slope angle (angle of repose) a slope retreats back at a constant inclination. A purely frictional, sandy slope whose stability is independent of slope height could conceivably fit this model. Model #4 fits observations from the Universal Soil Loss equation, which indicates that rainfall erosion losses from a slope (all other factors equal) are a function of the slope length. Model #5 is the so-called diffusion model, which postulates that in a transport-limited slope the passage of material down the slope from a point above is limited by the transfer rate at a point below. The slope profile adjusts itself over time to optimize this stepwise or sequential transfer of material downslope by various erosion or mass-wasting processes. Note that in the diffusion model, an initially planar slope evolves over time into a concave-convex slope as shown in Fig. 12.

The diffusion model (#5) was tested as part of a doctoral dissertation on slope evolution models at the University of

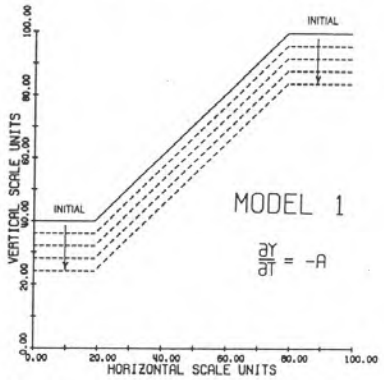

FIG. 8. Evolution of Hillside Slope when Rate of Lowering is Uniform over Entire Slope Profile (Model 1) [from Nash (1977)]

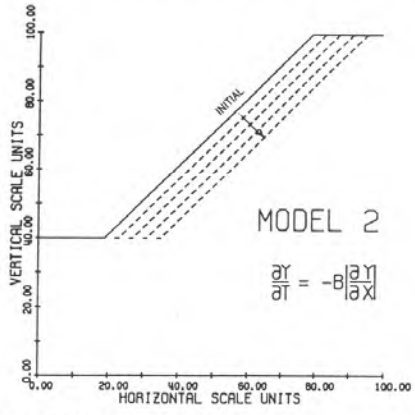

FIG. 9. Evolution of Hill Slope when Rate of Lowering at Point on Slope is Proportional to Profile Gradient at Point (Model 2) [from Nash (1977)]

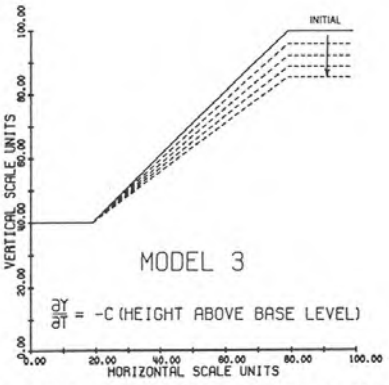

FIG. 10. Evolution of Hillside Slope when Rate of Lowering of a Point on Slope is Proportional to Elevation of Point (Model 3) [from Nash (1977)]

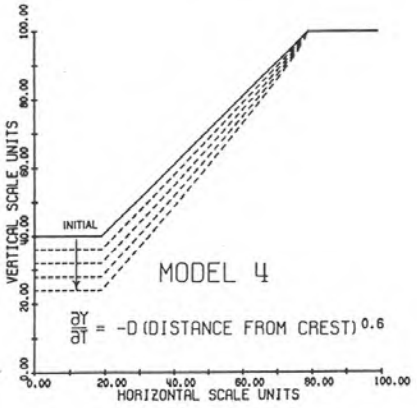

FIG. 11. Evolution of Hill Slope when Rate of Lowering at Point on Slope Profile is Proportional to Distance that Point Lies from Crest or Divide (Model 4) [from Nash (1977)]

Michigan (Nash 1977). The slope profiles of present-day, modern wave-cut bluffs along Lake Michigan and those of ancient, abandoned bluffs marking former glacial lake margins were used for this purpose. The study assumed that slope processes at work on the bluffs have remained relatively constant over geologic time. The ancient bluffs and their ages respectively, are the Nipissing bluffs (4,000 yr) and Algonquin bluffs (10,500 yr). Actual slope profiles for these three bluffs superposed at their midpoint are shown in Fig. 13. The correspondence or fit between the profiles predicted by the diffusion model and the actual profiles was examined for various diffusion constants. The configurations predicted by the diffusion model for an abandoned bluff after 4,000 years and 10,500 years using a diffusion coefficient of 0.012 m^2/yr and an initial, planar profile similar to the profile of the modern bluff are shown in Fig. 14. According to the diffusion model, the slope profiles gradually change over time from a linear to a concave-convex configuration, as illustrated in Fig. 14.

The fit or correspondence between actual and predicted profiles is quite good as can be seen by comparing slope profiles in Figs. 13 and 14. More importantly, this modeling

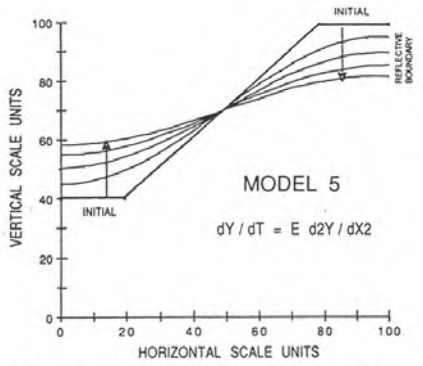

FIG. 12. Evolution of Hillside Slopes when Rate of Lowering of Point on Slope Profile is Proportional to Profile Curvature at that Point, Assuming Reflective Left and Right Boundaries (Model 5) [from Nash (1977)]

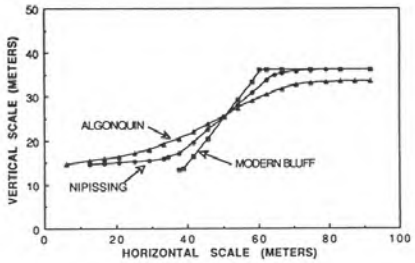

FIG. 13. Modern Bluff Profile, Nipissing Bluff Profile (4,000 yr), and Algonquin Bluff Profile (10,500 yr) Superposed at their Midpoint [from Nash (1977)]

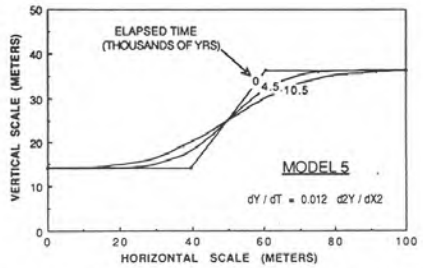

FIG. 14. Slope Profiles Predicted by Model 5 for Initial Planar Slope after 4,000 and 10,500 Years of Elapsed Time Using Diffusion Coefficient of 0.012 m^2/yr and Initial Inclination Similar to Present Wave Cut Bluff [from Nash (1977)]

work indicates that in transport-limited slopes, at least, a planar slope with constant inclination, typical of conventional grading practice, is not a stable, long-term equilibrium slope.

REVEGETATION AND LANDSCAPING

If monotony and uniformity in grading are combined with a uniform or artificial pattern of revegetation, the overall effect is not only sterile and ugly but also ineffective. Successful and attractive revegetation must invoke the same concepts and approaches as landform grading. Vegetation pat-

terns that are found in nature should also be mimicked. Shrubs and other woody vegetation growing on natural slopes tend to cluster in valleys and swales where moisture is more abundant. Random patterns or uniform coverage should be avoided. Instead, the vegetation is placed where it makes sense, i.e., where it has a better chance of surviving and does a better job of holding soil. Trees and shrubs require more moisture, and they also do a better job of stabilizing a soil mantle against shallow mass wasting. Accordingly, it makes sense to cluster them in swales and valleys in a slope (see Fig. 15), where runoff tends to concentrate and evaporation is minimized. Shrubs should also be heavily concentrated along the drainage flow of each swale.

By purposely controlling the drainage patterns on a slope, runoff can be concentrated in concave areas where it is needed or where it can best be handled by woody slope vegetation (see Fig. 16). Conversely, runoff and seepage will be diverted away from convex areas. These areas should be planted with grasses or more drought-tolerance herbaceous vegetation. Irrigation needs are thus reduced by careful control of drainage pattern on a slope and selection of appropriate plantings for different areas.

IMPACT ON DEVELOPMENT COSTS

Design Engineering and Surveying Costs

Design and surveying can be measurably higher if it is initially performed by a team only experienced in conventional methods. Design engineering and construction staking and surveying costs are directly related to the experience, talent, and versatility of the design engineer and his full understanding of the concept. When first implemented with a totally inexperienced staff during pioneering stages, design cost was 15% higher and field cost 10% higher than conventionally designed and surveyed slopes. From that initial experience, design costs quickly decreased to a factor of 1–3%, and surveying to 1–5% over conventional methods and approaches.

A willingness and an open mind to depart from old concepts are essential elements for realizing the benefits of landform grading. In-depth training of the designer, draftsman, and project manager are indispensable, as well, before attempting the landform-grading method. Approving agencies must also be brought into the information dissemination process so that plan check, permitting and, later, inspection can proceed smoothly.

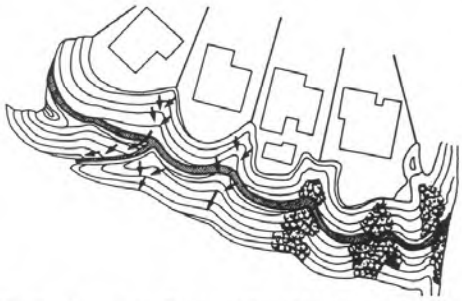

FIG. 15. Topographic Representation of Landform Configuration Showing Radial Flow of Water, Foliage Placement in Swales, and Lots that Conform with Landform Grading Configuration [after Schor (1992)]

FIG. 16. Landform-Graded Slope with Convex and Concave Slope Shapes, Varying Gradient, Curvilinear Drainage Ditch Concealed in Berm and Swale Configuration, and Clustered Plantings

Construction/Grading Costs

Construction/grading costs are most directly related to the size and volume of earth movement than any other factor. In addition, there is a direct relationship to the competitive marketplace situation at a given time. Competition for larger projects, such as those for 1,000,000 cu yd or more, tends to eliminate adherence to landform-grading standards as a significant factor.

Grading costs in hillsides of largely sedimentary materials and not requiring blasting or extremely heavy ripping range from $0.75 to $1.25 per cubic yard with an average of $1.00 per cubic yard. Variables affecting the unit cost include the quantity of material, the nature of the operating area, i.e., open or confined, the length and steepness of the haul from the cut areas to the fill areas, and the rippability by conventional dozer/scraper equipment.

At first glance it appears that landform-graded projects would be significantly more expensive to construct than conventional ones because of the more intricate details and natural shapes required. However, experience has shown that the differential is minor when compared to the total project cost. This is true because the largest percentage (on average 90%) of the earth volume moved, the mass "X" shown in Fig. 17, can be moved, placed, and compacted in a totally conventional manner. Only the outer slope layers, 20–50 ft thick (or approximately 10% of volume), require specialized shaping. Moreover, even this outer layer can still be placed and compacted with conventional equipment and methods. This outer component needs an additional grade checker for control and a dozer with an experienced operator for final shaping. Accordingly, when costs are reckoned on the basis of the actual additional operations involved they are a minor component, typically on the order of 1% of the total cost.

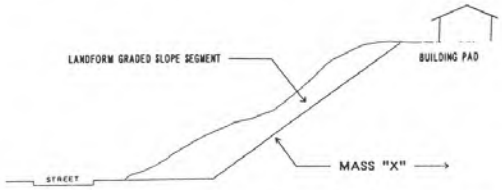

FIG. 17. Relative Amounts and Location of Earth Movement by Conventional as Opposed to Landform Grading

COST-IMPACT COMPARISONS ON VARIOUS SIZE PROJECTS

Large-Scale Projects

On a recently completed hillside project involving 20,000,000 cu yd of earth movement at a cost of some $24,000,000, the total additional cost incurred including design, surveying, construction staking, and grading, was $250,000, or about 1% of the total cost of the grading.

No loss of residential density was encountered, because land planning was done concurrently with the engineering. There was a loss of approximately 1% of commercial pad area due to concave valleys projecting into them. This was offset, however, by the credit given by the governing agency for these indentations toward landscape requirements and coverage calculations for the building pad areas. Furthermore, entitlement approvals were advanced by at least 1 year by being able to mitigate the previous strong community opposition to conventional hillside design and construction methods.

Small-Scale Projects

A 10-acre, 24 custom-lot subdivision requiring 300,000 cu yd of earth movement, initially designed by conventional methods, with little hope for approval, was reconfigured to landform-grading standards. The project applicants had previously proposed conventional grading and had for 2 1/2 years tried to secure permitting agency approvals in a community where grading practices had become a major and highly controversial issue. The governing agency insisted that the applicant apply landform-grading concepts before any further resubmittals. The project was redesigned by adhering to these concepts, and the new layout resulted in 21 lots, a loss of three lots. Design and staking costs also increased by approximately $10,000. However, this revision reduced construction costs by reducing the amount of grading required by 20%. The loss of the lots and additional design costs were further offset by reduced street and storm-drain improvements, tree-removal costs, and an enhanced and aesthetically pleasing project with larger open spaces for each of the lots. This in turn, increased the marketability of the projects. In addition to these benefits, the project received unanimous community approval within 3 months.

APPLICABILITY OF LANDFORM GRADING TO OTHER PROJECTS

In addition to residential and commercial developments the landform-grading concept should lend itself readily to highway slopes. Public objections are often voiced against these highly visible and stark slopes. In addition they are sometimes prone to erosion problems and generation of excess runoff. These problems and objections could be greatly mitigated by the application of this concept, thereby improving public acceptance. This benefit would likely offset any associated additional right-of-way acquisition costs.

Other large earthmoving and shaping projects that result in man-made landforms could also benefit from landform grading. Such projects include sanitary landfills, tailings embankments and mining waste stockpiles, and downstream faces of earthfill dams.

CONCLUSIONS

Grading considerations are very important to the successful stabilization and revegetation of slopes. Conventionally graded slopes can be characterized by essentially planar slope surfaces with constant gradients. Most slopes in nature, however, consist of complex landforms covered by vegetation that grows in patterns that are adjusted to hillside hydrogeology. Analysis of slope evolution models reveals that a planar slope often is not an equilibrium configuration.

Landform-graded slopes, on the other hand, are characterized by a variety of shapes including convex and concave forms that mimic stable natural slopes. Downslope drain devices either follow natural drop lines in the slope or are tucked away and hidden from view in special concave swale and convex berm combinations. Similarly landscaping plants are not placed in random or artificial patterns, but rather in patterns that occur in nature. Trees and shrubs are clustered primarily in concave areas, where drainage tends to concentrate, while drier convex portions are planted primarily with herbaceous ground covers.

Design and engineering costs for landform grading increase approximately 1–3%, and surveying 1–5% over conventional methods. Construction and grading costs are most strongly affected by the volume of earth movement and the competitive market. Accordingly, a landform-grading specification on a large project is not a significant factor. The relatively small increase in the costs of engineering and design are more than offset by improved visual and aesthetic impact, quicker regulatory approval, decreased hillside-maintenance and sediment-removal costs, and increased marketability and public acceptance.

APPENDIX. REFERENCES

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APPENDIX D: TREE PROTECTION STANDARDS

City of Pasadena
Public Works and Transportation – Forestry Operations
Attachment "C"

Tree Protection Plan Requirements

1. **PLANS MUST BE CLEAR AND READIBLE: In order to serve you better, we must be able to read your plans. Here is our minimum for what must appear on any plan submitted for tree protection.**

2. **PLANS MUST BE PREPARED BY A CERTIFIED OR CONSULTING ARBORIST. Names are available upon request from Forestry Operations at (626) 744-4514.**

Plans - Graphic Standards

- Scale to be no smaller than 1"=20'
- North arrow, graphic scale and date on each sheet.
- Symbols used for plant material must be clearly different from one another.
- Certified or Consulting Arborist's name, license number and information must be on all final sheets.
- Identify all existing trees and draw them to scale. Include genus, species and common name. Exact canopy and diameter (DBH) of all trees are to be drawn to scale on the plans.
- Trees in the parkway are to be included in the drawings.
- All property lines, driveways, walkways, streets, roads and avenues should be identified.
- Utility service locations to be clearly identified on the plans
- Details need to appear on the same sheet, whenever possible.
- Protective chain-link fencing are to be shown 5'0" outside of actual dripline. Fencing to have gate for tree maintenance
- Include a sheet with the tree name, botanic and common, the size of the trees with a number and their condition. Mark whether the trees are to be removed or retained. All trees to be retained shall be protected to the drip line with substantial temporary fencing with a gate to allow entry for maintenance.

2. Required Plans:

   A. EXISTING TREE SURVEY - Plan showing existing conditions. Tree diameter (DBH), actual canopy, exact genus and species must be shown. Survey must be conducted by a licensed consulting arborist/or certified arborist approved by the City. Each tree must have a condition rating based on the ISA guide to tree appraisal indicating if the tree has decay, disease, insects or other damage. Include pictures of the trees that are numbered according to the plans.

   B. GRADING AND TRENCHING PLANS: Grading plan and trenching plan (including irrigation, wall and building footings) must be shown with location and actual canopy of all trees to be retained.

   C. PROPOSED TREE RETENTION PLAN – Must include fencing plan that shows trees to be retained with temporary chain link fencing at the dripline of the tree. The dripline of the tree is defined as the outside edge of the canopy matching the circumference of the leaf canopy.

   D. REVIEW: - Plans must be reviewed by City Arborist (744-4514) and signed off before commencement of work. Protective fencing must be approved in place before any construction will be allowed to begin. Applicants may be asked to place a construction bond in the amount of the assessed value of the tree as determined using the most recent version of the International Society of Arboriculture guide to plant appraisal. The bond will be returned upon successful completion of the project if the trees have not sustained damage in construction.

3. Applicants must follow “Tree Protection Agreement” as developed for the project. Violations to the tree protection agreement will result in a stop work order on the construction project. Owner and contractor will jointly and severally be required to sign document stating they have read and understand and agree to follow the tree protection agreement.

City of Pasadena
Public Works and Transportation – Forestry Operations
Attachment "D"

Tree Protection Standards

Purpose: The City recognizes the substantial economic, environmental and aesthetic importance of trees and plantings within the community. It will be the City's policy to utilize applicable methods, techniques and procedures to preserve trees and canopy cover when feasible. These standards apply both to removals associated with construction projects and those not associated with construction on private property.

General Requirements: Protective fencing with a small gate to allow for tree maintenance personnel to enter must be installed to the dripline of protected trees and approved in place by the City Arborist before any construction will be allowed to begin.

Watering trees during construction to be determined with City Arborist. In general, trees must be deeply soaked monthly (8-12 inches) throughout the Protection Zone (within the tree's dripline, at the edge of the canopy of the tree). 3-4 inch diameter wood chips are to be placed 8-12 inches deep throughout the Protection Zone of the tree. Wood chips may be periodically available from Forestry Operations by calling (626) 744-4514.

Applicants may be asked to place a construction bond in the amount of the assessed value of the tree as determined using the most recent version of the International Society of Arboriculture guide to plant appraisal. The bond will be returned upon successful completion of the project if the trees have not sustained damage during construction. If damage has been sustained during construction, the bond may be held for an additional period of time determined by the City Arborist.

Applicants must follow the Tree Protection Standards and the "Tree Protection Agreement" as developed for each project. Violations to the tree protection agreement will result in assessed fines and the potential generation of a stop work order on the construction project. Owner and contractor are required to jointly and severally to sign an agreement stating they have read, understand, and agree to follow the tree protection agreement.

Specific Standards: (Sample)
1. All work conducted in the ground within the protection zone of any protected tree should be accomplished with hand tools only. (The protection zone is defined as the area within a circle with a radius equal to the greatest distance from the trunk to any overhanging foliage in the canopy).

2. Where structural footings are required and major roots will be impacted, the footing depth should be reduced to 12". This may require additional "rebar" for added strength. An alternative would involve bridging footings over roots and covering each root with plastic cloth and 2-4" of Styrofoam matting before pouring concrete.

3. Any required trenching which has options as to the trench path should be routed in such a manner as to minimize root damage. Radial trenching (radial to the tree trunk) is less harmful than tangential trenching because it runs parallel to tree roots rather than diagonal or perpendicular to them. If roots can be worked around, cutting of roots should be avoided (i. e. place pipes and cables below uncut roots whenever possible). Whenever possible utilize the same trench for as many utilities as possible.

4. "Natural" or pre-construction grade should be maintained for as great a distance from the trunk of each tree as construction permits. At no time during or after construction should soil be in contact with the trunk of the tree above natural grade.

5. In areas where grade will be lowered, some root cutting may be unavoidable. Cuts should be made cleanly with a sharp saw or pruning tool. The cut should be made at right angles to the root so that the wound is no larger than necessary. When practical, cut roots back to a branching lateral root.

6. When removing pavement, as little disruption of soil as necessary should be attempted.

7. Pruning of oaks should be limited to the removal of dead wood and the correction of potentially hazardous conditions, as evaluated by a qualified arborist. Pruning oaks excessively is harmful to them. Removal or reduction of major structural limbs should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no “flush cuts”), and cuts should be made in such a way as to prevent the tearing of bark from the tree. All pruning should be done in accordance with accepted pruning standards (e. g. ISA).

8. Pruning of trees other than oaks shall follow the current International Society of Arboriculture standards. Removal or reduction of major structural limbs should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no “flush cuts”), and cuts should be made in such a way as to prevent the tearing of bark from the tree. All pruning should be done in accordance with accepted pruning standards (e. g. ISA).

9. Keep all activity and traffic to a minimum within the protection zone of the trees to minimize soil compaction.

10. It is important that the protection zone not be subjected to flooding incidental to the construction work, or to disposal of construction debris such as paints, plasters, or chemical solutions. No equipment fueling or chemical mixing should be done within the root protection zone.

11. Trees shall not have physical damage to tree's bark or crown (where roots join the stem) during construction.

APPENDIX E: ARROYO STONE WALLS & STEPS SPECIFICATIONS

The arroyo stone walls and steps throughout the City of Pasadena and especially in the Arroyo Seco are considered an historic resource because many of them were built during the WPA years and in some locations designed by notable architects. Rehabilitation, including maintenance and repair, shall be focused on conservation of this historic resource.

Rehabilitation of this resource is an ongoing process and, as a specific location is designated for maintenance and repair, the contract shall specify a sample test area of the work for review and approval of workmanship and materials by the Pasadena Parks & Natural Resources and Design & Historic Preservation staff before work proceeds on the entire contract.

Standard Specifications: In connection with contracts related to the subject "Bidder's Proposal," and except as otherwise provided below, all work shall be done in accordance with the provisions of the current edition of "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (popularly known as the "GREENBOOK") including all Supplements and where not provided with relevant specifications in the "Greenbook" the work shall comply with the current code as specified in the latest edition of the California Uniform Building Code.

Mortar: Loose or missing stones shall be reset in new mortar that matches the original mortar as closely as possible in color, texture, and composition. The mortar shall be of standard mix design for masonry walls; see attached Pasadena Standard Plan "Concrete Block Fences" on page E-5. The cement shall be from a consistent local source. The mortar shall have a heavy aggregate content and use water-washed coarse sand. It shall include one half-strength "Fawn" or "Bisk" color additive. Adjust the amount of this color additive with the specific cement used to match as closely as possible the original mortar. A sample of dried mortar shall be given to the Pasadena Parks & Natural Resources Division for approval before work begins on the sample test area.

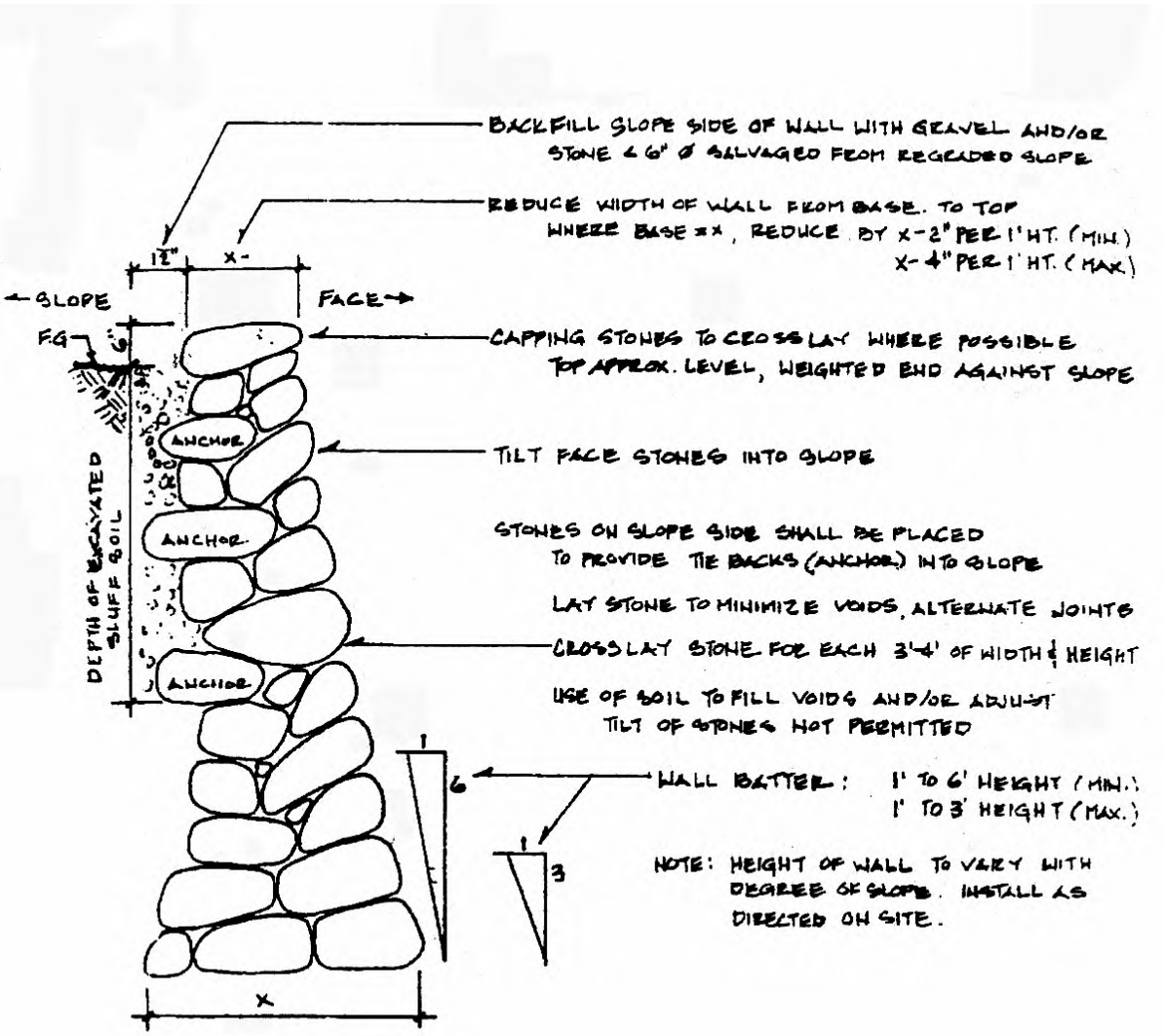
Where the adjacent work has the appearance of "infilling" the openings and joints among the stones, the mortar shall be tooled to match this effect. Where the adjacent work has the appearance of "dry" laid stones without mortar, mortar shall be used in the interior of the wall to give this "dry" laid appearance following detail shown on page E-3. Smearing of mortar over exposed surfaces of the stone is not acceptable. A "flush" surface of stone and mortar is only permitted on stair tread or path surfaces. Stones shall be chosen and mortar tooled to minimize the mortar surface area. For stair tread and path surfaces, apply white concrete glue to the stone where mortar thins to give a safe "flush" surface and include the recommended amount of concrete glue in the mortar mix. Mortar shall have a washed sand finish to match existing mortar surfaces.

***Stones*:** In places where the stones are missing, shall be replaced with new stones similar in color, size and finish to the adjacent stones. Surface stones shall be placed on fully

compacted base soil in a mortar base course. If the repair is six feet or greater in length at the footing, then a concrete footing with reinforcing steel bars shall be placed as specified in the attached exhibits on pages E-4 and E-5. During the restoration, the shape and size of a stone shall be chosen for the appropriately shaped exposed surface as well as fit the adjacent stones for structural integrity and match the adjacent appearance and function. A stockpile of stones will be provided by the City, at a location adjacent to the contract work. Should additional stones be needed from which to choose, they will be available from several locations in the Arroyo Seco. All stones moved to the work site and not used to complete the contract shall be returned to the stockpile and remain the property of the City of Pasadena.

Mortar Cap: The free form mortar cap shall be of a thickness and water-washed coarse sand finish to match the early mortar caps adjacent to the area to be restored. If the cap is one to two inches thick, expanded metal lath shall be imbedded in the mortar cap. The formed cantilevered cap shall be three to four inches thick to match formed caps in the area. The cantilevered cap shall have a number three reinforcing bar continuous in the nose, one and one half inches from any surface and be tied to 6x6 – 10/10 WWF reinforcing the total formed cap area. The cantilevered cap shall be formed to allow the nose face form to be removed at the proper time to receive a water-washed coarse sand finish. Mortar caps with metal lath or welded wire fabric for reinforcing shall have the cap structurally tied to the mortared interior of the rebuilt stone wall using galvanized metal seismic ties sixteen (16) inches on center, each way. See attached plan “Low Stone Walls” on page E-4.

Reinforcing & Footings: When rebuilding a free standing stone wall up to four feet in height or retaining stone wall up to three feet high with no surcharge or six feet or greater in length at the footing use reinforcing steel bars, galvanized seismic ties and footings size as specified on the attached City Standard Plan for “Concrete Block Fences” and “Low Stone Wall.” When rebuilding any stone wall or steps use galvanized seismic metal ties at sixteen inches on center, each way, each face. Retaining walls greater than three feet in height shall be engineered with a six or eight inch reinforced block wall on a footing engineered to support an Arroyo Stone veneer anchored to the block wall. The retaining wall details and specifications for each particular site shall be provided in the “Scope of Work”. Freestanding stone walls greater than four feet in height shall be engineered with reinforcing and footing details and specifications for each particular site provided in the “Scope of Work.”

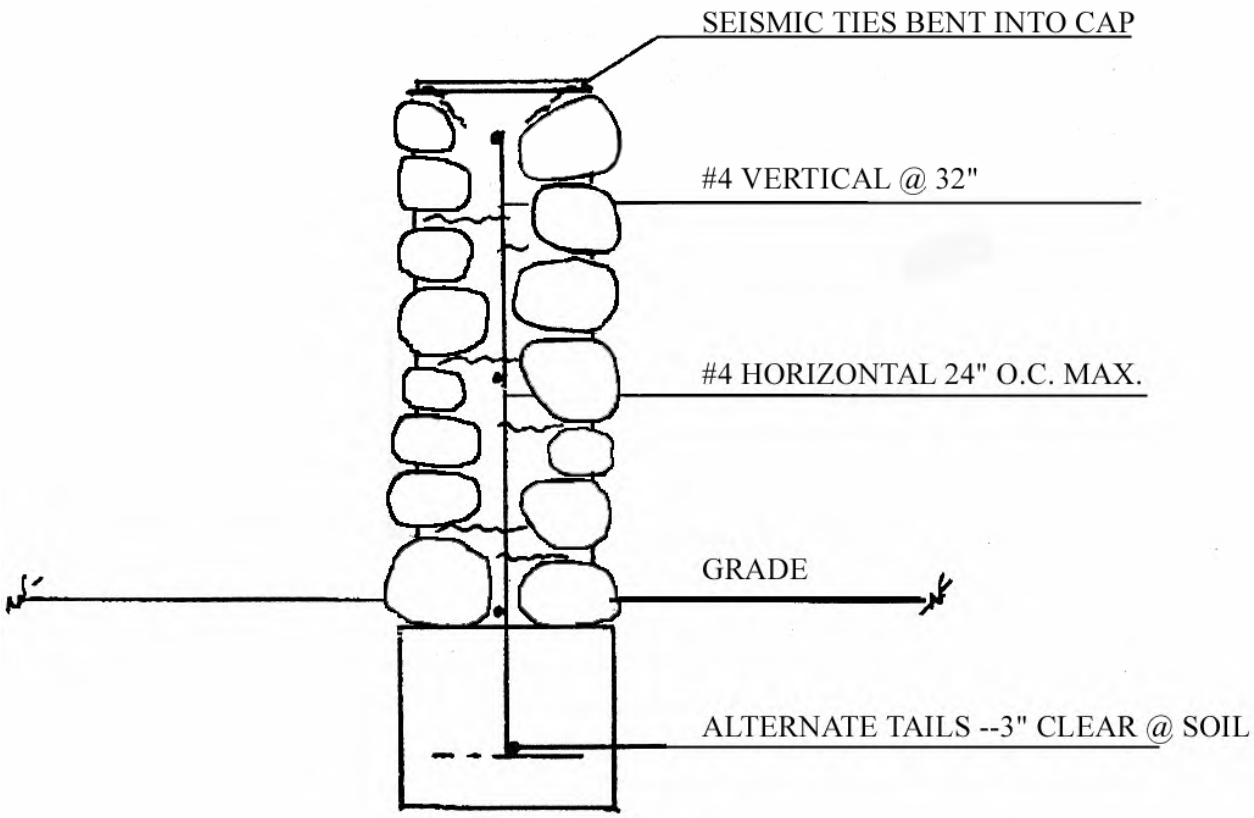


A **DRY LAID STONE WALL**

NO SCALE

LOW STONE WALL -- RETAINING THREE FEET MAX.

1. FOOTING: 14" X 12" THICK CONCRETE
2. VERTICAL #4 AT 32" O.C. -- ALTERNATE TAILS
3. ONE HORIZONTAL #4 IN FOOTING
4. HORIZONTAL STEEL AT WALL IN THREE PLACES (MAX. 24" O.C.)
5. GALVANIZED SEISMIC TIES AT 16" O.C. EACH WAY, EACH FACE
6. FOR SAND CAP BEND TIES UP INTO CAP



NOTE:

1. Fence height is measured from the top of the footing to the top of the wall.
2. All cells of concrete hollow units containing reinforcing must be solid grouted.
3. Concrete units shall be laid in running bond and no cold joint at any intersections.

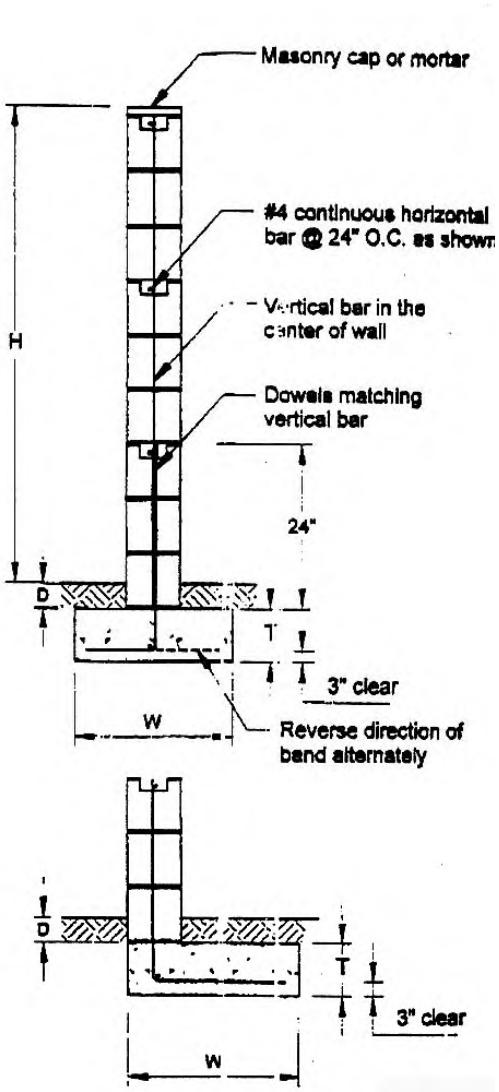
CONCRETE BLOCK FENCE SPECIFICATION:
Use the following specifications when constructing a concrete block fence.

1. **Concrete Mix:**
   1 part Portland cement conforming to ASTM C150, type I or II, low alkali.
   2 ¼ parts sand
   3 ½ parts ¾ inch maximum-size gravel
   Not more than 7 gallons of water per sack of cement.
   The minimum compressive strength shall not be less than 2000 psi.

2. **Hollow Block Units:**
   Hollow block units shall be medium-weight, grade "N", conforming to ASTM C90 with an average compressive strength of 1900 psi.

3. **Grout Mix:**
   Grout shall be of fluid consistency, conforming to ASTM C476.
   1 part Portland cement
   3 parts sand
   2 part pea gravel
   The minimum compressive strength shall not be less than 2000 psi.

   Mortar Mix:
   Mortar shall be type "S", conforming to ASTM C270.
   1 part Portland cement
   3 part sand
   ½ part lime putty or hydrated lime/
   The minimum compressive strength shall not be less than 1800 psi.



Wall Height	Block Thickness	W (Invert T shape) inches	W (L shape) inches	T inches	D inches	Reinforcing Steel
4'-0"	6"	12	12	8	4	#4 @ 32" O.C.
	8"	12	12	8	4	#4 @ 32" O.C.
5'-0"	6"	12	18	8	4	#4 @ 32" O.C.
	8"	18	18	10	2	#4 @ 24" O.C.
6'-0"	6"	18	24	10	2	#4 @ 24" O.C.
	8"	24	24	10	2	#4 @ 24" O.C.

CITY OF PASADENA
Permit Center

APPENDIX F
CITY OF PASADENA
PARK EQUIPMENT STORAGE FACILITY POLICY

I. INTRODUCTION

A. Equipment Storage Facilities

Equipment storage facilities that are located on City parkland, afford park user groups the ability to maintain sports equipment at their location of play. The proximity of athletic equipment and playing fields facilitates the coordination of team practices and games. However, storage facilities introduce an object that has the potential to adversely impact various aspects of a park environment. The City has developed this policy to establish a procedure to mitigate the impacts caused by equipment storage facilities located in and around parkland.

II. OBJECTIVES

The City of Pasadena has developed this policy to ensure that:

- Storage facilities located on parkland are in compliance with the Municipal Code;
- Each storage facility is aesthetically consistent with its surrounding environment;
- The use of storage facilities is kept within seasonal limits;
- The location of each storage facility does not hinder or otherwise interfere with City maintenance operations.
- The City has information pertaining to the owner of each storage facility and the contents contained therein.

III. APPLICATIONS FOR STORAGE FACILITIES ON PARKLAND

Whether requesting use of parkland for a storage facility, or requesting the expansion and/or use of an existing city-owned storage facility, applications may be obtained from the Human Services and Recreation Department's Park Reservation Desk[1] when applying for field use permits. Applications must describe the articles that are proposed for storage, and must indicate the proposed size, the proposed location, and the duration of storage.

[1] Park Reservation/Permit Desk is located at 175 N. Garfield Ave and may be contacted at (626) 744-7195

A. Requesting Use of Parkland For a Storage Facility

Parks user groups wishing to request use of parkland for ***their*** storage facility on parkland may submit a completed application to the Human Services and Recreation Department's Park Reservation Desk. Parks Staff will review applications requesting the use of parkland for a storage facility and either approve or deny them based upon this policy. Applicants receiving approval will be sent a copy of the approved application along with staff's comments to ensure an understanding of the terms of use. Unsuccessful applications will be returned to the applicant.

B. Requesting Use or Expansion of An Existing Storage Facility on Parkland

Parks user groups wishing to use or expand an existing ***city-owned*** storage facility on parkland may submit an application for use to the Human Services and Recreation Department's Park Reservation Desk. Applications for the expansion of a city-owned facility will be brought to the Recreation and Parks Commission and may be included in the City's Capital Improvement Program. Successful applicants will be required to pay for the costs of expansion.

IV. SEASONAL LIMITS OF USE

Storage facilities that are utilized throughout multiple seasons may be permitted to remain at the park throughout the year. Storage facilities that are utilized solely for one season per year may only remain at the park within two weeks from the end of that season, unless the group demonstrates special need for year round storage and receives written approval from the Parks staff. (Special needs include groups who can demonstrate an active year round recreational use that requires storage.)

If the City finds unauthorized equipment facilities at any of its parks and/or a permitted storage facility exceeds its permitted time, the City shall contact the owner in order to schedule its timely removal. In the event that the owner cannot be identified within 30 days the City shall padlock and/or remove the facility at the owner's expense.