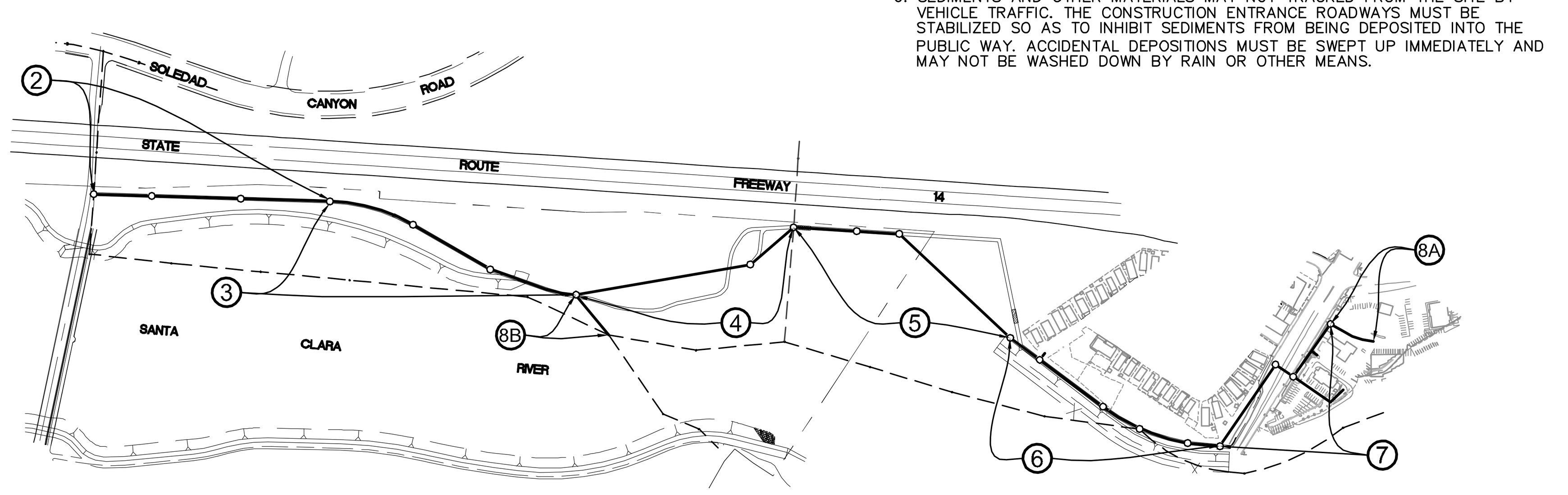
Appendix A

Site Plans

BENCHMARK:	L 1668
DESCRIPTION:	CS MON IN WELL 250MM DN @ PI 600MM EAST OF CENTERLINE
LOCATION:	SAND CANYON ROAD AND 161M NORTH OF LIVE OAK SPRINGS CANYON ROAD 8.2M NORTHEAST OF POWER POLE #1155006E MKD (PI 24)
ELEVATION:	1586.011 DATUM: NAVD 88 (1995 ADJ.)



INDEX MAP

SCALE: 1" = 500' INDEX 1334 & 1335
P.C. 06–11 TR. NO.S 69164
THOMAS GUIDE PAGE: 4551–A3 & B3 (2003)

NOTES: ○ CIRCLED NUMBERS INDICATE PAGE NUMBERS. ALL MAINLINE SANITARY SEWERS ARE WITHIN THE SANITARY SEWER EASEMENT

NO.	REVISION	REVISED BY (REGISTERED ENGINEER'S SIGNATURE)	APPROVED BY LA COUNTY SMD APPROVAL	DATE	CITY APPROVAL	DATE

STORMWATER POLLUTION PLAN NOTES

A. NOTES

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND MAY NOT CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
5. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIALS MAY NOT TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
7. ANY SLOPES WITH DISTURBED SOILS DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
8. THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE "BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORMWATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA 1993," OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY COUNTY INSPECTORS):

BMP NOTES:

CA001 – DEWATERING OPERATIONS
CA002 – PAVING OPERATIONS
CA003 – STRUCTURE CONSTRUCTION AND PAINTING
CA010 – MATERIAL DELIVERY AND STORAGE
CA011 – MATERIAL USE
CA012 – SPILL PREVENTION CONTROL
CA020 – SOLID WASTE MANAGEMENT
CA021 – HAZARDOUS WASTE MANAGEMENT
CA022 – CONTAMINATED SOIL MANAGEMENT
CA023 – CONCRETE WASTE MANAGEMENT
CA030 – VEHICLE AND EQUIPMENT CLEANING
CA031 – VEHICLE AND EQUIPMENT FUELING
CA032 – VEHICLE AND EQUIPMENT MAINTENANCE
CA040 – EMPLOYEE/SUBCONTRACTOR TRAINING
ESC01 – SCHEDULING
ESC02 – PRESERVATION OF EXISTING VEGETATION
ESC21 – DUST CONTROLS
ESC22 – TEMPORARY STREAM CROSSING
ESC23 – CONSTRUCTION ROAD STABILIZATION
ESC24 – STABILIZED CONSTRUCTION ENTRANCE
ESC40 – OUTLET PROTECTION
ESC41 – CHECK DAMS
ESC51 – STRAW BALE BARRIER
ESC52 – SAND BAG BARRIER
ESC53 – BRUSH OR ROCK FILTER
ESC54 – STORM DRAIN INLET PROTECTION

NOTES:
"PRIOR TO ACCEPTANCE OF ANY SANITARY SEWER LINE BY THE CITY OF SANTA CLARITA AN INSPECTION OF SAID LINE BY VIDEO SHALL BE REQUIRED AT NO COST TO THE CITY. ALL NEW MAINLINE SEWERS SHALL BE VIDEO INSPECTED. THE CCTV INSPECTION SHALL BE COMPLETED BY A CERTIFIED NATIONAL ASSOCIATION OF SEWER SERVICE COMPANY (NASSCO), PIPELINE ASSESSMENT AND CERTIFICATION PROGRAM (PACP) TRAINED OPERATOR(S) USING ESTABLISHED PACP CODING AND OBSERVATIONS. THE RESULTS OF THE VIDEO INSPECTION SHALL BE RECORDED IN DVD FORMAT AND A COPY SHALL BE PROVIDED TO THE CITY AND LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS SEWER MAINTENANCE DIVISION, CONDITION ASSESSMENT UNIT, FOR REVIEW AND APPROVAL. ANY NOTED DEFICIENCIES SHALL BE CORRECTED, THEN FOLLOWED BY A POST CORRECTION VIDEO TO BE RESUBMITTED FOR REVIEW AND APPROVAL. THE DEVELOPER OF THE PROJECT SHALL NOTIFY THE CITY OF SANTA CLARITA IN WRITING AT LEAST 24 HOURS IN ADVANCE OF THE SCHEDULED DATE OF THE VIDEO INSPECTION.

CITY OF SANTA CLARITA
APPROVED FOR CONSTRUCTION

ROBERT G. NEWMAN
DIRECTOR OF PUBLIC WORKS ____ DATE

PLAN CHECKER ____ DATE

BACKWATER VALVE REQUIRED FOR LOTS MARKED WITH [BWV]

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
CONSOLIDATED SEWER MAINTENANCE DISTRICT
REVIEWED FOR MAINTENANCE

REVIEWED BY ____ DATE ____

NOTICE TO CONTRACTOR:
MAINTAIN SEWER FLOW AT ALL TIMES DURING CONSTRUCTION.

EASEMENT NOTE:
A MINIMUM 10' SEWER EASEMENT TO BE DEDICATED TO THE CITY OF SANTA CLARITA OVER ALL PRIVATE DRIVES PER TRACT MAP 62322

PRIVATE CONTRACT SEWER GENERAL NOTES

THE FOLLOWING GENERAL NOTES ARE TO BE INCLUDED ON PAGE 1 OF ALL PRIVATE CONTRACT SEWER PLANS:

1. A SEWER CONSTRUCTION PERMIT SHALL BE OBTAINED AND A FEE PAID FOR CONSTRUCTION INSPECTION AND RECORD PLANS TO THE CITY OF SANTA CLARITA, 23920 VALENCIA BLVD. SUITE 300, AT LEAST 72 HOURS PRIOR TO STARTING WORK UNDER THIS PERMIT. COPIES OF ALL OTHER REQUIRED PERMITS, SUCH AS ROAD EXCAVATION, CALTRANS, ECT. MUST BE FILED WITH THE PERMIT APPLICATIONS.
2. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS INSPECTOR BY TELEPHONE AT (661) 255–4942 AT LEAST 24 HOURS BEFORE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 227–2600 AT LEAST 14 DAYS PRIOR TO START OF WORK.
4. PRIOR TO ISSUANCE OF THE REQUIRED SEWER CONSTRUCITON PERMIT, THE CONTRACTOR SHALL OBTAIN AND FILE WITH THE CITY OF SANTA CLARITA, COPIES OF A PERMIT TO EXCAVATE IN CITY STREETS AND A PERMIT FOR EXCAVATION AND TRENCHES FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND A CERTIFICATE OF WORKER'S COMPENSATION INSURANCE WITH THE CITY OF SANTA CLARITA NAMED AS THE CERTIFICATE HOLDER TO BE NOTIFIED 30 DAYS PRIOR TO CANCELLATION OF POLICY.
5. IF WORK IS DONE ON A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 120 SOUTH SPRING STREET, LOS ANGELES, CALIFORNIA.
6. APPROVAL OF THIS PLAN BY THE CITY OF SANTA CLARITA DOES NOT CONSTITUTE A REPRESENTATION AS TO ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON–EXISTENCE OF ANY UNDERGROUND UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
7. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS.
8. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", INCLUDING SUPPLEMENTS AND THE LATEST "SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWER" AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY OF SANTA CLARITA.
9. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7–10.4.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIO IN REGARD TO SAFETY ORDERS AND SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENT FOR OPEN EXCAVATION" AS SHOWN ON LOS ANGELES DEPARTMENT OF PUBLIC WORKS' STANDARD PLAN 6008–0.
10. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
11. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE CITY ENGINEER.
12. NO REPRESENTATIVE OF THE CITY OF SANTA CLARITA WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
13. GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTERLINE OF STREETS, OR CENTERLINE OF ALLEYS, ARE SHOWN BY CIRCLES ON PROFILES AT ALL POINTS BETWEEN SAID DESIGNED POINTS. THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGN POINTS.
14. THE PRIVATE ENGINEER SHALL FURNISH THE CITY OF SANTA CLARITA WITH GRADE SHEETS AND STATIONING FOR ALL HOUSE LATERALS AND "Y" OR "T" BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ALL HOUSE LATERALS SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT AT RIGHT ANGLES FROM THE MAIN LINE SEWER EXCEPT AS SHOWN ON THE PLANS. HOUSE LATERALS FROM CHIMNEYS SHALL NOT HAVE AN ANGLE OF LESS THAN 45 DEGREES WITH THE M.L. SEWER. ANY CHANGE IN ALIGNMENT SHALL BE REQUESTED IN WRITING BY THE PRIVATE ENGINEER.
15. THE PRIVATE ENGINEER SHALL FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.

COUNTY SANITATION DISTRICTS (CSD) NOTES:

1. NO CONNECTION FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS UNTIL A PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE HAS BEEN ISSUED BY CSD FOR SAID CONNECTION.
2. BEFORE BREAKING INTO A CSD SEWER OR MANHOLE, AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, A CSD INSPECTOR SHALL BE NOTIFIED BY TELEPHONE AT (661) 729–5320 OR (562) 908–4288, EXT. 6318 SO THAT REQUIRED INSPECTION CAN BE MADE.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL PROVIDE SURVEY STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTERLINE OF EACH MANHOLE.
2. VITRIFIED CLAY PIPE JOINTS SHALL BE TYPE "D" OR "G" IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SECTION 208–2.
3. IF A POWERPOLE IS WITHIN THREE FEET OF THE SEWER, THE SEWER SHALL BE ENCASED PER LACDPW STANDARD PLAN 2023–1, CASE II, TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
4. ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "D" (WITH BUSHING IF NECESSARY) PER "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SECTION 208–2.
5. HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT THE PROPERTY LINE 6 FEET BELOW CURB GRADE EXCEPT AS NOTED.
6. ALL WYES AND/OR HOUSE LATERALS ARE TO BE LOCATED AT LEAST 5' APART AND WHEN POSSIBLE NOT CLOSER THAN 5' TO ANY MANHOLE PER LOS ANGELES COUNTY'S STANDARD.
7. WYE OR TEE BRANCHES MAY BE USED FOR CONNECTIONS TO THE MAINLINE SEWERS EXCEPT AS NOTED.
8. IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED THAT THERE IS LESS THAN FOUR FEET OF COVER OVER THE TOP OF A MAINLINE OR HOUSE LATERAL V.C.P. SEWER WHICH IS NOT INDICATED ON THE PLANS, THE PIPES SHALL BE ENCASED PER LOS ANGELES COUNTY STANDARD PLAN 2023–1, CASE II, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
9. REFER TO THE STANDARD DRAWING 2100–0, "DESIGN REQUIREMENTS FOR SANITARY SEWERES IN THE VICINITY OF PRESSURE WATER MAINS", AND COMPLY WITH THE REQUIREMENTS.
10. ALL STRUCTURES SHALL BE EITHER BRICK SEWER MANHOLES PER LOS ANGELES COUNTY APWA 203–0, PRECAST CONCRETE SEWER MANHOLES PER APWA 200–2, OR REINFORCED PRECAST CONCRETE MANHOLE PER LACDPW STANDARD PLAN 2003–1, EXCEPT AS NOTED.
11. RESURFACE ALL TRENCHES WITHIN PAVED AREAS TO MEET THE CITY OF SANTA CLARITA, LOS ANGELES COUNTY PUBLIC WORKS OR CALIFORNIA STATE HIGHWAY REQUIREMENTS IN ACCORDANCE WITH THE PERMITS.
12. FULL COMPLIANCE WITH SECTION 306–1.3.4. OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" WILL BE REQUIRED FOR BACKFILL IN STREET, CERTIFICATION OF BACKFILL COMPACTION, AND SAND EQUIVALENTS BY A QUALIFIED CIVIL ENGINEER. THIS SHALL BE PROVIDED BY THE PERMITEE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF PARTIAL ACCEPTANCE.
13. ALL BACKFILL AND FILLS OUTSIDE OF THE STREET RIGHT OF WAY SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM SOIL COMPACTION TEST D 1557–78 METHOD "D" UNLESS OTHERWISE SPECIFIED. THIS SHALL BE CERTIFIED BY A QUALIFIED CIVIL ENGINEER. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY OF SANTA CLARITA PRIOR TO THE ACCEPTANCE OF THE WORK BY THE CITY.
14. MANHOLE TOPS IN UNIMPROVED RIGHT OF WAYS TO BE SIX INCHES ABOVE FINISHED GRADE.
15. SEWERS TO BE TESTED FOR LEAKAGE PER SECTION 306–1.4.4 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
16. AN APPROVED BACKWATER VALVE IS REQUIRED WHERE FINISHED FLOOR IS LOWER IN ELEVATION THAN THE TOP OF THE NEXT UPSTREAM MANHOLE.
17. DIRECT CONNECTION OF HOUSE LATERAL TO A MANHOLE IS PERMISSIBLE FOR TERMINAL MANHOLES WITH THE USE OF A 4 X 8 STUB.

PROFILE, ALIGNMENT, AND GRADE OF

SANITARY SEWERS

TO BE CONSTRUCTED IN

THE CITY OF SANTA CLARITA

SAND CANYON PC NO. XXX–XX

4 SHEETS: 8 PAGES

COUNTY OF LOS ANGELES CALIFORNIA

INDEX 1334 & 1335

SCALE: VERTICAL 1"=8'
HORIZONTAL 1"=40'

TRACT NO. 4616 PC XXX–XX (1)

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF THE DEPARTMENT OF PUBLIC WORKS SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT

LEGEND	2000–0
MINIMUM PUBLIC SAFETY REQUIREMENTS	6008–1
BRICK MANHOLE	APWA 203–0
REINFORCED PRECAST CONCRETE MANHOLE	2003–2
STANDARD MANHOLE STEP	2015–1
BEDDING FOR SEWER PIPE	2021–1
CRADLING AND ENCASEMENT	2023–1
WYE OR TEE SUPPORT	2024–1
ALLOWABLE TRENCH WIDTH	2027–1
LOCKING MANHOLE FRAME AND COVER	APWA 210–2
NON–REINFORCED PRECAST CONCRETE MANHOLE	APWA 200–2
SANITARY SEWER IN THE VICINITY OF PRESSURE WATER MAINS	2100–1

SANTA CLARITA VALLEY SANITATION DISTRICT
OF LOS ANGELES COUNTY, CALIFORNIA
GRACE ROBINSON CHAN–CHIEF ENGINEER AND GENERAL MANAGER

APPROVED BY ____ DATE: ____
OFFICE ENGINEER

PRIVATE ENGINEERS NOTICE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS IS REQUIRED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING. PRIOR TO EXCAVATION THE CONTRACTOR SHALL CALL TOLL FREE 1–800–422–4133 TO VERIFY THE UNDERGROUND LOCATION OF GAS AND TELEPHONE LINES. THE CONTRACTOR SHALL ALSO CALL MR. RAY CUMMINGS OF GENERAL TELEPHONE COMPANY AT 1–805–948 4871 SO THAT THEY CAN MARK THE LOCATION OF UNDERGROUND TELEPHONE LINES.

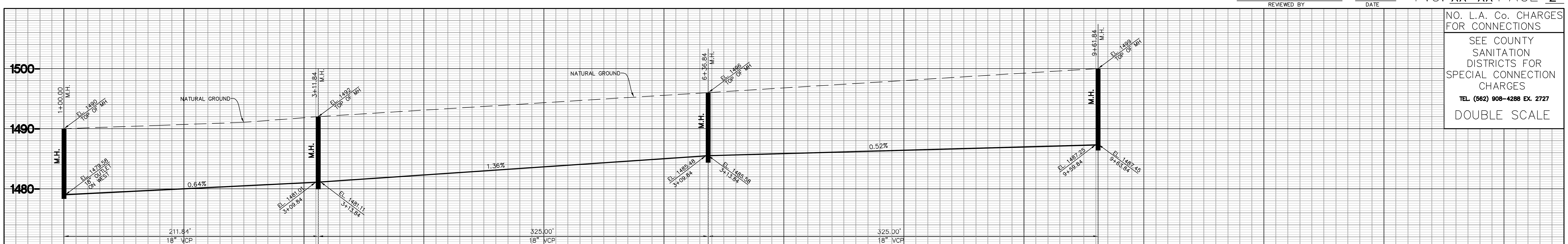
PROJECT ENGINEER RCE NO 51929 3/26/14 DATE

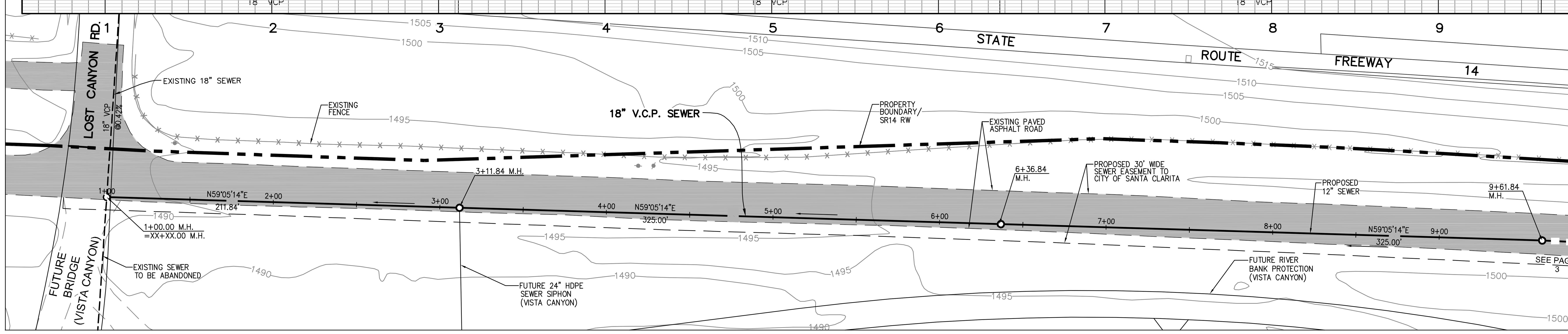
REVIEWED BY ____ DATE ____

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES
TEL. (562) 908–4288 EX. 2727

DOUBLE SCALE





PLAN
SCALE: 1" = 40'
25 0 50 100

REGISTERED PROFESSIONAL ENGINEER
CRAIG M. WHITTEKER
NO. 51929
EXP 6–30–16
CIVIL
STATE OF CALIFORNIA

PROJECT ENGINEER 3/26/14 DATE

SANITARY SEWER PLANS IN
SAND CANYON PC NO. XX–XX

CITY OF SANTA CLARITA

ALLIANCE
LAND PLANNING & ENGINEERING INC.

2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431–9896
FAX:(760) 431–8802

27451 TOURNEY ROAD
SUITE 140
VALENCIA, CA 91355
TEL: (661) 799–2760

P.C. xx–xx PAGE 3

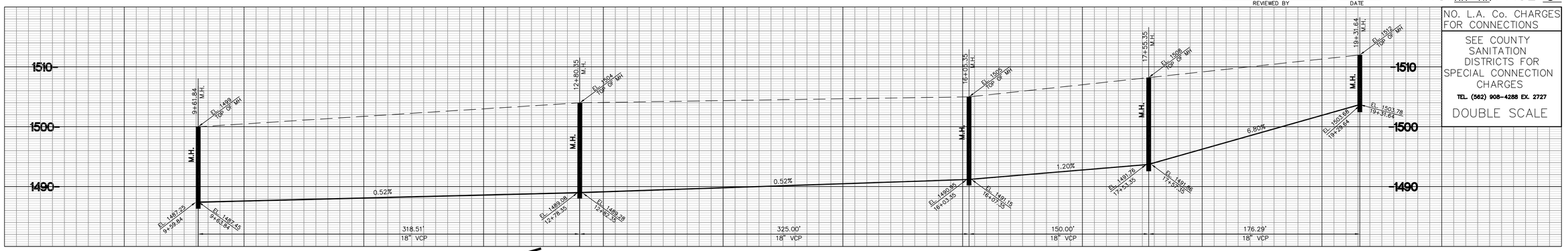
REVIEWED BY | DATE

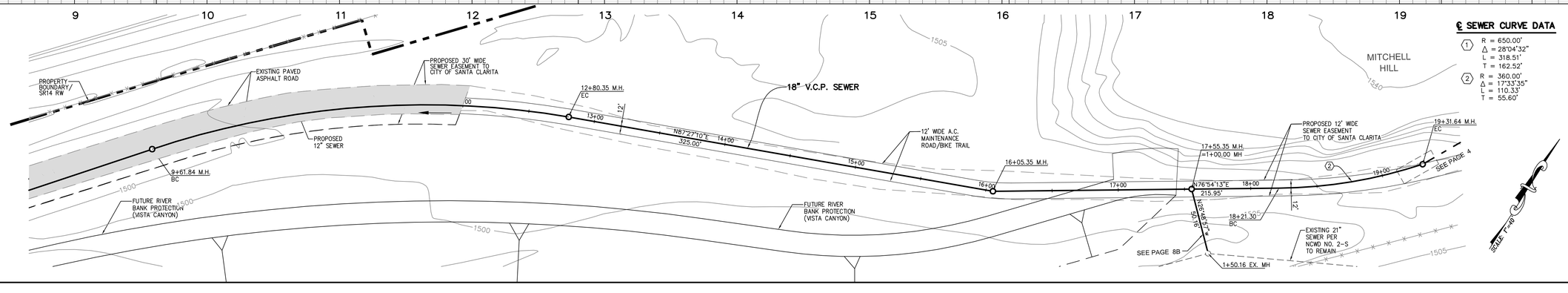
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





℄ SEWER CURVE DATA

① R = 650.00'
Δ = 28°04'32"
L = 318.51'
T = 162.52'

② R = 360.00'
Δ = 17°33'35"
L = 110.33'
T = 55.60'

P.C. xx–xx PAGE 4

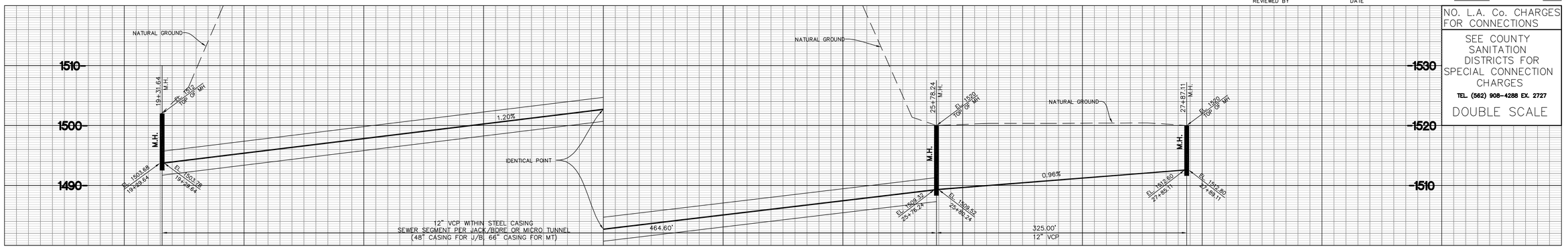
REVIEWED BY | DATE

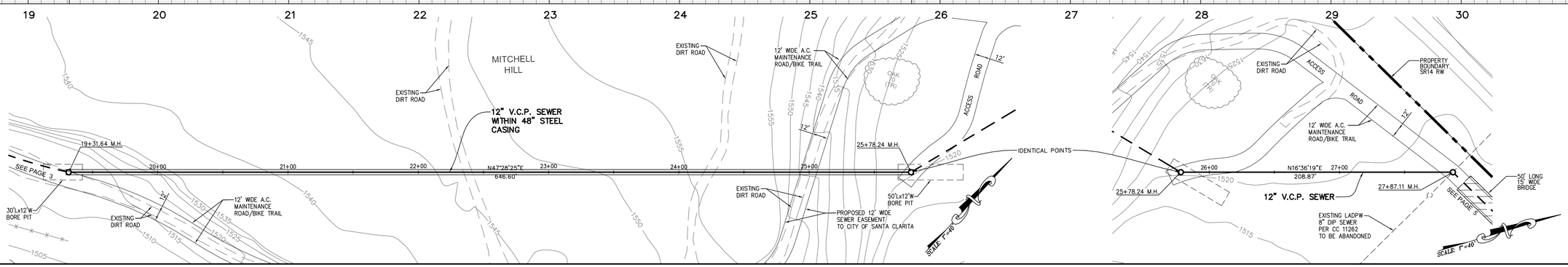
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





b.c. xx–xx

P.C. XX–XX PAGE 5

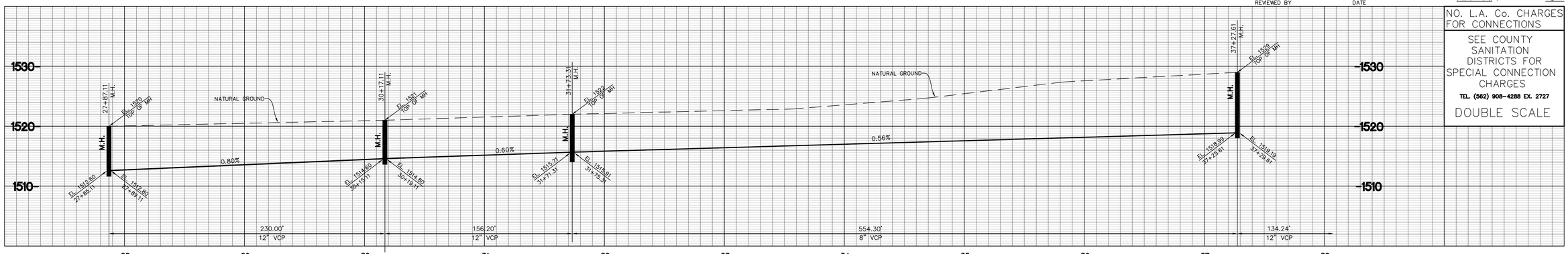
REVIEWED BY _____ DATE _____

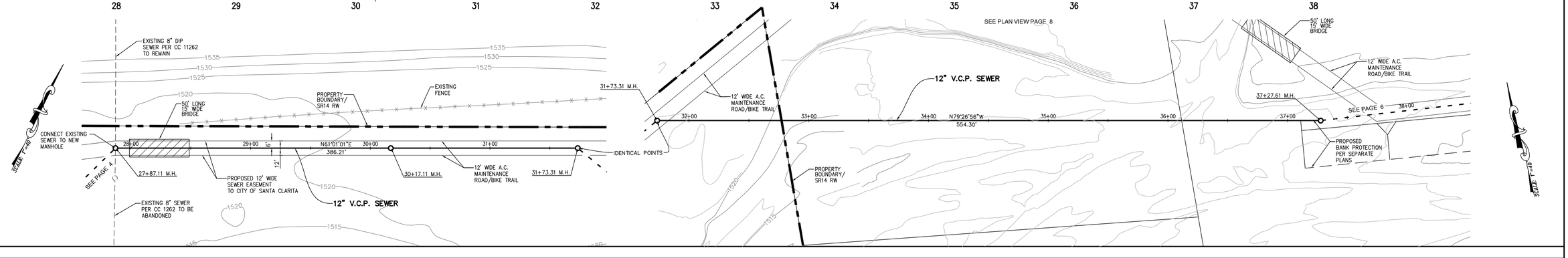
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





P.C. XX–XX PAGE 6

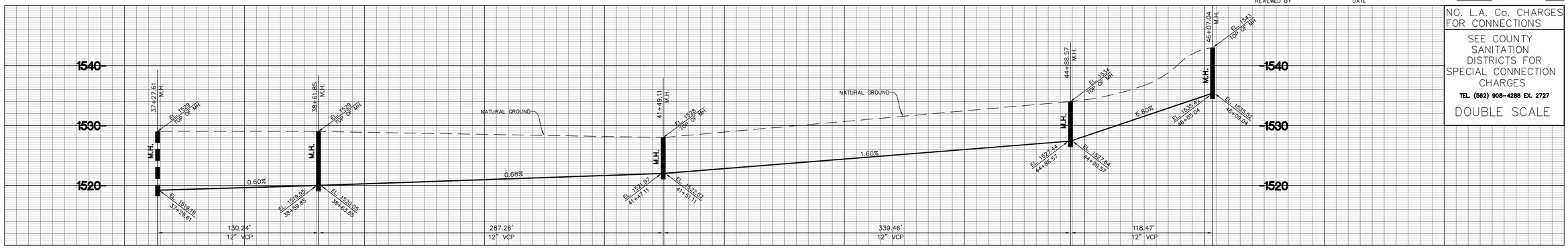
REVIEWED BY _____ DATE _____

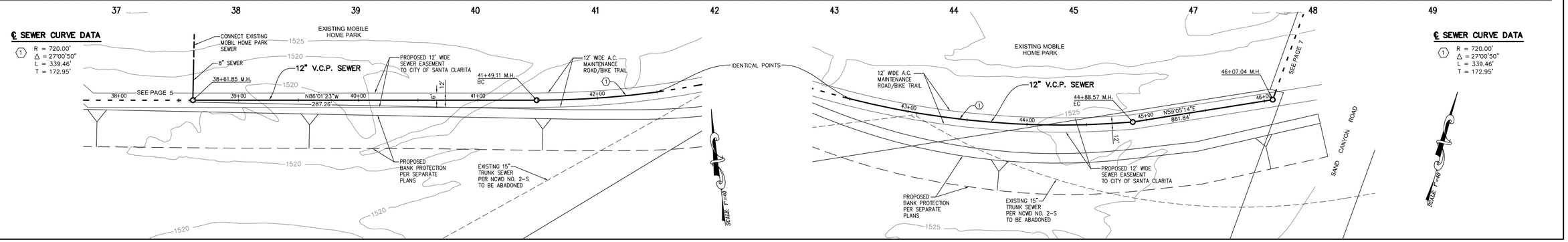
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





b.C. XX–XX (2)

I:\CAD\1250\SEWER PLANS\1250-SWR-SHEET-03.dwg

P.C. XX–XX PAGE 7

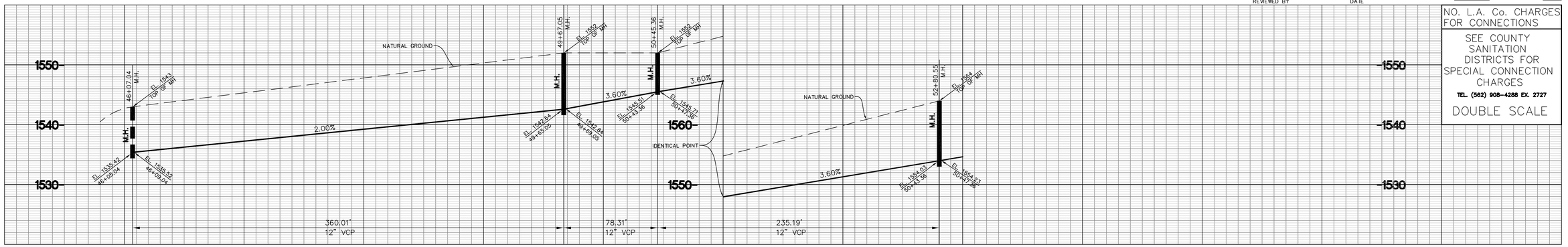
REVIEWED BY _____ DATE _____

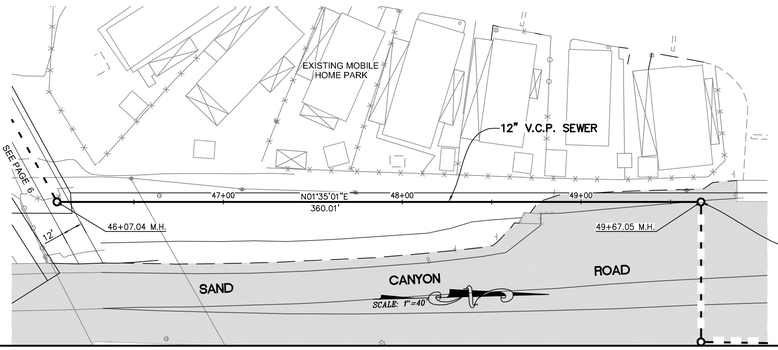
NO. L.A. Co. CHARGES FOR CONNECTIONS

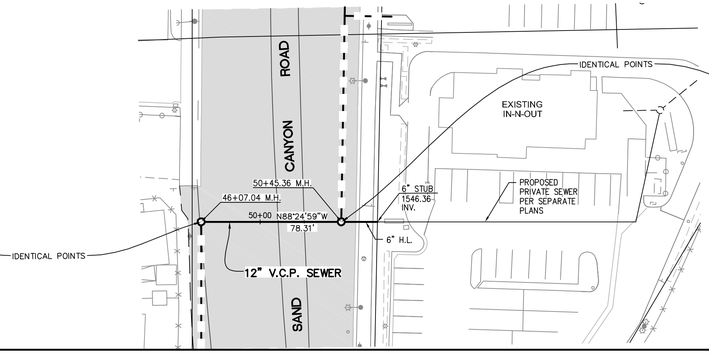
SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

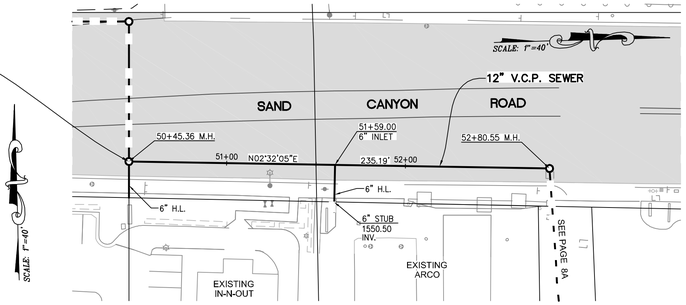
TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE









P.C. XX–XX PAGE 8

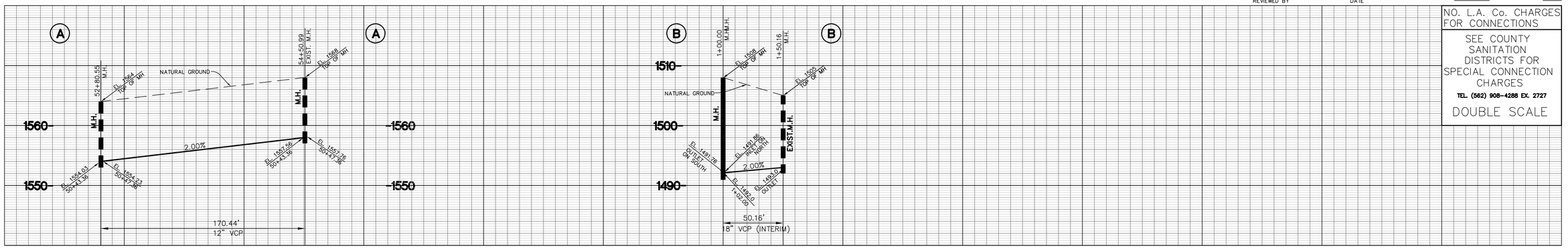
REVIEWED BY _____ DATE _____

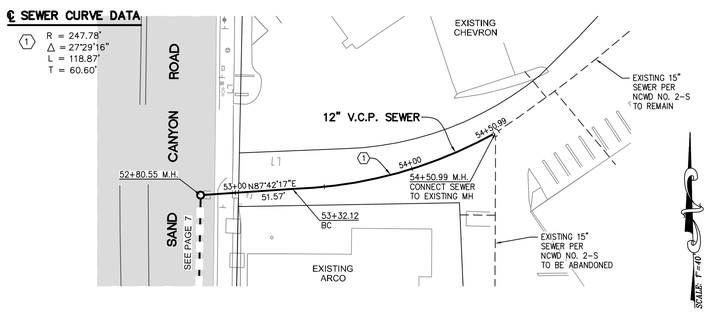
NO. L.A. Co. CHARGES FOR CONNECTIONS

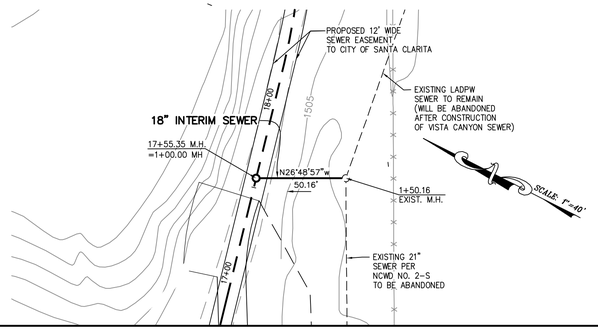
SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

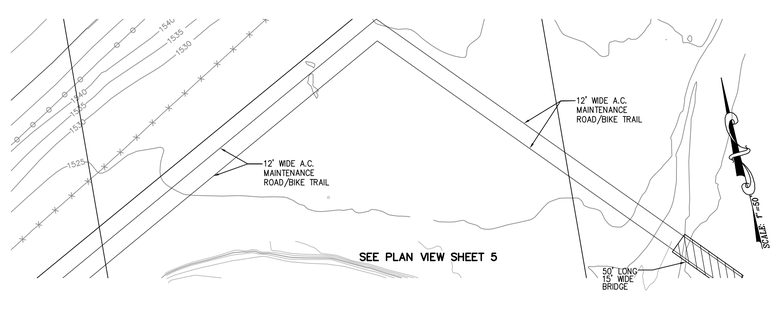
TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE









h:\CAD\1250\SEWER PLANS\1250-SWR-SHEET-04.dwg

Appendix B

California Emissions Estimator Model Results

Sand Canyon Sewer Relocation Project (Unmitigated) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Sand Canyon Sewer Relocation Project (Unmitigated)
Construction Start Date	1/2/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	Sand Canyon Rd, Santa Clarita, CA, USA
County	Los Angeles-South Coast
City	Santa Clarita
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3619
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	0.66	Mile	2.40	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.12	2.63	23.0	25.5	0.05	0.91	3.01	3.92	0.84	0.37	1.21	—	6,075	6,075	0.25	0.06	1.39	6,100
Mit.	3.12	2.63	23.0	25.5	0.05	0.91	1.39	2.31	0.84	0.20	1.04	—	6,075	6,075	0.25	0.06	1.39	6,100
% Reduced	—	—	—	—	—	—	54%	41%	—	47%	14%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.39	3.35	36.3	34.7	0.11	1.30	5.47	6.77	1.20	0.95	2.15	—	13,885	13,885	0.66	1.16	0.46	14,247
Mit.	4.39	3.35	36.3	34.7	0.11	1.30	3.53	4.83	1.20	0.74	1.94	—	13,885	13,885	0.66	1.16	0.46	14,247
% Reduced	—	—	—	—	—	—	36%	29%	—	22%	10%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.69	0.55	5.46	5.64	0.01	0.21	0.75	0.96	0.19	0.12	0.31	—	1,812	1,812	0.08	0.11	0.76	1,848
Mit.	0.69	0.55	5.46	5.64	0.01	0.21	0.44	0.65	0.19	0.09	0.27	—	1,812	1,812	0.08	0.11	0.76	1,848
% Reduced	—	—	—	—	—	—	41%	32%	—	28%	11%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.10	1.00	1.03	< 0.005	0.04	0.14	0.18	0.03	0.02	0.06	—	300	300	0.01	0.02	0.13	306
Mit.	0.13	0.10	1.00	1.03	< 0.005	0.04	0.08	0.12	0.03	0.02	0.05	—	300	300	0.01	0.02	0.13	306
% Reduced	—	—	—	—	—	—	41%	32%	—	28%	11%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.12	2.63	23.0	25.5	0.05	0.91	3.01	3.92	0.84	0.37	1.21	—	6,075	6,075	0.25	0.06	1.39	6,100
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.39	3.35	36.3	34.7	0.11	1.30	5.47	6.77	1.20	0.95	2.15	—	13,885	13,885	0.66	1.16	0.46	14,247
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.69	0.55	5.46	5.64	0.01	0.21	0.75	0.96	0.19	0.12	0.31	—	1,812	1,812	0.08	0.11	0.76	1,848
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.13	0.10	1.00	1.03	< 0.005	0.04	0.14	0.18	0.03	0.02	0.06	—	300	300	0.01	0.02	0.13	306

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.12	2.63	23.0	25.5	0.05	0.91	1.39	2.31	0.84	0.20	1.04	—	6,075	6,075	0.25	0.06	1.39	6,100
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.39	3.35	36.3	34.7	0.11	1.30	3.53	4.83	1.20	0.74	1.94	—	13,885	13,885	0.66	1.16	0.46	14,247
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.69	0.55	5.46	5.64	0.01	0.21	0.44	0.65	0.19	0.09	0.27	—	1,812	1,812	0.08	0.11	0.76	1,848
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.13	0.10	1.00	1.03	< 0.005	0.04	0.08	0.12	0.03	0.02	0.05	—	300	300	0.01	0.02	0.13	306

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.46	0.39	3.39	3.49	< 0.005	0.21	—	0.21	0.19	—	0.19	—	490	490	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.78	1.78	< 0.005	< 0.005	—	1.79
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.39	3.49	< 0.005	0.21	—	0.21	0.19	—	0.19	—	490	490	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.78	1.78	< 0.005	< 0.005	—	1.79
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.71	3.11	27.3	29.4	0.06	1.21	—	1.21	1.11	—	1.11	—	6,496	6,496	0.26	0.05	—	6,518
Dust From Material Movement	—	—	—	—	—	—	3.19	3.19	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.47	2.66	0.01	0.11	—	0.11	0.10	—	0.10	—	587	587	0.02	< 0.005	—	589
Dust From Material Movement	—	—	—	—	—	—	0.29	0.29	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	97.2	97.2	< 0.005	< 0.005	—	97.6
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	426	426	0.02	0.02	0.04	431
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	< 0.005	< 0.005	33.1
Hauling	0.53	0.10	8.83	3.34	0.05	0.09	1.85	1.94	0.09	0.51	0.60	—	6,930	6,930	0.38	1.09	0.42	7,264
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	0.06	39.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	< 0.005	3.00
Hauling	0.05	0.01	0.81	0.30	< 0.005	0.01	0.17	0.17	0.01	0.05	0.05	—	626	626	0.03	0.10	0.63	657
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.47	6.47	< 0.005	< 0.005	0.01	6.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.50
Hauling	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.10	109

3.4. Linear, Grading & Excavation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.71	3.11	27.3	29.4	0.06	1.21	—	1.21	1.11	—	1.11	—	6,496	6,496	0.26	0.05	—	6,518
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.47	2.66	0.01	0.11	—	0.11	0.10	—	0.10	—	587	587	0.02	< 0.005	—	589
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	97.2	97.2	< 0.005	< 0.005	—	97.6

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	426	426	0.02	0.02	0.04	431
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	< 0.005	< 0.005	33.1
Hauling	0.53	0.10	8.83	3.34	0.05	0.09	1.85	1.94	0.09	0.51	0.60	—	6,930	6,930	0.38	1.09	0.42	7,264
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	0.06	39.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	< 0.005	3.00
Hauling	0.05	0.01	0.81	0.30	< 0.005	0.01	0.17	0.17	0.01	0.05	0.05	—	626	626	0.03	0.10	0.63	657
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.47	6.47	< 0.005	< 0.005	0.01	6.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.50
Hauling	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.10	109

3.5. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.99	2.51	22.9	23.6	0.05	0.91	—	0.91	0.84	—	0.84	—	5,694	5,694	0.23	0.05	—	5,713
Dust From Material Movement	—	—	—	—	—	—	2.65	2.65	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.99	2.51	22.9	23.6	0.05	0.91	—	0.91	0.84	—	0.84	—	5,694	5,694	0.23	0.05	—	5,713
Dust From Material Movement	—	—	—	—	—	—	2.65	2.65	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.82	1.88	< 0.005	0.07	—	0.07	0.07	—	0.07	—	452	452	0.02	< 0.005	—	454
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.9	74.9	< 0.005	< 0.005	—	75.2

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.12	1.91	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	380	380	0.02	0.01	1.39	386
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.13	1.62	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	360	360	0.02	0.01	0.04	365
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.1	29.1	< 0.005	< 0.005	0.05	29.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.01	4.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.99	2.51	22.9	23.6	0.05	0.91	—	0.91	0.84	—	0.84	—	5,694	5,694	0.23	0.05	—	5,713
Dust From Material Movement	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.99	2.51	22.9	23.6	0.05	0.91	—	0.91	0.84	—	0.84	—	5,694	5,694	0.23	0.05	—	5,713
Dust From Material Movement	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.82	1.88	< 0.005	0.07	—	0.07	0.07	—	0.07	—	452	452	0.02	< 0.005	—	454
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.9	74.9	< 0.005	< 0.005	—	75.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.12	1.91	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	380	380	0.02	0.01	1.39	386
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.13	1.62	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	360	360	0.02	0.01	0.04	365
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.1	29.1	< 0.005	< 0.005	0.05	29.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.01	4.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	7.71	10.8	0.01	0.34	—	0.34	0.31	—	0.31	—	1,620	1,620	0.07	0.01	—	1,625
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	53.3	53.3	< 0.005	< 0.005	—	53.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.82	8.82	< 0.005	< 0.005	—	8.85
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	277	277	0.01	0.01	1.01	281
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.75	8.75	< 0.005	< 0.005	0.01	8.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.45	1.45	< 0.005	< 0.005	< 0.005	1.47
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Linear, Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	7.71	10.8	0.01	0.34	—	0.34	0.31	—	0.31	—	1,620	1,620	0.07	0.01	—	1,625
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	53.3	53.3	< 0.005	< 0.005	—	53.4

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.82	8.82	< 0.005	< 0.005	—	8.85
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	277	277	0.01	0.01	1.01	281
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.75	8.75	< 0.005	< 0.005	0.01	8.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.45	1.45	< 0.005	< 0.005	< 0.005	1.47
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/2/2025	1/13/2025	5.00	8.00	—
Linear, Grading & Excavation	Linear, Grading & Excavation	1/14/2025	3/1/2025	5.00	33.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	3/2/2025	4/11/2025	5.00	29.0	—
Linear, Paving	Linear, Paving	4/12/2025	4/28/2025	5.00	12.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41

Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Linear, Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	7.50	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	32.5	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	100	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	27.5	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	7.50	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	32.5	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	100	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	27.5	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	2.40	0.00	—
Linear, Grading & Excavation	—	2,400	2.40	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	2.40	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	2.40	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	117	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.0	annual days of extreme heat
Extreme Precipitation	7.50	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.8	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.0

AQ-PM	50.1
AQ-DPM	7.26
Drinking Water	68.4
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	39.1
Traffic	82.2
Effect Indicators	—
CleanUp Sites	54.7
Groundwater	22.1
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	12.5
Solid Waste	0.00
Sensitive Population	—
Asthma	33.7
Cardio-vascular	23.5
Low Birth Weights	1.68
Socioeconomic Factor Indicators	—
Education	5.10
Housing	28.7
Linguistic	7.38
Poverty	4.17
Unemployment	74.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	86.28256127
Employed	63.51854228
Median HI	93.95611446
Education	—
Bachelor's or higher	76.26074682
High school enrollment	7.583728988
Preschool enrollment	47.26036186
Transportation	—
Auto Access	92.6344155
Active commuting	5.171307584
Social	—
2-parent households	80.99576543
Voting	69.2416271
Neighborhood	—
Alcohol availability	97.0101373
Park access	32.15706403
Retail density	77.50545361
Supermarket access	16.34800462
Tree canopy	66.31592455
Housing	—
Homeownership	92.7242397
Housing habitability	88.22019761
Low-inc homeowner severe housing cost burden	37.93147697
Low-inc renter severe housing cost burden	86.42371359
Uncrowded housing	56.30694213
Health Outcomes	—

Insured adults	84.53740536
Arthritis	21.6
Asthma ER Admissions	65.6
High Blood Pressure	33.3
Cancer (excluding skin)	11.3
Asthma	61.7
Coronary Heart Disease	28.5
Chronic Obstructive Pulmonary Disease	42.5
Diagnosed Diabetes	65.9
Life Expectancy at Birth	83.3
Cognitively Disabled	48.3
Physically Disabled	81.6
Heart Attack ER Admissions	30.1
Mental Health Not Good	71.0
Chronic Kidney Disease	55.3
Obesity	65.8
Pedestrian Injuries	19.6
Physical Health Not Good	65.0
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	28.2
Current Smoker	73.3
No Leisure Time for Physical Activity	87.1
Climate Change Exposures	—
Wildfire Risk	97.9
SLR Inundation Area	0.0
Children	37.8

Elderly	84.9
English Speaking	66.2
Foreign-born	58.9
Outdoor Workers	85.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	77.0
Traffic Density	79.5
Traffic Access	23.0
Other Indices	—
Hardship	21.8
Other Decision Support	—
2016 Voting	52.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	77.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Appendix C

Biological Resources Assessment

Sand Canyon Sewer Relocation Project

Biological Resources Assessment

prepared for

Santa Clarita Valley Water Agency
26521 Summit Circle
Santa Clarita, California 91350
Contact: Amy Anderson, Project Manager

prepared by

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

February 2024

RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

Tables

Figures

Appendices

Executive Summary

Rincon Consultants, Inc. has prepared this Biological Resources Assessment to document existing conditions and provide a basis for evaluation of potential impacts to biological resources from the Santa Clarita Valley Water Agency's (SCV Water) Sand Canyon Sewer Relocation Project (project). The proposed project includes construction of approximately 3,500 linear feet of new 21-inch and 15-inch sewer pipeline on the north side of the Santa Clara River (SCR). An existing sewer line extends east from Vista Canyon Boulevard at the State Route 14 undercrossing within the SCR, crosses under the Sand Canyon Road bridge, and terminates approximately 600 feet east of the bridge. The purpose of the proposed project is to relocate the existing sewer line from within the flow path of the river into the adjacent overbank. The project also includes the development of a 12-foot-wide paved access road, and soil cement bank protection for the proposed sewer line along the northern bank of the SCR where the bank is unstable and subject to erosion. The Area of Potential Effects (APE) surrounding the project site encompasses a 100-foot survey buffer.

One special-status plant species, the slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), has a high potential to occur within the APE. Additionally, the following three special-status plant species have a moderate potential to occur in the APE: San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and slender-horned spineflower (*Dodecahema leptoceras*). Four special-status wildlife species have a high potential to occur, including California legless lizard (*Anniella* spp.), coastal whiptail (*Aspidoscelis tigris stejnegeri*), California horned lark (*Eremophila alpestris actia*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Eight species have a moderate potential to occur and include Crotch bumble bee (*Bombus crotchii*), Santa Ana sucker (*Catostomus santaanae*), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo chub (*Gila orcuttii*), arroyo toad (*Anaxyrus californicus*), western spadefoot (*Spea hammondii*), coast horned lizard (*Phrynosoma blainvillii*), and Cooper's hawk (*Accipiter cooperii*). No federally-designated critical habitat occurs within the APE.

Additionally, three sensitive plant communities are located within the APE: clustered tarweed fields, Fremont cottonwood forest and woodland, and scale broom scrub. The APE also contains potential nesting habitat for bird species protected under California Fish and Game Code Section 3503 and the federal Migratory Bird Treaty Act.

The proposed project includes 1.94 acres of temporary impacts and 1.53 acres of permanent impacts, some of which occur in vegetation communities that have the potential to support special-status species and nesting birds. Avoidance and minimization measures (AMMs) BIO-1 through BIO-5 would require implementation of Best Management Practices (BMP), a worker education program, pre-project botanical surveys, avoidance measures, and compensatory mitigation requirements (if applicable). These AMMs would reduce impacts to special-status plant species to less-than-significant levels. In addition, AMMs BIO-6 through BIO-9 would require a pre-activity special-status wildlife species survey and biological monitoring during ground disturbance, dry-season construction, and pre-construction nesting bird surveys and avoidance of nesting birds. With implementation of AMMs BIO-1, BIO-2, and BIO-6 through BIO-9, impacts to special-status wildlife species would be reduced to less-than-significant levels.

The proposed project includes 0.18 acre of temporary impact and 0.07 acre of permanent impact to Fremont cottonwood forest and woodland, a sensitive plant community. Implementation of AMM BIO-10 would require compensation for impacts to this plant community, and would reduce impacts

to sensitive plant communities to less-than-significant levels. Moreover, the proposed project would temporarily impact <0.01 acre (22 linear feet) of potential non-wetland waters of the state, 0.02 acre of potential wetland waters of the U.S./state, and 0.35 acre (1,624 linear feet) of potential California Department of Fish and Wildlife (CDFW) streambed and associated riparian habitat. The proposed project would permanently impact 0.16 acre (625 linear feet) of potential non-wetland waters of the U.S. and 0.16 acre (634 linear feet) of potential non-wetland waters of the state. The project would permanently impact 0.79 acre (2,440 linear feet) of potential CDFW streambed and associated riparian habitat. SCV Water would consult with the appropriate regulatory agencies (United States Army Corps of Engineers [USACE], Los Angeles Regional Water Quality Control Board [RWQCB], and/or CDFW) anticipated to assert jurisdiction over the features, and acquire necessary permits prior to implementation of the project. Furthermore, implementation of AMMs BIO-10 and BIO-11 would reduce impacts to jurisdictional waters and wetlands to less-than-significant levels.

The SCR in the southern portion of the APE provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. Construction activities would not occur within the bed of the SCR, as project components only occur along the northern bank (i.e., soil cement bank protection) or above the northern bank (i.e., sewer line installation, access road development). Migrating wildlife would have the ability to traverse around the work area (i.e., to the south) during construction and continue migrating through the SCR channel. In addition, implementation of BMPs in accordance with AMM BIO-1, including measures to prevent wildlife entrapment (e.g., sloping trenches) would reduce potentially significant impacts to wildlife movement to a less-than-significant level. Moreover, with implementation of AMM BIO-8, construction along the northern bank of the SCR bed would occur when the river is dry (i.e., no flowing water). Therefore, impacts to resident or migratory fish would be less than significant.

The APE is located within the city of Santa Clarita (City), and the northwestern portion of the APE occurs in the Vista Canyon Specific Plan area. Natural resources within the APE are regulated according to the City's General Plan and Vista Canyon Specific Plan, which focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees, and other indigenous woodlands and endangered or threatened species and habitat; and protection of biological resources in Significant Ecological Areas (SEA) and significant wildlife corridors. With implementation of AMMs BIO-1 through BIO-11, impacts to biological resources would be less than significant and the project would not conflict with policies protecting biological resources in the City of Santa Clarita General Plan or Vista Canyon Specific Plan. Parkway trees and oak trees (*Quercus* spp.) in the city are protected by the City's Oak Tree Preservation Ordinance and Parkway Trees Ordinance. The proposed project would not impact any trees protected by these ordinances and would not conflict with local policies or ordinances regarding trees.

The project site is located partially within the Santa Clara River SEA. The Santa Clara River SEA covers the length of the SCR and encompasses a wide variety of topographic features and habitat types. The orientation and extent of the SEA extends from the SCR's headwater tributaries and watershed basin to the point at which it exits Los Angeles County. Project construction would potentially affect the SEA and its biological resources due to construction activity in the APE. While the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) pursuant Government Code Section 53091, SCV Water would voluntarily comply with the City's code through the implementation of measures to reduce impacts (refer to AMMs BIO-1 through BIO-11) such that the project would be compliant with the City's code.

1 Introduction

Rincon Consultants, Inc. (Rincon) prepared this Biological Resources Assessment (BRA) Report for the Santa Clarita Valley Water Agency (SCV Water) to document existing conditions and provide a basis for evaluation of potential impacts to special-status and sensitive biological resources associated with the Sand Canyon Sewer Relocation Project (project) in the city of Santa Clarita (City), Los Angeles County, California (Figure 1).

1.1 Project Location

The approximately 2.4-acre project site is located in the eastern portion of the City. The approximately 0.7-mile sewer line would begin on an overbank adjacent to the north of the Santa Clara River (SCR; Figure 2a-Figure 2b) and south of State Route (SR) 14. The sewer line would travel generally east to Sand Canyon Road, where it would redirect north along Sand Canyon Road, then redirect and terminate east in two locations near existing commercial uses. The project site is located south of SR-14. A majority of the project site is located in an undeveloped area to the north of the SCR, as well as along the northern bank of the SCR. Residential uses are also located adjacent to the north of the project site. A portion of the project site is located along Sand Canyon Road and terminates near existing commercial uses east of the right-of-way.

The approximate center of the project site is located at latitude 34.422051 and longitude -118.425283 (WGS84). The project site is located in Township 04 North, Range 15 West, Sections 14 and 23 of the United States Geological Survey (USGS) *Mint Canyon, California* 7.5-minute topographic quadrangle (USGS 2023a). The Area of Potential Effects (APE) associated with the project includes the project site and a 100-foot buffer.

1.2 Project Description

The proposed project includes construction of approximately 3,500 linear feet of new 21-inch and 15-inch sewer pipeline on the north side of the SCR. An existing sewer line extends east from Vista Canyon Boulevard at the SR-14 undercrossing within the SCR, crosses under the Sand Canyon Road bridge, and terminates approximately 600 feet east of the bridge. The purpose of the proposed project is to relocate the existing sewer line from within the flow path of the SCR into the adjacent overbank.

The easternmost end of the proposed sewer line 3rcutd be located within Sand Canyon Road and would terminate east of Sand Canyon Road near existing commercial uses. The westernmost end of the sewer line would connect to the existing sewer line west of Mitchell Hill. The estimated area of temporary impact totals approximately 104,000 square feet. The project site, which includes the temporary impact footprint, is depicted in Figure 2a-Figure 2b. Site plans are included in Appendix A.

The existing sewer line would be abandoned-in-place. The proposed project also includes the development of a 12-foot-wide paved access road, and soil cement bank protection for the proposed sewer line along the northern bank of the SCR where the bank is unstable and subject to erosion. The access road would generally overlap the new pipeline, but would deviate from the proposed alignment where jack-and-bore construction is proposed. The access road would also

include the installation of two 16-foot-wide bridges across existing drainage features (Intermittent Drainage 1 and Ephemeral Drainage 1). The bridges would be constructed using a pre-cast arch design, with the footings located along the banks of the drainage features. The footings for the bridges would include a permanent impact area approximately 35 feet wide and 15 feet long.

Construction Activities

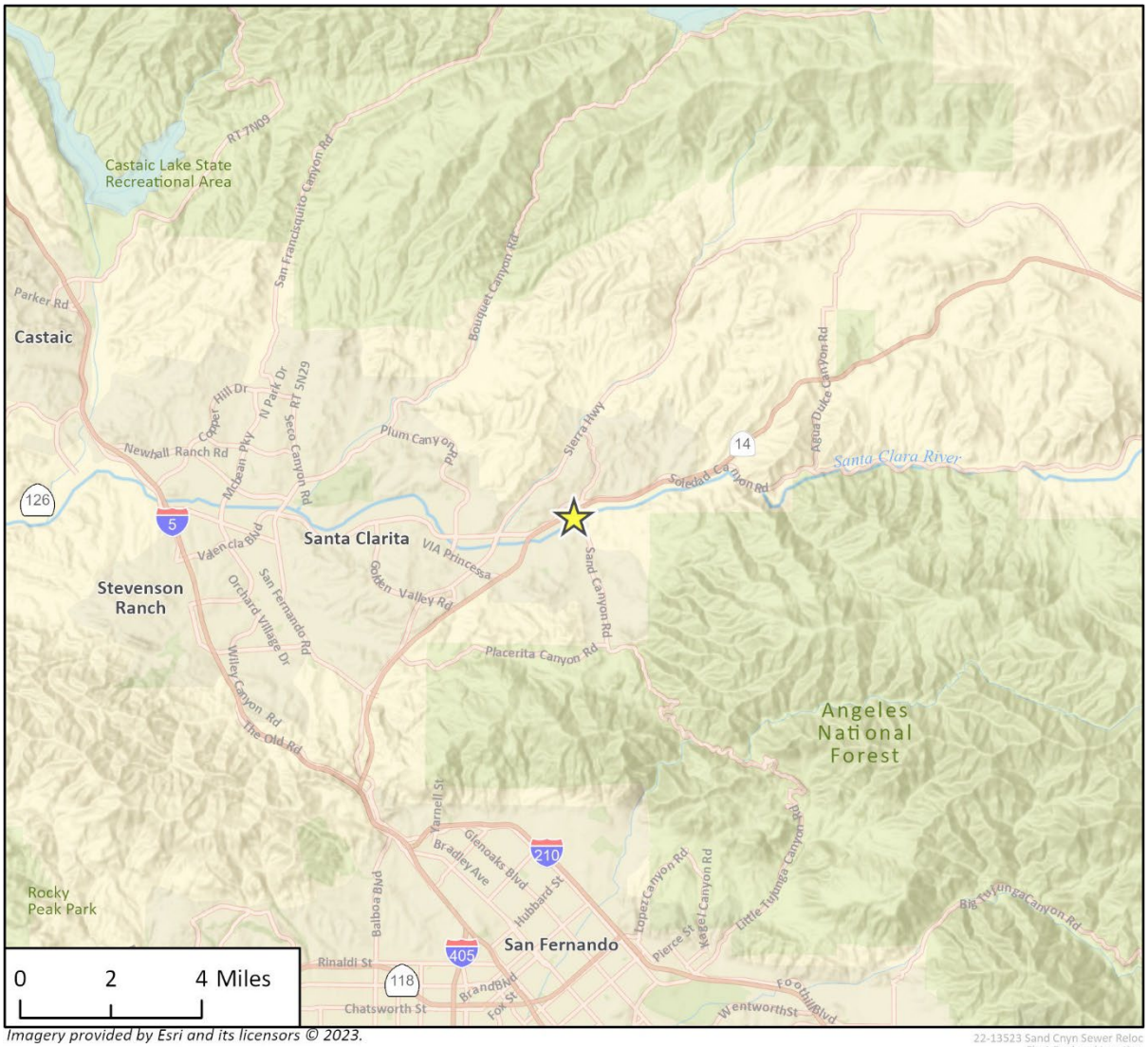
Construction would begin in early 2025 and would occur over the course of approximately four months. Construction would occur from 8:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities would involve removal of existing pavement, site preparation, grading, trench preparation, pipe laying, and repaving. While open trenching would be used to install a majority of the sewer line, jack-and-bore would be used to install approximately 500 linear feet of the sewer line along Mitchell Hill. Excavation would range from approximately 6 to 11 feet deep, including for both the pipeline and the jack-and-bore pits. Construction equipment associated with the 12-foot-wide access road would temporarily use an additional 8 feet on either side of the proposed road. Construction equipment associated with pipeline excavation areas that do not underlie the access road would require a work area width of 20 feet.

The proposed 4rcuttit would involve approximately 5,800 cubic yards of cut and 3,400 cubic yards of fill. Approximately 2,400 cubic yards of soil would be exported from the project site and no soil would be imported. Construction activities would require a temporary one-lane closure along northbound Sand Canyon Road. Traffic control measures would be implemented during lane closures, including flaggers at both ends. Construction equipment staging and worker parking would occur adjacent to Vista Canyon Boulevard and the northern bank of the SCR.

Operation and Maintenance

Upon completion of construction, the project would not require new operations and maintenance activities or electricity consumption beyond existing operations. The anticipated minimum lifetime of the proposed sewer line is 50 years.

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2023.

22-13523 Sand Cnyn Sewer Reloc
Fig 1 Regional Location

Project Location

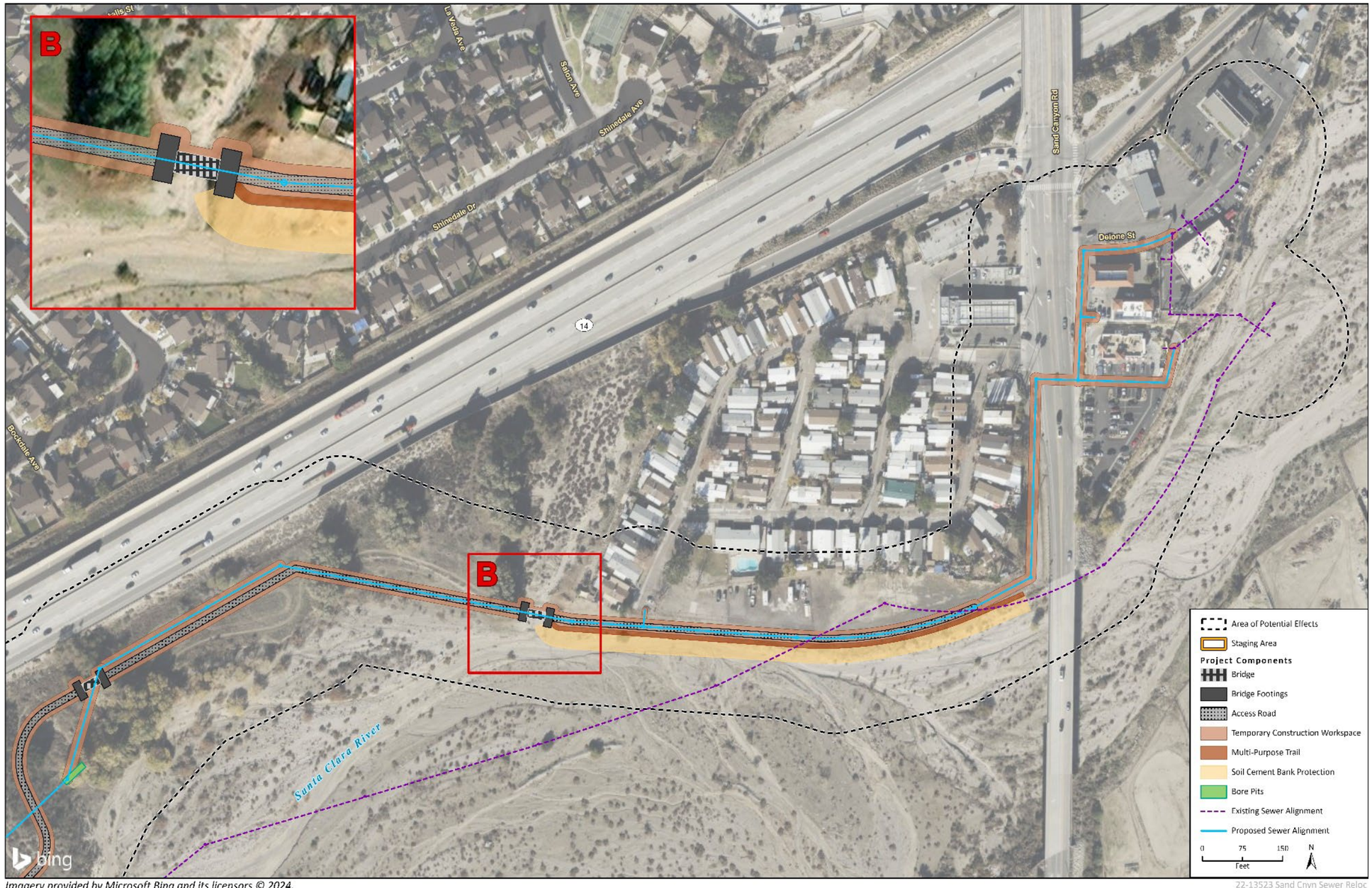
N

Figure 2a APE – West

Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 2A Area of Potential Effects

Figure 2b APE – East



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 2B Area of Potential Effects

2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special-status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by federal, state, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions.

Definition of Special-status Species

For the purposes of this report, special-status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the project;
- Species listed as candidate, rare, threatened, or endangered under the California Endangered Species Act (CESA) or Native Plant Protection Act;
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the California Fish and Game Code (CFGC) or California Department of Fish and Wildlife (CDFW);
- Species designated as locally important by the City and/or otherwise protected through ordinance or local policy; and
- Plants occurring on lists 1 through 4 of the California Native Plant Society (CNPS) California Rare Plant Rank system.

Environmental Statutes

For the purpose of this report, the analysis of potential impacts to biological resources was guided by the following statutes (described in detail in Appendix B):

- California Environmental Quality Act (CEQA);
- FESA;
- CESA;
- Federal Clean Water Act (CWA);
- CFGC;
- Migratory Bird Treaty Act (MBTA);
- The Bald and Golden Eagle Protection Act;
- Porter-Cologne Water Quality Control Act;
- City of Santa Clarita General Plan; and
- Santa Clarita Municipal Code.

Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a) *Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or U.S. Fish and Wildlife Service.*

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.*

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.*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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.*

2.2 Literature Review

Queries of the United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (USFWS 2023a), CDFW California Natural Diversity Database (CNDDB; CDFW 2023a), and the CNPS Online Inventory of Rare, Threatened and Endangered Plants of California (CNPS 2023a) were conducted to obtain comprehensive information regarding state and federally listed species as well as other special-status species considered to have potential to occur with the *Mint Canyon, California* USGS 7.5-minute topographic quadrangle and the surrounding eight quadrangles (*Agua Dulce, Sunland, San Fernando, Oat Mountain, Newhall, Warm Springs Mountain, Green Valley, and Sleepy Valley*). The results of these scientific database queries were compiled into a table that is presented in Appendix C.

In addition, the following resources were reviewed for information about the APE:

- Aerial photographs (Google Earth Pro 2023);
- *Mint Canyon, California* USGS 7.5-minute topographic quadrangle (USGS 2023a);
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2023a);
- USFWS Critical Habitat Portal (USFWS 2023b);
- USFWS National Wetland Inventory (NWI; USFWS 2023c); and
- USGS National Hydrography Dataset (NHD; USGS 2023b).

2.3 Field Reconnaissance Survey

A field reconnaissance survey was conducted within the APE to document the existing conditions and to evaluate the potential for presence of regulated biological resources in the APE, including special-status plant and wildlife species, sensitive plant communities, potential jurisdictional waters of the U.S./state and wetlands, and habitat for federally and state protected nesting birds.

The field reconnaissance survey was conducted by Rincon Biologist Kyle Gern on August 1, 2023, from 0800 to 1530. Weather conditions during the survey included clear skies with temperatures ranging from 72 degrees Fahrenheit (°F) to 93°F and winds ranging from approximately one to five miles per hour. The entire APE, with the exception of the proposed staging area, was surveyed on foot, and all biological resources encountered in the APE were recorded. The proposed staging area was surveyed by Mr. Gern on October 16, 2023, from 0900 to 1100, with clear skies, temperatures ranging from 65°F to 75°F, and winds ranging from one to two miles per hour.

Representative photographs of the APE were taken (Appendix D), and an inventory of all plant and wildlife species observed was compiled (Appendix E). Natural and semi-natural vegetation community classification was based using *A Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009), which establishes systematic classifications and definitions of vegetation communities. Updates to the MCV2 provided in the online database (CNPS 2023b) were taken into consideration. Each vegetation mapping unit was analyzed for characteristics to define the applicable vegetation community, such as dominant or co-dominant plant species and community membership rules. Additionally, land covers were characterized in areas that appeared to be altered by anthropogenic activities and were dominated by non-native or ornamental vegetation (e.g., developed, disturbed).

2.4 Jurisdictional Delineation

Information in the report related to jurisdictional waters is based on a formal jurisdictional delineation conducted by Mr. Gern on August 4 and October 16, 2023. The delineation mapped and recorded the extent of potential waters of the U.S., CDFW-jurisdictional streambeds, and/or waters of the state. Current federal and state policies, methods, and guidelines were used to identify and delineate potential jurisdictional areas (described in Appendix B). Data collection in the APE was focused on areas containing a potential waterway, and Sample Points (SPs) were chosen at locations that were best representation of the conditions within the APE. The Ordinary High Water Mark (OHWM) and Wetland Determination Data Forms are included in Appendix F. Current federal and state policies, methods and guidelines were used to identify and delineate potential jurisdictional areas and are described in detail below.

Non-Wetland Waters of the United States

The lateral limits of USACE jurisdiction (i.e., width) for non-wetland waters were determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations (CFR) sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter 05-05 (USACE 2005), as well as in reference to various relevant technical publications, including, but not limited to: *Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States* (USACE 2004), *Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of "Waters of the United States" in Arid Southwestern Channels* (USACE 2006), and *A Field Guide to*

Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States (USACE 2008b), *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010), and *Joint Memorandum to the Field Between the U.S. Department of the Army, Corps of Engineers and the U.S. Environmental Protection Agency Concerning Exempt Construction or Maintenance of Irrigation Ditches and Exempt Maintenance of Drainage Ditches Under Section 404 of the Clean Water Act* (USACE and USEPA 2020). The regulations were also reviewed in the determination of non-jurisdictional features including artificially irrigated areas and roadway ditches excavated in uplands.

Rincon evaluated sources of water, potential connections and distances to Traditional Navigable Waters (TNWs), streams that are perennial or intermittent in nature and other factors that affect whether waters qualify as "waters of the U.S." under current USACE regulations (33 CFR 328.3), including, but not limited to, the recent *Sackett v. USEPA* court ruling. A more detailed regulatory definition of USACE jurisdiction can be found in Appendix B.

Wetland Waters of the United States

Potential wetland features were evaluated for presence of wetland indicators; specifically, hydrophytic vegetation, hydric soils, and wetland hydrology, according to routine delineation procedures within the *Wetlands Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The 2020 USACE *Arid West Regional Wetland Plant List* was originally used to determine the wetland status of the examined vegetation by the following indicator status categories: Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate Wetland (OBL; USACE 2020). Representative sample points were sited in aeras most likely to exhibit wetland characteristics, i.e., a prevalence of hydrophytic vegetation and suitable landform, and examined in the field for potential wetland indicators. Sample points were not conducted in areas with an obvious prevalence of upland vegetation or in areas where the landform would not support wetland features, i.e., concrete channels and sloped areas. A more detailed regulatory definition of USACE jurisdiction can be found in Appendix B.

Waters of the State

The limits of "waters of the state," as defined under the Porter-Cologne Water Quality Control Act, are any surface water or groundwater, including saline waters, within the boundaries of the state. In those areas where an OHWM was present, the OHWM was determined to represent the limits of waters of the state based on current interpretation of jurisdiction by the Los Angeles RWQCB. In those areas where an OHWM was not present, but surface water was present, i.e., roadside ditches that are hydrologically connected to tributaries and TNWs, the limits of waters of the state were determined to be bounded by the top of slope or top of "bank."

Potential state wetland features were evaluated pursuant to the State Water Resources Control Board's (SWRCB) *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). Potential state wetlands were evaluated following the SWRCB's definition, which relies on the same three parameters as the USACE definition (hydrophytic vegetation, wetland hydrology, and hydric soils) but allows for naturally unvegetated areas meeting the other two parameters to be considered wetlands. A more detailed regulatory definition of RWQCB jurisdiction can be found in Appendix B.

CDFW Streambeds

The extent of potential streambeds, streambanks, lakes and riparian habitat subject to CDFW jurisdiction under Sections 1600 *et seq*. of the California Fish and Game Code was delineated by reviewing the topography and morphology of potentially jurisdictional features to determine the outer limit of riparian vegetation, where present, or the tops of banks for stream features. A more detailed regulatory definition of CDFW jurisdiction can be found in Appendix B.

3 Existing Conditions

This section summarizes the existing conditions of the APE and results of biological resource field database inquiries and field surveys. Brief discussions regarding the general physical characteristics within the APE, the watershed and drainages, soils, vegetation and land cover types, and general wildlife species, are presented below. Representative photographs of the APE are provided in Appendix D, and complete lists of all plant and wildlife species observed within the APE are presented in Appendix E.

3.1 Physical Characteristics

The APE is situated in a region that is characterized by a Mediterranean climate with warm, dry summers and cool, wet winters. Average high temperatures range from 77 to 89°F and average low temperatures range from 61 to 68°F. The average annual precipitation in the region is 15.56 inches with the majority falling in February (Western Regional Climate Center 2023).

The topography of the APE is generally level. Elevation ranges between approximately 1,500 and 1,580 feet above mean sea level (amsl). In the northern portion of the APE north of the SCR, the terrain is generally flat. The southern portion of the APE slopes downward from north to south toward the SCR channel.

Watershed and Drainages

The APE is located within the SCR watershed (Hydrologic Unit Code [HUC]-8 Number [No.] 18070102; USGS 2023a). The SCR originates in the northern slopes of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and eventually flows into the Pacific Ocean between the cities of San Buenaventura (Ventura) and Oxnard. Significant tributaries within the watershed include Piru, Sespe, Santa Paula, Hopper, Pole, and Castaic Creeks; San Francisquito and Bouquet Canyon; and South Fork SCR. The hydrology of the SCR is highly variable, and flows vary seasonally.

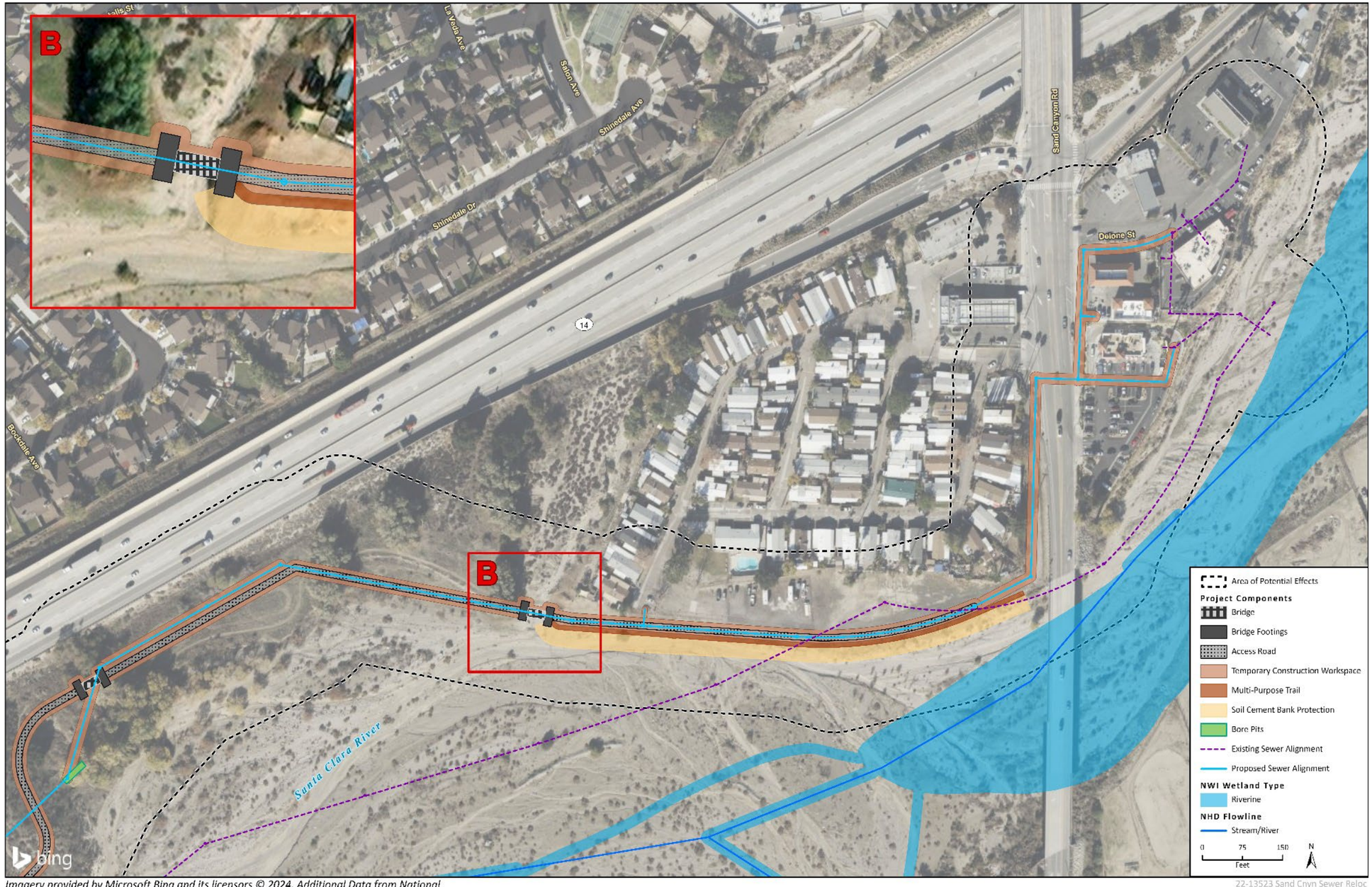
Specifically, the APE is located within the Headwaters SCR Watershed (HUC-10 No. 1807010201), and the Sand Canyon – SCR subwatershed (HUC-12 No. 180701020107). The Headwaters SCR Watershed encompasses a total area of approximately 152,907 acres. Historical records and current observations indicate that the Headwaters SCR watershed generally produces an intermittent flow regime, with flows increasing during the winter months (November through March), and declining throughout the summer months (USFWS 2023c). The SCR flows from northeast to southwest in the southern portion of the APE. The NWI and NHD identify the SCR as an intermittent riverine system in the APE, which coincides with Rincon's field observations (Figure 3a-Figure 3b). The SCR flows in a southwesterly direction through the cities of Santa Clarita, Fillmore, Santa Paula, and Ventura and eventually connects to the Pacific Ocean, which is a Traditional Navigable Water (TNW). Immediately south of the central portion of the APE is the confluence between Sand Canyon Creek and the SCR. The NWI identifies Sand Canyon Creek as an intermittent drainage (USFWS 2023c), and the NHD identifies Sand Canyon Creek as an ephemeral drainage (USGS 2023b).

Figure 3a NWI and NHD Resources – West

Imagery provided by Microsoft Bing and its licensors © 2024.
Additional Data from National Hydrology Dataset and National Wetland Inventory, 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 3A NHD NWI

Figure 3b NWI and NHD Resources – East



Imagery provided by Microsoft Bing and its licensors © 2024. Additional Data from National Hydrology Dataset and National Wetland Inventory, 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 3B NHD NWI

One intermittent tributary (Intermittent Drainage 1) is not mapped by the NWI or NHD. Intermittent Drainage 1 flows in a southerly direction underneath SR-14 and converges with the SCR along its northern bank. Intermittent Drainage 1 is culverted underneath SR-14 via an eight-foot-wide and eight-foot-tall concrete box culvert. In addition, one ephemeral drainage feature (Ephemeral Drainage 1) that is not mapped by the NWI or NHD also flows into the SCR along the northern bank. This feature is also culverted underneath SR-14 outside the APE to the north.

The mapping presented in the NHD and NWI provides useful context but is not a completely accurate depiction of current existing conditions or the extent of jurisdictional waters in the APE.

Soils

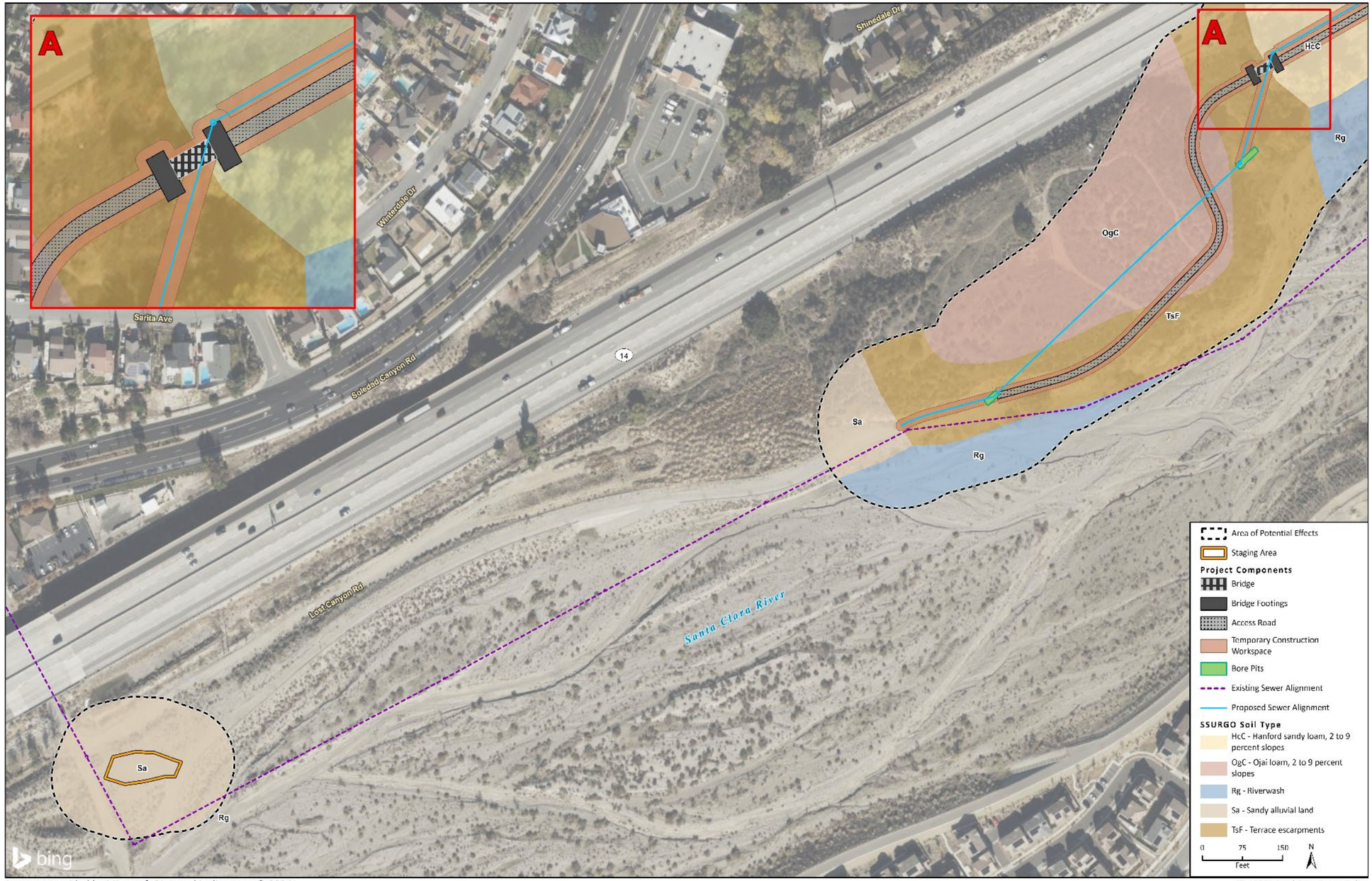
According to the NRCS Web Soil Survey, seven soil map units are mapped within the APE (USDA NRCS 2023a; Figure 4a-Figure 4b). Three soil map units are included on the National Hydric Soils List (USDA NRCS 2023b), as indicated below in Table 1.

Table 1 Soils in the APE

Soil Map Units	Hydric Soil[1]?
Cortina sandy loam, 2 to 9 percent slopes	No
Hanford sandy loam, 2 to 9 percent slopes	No
Ojai loam, 2 to 9 percent slopes	Yes
Riverwash	Yes
Saugus loam, 30 to 50 percent slopes, eroded	No
Sandy alluvial land	Yes
Terrace escarpments	No

[1]Soils listed on the National Hydric Soils List (USDA, NRCS 2023b).

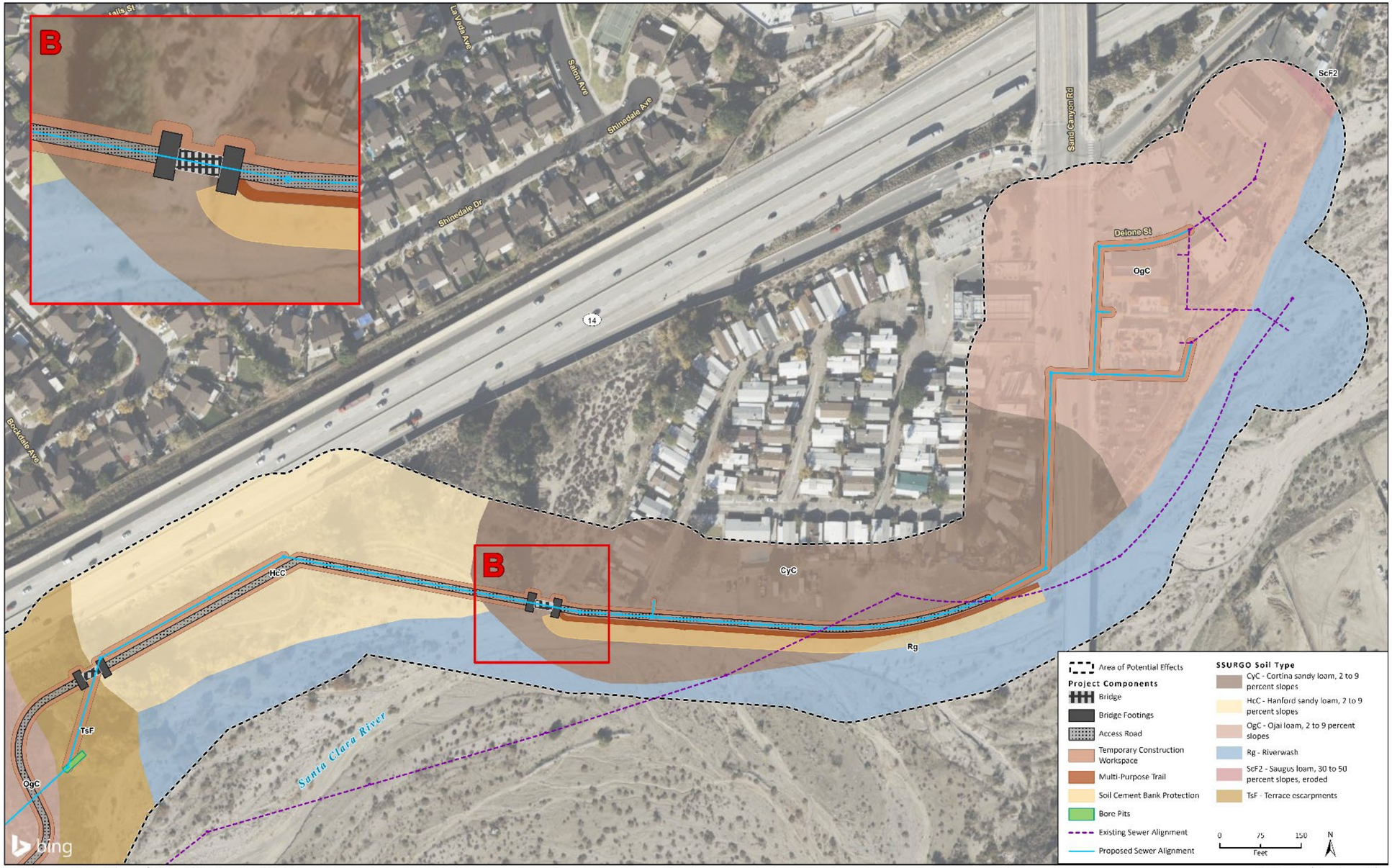
Figure 4a USDA NRCS Soil Survey Mapping – West



Imagery provided by Microsoft Bing and its licensors © 2024.
Additional data from SSURGO, 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 4A Soils

Figure 4b USDA NRCS Soil Survey Mapping – East



Imagery provided by Microsoft Bing and its licensors © 2024.
Additional data from SSURGO, 2024.

3.2 Vegetation and Other Land Cover

Seventeen vegetation communities and three land cover types were identified within the APE as described below and depicted in Figure 5a-Figure 5b. A list of plant species encountered during the field reconnaissance survey is provided in Appendix E.

3.2.1 Tree-Dominated Communities

Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland (*Populus fremontii* Forest and Woodland Alliance) is characterized by areas dominated by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) in the tree canopy with willows (*Salix* spp.) and other riparian trees such as western sycamore (*Platanus racemosa*) present as well. Fremont cottonwood accounts for approximately 10 to 80 percent absolute cover and greater than 50 percent relative cover in the tree layer. The tree canopy ranges from continuous to open, the shrub layer intermittent to open, and the herbaceous layer is variable (Sawyer et al. 2009). This alliance can be found on floodplains, along low-gradient rivers and perennial or seasonally intermittent streams, near springs, in canyons, on alluvial fans, and in valleys with a dependable subsurface water supply that varies considerably during the year. Fremont cottonwood forest and woodland is ranked G4S3 and is classified as a sensitive natural community by the CDFW (CDFW 2023b).

The Fremont cottonwood forest and woodland vegetation community is present along the northern bank of the SCR adjacent to the active channel within the APE (Figure 5a-Figure 5b). This vegetation community is also associated with the active channel of Intermittent Drainage 1 in the central portion of the APE. Within the APE, Fremont cottonwood is dominant in the dense tree layer, with western sycamore, red willow (*Salix laevigata*), velvet ash (*Fraxinus velutina*), common fig (*Ficus carica*), coast live oak (*Quercus agrifolia*), and athel tamarisk (*Tamarix aphylla*) present as subdominant in the tree layer (Appendix D, Photographs 7, 10-11, 26-27, 31-32). The tree layer accounts for approximately 40 to 70 percent absolute cover. The shrub layer is dominated by mulefat (*Baccharis salicifolia*) and sandbar willow (*Salix exigua*), with scale broom (*Lepidospartum squamatum*), castor bean (*Ricinus communis*), and rubber rabbitbrush (*Ericameria nauseosa*) present as subdominant species. Giant reed (*Arundo donax*) is dominant in the herbaceous layer, with cattails (*Typha* spp.), tall flatsedge (*Cyperus eragrostis*), red brome (*Bromus rubens*), slender wild oats (*Avena barbata*), and summer mustard (*Hirschfeldia incana*) present as subdominant species.

Tamarisk Thickets

Tamarisk thickets (*Tamarix* spp. Shrubland Alliance) are characterized by tamarisk (*Tamarix* spp.) dominant in the shrub or low tree layer. Most tamarisk species are provided a rating of high by the California Invasive Plant Council (Cal-IPC 2023), indicating these species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Emergent native shrubs or trees may be present at low cover, including Fremont cottonwood or willows (*Salix* spp.). Tamarisk has at least three percent absolute cover or 60 percent relative cover in the shrub or low tree layer. This alliance can be found between 246 and 2,625 feet amsl (Sawyer et al. 2009). This vegetation community is ranked Global Not Applicable/State Not Applicable (GNA/SNA) due to the dominance of non-native species and is not classified as sensitive (CDFW 2023b).

Tamarisk thickets occur above and along the northern bank of the SCR in the central portion of the APE (Appendix D, Photograph 30). Athel tamarisk is overwhelmingly dominant in the dense shrub and tree layer, with tree tobacco (*Nicotiana glauca*) and blue elderberry (*Sambucus mexicana*) present as subdominant species. The herbaceous layer is largely dominated by exotic annual grasses and forbs such as ripgut brome (*Bromus diandrus*), red brome, and slender wild oats.

3.2.2 Shrub-Dominated Communities

Big Sagebrush Scrub

Big sagebrush scrub (*Artemisia tridentata* Shrubland Alliance) is typically found within plains, alluvial fans, bajadas, pediments, lower slopes, valley bottoms, hills, ridges, seasonal and perennial stream channels, and dry washes between 984 and 9,840 feet amsl. Big sagebrush (*Artemisia tridentata* ssp. *tridentata*) constitutes at least two percent absolute cover in the shrub layer, with no other single species with greater cover. This vegetation community is ranked G5S5 and is not classified as sensitive (CDFW 2023b).

Big sagebrush scrub occurs in the western portion of the APE to the northwest of the proposed staging area. Big sagebrush is dominant in the open shrub layer, with rubber rabbitbrush present as subdominant. Red brome and summer mustard occur in the herbaceous layer. The tree layer is absent.

Brittle Bush Scrub

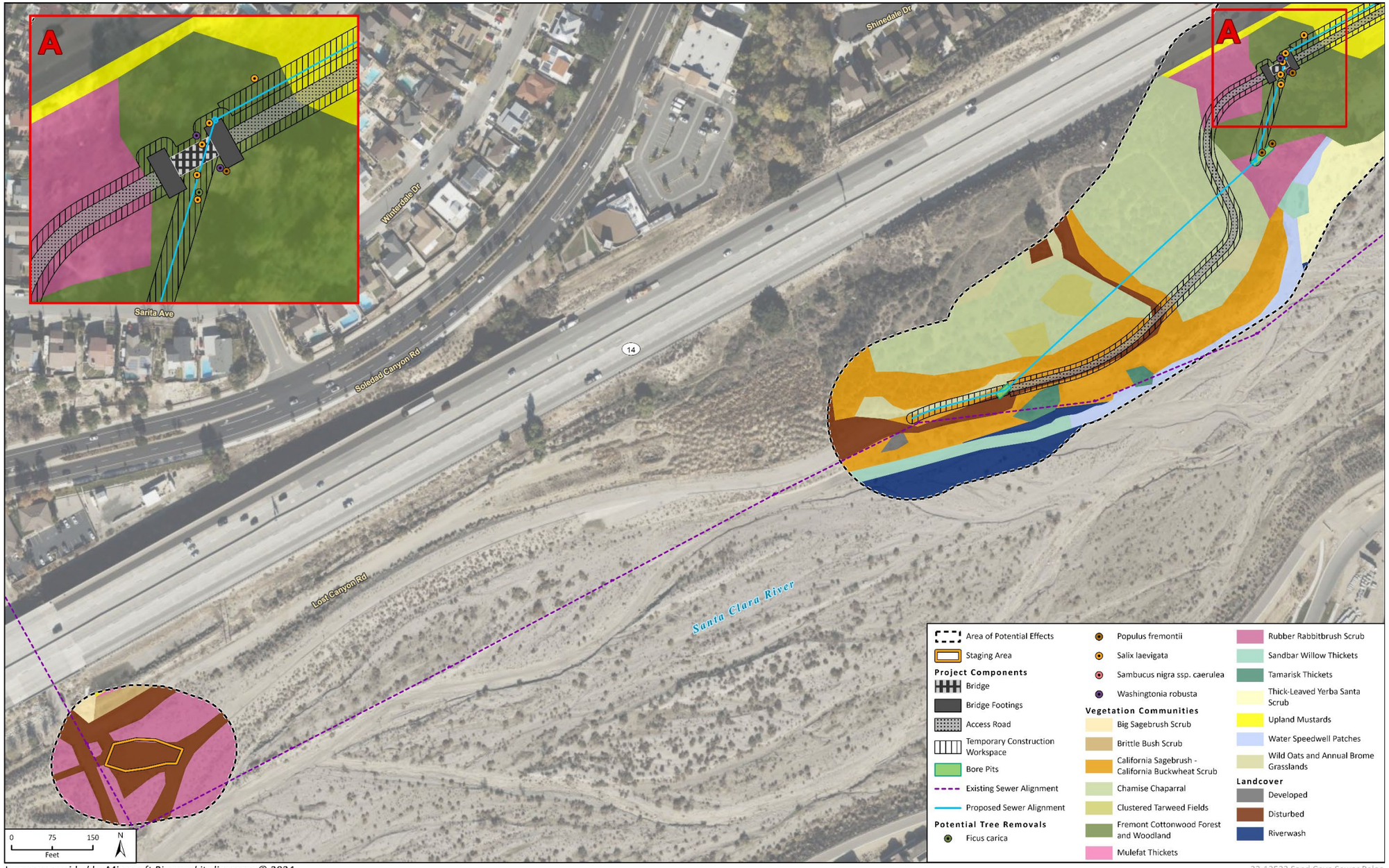
Brittle bush scrub (*Encelia farinosa* Shrubland Alliance) is typically found on alluvial fans, bajadas, colluvium, rocky hillsides, and slopes of small washes and rills. Soils are well drained, rocky, and may be covered by desert pavement. This alliance is generally found between 246 and 4,594 feet amsl. Brittle bush scrub is characterized by an open to intermittent shrub canopy and a seasonal herbaceous layer. Brittle bush (*Encelia farinosa*) has over one percent absolute cover and 30 percent relative cover in the shrub layer (Sawyer et al. 2009). This vegetation community is ranked G5S4 and is not classified as sensitive (CDFW 2023b).

Brittle brush scrub occurs in the western portion of the APE immediately adjacent to Lost Canyon Road, as well as in the central portion of the APE immediately south of SR-14 (Appendix D, Photograph 24). Brittle bush is dominant in the open shrub layer, with rubber rabbitbrush and California buckwheat (*Eriogonum fasciculatum*) present as subdominant. Rattail fescue (*Festuca myuros*) is dominant in the herbaceous layer, with slender wild oats, red brome, and redstem filaree (*Erodium cicutarium*) present as subdominant. The tree layer is absent.

California Buckwheat Scrub

California buckwheat scrub (*Eriogonum fasciculatum* Shrubland Alliance) is characterized by dominant or codominant California buckwheat in cismontane stands. California buckwheat scrub is found in upland slopes, intermittently flooded arroyos, channels and washes, and rarely flooded low-gradient deposits. Elevations range from sea level to 3,937 feet amsl. Soils are typically course, well drained, and moderately acidic to slightly saline. California buckwheat contributes to at least 50 percent relative cover in the shrub layer (Sawyer et al. 2009). This community is ranked G5S5 and is not classified as sensitive (CDFW 2023b).

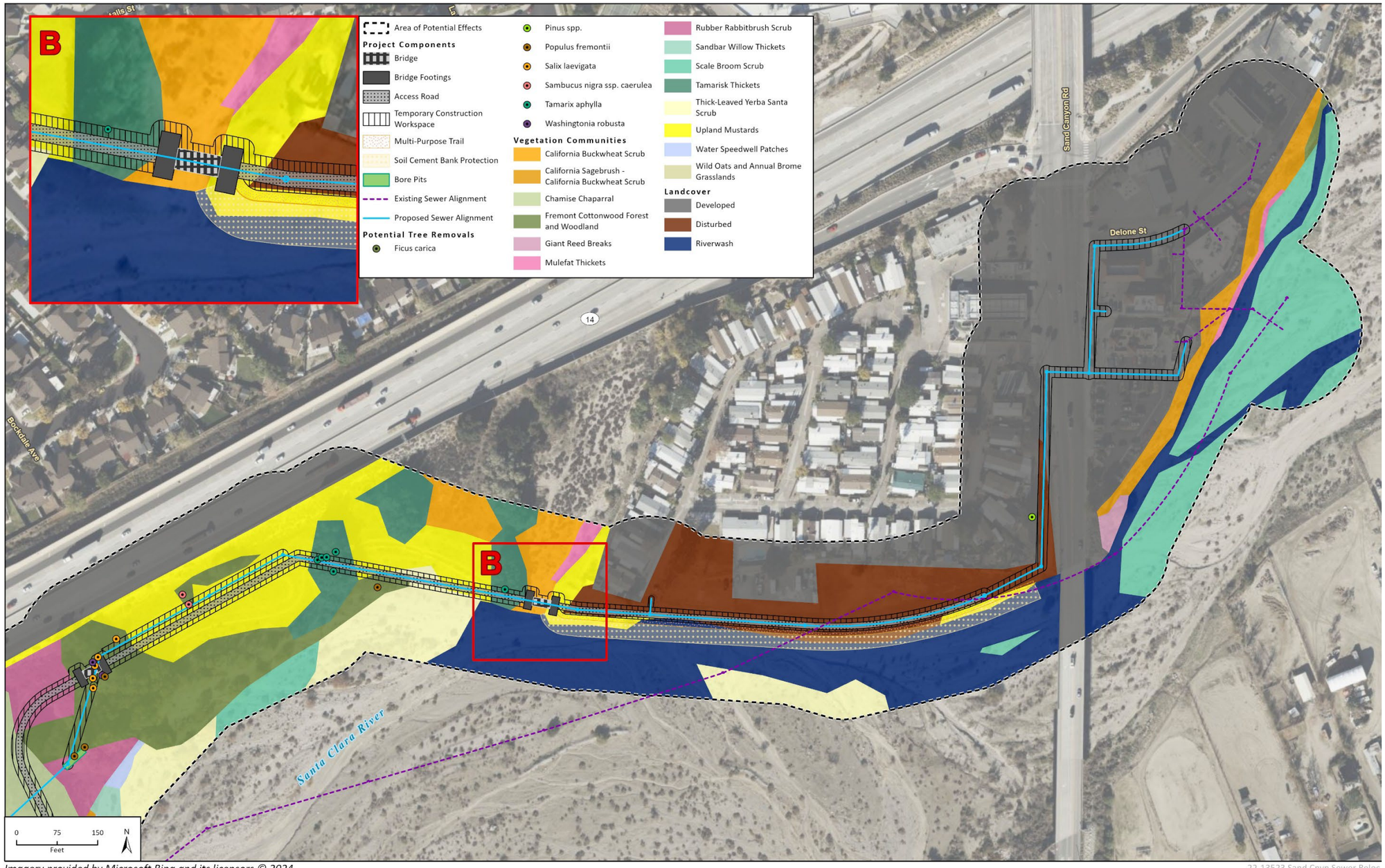
Figure 5a Vegetation Communities and Land Cover Types – West



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 5A Vegetation Communities & Land Cover Type

Figure 5b Vegetation Communities and Land Cover Types – East



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 5B Vegetation Communities & Land Cover Type

California buckwheat scrub occurs above and along the northern bank of the SCR in the central portion of the APE (Appendix D, Photograph 17). California buckwheat is dominant in the open to continuous shrub layer, with Palmer's goldenbush (*Ericameria palmeri*) and chaparral yucca (*Hesperoyucca whipplei*) present as subdominant species in the shrub layer. The herbaceous layer is largely dominated by exotic annual grasses and forbs such as ripgut brome, red brome, and slender wild oats, but also includes native species such as Menzies' fiddleneck (*Amsinckia menziesii*) and common sandaster (*Corethrogyne filaginifolia*). The tree layer is absent.

California Sagebrush – California Buckwheat Scrub

California sagebrush – California buckwheat scrub (*Artemisia californica – Eriogonum fasciculatum* Shrubland Association) is typically found along steep upland slopes that are rarely flooded, and low-gradient deposits along streams, between sea level and 3,940 feet amsl (Sawyer et al. 2009). Soils are typically alluvial or colluvial derived. California sagebrush (*Artemisia californica*) and California buckwheat collectively contribute between 30 and 60 percent relative cover in the shrub layer. This vegetation community is ranked G4S4 and is not classified as sensitive (CDFW 2023b).

California sagebrush – California buckwheat scrub occurs above the northern bank of the SCR in the northern portion of the APE (Appendix D, Photograph 6). California sagebrush and California buckwheat are codominant in the shrub layer, with chamise (*Adenostoma fasciculatum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), Palmer's goldenbush, chaparral yucca, and big sagebrush present as subdominant species in the shrub layer. The herbaceous layer is largely dominated by exotic annual grasses and forbs such as ripgut brome, red brome, and slender wild oats, but also includes native species such as clustered tarweed (*Deinandra fasciculata*), Menzies' fiddleneck, common sandaster, and Turkish rugging (*Chorizanthe staticoides*). The tree layer is absent.

Chamise Chaparral

Chamise chaparral (*Adenostoma fasciculatum* Shrubland Alliance) is widespread on shallow soils over colluvium and many kinds of bedrock between 32 and 5,900 feet amsl. Chamise contributes to at least 50 percent relative cover in the shrub layer, and the shrub canopy ranges from intermittent to continuous (Sawyer et al. 2009). This vegetation community is ranked G5S5 and is not considered sensitive (CDFW 2023b).

Chamise chaparral occurs in the northwestern portion of the APE along a terrace above the banks of the SCR (Appendix D, Photograph 8). Chamise is dominant in the open to intermittent shrub layer, with California buckwheat and California sagebrush present as subdominant. Slender wild oats (*Avena barbata*) are dominant in the herbaceous layer, with red brome, Turkish rugging, clustered tarweed, and common sandaster present as subdominant. A few scattered California junipers (*Juniperus californica*) occur in the tree layer.

Mulefat Thickets

Mulefat thickets (*Baccharis salicifolia* Shrubland Alliance) are typically found in canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels at elevations between sea level and 4,100 feet amsl. Soils are mixed alluvium (Sawyer et al. 2009). Mulefat contributes to at least 30 percent relative cover in the shrub canopy. This vegetation alliance is ranked G4S4 and is not classified as sensitive (CDFW 2023b).

The mulefat thickets vegetation community is present along the northern bank of the SCR in the northwestern portion of the APE. This vegetation community also occurs in the low flow channel of Ephemeral Drainage 1 and in the southern portion of the sediment basin in the western portion of the APE near the proposed staging area (Figure 5b). Within the APE, mulefat is dominant in the shrub layer, with brittle bush present as subdominant. The herbaceous layer includes summer mustard and red brome, and the tree layer includes scattered Fremont cottonwood saplings.

Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub (*Ericameria nauseosa* Shrubland Alliance) occurs in all topographic settings, and especially in disturbed settings. Soils are typically well drained sands and gravels. This alliance is generally found between sea level and 10,500 feet amsl. Rubber rabbitbrush scrub is characterized by an open to intermittent shrub canopy and a sparse herbaceous layer. Rubber rabbitbrush has over two percent absolute cover or more than 25 percent relative cover in the shrub layer (Sawyer et al. 2009). This vegetation community is ranked G5S5 and is not classified as sensitive (CDFW 2023b).

Rubber rabbitbrush scrub occurs adjacent to the proposed staging area and Intermittent Drainage 1 (Figure 5a-Figure 5b). Rubber rabbitbrush is dominant in the open shrub layer, with deerweed (*Acmispon glaber*), allscale saltbush (*Atriplex polycarpa*), fragrant sumac (*Rhus aromatica*), scale broom, blue elderberry, and brittle brush present as subdominant species. Red brome is dominant in the herbaceous layer, with slender wild oats present as subdominant. The tree layer is absent.

Sandbar Willow Thickets

Sandbar willow thickets (*Salix exigua* Shrubland Alliance) are typically found on temporarily flooded floodplains, depositions along rivers and streams, and at springs between sea level and 8,860 feet amsl. This community is characterized by an intermittent to continuous shrub layer and a variable herbaceous layer. Sandbar willow has at least 30 percent relative cover in the shrub layer (Sawyer et al. 2009). This vegetation community is ranked G5S4 and is not classified as sensitive (CDFW 2023b).

The sandbar willow thickets vegetation community is present within the banks of the SCR immediately downstream of the confluence with Intermittent Drainage 1 (Figure 5a-Figure 5b). Within the APE, sandbar willow is dominant in the shrub layer, with mulefat and thick-leaved yerba santa present as subdominant species. The herbaceous layer includes water speedwell (*Veronica anagallis-aquatica*), white sweetclover (*Melilotus albus*), and perennial pepperweed (*Lepidium latifolium*). The tree layer is absent.

Scale Broom Scrub

Scale broom scrub (*Lepidospartum squamatum* Shrubland Alliance) is characterized by dominant, co-dominant, or conspicuous scale broom in a shrub canopy that is open to continuous, with emergent plants in low cover and an herbaceous layer that is variable and may be grassy. Shrubs are less than 6.5 feet tall. Scale broom scrub is found in areas that are intermittently or rarely flooded, and on low-gradient alluvial deposits along streams, washes, and fans. Elevation ranges from 164 to 4,921 feet amsl (Sawyer et al. 2009). Scale broom scrub is ranked G3S3 and is identified by the CDFW as a sensitive natural community (CDFW 2023b).

The scale broom scrub vegetation community occurs in the southern portion of the APE within the floodplain of the SCR (Figure 5b). Within the APE, native species commonly associated with this vegetation community include scale broom, chaparral yucca, California buckwheat, big sagebrush,

rubber rabbitbrush, tree tobacco, annual bursage (*Ambrosia acanthicarpa*), and emergent Fremont cottonwood. Non-native species observed within the vegetation community include various grasses and forbs such as red brome, summer mustard, and rattail fescue.

Thick-leaved Yerba Santa Scrub

Thick-leaved yerba santa scrub (*Eriodictyon crassifolium* Provisional Shrubland Association) is characterized by dominant thick-leaved yerba santa in the shrub canopy with other native species present as well. Emergent trees may also be present at low cover and include interior live oak (*Quercus wislizeni*). The thick-leaved yerba santa shrub canopy is intermittent and sometimes two tiered. This alliance can be found between 2,700 and 5,675 feet amsl (Sawyer et al. 2009). This vegetation community is ranked G5S5 and is not classified as sensitive (CDFW 2023b).

Thick-leaved yerba santa scrub occurs in the southern portion of the APE within the banks of the SCR (Appendix D, Photograph 13). Thick-leaved yerba santa is dominant in the open shrub layer, with scale broom, California buckwheat, athel tamarisk, rubber rabbitbrush, and golden aster (*Heterotheca sessiliflora*) present as subdominant species. Mediterranean grass (*Schismus barbatus*) is dominant in the herbaceous layer, with summer mustard, red brome, redstem filaree, and giant reed present as subdominant species. The tree layer is absent.

3.2.3 Herbaceous Communities

Clustered Tarweed Fields

Clustered tarweed fields (*Deinandra fasciculata* Herbaceous Alliance) are typically found along clay flats and bottomlands, edges of vernal pools, shallow pools, and alkaline flats between sea level and 2,953 feet amsl. Soils are poorly drained and consist of fine-textured alluvium with periodic or intermittent inundation, and may be underlain by claypan or other impervious layers. Clustered tarweed has greater than 30 percent relative cover or is seasonally present in the herbaceous layer with a variety of other annual herbaceous plants (Sawyer et at. 2009). This alliance is ranked G2S2 and is classified as sensitive (CDFW 2023b).

Clustered tarweed fields occur in the northwestern portion of the APE along a terrace above the banks of the SCR (Appendix D, Photograph 3). This vegetation community occurs in a mosaic with the chamise chaparral vegetation community. Clustered tarweed is dominant in the dense herbaceous layer, with Turkish rugging, slender wild oats, and red brome present as subdominant species. Scattered shrubs include chamise, California sagebrush, and California buckwheat. The tree layer is absent.

Giant Reed Breaks

Giant reed breaks (*Arundo donax* Herbaceous Semi-Natural Alliance) are found within riparian areas, along low-gradient streams and ditches, as well as within semi-permanently flooded and slightly brackish marshes and impoundments, from sea level to 5,249 feet amsl (Sawyer et al. 2009). Giant reed dominates the herbaceous layer. Giant reed is provided a rating of high by the California Invasive Plant Council (Cal-IPC 2023), indicating that the species has severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Its reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. This vegetation community is ranked GNA/SNA and is not classified as sensitive (CDFW 2023).

Giant reed breaks occur in the northeastern portion of the APE along the northern bank of the SCR adjacent to Sand Canyon Road (Appendix D, Photograph 21). Giant reed is dominant in the dense herbaceous layer, with summer mustard present as subdominant. Other species observed include scattered scale broom, Fremont cottonwood, and red brome.

Upland Mustards

Upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance) is typically found in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places at elevations between sea level and 9,186 feet amsl. Black mustard, summer mustard, wild radish (*Raphanus sativus*), or other mustards occur with non-native plants at over 80 percent cover in the herbaceous layer. This vegetation community is ranked GNA/SNA due to the dominance of non-native species and is not classified as sensitive (CDFW 2023b).

Upland mustards occur throughout the APE, with summer mustard and black mustard dominant in the dense herbaceous layer (Appendix D, Photograph 17). Subdominant herbaceous species include slender wild oats, red brome, prickly lettuce (*Lactuca serriola*), tocalote (*Centaurea melitensis*), ripgut brome, and rattail fescue. Scattered shrub species include California buckwheat and athel tamarisk. The tree layer is absent.

Water Speedwell Patches

Water speedwell patches occur in the southwestern portion of the APE and are associated with the SCR where surface water was present during the field survey. This vegetation community does not align with a defined alliance in the MCV2, but is provisionally characterized as the *Veronica anagallis-aquatica* Herbaceous Semi-Natural Alliance for the purposes of this BRA, to accurately characterize the vegetation occurring in this area.

This provisional vegetation community is dominated by water speedwell, which is overwhelmingly dominant in the herbaceous layer. Water speedwell is a non-native plant species that, although not listed by the Cal-IPC as invasive, can form dense stands in riparian areas and outcompete other plant species for resources (Cal-IPC 2023). Water speedwell accounts for more than 60 percent relative cover in the herbaceous layer. Other herbaceous species encountered in this vegetation community include perennial pepperweed, annual rabbitsfoot grass (*Polypogon monspeliensis*), white sweetclover, seep monkeyflower (*Erythranthe guttata*), curly dock (*Rumex crispus*), and common knotweed (*Persicaria lapathifolia*). Emergent mulefat and Fremont cottonwood occur at low cover. This vegetation community is not provided a rarity ranking by the CDFW as it is not listed (CDFW 2023b). However, due to the predominance of non-native species (i.e., water speedwell), this vegetation community is not characterized as sensitive for the purposes of this BRA.

Wild Oats and Annual Brome Grasslands

Wild oats and annual brome grasslands (*Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance) are generally found in open areas in valleys and foothills throughout coastal and interior California. It typically occurs on soils consisting of fine-textured loams or clays that are somewhat poorly drained. Non-native annual grasses and weedy annual and perennial forbs, primarily of Mediterranean origin, dominate this vegetation type, probably as a result of human disturbance. Scattered native grass and wildflower species, representing remnants of the original vegetation may also be common (Sawyer et al. 2009). This vegetation alliance is ranked GNA/SNA due to the predominance of non-native species, and is not considered sensitive (CDFW 2023b).

Wild oats and annual brome grasslands occur in the western portion of the APE along a south-facing terrace above the banks of the SCR. This vegetation community is dominated by slender wild oats in the herbaceous layer, with red brome, tocalote, ripgut brome, and rattail fescue present as subdominant species. Scattered shrub species include California buckwheat and California sagebrush. The tree layer is absent.

3.2.4 Other Land Cover Types

Developed

Developed areas consist of buildings, other infrastructure, and paved areas with little to no vegetation (e.g., paved roads and unpaved roads, buildings, and concrete rip rap). Development is present north of the SCR in the APE (Figure 5a-Figure 5b). Developed areas are also present along the northern bank of the SCR, and include existing concrete rip rap that extends from the Sand Canyon Road bridge (Appendix D, Photograph 25 and 33).

Disturbed

Ruderal (weedy) plants grow in disturbed areas as a result of recent and continual surface soil disturbance. Disturbed areas typically contain a high percentage of bare ground and are dominated by non-native species. Due to the low plant species diversity and predominance of invasive weeds in most disturbed areas, the habitat value of this vegetation type is generally low, and these areas do not conform to a defined alliance in *A Manual of California Vegetation* (Sawyer et al. 2009).

The disturbed land cover type occurs adjacent to existing development (e.g., unpaved dirt roads, residential buildings, foot trails) in the northern portion of the APE (Figure 5a-Figure 5b). Non-native species commonly observed within this land cover type include annual non-native grasses and forbs such as ripgut brome, red brome, and black mustard (*Brassica nigra*).

Riverwash

Riverwash is present within the active channel of the SCR. This land cover type consists of sand and cobble which has accumulated in the channels and low terraces in the riverbed. Little to no vegetation is present. Riverwash is a naturally dynamic landform and may shift and change position depending on flood volumes and regularity. Portions of riverwash in the APE were disturbed by off highway vehicle use (Appendix D, Photographs 19-20).

3.3 General Wildlife

A total of 12 wildlife species were observed during the field reconnaissance surveys (Appendix E). Common mammalian species observed included a California ground squirrel (*Otospermophilus beecheyi*) individual, coyote (*Canis latrans*) scat, and domesticated dog (*Canus lupus familiaris*). One reptilian species, the western fence lizard (*Sceloporus occidentalis*), was observed in the APE. Common avian species observed include common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), and red-tailed hawk (*Buteo 27rcutti27na27*), among others. These species, with the exception of domesticated dog, would be expected to use the APE for foraging, nesting, and/or shelter.

4 Sensitive Biological and Jurisdictional Resources

Local, state, and federal agencies regulate special-status species and other sensitive biological resources and may require an assessment of their presence or potential presence to be conducted on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed within the APE and evaluates the potential for the APE to support additional sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the APE, previous reports for the project site, and the results of surveys of the APE. The potential for each special-status species to occur in the APE was evaluated according to the following criteria:

- **Not Expected.** Habitat in and adjacent to the APE is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat in and adjacent to the APE is unsuitable or of very poor quality. The species is not likely to be found in the APE. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat in or adjacent to the APE is unsuitable. The species has a moderate probability of being found in the APE.
- **High Potential**. All of the habitat components meeting the species requirements are present and/or most of the habitat in or adjacent to the APE is highly suitable. The species has a high probability of being found in the APE.
- **Present.** Species was observed in the APE or has been recorded (e.g., CNDDB, other reports) in the APE recently (within the last five years).

4.1 Special-status Species

4.1.1 Special-status Plant Species

Based on the database and literature review, 38 special-status plant species have been recorded within the vicinity (i.e., nine quadrangle radius) of the APE (Appendix C). Of these, one species has a high potential to occur, and three species have a moderate potential to occur within the APE based upon the presence of suitable habitat within the APE. The species that can be reasonably anticipated to occur were determined based on the published ranges of the species, and the type, extent, and condition of habitat available at the APE. A list of special-status plant species with potential to occur within the APE is provided in Table 2 below. Those with a moderate or high potential to occur are discussed in more detail in the following sections.

Table 2 Special-status Plant Species with Potential to Occur in the APE

Species	Low Potential	Moderate Potential	High Potential	Present
Catalina mariposa lily (*Calochortus catalinae*); CRPR 4.2	X			
Club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*); CRPR 4.3	X			
Slender mariposa 29rcu (*Calochortus clavatus* var. *Gracilis*); CRPR 1B.2			X	
Plummer's mariposa lily (*Calochortus plummerae*); CRPR 4.2	X			
Peirson's morning-glory (*Calystegia peirsonii*); CRPR 4B.2	X			
San Fernando Valley spineflower (*Chorizanthe parryi* var. *29rcutti29na*); SCE; CRPR 4.2		X		
Parry's spineflower (*Chorizanthe parryi* var. *parryi*); CRPR 1B.2		X		
Slender-horned spineflower (*Dodecahema leptoceras*); FE, SCE, CRPR 1B.2		X		
Mesa horkelia (*Horkelia cuneata* var. *Puberula*); CRPR 1B.1	X			
California satintail (*Imperata brevifolia*); CRPR 2B.1	X			
Robinson's pepper-grass (*Lepidium virginicum* var. *Robinsonii*); CRPR 4.3	X			
California spineflower (*Mucronea californica*); CRPR 4.2	X			
Piute Mountains navarretia (*Navarretia setiloba*); CRPR 1B.1	X			
White rabbit-tobacco (*Pseudognaphalium leucocephalum*); CRPR 2B.2	X			

FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; SCE = State Candidate Endangered; ST = State Threatened; SV = State Vulnerable; FP= State Fully Protected; SSC = CDFW Species of Special Concern ; WL= Watch List ; CRPR = California Rare Plant Rank.

The remaining 24 special-status plant species are not expected to occur in the APE based on incompatible habitat conditions (e.g., vegetation assemblage, soils, topography, hydrology, and prior disturbances), or the absence of readily identifiable species (e.g., perennial herbs, shrubs, and/or trees) based upon the field reconnaissance survey results.

A brief description of each species with moderate or high potential to occur is provided below. Species with a low potential to occur are omitted from further discussion because there are limited habitat components meeting the species requirements and/or the majority of habitat in and adjacent to the APE is unsuitable or of very poor quality, the species was not observed during field surveys, and therefore the species is not likely to be found in the APE.

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*; California Rare Plant Rank [CRPR] 1B.2) is a perennial bulb in the lily (*Liliaceae*) family. This plant has linear basal leaves approximately 10-20 centimeters (cm) long and a stem approximately 20-30 cm tall. Slender mariposa lily generally flowers between March and June. The flowers are cup-shaped and composed of three petals, each of which are between 3-4 cm in size. The petals are yellow and sparsely hairy, with variable dark red or brown lines. The fruit is a narrow capsule which contains many seeds (Jepson Flora Project 2023). Slender mariposa lily is endemic to coastal southern California and is often found in chaparral, coastal scrub, and on grassy slopes in shaded foothill canyons.

Potentially suitable habitats for slender mariposa lily include chaparral (i.e., chamise chaparral), scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub), and herbaceous (i.e., clustered tarweed fields, and wild oats and annual brome grasslands) communities that occur above the northern bank of the SCR along the south-facing terrace that slopes down toward the SCR. Additionally, there are multiple CNDDB records within the vicinity of the APE, the closest being approximately 0.6 mile northeast (Occurrence No. 139). Therefore, spender mariposa lily has a high potential to occur in the APE.

San Fernando Valley Spineflower

San Fernando Valley spineflower (*Chorizanthe parryi* var*. 30rcutti30na*; State Candidate Endangered [SCE], CRPR 1B.1) is an annual herb in the buckwheat (*Polygonaceae*) family that blooms between April and July. This species is generally found in washes and on hills or mesas, and grows in a variety of substrates, including sandy soils and loamy or silty clay loam soils. This basal rosette plant has linear basal leaves approximately 0.5-4 cm long. The flowers are tube-shaped and composed of three petals, each of which are between 2-3 millimeters (mm) in size. The petals are green to white. The fruit is a single-seeded achene (Jepson Flora Project 2023).

Potentially suitable chaparral (i.e., chamise chaparral), scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub), and grassland (i.e., wild oats and annual brome grasslands) habitats occur along the upper terrace to the north of the SCR in the northwestern portion of the APE. However, there are no CNDDB records within a 5-mile radius of the APE. Therefore, San Fernando Valley spineflower has a moderate potential to occur in the APE.

Parry's Spineflower

Parry's spineflower (*Chorizanthe parryi var. parryi*; CRPR 1B.2) is an annual herb in the buckwheat family that blooms between April and June. This species is generally found in openings in chaparral, coastal scrub, and grassland habitats, and typically grows in sandy soils. This basal rosette plant has linear basal leaves approximately 0.5-4 cm long. The flowers are tube-shaped and composed of three petals, each of which are between 2-3 millimeters (mm) in size. The petals are green to white. The fruit is a single-seeded achene (Jepson Flora Project 2023).

Potentially suitable chaparral (i.e., chamise chaparral), scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub), and grassland (i.e., wild oats and annual brome grasslands) habitats occur along the upper terrace to the north of the SCR in the northwestern portion of the APE. However, there are no CNDDB records within a 5-mile radius of the APE. Therefore, Parry's spineflower has a moderate potential to occur in the APE.

Slender-horned Spineflower

Slender-horned spineflower (*Dodecahema leptoceras*; Federally Endangered [FE], SCE, CRPR 1B.1) is an annual herb in the buckwheat family that blooms between April and June. Slender-horned spineflower commonly occurs in alluvial fans, floodplains, stream terraces, washes, and associated benches, from 700-2,500 feet amsl. It grows in riverbed alluvium high in silt and low in nutrients and

organic matter; in silt-filled, shallow depressions on relatively flat surfaces surrounded by scattered, river-rounded, cobble-sized rocks. The species is generally found in open areas among alluvial fan scrub, often associated with other spineflower species, and in low density of exotic grasses and other introduced weedy species (Allen 1996).

Potentially suitable habitat for slender-horned spineflower occurs in the APE, including coastal scrub (i.e., California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) within the banks of the SCR, particularly within the lower terraces above the low-flow channel of the river. Additionally, there are multiple CNDDB records near the APE, the closest recent occurrence (i.e., less than 30 years old) being approximately 3.5 miles northeast (Occurrence No. 279). However, reconnaissance field surveys performed within the APE in April 2013 did not detect any individuals (Dudek 2013). Therefore, this species has a moderate potential to occur in the APE.

4.1.2 Special-status Wildlife Species

Based on the database and literature review, 31 special-status wildlife species have been recorded or have the potential to occur within the vicinity (i.e., nine quadrangle radius) of the APE (Appendix C). Of these, 24 species have potential to occur within the APE based upon the presence of suitable habitat and history of occurrence in the vicinity. Four (4) species have a high potential to occur, 8 species have a moderate potential to occur, and 12 species have a low potential to occur within the APE. A list of special-status wildlife species with potential to occur within the APE is provided in Table 3 below.

Table 3 Special-status Wildlife Species with Potential to Occur in the APE

Species	Low Potential	Moderate Potential	High Potential	Present
Crotch bumble bee (*Bombus crotchii*); SCE		X		
Santa Ana sucker (*Catostomus santaanae*); FT		X		
Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); FE, SE, FP		X		
Arroyo chub (*Gila 31rcutti*); SSC		X		
Arroyo toad (*Anaxyrus californicus*); FE, SSC		X		
Western spadefoot (*Spea hammondii*); SSC		X		
California legless lizard (*Anniella* spp.); SSC			X	
California glossy snake (*Arizona elegans occidentalis*); SSC	X			
Coastal whiptail (*Aspidoscelis tigris stejnegeri*); SSC			X	
Coast horned lizard (*Phrynosoma blainvillii*); SSC		X		
Two-striped gartersnake (*Thamnophis hammondii*); SSC	X			
Cooper's hawk (*Accipiter cooperii*); WL		X		
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*); WL	X			
Bell's sage sparrow (*Artemisiospiza belli belli*); WL	X			
Burrowing owl (*Athene cunicularia*); SSC	X			
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*); FE, SE	X			

Species	Low Potential	Moderate Potential	High Potential	Present
Southwestern willow flycatcher (*Empidonax traillii extimus*); FE, SE	X			
California horned lark (*Eremophila alpestris actia*); WL			X	
Prairie falcon (*Falco mexicanus*); WL	X			
Loggerhead shrike (*Lanius ludovicianus*); SSC	X			
Coastal California gnatcatcher (*Polioptila californica californica*); FT, SSC	X			
Least Bell's vireo (*Vireo bellii pusillus*); FE, SE	X			
Western mastiff bat (*Eumops perotis californicus*); SSC	X			
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); SSC			X	

FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; SCE = State Candidate Endangered; ST = State Threatened; SV = State Vulnerable; FP= State Fully Protected; SSC = CDFW Species of Special Concern ; WL= Watch List

A brief description of each species with moderate or high potential to occur is provided below. Species with a low potential to occur are omitted from further discussion because there are limited habitat components meeting the species requirements and/or the majority of habitat in and adjacent to the APE is unsuitable or of very poor quality, the species was not observed during field surveys, and therefore the species is not likely to be found in the APE.

The remaining seven special-status wildlife species that have been recorded or have the potential to occur within the vicinity of the APE are not expected to occur because the APE does not support their required habitat components and/or is not within the known range of the species.

Fish

Arroyo Chub

The arroyo chub (*Gila orcutti*) is a CDFW Species of Special Concern (SSC) native to coastal drainages of Los Angeles, Orange, Riverside, and San Diego counties in California. Considered true omnivores, arroyo chub eat algae, insects, and small crustaceans (Moyle 2015). Spawning generally occurs in June and July, but the eggs of females ripen in small batches, allowing spawning to occur anywhere from February through August (Tres 1992). Typically, arroyo chub are found in slow-moving sections of cool to warm (50°F – 78.8°F) streams dominated by sand and silt substrates.

Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including sandy substrate and presence of algae. One CNDDB record (Occurrence No. 44) from 1999 is located in the SCR approximately three miles downstream (west) of the APE. However, because there is no permanent water flow in the stretch of the SCR within the APE, this species would only occupy the SCR after a large storm event, and therefore has a moderate potential to occur in the APE.

Santa Ana Sucker

The Santa Ana sucker (*Catostomus santaanae*) is a federally threatened fish species that historically occupied upper watershed areas of the San Gabriel and San Bernardino Mountains down to the Pacific Ocean. At present, the Santa Ana sucker is found in three disjunct populations that occupy portions of the San Gabriel, Los Angeles, and Santa Ana River basins in southern California. Santa Ana suckers rely on perennial flows with suitable water quality and substrate to support breeding, feeding, and sheltering. Over different life history stages, suckers depend on a variety of coarse

substrate types, such as gravel, cobble, or mixtures of gravel or cobble with sand, and a variety of riverine features, such as shallow riffles and deeper runs and pools (USFWS 2023d).

Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including presence of aquatic vegetation (e.g., watercress) and slow-moving water. Additionally, one CNDDB record (Occurrence No. 13) from 1993 is located in the SCR approximately 3.5 miles upstream (east) of the APE (CDFW 2023a). However, because there is no permanent water flow in the stretch of the SCR within the APE, this species would only occupy the SCR after a large storm event, and therefore has a moderate potential to occur in the APE.

Unarmored Threespine Stickleback

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*; UTS) is a state and federally listed endangered species and a state fully protected species. UTS are scaleless, freshwater fish that grow up to five centimeters (two inches) long and primarily feed on bottom dwelling insects, crustaceans, and snails. UTS have a very limited distribution, with the southern California population represented in only three drainages; Upper SCR (extremely limited), Bouquet Creek (extremely limited) and Soledad Canyon Creek (possibly extirpated).

Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including presence of aquatic vegetation (e.g., watercress) and slow-moving water. Additionally, two CNDDB records (Occurrence No. 4 and 10) are located in the SCR approximately 3.5 miles upstream (Occurrence No. 4) and three miles downstream (Occurrence No. 10) of the APE. However, because there is no permanent water flow in the stretch of the SCR within the APE, this species would only occupy the SCR after a large storm event, and therefore has a moderate potential to occur in the APE.

Amphibians and Reptiles

Arroyo Toad

Arroyo toad (*Anaxyrus californicus*) is a federally endangered species and SSC endemic to California and northern Baja California. This species ranges mostly west of the desert in coastal areas from the upper Salinas River system in Monterey County to northwestern coastal Baja California. Arroyo toad occurs in washes, arroyos, sandy riverbanks, and riparian areas with willows, sycamores (*Platanus* spp.), oaks (*Quercus* spp.), and cottonwoods (*Populus* spp.). Arroyo toads require exposed sandy streambanks with stable terraces for burrowing with scattered vegetation for shelter as well as areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding (Zeiner et al. 1988).

One CNDDB record of arroyo toad (Occurrence No. 48) has been documented within five miles of the APE and is located in the SCR channel approximately four miles upstream (east) of the APE (CDFW 2023a). The APE contains coastal scrub and riparian habitat for burrowing/dispersal along the sandy banks of the SCR, which is generally associated with the Fremont cottonwood forest and woodland, sandbar willow thickets, mulefat thickets, scale broom scrub, and thick-leaved yerba santa scrub vegetation communities, as well as the riverwash land cover type. In addition, suitable breeding habitat for this species may be present within the active channel of the SCR when surface water is present. Therefore, this species has a moderate potential to occur within the APE.

Western Spadefoot

Western spadefoot (*Anaxyrus californicus*) is an SSC and is also proposed for listing as threatened under the FESA. This species ranges throughout the Central Valley and adjacent foothills, and through the Coast Ranges and coastal plain from Point Conception south to the Mexican border. Elevations of occurrence extend from near sea level to 4,460 feet amsl in the southern Sierra foothills. It relies on temporary rain pools in a variety of vegetation types for its reproductive habitat. It spends most of the year in burrows up to 36 inches underground. Individuals have been reported to use mammal burrows. Surface movement by adults is primarily associated with rains or during nights of high humidity and they rarely stray far from their natal pools. Ponds must lack predators and persist for at least three weeks for successful reproduction. Recently metamorphosed juveniles seek refuge in drying mud cracks, under boards and other surface objects in the immediate vicinities of breeding ponds for up to several days after transformation.

This species was previously documented approximately 200 feet south of the APE on the southern bank of the SCR during focused surveys performed for the Vista Canyon Specific Plan Environmental Impact Report (EIR; State Clearinghouse [SCH] No. 2007071039; City of Santa Clarita 2010). This documented occurrence includes a single dispersing adult. Additionally, there are four CNDDB records (Occurrence No.'s 342-344, 1062) within one mile of the APE (CDFW 2023a). One of these occurrences from 2008 (Occurrence No. 342) included observations of tadpoles and egg clusters. Vernal pools are generally absent from the APE, but potentially suitable grassland habitat occurs to the north of the northe'n bank of the SCR in the APE, and western spadefoot has a moderate potential to utilize this habitat for foraging. The APE does not provide suitable breeding habitat for western spadefoot, but suitable breeding habitat may occur outside of the APE near locations of previously documented occurrences. Therefore, this species has a moderate potential to occur within the APE.

California Legless Lizard

California legless lizard (*Anniella* spp.) is an SSC found in the Coast Ranges from Contra Costa County to the Mexican border. California legless lizard occurs in a variety of habitats including sparsely vegetated areas of coastal dunes, valley-foothill grasslands, chaparral, and coastal scrub that contain sandy or loose organic soils with leaf litter and moist soils for burrowing. Areas disturbed by agriculture or other human uses are typically not suitable habitat for the species (Zeiner et al. 1988).

Numerous CNDDB records of the species have been documented within five miles of the APE, including one record from 2015 (Occurrence No. 67) that overlaps the APE (CDFW 2023a). Potentially suitable open scrub (big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland habitat (i.e., wild oats and annual brome grasslands) occurs in and adjacent to the SCR to support this species. In addition, loose, moist soil occurs adjacent to the active channel of the SCR and may provide suitable foraging and/or breeding habitat for this species. Therefore, California legless lizard has a high potential to occur within the APE.

Coastal Whiptail

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) is an SSC that is found in deserts and semi-arid areas with sparse vegetation within Ventura, Los Angeles, Riverside and San Diego counties. The species is commonly found in a variety of habitats including valley-foothill hardwood, valley-foothill

hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chamise-redshank chaparral, mixed chaparral, desert scrub, desert wash, alkali scrub, and annual grasslands (Zeiner et al. 1988).

Several occurrences have been documented within five miles of the APE, the closest being approximately 0.2 mile southwest (CDFW 2023a). Potentially suitable open scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland habitat (i.e., wild oats and annual brome grasslands) occurs in the APE to support this species. While this species was not documented during surveys performed for the Vista Canyon Specific Plan EIR, which overlaps the western portion of the APE (City of Santa Clarita 2010), the APE provides suitable open scrub and grassland habitat as well as sparsely-vegetated sandy soils. Therefore, this species has a high potential to occur in the APE.

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is an SSC that can be found in grasslands, coniferous forests, woodlands, and chaparral habitats containing open areas and patches of loose soil. There are multiple records of the species within the regional vicinity of the APE, the closest being approximately 3.5 miles east in Bee Canyon Wash (CDFW 2023a). Additionally, this species was observed within the Vista Canyon Specific Plan area in 2006, which overlaps the western portion of the APE (City of Santa Clarita 2010). Suitable open scrub (I.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland habitat (i.e., wild oats and annual brome grasslands) occurs in the APE to support this species. and grassland habitats with loose soils in and adjacent to the SCR are present within the APE. Therefore, coast horned lizard has a moderate potential to occur within the APE.

Birds

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a CDFW Watch List (WL) species that typically occurs in woodland habitat. This species forages and nests in riparian growths of deciduous trees or live oak trees, as in canyon bottoms on river floodplains. While no CNDDB records are documented within five miles of the APE, this species was observed within the Vista Canyon Specific Plan area in 2009, which overlaps the western portion of the APE (City of Santa Clarita 2010). Potentially suitable nesting habitat occurs in the Fremont cottonwood forest and woodland vegetation community. However, this vegetation community is isolated, of relatively small size, and is constrained to the north by SR-14. Therefore, this species has a moderate potential to forage and/or nest in the APE.

California Horned Lark

California horned lark (*Eremophila alpestris actia*) is a CDFW WL species that typically occurs in the coastal regions of California from Sonoma County to San Diego County. This species mostly eats insects, snails, and spiders during the breeding season (generally February 1 through August 31) and adds grass and forb seeds and other plant matter to its diet during other seasons. The California horned lark walks along the ground, searching for food. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover. This species builds grass-lined cup-shaped nests

in depressions on the ground in the open and is frequently found in grasslands and other open habitats with low, sparse vegetation (Zeiner et al. 1988).

No CNDDB records are documented within five miles of the APE; however, foraging individuals were observed within the Vista Canyon Specific Plan area in 2009, which overlaps the western portion of the APE (City of Santa Clarita 2010). Nesting was not documented during these surveys. Potentially suitable nesting and foraging habitat occurs in the scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland (i.e., wild oats and annual brome grasslands) vegetation communities in the APE. Therefore, this species has a high potential to occur in the APE.

Mammals

San Diego Black-Tailed Jackrabbit

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is an SSC that inhabits a wide range of habitats including desert shrublands, sagebrush, chaparral, oak woodland with an herb mosaic component. This species occurs from coastal southern California to Baja California. The species requires a mix of grasses, forbs, and shrubs for foraging and prefers predominantly open areas without dense understory (Howard 1995).

The closest CNDDB record of this species is approximately 300 feet southwest of the APE (Occurrence No. 106; CDFW 2023a). In addition, this species was observed during surveys performed for the Vista Canyon Specific Plan EIR in 2008 (City of Santa Clarita 2010). Potentially suitable habitat occurs in the scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland (i.e., wild oats and annual brome grasslands) vegetation communities in the APE, with more open habitat occurring within the banks of the SCR. Therefore, this species has a high potential to occur in the APE.

Insects

Crotch Bumble Bee

Crotch bumble bee (*Bombus crotchii*) is an SCE species endemic to California and south into Mexico. The Crotch bumble bee inhabits grassland and scrub areas, requiring a hotter and drier habitat than other bumble bee species. This species nests underground, often in abandoned rodent dens. Forage plant genera include but are not limited to snapdragon (*Antirrhinum* spp.), phacelia (*Phacelia* spp.), clarkia (*Clarkia* spp.), tree poppy (*Dendromecon* spp.), herbaceous poppy (*Eschscholzia* spp.), and buckwheat (*Eriogonum* spp.).

One historic CNDDB record (Occurrence No. 135) overlaps the APE, and one recent CNDDB record (Occurrence No. 326) from 2019 is located approximately 3.3 miles south of the APE (CDFW 2023a). The APE contains potentially suitable foraging habitat in the scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and grassland (i.e., wild oats and annual brome grasslands) habitats. Additionally, forage food genera for the Crotch bumble bee including California buckwheat and longstem buckwheat (*Eriogonum elongatum*) commonly occur throughout the scrub habitats,

particularly along the upland slopes to the north of the SCR. Therefore, this species has a moderate potential to forage within the APE. Crotch bumble bee has a low potential to nest in the APE, as limited rodent dens were observed in the APE, and a large portion of the APE has been previously disturbed. Moreover, only one single California ground squirrel was observed in the APE, and it was found on an ornamental tree in the developed land cover type.

4.1.3 Other Protected Species

Nesting Birds

The APE contains suitable habitat to support regulated nesting birds and raptors protected under CFGC Sections 3503, 3503.5, and 3513, and the MBTA (16 United States Code Sections 703 to 712). Potential nesting habitat for birds and raptors was observed throughout the APE, with the most suitable locations in the Fremont cottonwood forest and woodland, tamarisk thickets, mulefat thickets, and sandbar willow thickets vegetation communities, and moderately-suitable nesting habitat occurring in the scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub) and chaparral (i.e., chamise chaparral) vegetation communities. No inactive or potentially active nests were observed within the APE during the field reconnaissance surveys.

4.2 Sensitive Plant Communities and Critical Habitats

Sensitive Natural Communities

The CDFW *California Sensitive Natural Communities List* identifies sensitive natural communities throughout California, based in part on global and state rarity ranks (CDFW 2023b). Natural communities having a rank of 1 to 3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. CDFW-designated sensitive vegetation communities found within the APE include clustered tarweed fields (ranked G2S2), Fremont cottonwood forest and woodland (ranked G4S3), and scale broom scrub (ranked G3S3; CDFW 2023b). Fremont cottonwood forest and woodland and scale broom scrub are located in the riparian corridor of the SCR and Intermittent Drainage 1 in the central and southern portions of the APE, and clustered tarweed fields are located in the northern portion of the APE along Mitchell Hill which occurs on an upland terrace to the north of the SCR (Figure 5a).

Designated Critical Habitat

No USFWS-designated critical habitat occurs within the APE. The nearest designated critical habitat is for coastal California gnatcatcher approximately 1.6 miles southwest of the APE in the foothills of the San Gabriel Mountains, spreading navarretia (*Navarretia fossalis*) approximately 2.6 miles north near the Cruzan Mesa, and arroyo toad approximately 2.9 miles east of the APE within the SCR riparian corridor (USFWS 2023b). No other USFWS-designated critical habitat exists within five miles of the APE.

4.3 Jurisdictional Waters and Wetlands

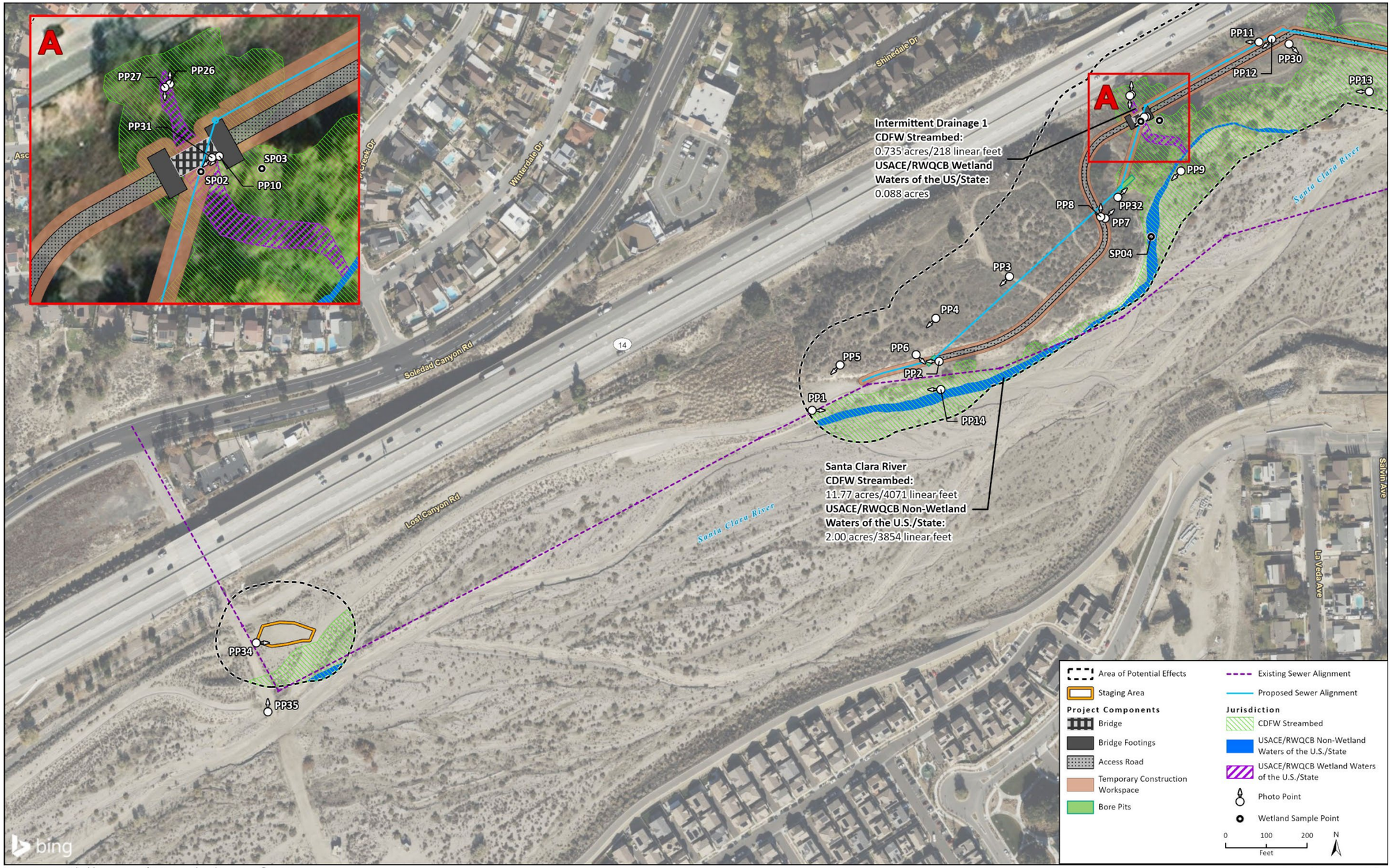
The results of the research and field visit determined the SCR and Intermittent Drainage 1 are potentially subject to USACE, RWQCB, and CDFW jurisdictions. Ephemeral Drainage 1 is also

potentially subject to RWQCB and CDFW jurisdictions (Table 4). A total of 2.00 acres (3,854 linear feet) of non-wetland waters of the U.S. and 0.088 acre of wetland waters of the U.S. occur within the APE (Figure 6). A total of 2.06 acres (4,063 linear feet) of non-wetland waters of the state and 0.088 acre of wetland waters of the state occur within the APE. A total of 12.86 acres (4,463 linear feet) of CDFW streambed and associated riparian habitat occur within the APE. A map illustrating potentially jurisdictional aquatic resources within the APE is presented in Figure 6a-Figure 6b. A description of each jurisdictional feature occurring within the APE is provided below. Site photographs are provided in Appendix D.

Table 4 Summary of Potentially Jurisdictional Areas within the APE

	USACE Waters of the U.S.		RWQCB Waters of the State		CDFW Jurisdiction
Feature	Non-wetland Waters of the U.S. (acres [linear feet])	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres [linear feet])	Wetland Waters of the State (acres)	CDFW Streambed (acres [linear feet])
Santa Clara River	2.00 (3,854)	0	2.00 (3,854)	0	11.77 (4,071)
Intermittent Drainage 1	–	0.09	–	0.09	0.74 (218)
Ephemeral Drainage 1	–	–	0.06 (209)	–	0.36 (174)
Total	**2.00 (3,854)**	**0.09**	**2.06 (4,063)**	**0.09**	**12.86 (4,463)**

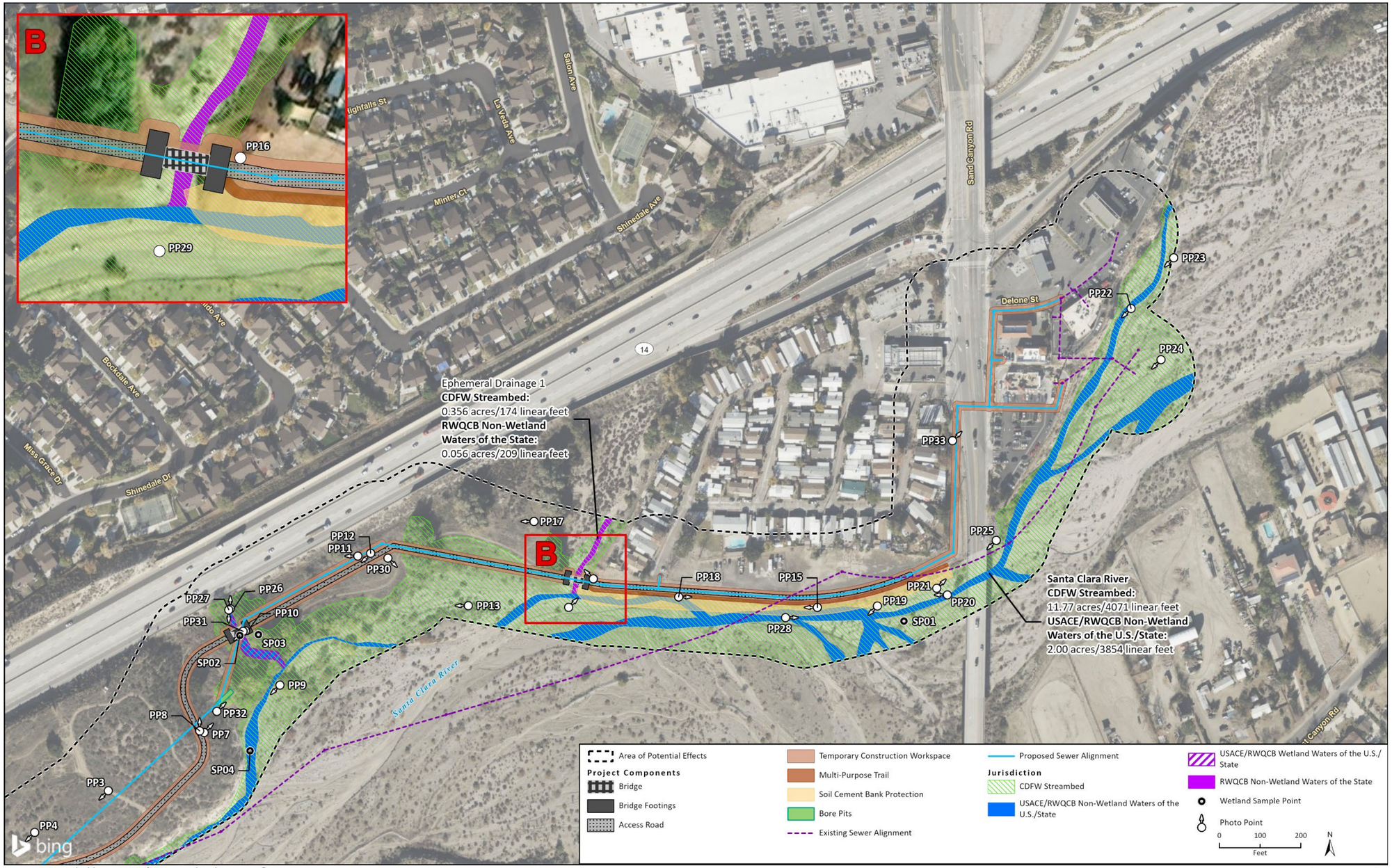
Figure 6a Potentially Jurisdictional Resources – West



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 6A Jurisdictional Delineation No Impacts

Figure 6b Potentially Jurisdictional Resources – East



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 6B Jurisdictional Delineation No Impacts

Santa Clara River

The SCR flows from east to west in the southern portion of the APE (Figure 6a-Figure 6b). The SCR is an intermittent system; the riverbed surface is dry for most of the year, except during and following storm events. The riverbed is wide and characterized by a braided active channel, and contains historical secondary channels that are interspersed among the active channel. Within the APE, the SCR receives inputs from a variety of drainages, including Sand Canyon Creek to the south of the APE, and Intermittent Drainage 1 and Ephemeral Drainage 1 in the northern portion of the APE. During the field surveys, flowing water was present within the active channel of the SCR in the western portion of the APE near the confluence with Intermittent Drainage 1 and moving westward toward the proposed staging area (Appendix D, Photographs 1, 6, and 14).

The northern top of bank of the SCR extends from the central portion of the APE southward for approximately 160 feet to the southern boundary of the APE. The southern bank of the SCR occurs outside and to the south of the APE. The OHWM of the SCR ranges between 10 and 46 feet wide in the APE, with the widest point of the OHWM occurring in the northeastern portion of the APE and the narrowest point occurring in the central portion of the APE. The OHWM of the SCR is defined by a change in sediment, a change in vegetation composition, a clearly defined bed and bank, and a break in the associated bank slope. Due to the intermittent flow regime of the SCR, surface water observed during the field surveys, and direct connectivity to a TNW (Pacific Ocean), this feature is determined to be a Relatively Permanent Water (RPW) that flows at least seasonally (i.e., three months out of the year). SP01 and SP04 were collected immediately adjacent to the OHWM of the SCR in the eastern and central portions of the APE, respectively (Figure 6a-Figure 6b). At SP01 and SP04, indicators of hydrophytic vegetation and wetland hydrology were observed, but hydric soils were not observed (Appendix F). Therefore, it was determined that wetlands were not present in the SCR within the APE.

Based on the field surveys, the SCR is potentially subject to USACE, RWQCB, and CDFW jurisdiction. The SCR constitutes non-wetland waters potentially subject to the jurisdiction of USACE per Section 404 of the CWA and was delineated to the width of the OHWM of the SCR. The SCR also potentially constitutes a CDFW streambed under the jurisdiction of the CDFW per Section 1600 et seq. of the CFGC. The limits of CDFW jurisdiction extend to the top of bank or outer edge of riparian vegetation associated with the river, whichever is greater. The SCR also constitutes non-wetland waters potentially subject to the jurisdiction of the Los Angeles RWQCB per Section 401 of the CWA. The limits of RWQCB jurisdiction were determined to be coterminous with USACE jurisdiction.

Intermittent Drainage 1

Intermittent Drainage 1 flows from north to south in the central portion of the APE (Figure 6a-Figure 6b). Intermittent Drainage 1 originates in the APE from an eight-foot tall, eight-foot wide concrete box culvert outlet immediately south of SR-14, which conveys surface water runoff from the residential neighborhood to the north (Appendix D, Photograph 26). This drainage has an intermittent flow regime and contains surface water for a majority of the year, as evidenced by the presence of slow-flowing water during the field surveys. Intermittent Drainage 1 is characterized by a single active channel with slow-moving water, with establishment of dense riparian vegetation (including herbs, shrubs, and trees) within and surrounding the active channel. Vegetation surrounding Intermittent Drainage 1 is categorized as the Fremont cottonwood forest and woodland vegetation community.

Within the APE, the top of bank of Intermittent Drainage 1 is approximately 80 feet wide and 8 feet deep, and the OHWM is approximately 20 feet wide and 3 feet deep. The OHWM of Intermittent Drainage 1 is defined by a change in vegetation species, a well-defined bed and bank, and a break in bank slope. Due to the intermittent flow regime of Intermittent Drainage 1, flowing water present during the field surveys, and direct connectivity to a TNW (Pacific Ocean) via the SCR, this feature is assumed to be an RPW that flows at least seasonally (i.e., three months out of the year). SP02 was taken in silty sediment within the OHWM of Intermittent Drainage 1 in an area dominated by cattails (*Typha* spp.; OBL), with an overstory of Fremont cottonwood (FACW), red willow (FACW), and Mexican fan palm (*Washingtonia robusta*; FACW). Indicators of hydrophytic vegetation and wetland hydrology were observed (Attachment 3). Although indicators of hydric soils were not observed at SP02, this area is dominated by cattails, an obligate wetland plant species. Furthermore, the concrete box culvert outlet associated with Intermittent Drainage 1 contained six feet of sediment accumulation, indicating that large volumes of sediment are frequently deposited within the bed of the drainage. The large amount of sediment accumulation on a regular basis appears to have obscured hydric soil indicators that may be present deeper in the soil profile. As such, it was determined that problematic hydric soils and therefore wetlands were present at SP02. SP03 was collected approximately 45 feet east of SP02, above the OHWM of Intermittent Drainage 1 but underneath the canopy of Fremont cottonwood trees associated with the drainage feature. No wetland indicators (hydrophytic vegetation, hydric soils, wetland hydrology) were observed at SP03. Therefore, it was determined that a wetland was not present at SP03, and the boundaries of wetlands in Intermittent Drainage 1 were defined to the extent of the OHWM.

Based on the field survey, Intermittent Drainage 1 is likely subject to USACE, RWQCB, and CDFW jurisdiction. Intermittent Drainage 1 contains wetland waters potentially subject to the jurisdiction of the USACE and Los Angeles RWQCB per Sections 404 and 401 of the CWA, respectively, and was delineated to the extent of the OHWM of the drainage feature. Intermittent Drainage 1 potentially constitutes a CDFW streambed under the jurisdiction of the CDFW per Section 1600 et seq. of the CFGC. The limits of CDFW jurisdiction extend to the riparian vegetation beyond the top of bank of the drainage.

Ephemeral Drainage 1

Ephemeral Drainage 1 flows from north to south in the central portion of the APE, immediately west of a mobile home park (Figure 6b). Ephemeral Drainage 1 is a relatively small streambed that collects flows from the hillsides and residential/commercial development to the north of SR-14 outside the APE. The bed of Ephemeral Drainage 1 is mostly unvegetated, but contains some upland shrub species such as rubber rabbitbrush (UPL) and California buckwheat (UPL), and limited establishment of mulefat (FAC). No standing or flowing water was observed in Ephemeral Drainage 1 during the field surveys (Appendix D, Photographs 16 and 29).

The top of bank of Ephemeral Drainage 1 is approximately 50 feet wide and 10 feet deep, and the OHWM is approximately 12 feet wide and one foot deep. The eastern bank of Ephemeral Drainage 1 is constrained by existing residential development. The OHWM of Ephemeral Drainage 1 is defined by a change in sediment, a change in vegetation composition, a clearly defined bed and bank, and a break in the associated bank slope. Due to the ephemeral flow regime of Ephemeral Drainage 1, lack of surface water observed during the field surveys, and relatively small size of the watershed contributing flows to the drainage system, this feature is determined to be a non-RPW that does not flow at least seasonally (i.e., three months out of the year). As Ephemeral Drainage 1 did not exhibit any wetland characteristics (e.g., predominance of hydrophytic vegetation, multiple indicators of

wetland hydrology), wetland sample points were not collected in the drainage feature and wetlands were determined to be absent.

Based on the field surveys, Ephemeral Drainage 1 is potentially subject to RWQCB and CDFW jurisdiction. Ephemeral Drainage 1 constitutes non-wetland waters potentially subject to the jurisdiction of the Los Angeles RWQCB per Section 401 of the CWA. The limits of Los Angeles RWQCB jurisdiction were delineated to the OHWM. Ephemeral Drainage 1 also potentially constitutes a CDFW streambed under the jurisdiction of the CDFW per Section 1600 et seq. of the CFGC. The limits of CDFW jurisdiction extend to the top of bank associated with the drainage, as there is no riparian vegetation extending beyond the top of bank. As Ephemeral Drainage 1 is an ephemeral, non-RPW, it is not anticipated to be subject to USACE jurisdiction per Section 404 of the CWA.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats in the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation. Typically, habitat linkages are contiguous strips of natural areas, although dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (e.g., rock outcroppings, vernal pools, or oak trees) may need to be located in the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

At the regional/landscape-level scale, the APE is mapped as a relatively less permeable Essential Connectivity Area in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). The APE occurs along the southern fringe of an Essential Connectivity Area that connects portions of the San Gabriel Mountains to the north and south of the APE through the City. At the local level, the SCR channel in the southern portion of the APE provides a source of water during the winter months and contains a pathway and vegetative cover for migrating wildlife. Therefore, the SCR channel likely acts as a significant east-west movement corridor for large animals such as mule deer and coyote. Additionally, smaller, more mobile species (e.g., birds) may use the SCR channel to connect habitats to the north and south of the APE.

4.5 Resources Protected By Local Policies and Ordinances

City of Santa Clarita General Plan

Natural resources within City limits are regulated according to the City's General Plan, which includes policies regarding conservation of biological resources and ecosystems as well as protection of sensitive habitat (including wildlife corridors) and endangered species. The following objectives and policies related to biological resources are relevant for the proposed project based on its location and/or proposed activities (City of Santa Clarita 2011a):

Objective CO 3.1: In review of development plans and projects, encourage conservation of existing natural areas and restoration of damaged natural vegetation to provide for habitat and biodiversity.

- **Policy CO 3.1.1:** On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.
- **Policy CO 3.1.2:** Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- **Policy CO 3.1.3:** On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).
- **Policy CO 3.1.4:** For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.
- **Policy CO 3.1.5:** Promote the use of site-appropriate native or adapted plant materials and prohibit use of invasive or noxious plant species in landscape designs.
- **Policy CO 3.1.6:** On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- **Policy CO 3.1.7:** Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.
- **Policy CO 3.1.8:** On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.
- **Policy CO 3.1.9:** During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.
- **Policy CO 3.1.10:** To the extent feasible, encourage the use of open space to promote biodiversity.
- **Policy CO 3.1.11:** Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to reach tree roots (preventing sidewalk lift-

up from roots seeking oxygen), and mitigate tree-sidewalk conflicts, in order to maintain a healthy mature urban forest.

Objective CO 3.2: Identify and protect areas which have exceptional biological resource value due to a specific type of vegetation, habitat, ecosystem, or location.

- **Policy CO 3.2.3:** Ensure protection of any endangered or threatened species or habitat, in conformance with state and federal laws.

Objective CO 3.3: Protect significant wildlife corridors from encroachment by development that would hinder or obstruct wildlife movement.

Objective CO 3.5: Maintain, enhance, and manage the urban forest throughout developed portions of the Santa Clarita Valley to provide habitat, reduce energy consumption, and create a more livable environment.

- **Policy CO 3.5.1:** Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.
- **Policy CO 3.5.2:** Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.

Objective CO 3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

- **Policy CO 3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes and encourage reduction of lighting levels during nonbusiness nighttime hours.
- **Policy CO 3.6.2:** Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat.

Vista Canyon Specific Plan

The northwestern portion of the APE, including areas to the north of the SCR and to the west of Ephemeral Drainage 1, are within the planning area of the City's Vista Canyon Specific Plan. The Vista Canyon Specific Plan includes objectives regarding conservation of biological resources and ecosystems as well as protection of sensitive habitat (including the SCR) and endangered species. The following objectives related to biological resources are relevant for the proposed project based on its location and/or proposed activities (City of Santa Clarita 2011b):

Resource Conservation Objective 2.2.3:

1. Restore and minimize impacts to important biotic resources.
2. Maintain the use of the Santa Clara River as a major east/west open space corridor.
3. Establish a Santa Clara River Corridor and adopt measures to maintain, enhance, and protect important river habitat values and functions.

4. Provide native revegetation of river and setback areas when temporarily disturbed due to development activities.
5. Minimize impacts to the Santa Clara River and its resources.
6. Minimize impacts to oak trees and incorporate, where possible, oak trees into public spaces.

City of Santa Clarita Oak Tree Preservation Ordinance

According to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18), including the City of Santa Clarita Oak Tree Preservation Ordinance. Nevertheless, SCV Water would voluntarily comply with the City's oak tree preservation ordinance during implementation of the proposed project; therefore, it is included in this discussion.

The City of Santa Clarita Oak Tree Preservation Ordinance (Santa Clarita Municipal Code Section 17.51.040) protects and preserves oak trees in the City and provides regulatory measures to accomplish this purpose. This policy applies to the removal, pruning, cutting, and/or encroachment into the protected zone of oak trees. The following definitions are provided in the ordinance:

- "Oak tree" means any oak tree of the genus *Quercus*, including, but not limited to, valley oak (*Quercus lobata*), California live oak, canyon oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizenii*), and scrub oak (*Quercus dumosa*), regardless of size.
- "Heritage oak tree" means any oak tree measuring 108 inches or more in circumference or, in the case of a multiple trunk oak tree, two or more trunks measuring 72 inches each or greater in circumference, measured 4.5 feet above the natural grade surrounding each tree. In addition, the Commission and/or Council may classify any oak tree, regardless of size, as a heritage tree if it is determined by a majority vote thereof that such tree has exceptional historic, aesthetic, and/or environmental qualities of major significance or prominence to the community.
- "Oak tree protected zone" means a specifically defined area totally encompassing an oak tree which work activities are strictly controlled. Using the dripline as a point of reference, the protected zone shall commence at a point five feet outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than 15 feet from the trunk of an oak tree.

An Oak Tree Permit is required to cut, prune, remove, relocate, endanger, damage, or encroach into the protected zone of any oak tree on any public or private property within the City. Oak trees that do not exceed six inches in circumference when measured at a point 4.5 feet above the tree's natural grade are exempt from the Oak Tree Permit requirements.

During the reconnaissance field surveys, one coast live oak tree was documented in the APE to the northeast of the easternmost bore pit location. This tree, including its protected zone, does not occur within any proposed work area.

City of Santa Clarita Parkway Trees Ordinance

Native trees are protected under the City's Parkway Trees Ordinance (Santa Clarita Municipal Code Section 13.76). Pursuant to this ordinance, a tree permit must be obtained prior to damaging or removing any public trees within parkways or public areas.

Most of the APE occurs within private property where the City's Parkway Tree Ordinance does not apply. A small component of the APE along an unpaved access road in the western portion of the APE occurs within public property; however, no trees protected by the City's Parkway Tree Ordinance occur in this area. Public property also occurs along and immediately adjacent to Sand Canyon Road in the eastern portion of the APE, and two non-native ornamental pine (*Pinus* spp.), occur in this area.

Significant Ecological Areas

The City's General Plan and Municipal Code (Santa Clarita Municipal Code Section 17.38.080) includes treatment of the Significant Ecological Areas (SEAs) Overlay Zone as among the habitat types within the City. SEAs are defined as "ecologically important land and water systems that are valuable as plant or animal communities, often important to the preservation of threatened and endangered species, and conversation of biological diversity in the County" (City of Santa Clarita 2011a). Santa Clarita Municipal Code Section 17.38.080 requires a conformance review for development within the SEA Overlay Zone. The SCR corridor is identified as an SEA, specifically the "Santa Clara River" SEA, which extends throughout the river channel. This SEA overlaps the majority of the APE to the south of SR-14 and existing development adjacent to Sand Canyon Road, and overlaps most of the project footprint, excluding portions of the project footprint occurring in developed areas near Sand Canyon Road. While the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) pursuant Government Code Section 53091, SCV Water would voluntarily comply with the City's code through the implementation of measures to reduce impacts (refer to AMMs BIO-1 through BIO-11) such that the project would be compliant with the City's code.

4.6 Habitat Conservation Plans

The APE is not covered by any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan area.

5 Impact Analysis and Mitigation Measures

5.1 Special-status Species

The proposed project would have a significant effect on biological resources if it would:

1) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.*

5.1.1 Special-status Plant Species

As discussed in Section 4.1, *Special-status Species*, the CNDDB and CNPS query results include 38 special-status plant species within a nine-quadrangle search of the APE. Of these, three species have moderate potential to occur (San Fernando Valley spineflower, Parry's spineflower, and slender-horned spineflower), and one has high potential to occur (slender mariposa lily). These species have potential to occur in the chaparral (i.e., chamise chaparral), coastal scrub (i.e., big sagebrush scrub, brittle bush scrub, California buckwheat scrub, California sagebrush – California buckwheat scrub, rubber rabbitbrush scrub, scale broom scrub, California sagebrush scrub, scale broom scrub, and thick-leaved yerba santa scrub), and/or annual grassland/herbaceous habitat (i.e., wild oats and annual brome grasslands and clustered tarweed fields) within the APE. Ground disturbance from project construction would occur within some of these vegetation communities, as shown in Table 5. Ground disturbance could directly result in the damage or removal of special-status plants if present in the APE. Should special-status plant species be encountered within the work limits of the APE, direct impacts could occur through injury or mortality to individuals by heavy equipment during construction. Indirect impacts could result from habitat modifications, such as by the introduction of invasive plants disseminated from construction equipment, contamination of soils, and habitat degradation due to accidental fuel spills during construction.

San Fernando Valley spineflower, Parry's spineflower, slender-horned spineflower, and slender mariposa lily were not observed within the APE during reconnaissance surveys, but they have a moderate to high potential to occur. Given the open cut trenching construction method proposed to install the majority of the new sewer alignment, as well as access road development and soil cement bank protection proposed, individuals of these species, if present, could be removed, damaged, or disturbed by the project. Impacts to these species would be potentially significant, but mitigable through implementation of BMPs, a worker education program, pre-project botanical surveys, avoidance measures, and compensatory mitigation requirements (if applicable) as prescribed under avoidance and minimization measures (AMM) BIO-1 through BIO-5.

Table 5 Impacts to Vegetation Communities and Land Covers in the APE[1]

Vegetation Community or Land Cover Type	Temporary Project Impact (Acres)	Permanent Project Impact (Acres)	CDFW Sensitive Natural Community (Yes/No)
California buckwheat scrub	0.03	0.02	No
California sagebrush – California buckwheat scrub	0.14	0.05	No
Chamise chaparral	0.13	0.10	No
Developed	0.42	0	No
Disturbed	0.52	0.43	No
Fremont cottonwood forest and woodland	0.18	0.07	Yes
Riverwash	<0.01	0.47	No
Rubber rabbitbrush scrub	0.08	0.04	No
Tamarisk thickets	0.06	0.04	No
Thick-leaved yerba santa scrub	0.03	0.02	No
Upland mustards	0.31	0.29	No
Wild oats and annual brome grasslands	0.04	0	No
Total	**1.94**	**1.53**	**N/A**

[1] Vegetation community ranks are from CDFW (2023b).

5.1.2 Special-status Wildlife Species

Based on the database and literature review, 31 special-status wildlife species are known or have the potential to occur within the vicinity of the APE. Of the 31 wildlife species evaluated, 12 special-status wildlife species have low potential to occur, 8 have moderate potential to occur, 4 have high potential to occur in the APE, and 7 have no potential to occur. No special-status wildlife species were observed within the APE during the field survey. California legless lizard, coastal whiptail, California horned lark, and San Diego black-tailed jackrabbit have a high potential to occur in the APE. Crotch bumble bee (foraging), Santa Ana sucker, unarmored threespine stickleback, arroyo chub, arroyo toad, western spadefoot, coast horned lizard, and Cooper's hawk have a moderate potential to occur in the APE. With implementation of the AMMs described further below, potential direct and indirect impacts to special-status wildlife species would be reduced to a less-than-significant level.

Special-status Reptiles, Mammals, and Insects

Most of the special-status wildlife species that have the potential to occur within the project footprint are capable of escaping harm during project construction, while others are potentially vulnerable to direct impacts, including injury and mortality. Special-status species that could be directly impacted include potentially occurring land-dwelling animals, such as the California legless lizard, coastal whiptail, coast horned lizard, and San Diego black-tailed jackrabbit.

As Crotch bumble bee is a flying insect species, it would be capable of escaping harm during project construction while foraging. In addition, Crotch bumble does not have a moderate or high potential to nest in the APE because limited rodent dens were observed in the APE, and a large portion of the APE has been previously disturbed. Therefore, direct impacts to this species are not expected to occur as a result of the project.

The project's use of open cut trenching to install the majority of the existing line along and above the northern bank of the SCR, as well as excavations associated with jack-and-bore pits, access road development (including two bridges across Intermittent Drainage 1 and Ephemeral Drainage 1), multi-purpose trail development, and SCR soil cement bank protection has the potential to directly impact California legless lizard, coastal whiptail, coast horned lizard, and San Diego black-tailed jackrabbit. Open trench excavation would consist of excavating the soil to approximately 6 to 11 feet deep, installing a new pipe or a section of new pipe, and then backfilling the trench. Development of the access road would require vegetation clearing, grading the roadway, paving the road, installing bridge footings, and placing pre-cast bridges over Intermittent Drainage 1 and Ephemeral Drainage 1. Installation of soil cement bank protection along the northern bank of the SCR would require excavation, grading, and laying of soil cement to the desired grade. These project components have the potential to impact the aforementioned special-status species. Direct impacts could occur via direct strikes to individuals by construction equipment, or entrapment of special-status species in excavation trenches. In addition, indirect impacts could occur through vibrations and dust, which could alter behavioral patterns of land-dwelling special-status wildlife species and cause them to become exposed to predators. Implementation of AMM BIO-1 would require the sloping or fencing of trenches to prevent wildlife entrapment, and implementation of AMMs BIO-6 and BIO-7 would require pre-construction surveys for special-status wildlife species and construction monitoring. Additionally, potential impacts to federally- and state-listed wildlife species, if present, would require incidental take authorizations from the USFWS and CDFW.

Special-status Fish and Amphibian Species

There are documented occurrences of unarmored threespine stickleback, Santa Ana sucker, and arroyo chub within a nine-quadrangle search area of the APE. These species have the potential to occur in the low-flow channel of the SCR. Installation of soil cement bank protection and the multi-purpose trail along the northern bank of the SCR is expected to occur within the low-flow channel of the SCR. Direct impacts to unarmored threespine stickleback, Santa Ana sucker, and arroyo chub could occur via direct strikes to individuals by construction equipment. In addition, indirect impacts to these species could occur if project construction occurs when surface and/or standing water is present within the SCR, and construction spoils or stormwater runoff is deposited into the SCR. This could result in effects such as increased turbidity, altered pH, and/or decreased dissolved oxygen levels, which could harm special-status fish species. Implementation of AMM BIO-1 would require implementation of standard BMPs that would avoid or minimize construction leaks or spills, and implementation of AMM BIO-8 would restrict the construction window to when surface water is absent, which would avoid impacts to unarmored threespine stickleback, Santa Ana sucker, and arroyo chub. Direct impacts to arroyo toad and western spadefoot could occur during project construction within suitable aquatic habitat (i.e., SCR channel) and upland habitat (i.e., scrub and grassland habitat) through direct strikes to individuals, should they occur. In addition, indirect impacts could occur through vibrations, noise, lighting, and dust, which could alter behavioral patterns of these individuals and lead to mortality. Implementation of AMM BIO-1 would require standard construction BMPs, and AMMs BIO-6 and BIO-7 would require implementation of pre-construction surveys for western spadefoot and arroyo toad, as well as construction monitoring. With implementation of AMM BIO-1, and BIO-6 through BIO-8, impacts to western spadefoot and arroyo toad would be reduced to less-than-significant levels.

Special-status and Nesting Birds

The nests of most native birds and raptors are state and federally protected. It is likely birds use the APE for nesting (generally from early February through late August) given the mix of native and non-native vegetation, as well as the number of bird species and individuals observed during the survey. Implementation of the proposed project could result in direct or indirect impacts to nesting birds, through the direct removal or trimming of shrubs and trees which provide suitable nesting habitat. Project-related noise, vibration, and increased lights can lead to the disturbance of nesting birds which may have a negative impact on the animals. Although temporary, such disturbance can lead to the abandonment of a bird nest.

The project has potential to result in direct and indirect impacts to nesting birds, including CDFW SSC (i.e., Cooper's hawk and California horned lark), and species protected under the MBTA and CFGC 3503, if they are nesting within the APE and/or immediate vicinity during construction activities. Construction would occur within scrub (California sagebrush – California buckwheat scrub, chamise chaparral, rubber rabbitbrush scrub, thick-leaved yerba santa scrub) and woodland (Fremont cottonwood forest and woodland and tamarisk thickets) vegetation communities that have the potential to support nesting birds and raptors, including Cooper's hawk. Direct impacts from construction activities include ground disturbance and removal of vegetation, which could potentially contain birds' nests. Indirect impacts include construction noise, lighting, and fugitive dust. These impacts could lead to individual mortality or harassment that might reduce nesting success. Therefore, AMM BIO-9 would require a pre-construction nesting bird survey and protective buffers if nesting birds are found. In addition, AMM BIO-6 and BIO-7 would identify and protect any special-status bird species (i.e., Cooper's hawk and California horned lark) within the APE prior to and during initial ground disturbance, which would further reduce potential direct and indirect impacts associated with the project.

5.1.3 Recommended Avoidance, Minimization, and Mitigation Measures

Implementation of AMMs BIO-1 through BIO-9 would reduce impacts to special-status species to less-than-significant levels.

BIO-1 General Best Management Practices

General requirements which should be followed by construction personnel are listed below.

- The contractor should clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries.
- Project-related vehicles should observe a 10-mile per hour speed limit within the unpaved limits of construction.
- All open trenches or excavations should be fenced and/or sloped to prevent entrapment of wildlife species.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during proposed project construction should be disposed of in closed containers only and removed daily from the project site.
- Project-related vehicles and equipment should be inspected for weeds prior to entering the project site.
- Project-related materials (e.g., straw wattles) should be sourced from weed-free materials.

- No deliberate feeding of wildlife should be allowed.
- No pets should be allowed on the project site.
- No firearms should be allowed on the project site.
- If vehicle or equipment maintenance is necessary, it should be performed in the designated staging areas.
- If construction lighting is used, it should be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.
- During construction, heavy equipment should be operated in accordance with standard BMPs. All equipment used on-site should be properly maintained to avoid leaks of oil, fuel, or residues. Provisions should be in place to remediate any accidental spills.
- While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped should immediately report the incident to the construction foreman or biological monitor. The construction foreman or biological monitor should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW within five working days of the incident. All observations of special-status species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the biological monitor.

BIO-2 Worker Environmental Awareness Program

A lead biological monitor should conduct a pre-project environmental education program for all personnel working at the site, which should be focused on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction should attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special-status biological resources potentially occurring in the project area. This training should include information about the special-status species with potential to occur in the project area. The specifics of this program should include identification of special-status species and habitats, a description of the regulatory status and general ecological characteristics of special-status resources, and review of the limits of construction and measures required to avoid and minimize impacts to biological resources within the work area. A fact sheet conveying this information should be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project. All employees working at the project site should sign a form provided by the trainer documenting they have attended the WEAP and understand the information presented to them. The crew foreman should be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species.

BIO-3 Special-status Plant Surveys

To avoid impacts to special-status plants, surveys for special-status plants should be completed prior to any vegetation removal, grubbing, or other construction activity within the project site. The surveys should be floristic in nature, seasonally timed to coincide with the blooming period of the target species (slender mariposa lily, San Fernando Valley spineflower, Parry's spineflower, and slender-horned spineflower), and be conducted by a qualified biologist.

Special-status plant species identified on-site should be mapped onto a site-specific aerial photograph and topographic map. Surveys should be conducted in accordance with the most

current protocols established by the CDFW and USFWS. A report of the survey results should be submitted to SCV Water for review and approval.

BIO-4 Special-status Plant Avoidance Measures

If special-status plants are detected during special-status plant surveys, avoidance of the special-status plants should occur where feasible and vegetation clearing within 50 feet of any identified rare plant should be conducted by hand, if practicable. Any rare plant occurrence should have bright orange protective fencing installed at least 50 feet beyond its extent, or another distance as approved by a qualified biologist, to protect it from harm.

If avoidance is not feasible, SCV Water should offset the proposed loss of individual plants at a minimum 1:1 ratio by on-site restoration (salvage, replanting, and propagation) detailed in AMM BIO-5. The open scrub and grassland habitats in the APE would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of on-site populations or off-site populations in the vicinity of the site at a 1:1 ratio if present.

BIO-5 Special-status Plant Mitigation and Monitoring Plan

If special-status plants are detected and would be impacted by project construction, a Special-status Plant Mitigation and Monitoring Plan that provides for the replacement of the species impacted by the project should be developed by a qualified restoration specialist. The Special-status Plant Mitigation and Monitoring Plan would be prepared for both on-site and off-site mitigation.

The Special-status Plant Mitigation and Monitoring Plan should specify the following:

- A summary of impacts;
- The location of the mitigation site;
- Methods for harvesting seeds or salvaging and transplanting individuals to be impacted;
- Measures for propagating plants or transferring living plants from the salvage site to the mitigation site;
- Site preparation procedures for the mitigation site;
- A schedule and action plan to maintain and monitor the mitigation area;
- Criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted plants at a minimum 1:1 ratio;
- Measures to exclude unauthorized entry into the mitigation areas; and
- Contingency measures such as replanting or weeding if mitigation efforts are not successful.

The performance standards for the Special-Status Plant Mitigation and Monitoring Plan should be at a minimum the following:

- Within five years after introducing the plants to the mitigation site, the number of established, reproductive plants should equal the number lost to project construction, and
- Restoration will be considered successful after the success criteria have been met for a period of at least 2 years without any maintenance or remediation activities other than invasive species control.

The Special-status Plant Mitigation and Monitoring Plan should be prepared prior to development of the project and implemented during project construction and should continue thereafter for a five-

year period. It can also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under AMM BIO-10, below.

Annual reports discussing the implementation, monitoring, and management of the Special-status Plant Mitigation and Monitoring Plan should be submitted to SCV Water. Five years after the start of the mitigation project, a final report should be submitted, which should at a minimum discuss the implementation, monitoring, and management of the Special-status Plant Mitigation and Monitoring Plan over the five-year period and indicate whether the Special-status Plant Mitigation and Monitoring Plan has been successful based on established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

BIO-6 Pre-activity Survey

Prior to commencement of ground or vegetation disturbing activities at the project site, a qualified biologist should conduct two surveys for special-status wildlife species. The first survey should be conducted no more than fourteen (14) days prior to commencement of project activities and the second survey should be conducted no more than three (3) days prior to the commencement of project activities. The survey should incorporate methods to detect the special-status wildlife species that could potentially occur at the site. In addition, prior to commencement of project activities, a qualified biologist should be retained to conduct focused surveys according to the USFWS Survey Protocol for the Arroyo Toad (USFWS 1999).

If special-status species are observed within the project site during pre-activity surveys, a qualified biologist should draft a “Species Protection Plan” prior to the initiation of construction. At a minimum, the plan should include avoidance and minimization measures for each observed species. These measures may include, but are not limited to:

- Species-specific Worker Environmental Awareness Program materials;
- Relocation methods including planned relocation areas for the protection of special-status species; and/or
- Reporting requirements.

To the extent feasible, special-status species should be avoided. If avoidance is not feasible, the species should be captured and transferred to an appropriate habitat and location on-site where it would not be harmed by project activities. The biologist should hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of the proposed activity, the methods and results of the surveys and, if a special-status species is found, the measures to be employed to avoid impacts to the species should be presented in a letter report to SCV Water.

BIO-7 Qualified Biological Monitor

A qualified biological monitor familiar with special-status species with potential to occur in the project site should be present during initial ground disturbance or vegetation removal activities. The biological monitor should have the authority to temporarily stop work if one or more special-status amphibian, reptile, or mammals are observed; the monitor should then relocate these individuals to suitable undisturbed habitat, outside the areas directly and indirectly affected by ground disturbance activities. The biologist should hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable.

The monitor should recommend measures to ensure compliance with all avoidance and minimization measures, applicable permit conditions, and any conditions required by SCV Water. When the biological monitor is present on site, they should be responsible for:

- Ensuring procedures for verifying compliance with environmental mitigation are followed;
- Lines of communication and reporting methods;
- Daily and weekly reporting of compliance;
- Construction crew WEAP training;
- Authority to stop work; and
- Action to be taken in the event of non-compliance.

BIO-8 Dry Season Construction

To eliminate the potential for impacts to the unarmored threespine stickleback, Santa Ana sucker, arroyo chub, arroyo toad, and western spadefoot and to minimize impacts to wildlife movement corridors, construction associated with soil cement bank protection and multi-purpose trail development along the northern bank of the SCR should be restricted to the dry season. This period generally occurs from May 1 to September 15; however, construction can occur outside this window provided no flowing or ponded water associated with the SCR is present within 50 feet of any work area. In addition, surface elevations within Ephemeral Drainage 1 and Intermittent Drainage 1 should be returned to preconstruction conditions prior to the end of the dry season.

BIO-9 Nesting Birds

Project-related activities should occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If construction must occur within the bird breeding season, then no more than seven days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey should be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-feet for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey should be required prior to each phase of construction during the nesting season.

Pre-construction nesting bird surveys should be conducted during the time of day when birds are active and should factor in sufficient time to perform this survey adequately and completely. A report of the nesting bird survey results, if applicable, should be submitted to SCV Water for review and approval prior to ground and/or vegetation disturbance activities.

If nests are found, their locations should be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines and up to 300 feet for raptors, depending upon the species and the proposed work activity, should be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests should be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance should occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. If project activities must occur within the buffer, they should be conducted at the discretion of the qualified biologist. The nesting bird buffer zones may also be extended at the discretion of the qualified biologist based on field observations of nesting bird behavior. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

5.2 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.

As shown in Figure 5a-Figure 5b, three CDFW-designated sensitive plant communities occur in the APE: clustered tarweed fields (ranked G2S2), Fremont cottonwood forest and woodland (ranked G4S3), and scale broom scrub (ranked G3S3; CDFW 2023b). Temporary and permanent impacts to sensitive plant communities would be limited to the Fremont cottonwood forest and woodland community (Table 6). Direct impacts to Fremont cottonwood forest and woodland include vegetation removal within the project footprint in order to install the sewer pipeline and access road. Implementation of AMM BIO-10 and BIO-11 will compensate for direct impacts to sensitive plant communities, as well as riparian habitat associated with the SCR, Intermittent Drainage 1, and Ephemeral Drainage 1. Indirect impacts could also occur through introduction of invasive plant species to the APE, which could negatively impact sensitive plant communities. Implementation of AMM BIO-1 includes the use of weed-free construction materials (e.g., straw wattles) and inspecting construction-related vehicles and equipment for weeds prior to entering the project site. This would reduce the potential for indirect impacts to sensitive plant communities. Impacts to sensitive plant communities would be less than significant with mitigation incorporated.

Table 6 Impacts to Sensitive Plant Communities in the APE[1]

Vegetation Community or Land Cover Type	Temporary Project Impact (Acres)	Permanent Project Impact (Acres)	Habitat Type	CDFW Sensitive Natural Community (Yes/No)
Fremont cottonwood forest and woodland	0.18	0.07	Riparian	Yes

[1] Vegetation community ranks are from CDFW (2023b).

5.2.1 Recommended Avoidance, Minimization, and Mitigation Measures

Implementation of AMMs BIO-10 and BIO-11 would reduce impacts to sensitive plant communities to less-than-significant levels.

BIO-10 Habitat Revegetation, Restoration, and Monitoring Program

Impacts to sensitive plant communities should be avoided to the greatest extent feasible. If avoidance is not feasible, mitigation for unavoidable impacts to sensitive plant communities can be accomplished either through on-site restoration, off-site restoration, or purchase of credits through an approved Mitigation Bank. Compensatory mitigation for unavoidable impacts to sensitive plant communities should be accomplished at a ratio of 1:1. If on-site or off-site restoration occurs, a Habitat Revegetation, Restoration, and Monitoring Program should be prepared and submitted for approval to SCV Water prior to initiating impacts. At minimum, the Habitat Revegetation, Restoration, and Monitoring Program should include the following:

- A description of the purpose and goals of the restoration
- Identification of success criteria and performance standards

- Methods of site preparation
- Irrigation plan and schedule
- BMPs
- Maintenance and monitoring program
- Adaptive management strategies
- Key stakeholders and responsible parties
- Funding
- Contingencies

BIO-11 Jurisdictional Habitat Best Management Practices

The following best management practices for construction within jurisdictional habitat should be followed by construction personnel:

- Materials should be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and should be at least 50 feet from drainage features. Construction materials and spoils should be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All vehicles and equipment should be in good working condition and free of leaks. The contractor should prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans should be placed below vehicles to contain fluid leaks.
- All re-fueling, cleaning, and maintenance of equipment will occur at least 50 feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment should be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.
- Compensatory mitigation for permanent impacts to the Santa Clara River and the two unnamed drainages (Ephemeral Drainage 1 and Intermittent Drainage 1) can be accomplished either through purchase of credits through an approved Mitigation Bank or through SCV Water sponsored mitigation (e.g., on-site restoration). Compensatory mitigation should be determined and approved by CDFW, USACE and RWQCB prior to impacting state- or federally-regulated waters. If on-site restoration would occur, it would be accomplished through implementation of a Habitat Revegetation, Restoration, and Monitoring Program as contained in AMM BIO-10.

5.3 Jurisdictional Waters and Wetlands

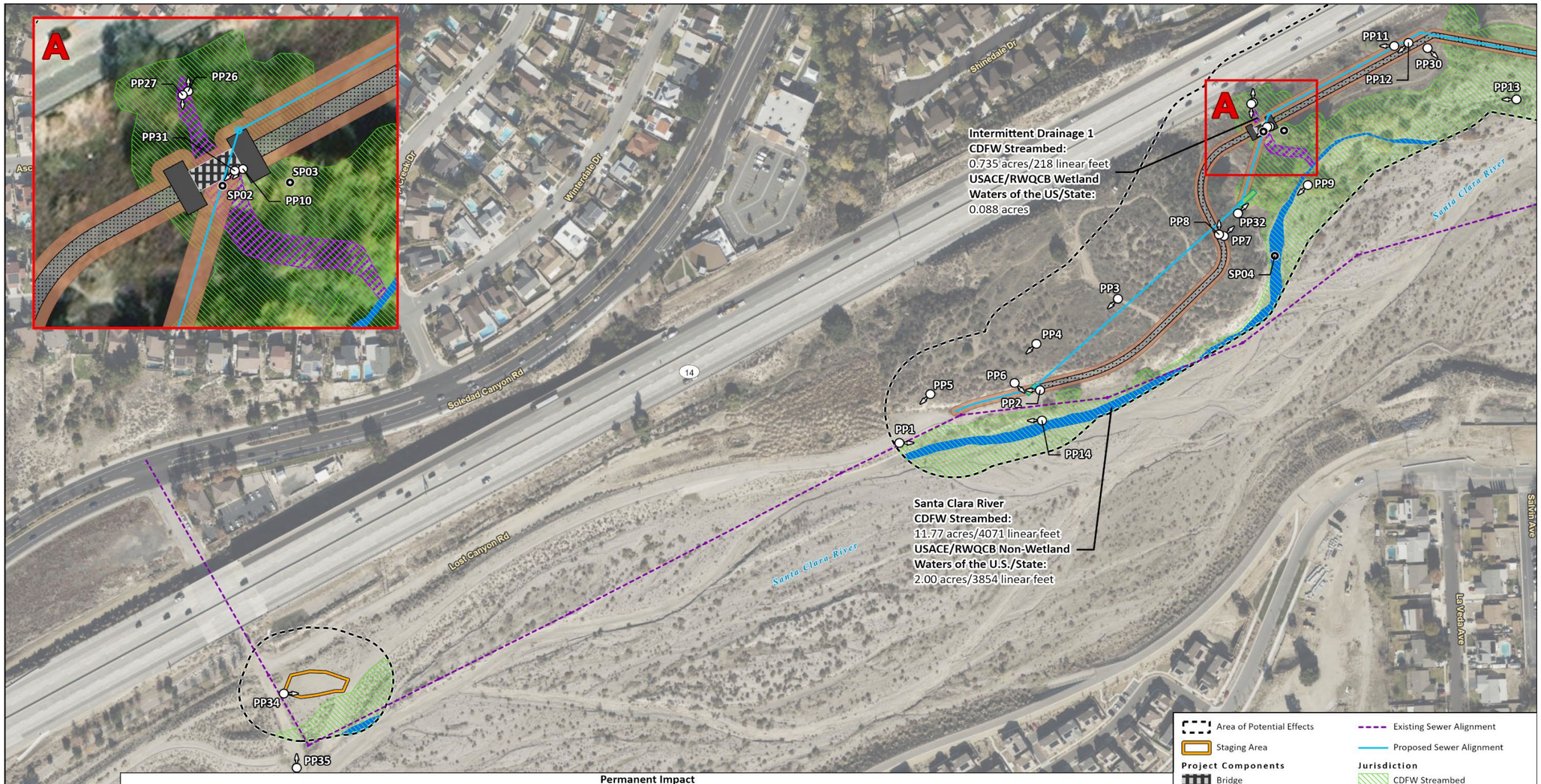
The proposed project would have a significant effect on biological resources if it would:

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.*

The SCR and two unnamed drainages (Ephemeral Drainage 1 and Intermittent Drainage 1) within the APE are potentially subject to the jurisdiction of USACE, RWQCB, and/or CDFW. Project construction would involve the installation of a new sewer line along the northern bank of the SCR and would include soil cement bank protection for the proposed sewer line where the SCR bank is

unstable and subject to scouring (Appendix D, Photographs 15 and 28). The project also includes the development of an access road across Intermittent Drainage 1 and Ephemeral Drainage 1. Two pre-cast arch design bridges and bridge footings would be installed where the access road crosses these drainage features. Permanent and temporary impacts to potentially jurisdictional features are shown in Figure 7a-Figure 7b, as well as in Table 7 and Table 8 below.

Figure 7a Potentially Jurisdictional Resources Impacts - West



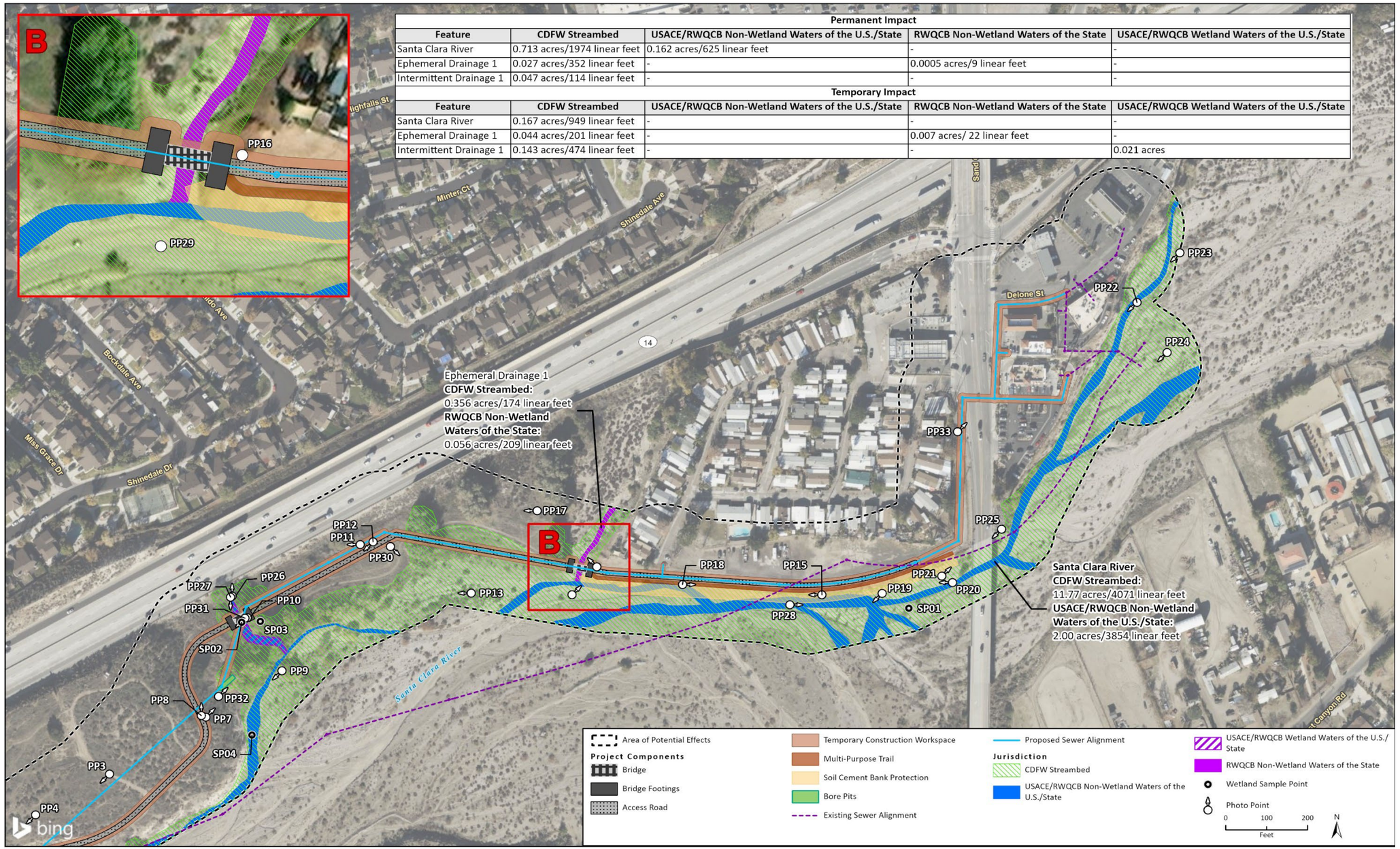
Permanent Impact				
Feature	**CDFW Streambed**	**USACE/RWQCB Non-Wetland Waters of the U.S./State**	**RWQCB Non-Wetland Waters of the State**	**USACE/RWQCB Wetland Waters of the U.S./State**
Santa Clara River	0.713 acres/1974 linear feet	0.162 acres/625 linear feet	-	-
Ephemeral Drainage 1	0.027 acres/352 linear feet	-	0.0005 acres/9 linear feet	-
Intermittent Drainage 1	0.047 acres/114 linear feet	-	-	-
Temporary Impact				
Feature	**CDFW Streambed**	**USACE/RWQCB Non-Wetland Waters of the U.S./State**	**RWQCB Non-Wetland Waters of the State**	**USACE/RWQCB Wetland Waters of the U.S./State**
Santa Clara River	0.167 acres/949 linear feet	-	-	-
Ephemeral Drainage 1	0.044 acres/201 linear feet	-	0.007 acres/ 22 linear feet	-
Intermittent Drainage 1	0.143 acres/474 linear feet	-	-	0.021 acres

Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 6A Jurisdictional Delineation

Figure 7b Potentially Jurisdictional Resources Impacts - East

Permanent Impact				
Feature	**CDFW Streambed**	**USACE/RWQCB Non-Wetland Waters of the U.S./State**	**RWQCB Non-Wetland Waters of the State**	**USACE/RWQCB Wetland Waters of the U.S./State**
Santa Clara River	0.713 acres/1974 linear feet	0.162 acres/625 linear feet	-	-
Ephemeral Drainage 1	0.027 acres/352 linear feet	-	0.0005 acres/9 linear feet	-
Intermittent Drainage 1	0.047 acres/114 linear feet	-	-	-
Temporary Impact				
Feature	**CDFW Streambed**	**USACE/RWQCB Non-Wetland Waters of the U.S./State**	**RWQCB Non-Wetland Waters of the State**	**USACE/RWQCB Wetland Waters of the U.S./State**
Santa Clara River	0.167 acres/949 linear feet	-	-	-
Ephemeral Drainage 1	0.044 acres/201 linear feet	-	0.007 acres/ 22 linear feet	-
Intermittent Drainage 1	0.143 acres/474 linear feet	-	-	0.021 acres



Imagery provided by Microsoft Bing and its licensors © 2024.

22-13523 Sand Cnyn Sewer Reloc
Fig 6B Jurisdictional Delineation

Table 7 Permanent Impacts to Potentially Jurisdictional Areas

	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
Feature	Non-Wetland Waters of the U.S. (acres/ linear feet)	Wetland Waters of the U.S. (acres)	Non-Wetland Waters of the State (acres/ linear feet)	Wetland Waters of the State (acres)	Streambed and Associated Riparian Habitat (acres/ linear feet)
Santa Clara River	0.16/625	0	0.16/625	0	0.71/1,974
Intermittent Drainage 1	0/0	0	0/0	0	0.05/114
Ephemeral Drainage 1	0/0	0	<0.01/9	0	0.03/352
Total	0.16/625	**0**	0.16/634	**0**	**0.79/2,440**

Table 8 Temporary Impacts to Potentially Jurisdictional Areas

	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
Feature	Non-Wetland Waters of the U.S. (acres/ linear feet)	Wetland Waters of the U.S. (acres)	Non-Wetland Waters of the State (acres/ linear feet)	Wetland Waters of the State (acres)	Streambed and Associated Riparian Habitat (acres/ linear feet)
Santa Clara River	0/0	0	0/0	0	0.167/949
Intermittent Drainage 1	0/0	0.021	0/0	0.021	0.143/474
Ephemeral Drainage 1	0/0	0	<0.01/22	0	0.044/201
Total	**0/0**	**0.021**	**0.007/22**	**0.021**	**0.354/1,624**

Prior to ground disturbance activities that could impact these features, SCV Water should consult with the appropriate regulatory agencies (USACE, Los Angeles RWQCB, and/or CDFW) anticipated to assert jurisdiction over the features. The project is anticipated to require a Lake and Streambed Alteration Agreement from the CDFW, a Water Quality Certification under Clean Water Act Section 401 from the Los Angeles RWQCB, and verification from the USACE under Nationwide Permit 58. Based on such consultation, any required permits must be obtained prior to disturbance of jurisdictional resources. With implementation of AMM BIO-10 and AMM BIO-11 and adherence to agency permits and existing regulations, potential direct and indirect impacts to jurisdictional waters and wetlands would be reduced to a less-than-significant level.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the APE is included as a relatively less permeable Essential Connectivity Area in the California

Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). Habitat corridors are present within the APE, notably including the SCR. The SCR has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. This is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types.

The SCR provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. Construction activities would not occur within the bed of the SCR, as project components only occur along the northern bank (i.e., soil cement bank protection) or above the northern bank (i.e., sewer line installation, access road development). Additionally, construction activities would be short-term and would only occur during the daytime. Project construction would not result in a decrease in the function of the corridor for wildlife movement, as the optimal path for wildlife movement (i.e., SCR) would remain intact during implementation of the project. Migrating wildlife would have the ability traverse around the work area (i.e., to the south) during construction and continue migrating through the SCR channel. In addition, implementation of BMPs in accordance with AMM BIO-1, including measures to prevent wildlife entrapment (e.g., sloping trenches) and shielding/directing light downward, would reduce potentially significant impacts to wildlife movement to a less-than-significant level.

Moreover, with implementation of AMM BIO-8, construction along the northern bank of the SCR bed will only occur when the river is dry (i.e., no flowing water). Therefore, impacts to resident or migratory fish would be less than significant.

Project operation would not increase activities that could impact wildlife movement beyond existing conditions. The project would be located below ground and would not 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. Impacts would be less than significant.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

City of Santa Clarita General Plan and Vista Canyon Specific Plan

The objectives and policies of the City of Santa Clarita General Plan and Vista Canyon Specific Plan focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees, and other indigenous woodlands and endangered or threatened species and habitat; and protection of biological resources in SEAs and significant wildlife corridors. With implementation of AMMs BIO-1 through BIO-11, impacts to biological resources would be less than significant and the project would not conflict with policies protecting biological resources in the City of Santa Clarita General Plan and Vista Canyon Specific Plan. Impacts would therefore be less than significant with mitigation incorporated.

City of Santa Clarita Oak Tree Preservation Ordinance and Parkway Trees Ordinance

One coast live oak tree was documented in the APE to the northeast of the easternmost bore pit location. This tree, including its protected zone, does not occur within any proposed work area, and will not be impacted by the project. Additionally, the majority of the APE occurs within private property where the City's Parkway Trees Ordinance does not apply. A small component of the APE along an unpaved access road in the western portion of the APE occurs within public property, and no trees protected by the City's Parkway Trees Ordinance occur in this area. As such, the project would not conflict with the City's Oak Tree Preservation Ordinance and Parkway Trees Ordinance, and no further actions are recommended.

Significant Ecological Areas

Project construction would potentially affect the Santa Clara River SEA and its biological resources due to construction activity in the APE. While the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) pursuant Government Code Section 53091, SCV Water would voluntarily comply with the City's code through the implementation of measures to reduce impacts (refer to AMMs BIO-1 through BIO-11) such that the project would be compliant with the City's code.

5.6 Habitat Conservation Plans

The proposed project would have a significant effect on biological resources if it would:

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

The APE is not located within any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan area. Therefore, no impact would occur, and no mitigation measures are recommended.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

7 References

Allen, Edith B. 1996. Characterizing the habitat of slender-horned spineflower (*Dodecahema leptoceras*). Ecological analysis prepared for California Department of Fish and Game. Contract No. FG-4632-R5.

Brady and Vyverberg. 2013. Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-scale Solar Power Plants. February 2014.

California Department of Fish and Wildlife (CDFW). 1994. A Field Guide to Lake and Streambed Alteration Agreements Section 1600-1607 California Fish and Game Code. January 1994.

_____. 2023a. California Natural Diversity Database (CNDDB), Rarefind V. Accessed December 2023.

_____. 2023b. California Sensitive Natural Communities. June 1, 2023. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities (accessed December 2023).

California Invasive Plant Council (Cal-IPC). 2023. The Cal-IPC Inventory: Southwest Jepson Region. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed December 2023).

California Native Plant Society. 2023a. Inventory of Rare and Endangered Plants. V.7-08c-Interim 8-22-02. www.rareplants.cnps.org (accessed December 2023).

_____. 2023b. A Manual of California Vegetation, Online Edition. http://www.cnps.org/cnps/vegetation/ (accessed December 2023).

Calflora. 2023. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/ (Accessed December 2023).

City of Santa Clarita. 2010. Vista Canyon Specific Plan Environmental Impact Report – Biological Resources Section. SCH No. 2007071039. Available online at https://ceqanet.opr.ca.gov/2007071039/4 (Accessed December 2023).

_____. 2011a. Santa Clarita General Plan, Conservation and Open Space Element. https://www.codepublishing.com/CA/SantaClarita/html/SantaClaritaGP/SantaClaritaGP.html (accessed December 2023).

_____. 2011b. City of Santa Clarita Draft Vista Canyon Specific Plan. Available online at: https://filecenter.santa-clarita.com/CommDev/SpecificPlans/VistaCanyon/Table%20of%20Contents.pdf (accessed December 2023).

Dudek. 2013. Biological Constraints Survey Report for the Newhall County Water District Proposed Sewer Pipeline Relocation Project, City of Santa Clarita, California. August 26, 2013.

Google Earth Pro. 2023. Accessed December 2023.

Howard, Janet L. 1995. Lepus californicus. In: Fire Information System, U.S. Department of Agriculture, Forest Service. www.fs.fed.us/database/feis/animals/mammal/leca/all.html (accessed December 2023).

Jepson Flora Project (eds.) 2023. Jepson eFlora. Available at: https://ucjeps.berkeley.edu/eflora/. Accessed December 2023.

Moyle, P. B. 1976. Inland Fishes of California. University of California Press, Berkeley, CA, USA.

Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, California.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Tres, J. 1992. Breeding biology of the Arroyo Chub, Gila orcutti (Pisces: Cyprinidae). Thesis, California Polytechnic State University, Pomona, USA.

United States Army Corps of Engineers (USACE). Environmental Laboratory. 1987. Technical Report Y-97-1. In: United States Army Corps of Engineers Wetlands Delineation Manual. United States Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.

_____. 2004. Review of Ordinary High-Water Mark Indicators for Delineating Arid Streams in the Southwest United States. Technical Report ERDC TR-04-1. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

_____. 2005. Regulatory Guidance Letter No. 05-05: Ordinary High-Water Mark Identification. U.S. Army Corps of Engineers. Washington, D.C.

_____. 2006. Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels. Cold Regions Research and Engineering Laboratory (U.S.) and Engineer Research and Development Center (U.S.).

_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). United States Army Corps of Engineers Research and Development Center. Vicksburg, MS. September

_____. 2008b. A Field Guide to the Identification of the Ordinary High Water mark (OHWM) in the Arid West Region of the Western United States. Technical Report ERDC/CRREL TR-08-12. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

_____. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Technical Report ERDC/CRREL TN-10-1. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

_____. 2020. Arid West Regional Wetland Plant List. Website. Available at: https://cwbi-app.sec.usace.army.mil/nwpl_static/data/DOC/lists_2020/Regions/pdf/reg_AW_2020v1.pdf

United States Army Corps of Engineers (USACE) and United States Environmental Protection Agency (USEPA). 2020. Joint Memorandum to the Field Between the U.S. Department of the Army, Corps of Engineers and the U.S. Environmental Protection Agency Concerning Exempt Construction or Maintenance of Irrigation Ditches and Exempt Maintenance of Drainage Ditches Under Section 404 of the Clean Water Act. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

United States Department of Agricultural, Natural Resources Conservation Service (USDA NRCS). 2023a. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed December 2023).

_____. 2023b. Lists of Hydric Soils. National Cooperative Soil Survey, U.S. Department of Agriculture. https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/ (accessed December 2023).

United States Fish and Wildlife Service (USFWS). 1999. Survey Protocol for the Arroyo Toad. May 19, 1999. Available online at: https://www.fws.gov/sites/default/files/documents/survey-protocol-for-arroyo-toad.pdf (accessed December 2023).

_____. 2023a. Information for Planning and Consultation online project planning tool. https://ecos.fws.gov/ipac/ (accessed December 2023).

_____. 2023b. Critical Habitat Portal. https://ecos.fws.gov/ecp/report/table/critical-habitat.html (accessed December 2023).

_____. 2023c. National Wetland Inventory Data Mapper. https://www.fws.gov/wetlands/Data/Mapper.html (accessed December 2023).

_____. 2023d. Species Profile for the Santa Ana Sucker (Catostomus santaanae). https://www.fws.gov/species/santa-ana-sucker-catostomus-santaanae (Accessed December 2023).

United States Geological Survey (USGS). 2023a. USGS US Topo 7.5-minute map for Mint Canyon, California 2023: USGS - National Geospatial Technical Operations Center.

_____. 2023b. National Hydrography Dataset. https://viewer.nationalmap.gov/advanced-viewer/ (accessed December 2023).

Western Regional Climate Center. 2023. Climate of California. www.wrcc.dri.edu/Climate/narrative_ca.php (accessed December 2023).

Zeiner, D., W.F. Laudenslayer, Jr., and K.E. Mayer. 1988. California's Wildlife. California Statewide Wildlife Habitat Relationship System, Volumes I, II, & III. California Department of Fish and Wildlife.

8 List of Preparers

Rincon Consultants, Inc.

Primary Author

- Kyle Gern, Biologist

Technical Review

- Robin Murray, Senior Biologist/Botanist
- Steven J. Hongola, Principal Biologist

Graphics

- Emily Gaston, Senior GIS Analyst

Publishing

- Debra Jane Seltzer, Publishing Specialist
- Yaritza Ramirez, Publishing Specialist

Field Reconnaissance Survey

- Kyle Gern, Biologist

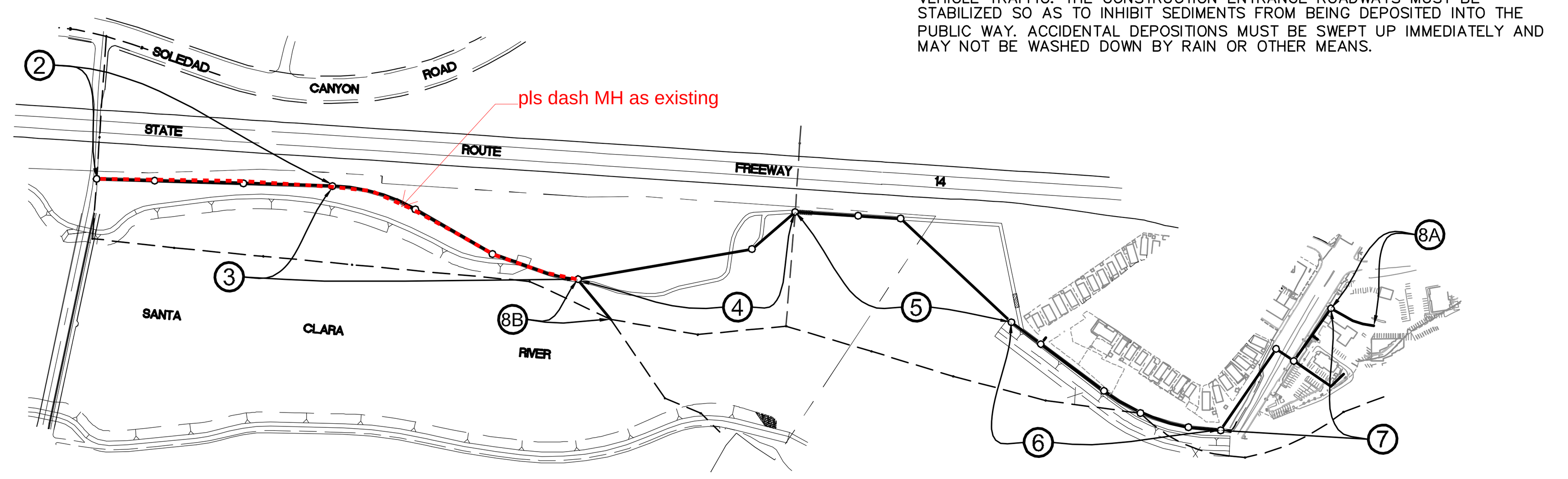
Jurisdictional Evaluation

- Kyle Gern, Biologist

Appendix A

Site Plans

BENCHMARK:	L 1668
DESCRIPTION:	CS MON IN WELL 250MM DN @ PI 600MM EAST OF CENTERLINE
LOCATION:	SAND CANYON ROAD AND 161M NORTH OF LIVE OAK SPRINGS CANYON ROAD 8.2M NORTHEAST OF POWER POLE #1155006E MKD (PI 24)
ELEVATION:	1586.011 DATUM: NAVD 88 (1995 ADJ.)



INDEX MAP

SCALE: 1" = 500' INDEX 1334 & 1335

P.C. 06–11 TR. NO.S 69164

THOMAS GUIDE PAGE: 4551–A3 & B3 (2003)

NOTES: ◯ CIRCLED NUMBERS INDICATE PAGE NUMBERS. ALL MAINLINE SANITARY SEWERS ARE WITHIN THE SANITARY SEWER EASEMENT

CITY OF SANTA CLARITA APPROVED FOR CONSTRUCTION

ROBERT G. NEWMAN DIRECTOR OF PUBLIC WORKS ______ DATE

PLAN CHECKER ______ DATE

NO.	REVISION	REVISED BY (REGISTERED ENGINEER'S SIGNATURE)	APPROVED BY LA COUNTY SMD APPROVAL	DATE	CITY APPROVAL	DATE

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
CONSOLIDATED SEWER MAINTENANCE DISTRICT
REVIEWED FOR MAINTENANCE

REVIEWED BY ______ DATE ______

STORMWATER POLLUTION PLAN NOTES

A. NOTES

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND MAY NOT CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
5. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIALS MAY NOT TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
7. ANY SLOPES WITH DISTURBED SOILS DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
8. THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE "BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORMWATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA 1993," OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY COUNTY INSPECTORS):

BMP NOTES:

CA001 – DEWATERING OPERATIONS
CA002 – PAVING OPERATIONS
CA003 – STRUCTURE CONSTRUCTION AND PAINTING
CA010 – MATERIAL DELIVERY AND STORAGE
CA011 – MATERIAL USE
CA012 – SPILL PREVENTION CONTROL
CA020 – SOLID WASTE MANAGEMENT
CA021 – HAZARDOUS WASTE MANAGEMENT
CA022 – CONTAMINATED SOIL MANAGEMENT
CA023 – CONCRETE WASTE MANAGEMENT
CA030 – VEHICLE AND EQUIPMENT CLEANING
CA031 – VEHICLE AND EQUIPMENT FUELING
CA032 – VEHICLE AND EQUIPMENT MAINTENANCE
CA040 – EMPLOYEE/SUBCONTRACTOR TRAINING
ESC01 – SCHEDULING
ESC02 – PRESERVATION OF EXISTING VEGETATION
ESC21 – DUST CONTROLS
ESC22 – TEMPORARY STREAM CROSSING
ESC23 – CONSTRUCTION ROAD STABILIZATION
ESC24 – STABILIZED CONSTRUCTION ENTRANCE
ESC40 – OUTLET PROTECTION
ESC41 – CHECK DAMS
ESC51 – STRAW BALE BARRIER
ESC52 – SAND BAG BARRIER
ESC53 – BRUSH OR ROCK FILTER
ESC54 – STORM DRAIN INLET PROTECTION

NOTES:
"PRIOR TO ACCEPTANCE OF ANY SANITARY SEWER LINE BY THE CITY OF SANTA CLARITA AN INSPECTION OF SAID LINE BY VIDEO SHALL BE REQUIRED AT NO COST TO THE CITY. ALL NEW MAINLINE SEWERS SHALL BE VIDEO INSPECTED. THE CCTV INSPECTION SHALL BE COMPLETED BY A CERTIFIED NATIONAL ASSOCIATION OF SEWER SERVICE COMPANY (NASSCO), PIPELINE ASSESSMENT AND CERTIFICATION PROGRAM (PACP) TRAINED OPERATOR(S) USING ESTABLISHED PACP CODING AND OBSERVATIONS. THE RESULTS OF THE VIDEO INSPECTION SHALL BE RECORDED IN DVD FORMAT AND A COPY SHALL BE PROVIDED TO THE CITY AND LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS SEWER MAINTENANCE DIVISION, CONDITION ASSESSMENT UNIT, FOR REVIEW AND APPROVAL. ANY NOTED DEFICIENCIES SHALL BE CORRECTED, THEN FOLLOWED BY A POST CORRECTION VIDEO TO BE RESUBMITTED FOR REVIEW AND APPROVAL. THE DEVELOPER OF THE PROJECT SHALL NOTIFY THE CITY OF SANTA CLARITA IN WRITING AT LEAST 24 HOURS IN ADVANCE OF THE SCHEDULED DATE OF THE VIDEO INSPECTION.

BACKWATER VALVE REQUIRED FOR LOTS MARKED WITH [BWV]

NOTICE TO CONTRACTOR:
MAINTAIN SEWER FLOW AT ALL TIMES DURING CONSTRUCTION.

EASEMENT NOTE:
A MINIMUM 10' SEWER EASEMENT TO BE DEDICATED TO THE CITY OF SANTA CLARITA OVER ALL PRIVATE DRIVES PER TRACT MAP 62322

PRIVATE CONTRACT SEWER GENERAL NOTES

THE FOLLOWING GENERAL NOTES ARE TO BE INCLUDED ON PAGE 1 OF ALL PRIVATE CONTRACT SEWER PLANS:

1. A SEWER CONSTRUCTION PERMIT SHALL BE OBTAINED AND A FEE PAID FOR CONSTRUCTION INSPECTION AND RECORD PLANS TO THE CITY OF SANTA CLARITA, 23920 VALENCIA BLVD. SUITE 300, AT LEAST 72 HOURS PRIOR TO STARTING WORK UNDER THIS PERMIT. COPIES OF ALL OTHER REQUIRED PERMITS, SUCH AS ROAD EXCAVATION, CALTRANS, ECT. MUST BE FILED WITH THE PERMIT APPLICATIONS.
2. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS INSPECTOR BY TELEPHONE AT (661) 255–4942 AT LEAST 24 HOURS BEFORE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 227–2600 AT LEAST 14 DAYS PRIOR TO START OF WORK.
4. PRIOR TO ISSUANCE OF THE REQUIRED SEWER CONSTRUCITON PERMIT, THE CONTRACTOR SHALL OBTAIN AND FILE WITH THE CITY OF SANTA CLARITA, COPIES OF A PERMIT TO EXCAVATE IN CITY STREETS AND A PERMIT FOR EXCAVATION AND TRENCHES FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND A CERTIFICATE OF WORKER'S COMPENSATION INSURANCE WITH THE CITY OF SANTA CLARITA NAMED AS THE CERTIFICATE HOLDER TO BE NOTIFIED 30 DAYS PRIOR TO CANCELLATION OF POLICY.
5. IF WORK IS DONE ON A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 120 SOUTH SPRING STREET, LOS ANGELES, CALIFORNIA.
6. APPROVAL OF THIS PLAN BY THE CITY OF SANTA CLARITA DOES NOT CONSTITUTE A REPRESENTATION AS TO ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON–EXISTENCE OF ANY UNDERGROUND UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
7. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS.
8. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", INCLUDING SUPPLEMENTS AND THE LATEST "SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWER" AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY OF SANTA CLARITA.
9. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7–10.4.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIO IN REGARD TO SAFETY ORDERS AND SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENT FOR OPEN EXCAVATION" AS SHOWN ON LOS ANGELES DEPARTMENT OF PUBLIC WORKS' STANDARD PLAN 6008–0.
10. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
11. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE CITY ENGINEER.
12. NO REPRESENTATIVE OF THE CITY OF SANTA CLARITA WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
13. GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTERLINE OF STREETS, OR CENTERLINE OF ALLEYS, ARE SHOWN BY CIRCLES ON PROFILES AT ALL POINTS BETWEEN SAID DESIGNED POINTS. THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGN POINTS.
14. THE PRIVATE ENGINEER SHALL FURNISH THE CITY OF SANTA CLARITA WITH GRADE SHEETS AND STATIONING FOR ALL HOUSE LATERALS AND "Y" OR "T" BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ALL HOUSE LATERALS SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT AT RIGHT ANGLES FROM THE MAIN LINE SEWER EXCEPT AS SHOWN ON THE PLANS. HOUSE LATERALS FROM CHIMNEYS SHALL NOT HAVE AN ANGLE OF LESS THAN 45 DEGREES WITH THE M.L. SEWER. ANY CHANGE IN ALIGNMENT SHALL BE REQUESTED IN WRITING BY THE PRIVATE ENGINEER.
15. THE PRIVATE ENGINEER SHALL FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.

COUNTY SANITATION DISTRICTS (CSD) NOTES:

1. NO CONNECTION FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS UNTIL A PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE HAS BEEN ISSUED BY CSD FOR SAID CONNECTION.
2. BEFORE BREAKING INTO A CSD SEWER OR MANHOLE, AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, A CSD INSPECTOR SHALL BE NOTIFIED BY TELEPHONE AT (661) 729–5320 OR (562) 908–4288, EXT. 6318 SO THAT REQUIRED INSPECTION CAN BE MADE.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL PROVIDE SURVEY STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTERLINE OF EACH MANHOLE.
2. VITRIFIED CLAY PIPE JOINTS SHALL BE TYPE "D" OR "G" IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SECTION 208–2.
3. IF A POWERPOLE IS WITHIN THREE FEET OF THE SEWER, THE SEWER SHALL BE ENCASED PER LACDPW STANDARD PLAN 2023–1, CASE II, TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
4. ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "D" (WITH BUSHING IF NECESSARY) PER "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SECTION 208–2.
5. HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT THE PROPERTY LINE 6 FEET BELOW CURB GRADE EXCEPT AS NOTED.
6. ALL WYES AND/OR HOUSE LATERALS ARE TO BE LOCATED AT LEAST 5' APART AND WHEN POSSIBLE NOT CLOSER THAN 5' TO ANY MANHOLE PER LOS ANGELES COUNTY'S STANDARD.
7. WYE OR TEE BRANCHES MAY BE USED FOR CONNECTIONS TO THE MAINLINE SEWERS EXCEPT AS NOTED.
8. IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED THAT THERE IS LESS THAN FOUR FEET OF COVER OVER THE TOP OF A MAINLINE OR HOUSE LATERAL V.C.P. SEWER WHICH IS NOT INDICATED ON THE PLANS, THE PIPES SHALL BE ENCASED PER LOS ANGELES COUNTY STANDARD PLAN 2023–1, CASE II, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
9. REFER TO THE STANDARD DRAWING 2100–0, "DESIGN REQUIREMENTS FOR SANITARY SEWERES IN THE VICINITY OF PRESSURE WATER MAINS", AND COMPLY WITH THE REQUIREMENTS.
10. ALL STRUCTURES SHALL BE EITHER BRICK SEWER MANHOLES PER LOS ANGELES COUNTY APWA 203–0, PRECAST CONCRETE SEWER MANHOLES PER APWA 200–2, OR REINFORCED PRECAST CONCRETE MANHOLE PER LACDPW STANDARD PLAN 2003–1, EXCEPT AS NOTED.
11. RESURFACE ALL TRENCHES WITHIN PAVED AREAS TO MEET THE CITY OF SANTA CLARITA, LOS ANGELES COUNTY PUBLIC WORKS OR CALIFORNIA STATE HIGHWAY REQUIREMENTS IN ACCORDANCE WITH THE PERMITS.
12. FULL COMPLIANCE WITH SECTION 306–1.3.4. OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" WILL BE REQUIRED FOR BACKFILL IN STREET, CERTIFICATION OF BACKFILL COMPACTION, AND SAND EQUIVALENTS BY A QUALIFIED CIVIL ENGINEER. THIS SHALL BE PROVIDED BY THE PERMITEE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF PARTIAL ACCEPTANCE.
13. ALL BACKFILL AND FILLS OUTSIDE OF THE STREET RIGHT OF WAY SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM SOIL COMPACTION TEST D 1557–78 METHOD "D" UNLESS OTHERWISE SPECIFIED. THIS SHALL BE CERTIFIED BY A QUALIFIED CIVIL ENGINEER. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY OF SANTA CLARITA PRIOR TO THE ACCEPTANCE OF THE WORK BY THE CITY.
14. MANHOLE TOPS IN UNIMPROVED RIGHT OF WAYS TO BE SIX INCHES ABOVE FINISHED GRADE.
15. SEWERS TO BE TESTED FOR LEAKAGE PER SECTION 306–1.4.4 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
16. AN APPROVED BACKWATER VALVE IS REQUIRED WHERE FINISHED FLOOR IS LOWER IN ELEVATION THAN THE TOP OF THE NEXT UPSTREAM MANHOLE.
17. DIRECT CONNECTION OF HOUSE LATERAL TO A MANHOLE IS PERMISSIBLE FOR TERMINAL MANHOLES WITH THE USE OF A 4 X 8 STUB.

PROFILE, ALIGNMENT, AND GRADE OF

SANITARY SEWERS

TO BE CONSTRUCTED IN

THE CITY OF SANTA CLARITA

SAND CANYON PC NO. XXX–XX

4 SHEETS: 8 PAGES

COUNTY OF LOS ANGELES CALIFORNIA

INDEX 1334 & 1335

SCALE: VERTICAL 1"=8'
HORIZONTAL 1"=40'

TRACT NO. 4 PC XXX–XX ①

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF THE DEPARTMENT OF PUBLIC WORKS SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT

LEGEND	2000–0
MINIMUM PUBLIC SAFETY REQUIREMENTS	6008–1
BRICK MANHOLE	APWA 203–0
REINFORCED PRECAST CONCRETE MANHOLE	2003–2
STANDARD MANHOLE STEP	2015–1
BEDDING FOR SEWER PIPE	2021–1
CRADLING AND ENCASEMENT	2023–1
WYE OR TEE SUPPORT	2024–1
ALLOWABLE TRENCH WIDTH	2027–1
LOCKING MANHOLE FRAME AND COVER	APWA 210–2
NON–REINFORCED PRECAST CONCRETE MANHOLE	APWA 200–2
SANITARY SEWER IN THE VICINITY OF PRESSURE WATER MAINS	2100–1

SANTA CLARITA VALLEY SANITATION DISTRICT
OF LOS ANGELES COUNTY, CALIFORNIA
GRACE ROBINSON CHAN–CHIEF ENGINEER AND GENERAL MANAGER

APPROVED BY ______ (OFFICE ENGINEER) DATE: ______

PRIVATE ENGINEERS NOTICE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS IS REQUIRED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING. PRIOR TO EXCAVATION THE CONTRACTOR SHALL CALL TOLL FREE 1–800–422–4133 TO VERIFY THE UNDERGROUND LOCATION OF GAS AND TELEPHONE LINES. THE CONTRACTOR SHALL ALSO CALL MR. RAY CUMMINGS OF GENERAL TELEPHONE COMPANY AT 1–805–948 4871 SO THAT THEY CAN MARK THE LOCATION OF UNDERGROUND TELEPHONE LINES.

PROJECT ENGINEER RCE NO 51929 — DATE 3/26/14

REVIEWED BY ______ DATE ______

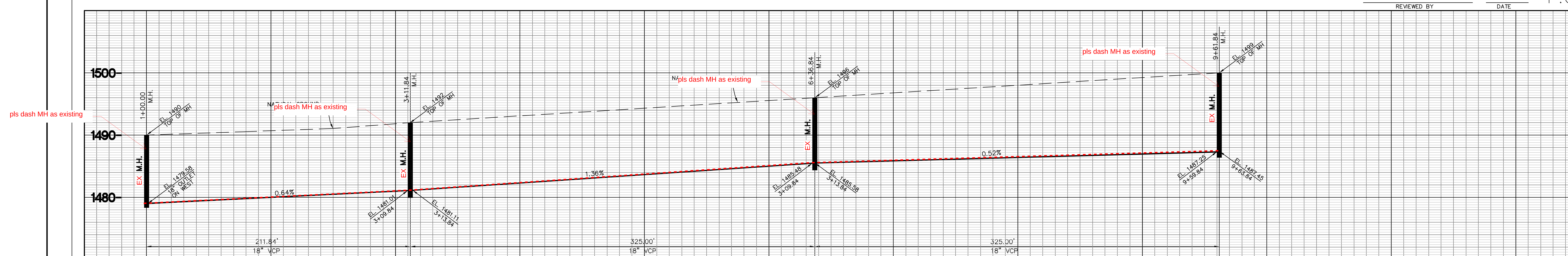
P.C. XX–XX PAGE 2

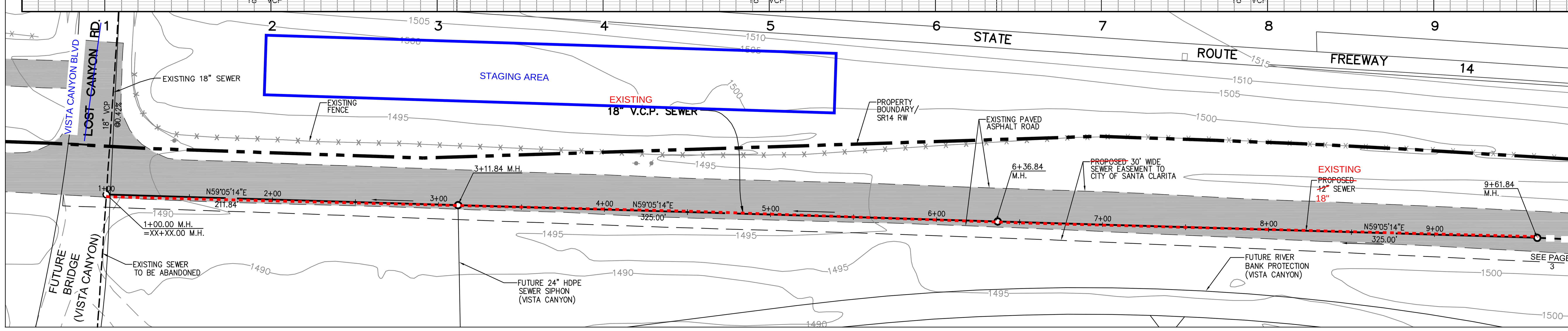
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908–4288 EX. 2727

DOUBLE SCALE





PLAN
SCALE: 1" = 40'
25 0 50 100

REGISTERED PROFESSIONAL ENGINEER CRAIG M. WHITTEKER NO. 51929 EXP 6-30-16 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER 3/26/14 DATE

SANITARY SEWER PLANS IN
SAND CANYON PC NO. XX–XX

CITY OF SANTA CLARITA

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431–9896 FAX: (760) 431–8802
27451 TOURNEY ROAD SUITE 140 VALENCIA, CA 91355 TEL: (661) 799–2760

I:\CAD\1250\SEWER PROFILE\1250_SEWER_PLAN-PROFILE_SHT-01.dwg

P.C. xx–xx PAGE 3

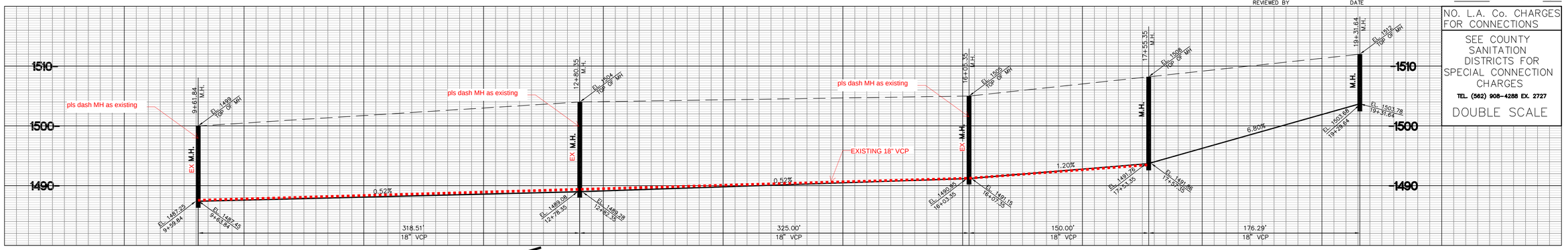
REVIEWED BY | DATE

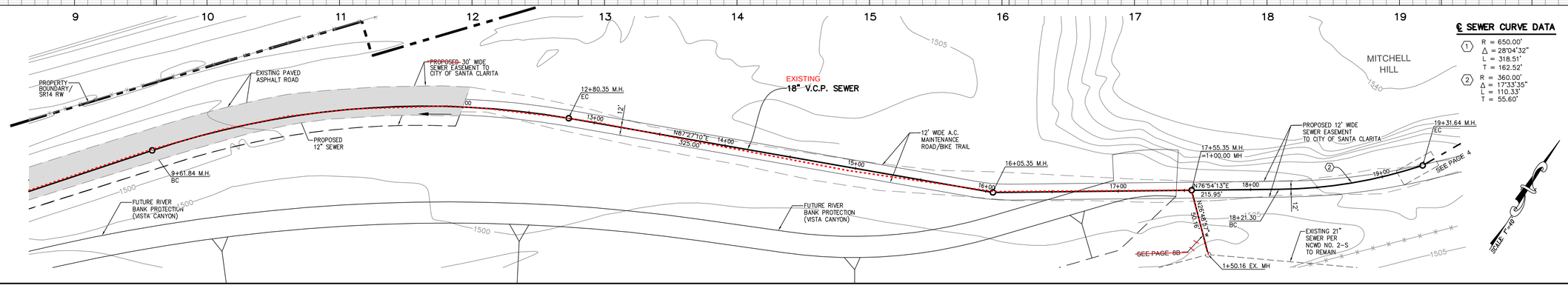
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





℄ SEWER CURVE DATA

① R = 650.00'
Δ = 28°04'32"
L = 318.51'
T = 162.52'

② R = 360.00'
Δ = 17°33'35"
L = 110.33'
T = 55.60'

P.C. xx–xx PAGE 4

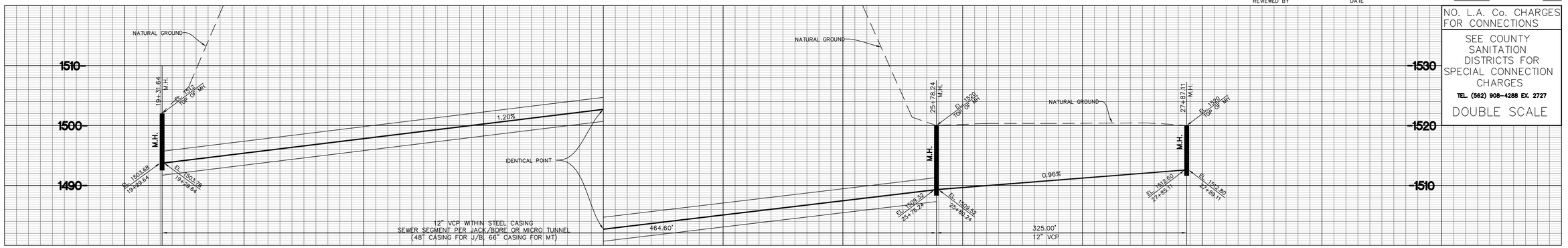
REVIEWED BY | DATE

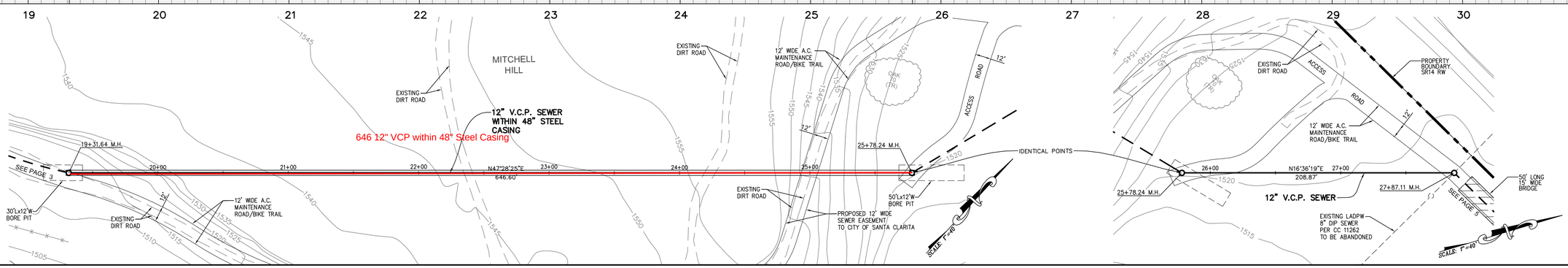
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





b.c. xx–xx

P.C. XX–XX PAGE 5

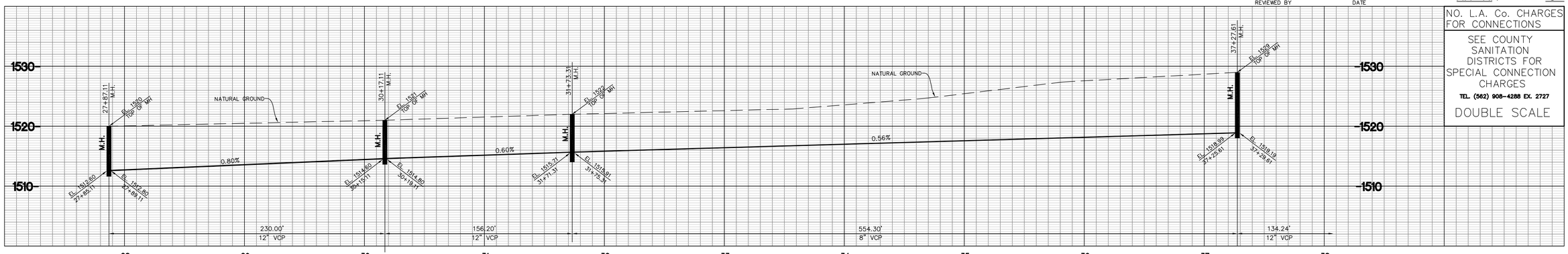
REVIEWED BY _____ DATE _____

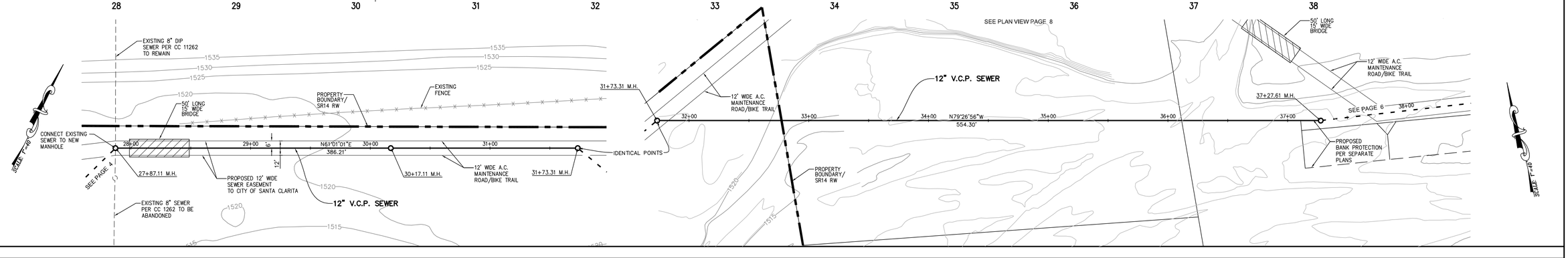
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

DOUBLE SCALE





P.C. XX–XX PAGE 6

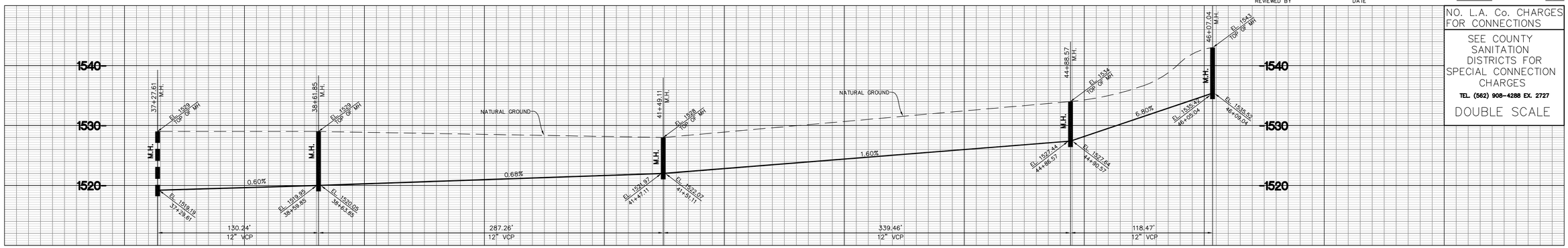
REVIEWED BY _____ DATE _____

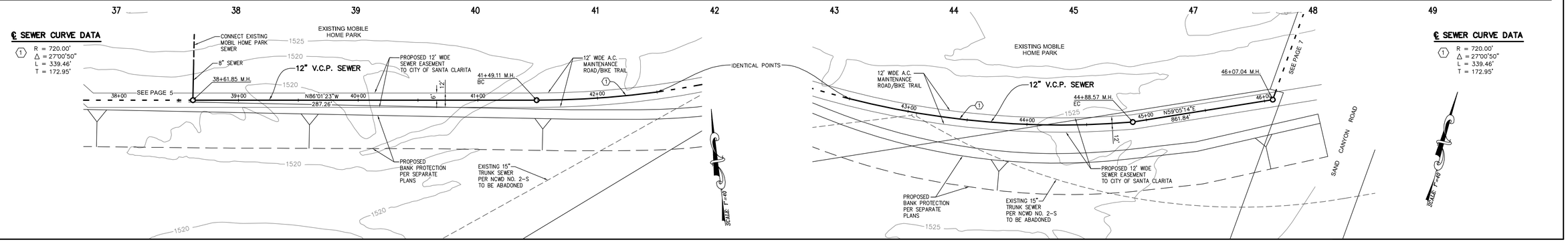
NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES

TEL. (562) 908-4288 EX. 2727

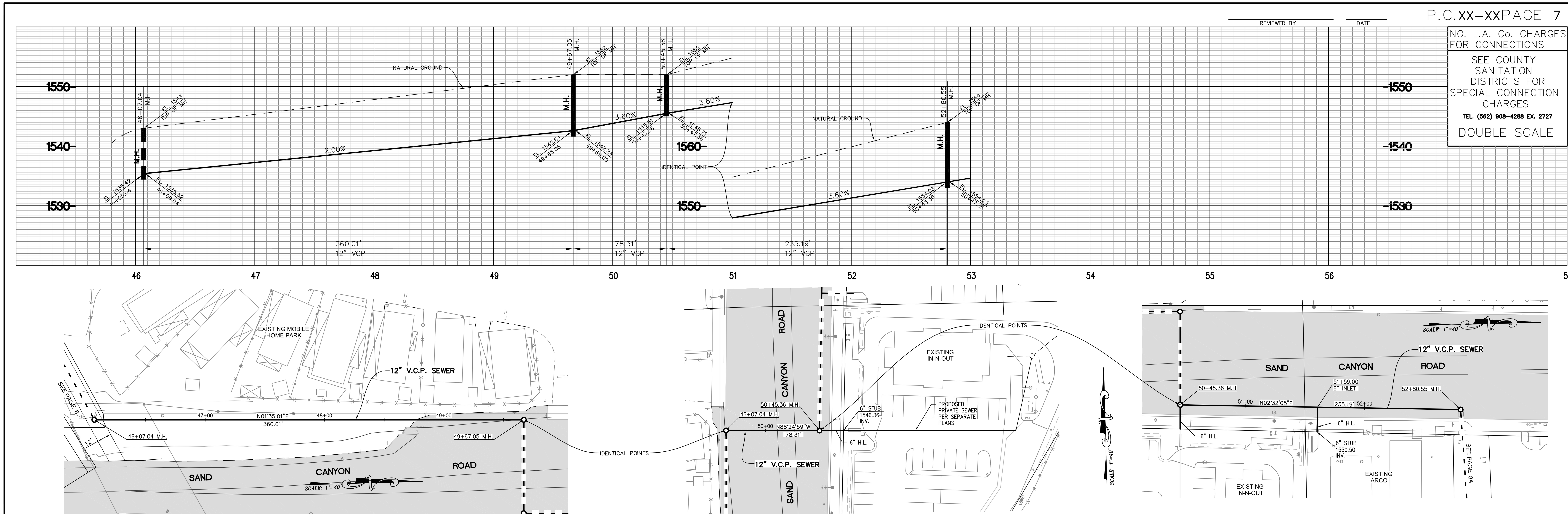
DOUBLE SCALE





b.C. XX–XX (2)

I:\CAD\1250\SEWER PLANS\1250-SWR-SHEET-03.dwg


REVIEWED BY
DATE
P.C. XX–XX PAGE 7
NO. L.A. Co. CHARGES FOR CONNECTIONS
SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES
TEL. (562) 908-4288 EX. 2727
DOUBLE SCALE
NATURAL GROUND
IDENTICAL POINT
2.00%
3.60%
3.60%
3.60%
360.01' 12" VCP
78.31' 12" VCP
235.19' 12" VCP
46+07.04 M.H.
49+67.05 M.H.
50+45.36 M.H.
52+80.55 M.H.
1550
1540
1530
1560
46 47 48 49 50 51 52 53 54 55 56 55
EXISTING MOBILE HOME PARK
12" V.C.P. SEWER
SEE PAGE 6
N01°35'01"E 360.01'
47+00
48+00
49+00
46+07.04 M.H.
49+67.05 M.H.
SAND
CANYON
ROAD
SCALE: 1"=40'
IDENTICAL POINTS
EXISTING IN-N-OUT
50+45.36 M.H.
46+07.04 M.H.
50+00 N88°24'59"W 78.31'
6" STUB 1546.36 INV.
PROPOSED PRIVATE SEWER PER SEPARATE PLANS
6" H.L.
12" V.C.P. SEWER
12" V.C.P. SEWER
50+45.36 M.H.
51+59.00 6" INLET
51+00 N02°32'05"E
235.19' 52+00
52+80.55 M.H.
6" H.L.
6" STUB 1550.50 INV.
EXISTING IN-N-OUT
EXISTING ARCO
SEE PAGE 8A


REVIEWED BY
DATE
P.C. XX–XX PAGE 8
NO. L.A. Co. CHARGES FOR CONNECTIONS
SEE COUNTY SANITATION DISTRICTS FOR SPECIAL CONNECTION CHARGES
TEL. (562) 908-4288 EX. 2727
DOUBLE SCALE
A
B
52+80.55 M.H.
54+50.99 EXIST. M.H.
NATURAL GROUND
2.00%
170.44' 12" VCP
1560
1550
1+00.00 M.H./M.H.
1+50.16 M.H.
1510
1500
1490
2.00%
50.16' 18" VCP (INTERIM)
remove this plan and profile
53 54 55 1 2
℄ SEWER CURVE DATA
R = 247.78'
Δ = 27°29'16"
L = 118.87'
T = 60.60'
EXISTING CHEVRON
12" V.C.P. SEWER
EXISTING 15" SEWER PER NCWD NO. 2-S TO REMAIN
52+80.55 M.H.
53+00 N87°42'17"E 51.57'
54+00
54+50.99 M.H. CONNECT SEWER TO EXISTING MH
53+32.12 BC
SAND
CANYON
ROAD
SEE PAGE 7
EXISTING ARCO
EXISTING 15" SEWER PER NCWD NO. 2-S TO BE ABANDONED
SCALE: 1"=40'
PROPOSED 12' WIDE SEWER EASEMENT TO CITY OF SANTA CLARITA
18" INTERIM SEWER
EXISTING LADPW SEWER TO REMAIN (WILL BE ABANDONED AFTER CONSTRUCTION OF VISTA CANYON SEWER)
1+50.16 EXIST. M.H.
EXISTING 21" SEWER PER NCWD NO. 2-S TO BE ABANDONED
12' WIDE A.C. MAINTENANCE ROAD/BIKE TRAIL
12' WIDE A.C. MAINTENANCE ROAD/BIKE TRAIL
SEE PLAN VIEW SHEET 5
50' LONG 15' WIDE BRIDGE

P.C. XX–XX

Appendix B

Regulatory Setting

Regulatory Setting

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- National Marine Fisheries Service (marine animals and anadromous fishes);
- Los Angeles Regional Water Quality Control Board (waters of the State);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; nesting birds, marine resources); and
- City of Santa Clarita

United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable, tidal, and interstate waters and certain impoundments, tributaries, and wetlands. The agencies' most recent regulatory definition of the term was promulgated in January 2023, following failed attempts in prior years that had been frustrated by legal challenges. However, in May 2023 the U.S. Supreme Court issued its ruling in *Sackett v. Environmental Protection Agency*, which invalidated portions of the updated regulations. To address this ruling, in September 2023 the agencies issued a "conforming rule" (88 FR 61964-61969) modifying their definition of "waters of the United States" to comport with the Court's ruling. This definition is described in detail below.

Waters of the U.S.

Current USACE and USEPA regulations, reflecting of the January 2023 definition as modified by the September 2023 Conforming Rule, define "waters of the United States" as follows (33 CFR 328.3; see also 88 FR 61964-61969):

1. Waters which are:
   (i) (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;

(ii) The territorial seas; or

(iii) Interstate waters;

2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
3. Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:

   (iv) Waters identified in paragraph (a)(1) of this section; or

   (v) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

5. Intrastate lakes and ponds, not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

The definition specifies that the following features are not “waters of the United States” even where they otherwise meet the terms of provisions (2) through (5) above:

1. Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
2. Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
3. Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
4. Artificially irrigated areas that would revert to dry land if the irrigation ceased;
5. Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
6. Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
7. Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
8. Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(c)(1)). As such, waters are recognized in the

field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

Wetlands

The USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(c)(1)). The USACE's delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exert a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurrence in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2020), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the USACE list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5 percent vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in *Sackett* provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.

Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank

protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code Section 13050[e]). These agencies also have responsibilities for administering portions of the CWA.

Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State should be protected;
- All activities and factors affecting the quality of water should be regulated to attain the highest water quality within reason; and
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight,

allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state they are to be used in issuing CWA Section 401 Certifications and WDRs and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

Non-Wetland Waters of the State

The SWRCB and RWQCBs have not currently established regulations for field determinations of waters of the State except for wetlands. In many cases, the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance, each RWQCB may interpret jurisdictional boundaries within their region, and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020) states waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods should be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements several laws protecting the Nation's fish and wildlife resources, including the Endangered Species Act (FESA; 16 United States Code [USC] Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703 through 711), and the Bald and Golden Eagle Protection Act (16 USC Section 668).

Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the FESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any threatened or endangered animal species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in funding, authorizing, or carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories and that a native migratory bird species is one that is present as a result of natural biological or ecological

processes. The Migratory Bird Treaty Reform Act requires the USFWS to publish a list of all nonnative, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or U.S. territories is solely the result of intentional or unintentional human-assisted introductions.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle … [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

"Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the California Fish and Game Code and administers several state laws protecting fish and wildlife resources and the habitats upon which they depend.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code Section 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the federal ESA, CESA's protections extend to candidate species during the period (typically one year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 California Code of Regulations Section 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA's "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Fully Protected Species Laws

The CDFW enforces Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code, which prohibit take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided. The exception is a situation in which a Natural Community Conservation Plan (NCCP) is in place that authorizes take of the Fully Protected species.

Avian Protection Laws

California Fish and Game Code Sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act.

Protection of Lakes and Streambeds

California Fish and Game Code Section 1602 states it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying CDFW of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFW determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Lake/Streambed Alteration Agreement (LSAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft LSAA. Upon review of the Draft LSAA by the applicant, any problematic terms are negotiated with CDFW and a final LSAA is executed.

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 California Code of Regulations Section 1.72) and streambed alterations associated with cannabis production (14 California Code of Regulations Section 722[c][21]), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation
- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFW 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife

- Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
- The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. The importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

Local Jurisdiction

City of Santa Clarita General Plan

Natural resources within the City of Santa Clarita's (City) limits are regulated according to the City's General Plan (City of Santa Clarita 2011), which includes policies regarding conservation of biological resources and ecosystems as well as protection of sensitive habitat (including wildlife corridors) and endangered species. The City's General Plan includes policies relating to oak trees, protected areas, and Significant Ecological Areas, among others.

Santa Clarita Municipal Code

Natural resources within the City are also regulated by the City's Municipal Code. In particular, the City of Santa Clarita Oak Tree Preservation Ordinance (Santa Clarita Municipal Code Section 17.51.040) protects and preserves oak trees in the City; the City's Parkway Trees Ordinance (Santa Clarita Municipal Code Section 13.76) protects native trees in the City and Santa Clarita Municipal Code Section 17.38.080 protects SEAs within the City.

This page intentionally left blank.

Appendix C

Special-status Species Evaluation Tables

Special-status Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Plants and Lichens				
Arenaria paludicola marsh sandwort	FE/SCE G1/S1 1B.1	Perennial stoloniferous herb. Marshes and swamps. Openings, sandy. Elevations: 10-560ft. (3-170m.) Blooms May-Aug.	Not Expected	Intermittent Drainage 1 provides potentially suitable aquatic habitat. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Berberis nevinii Nevin's barberry	FE/SCE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub, riparian scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 230-2705ft. (70-825m.) Blooms (Feb)Mar-Jun.	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field surveys, and was not observed.
Calochortus catalinae Catalina mariposa lily	None/None G3G4/S3S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. In heavy soils, open slopes, openings in brush. Elevations: 50-2295ft. (15-700m.) Blooms (Feb)Mar-Jun.	Low Potential	Potentially suitable chaparral, scrub, and grassland habitat occurs in the APE above the northern bank of the SCR. However, there are no documented CNDDB records within a five mile radius of the APE.
Calochortus clavatus var. *avius* Pleasant Valley mariposa lily	None/None G4T2/S2 1B.2	Perennial bulbiferous herb. Lower montane coniferous forest. Josephine silt loam and volcanically derived soil; often in rocky areas. Elevations: 1000-5905ft. (305-1800m.) Blooms May-Jul.	Not Expected	Lower montane coniferous forest is absent from the APE.
Calochortus clavatus var. *clavatus* club-haired mariposa lily	None/None G4T3/S3 4.3	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Clay, Rocky, serpentinite (usually). Elevations: 100-4265ft. (30-1300m.) Blooms (Mar)May-Jun.	Low Potential	Potentially suitable chaparral, scrub, and grassland habitat occurs in the APE above the northern bank of the SCR. However, there are no documented CNDDB records within a five mile radius of the APE.
Calochortus clavatus var. *gracilis* slender mariposa lily	None/None G4T2T3/S2S3 1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Shaded foothill canyons; often on grassy slopes within other habitat. Elevations: 1050-3280ft. (320-1000m.) Blooms Mar-Jun(Nov).	High Potential	Potentially suitable chaparral, scrub, and grassland habitat occurs in the APE above the northern bank of the SCR. Additionally, there are multiple CNDDB records within a five mile radius of the APE, the closest being approximately 0.6 mile northeast (Occurrence No. 139).
Calochortus palmeri var. *palmeri* Palmer's mariposa lily	None/None G3T2/S2 1B.2	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2330-7840ft. (710-2390m.) Blooms Apr-Jul.	Not Expected	The APE is outside the known elevation range of the species.
Calochortus plummerae Plummer's mariposa lily	None/None G4/S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Granitic, rocky. Elevations: 330-5580ft. (100-1700m.) Blooms May-Jul.	Low Potential	Granitic/rocky areas are generally absent from the APE. The closest CNDDB record (Occurrence No. 188) is approximately 3.5 miles northeast of the APE.
Calystegia peirsonii Peirson's morning-glory	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Often in disturbed areas or along roadsides or in grassy, open areas. Elevations: 100-4920ft. (30-1500m.) Blooms Apr-Jun.	Low Potential	Potentially suitable chaparral, scrub, and grassland habitat occurs in the APE above the northern bank of the SCR. Additionally, disturbed areas adjacent to unpaved access roads also occur to the north of the SCR. However, the only CNDDB records (Occurrence No.'s 5 and 8) within a five mile radius of the APE are more than 30 years old, and this is a perennial species that was not observed during the field surveys.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov.	Not Expected	Aquatic habitat occurs in the SCR and Intermittent Drainage 1. However, Intermittent Drainage 1 is surrounded by dense riparian vegetation that is not preferred by the species, and the SCR is a linear drainage feature with coarse and sandy soils that are not preferred by the species. Additionally, the field surveys were performed in the blooming period for this species, and it was not observed.
Cercocarpus betuloides var. *blancheae* island mountain-mahogany	None/None G5T4/S4 4.3	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest. Elevations: 100-1970ft. (30-600m.) Blooms Feb-May.	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field survey, and was not observed.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	None/SCE G2T1/S1 1B.1	Annual herb. Coastal scrub, valley and foothill grassland. Sandy soils. Elevations: 490-4005ft. (150-1220m.) Blooms Apr-Jul.	Moderate Potential	Potentially suitable habitat occurs in the chaparral, scrub, and grassland habitat along the upper terrace to the north of the SCR in the northwestern portion of the APE. However, there are no CNDDB records of this species within a five mile radius of the APE.
Chorizanthe parryi var. *parryi* Parry's spineflower	None/None G3T2/S2 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Openings, Rocky (sometimes), sandy (sometimes). Elevations: 900-4005ft. (275-1220m.) Blooms Apr-Jun.	Moderate Potential	Potentially suitable habitat occurs in the chaparral, scrub, and grassland habitat along the upper terrace to the north of the SCR in the northwestern portion of the APE. However, there are no CNDDB records of this species within a five mile radius of the APE.
Deinandra minthornii Santa Susana tarplant	None/SCR G2/S2 1B.2	Perennial deciduous shrub. Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. Elevations: 920-2495ft. (280-760m.) Blooms Jul-Nov.	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field surveys, and was not observed.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Deinandra paniculata paniculate tarplant	None/None G4/S4 4.2	Annual herb. Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernally mesic sites. Sometimes in vernal pools or on mima mounds near them. Elevations: 80-3085ft. (25-940m.) Blooms (Mar)Apr-Nov.	Not Expected	Vernally mesic sites within coastal scrub and/or grassland habitat are absent from the APE.
Dodecahema leptoceras slender-horned spineflower	FE/SCE G1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	Moderate Potential	Potentially suitable coastal scrub habitat occurs in the APE within the banks of the SCR, particularly within the lower terraces above the low-flow channel. Additionally, there are multiple CNDDB records within a five mile radius of the APE, the closest recent occurrence (i.e., less than 30 years old) being approximately 3.5 miles northeast (Occurrence No. 279). However, this species was not observed in the APE during field surveys performed in April 2013 (Dudek 2013).
Dudleya densiflora San Gabriel Mountains dudleya	None/None G2/S2 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland. In crevices and on decomposed granite on cliffs and canyon walls. Elevations: 800-2000ft. (244-610m.) Blooms Mar-Jul.	Not Expected	Decompressed granite on cliffs and rocky canyon walls are absent from the APE. The northern bank of the SCR includes a steep face in the eastern portion of the APE. However, soils in this area are loamy/sandy, and do not contain clusters of rocks. Additionally, this is a conspicuous perennial species that that would have been identifiable during the field surveys, and was not observed.
Harpagonella palmeri Palmer's grapplinghook	None/None G4/S3 4.2	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. Elevations: 65-3135ft. (20-955m.) Blooms Mar-May.	Not Expected	Potentially suitable habitat occurs in the chaparral, scrub, and grassland habitat along the upper terrace to the north of the SCR in the northwestern portion of the APE. However, the only CNDDB record (Occurrence No. 60) of this species within a five mile radius of the APE is a non-specific, undated record, and clay soils are absent from the APE.
Hordeum intercedens vernal barley	None/None G3G4/S3S4 3.2	Annual herb. Coastal dunes, coastal scrub, valley and foothill grassland, vernal pools. Vernal pools, dry, saline streambeds, alkaline flats. 5-. Elevations: 15-3280ft. (5-1000m.) Blooms Mar-Jun.	Not Expected	Vernal pools, dry saline streambeds, and alkaline flats are absent from the APE.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	Low Potential	Potentially suitable chaparral and scrub habitat occurs in the APE. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Imperata brevifolia California satintail	None/None G3/S3 2B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, meadows and seeps, mojavean desert scrub, riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-. Elevations: 0-3985ft. (0-1215m.) Blooms Sep-May.	Low Potential	Intermittent Drainage 1 and wetted portions of the SCR provide potentially suitable mesic habitat. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Juglans californica Southern California black walnut	None/None G4/S4 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Slopes, canyons, alluvial habitats. Elevations: 165-2955ft. (50-900m.) Blooms Mar-Aug.	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the APE. However, this is a conspicuous tree species that would have been identifiable during the field surveys, and was not observed.
Juncus acutus ssp. *leopoldii* southwestern spiny rush	None/None G5T5/S4 4.2	Perennial rhizomatous herb. Coastal dunes, marshes and swamps, meadows and seeps. Moist saline places. Elevations: 10-2955ft. (3-900m.) Blooms (Mar)May-Jun.	Not Expected	Moist saline places are absent from the APE.
Lepechinia fragrans fragrant pitcher sage	None/None G3/S3 4.2	Perennial shrub. Chaparral. Elevations: 65-4300ft. (20-1310m.) Blooms Mar-Oct.	Not Expected	Potentially suitable chaparral habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field surveys, and was not observed.
Lepechinia rossii Ross' pitcher sage	None/None G1/S1 1B.2	Perennial shrub. Chaparral. Soil derived from fine-grained, reddish sedimentary rock. Elevations: 1000-2590ft. (305-790m.) Blooms May-Sep.	Not Expected	Potentially suitable chaparral habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field surveys, and was not observed.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. 4-. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	Low Potential	Potentially suitable chaparral and coastal scrub habitat occurs in the APE above the northern bank of the SCR. However, there are no documented CNDDB records within a five mile radius of the APE.
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	None/None G4T4?/S4? 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland. Yellow-pine forest or openings, oak canyons. Elevations: 100-5905ft. (30-1800m.) Blooms Mar-Jul(Aug).	Not Expected	Intermittent Drainage 1 and wetted portions of the SCR provide potentially suitable mesic habitat. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Malacothamnus davidsonii Davidson's bush-mallow	None/None G2/S2 1B.2	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy washes. Elevations: 605-3740ft. (185-1140m.) Blooms Jun-Jan.	Not Expected	Potentially suitable chaparral and coastal scrub habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field surveys, and was not observed.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Mucronea californica California spineflower	None/None G3/S3 4.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. Elevations: 0-4595ft. (0-1400m.) Blooms Mar-Jul(Aug).	Low Potential	Potentially suitable chaparral, coastal scrub, and grassland habitat occurs in the APE above the northern bank of the SCR. However, there are no documented CNDDB records within a five mile radius of the APE.
Nasturtium gambelii Gambel's water cress	FE/SCT G1/S1 1B.1	Marshes and swamps (brackish, freshwater). Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m. Blooms Apr-Oct.	Not Expected	Intermittent Drainage 1 and the wetted portions of the SCR provide potentially suitable aquatic habitat. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Navarretia fossalis spreading navarretia	FT/None G2/S2 1B.1	Annual herb. Chenopod scrub, marshes and swamps, playas, vernal pools. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	Not Expected	Chenopod scrub, vernal pools, and swales are absent from the APE
Navarretia setiloba Piute Mountains navarretia	None/None G2/S2 1B.1	Annual herb. Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Red clay soils, or on gravelly loam. Elevations: 935-6890ft. (285-2100m.) Blooms Apr-Jul.	Low Potential	Limited annual grassland habitat occurs to the north of the northern bank of the SCR. However, red clay soils and gravelly loam are generally absent from this area.
Opuntia basilaris var. *brachyclada* short-joint beavertail	None/None G5T3/S3 1B.2	Perennial stem. Chaparral, joshua tree woodland, mojavean desert scrub, pinyon and juniper woodland. Sandy soil or coarse, granitic loam. Elevations: 1395-5905ft. (425-1800m.) Blooms Apr-Jun(Aug).	Not Expected	Potentially suitable chaparral habitat occurs in the APE. However, this is a conspicuous perennial species that would have been identifiable during the field survey, and was not observed.
Orcuttia californica California Orcutt grass	FE/SCE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug.	Not Expected	Vernal pools are absent from the APE.
Pseudognaphalium leucocephalum white rabbit-tobacco	None/None G4/S2 2B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy, gravelly sites. Elevations: 0-6890ft. (0-2100m.) Blooms (Jul)Aug-Nov(Dec).	Low Potential	Potentially suitable chaparral, coastal scrub and riparian woodland habitat occurs in the banks of the SCR in the APE to support this species. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Quercus durata var. *gabrielensis* San Gabriel oak	None/None G4T3/S3 4.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Elevations: 1475-3280ft. (450-1000m.) Blooms Apr-May.	Not Expected	Potentially suitable chaparral habitat occurs in the APE. However, this is a conspicuous shrub species that would have been identifiable during the field survey, and was not observed.
Senecio aphanactis chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).	Not Expected	Alkaline areas within coastal scrub are absent from the APE. Additionally, there are no CNDDB records within a five mile radius of the APE.
Symphyotrichum greatae Greata's aster	None/None G2/S2 1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland. Mesic canyons. Elevations: 985-6595ft. (300-2010m.) Blooms Jun-Oct.	Not Expected	Potentially suitable mesic habitat occurs in Intermittent Drainage 1 and the SCR in the APE. However, this is a conspicuous perennial species that would have been identifiable during the field surveys, and was not observed.
Wildlife				
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Moderate Potential	Potentially suitable habitat occurs in the open scrubby and/or grassland habitat in the APE, including suitable forage genera (e.g., *Eriogonum*) and open, undeveloped land. One historic CNDDB record (Occurrence No. 135) overlaps the APE, and one recent CNDDB record (Occurrence No. 326) from 2019 is located approximately 3.3 miles south of the APE. This species may utilize the APE for foraging. Crotch bumble bees are not expected nest in the APE, as limited rodent dens were observed in the APE, and a large portion of the APE has been previously disturbed.
Branchinecta lynchi vernal pool fairy shrimp	FT/None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not Expected	Vernal pools are absent from the APE.
Danaus plexippus pop. 1 monarch - California overwintering population	FC/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	No suitable eucalyptus groves are present within the APE.
Euphydryas editha quino quino checkerspot butterfly	FE/None G5T1T2/S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	Not Expected	The APE is outside the known range of the species and suitable food plants are absent from the APE.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Streptocephalus woottoni Riverside fairy shrimp	FE/None G1G2/S1S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Not Expected	Vernal pools are absent from the APE.
Fish				
Catostomus santaanae Santa Ana sucker	FT/None G1/S1	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including sandy substrate and presence of algae. However, because there is no permanent water flow in this stretch of the SCR, this species would only occupy the river after a large storm event. One CNDDB record (Occurrence No. 13) from 1993 is located in the SCR approximately 3.5 miles upstream (east) of the APE.
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	FE/SE G5T1/S1 FP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24 C), clear water with abundant vegetation.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including presence of aquatic vegetation (e.g., watercress) and slow-moving water. However, because there is no permanent water flow in this stretch of the SCR, this species would only occupy the river after a large storm event. Two CNDDB records (Occurrence No. 4 and 10) are located in the SCR approximately 3.5 miles upstream (Occurrence No. 4) and 3 miles downstream (Occurrence No. 10) of the APE.
Gila orcuttii arroyo chub	None/None G2/S2 SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of the SCR, including sandy substrate and presence of algae. However, because there is no permanent water flow in this stretch of the SCR, this species would only occupy the river after a large storm event. One CNDDB record (Occurrence No. 44) from 1999 is located in the SCR approximately 3 miles downstream (west) of the APE.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Moderate Potential	Only one CNDDB record for this species exists within five miles of the APE, and is located approximately four miles upstream (Occurrence No. 48). There is a low probability of the species migrating through the APE because the SCR lacks sufficient water flow in this stretch of the SCR to support arroyo toad breeding. Therefore, this species has a moderate potential to occur.
Spea hammondii western spadefoot	None/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Moderate Potential	Vernal pools are absent from the APE. However, suitable grassland habitat occurs to the north of the northern bank of the SCR in the APE, and there are four CNDDB records (Occurrence No.'s 342-344, 1062) within one mile of the APE. This species may utilize the APE for foraging, but is not expected to use the APE for breeding.
Reptiles				
Anniella spp. California legless lizard	None/None G3G4/S3S4 SSC	Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	High Potential	Suitable open scrub and grassland habitats in and adjacent to the SCR are present within the APE, as well as loose, moist soil adjacent to the active channel of the SCR. There are multiple CNDDB records of this species within a five mile radius of the APE, including one record that overlaps the APE (Occurrence No. 67).
Arizona elegans occidentalis California glossy snake	None/None G5T2/S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Low Potential	Suitable open habitat with sandy soils are present within the banks of the SCR in the APE. However, all three CNDDB records within a five mile radius of the APE are more than 60 years old.
Aspidoscelis tigris stejnegeri coastal whiptail	None/None G5T5/S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	High Potential	Suitable open scrub and grassland habitats in and adjacent to the SCR are present within the APE. There are multiple CNDDB records of this species within a five mile radius of the APE, the closest being 0.2 mile southwest (Occurrence No. 117).
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Moderate Potential	Suitable open scrub and grassland habitats with loose soils in and adjacent to the SCR are present within the APE. There are multiple CNDDB records of this species within a five mile radius of the APE, the closest being 3.5 miles east in Bee Canyon Wash (Occurrence No. 465).
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Low Potential	Potentially suitable riparian habitat occurs in Intermittent Drainage 1 and the SCR. However, permanent sources of fresh water are absent from the APE, as the aforementioned drainage features are subject to periods of drying during summer months.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Moderate Potential	Potentially suitable nesting and/or foraging habitat is present in the Fremont cottonwood forest and woodland vegetation community in the APE. Additionally, this species was observed in the western portion of the APE in 2009 (City of Santa Clarita 2010).
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S3 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Low Potential	The western portion of the APE contains potentially suitable coastal scrub and chaparral, which are bounded by the SCR/residential development to the south and SR-14 to the north. Additionally, this species was documented in the western portion of the APE in 2009 (City of Santa Clarita 2010).
Artemisiospiza belli belli Bell's sage sparrow	None/None G5T2T3/S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Low Potential	While chamise chaparral occurs within the western portion of the APE, this vegetation community contains loosely scattered shrub individuals with many open spaces in between shrubs. Therefore, this species has a low potential to occur.
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential	Suitable open habitat is present in the northern portion of the APE adjacent to the SCR. However, no mammalian activity was limited to a single ground squirrel during the field survey, and few mammal burrows were observed. None of the mammal burrows observed exhibited sign of burrowing owl (i.e., whitewash, pellets, feathers).
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Low Potential	The central portion of the APE features low-quality riparian habitat for nesting and foraging for this species, as it contains a few isolated patches of Fremont cottonwood forest with some mature overstory Fremont cottonwood trees, and understory shrubs such as mulefat. There are no CNDDB occurrences within a five mile radius of the APE, and the APE is not located within USFWS-designated critical habitat for the species.
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S1	Riparian woodlands in Southern California.	Low Potential	The central portion of the APE features low-quality riparian habitat for nesting and foraging for this species, as it contains a few isolated patches of Fremont cottonwood forest with some mature overstory Fremont cottonwood trees, and understory shrubs such as mulefat. There are no CNDDB occurrences within a five mile radius of the APE, and the APE is not located within USFWS-designated critical habitat for the species. The closest USFWS-designated critical habitat is more than eight miles downstream (west) of the APE.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	High Potential	This species was previously documented within the western portion of the APE (City of Santa Clarita 2010). Potentially suitable habitat is present in the grassland (i.e., wild oats and annual brome grasslands) and sparse scrub communities in the APE.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low Potential	Suitable breeding habitat (i.e., cliffsides) is absent from the APE. Although the APE contains some open habitat, it is fragmented by development to the north (the SR 14) and the south (residential development). Therefore, foraging habitat is considered low quality. Only one historic CNDDB record (Occurrence No. 465) from 1980 occurs approximately 2.6 miles east of the APE.
Gymnogyps californianus California condor	FE/SE G1/S1 FP	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Not Expected	Potentially suitable foraging (i.e., open savannah, grasslands, or foothill chaparral) and breeding (i.e., cliffsides) habitat are absent from the APE.
Lanius ludovicianus loggerhead shrike	None/None G4/S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low Potential	One CNDDB occurrence almost 5 miles NW. Look for suitable perches/habitat.
Polioptila californica californica coastal California gnatcatcher	FT/None G4G5T3Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Low Potential	Marginally suitable coastal sage scrub habitat exists in the western portion of the APE. The coastal sage scrub habitat within the APE includes sparsely scattered shrubs (e.g., California sagebrush and California buckwheat), and is fragmented by development to the north and south of the APE. One CNDDB record overlaps the APE (Occurrence No. 998), but is more than 80 years old and is a non-specific occurrence that overlaps the entirety of Mint Canyon and Forest Park. The closest recent CNDDB record (Occurrence No. 845) is approximately 2.5 miles southwest. The APE is not located within USFWS-designated critical habitat for the species. The closest USFWS-designated critical habitat is approximately 1.5 miles south of the APE.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Low Potential	The central portion of the APE features low-quality riparian habitat for nesting and foraging for this species, as it contains a few isolated patches of Fremont cottonwood forest with some mature overstory Fremont cottonwood trees, and understory shrubs such as mulefat. There are no CNDDB occurrences within a five mile radius of the APE, and the APE is not located within USFWS-designated critical habitat for the species. The closest USFWS-designated critical habitat is more than eight miles downstream (west) of the APE.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls, ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Not Expected	Isolated patches of Fremont cottonwood forest occur in the southern portion of the APE within the banks of the SCR and Intermittent Drainage 1. However, these areas are situated immediately adjacent to development (e.g., SR 14, commercial and residential development). One historic CNDDB record (Occurrence No. 305) from 1942 is located approximately 3 miles north of the APE.
Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	Low Potential	Suitable roosting habitat (rock crevices in cliffs and caves) is absent from the APE. While existing structures are present in the APE, they are frequently disturbed/occupied by humans, and do not provide suitable roosting habitat. Use of the APE by this species would be for foraging only.
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/None G5T3T4/S3S4	Occurs in Los Angeles, San Bernardino, Riverside, and San Diego Counties of southern California. Typically found in open shrub habitats. Will also occur in woodland habitats with open understory adjacent to shrublands.	High Potential	Suitable habitat exists within the banks of the SCR throughout the APE, as well as the chaparral and scrub habitats to the north of the SCR. Additionally, there is a recent CNDDB record (Occurrence No. 106) within the SCR approximately 300 feet southwest of the proposed staging area.
Onychomys torridus ramona southern grasshopper mouse	None/None G5T3/S3 SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	Not Expected	Scrub habitat is present within the APE; however, the soils in the APE are primarily sandy, and are not friable. Additionally, only one historic CNDDB record (Occurrence No. 24) from 1930 occurs within a five mile radius of the APE, approximately five miles northeast.

Regional Vicinity refers to within a nine-quadrangle search area of site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

California Rare Plant Rank (California Native Plant Society)

1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Need more information (Review List)
4 = Limited Distribution (Watch List)

California Rare Plant Rank Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20 to 80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Appendix D

Site Photographs

Photograph 1. Photo Point 1. View of the western portion of the APE, showing the SCR on the right and an existing access road on the left, facing east (August 1, 2023).

Photograph 2. Photo Point 2. View of the western portion of the APE, showing an existing access road and Mitchell Hill to the right (north), facing west (August 1, 2023).

Photograph 3. Photo Point 3. View of the western portion of the APE above the SCR channel on Mitchell Hill. Note presence of wild oats and annual brome grasslands and clustered tarweed fields, facing southwest (August 1, 2023).

Photograph 4. Photo Point 4. View of the chamise chaparral vegetation community in the western portion of the APE, facing southwest. This vegetation community occurs on Mitchell Hill where jack-and-bore construction would occur (August 1, 2023).

Photograph 5. Photo Point 5. View of the western portion of the APE where jack-and-bore activities would occur, facing southwest. Note existing access road and SCR channel (August 1, 2023).

Photograph 6. Photo Point 6. View of the SCR channel in the southwestern portion of the APE, facing southeast. Note presence of non-native tree (e.g., blue gum eucalyptus) along the northern bank of the SCR, and California sagebrush – California buckwheat scrub along the side-slope (August 1, 2023).

Photograph 7. Photo Point 7. View of Fremont cottonwood woodland associated with Intermittent Drainage 1 in the western portion of the APE, facing northeast (August 1, 2023).

Photograph 8. Photo Point 8. View of chamise chaparral on Mitchell Hill adjacent to an existing trail in the western portion of the APE, and to the north of the SCR, facing north (August 1, 2023).

Photograph 9. Photo Point 9. View of the SCR channel in the central portion of the APE, immediately south of Intermitent Drainage 1, facing southwest (August 1, 2023).

Photograph 10. Photo Point 10. View of Intermittent Drainage 1 in the central portion of the APE, facing southwest. Note presence of cattails and Fremont cottonwood trees (August 1, 2023).

Photograph 11. Photo Point 11. View of an isolated patch of Fremont cottonwood woodland in the northern portion of the APE, facing west (August 1, 2023).

Photograph 12. Photo Point 12. View of the upland mustards vegetation community in the central portion of the APE and to the north of the SCR channel, facing southwest. The proposed access road would cross this non-native vegetation community (August 1, 2023).

Photograph 13. Photo Point 13. View of the thick-leaved yerba santa scrub vegetation community in the central portion of the APE, facing west. This vegetation community is located within the banks of the SCR (August 1, 2023).

Photograph 14. Photo Point 14. View of the active channel of the SCR in the southwestern portion of the APE, facing west (August 1, 2023).

Photograph 15. Photo Point 15. View of the northern bank of the SCR in the central portion of the APE where soil cement bank protection is proposed, facing west. Note unstable, eroding bank and compacted, barren soils immediately north of the bank (August 1, 2023).

Photograph 16. Photo Point 16. View of Ephemeral Drainage 1 at its confluence with the SCR in the central portion of the APE, facing northwest. Bridge installation is proposed at this location where the access road would cross the drainage feature (August 1, 2023).

Photograph 17. Photo Point 17. View of the California buckwheat scrub (right) and upland mustards (left) in the central portion of the APE, facing west (August 1, 2023).

Photograph 18. Photo Point 18. View of the northern bank of the SCR in the central portion of the APE where soil cement bank protection is proposed, facing east. Note unstable, eroding bank (August 1, 2023).

Photograph 19. Photo Point 19. View of the SCR channel in the eastern portion of the APE, facing southwest. Note dry riverbed and the riverwash land cover type (August 1, 2023).

Photograph 20. Photo Point 20. View of the SCR channel in the eastern portion of the APE, facing west. Note dry riverbed and the riverwash land cover type (August 1, 2023).

Photograph 21. Photo Point 21. View of the SCR near the Sand Canyon Road bridge, facing northeast. Note dry riverbed and isolated Fremont cottonwood tree to the right, and giant reed breaks to the left along the bank (August 1, 2023).

Photograph 22. Photo Point 22. View of the northern bank of the SCR in the northeastern portion of the APE, facing southwest. Note steep bank and presence of mulefat at the toe of the bank (August 1, 2023).

Photograph 23. Photo Point 23. View of the SCR in the northeastern portion of the APE, facing southwest. Note presence of abandoned, flipped car in the river bed (August 1, 2023).

Photograph 24. Photo Point 24. View of the scale broom scrub vegetation community in the northeastern portion of the APE, facing southwest (August 1, 2023).

Photograph 25. Photo Point 25. View of the northern bank of the SCR to the east of the Sand Canyon Bridge, facing southwest. Note presence of rip-rap along the northern bank (August 1, 2023).

Photograph 26. Photo Point 26. View of the Intermittent Drainage 1 culvert outlet that transports flows underneath SR-14 and into the APE, facing north. Note large amount of sediment deposition and riparian vegetation (August 4, 2023).

Photograph 27. Photo Point 27. View of Intermittent Drainage 1, highlighting slow-moving water and presence of riparian vegetation, facing south (August 4, 2023).

Photograph 28. Photo Point 28. View of the SCR channel in the central portion of the APE, facing east. Soil cement bank protection is proposed along the northern bank, which is on the left hand side of the photograph (August 4, 2023).

Photograph 29. Photo Point 29. View of the confluence between Ephemeral Drainage 1 and the SCR, facing northeast (August 4, 2023).

Photograph 30. Photo Point 30. View of the tamarisk thickets vegetation community in the central portion of the APE, facing southeast. These non-native trees are anticipated to be removed as part of access road development (August 4, 2023).

Photograph 31. Photo Point 31. View of wetlands associated with Intermittent Drainage 1 in the central portion of the APE, facing southwest. Bridge installation is proposed at this location where the access road would cross the drainage feature (August 4, 2023).

Photograph 32. Photo Point 32. View of Fremont cottonwood tree that occurs near the eastern bore-pit location, facing northeast. This tree may require trimming and/or removal (August 4, 2023).

Photograph 33. Photo Point 33. View of the developed land cover type in the northeastern portion of the APE, facing northeast (August 4, 2023).

Photograph 34. Photo Point 34. View of the proposed staging area in the southwestern portion of the APE, facing east (October 16, 2023).

Photograph 35. Photo Point 35. View of an existing access road and the SCR channel in the southwestern portion of the APE near the proposed staging area, facing north (October 16, 2023).

Photograph 36. View of SP01, facing northwest (August 4, 2023).

Photograph 37. View of SP02, facing south (August 4, 2023).

Photograph 37. View of SP03, facing northeast (August 4, 2023).

Photograph 38. View of SP04, facing west (August 4, 2023).

Appendix E

Floral and Faunal Compendium

Plant and Wildlife Species Detected in the APE on August 1 and October 16, 2023

Scientific Name	Common Name	Status	Native or Introduced
Plants			
Acacia redolens	catclaw acacia	–	Introduced
Acmispon glaber	deerweed	–	Native
Adenostoma fasciculatum	chamise	–	Native
Ailanthus altissima	tree of heaven	Cal-IPC Moderate	Introduced
Ambrosia acanthicarpa	annual bursage	–	Native
Amsinckia menziesii	Menzies' fiddleneck	–	Native
Artemisia californica	California sagebrush	–	Native
Artemisia douglasiana	mugwort	–	Native
Artemisia dracunculus	tarragon	–	Native
Artemisia tridentata ssp. *tridentata*	big sagebrush	–	Native
Arundo donax	giant reed	Cal-IPC High	Introduced
Atriplex polycarpa	allscale saltbush	–	Native
Avena barbata	slender wild oats	Cal-IPC Moderate	Introduced
Baccharis salicifolia	mulefat	–	Native
Brassica nigra	black mustard	Cal-IPC Moderate	Introduced
Bromus rubens	red brome	Cal-IPC High	Introduced
Bromus tectorum	cheat grass	Cal-IPC High	Introduced
Carduus pycnocephalus	Italian thistle	Cal-IPC Moderate	Introduced
Centaurea melitensis	tocalote	Cal-IPC Moderate	Introduced
Chenopodium album	white goosefoot	–	Introduced
Chenopodium rubrum	red goosefot	–	Introduced
Chorizanthe brevicornu	brittle spineflower	–	Native
Chorizanthe staticoides	Turkish rugging	–	Native
Corethrogyne filaginifolia	common sandaster	–	Native
Croton setiger	doveweed	–	Native
Cryptantha intermedia	common cryptantha	–	Native
Cylindropuntia prolifera	coast cholla	–	Native
Cyperus eragrostis	tall flatsedge	–	Native
Datura wrightii	sacred datura	–	Native
Deinandra fasciculata	clustered tarweed	–	Native
Elymus condensatus	giant wild rye	–	Native
Encelia farinosa	brittle bush	–	Native
Eriastrum densifolium	giant eriastrum	–	Native
Ericameria nauseosa	rubber rabbit brush	–	Native
Erigeron canadensis	Canada horseweed	–	Native
Eriodictyon crassifolium	thick-leaved yerba santa	–	Native
Eriogonum elongatum	longstem buckwheat	–	Native

Scientific Name	Common Name	Status	Native or Introduced
Eriogonum fasciculatum	California buckwheat	–	Native
Erodium cicutarium	redstem filaree	Cal-IPC Limited	Introduced
Euphorbia albomarginata	rattlesnake sandmat	–	Introduced
Ficus carica	common fig	Cal-IPC Moderate	Introduced
Fraxinus velutina	Oregon ash	–	Native
Helianthus annuus	annual sunflower	–	Native
Heliotropium curassavicum	alkali heliotrope	–	Native
Heterotheca grandiflora	telegraph weed	–	Native
Heterotheca sessiliflora	golden aster	–	Native
Hirschfeldia incana	summer mustard	Cal-IPC Moderate	Introduced
Juniperus californica	California juniper	–	Native
Lactuca serriola	prickly lettuce	–	Introduced
Lepidium latifolium	perennial pepperweed	–	Introduced
Lepidospartum squamatum	scale broom	–	Native
Lessingia glandulifera	valley lessingia	–	Native
Lupinus bicolor	bicolor lupine	–	Native
Marrubium vulgare	white horehound	Cal-IPC Limited	Introduced
Melica imperfecta	California melicgrass	–	Native
Melilotus albus	white sweetclover	–	Introduced
Melilotus indica	yellow sweetclover	–	Introduced
Microsteris gracilis	slender phlox	–	Native
Mimulus guttata	seep monkeyflower	–	Native
Muhlenbergia rigens	deergrass	–	Native
Nicotiana glauca	tree tobacco	Cal-IPC Moderate	Introduced
Persicaria lapathifolia	common knotweed	–	Native
Phacelia cicutaria	caterpillar phacelia	–	Native
Phacelia ramosissima	branching phacelia	–	Native
Pinus spp.	ornamental pine	–	Introduced
Polygonum aviculare	prostrate knotweed	–	Introduced
Polypogon monspeliensis	annual rabbitsfoot grass	Cal-IPC Limited	Introduced
Populus fremontii	Fremont cottonwood	–	Native
Quercus agrifolia	coast live oak	–	Native
Rhus aromatica	fragrant sumac	–	Native
Ribes speciosum	fuchsiaflower gooseberry	–	Native
Ricinus communis	castor bean	Cal-IPC Limited	Introduced
Rumex crispus	curly dock	Cal-IPC Limited	Introduced
Salix exigua	sandbar willow	–	Native
Salix laevigata	red willow	–	Native
Salsola tragus	Russian thistle	Cal-IPC Limited	Introduced
Sambucus mexicana	blue elderberry	–	Native

Scientific Name	Common Name	Status	Native or Introduced
Schinus molle	Peruvian pepper tree	Cal-IPC Limited	Introduced
Schismus barbatus	Mediterranean grass	Cal-IPC Limited	Introduced
Schoenoplectus spp.	bulrush	–	Native
Sisymbrium irio	London rocket	Cal-IPC Limited	Introduced
Solanum xanti	chaparral nightshade	–	Native
Spartium junceum	Spanish broom	Cal-IPC High	Introduced
Stephanomeria cichoriacea	chicoryleaf wirelettuce	–	Native
Stipa miliaceae	smilo grass	–	Introduced
Tamarix aphylla	athel tamarisk	Cal-IPC Limited	Introduced
Typha spp.	cattail	–	Native
Veronica anagallis-aquatica	water speedwell	–	Introduced
Washingtonia robusta	Mexican fan palm	Cal-IPC Moderate	Introduced
Zeltnera exaltata	desert centaury	–	Native
Wildlife			
Birds			
Buteo jamaicensis	red-tailed hawk	–	Native
Charadrius vociferus	killdeer	–	Native
Corvus brachyrhynchos	American crow	–	Native
Corvus corax	common raven	–	Native
Lepus californicus	black-tailed jackrabbit	–	Native
Spinus psaltria	lesser goldfinch	–	Native
Mammals			
Canis latrans	coyote (scat)	–	Native
Canis lupus familiaris	domesticated dog	–	Native
Otospermophilus beecheyi	California ground squirrel	–	Native
Reptiles			
Sceloporus occidentalis	western fence lizard	–	Native

Source: Rincon Consultants biological resources reconnaissance field survey conducted on August 1 and October 16, 2023; Calflora 2023; California Invasive Plant Council (Cal-IPC) 2023, which rates introduced species according to their level of invasiveness.

This page intentionally left blank.

Appendix F

Ordinary High Water Mark and Wetland Determination Data Forms

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: SCUWA Sand Canyon
Project Number: 22-13523
Stream: Santa Clara River
Investigator(s): Kyle Gerin

Date: 2/14/2023 **Time:** 11:00 a m
Town: Santa Clarita **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: W/ in SCR near Sand Canyon Road Bridge

Projection: USGS **Datum:** NAD83
Coordinates: 34.423674, -118.422226

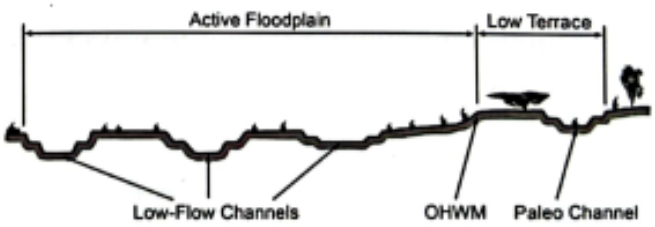
Potential anthropogenic influences on the channel system:
Anthropogenic pollution (fluids, trash, water sources), commercial / residential development

Brief site description:
Santa Clara River w/ in eastern limits of Santa Clarita. Intermittent portion of drainage w/ multiple low-flow channels

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2023
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

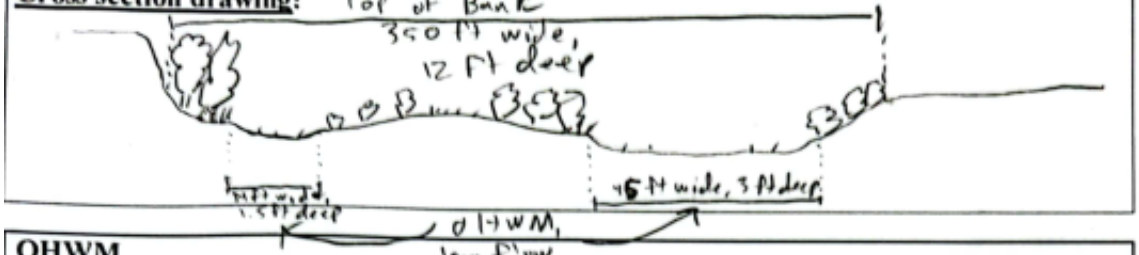


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 22-13523 **Cross section ID:** SCR 011-01 **Date:** 8/4/2023 **Time:** 11:00 am

Cross section drawing:



OHWM

GPS point: Left OHWM: 34.423906, -118.422453
Right OHWM: 34.423556, -118.422067

Indicators:

- [1] Change in average sediment texture
- [2] Change in vegetation species
- [3] Change in vegetation cover
- [4] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

1 - change from sand in OHWM to pebbles & fine sand above OHWM
2 - generally unvegetated in OHWM, & variety of species (e.g. fremont cottonwood, scale broom, thick-leaved yerba santa) above OHWM
3 - ↑ in veg cover outside OHWM; 4 - observed break in slope

Floodplain unit: [X] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Sand
Total veg cover: 5 % Tree: 0 % Shrub: 2.5 % Herb: 2.5 %
Community successional stage:

- [ ] NA
- [X] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [X] Drift and/or debris
- [X] Presence of bed and bank
- [X] Benches
- [X] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: SCVWA Sand Canyon
Project Number: 22-13523
Stream: Ephemeral drainage 01
Investigator(s): V Gern

Date: 8/11/2023 **Time:** ~~1200~~ 1:05pm
Town: Santa Clarita **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Tributary to SCR west of Sand cyn bridge
Projection: WGS **Datum:** NAD83
Coordinates: 34.422597, -118.426606

Potential anthropogenic influences on the channel system:

Development, pollution

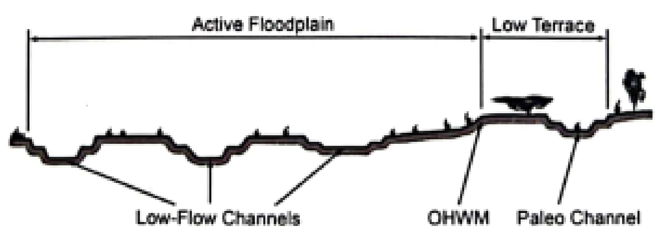
Brief site description:

small single-thread ephemeral drainage w/ mulefat thickets & buckwheat scrub vegetation. flows N->S into SCR

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2023
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

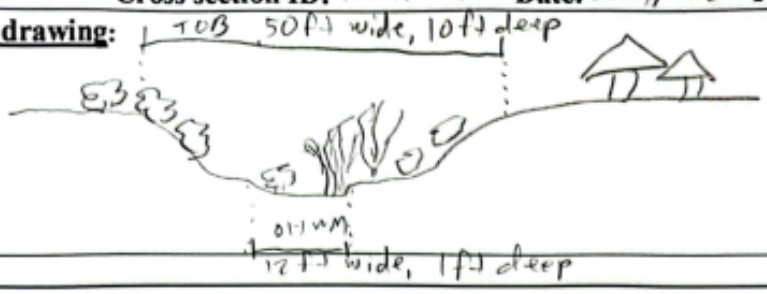


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 22-13573 **Cross section ID:** ED OH-01 **Date:** 2/6/23 **Time:** 1:10pm

Cross section drawing:



OHWM

GPS point: 33.41262, -118.42669

Indicators:

- [1] Change in average sediment texture
- [2] Change in vegetation species
- [3] Change in vegetation cover
- [4] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:
1- Sand in OHWM, fine sand/silt above OHWM
2- BACSAL in OHWM, upland shrubs outside OHWM
3- ↑ in veg. cover outside OHWM
4- observed break in slope

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:
Average sediment texture: Sand
Total veg cover: 30 % Tree: 0 % Shrub: 20 % Herb: 10 %
Community successional stage:

- [ ] NA
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Early (herbaceous & seedlings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: SCWA Sand Canyon
Project Number: 22-13523
Stream: Intermittent Drainage 01
Investigator(s): K. Green

Date: 8/21/2023 **Time:** 3:00pm
Town: Santa Clarita **State:** CA
Photo begin file#: **Photo end file#:**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: South of Hwy 14 adjacent to SCR.

Projection: NAD83 **Datum:** NAD83
Coordinates: 34.422028, -118429574

Potential anthropogenic influences on the channel system:
Anthropogenic water sources (e.g. residential/commercial/agricultural runoff), pollution (e.g. trash, fluids).

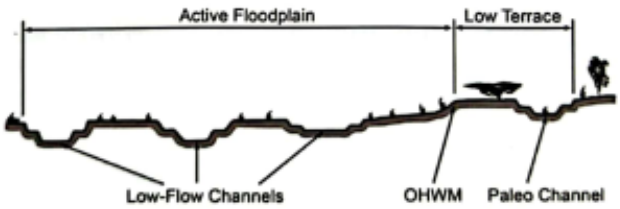
Brief site description:
Intermittent drainage feature that flows N-S under Hwy 14 into SCR. Water largely sourced from anthropogenic sources as described above. Large amount of sediment deposition in drainage & trash as well.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2023
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

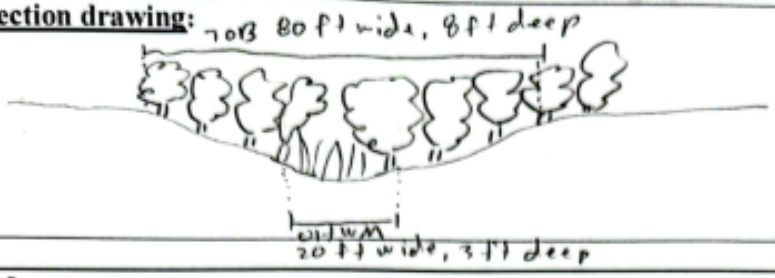


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 22-13523 **Cross section ID:** JD 014-01 **Date:** 8/4/2023 **Time:** 8:00pm

Cross section drawing:



OHWM

GPS point: 34.422028, -118.429574

Indicators:

- [ ] Change in average sediment texture
- [1] Change in vegetation species
- [ ] Change in vegetation cover
- [2] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

1 - Cattails (Typha spp.) & tall flatsedge (Cyperus eragrostis) occur in OHWM, & do not occur outside OHWM
2 - evident break in slope.

Floodplain unit: [X] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: loam
Total veg cover: 95 % Tree: 50 % Shrub: 0 % Herb: 45 %
Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [X] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [X] Drift and/or debris
- [X] Presence of bed and bank
- [ ] Benches
- [X] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 22-13573 Sand Canyon City/County: Santa Clarita/LA Co. Sampling Date: 8/21/2023
Applicant/Owner: SCUWA State: CA Sampling Point: SP01
Investigator(s): K. Cearn Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc.): Vegetated bar in active floodplain of SCR Local relief (concave, convex, none): Convex Slope (%): 1
Subregion (LRR): C- Mediterranean California Lat: 34.422063 Long: -118.474130 Datum: NAD84
Soil Map Unit Name: Riverwash NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Hydrophytic veg. & hydrology met, but no evidence of hydric soils or problematic hydric soils. Therefore, wetland not present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30x30)			
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Baccharis salicifolia	5	Y	FACW
2. Lepidospartum sq. nanum	1	N	FACU
3.			
4.			
5.			
	6 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Bromus rubens	1	N	UPL
2. Melilotus alba	1	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	2 = Total Cover		
Woody Vine Stratum (Plot size: 15x15)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 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 X No ____

Remarks: One mulefat individual & one scale broom individual occur in sample radius. Mulefat is dominant, therefore qualifying for hydric veg.

IS Army Corps of Engineers — Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 22-13573 Sand Canyon City/County: Santa Clarita/LA Co. Sampling Date: 8/21/2023
Applicant/Owner: SCUWA State: CA Sampling Point: SP01
Investigator(s): K. Cearn Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc.): Vegetated bar in active floodplain of SCR Local relief (concave, convex, none): Convex Slope (%): 1
Subregion (LRR): C- Mediterranean California Lat: 34.422063 Long: -118.474130 Datum: NAD84
Soil Map Unit Name: Riverwash NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil N, or Hydrology N 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 X	No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Hydrophytic veg. & hydrology met, but no evidence of hydric soils or problematic hydric soils. Therefore, wetland not present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30x30)			
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Baccharis salicifolia	5	Y	FACW
2. Lepidospartum sq. nanatum	1	N	FAIU
3.			
4.			
5.			
	6 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Bromus rubens	1	N	UPL
2. Melilotus alba	1	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	2 = Total Cover		
Woody Vine Stratum (Plot size: 15x15)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 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 X No ____

Remarks: One mulefat individual & one scale broom individual occur in sample radius. Mulefat is dominant, therefore qualifying for hydric veg.

US Army Corps of Engineers — Arid West – Version 2.0

SOIL Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/2	100					Sandy loam	Herbaceous roots present
4-12	10YR5/3	100					Sand	Herbaceous roots absent

[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: Boulders
Depth (inches): 12

Hydric Soil Present? Yes ___ No X

Remarks: No evidence of problematic sandy soils or hydric soils.

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)
- X Drift Deposits (B3) (Riverine)
- X 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 X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Drift deposits (twigs & branches) & drainage patterns (directional flow of scr are present).

US Army Corps of Engineers — Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 22-13573 Sand Canyon City/County: Santa Clarita/LA Co. Sampling Date: 8/14/2023
Applicant/Owner: SCVWA State: CA Sampling Point: SP02
Investigator(s): K. Leon Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc.): Willow Int. Drain D1 Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): C- Mediterranean California Lat: 34.421946 Long: -118.429527 Datum: NAD84
Soil Map Unit Name: Hanford Sandy Loam, 2-9% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes N No X (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ____ No T
Are Vegetation N, Soil N, or Hydrology N 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____
Is the Sampled Area within a Wetland? Yes X No ____

Remarks: This water feature (intermittent Drainage D1) is largely fed by anthropogenic sources (e.g. residential runoff), & hydrology is therefore not natural & sig. disturbed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	5	N	FACW
2. Washingtonia robusta	15	N	FACW
3. Populus fremontii	55	Y	FACW
4. Ficus carica	20	Y	FAC
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5x15)			
1. Ficus carica	1	N	FAC ~~FACW~~
2. Salix laevigata	2	N	FACW
3. Baccharis salicifolia	1	N	FAC
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Typha spp.	40	Y	OBL
2. Juncus effusus	10	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 15x15)			
1. N/A			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 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 X No ____

Remarks: Hydrophytic dominant veg. includes ~~SP~~ POPFR, Typha spp., & JUNEFF.

US Army Corps of Engineers — Arid West – Version 2.0

SOIL Sampling Point: SP02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100					silty 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)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: N/A
Depth (inches): N/A

Hydric Soil Present? Yes X No ____

Remarks: No evidence of hydric soils. However, SP02 is located in an area dominated by cattails (Typha spp.), an obligate wetland plant species. Therefore, this area is characterized as a recently formed wetland despite lack of hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Drainage Patterns (B10)
- __ Season Water Table (C2)
- __ sh Burrows (C8)
- __ tion Visible on Aerial Imagery (C9)
- __ v Aquitard (D3)
- __ eutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): 0 in
Water Table Present? Yes X No ____ Depth (inches): 5 in
Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 3 in

Wetland Hydrology sent? Yes Y No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water, high water table, & saturation present. Therefore wetland hydrology present.

US Army Corps of Engineers — Arid West – Version 2.0

Trash (e.g., bottles, plastic) observed at 15 inches in depth, and culvert outlet is buried up to 6 feet in sediment (only 2-3 feet of daylight), indicating large amount of sediment deposition on a yearly basis.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 22-13625 Sand Canyon City/County: Santa Clarita/LA Co. Sampling Date: 8/21/2023
Applicant/Owner: SCVWA State: CA Sampling Point: SP03
Investigator(s): L. Carson Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc.): ~~Hillslope~~ Flat plain Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): C- Mediterranean California Lat: 34.412151 Long: -118.477384 Datum: NAD84
Soil Map Unit Name: Hanford Sandy Loam, 2-9% Slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes Y No ____
Are Vegetation N, Soil N, or Hydrology N 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 N	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No N	
Wetland Hydrology Present?	Yes ____	No N	

Remarks: No evidence of wetlands (hydrophytic veg, hydric soils, wetland hydrology). Area sampled under canopy of POPFRE, w/ upland understory

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	55	Y	FACW
2.			
3.			
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. N/A		Y	FACW
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Bromus diandrus	60	Y	UPL
2. Silybum marianum	20	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 15x15)			
1. N/A			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % 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: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

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 X

Remarks:

US Army Corps of Engineers — Arid West – Version 2.0

SOIL

Sampling Point: SP03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100					~~Sandy~~ Sandy Loam	
12-20	10YR 4/3	100					Sandy 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: N/A

Depth (inches): N/A

Hydric Soil Present? Yes ____ No X

Remarks: No evidence of hydric soils

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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

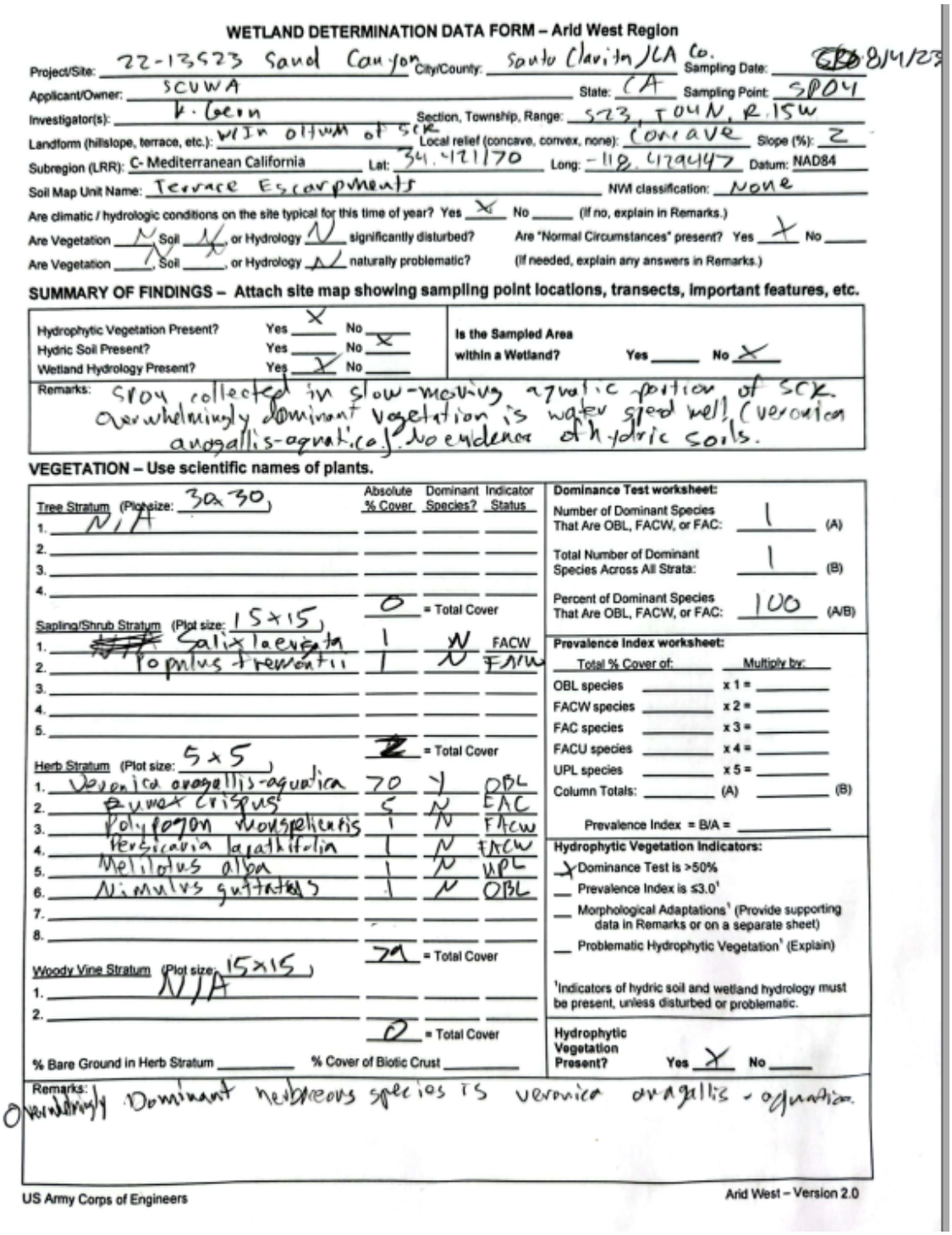
Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No evidence of wetland hydrology.

US Army Corps of Engineers

Arid West – Version 2.0



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 22-13523 Sand Canyon City/County: Santa Clarita/LA Co. Sampling Date: 8/14/23
Applicant/Owner: SCWA State: CA Sampling Point: SP04
Investigator(s): K. Gerin Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc.): WIN alluvium of SCK Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR): C- Mediterranean California Lat: 34.421170 Long: -118.629447 Datum: NAD84
Soil Map Unit Name: Terrace Escarpments NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ___	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes X	No ___	

Remarks: SP04 collected in slow-moving aquatic portion of SCK. Overwhelmingly dominant vegetation is water speedwell (Veronica anagallis-aquatica). No evidence of hydric soils.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30x30)			
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1. ~~Salix~~ Salix laevigata	1	N	FACW
2. Populus fremontii	1	N	FACW
3.			
4.			
5.			
	2 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Veronica anagallis-aquatica	70	Y	OBL
2. Rumex crispus	5	N	FAC
3. Polygonum monspeliensis	1	N	FACW
4. Hirschfeldia incana	1	N	FACW
5. Melilotus alba	1	N	UPL
6. Nasturtium officinale	1	N	OBL
7.			
8.			
	79 = Total Cover		
Woody Vine Stratum (Plot size: 15x15)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum ___ % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
X 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 X No ___

Remarks: Overwhelmingly dominant herbaceous species is Veronica anagallis-aquatica.

US Army Corps of Engineers — Arid West – Version 2.0

SOIL Sampling Point: SP04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR3/1	100					Loamy Sand	
1-20	10YR3/3	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: N/A
Depth (inches): N/A

Hydric Soil Present? Yes ? No ___

Remarks: No evidence of hydric soils. Only sandy soils w/ surface water present. Potential recently-formed wetland? ask robin

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 X No ___ Depth (inches): 0
Water Table Present? Yes X No ___ Depth (inches): 2
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes Y No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: surface water, high water table, & saturation present. Therefore, wetland hydrology present.

US Army Corps of Engineers — Arid West – Version 2.0

This page intentionally left blank.

Appendix D

Cultural Resources Technical Report

CONFIDENTIAL APPENDIX

**To protect sensitive information about the location and nature of cultural resources, this appendix is not included in the public draft of this document.

Appendix E

Noise Modeling Output

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/16/2024
Case Description: Sand Canyon Sewer Relocation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Drainage, Utilities, and Sub-Grade	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Scraper	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Grader	No	40	85.0		50.0	0.0
Compactor (ground)	No	20		83.2	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA) Day Evening

Equipment	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	85.0	86.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/16/2024
Case Description: Sand Canyon Sewer Relocation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading and Excavation	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Grader	No	40	85.0		50.0	0.0
Roller	No	20	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	85.0	86.6	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/16/2024
Case Description: Sand Canyon Sewer Relocation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grubbing and Land Clearing	Residential	60.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84.0		50.0	0.0
Excavator	No	40	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	83.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/16/2024
Case Description: Sand Canyon Sewer Relocation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving	Residential	60.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20	85.0		50.0	0.0
Paver	No	50	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Day Calculated (dBA) Lmax	Day Calculated (dBA) Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Roller	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	85.0	82.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	85.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A