THE CITY OF SAN DIEGO

ENVIRONMENTAL IMPACT REPORT

Project No. 587128
SCH No. 2018041065

SUBJECT: **3Roots**: A request for a RECLAMATION PLAN AMENDMENT and a CONDITIONAL USE PERMIT (CUP) to amend CUP No. 89-0585 to modify the Reclamation Plan; a GENERAL PLAN AMENDMENT; COMMUNITY PLAN AMENDMENT to the Mira Mesa Community Plan; MASTER PLAN AMENDMENT to the Carroll Canyon Master Plan; a REZONE from AR-1-1 & IL-2-1 to RX-1-2, RM-2-6, RM-3-9, CC-2-4, OP-1-1, OR-1-1, and OC-1-1; adoption of a Community Plan Implementation Overlay Zone Type B, a VESTING TENTATIVE MAP, EASEMENT VACATIONS, MASTER PLANNED DEVELOPMENT PERMIT, SITE DEVELOPMENT PERMIT; and a MULTI-HABITAT PLANNING AREA BOUNDARY LINE ADJUSTMENT to redevelop the Hanson Aggregates site, a former aggregate mining quarry. The proposed redevelopment would include the following: approximately 1,800 residential units comprised of 185 single-family lots, 1,006 condominiums (both attached and detached), and 609 multi-family lots (of which 180 units would be designated affordable), approximately 160,160 combined square feet of commercial retail/office uses; and a 1.35-acre mobility hub, identified as a nexus for public and private transportation alternatives. The project would also create approximately 181 acres of protected biological open space and a 23.6-acre ~~25.8-acre~~ public community park. The project would construct the on-site extension of Carroll Canyon Road, establishing a portion of a main arterial, facilitating a future connection between Interstate 805 (I-805) and Interstate 15 (I-15) as well as internal circulation consisting of on-site roads and parkways. San Diego Gas & Electric (SDG&E) Facility modifications are required as a result of the project and consist of east-west modifications, north-south modification, decommission and removal of the Fenton Substation, as well as modifications to, and extension of, smaller SDG&E facilities to serve the site. The approximately 413-acre project site is located east of Camino Santa Fe between Flanders Drive and Trade Street. The site is approximately three-quarters of a mile north of Miramar Road, two miles west of I-15, and two miles east of I-805. The site is designated medium residential density (15-30 du/ac) and medium-high residential density (3-44 du/ac) and zoned AR-1-1 (Agricultural) and IL-2-1 (Industrial) within the Carroll Canyon Master Plan of the Mira Mesa Community Plan. Additionally, the site is within the Airport Land Use Compatibility Overlay Zone (MCAS Miramar), Airport Land Use Compatibility Plan (Airport Noise MCAS-Miramar / 60-65 CNEL and 65-70 CNEL), Airport Influence Area (MCAS-Miramar - Review Area 1), Federal Aviation Administration Part 77 Notification Area (MCAS-Miramar), Residential Tandem Parking Overlay Zone, Prime and the Transit Priority Area. (Assessor parcel number(s): 341-050-3800, 3900, 341-050-4000, 341-050-4100, 341-050-4200, 341-051-1700, 341-051-1800, and 341-060-8200). APPLICANT: Mesa Canyon Community Partners, LLC.

UPDATE: **June 29, 2020. Clarifications/revisions, additional information, and typographical corrections have been made to the final Environmental Impact Report when compared to the draft environmental document. More specifically, refer to the attached Information Sheet for a brief overview of the revisions.**

In accordance with Section 15088.5 of the California Environmental Quality Act, the addition of new information that clarifies, amplifies, or makes insignificant modifications and would not result in new impacts or no new mitigation does not require recirculation.

Pursuant to Section 15088.5(a) of the CEQA Guidelines: "Significant new information" requiring recirculation includes, for example, a disclosure or additional data or other information showing that:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The modifications made to the final environmental document do not affect the analysis or conclusions of the Environmental Impact Report. All revisions are shown in a ~~strikethrough~~ and/or <u>underline</u> format.

I. ENVIRONMENTAL DETERMINATION:

This document has been prepared by the City of San Diego's Environmental Analysis Section under the direction of the Development Services Department and is based on the City's independent analysis and conclusions made pursuant to 21082.1 of the California Environmental Quality Act (CEQA) Statutes and Sections 128.0103(a), 128.0103(b) of the San Diego Land Development Code.

Based on the analysis conducted for the project described above, the City of San Diego, as the Lead Agency, has prepared the following Environmental Impact Report. The analysis addressed the following issue area(s) in detail: **Land Use, Transportation/Circulation, Visual Effects/Neighborhood Character, Air Quality, Greenhouse Gas Emissions, Energy, Noise,**

Geology and Soils, Biological Resources, Historical Resources, Tribal Cultural Resources, Health and Safety, Public Utilities, Public Services and Facilities, and **Hydrology and Water Quality**.

The Environmental Impact Report concluded that the project would result in significant but mitigable environmental impacts to **Transportation/Circulation**, **Air Quality**, **Noise**, **Biological Resources**, **Historical Resources**, **Tribal Cultural Resources** and significant and unmitigated impacts to **Transportation/Circulation** ~~and **Hydrology**~~. All other impacts analyzed in the draft EIR were determined to either be less than significant.

The purpose of this document is to inform decision-makers, agencies, and the public of the significant environmental effects that could result if the project is approved and implemented, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

II. PUBLIC REVIEW DISTRIBUTION:

The following agencies, organizations, and individuals were distributed either the Public Notice or a copy of the draft Environmental Impact Report:

<u>Federal Government</u>
Commanding General MCAS Miramar Air Station (13)
U.S. Environmental Protection Agency (19)
U.S. Fish and Wildlife Service (23)
Commanding General, MCAS Miramar Air Station (24)
U.S. Army Corps of Engineers (26)

<u>State of California</u>
Caltrans District 11 (31)
California Department of Fish and Wildlife (32)
San Diego County Regional Airport Authority (42)
California Regional Water Quality Control Board, Region 9 (44)
State Clearinghouse (46A)
California Coastal Commission (47)
California Department of Transportation (51)
California Transportation Commission (51A)
California Transportation Commission (51B)
Native American Heritage Commission (56)
Lolita Urrutia, Department of Conservation, Division of Mines and Geology Mine Reclamation Program (61)
Carol E. Atkins, Manager Environmental Services Unit, Department of Conservation, Division of Mine Reclamation
Paul Fry, Manager Engineering and Geology Unit, Department of Conservation, Division of Mine Reclamation

City of San Diego
Mayor's Office (91)
Councilmember Bry, District 1 (MS 10A)
Councilmember Campbell, District 2 (MS 10A)
Councilmember Ward, District 3 (MS 10A)
Councilmember Montgomery, District 4 (MS 10A)
Councilmember Kersey, District 5 (MS 10A)
Councilmember Cate, District 6 (MS 10A)
Councilmember Sherman, District 7 (MS 10A)
Councilmember Moreno, District 8 (MS 10A)
Councilmember Gomez, District 9 (MS 10A)
Development Services Department
    EAS
    Transportation
    Transportation
    LDR Planning
    LDR Engineering
    LDR Landscape
    LDR Geology
    LDR Water/Wastewater Review
    Fire Plan Review
    Development Project Manager
Planning Department
    Plan-Long Range Planning
    Park Planning and Development
    Plan MSCP
    Plan Facilities Financing
    Plan-Airports
Environmental Services Department
Fire-Rescue Department
San Diego Police Department
Transportation Development - DSD (78)
Development Coordination (78A)
Fire and Life Safety Services (79)
Library Department - Government Documents (81)
Central Library (81A)
Mira Mesa Branch Library (81P)
Historical Resources Board (87)
City Attorney (93C)
Wetlands Advisory Board (171)

Other Interested Groups, Organizations, and Individuals
San Diego Association of Governments (108)
San Diego County Regional Airport Authority (110)
San Diego Transit Corporation (112)
Metropolitan Transit System (115)
San Diego Unified School District (125)

Other Interested Groups, Organizations, and Individuals - continued

Mira Mesa Star News (148)
Mira Mesa/Scripps Ranch Sentinel (149)
Rancho Santa Ana Botanic Garden at Claremont (161)
Sierra Club (165)
San Diego Natural History Museum (166)
San Diego Audubon Society (167)
San Diego Audubon Society (167A)
California Native Plant Society (170)
Citizens Coordinate for Century 3 (179)
Endangered Habitats League (182)
Endangered Habitats League (182A)
Carmen Lucas (206)
South Coastal Information Center (210)
San Diego Archaeological Center (212)
Save Our Heritage Organisation (214)
Ron Christman (215)
Clint Linton (215B)
Frank Brown – Inter-Tribal Cultural Resources Council (216)
Campo Band of Mission Indians (217)
San Diego County Archaeological Society (218)
Kumeyaay Cultural Heritage Preservation (223)
Kumeyaay Cultural Repatriation Committee (225)
Native American Distribution [Notice Only] (225A-S)
Clint Linton, Iipay Nation of Santa Ysabel
Lisa Cumper, Jamul Indian Village
Jesse Pinto, Jamul Indian Village
Mira Mesa Community Planning Group (310)
Friends of Penasquitos Preserve Inc. (313)
Miramar College (316)
Marian Bear Natural Park Recreation Council (317)
Christiana Donovan
John Pollard
Richard Drury, Lozeau Drury LLP
Daniel Charlier-Smith, Lozeau Drury LLP
Theresa Rettinghouse, Lozeau Drury LLP
Komalpreet Toor, Lozeau Drury LLP
Jonathon Weissglass, Law Offices of Jonathon Weissglass / jonathan@weissglass.com
Craig Jackson / craigmjackson@gmail.com
Robert Mixon / rmixon@sbcglobal.net
Saveen Chadalawada / saveenchad@gmail.com
Manjula Chadawada / 10066 Maya Linda Road, No. 2103, San Diego CA 92126
Karen Ruggles, KLR Planning
Leon Ramsey Jr., Mitchell M. Tsai, Attorney at Law
Mitchell M. Tsai, Mitchell M. Tsai, Attorney at Law
Allison Cordero, Hecht Solberg Robinson Goldberg & Bagley LLP
Jennifer Shanks, Spectrum Property Management

Other Interested Groups, Organizations, and Individuals - continued
Jeff Stevens
Sandra Smith
Destiny Colocho, Rincon Band of Luiseno Indians
Matthew Lilac | 10650 Granby Way, San Diego, CA 92136
Mitz Lee, Mira Mesa Senior Center
Oliver White, Pacific/Southeby's
Lisa Capper, HELIX Environmental Planning, Inc., Consultant
Allegra Parisi, Lennar, Development Representative
Ryan Green, Lennar
Marina Wurst, PDC, Civil Engineer

III. RESULTS OF PUBLIC REVIEW:

( ) No comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.

(X) Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.

Copies of the draft environmental document, the Mitigation, Monitoring and Reporting Program and any other materials are available in the office of the Development Services Department for review, or for purchase at the cost of reproduction.

Elizabeth Shearer-Nguyen
Senior Planner
Development Services Department

June 28, 2019
Date of Draft Report

June 29, 2020
Date of Final Report

Analyst: E. Shearer-Nguyen

3Roots
Environmental Impact Report

SCH No. 2018041065

Project No. 587128

June 2020

Prepared for:

City of San Diego
Development Services Department
Land Development Review
1222 First Avenue, MS 501
San Diego, CA 92101-4155

Information Sheet
for the Final EIR

Few changes have been made to this Final Environmental Impact Report (Final EIR) since public circulation of the Draft EIR. Limited changes were made to the Project description, including: (1) deletion of Draft EIR restrictions to seniors and replacement with commitment to complying with applicable affordable housing regulations; (2) clarification of Project deviations for MPDP development; and (3) focused SDG&E pole removal/replacement clarification. These, as well as other changes include minor clarifications of text, minor changes provided in response to comments received, and editorial corrections (e.g., typographical error corrections).

Substantive edits relate to elimination of age-restrictions on affordable housing and associated less than significant updates to assumptions regarding additional potential school-age children (Section 5.14), and updates to calculations on SDG&E facility impacts west of Camino Santa Fe to provide specifics promised in the Draft EIR and retaining wall descriptions (Section 5.3), as well as de minimis acreage modifications to vegetation communities (Section 5.9). The SDG&E facility changes also resulted in modification of impact footprint west of Camino Santa Fe on four figures: Figure 3-4, *SDG&E Facility Modifications*, Figure 3-18, *Carroll Canyon Road Extension (West),* 5.9-6, *Project Impacts to Vegetation and Land Cover Types*, and 5.9-7, *Project Impacts to Sensitive Biological Resources*.

City and public agency actions since the Draft EIR was circulated also affect the Final EIR. During public review, required notification letters were sent to specific adjacent-property owners related to on-site stormwater management. Also, in February 2020, resource agencies approved the proposed Multi-Habitat Preserve Area (MHPA) boundary line adjustment (BLA) to incorporate additional, and more functional, habitats. This addressed some issues identified in the Draft EIR relative to receipt of a Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision (CLOMR) to be received following EIR certification and issuance of resource agency permits. This updated information has resulted in a change in the conclusion of impacts in Section 5.15 from significant and unmitigable to less than significant in this Final EIR.

Textual changes are shown in strike-out (deleted) and underline (added) so that they can be easily seen. Modified text can be found in:

- Summary
- Chapter 1.0
- Chapter 2.0
- Chapter 3.0
- Chapter 5.0
    - Section 5.1
    - Section 5.3
    - Section 5.7
    - Section 5.8
    - Section 5.9
    - Section 5.14
    - Section 5.15
- Chapter 7.0
- Chapter 10.0
- Chapter 11.0

The remainder of the document remains as publicly circulated between June 28 and August 16, 2019.

Based on recent coordination with transit agencies, the applicant has agreed to provide project-improved sections of Carroll Canyon Road with a center alignment for bus rapid transit (BRT; additionally discussed below for technical appendices). The potential for a center alignment was accommodated through the Vesting Tentative Map and in the Draft EIR through set aside of potential right-of-way on the south side of on-site Carroll Canyon Road, thereby ensuring appropriate public right-of-way to allow for incorporation into the roadway footprint. Specifics of the center alignment have been confirmed in project conditions. For purposes of the Final EIR, please note that the reader can assume that all references to a southerly alignment of a BRT IOD adjacent to Carroll Canyon Road should be read as center alignment. Related to that, the southern location of the BRT IOD addressed in the Draft EIR abutted the project-proposed community park. Because future implementation of the BRT was identified as evaluated but uncertain, it was also noted that if the BRT was not implemented, the IOD could be developed as part of the park. Although clearly noted that 2.2 acres was related to potential BRT, the separation of the IOD from the north edge of the park to the center of Carroll Canyon Road means that references to gross park acreage at 38.3 should be read as 36.1, and references to 25.8 gross acres of community park acres should be read as 23.6 acres. These acreages substantially exceed the 20 acres of park contemplated in the adopted Carroll Canyon Master Plan.

In terms of organization, the document also is largely as presented in the Draft EIR. A new section contains the comments received on the EIR during public circulation and the responses provided to them. Those comments and responses precede the body of the Final EIR and immediately follow these pages.

Relative to technical appendices, EIR Appendix H, the September 2019 Long-term Habitat Management Plan has been clarified as part of the BLA approval. The amended document includes minor changes regarding such items as: (1) long-term manager qualifications, (2) timing/frequency of monitoring/management actions, (3) respective City/long-term manager/homeowner's association responsibility, and (4) preliminary costs for the non-wasting endowment to fund said management. Appendix B to EIR Appendix H, the July 2019 Habitat Reclamation and Mitigation Plan, has been updated to reflect incremental acreage impacts as reflected in that BLA approval, which are also appended to EIR Appendix G as new Appendix F to the Biological Technical Report. New Appendix U contains supplemental information to the publicly circulated Draft EIR addressing implementation of BRT service in a center alignment within Carroll Canyon Road. Similarly, Appendix T has been updated, with the focus on references to the center BRT IOD. Appendix O contains an addendum confirming sewer flow capacity.

Each of the modifications discussed above provides confirmatory information, or reflects minor changes to development footprint, and less than significant changes relative to project analyses. None of the changes would constitute new significant impacts under CEQA, require a new mitigation measure, or constitute a substantial increase in the severity of a previously identified environmental impact.

3Roots San Diego Project Environmental Impact Report

SCH No. 2018041065; Project No. 587128

Comments and Responses to Comments on the Draft EIR

June 2020

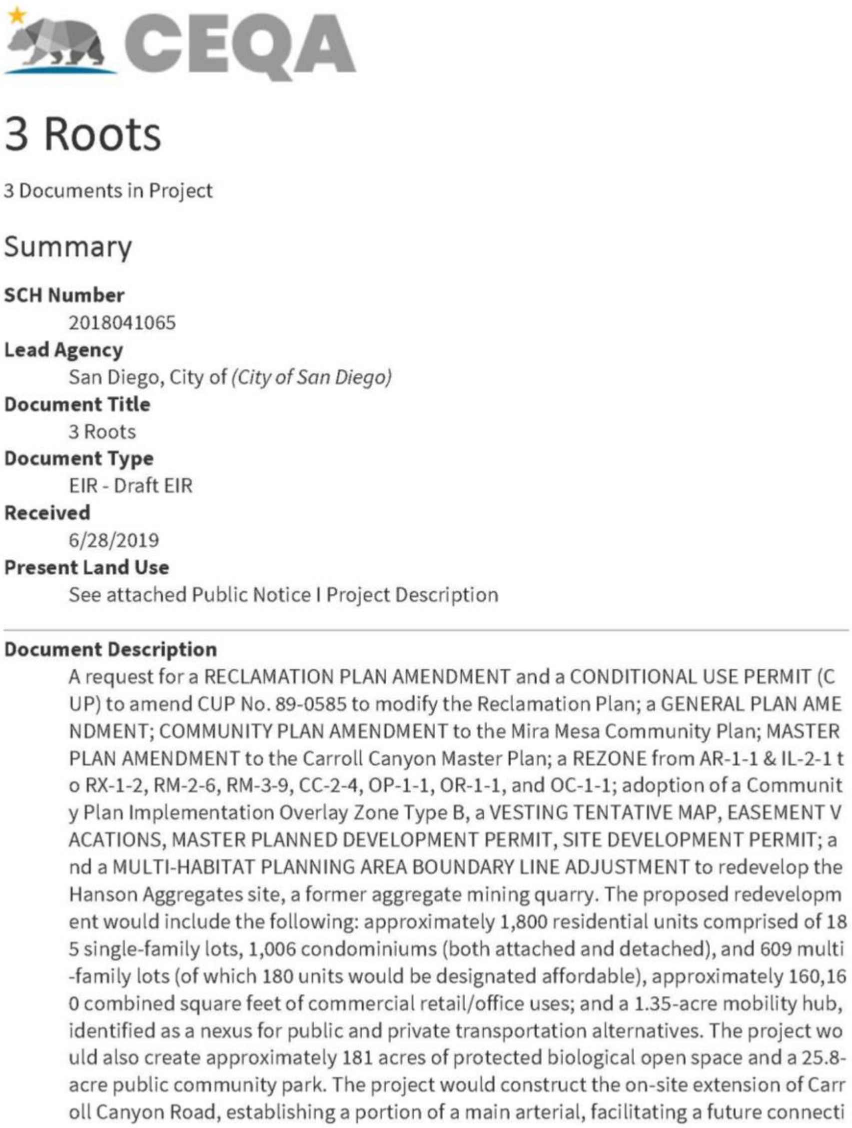
Public Review Letters

The following comment letters were received from agencies, organizations, and individuals during the public review of the Draft Environmental Impact Report (Draft EIR). A copy of each comment letter along with corresponding staff responses has been included. Letters and responses are provided in side-by-side format for ease of reader review.

Comment letters were received from the 12 agencies, organizations and individuals shown on the matrix below. Several comment letters received during the Draft EIR public review period contained requests for revisions that resulted in minor changes and text clarifications to the Draft EIR text. These changes to the text are indicated by strikeout (deleted) and underline (inserted) markings in the Final EIR. Some of the comments do not pertain to the adequacy of analysis in the Draft EIR or to other aspects pertinent to the potential effects of the proposed project on the environment pursuant to CEQA. Regardless, a good faith effort has been made by the City to respond to the comments submitted where they may touch on environmental analyses.

Letter Identification	Commenter	Address	Starting page
State Agencies			
S1 State Clearinghouse and Planning Unit	CEQAnet	https://ceqanet.opr.ca.gov/	RTC-1
S2 Department of Conservation, Division of Mine Reclamation	Carol E. Atkins, Manager Environmental Services Unit and Paul Fry, Manager Engineering and Geology Unit	801 K street, MS 09-06 Sacramento, CA 95814	RTC-5
S3 Department of Transportation, District 11	Maurice Eaton, Chief Development Review Branch	4050 Taylor Street, MS-240 San Diego, CA 92110	RTC-6
S4 Native American Heritage Commission	Steven Quinn Associate Governmental Program Analyst	1550 Harbor Blvd, Suite 100 West Sacramento, CA 05691	RTC-14
S5 Natural Resources Agency, Department of Fish and Wildlife, South Coast Region	Gail K. Sevrens Environmental Program Manager South Coast Region	3883 Ruffin Road San Diego, CA 92123	RTC-19
Regional Agencies			
R1 San Diego Association of Governments	Seth Litchney Senior Regional Planner	401 B Street, Suite 800 San Diego, CA 92101-4231	RTC-24
Local Agencies			
L1 Mira Mesa Community Planning Group	Jeff Stevens Chair, Mira Mesa Community Planning Group	Mmcpg.chair@gmail	RTC-27

Special Interest and Individuals			
SI1 D6 Small Business	Sandra Smith	Sandysmith92126@gmail.com	RTC-28
SI2 Rincon Band of Luiseño Indians Cultural Resources Department	Destiny Colocho, RPA Tribal Historic Preservation Officer Rincon Cultural Resources Department	One Government Center Lane Valley Center, CA 92082	RTC-29
SI3	Matthew Lilac	10650 Granby Way San Diego, CA 92136	RTC-30
SI4 Mira Mesa Senior Center	Mitz Lee Executive Director	8460 Mira Mesa Blvd San Diego, CA 92126	RTC-31
SI5 Southwest Regional Council of Carpenters and Michael Carmen LaBruno	Mitchell M. Tsai Attorney at Law	155 South El Molino Avenue, Suite 104 Pasadena, CA 91101	RTC-32
SI6	Oliver White	Pacific/Southeby's 111 1 Prospect Street La Jolla, CA 92037	RTC-130



CEQA

3 Roots

3 Documents in Project

S1-1 ## Summary

SCH Number
2018041065

Lead Agency
San Diego, City of *(City of San Diego)*

Document Title
3 Roots

Document Type
EIR - Draft EIR

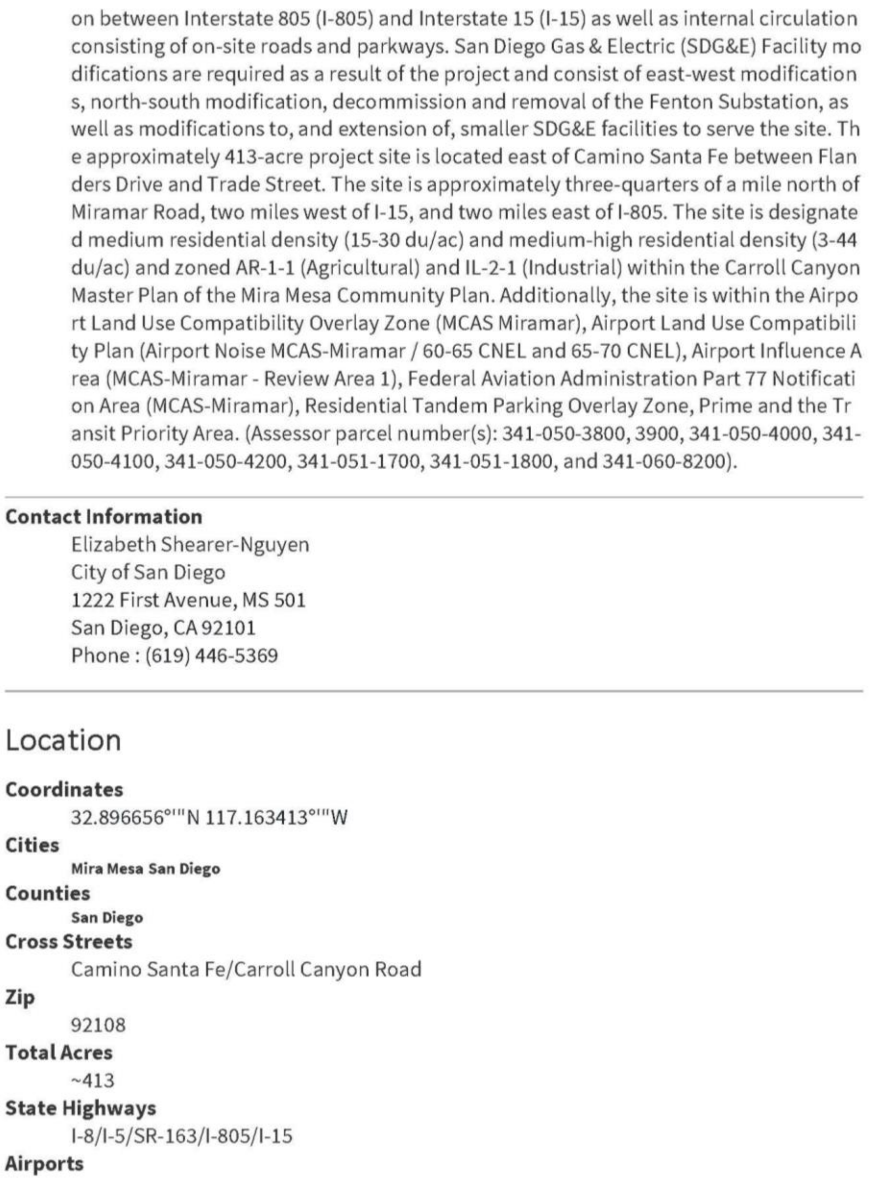
Received
6/28/2019

Present Land Use
See attached Public Notice I Project Description

Document Description

A request for a RECLAMATION PLAN AMENDMENT and a CONDITIONAL USE PERMIT (CUP) to amend CUP No. 89-0585 to modify the Reclamation Plan; a GENERAL PLAN AMENDMENT; COMMUNITY PLAN AMENDMENT to the Mira Mesa Community Plan; MASTER PLAN AMENDMENT to the Carroll Canyon Master Plan; a REZONE from AR-1-1 & IL-2-1 to RX-1-2, RM-2-6, RM-3-9, CC-2-4, OP-1-1, OR-1-1, and OC-1-1; adoption of a Community Plan Implementation Overlay Zone Type B, a VESTING TENTATIVE MAP, EASEMENT VACATIONS, MASTER PLANNED DEVELOPMENT PERMIT, SITE DEVELOPMENT PERMIT; and a MULTI-HABITAT PLANNING AREA BOUNDARY LINE ADJUSTMENT to redevelop the Hanson Aggregates site, a former aggregate mining quarry. The proposed redevelopment would include the following: approximately 1,800 residential units comprised of 185 single-family lots, 1,006 condominiums (both attached and detached), and 609 multi-family lots (of which 180 units would be designated affordable), approximately 160,160 combined square feet of commercial retail/office uses; and a 1.35-acre mobility hub, identified as a nexus for public and private transportation alternatives. The project would also create approximately 181 acres of protected biological open space and a 25.8-acre public community park. The project would construct the on-site extension of Carroll Canyon Road, establishing a portion of a main arterial, facilitating a future connecti

S1-1 The comment notes dates of public circulation, describes the project, and identifies two state agencies that submitted comment letters (California Department of Fish and Wildlife and Native American Heritage Commission). Those letters and specific responses are provided below (reference letters S3 and S4). No additional response is required.



on between Interstate 805 (I-805) and Interstate 15 (I-15) as well as internal circulation consisting of on-site roads and parkways. San Diego Gas & Electric (SDG&E) Facility modifications are required as a result of the project and consist of east-west modifications, north-south modification, decommission and removal of the Fenton Substation, as well as modifications to, and extension of, smaller SDG&E facilities to serve the site. The approximately 413-acre project site is located east of Camino Santa Fe between Flanders Drive and Trade Street. The site is approximately three-quarters of a mile north of Miramar Road, two miles west of I-15, and two miles east of I-805. The site is designated medium residential density (15-30 du/ac) and medium-high residential density (3-44 du/ac) and zoned AR-1-1 (Agricultural) and IL-2-1 (Industrial) within the Carroll Canyon Master Plan of the Mira Mesa Community Plan. Additionally, the site is within the Airport Land Use Compatibility Overlay Zone (MCAS Miramar), Airport Land Use Compatibility Plan (Airport Noise MCAS-Miramar / 60-65 CNEL and 65-70 CNEL), Airport Influence Area (MCAS-Miramar - Review Area 1), Federal Aviation Administration Part 77 Notification Area (MCAS-Miramar), Residential Tandem Parking Overlay Zone, Prime and the Transit Priority Area. (Assessor parcel number(s): 341-050-3800, 3900, 341-050-4000, 341-050-4100, 341-050-4200, 341-051-1700, 341-051-1800, and 341-060-8200).

Contact Information

Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101
Phone : (619) 446-5369

Location

Coordinates
32.896656°'"N 117.163413°'"W
Cities
Mira Mesa San Diego
Counties
San Diego
Cross Streets
Camino Santa Fe/Carroll Canyon Road
Zip
92108
Total Acres
~413
State Highways
I-8/I-5/SR-163/I-805/I-15
Airports

MCAS Miramar

Schools

Challenger Middle School

Waterways

Carroll Canyon Creek

Notice of Completion

Review Period Start

6/28/2019

Review Period End

8/12/2019

Development Type

Power (69 KV lines) Water Facilities Other (Reclamation Plan Amendment; 160,160 combined square feet of comm)

Local Action

General Plan Amendment Community Plan Master Plan Rezone Reclamation Plan Amendment, CUP Amendment; CPIOZ B, Vesting Tentative Map. Planned Development Permit. Site Development Permit. Conditional Use Permit. Easement

Project Issues

Aesthetic/Visual Air Quality Archaeologic-Historic Biological Resources Drainage/Absorption Flood Plain/Flooding Geologic/Seismic Noise Public Services Solid Waste Traffic/Circulation Tribal Cultural Resources Vegetation Water Quality Wetland/Riparian Wildlife Land Use Cumulative Effects

Reviewing Agencies

Air Resources Board, Transportation Projects California Department of Parks and Recreation California Department of Transportation, District 11 California Highway Patrol California Regional Water Quality Control Board, San Diego Region 9 California State Lands Commission Caltrans, Division of Aeronautics Department of Housing and Community Development Department of Toxic Substances Control Office of Emergency Services, California Resources Agency Resources, Recycling and Recovery State Water Resources Control Board, Division of Water Quality California Native American Heritage Commission California Department of Fish and Wildlife, South Coast Region 5

Attachments

Environmental Document

0_SCH Summary Form_3Roots **PDF 541 K** 1_Notice of EIR Availability_3Roots **PDF 118 K** 2_Draft Certification_3Roots **PDF 129 K** Appendix A_Notice of Preparation-Scoping Meeting Transcript-Comment Letters **PDF 14368 K** Appendix B_Transportation Impact Analysis **PDF 44989 K** Appendix C_Air Quality Technical Report **PDF 5462 K** Appendix D_CAP Consistency Checklist **PDF 3885 K** Appendix E_Acoustical Analysis Report **PDF 13529 K** Appendix F_Geotechnical Reports **PDF 51363 K** Appendix G_Biological Technical Report **PDF 82531 K** Appendix H_Long Term Habitat Management Plan **PDF 33403 K** Appendix I_Jurisdictional Delineation Report **PDF 32243 K** Appendix J_Archaelogical Resources Report Form **PDF 6781 K** Appendix K_Phase I Environmental Site Assessment **PDF 262802 K** Appendix L_Phase II Environmental Site Assessment **PDF 8357**

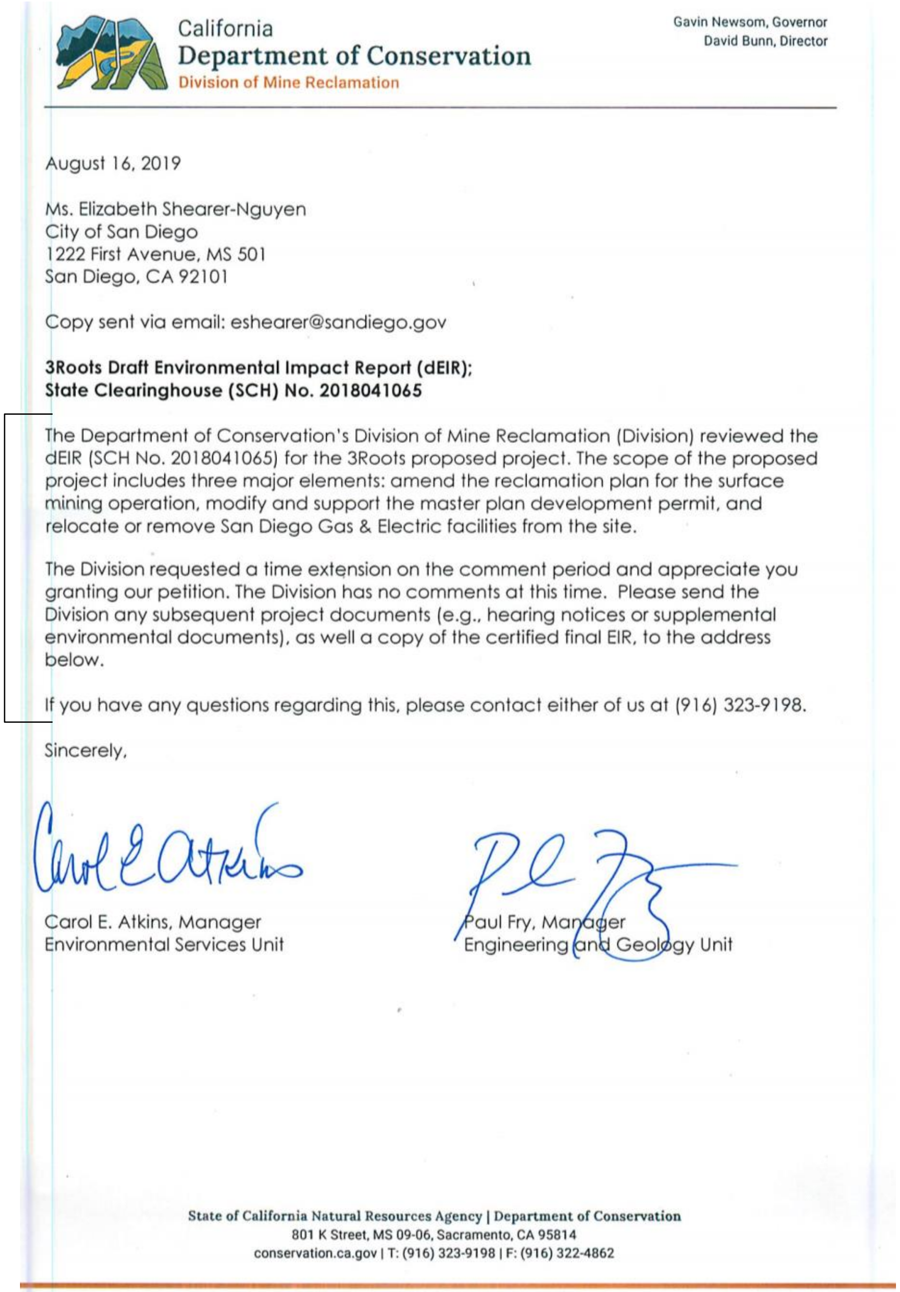
K Appendix M_Water Supply Assessment Report **PDF 1063 K** Appendix N_Water Study **PDF 9918 K** Appendix O_Sewer Study **PDF 12746 K** Appendix O_Sewer Study **PDF 12746 K** Appendix P_Waste Management Plan **PDF 5296 K** Appendix Q_Preliminary Drainage Report **PDF 65229 K** Appendix R1_Preliminary Hydromodification Management Study **PDF 12203 K** Appendix R2_Hydraulic Analyses **PDF 21174 K** Appendix S_Storm Water Quality Management Plan **PDF 117947 K** Appendix T_Master Planned Development Permit **PDF 82466 K** Memo-Corrected Document Type **PDF 593 K**

NOC

Corrected NOC **PDF 97 K** noc **PDF 2210 K**

State Comments

2018041065_CDFW_pdf 3 Roots Project-San Diego **PDF 605 K** 2018041065_NAHC_NOP Early Consult Shearer-NguyenSanDiego - 3 Roots Signed **PDF 272 K**



California
Department of Conservation
Division of Mine Reclamation

Gavin Newsom, Governor
David Bunn, Director

August 16, 2019

Ms. Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

Copy sent via email: esheárer@sandiego.gov

3Roots Draft Environmental Impact Report (dEIR);
State Clearinghouse (SCH) No. 2018041065

S2-1

The Department of Conservation's Division of Mine Reclamation (Division) reviewed the dEIR (SCH No. 2018041065) for the 3Roots proposed project. The scope of the proposed project includes three major elements: amend the reclamation plan for the surface mining operation, modify and support the master plan development permit, and relocate or remove San Diego Gas & Electric facilities from the site.

The Division requested a time extension on the comment period and appreciate you granting our petition. The Division has no comments at this time. Please send the Division any subsequent project documents (e.g., hearing notices or supplemental environmental documents), as well a copy of the certified final EIR, to the address below.

If you have any questions regarding this, please contact either of us at (916) 323-9198.

Sincerely,

Carol E Atkins

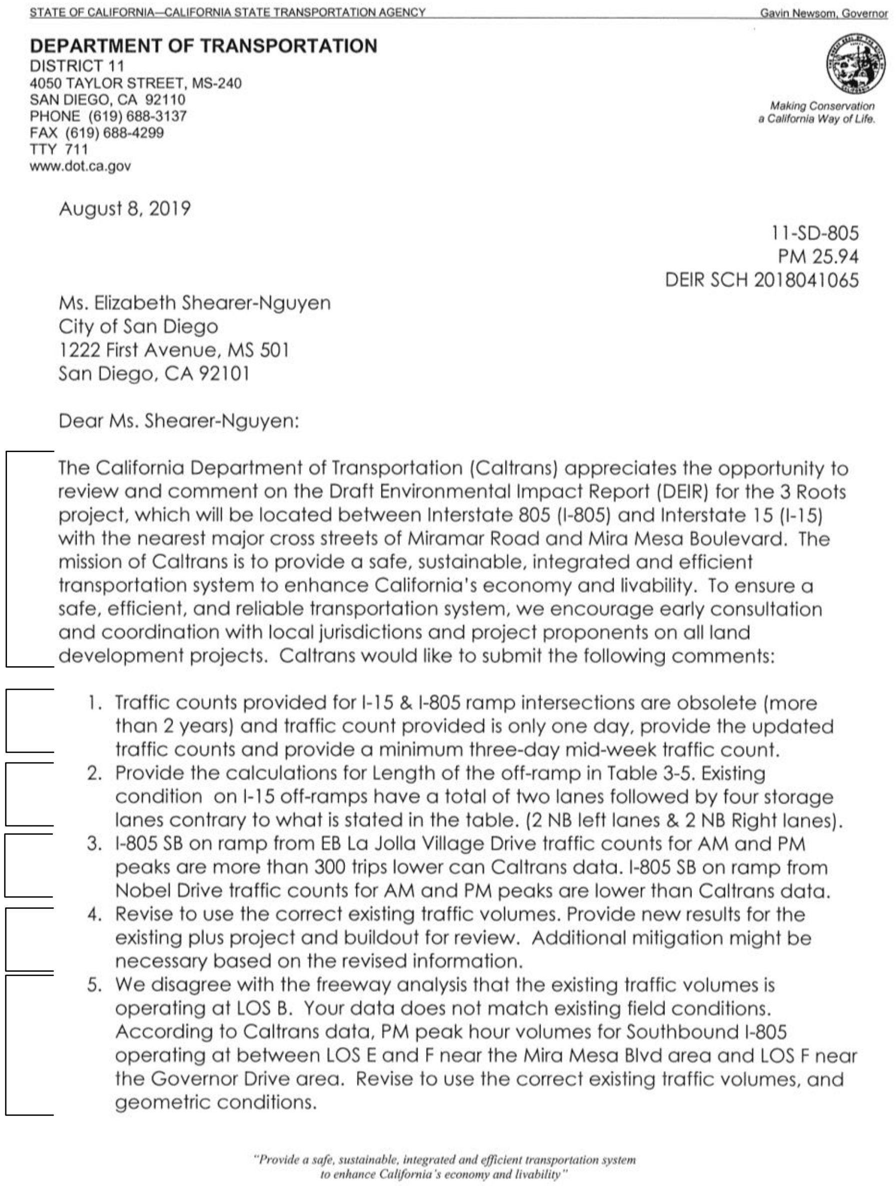
Carol E. Atkins, Manager
Environmental Services Unit

Paul Fry, Manager
Engineering and Geology Unit

State of California Natural Resources Agency | Department of Conservation
801 K Street, MS 09-06, Sacramento, CA 95814
conservation.ca.gov | T: (916) 323-9198 | F: (916) 322-4862

S2-1 Comments noted. The City agrees with the summary statement of the three major project elements. As a responsible agency and commenter on the Draft EIR, the Division will receive any subsequent notices and documents, including the Final EIR.

COMMENTS



STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
4050 TAYLOR STREET, MS-240
SAN DIEGO, CA 92110
PHONE (619) 688-3137
FAX (619) 688-4299
TTY 711
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Making Conservation a California Way of Life.

August 8, 2019

11-SD-805
PM 25.94
DEIR SCH 2018041065

Ms. Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

Dear Ms. Shearer-Nguyen:

S3-1 The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the 3 Roots project, which will be located between Interstate 805 (I-805) and Interstate 15 (I-15) with the nearest major cross streets of Miramar Road and Mira Mesa Boulevard. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. To ensure a safe, efficient, and reliable transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all land development projects. Caltrans would like to submit the following comments:

S3-2
1. Traffic counts provided for I-15 & I-805 ramp intersections are obsolete (more than 2 years) and traffic count provided is only one day, provide the updated traffic counts and provide a minimum three-day mid-week traffic count.

S3-3
2. Provide the calculations for Length of the off-ramp in Table 3-5. Existing condition on I-15 off-ramps have a total of two lanes followed by four storage lanes contrary to what is stated in the table. (2 NB left lanes & 2 NB Right lanes).

S3-4
3. I-805 SB on ramp from EB La Jolla Village Drive traffic counts for AM and PM peaks are more than 300 trips lower can Caltrans data. I-805 SB on ramp from Nobel Drive traffic counts for AM and PM peaks are lower than Caltrans data.

S3-5
4. Revise to use the correct existing traffic volumes. Provide new results for the existing plus project and buildout for review. Additional mitigation might be necessary based on the revised information.

S3-6
5. We disagree with the freeway analysis that the existing traffic volumes is operating at LOS B. Your data does not match existing field conditions. According to Caltrans data, PM peak hour volumes for Southbound I-805 operating at between LOS E and F near the Mira Mesa Blvd area and LOS F near the Governor Drive area. Revise to use the correct existing traffic volumes, and geometric conditions.

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

RESPONSES

S3-1 Comment noted.

S3-2 Typically only one day of traffic counts have been collected. The Caltrans Guide for the Preparation of Traffic Impact Studies (2002) does not require multi-day counts. Michael Baker collected new peak hour intersection turning movement counts the week of September 2, 2019 at the following locations:

- I-805 SB on ramp / La Jolla Village Drive
- I-805 SB on ramp / Nobel Drive

Two days of traffic counts were collected midweek (Wednesday and Thursday) in the AM and PM Peak. Results of these counts are provided in Attachments A-1, A-2, A-3, and A-4 to this response.

S3-3 The TIA included an average turn pocket length for evaluating ramp queues. In response to Caltrans request to explain how average queues were calculated, the following table provides a summary of the individual turn pocket lengths. These turn pocket lengths were used to calculate the pocket length identified in Table 3-5 of the TIA. As shown in the footnote on Table 3-5 in the TIA and in Table 1 below, the ramp lengths reported in the TIA are an average of the two lanes serving a specific movement (i.e., the average of the two left turn lanes and the average of the two right turn lanes).

Table 1: Summary of Ramp Lengths – Average and Per Lane Turn Pocket Lengths

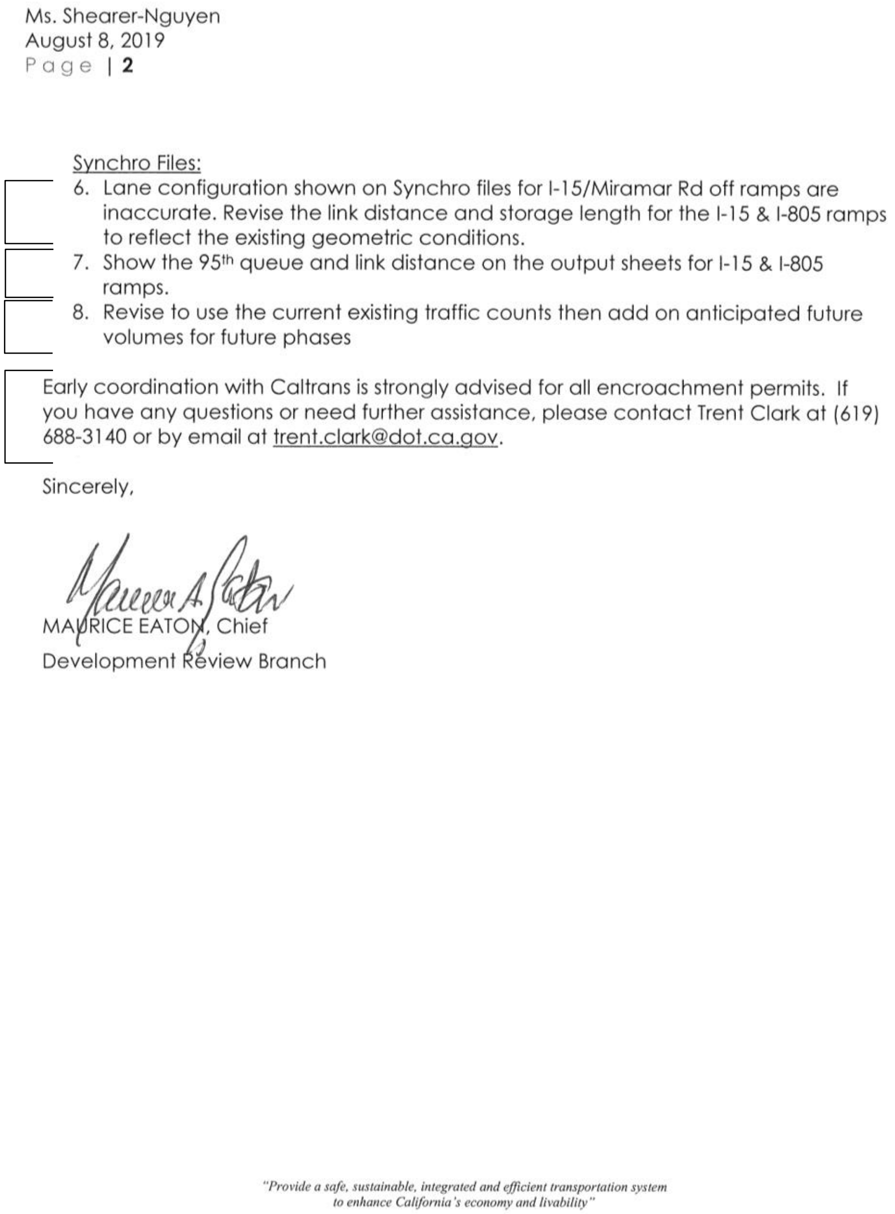
Off-Ramp Intersection Approach Lane	# Lanes	Average Length Reported in TIA (feet)	Outside Left	Inside Left	Inside Right	Outside Right
SB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd						
Southbound Left	2	1,016 (1)	450	1582		
Southbound Right	2	1,295 (1)			1580	1010
NB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd						
Northbound Left	2	1,110 (1)	730	1490		
Northbound Right	2	899 (1)			1480	320
NB I-805 Off-Ramp at Nobel Dr						
Northbound Left	2	1,429 (1)	2,152	706		
Northbound Right	2	1,429 (1)			706	2,152
SB I-15 Off-Ramp at Miramar Rd						
Southbound Left	2	844 (1)	520	1170		
Southbound Right	2	894 (1)			1170	610
NB I-15 Off-Ramp at Miramar Rd						
Northbound Left	2	1,132 (1)	615	1650		
Northbound Right	2	1,132 (1)			1650	615

1 Where an off-ramp has turn bays approaching the intersection, the storage length was calculated for both the turn bay length and total off-ramp length.

S3-4 Refer to Response to Comment 3-2 of this letter. New data were collected on September 4 and September 5, 2019. Relative to I-805 SB on-ramp AM and PM peak counts, volume reports are similar to those collected specific to and reported in the 3Roots TIA. After a review of the count data provided by Caltrans and recently completed TIAs in the study area, it was determined that the traffic counts collected for, and analyzed in and reported in the 3Roots TIA, reflect the existing traffic conditions in the study area. Data provided by Caltrans were more than two years old and reflect conditions prior to infrastructure projects near the project site; including the reconfiguration of the I-805 / La Jolla Village Drive interchange and the Direct Access Ramps on I-15 at Hillery Drive. It was determined through discussions with between the applicant and Caltrans that the differences in volumes between the applicant and Caltrans that the historic data from Caltrans and recently collected data for this project are due to both these changes in infrastructure as well as development that has occurred in the study area.

S3-5 Please refer to Response to Comment 3-4. No additional mitigation is required based on the count data and analysis used in TIA.

S3-6 New traffic count data have been posted to the Caltrans website for both daily traffic on the freeway mainline and the K-D factors for the corridors. Michael Baker used the same spreadsheet presented in October 2019 to calculate the freeway LOS using data currently available on Caltrans website. Tables summarizing the Existing, Existing plus project Phase 1, Existing plus Project Buildout, 2021 with and without Phase 1, 2025 with and without Project buildout, and 2050 without and with Project Buildout are provided as Attachment B. Also provided in Attachment B is a comparison of the volume, V/C and LOS. As shown, change in data does not result in a change in finding in the TIA. The Project does not result in a significant impact on any of the freeway segments and no changes are required to the TIA or Draft EIR significance conclusions.



Ms. Shearer-Nguyen
August 8, 2019
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Synchro Files:

S3-7 6. Lane configuration shown on Synchro files for I-15/Miramar Rd off ramps are inaccurate. Revise the link distance and storage length for the I-15 & I-805 ramps to reflect the existing geometric conditions.

S3-8 7. Show the 95th queue and link distance on the output sheets for I-15 & I-805 ramps.

3-9 8. Revise to use the current existing traffic counts then add on anticipated future volumes for future phases

S3-10 Early coordination with Caltrans is strongly advised for all encroachment permits. If you have any questions or need further assistance, please contact Trent Clark at (619) 688-3140 or by email at trent.clark@dot.ca.gov.

Sincerely,

MAURICE EATON, Chief
Development Review Branch

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S3-7 Michael Baker updated the Synchro file and re-ran all study scenarios for the I-15/Miramar Road Ramps to reflect actual turn pocket lengths rather than average turn pocket lengths. The results of the level of service analysis are provided as Attachment C to this response to comments. A comparison of the level of service reported in the TIA and the updated LOS analysis with the modified ramp configuration shows no change in LOS. Therefore, there are no changes to the findings in the TIA or to the Draft EIR.

S3-8 The 95th percentile queue worksheets are provided as Attachment D to this response and summarized in Tables 2a through 2c. As shown, the queue is within the allowable storage and the project results in no significant impacts.

S3-9 Please refer to Responses to Comments 3-4 and 3-5 of this letter.

S3-10 Comments noted. The applicant does not anticipate an encroachment permit will be necessary.

Reader, please note: Attachments A through D referenced in responses above are located at the end of these responses, following page RTC-132.

Table 2a: Summary of 95th Percentile Queues for I-15 / Miramar Off Ramps

	I-15 SB Ramps / Miramar											
	AM						PM					
	Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?		Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?	
		Outside Left	Inside Left		Inside Right	Outside Right		Outside Left	Inside Left		Inside Right	Outside Right
Storage Length		**520′**	**1,170′**		**1,170′**	**610′**		**520′**	**1,170′**		**1,170′**	**610′**
Existing	41			428			27			175		
Existing + Phase 1	44			475			27			185		
Existing + Project	41			443			26			205		
2021 No Project	43			471			27			210		
2021 with Phase 1	43			473			27			220		
2025 with Phase 1	45			519			27			250		
2025 with Project Buildout	44			525			26			292		
2050 No Project	47			532			27			297		
2050 With Project	48			560			27			314		

	I-15 NB Ramps / Miramar											
	AM						PM					
	Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?		Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?	
		Outside Left	Inside Left		Inside Right	Outside Right		Outside Left	Inside Left		Inside Right	Outside Right
Storage Length		**615′**	**1,650′**		**1,650′**	**615′**		**615′**	**1,650′**		**1,650′**	**615′**
Existing	258			56			349			100		
Existing + Phase 1	269			56			357			103		
Existing + Project	268			56			364			114		
2021 No Project	267			56			361			138		
2021 with Phase 1	269			56			369			141		
2025 with Phase 1	279			56			381			187		
2025 with Project Buildout	301			55			414			185		
2050 No Project	303			56			407			295		
2050 With Project	318			55			435			293		

Table 2b: Summary of 95th Percentile Queues for I-805 / Nobel Drive

	I-805 NB / Nobel											
	AM						**PM**					
	Per Lane Left Turn Queue (feet)	**Queue Exceed Storage?**		**Per Lane Right Turn Queue (feet)**	**Queue Exceed Storage?**		**Per Lane Left Turn Queue (feet)**	**Queue Exceed Storage?**		**Per Lane Right Turn Queue (feet)**	**Queue Exceed Storage?**	
		Outside Left	**Inside Left**		**Inside Right**	**Outside Right**		**Outside Left**	**Inside Left**		**Inside Right**	**Outside Right**
Storage Length		**2,152’**	**706’**		**706’**	**2,152’**		**2,152’**	**706’**		**706’**	**2,152’**
Existing	263			79			205			82		
Existing + Phase 1	281			130			205			132		
Existing + Project	271			117			200			168		
2021 No Project	273			114			214			113		
2021 with Phase 1	273			125			214			164		
2025 with Phase 1	282			153			217			184		
2025 with Project Buildout	290			184			191			156		
2050 No Project	312			213			230			176		
2050 With Project	312			233			223			202		

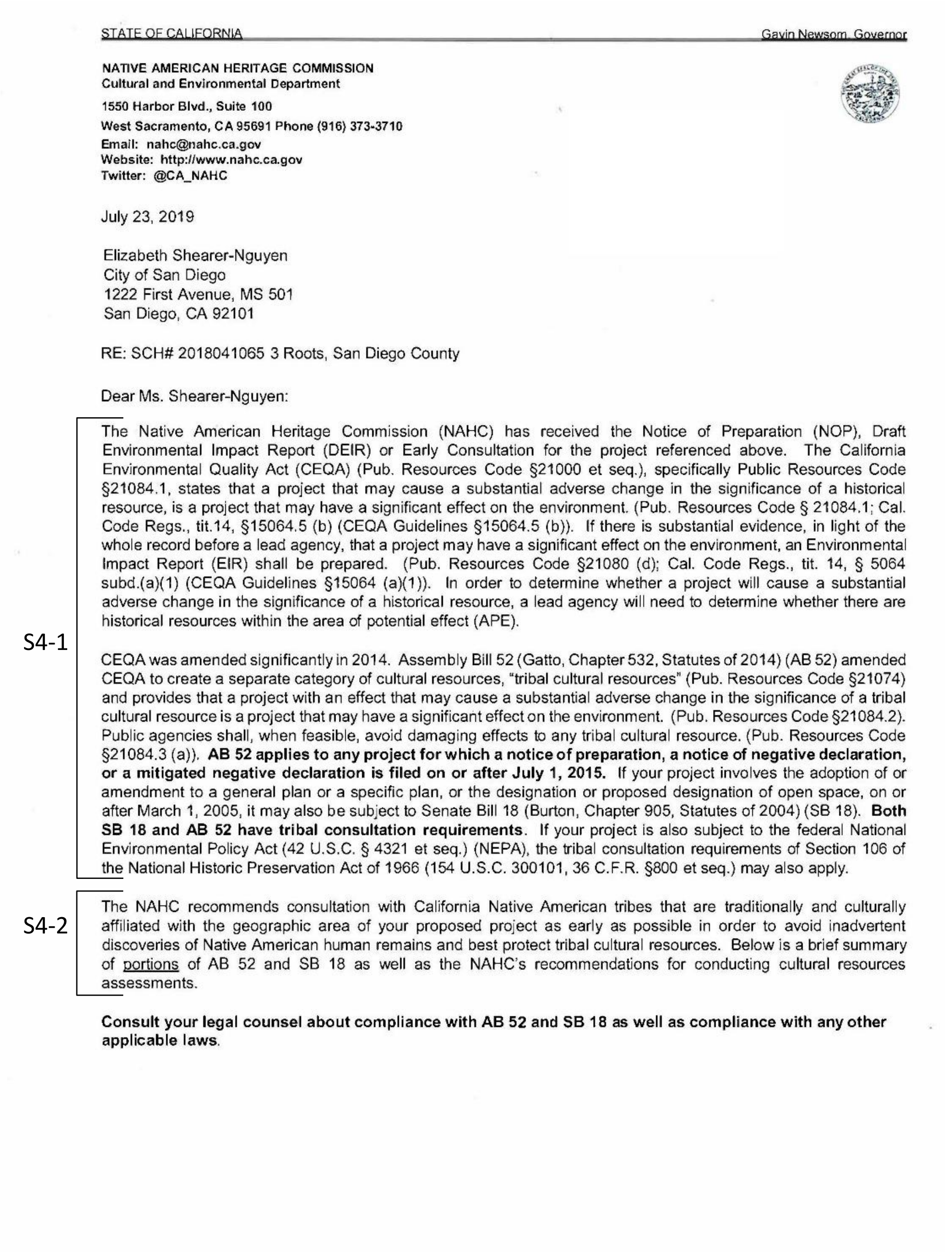
Table 2c: Summary of 95th Percentile Queues for I-805 / La Jolla Village Drive-Miramar Road Off Ramps

	I-805 SB Ramps / LVD - Miramar											
	AM						PM					
	Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?		Per Lane Left Turn Queue (feet)	Queue Exceed Storage?		Per Lane Right Turn Queue (feet)	Queue Exceed Storage?	
		Outside Left	Inside Left		Inside Right	Outside Right		Outside Left	Inside Left		Inside Right	Outside Right
Storage Length		450’	1,582’		1,580’	1,010’		450’	1,582’		1,580’	1,010’
Existing	227			970			99			414		
Existing + Phase 1	241			1,038		Yes (28’)	106			415		
Existing + Project	233			970			112			418		
2021 No Project	243			1,047		Yes (37’)	101			436		
2021 with Phase 1	250			1,047		Yes (37’)	107			438		
2025 with Phase 1	259			1,119		Yes (9’)	111			467		
2025 with Project Buildout	270			1,098		Yes (88’)	115			460		
2050 No Project	289			1,237	(1)	Yes (227’)	119			552		
2050 With Project	289			1,237	(1)	Yes (227’)	119			555		

Note: (1) When the additional queue is added to the per lane queue for the inside right lane, the inside right lane queue is1,465 feet (1237 + 227 = 1,465’ < 1,580). Therefore, the queue can be maintained within the existing available storage (1,580’).

	I-805 SB Ramps / LVD - Miramar											
	AM						**PM**					
	Per Lane Left Turn Queue (feet)	**Queue Exceed Storage?**		**Per Lane Right Turn Queue (feet)**	**Queue Exceed Storage?**		**Per Lane Left Turn Queue (feet)**	**Queue Exceed Storage?**		**Per Lane Right Turn Queue (feet)**	**Queue Exceed Storage?**	
		Outside Left	**Inside Left**		**Inside Right**	**Outside Right**		**Outside Left**	**Inside Left**		**Inside Right**	**Outside Right**
Storage Length		**730′**	**1,490′**		**1,480′**	**320′**		**730′**	**1,490′**		**1,480′**	**320′**
Existing	352			108			261			32		
Existing + Phase 1	362			119			261			36		
Existing + Project	352			125			261			38		
2021 No Project	361			115			274			32		
2021 with Phase 1	361			119			274			36		
2025 with Phase 1	376			125			287			36		
2025 with Project Buildout	375			128			282			36		
2050 No Project	363			118			302			35		
2050 With Project	363			127			302			39		

COMMENTS



STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
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West Sacramento, CA 95691 Phone (916) 373-3710
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July 23, 2019

Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

RE: SCH# 2018041065 3 Roots, San Diego County

Dear Ms. Shearer-Nguyen:

S4-1

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

S4-2

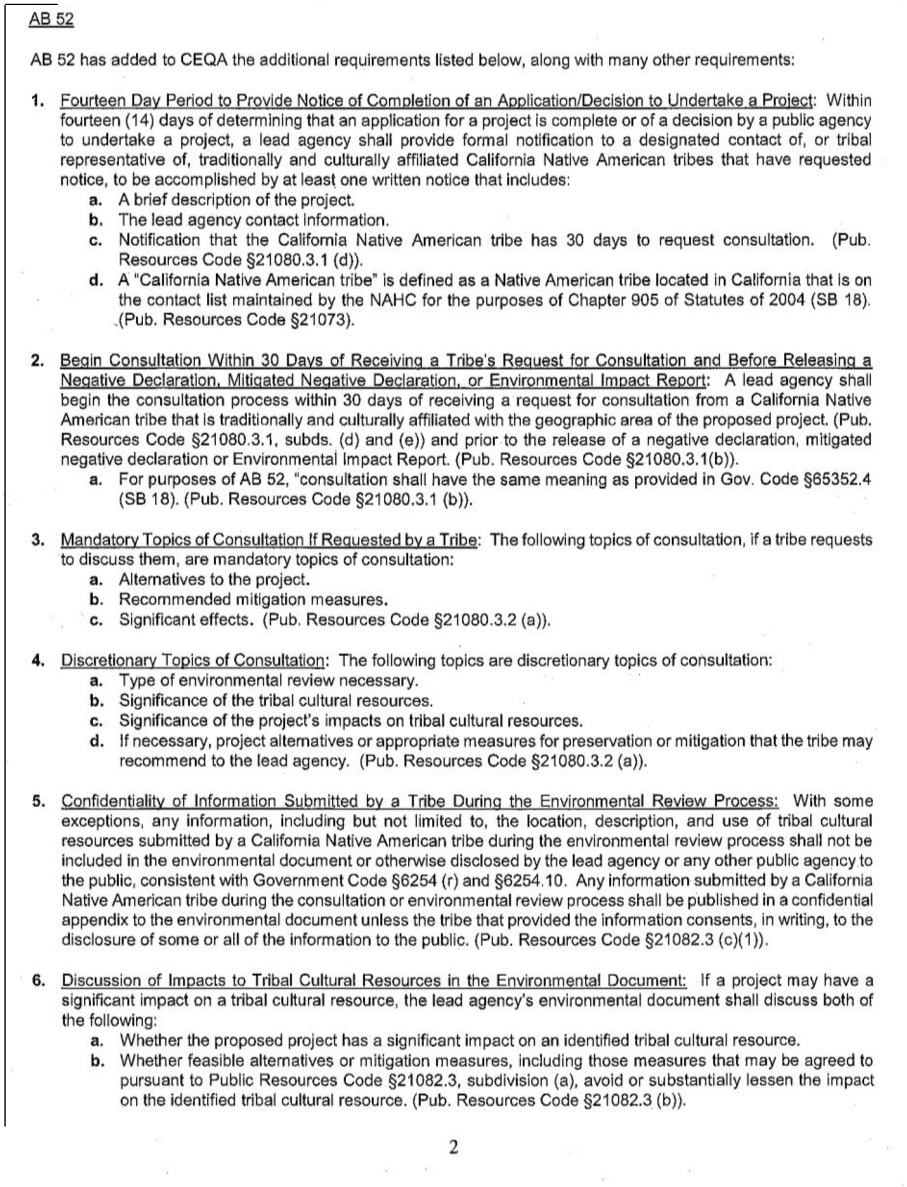
The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

RESPONSES

S4-1 Comments noted. The NAHC received notice of availability of the Draft EIR. The City agrees with the statements of law in these paragraphs.

S4-2 Consistent with this comment, the City consulted with Native American tribes traditionally and culturally affiliated with the geographic area of the project. Specific details are provided in the responses below.



AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    a. A brief description of the project.
    b. The lead agency contact information.
    c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
    d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
    a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

S4-3

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
    a. Alternatives to the project.
    b. Recommended mitigation measures.
    c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
    a. Type of environmental review necessary.
    b. Significance of the tribal cultural resources.
    c. Significance of the project's impacts on tribal cultural resources.
    d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
    a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
    b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

2

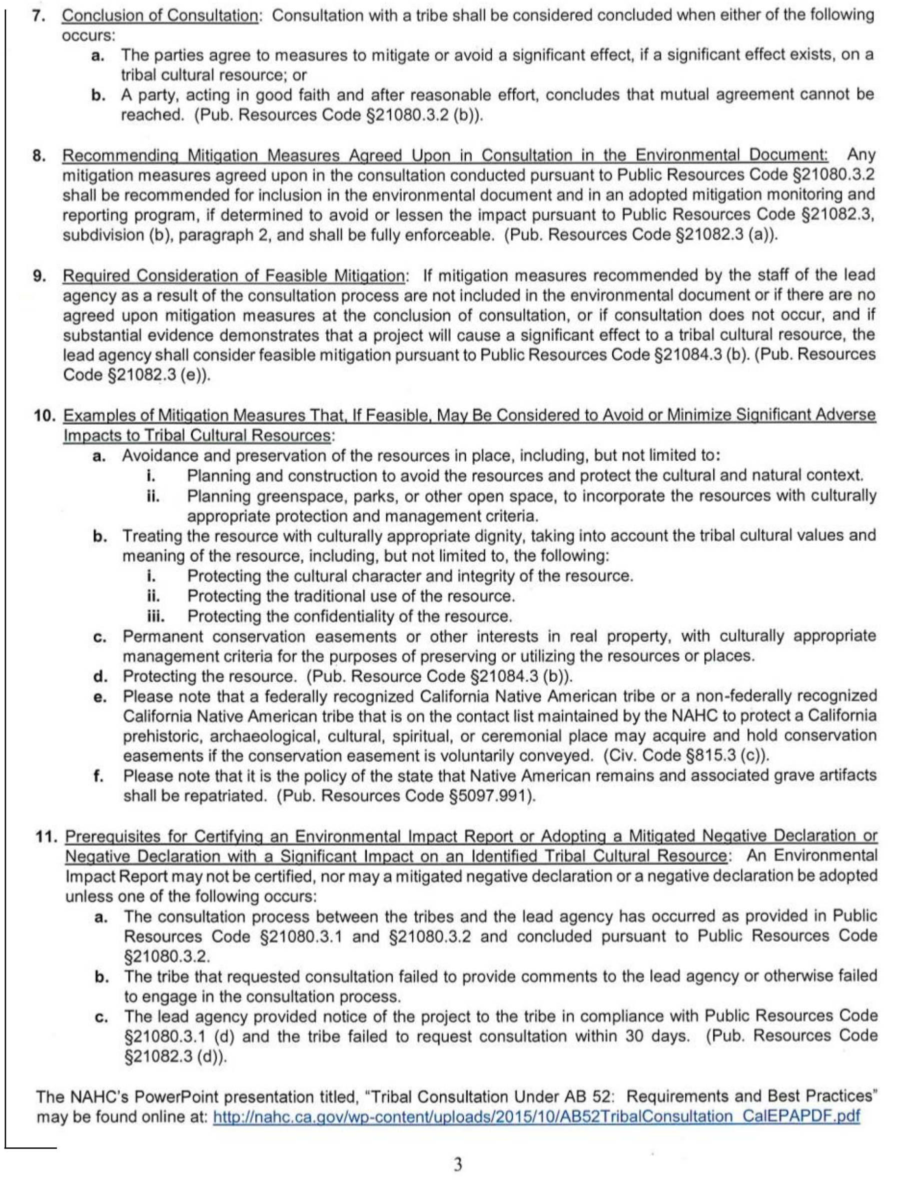
S4-3 As disclosed in Section 5.11 of the Draft EIR, in accordance with the requirements of PRC Section 21080.3.1, the City of San Diego contacted the Iipay Nation of Santa Isabel and the Jamul Indian Village, both traditionally and culturally affiliated with the project area. These tribes were notified via email on May 8, 2018 and both tribes responded within the 30-day formal notification period requesting consultation, which occurred on May 11, 2018. Both Native American tribes concurred with staff's determination and the consultation process was concluded based on site characteristics and impact/mitigation summarized below.

No specific information regarding location, description or use of cultural resources provided during the consultation process was included in the publicly circulated Draft EIR.

As described in EIR Section 5.11, the project site is largely disturbed as the result of a multi-decade mining operation that is now concluded, and no known resources are known within the project footprint, There is some potential, however, for inadvertent discovery of a buried or subsurface resource that could be impacted during project implementation. Potential impacts would be considered significant.

Mitigation for these (currently unanticipated) potential impacts occurring during construction to unknown resources is identified in the EIR in Sections 5.10 and 5.11, as well as in Chapter 11, which constitutes the City Mitigation, Monitoring, and Reporting Program. The measure requires presence of a Native American monitor to be on site during construction activities in areas that potentially could contain currently unknown resources and also requires coordination with the Most Likely Descendent in the unexpected event of location of Native American remains and/or associated grave artifacts. Based on the noted May coordination and the mitigation measures (TCR-1/HIS-1) identified in the EIR, potential impacts would be lowered to less than significant.

S4-3 cont.



7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    - **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    - **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

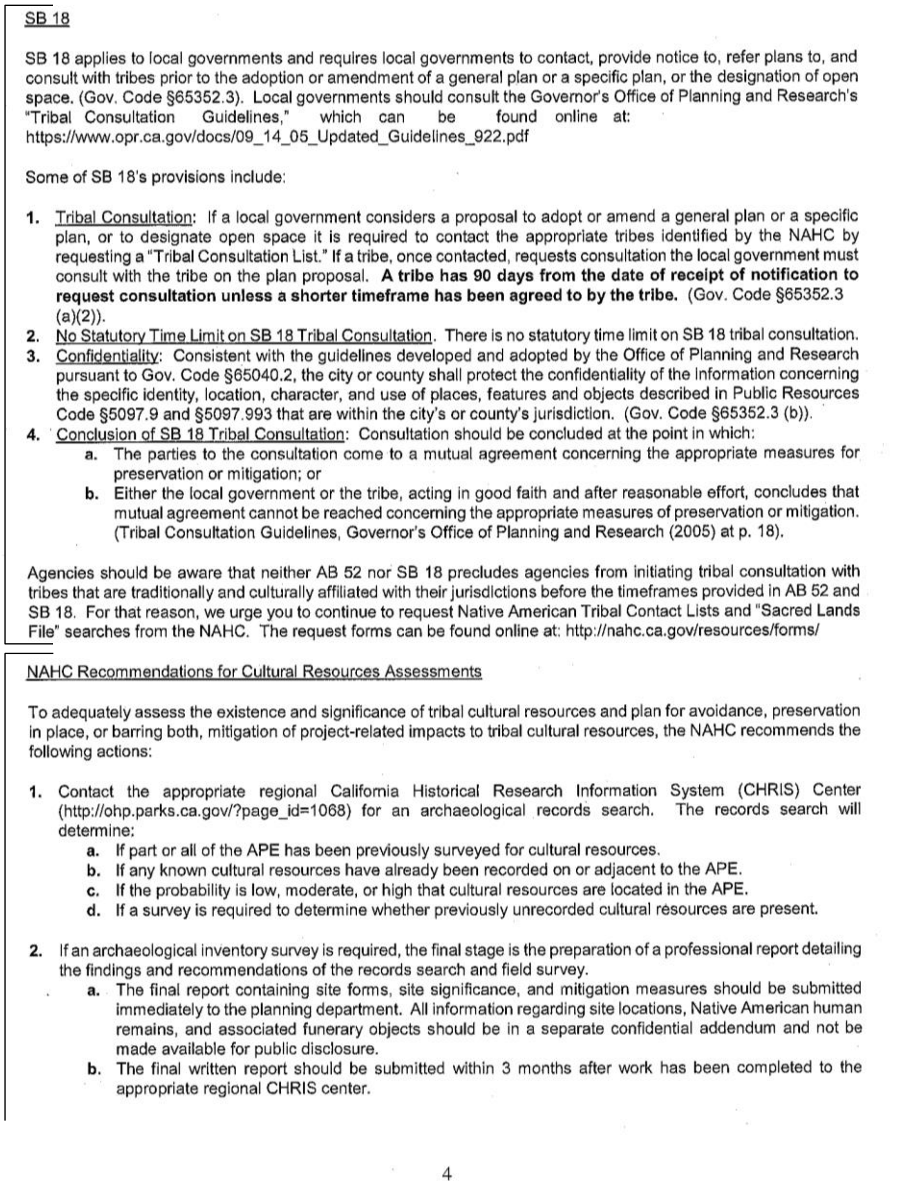
10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    - **a.** Avoidance and preservation of the resources in place, including, but not limited to:
        - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
        - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    - **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        - **i.** Protecting the cultural character and integrity of the resource.
        - **ii.** Protecting the traditional use of the resource.
        - **iii.** Protecting the confidentiality of the resource.
    - **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    - **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    - **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    - **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    - **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    - **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    - **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

3

COMMENTS



S4-4

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
   - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
   - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

S4-5

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

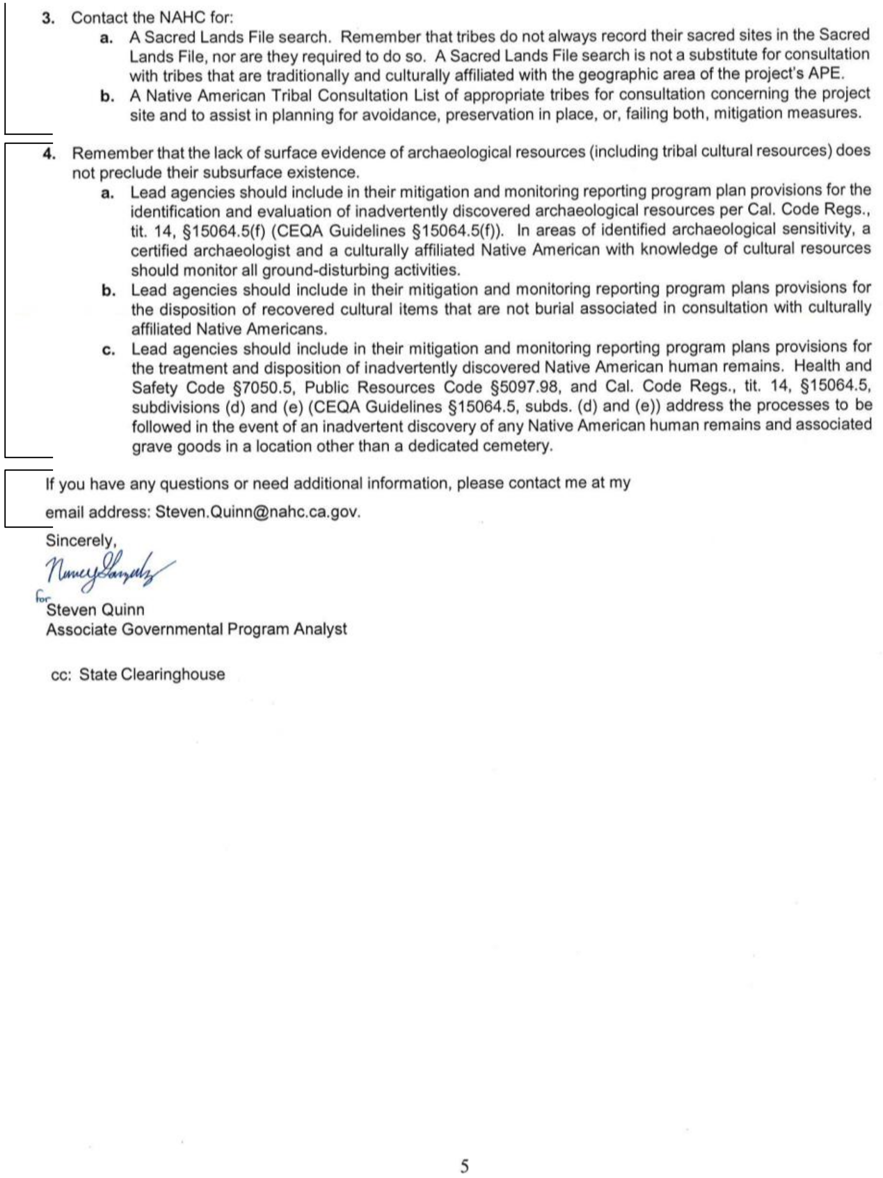
1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
   - a. If part or all of the APE has been previously surveyed for cultural resources.
   - b. If any known cultural resources have already been recorded on or adjacent to the APE.
   - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
   - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
   - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

RESPONSES

S4-4 The 3Roots Project proposes both a General Plan/Community Plan Amendment (CPA), as well as designation of open space, and is therefore subject to SB 18. Overall, it is noted that the 3Roots CPA is similar to the existing Mira Mesa Community Plan and Carroll Canyon Master Plan documents that have been available since 1994; and that the project would implement those plans in a compatible manner. The open space element of the Project would result in permanent set aside of over 150 acres into protected open space and an increase in Multi-Habitat Planning Area acreage.

Information sent to the NAHC and to all tribes identified by NAHC with traditionally and culturally affiliated tribes has occurred twice as of September 2019 and will occur once more prior to project hearings. The first outreach was on September 13, 2017. At that time, the tribes were sent copies of the initiation report to the Planning Commission, an initial filing by the City Planning Department notifying the Planning Commission that a CPA would comprise part of the project. This was the formal initiation of the 90-day CPA consultation process addressed in Government Code Section 65352.3. No request for coordination was received. The second contact was mailed August 2, 2019. This communication included the CPA in final draft form, along with an explanatory letter and USGS map, consistent with Government Code Section 65352, and initiated a 45-day response period. The final outreach will take place 10 days prior to Planning Commission Hearing with the required notice for public hearing required in Government Code Section 65092(a), This is routinely noticed under City standards.

S4-5 Each of the steps noted in this comment have been appropriately completed. The project area is located within an area identified as sensitive on the City of San Diego Historical Resources Sensitivity Maps; furthermore, there are recorded cultural resources within a one mile buffer of the site. Therefore, qualified City staff conducted a records search of the CHRIS digital database; although the search identified that no previously recorded resources are located within the project boundaries, the search confirmed numerous previously recorded historic and prehistoric sites in the project vicinity. Focused archaeological survey of the area with Native American (Kumeyaay) monitors occurred on September 12 and 15, 2017 and July 13 and 16, 2018. No cultural material was observed. A Sacred Lands Search was requested of the NAHC on August 17, 2017, and a response from the NAHC was received on August 29, 2017 (negative in that no resources have been previously identified in the immediate project area).



S4-5 cont.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

S4-6

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

S4-7

If you have any questions or need additional information, please contact me at my email address: Steven.Quinn@nahc.ca.gov.

Sincerely,

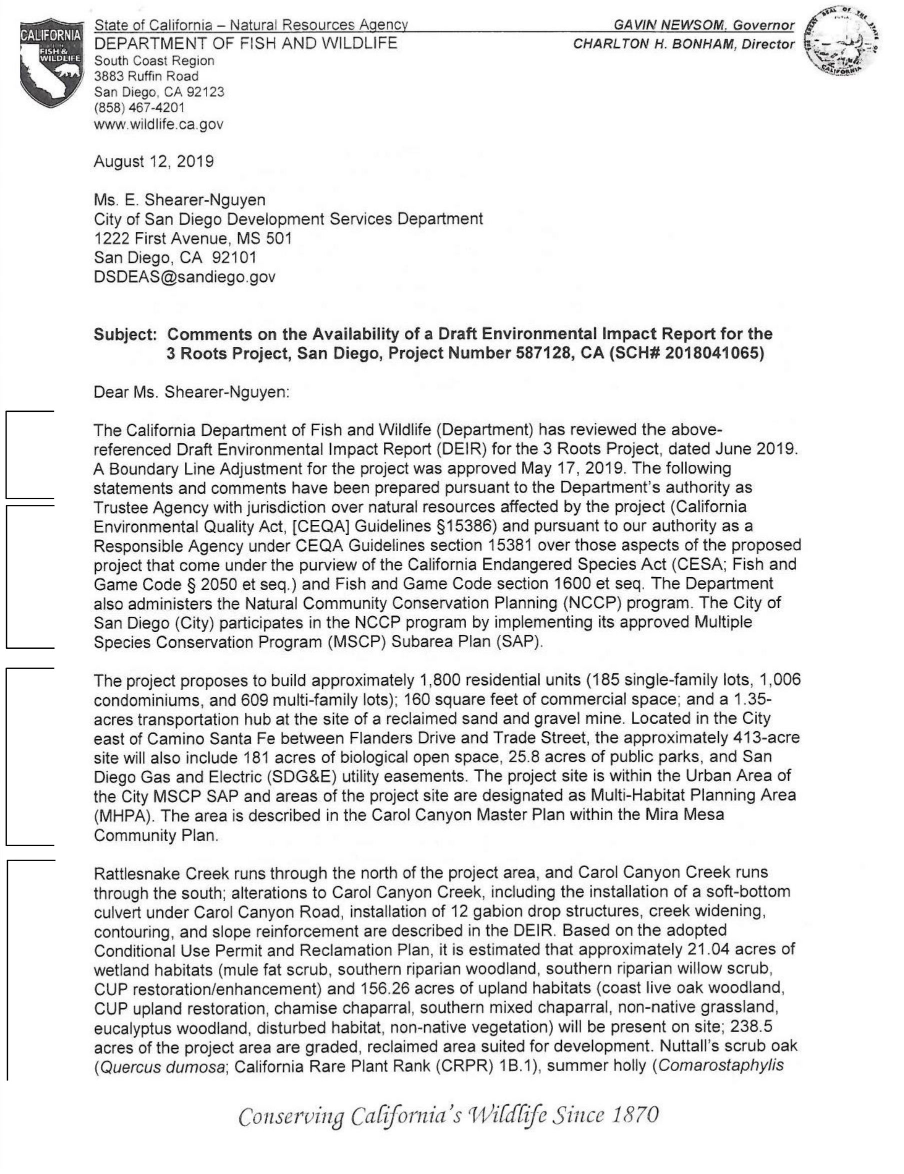
Nancy Gonzalez
for Steven Quinn
Associate Governmental Program Analyst

cc: State Clearinghouse

5

S4-6 The City agrees that lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence. To that end, Mitigation Measure HIS-1 (and TCR-1) specifically address monitoring, discovery notification process, and determination of significance. The mitigation also expressly requires presence of a qualified archaeological monitor as well as Native American consultant/monitor in areas of identified sensitivity. Where cultural items are recovered, the mitigation requires permanent curation identified in consultation with the Native American representative. As applicable, written verification is required from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. Treatment of human remains would occur in accordance with state codes and regulations, as described in Section 5.10, in the details of HIS-1.

S4-7 Comment noted.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
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(858) 467-4201
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 12, 2019

Ms. E. Shearer-Nguyen
City of San Diego Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101
DSDEAS@sandiego.gov

Subject: Comments on the Availability of a Draft Environmental Impact Report for the 3 Roots Project, San Diego, Project Number 587128, CA (SCH# 2018041065)

Dear Ms. Shearer-Nguyen:

S5-1 The California Department of Fish and Wildlife (Department) has reviewed the above-referenced Draft Environmental Impact Report (DEIR) for the 3 Roots Project, dated June 2019. A Boundary Line Adjustment for the project was approved May 17, 2019. S5-2 The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (California Environmental Quality Act, [CEQA] Guidelines §15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (CESA; Fish and Game Code § 2050 et seq.) and Fish and Game Code section 1600 et seq. The Department also administers the Natural Community Conservation Planning (NCCP) program. The City of San Diego (City) participates in the NCCP program by implementing its approved Multiple Species Conservation Program (MSCP) Subarea Plan (SAP).

S5-3 The project proposes to build approximately 1,800 residential units (185 single-family lots, 1,006 condominiums, and 609 multi-family lots); 160 square feet of commercial space; and a 1.35-acres transportation hub at the site of a reclaimed sand and gravel mine. Located in the City east of Camino Santa Fe between Flanders Drive and Trade Street, the approximately 413-acre site will also include 181 acres of biological open space, 25.8 acres of public parks, and San Diego Gas and Electric (SDG&E) utility easements. The project site is within the Urban Area of the City MSCP SAP and areas of the project site are designated as Multi-Habitat Planning Area (MHPA). The area is described in the Carol Canyon Master Plan within the Mira Mesa Community Plan.

S5-4 Rattlesnake Creek runs through the north of the project area, and Carol Canyon Creek runs through the south; alterations to Carol Canyon Creek, including the installation of a soft-bottom culvert under Carol Canyon Road, installation of 12 gabion drop structures, creek widening, contouring, and slope reinforcement are described in the DEIR. Based on the adopted Conditional Use Permit and Reclamation Plan, it is estimated that approximately 21.04 acres of wetland habitats (mule fat scrub, southern riparian woodland, southern riparian willow scrub, CUP restoration/enhancement) and 156.26 acres of upland habitats (coast live oak woodland, CUP upland restoration, chamise chaparral, southern mixed chaparral, non-native grassland, eucalyptus woodland, disturbed habitat, non-native vegetation) will be present on site; 238.5 acres of the project area are graded, reclaimed area suited for development. Nuttall's scrub oak (*Quercus dumosa*; California Rare Plant Rank (CRPR) 1B.1), summer holly (*Comarostaphylis*

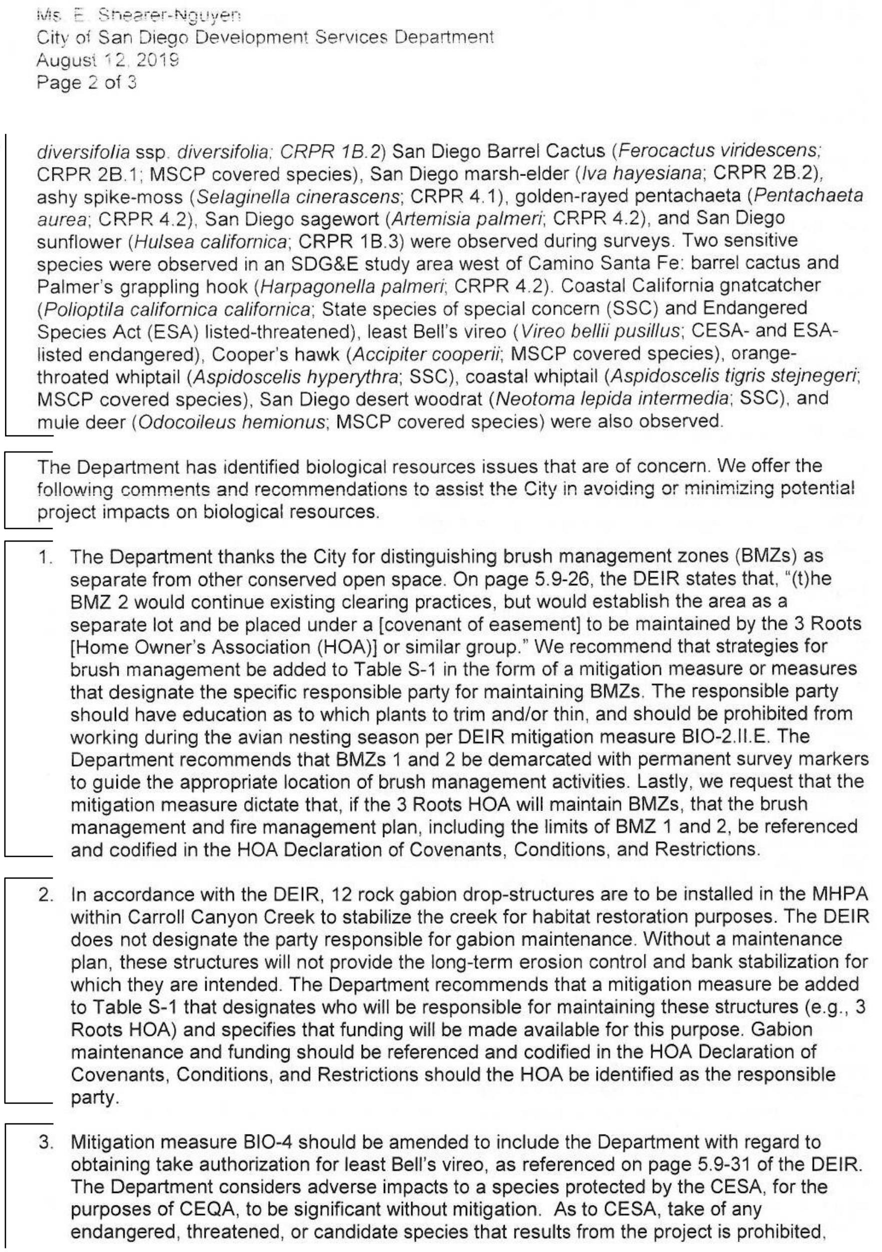
S5-1 The City notes the comment that the Department has reviewed the Draft EIR and approved the Project Boundary Line Adjustment as of May 17, 2019. This was clarified in an email to Kristy Forburger of the City MSCP by Mr. Weiss of CDFW on September 4. The email noted that the comment: "should have stated that the BLA was tentatively approved contingent on the outstanding items including an approved long-term management plan, PAR, and identifying an approved habitat manager." The outstanding items requested by the agencies, including formal identification of the San Diego Habitat Conservancy (SDHC) as the approved non-profit habitat manager, and submittal of Estimate of Long-term Management (or Property Assessment Record [PAR]) by the SDHC were completed and submitted on September 9, 2019. This satisfied the conditions. CDFW provided confirmation of BLA approval on February 25, 2020.

S5-2 The City notes the jurisdictional information provided in this comment and agrees with the City's responsibility in implement the MSCP Subarea Plan.

S5-3 The City generally agrees with the project overview provided, with two clarifications: (1) the amount of commercial space proposed for the Project is 160,160 square feet; and (2) the public park acreage is less an irrevocable offer of dedication as discussed in the Draft EIR.

S5-4 This comment provides a summary of primary drainages on the property, design elements associated with reconstruction of the creek, and sensitive species noted during survey. No response is required.

COMMENTS



Ms. E. Shearer-Nguyen
City of San Diego Development Services Department
August 12, 2019
Page 2 of 3

S5-4 cont. *diversifolia* ssp. *diversifolia*; *CRPR 1B.2*) San Diego Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1; MSCP covered species), San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2), ashy spike-moss (*Selaginella cinerascens*; CRPR 4.1), golden-rayed pentachaeta (*Pentachaeta aurea*; CRPR 4.2), San Diego sagewort (*Artemisia palmeri*; CRPR 4.2), and San Diego sunflower (*Hulsea californica*; CRPR 1B.3) were observed during surveys. Two sensitive species were observed in an SDG&E study area west of Camino Santa Fe: barrel cactus and Palmer's grappling hook (*Harpagonella palmeri*; CRPR 4.2). Coastal California gnatcatcher (*Polioptila californica californica*; State species of special concern (SSC) and Endangered Species Act (ESA) listed-threatened), least Bell's vireo (*Vireo bellii pusillus*; CESA- and ESA-listed endangered), Cooper's hawk (*Accipiter cooperii*; MSCP covered species), orange-throated whiptail (*Aspidoscelis hyperythra*; SSC), coastal whiptail (*Aspidoscelis tigris stejnegeri*; MSCP covered species), San Diego desert woodrat (*Neotoma lepida intermedia*; SSC), and mule deer (*Odocoileus hemionus*; MSCP covered species) were also observed.

S5-5 The Department has identified biological resources issues that are of concern. We offer the following comments and recommendations to assist the City in avoiding or minimizing potential project impacts on biological resources.

S5-6
1. The Department thanks the City for distinguishing brush management zones (BMZs) as separate from other conserved open space. On page 5.9-26, the DEIR states that, "(t)he BMZ 2 would continue existing clearing practices, but would establish the area as a separate lot and be placed under a [covenant of easement] to be maintained by the 3 Roots [Home Owner's Association (HOA)] or similar group." We recommend that strategies for brush management be added to Table S-1 in the form of a mitigation measure or measures that designate the specific responsible party for maintaining BMZs. The responsible party should have education as to which plants to trim and/or thin, and should be prohibited from working during the avian nesting season per DEIR mitigation measure BIO-2.II.E. The Department recommends that BMZs 1 and 2 be demarcated with permanent survey markers to guide the appropriate location of brush management activities. Lastly, we request that the mitigation measure dictate that, if the 3 Roots HOA will maintain BMZs, that the brush management and fire management plan, including the limits of BMZ 1 and 2, be referenced and codified in the HOA Declaration of Covenants, Conditions, and Restrictions.

S5-7
2. In accordance with the DEIR, 12 rock gabion drop-structures are to be installed in the MHPA within Carroll Canyon Creek to stabilize the creek for habitat restoration purposes. The DEIR does not designate the party responsible for gabion maintenance. Without a maintenance plan, these structures will not provide the long-term erosion control and bank stabilization for which they are intended. The Department recommends that a mitigation measure be added to Table S-1 that designates who will be responsible for maintaining these structures (e.g., 3 Roots HOA) and specifies that funding will be made available for this purpose. Gabion maintenance and funding should be referenced and codified in the HOA Declaration of Covenants, Conditions, and Restrictions should the HOA be identified as the responsible party.

S5-8
3. Mitigation measure BIO-4 should be amended to include the Department with regard to obtaining take authorization for least Bell's vireo, as referenced on page 5.9-31 of the DEIR. The Department considers adverse impacts to a species protected by the CESA, for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited,

RESPONSES

S5-5 Comments noted. Each of the specific comments has its own response, below.

S5-6 Table S-1 serves a specific purpose under CEQA – it identifies significant impacts, the mitigation measures developed to address those impacts, and whether or not the mitigation measure would lower such impacts to less than significant levels. The comments related to project design in this section do not belong on Table S-1 as they are not mitigation for significant impacts. Specifics of the BMZ 1 and 2 areas are described in Section 5.12 of the EIR.

Specifically, as noted in the cited text regarding BMZ 2, brush management along Rattlesnake Canyon is an ongoing occurrence. No project-related impacts were identified related to brush management in Rattlesnake Canyon and the brush management program was not developed in response to identified significant impacts resulting from the Project).,The HOA would continue the program in compliance with the City's Brush Management required standards, which would be a matter of project design. Because the actions are not in response to a significant project impact, it is not appropriate to reference them on Table S-1. Similarly, where brush management would occur within extant sensitive habitat and would be required specifically as part of Project actions (e.g., north of PAs 1 and 2) this is also addressed as part of project design.

There are, however, some noted safeguards. The comment requests that work should be prohibited during the nesting season as specified in mitigation measure BIO-2 in both Section 5.9 and Chapter 11.0 of the EIR. BIO-2.I.E identifies February 1 to September 15 as a period of concern. Although the City Area Specific Management Directives for California gnatcatcher (see Draft EIR page 5:9-67) and San Diego Municipal Code Chapter 14, Article 2, Division 4, Section 142.0412(d) requires as a matter of ordinance that:

> *Brush management activities are prohibited within coastal sage scrub, maritime succulent scrub, and coastal sage-chaparral habitats from March 1 through August 15, except where documented to the satisfaction of the City Manager that the thinning would be consistent with conditions of species coverage described in the City of San Diego's MSCP Subarea Plan.*

The Project is conditioned to the timing restriction noted in BIO-4 for construction activities. Brush management can be considered an ongoing construction action, and would be required to conform to the same time periods.

S5-6 (cont.)

The comment also requests that the brush management zone (BMZ 2) be demarcated with permanent survey markers to guide the appropriate location of brush management activities. The City is not opposed to this request and the Project Conditions for brush management specify this. Finally, the comment also requests that the mitigation measure note that if the HOA will maintain the BMZs, that the brush management and fire management plan, including BMZ limits, be referenced and codified in the HOA Declaration of Covenants, Conditions, and Restrictions (CC&Rs). As stated above, the design feature relative to brush management is not a mitigation measure. Nonetheless, the project is conditioned to comply with the requirements of the City's Brush Management Regulations and in the case of 3Roots, the HOA will be responsible for implementing and maintaining the BMZs.

As discussed on Draft EIR page 5.9-66:

> *Existing residences surrounding Rattlesnake Canyon abut the MHPA and vegetative clearing for brush management purposes has been ongoing along this edge condition. The Project proposes a 65 foot BMZ 2 along this residential edge, which would be included in the MHPA via a separate COE and would be maintained by the 3Roots Project HOA. Currently, these areas are largely devoid of vegetation or support disturbed habitat; such areas would be seeded with upland native plant species and allowed to grow/recover to the extent consistent with thinning requirements for BMZ 2.*

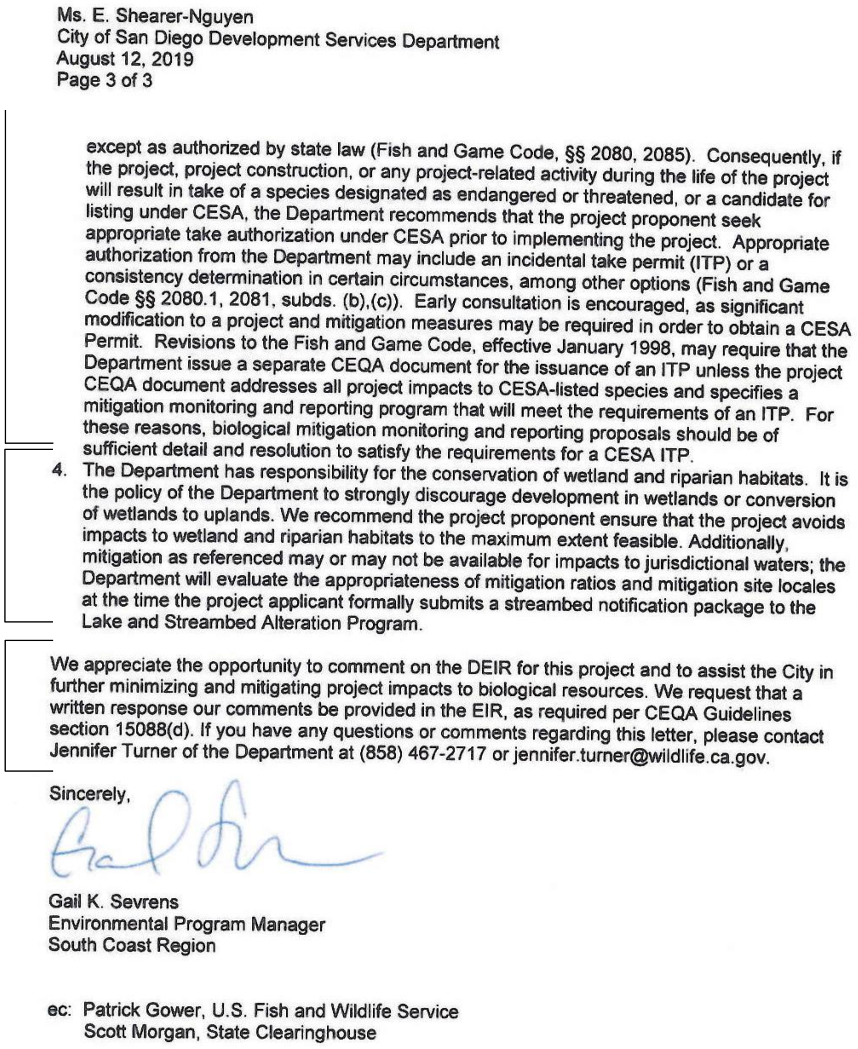
The brush management activities would be subject to the ongoing requirements of the MHPA Land Use Adjacency Guidelines. These future actions will be referenced and codified in the 3Roots CC&Rs.

S5-7 The statement regarding 12 gabion revetments in the reconstructed creek for purposes of habitat stabilization is correct. The responsible party will be the landowner. Maintenance and funding are addressed in the Long-Term Habitat Management Program (LTHMP), which is the guiding document for long term management; no change to the EIR is necessary. Similar to Response to Comment 6 of this letter, the maintenance is a project design feature, not a mitigation measure. As such, it is not appropriate to include these elements in Table S-1. They are, however, assured through commitments made in the LTHMP and CC&Rs as well as financial surety in the form of bonding and reserving for the HOA. As described in Section 6.11, Flood Control, of the LTHMP:

S5-7 (cont.)

> *The 12 gabion drop structures in the Preserve Area will be assessed by the Habitat Manager annually to ensure they are functioning properly and are not being undermined, buried, or dilapidated. It is anticipated that regular maintenance of these structures is not necessary; however, if they are not functioning properly and need repair or replacement, the Habitat Manager [SDHC] will coordinate with the HOA and notify the City of the need within 30 days of discovery. Repair or replacement (including funding) of a gabion drop structure, should it fail, would be the responsibility of the owner (i.e., HOA); the Habitat Manager shall not be responsible for gabion drop structure repair or replacement (including funding).*
>
> *The HOA is the entity obligated to fund and implement any repairs to gabion drop structures and this obligation will be included in the project's CC&Rs. Based on an engineer estimate, funding to repair or replace a gabion drop structure has been included in the endowment estimate for the Project in the amount of $50,000. These additional funds are to be held in a separate account by the Habitat Manager which may only be used for repair and/or replacement of the gabion drop structures (including coordination with the HOA, City, and Agency staff) in the event the HOA is not financially capable of making the repairs. The Habitat Manager shall lead coordination on any necessary modification, or replacement of the gabion drop structures such that access to the site is controlled and impacts to adjacent wetlands and riparian areas within the Preserve Area are limited and properly managed and restored immediately following activities. Repair of the gabion drop structure(s) may necessitate the need for Section 404 and Section 401 permits under the Clean Water Act and other local approvals.*

Avoidance of impacts to wetland and riparian habitats has occurred to the maximum amount feasible. Please note that remaining impacts generally would occur as part of the ongoing approved Reclamation Plan associated with cessation of mining. Very minor impacts to vegetation would be associated with s new and project-related implementation of final Carroll Canyon Road alignment (an Essential Public Facility). These effects are addressed throughout the EIR (see Table 5.9-6, in particular).



Ms. E. Shearer-Nguyen
City of San Diego Development Services Department
August 12, 2019
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S5-8 cont. except as authorized by state law (Fish and Game Code, §§ 2080, 2085). Consequently, if the project, project construction, or any project-related activity during the life of the project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from the Department may include an incidental take permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subds. (b),(c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

S5-9

4. The Department has responsibility for the conservation of wetland and riparian habitats. It is the policy of the Department to strongly discourage development in wetlands or conversion of wetlands to uplands. We recommend the project proponent ensure that the project avoids impacts to wetland and riparian habitats to the maximum extent feasible. Additionally, mitigation as referenced may or may not be available for impacts to jurisdictional waters; the Department will evaluate the appropriateness of mitigation ratios and mitigation site locales at the time the project applicant formally submits a streambed notification package to the Lake and Streambed Alteration Program.

S5-10 We appreciate the opportunity to comment on the DEIR for this project and to assist the City in further minimizing and mitigating project impacts to biological resources. We request that a written response our comments be provided in the EIR, as required per CEQA Guidelines section 15088(d). If you have any questions or comments regarding this letter, please contact Jennifer Turner of the Department at (858) 467-2717 or jennifer.turner@wildlife.ca.gov.

Sincerely,

Gail K. Sevrens
Environmental Program Manager
South Coast Region

ec: Patrick Gower, U.S. Fish and Wildlife Service
Scott Morgan, State Clearinghouse

S5-8 Consistent with this comment, the CDFW has been added as an agency to BIO-4 in the Final EIR. The project will seek a Consistency Determination or Incidental Take Permit through the California Endangered Species Act Section 2080.1 permitting process. The mitigation measures proposed in the EIR specific to the least Bell's vireo provide sufficient detail for the Department to analyze and approve take authorization under the State Fish and Game Code. This will occur concurrently with the Section 7 process.

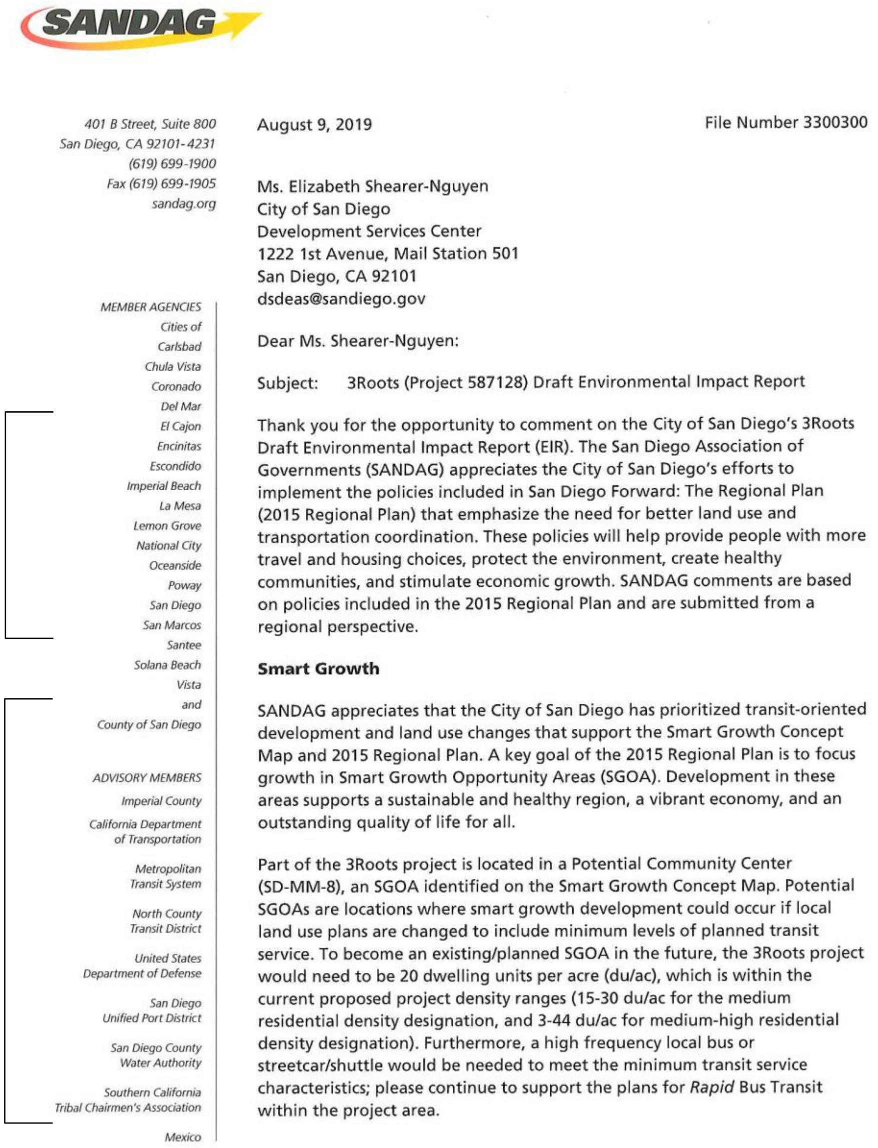
S5-9 These comments are noted. It is important to clarify the CEQA process versus the 1600 Streambed Alteration permitting. The Lake and Streambed Alteration streambed notification package was submitted on December 21, 2018, with ongoing coordination and updates occurring during design refinement. The formal application will close with submittal of a certified Final EIR.

Please see Response to Comment 7 of this letter regarding avoidance. No conversion of wetlands to uplands would occur as a result of the proposed 3Roots Project.

S5-10 Comments noted. The City, as Lead Agency, shall provide written responses to CDFW 10 days prior to certifying the EIR in accordance with CEQA Guidelines Section 15088(b).

COMMENTS

RESPONSES



SANDAG

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Southern California Tribal Chairmen's Association
Mexico

August 9, 2019

File Number 3300300

Ms. Elizabeth Shearer-Nguyen
City of San Diego
Development Services Center
1222 1st Avenue, Mail Station 501
San Diego, CA 92101
dsdeas@sandiego.gov

Dear Ms. Shearer-Nguyen:

Subject: 3Roots (Project 587128) Draft Environmental Impact Report

R1-1

Thank you for the opportunity to comment on the City of San Diego's 3Roots Draft Environmental Impact Report (EIR). The San Diego Association of Governments (SANDAG) appreciates the City of San Diego's efforts to implement the policies included in San Diego Forward: The Regional Plan (2015 Regional Plan) that emphasize the need for better land use and transportation coordination. These policies will help provide people with more travel and housing choices, protect the environment, create healthy communities, and stimulate economic growth. SANDAG comments are based on policies included in the 2015 Regional Plan and are submitted from a regional perspective.

Smart Growth

R1-2

SANDAG appreciates that the City of San Diego has prioritized transit-oriented development and land use changes that support the Smart Growth Concept Map and 2015 Regional Plan. A key goal of the 2015 Regional Plan is to focus growth in Smart Growth Opportunity Areas (SGOA). Development in these areas supports a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all.

Part of the 3Roots project is located in a Potential Community Center (SD-MM-8), an SGOA identified on the Smart Growth Concept Map. Potential SGOAs are locations where smart growth development could occur if local land use plans are changed to include minimum levels of planned transit service. To become an existing/planned SGOA in the future, the 3Roots project would need to be 20 dwelling units per acre (du/ac), which is within the current proposed project density ranges (15-30 du/ac for the medium residential density designation, and 3-44 du/ac for medium-high residential density designation). Furthermore, a high frequency local bus or streetcar/shuttle would be needed to meet the minimum transit service characteristics; please continue to support the plans for *Rapid* Bus Transit within the project area.

R1-1 Comments noted.

R1-2 Comments noted. The City continues to support plans for Bus Rapid Transit along the Carroll Canyon Road corridor.

COMMENTS

Transportation Demand Management

R1-3

SANDAG appreciates the integration of transportation demand management (TDM) strategies and mobility hub features to help reduce single occupancy vehicle trips throughout the 3Roots development. Please consider collaborating with SANDAG to align the Mobility Hub with the future Regional Mobility Hub Network that is being developed as part of San Diego Forward: The 2021 Regional Plan.

To further reduce dependency on private automobiles and encourage alternative transportation, please consider implementing parking management solutions, such as unbundled parking and reduced parking requirements. Additional parking management strategies could include priced parking, parking cash-out, and priority parking for shared mobility options. In addition to bikeshare, please also consider offering on-site shared mobility services such as scootershare and neighborhood electric vehicles (or NEVs) to provide alternatives for travel within the project area and enhance connections to transit.

The SANDAG TDM program iCommute provides regional TDM services that encourage the use of transportation alternatives. Regional TDM programs that can be promoted to tenants and employees include the regional vanpool program subsidy, the Guaranteed Ride Home service, and support for bicycling, carpool, and transit. The proposed mobility concierge/TDM coordinator should work directly with the iCommute team. Information on the SANDAG TDM program can be accessed through icommutesd.com.

Other Considerations

R1-4

SANDAG has a number of resources that can be used for additional information or clarification on topics discussed in this letter. These can be found on our website at sandag.org:

- Designing for Smart Growth: Creating Great Places in the San Diego Region
- Parking Strategies for Smart Growth
- Trip Generation for Smart Growth
- Planning and Designing for Pedestrians: Model Guidelines for the San Diego Region
- SANDAG Regional Parking Management Toolbox
- Riding to 2050: The San Diego Regional Bike Plan
- Mobility Management Toolbox

R1-5

When available, please send any additional environmental documents related to this project to:

Intergovernmental Review
c/o SANDAG
401 B Street, Suite 800
San Diego, CA 92101

RESPONSES

R1-3 With regard to Transportation Demand Management (TDM) strategies, 3Roots will be required to have a TDM program with specific elements applicable to the project. Relative to the project's Mobility Hub, Draft EIR page 3-17 states:

> *The Mobility Hub would place public transportation as well as private mobility options in an accessible area for project residents, and would be staffed by a full-time mobility concierge/TDM coordinator. The on-site concierge/TDM coordinator will coordinate ride-share opportunities; develop, implement and coordinate an Employment Center Shuttle Service; manage the on-site kiosk for scheduling and paying for on line car sharing programs; coordination of bike education events (to encourage use of bicycles with the community and into surrounding neighborhoods; and work with the community of implementation and integration of bike-share services should that program evolve.*

R1-4 Comment noted.

R1-5 Comment noted.

COMMENTS

RESPONSES

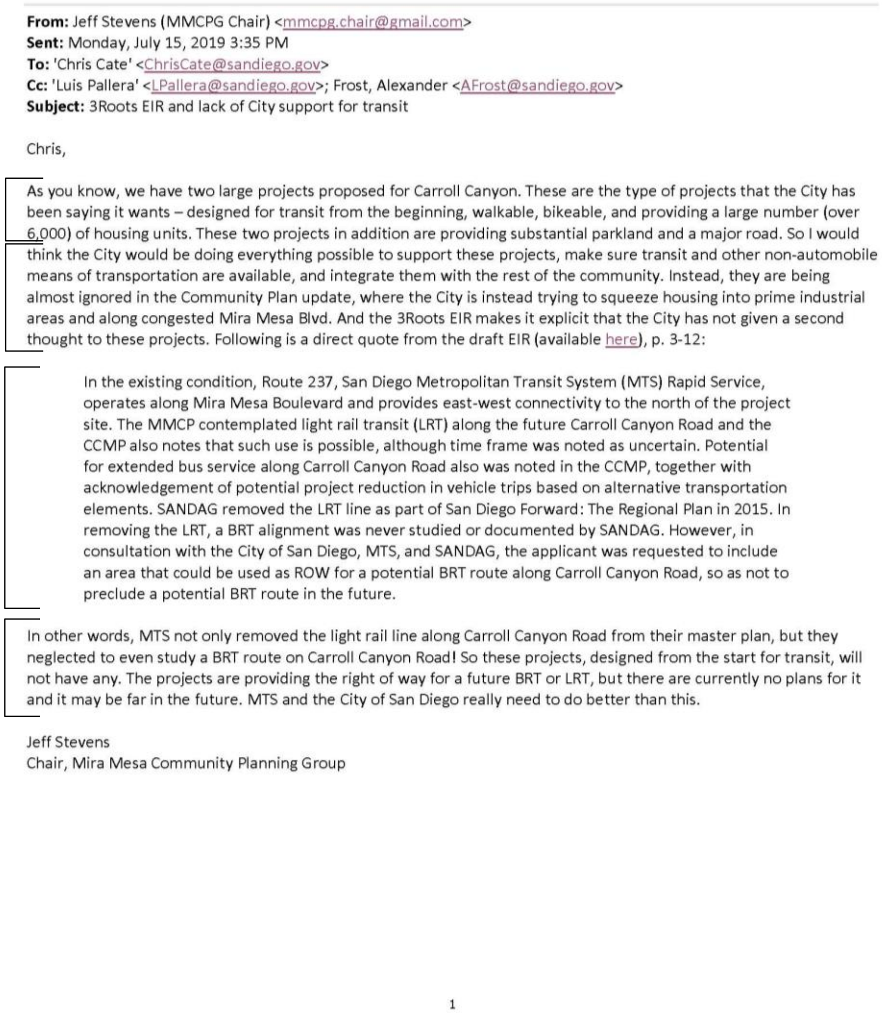
R1-5 cont. We appreciate the opportunity to comment on City of San Diego's 3Roots Draft EIR. If you have any questions, please contact me at (619) 699-1943 or seth.litchney@sandag.org.

Sincerely,

SETH LITCHNEY
Senior Regional Planner

SLI/KHE/jla

COMMENTS



From: Jeff Stevens (MMCPG Chair) <mmcpg.chair@gmail.com>
Sent: Monday, July 15, 2019 3:35 PM
To: 'Chris Cate' <ChrisCate@sandiego.gov>
Cc: 'Luis Pallera' <LPallera@sandiego.gov>; Frost, Alexander <AFrost@sandiego.gov>
Subject: 3Roots EIR and lack of City support for transit

Chris,

L1-1 As you know, we have two large projects proposed for Carroll Canyon. These are the type of projects that the City has been saying it wants – designed for transit from the beginning, walkable, bikeable, and providing a large number (over 6,000) of housing units. These two projects in addition are providing substantial parkland and a major road. So I would

L1-2 think the City would be doing everything possible to support these projects, make sure transit and other non-automobile means of transportation are available, and integrate them with the rest of the community. Instead, they are being almost ignored in the Community Plan update, where the City is instead trying to squeeze housing into prime industrial areas and along congested Mira Mesa Blvd. And the 3Roots EIR makes it explicit that the City has not given a second thought to these projects. Following is a direct quote from the draft EIR (available here), p. 3-12:

L1-3

> In the existing condition, Route 237, San Diego Metropolitan Transit System (MTS) Rapid Service, operates along Mira Mesa Boulevard and provides east-west connectivity to the north of the project site. The MMCP contemplated light rail transit (LRT) along the future Carroll Canyon Road and the CCMP also notes that such use is possible, although time frame was noted as uncertain. Potential for extended bus service along Carroll Canyon Road also was noted in the CCMP, together with acknowledgement of potential project reduction in vehicle trips based on alternative transportation elements. SANDAG removed the LRT line as part of San Diego Forward: The Regional Plan in 2015. In removing the LRT, a BRT alignment was never studied or documented by SANDAG. However, in consultation with the City of San Diego, MTS, and SANDAG, the applicant was requested to include an area that could be used as ROW for a potential BRT route along Carroll Canyon Road, so as not to preclude a potential BRT route in the future.

L1-4 In other words, MTS not only removed the light rail line along Carroll Canyon Road from their master plan, but they neglected to even study a BRT route on Carroll Canyon Road! So these projects, designed from the start for transit, will not have any. The projects are providing the right of way for a future BRT or LRT, but there are currently no plans for it and it may be far in the future. MTS and the City of San Diego really need to do better than this.

Jeff Stevens
Chair, Mira Mesa Community Planning Group

1

RESPONSES

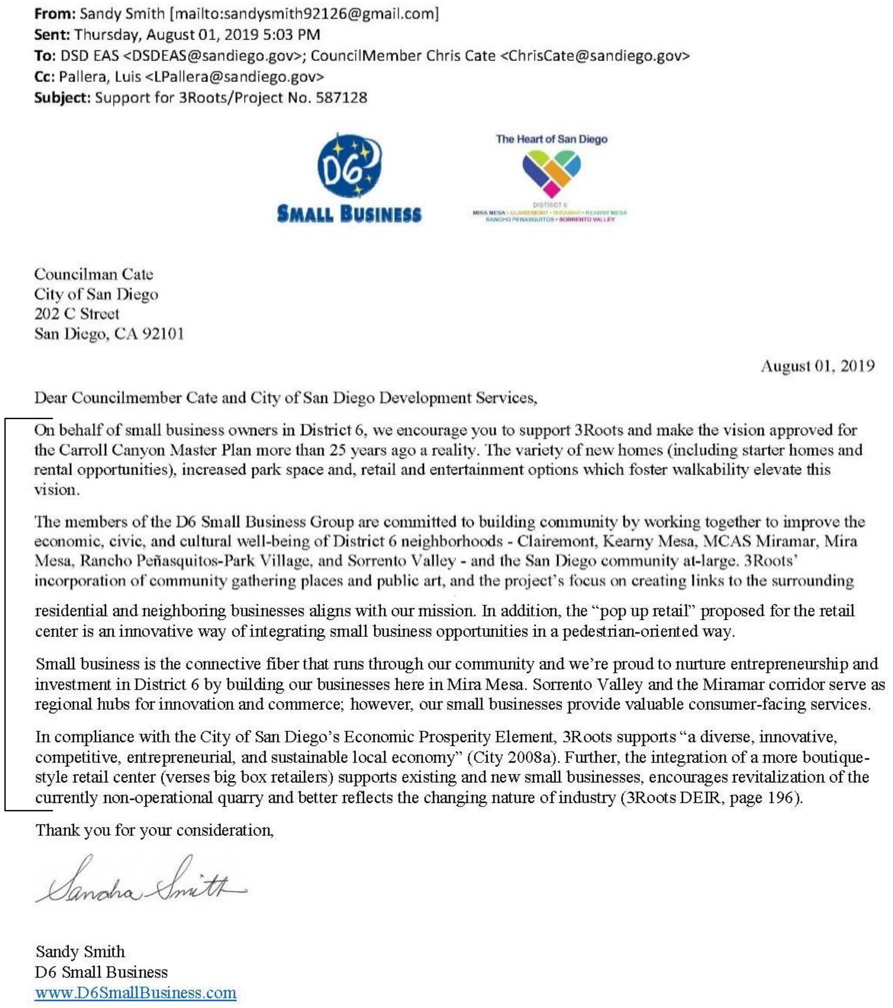
L1-1 These comments broadly summarize the two projects currently under consideration in Carroll Canyon relative to residential units, parkland and a major road, and do not address the EIR. No response is required.

L1-2 This comment expresses the view that the ongoing Community Plan Update efforts, which are beyond the scope of the 3Roots Draft EIR, do not adequately address public transit. These comments do not address adequacy of the Draft EIR and do not require additional response.

L1-3 This quote from the EIR is correct. The City of San Diego, Metropolitan Transit System (MTS) and the San Diego Association of Governments (SANDAG) have been working to retain a right-of-way (ROW) via an IOD for a potential BRT route indicating that public transportation through the site remains a goal of the City.

L1-4 This comment addresses MTS studies and the largely future nature of specific BRT or LRT studies. As such, these comments do not address adequacy of the Draft EIR and do not require response.

COMMENTS



From: Sandy Smith [mailto:sandysmith92126@gmail.com]
Sent: Thursday, August 01, 2019 5:03 PM
To: DSD EAS <DSDEAS@sandiego.gov>; CouncilMember Chris Cate <ChrisCate@sandiego.gov>
Cc: Pallera, Luis <LPallera@sandiego.gov>
Subject: Support for 3Roots/Project No. 587128

Councilman Cate
City of San Diego
202 C Street
San Diego, CA 92101

August 01, 2019

Dear Councilmember Cate and City of San Diego Development Services,

SI-1

On behalf of small business owners in District 6, we encourage you to support 3Roots and make the vision approved for the Carroll Canyon Master Plan more than 25 years ago a reality. The variety of new homes (including starter homes and rental opportunities), increased park space and, retail and entertainment options which foster walkability elevate this vision.

The members of the D6 Small Business Group are committed to building community by working together to improve the economic, civic, and cultural well-being of District 6 neighborhoods - Clairemont, Kearny Mesa, MCAS Miramar, Mira Mesa, Rancho Peñasquitos-Park Village, and Sorrento Valley - and the San Diego community at-large. 3Roots' incorporation of community gathering places and public art, and the project's focus on creating links to the surrounding residential and neighboring businesses aligns with our mission. In addition, the "pop up retail" proposed for the retail center is an innovative way of integrating small business opportunities in a pedestrian-oriented way.

Small business is the connective fiber that runs through our community and we're proud to nurture entrepreneurship and investment in District 6 by building our businesses here in Mira Mesa. Sorrento Valley and the Miramar corridor serve as regional hubs for innovation and commerce; however, our small businesses provide valuable consumer-facing services.

In compliance with the City of San Diego's Economic Prosperity Element, 3Roots supports "a diverse, innovative, competitive, entrepreneurial, and sustainable local economy" (City 2008a). Further, the integration of a more boutique-style retail center (verses big box retailers) supports existing and new small businesses, encourages revitalization of the currently non-operational quarry and better reflects the changing nature of industry (3Roots DEIR, page 196).

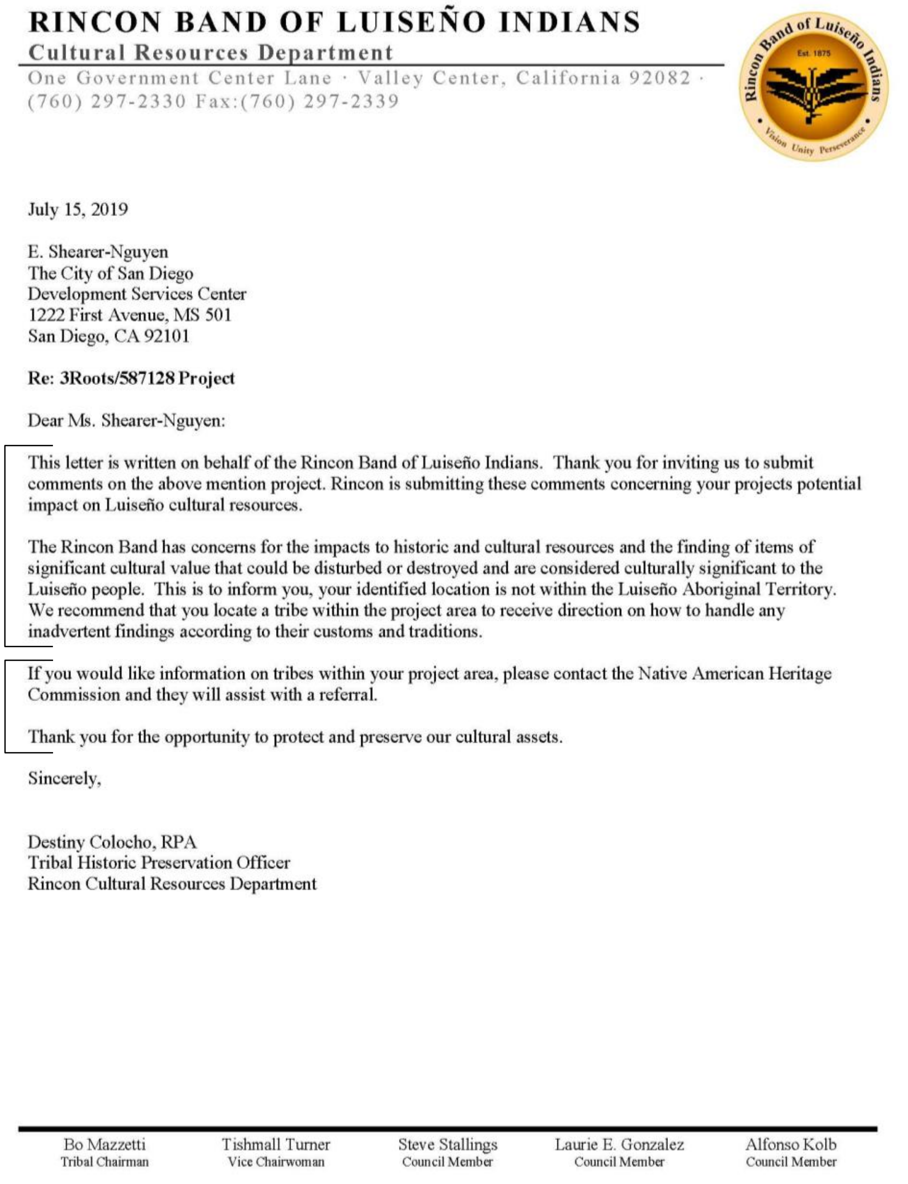
Thank you for your consideration,

Sandra Smith

Sandy Smith
D6 Small Business
www.D6SmallBusiness.com

RESPONSES

SI-1 Comments noted. These comments do not address the adequacy or accuracy of the CEQA document and no response is required.



RINCON BAND OF LUISEÑO INDIANS
Cultural Resources Department
One Government Center Lane · Valley Center, California 92082 ·
(760) 297-2330 Fax:(760) 297-2339

July 15, 2019

E. Shearer-Nguyen
The City of San Diego
Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Re: 3Roots/587128 Project

Dear Ms. Shearer-Nguyen:

SI2-1 This letter is written on behalf of the Rincon Band of Luiseño Indians. Thank you for inviting us to submit comments on the above mention project. Rincon is submitting these comments concerning your projects potential impact on Luiseño cultural resources.

The Rincon Band has concerns for the impacts to historic and cultural resources and the finding of items of significant cultural value that could be disturbed or destroyed and are considered culturally significant to the Luiseño people. This is to inform you, your identified location is not within the Luiseño Aboriginal Territory. We recommend that you locate a tribe within the project area to receive direction on how to handle any inadvertent findings according to their customs and traditions.

SI2-2 If you would like information on tribes within your project area, please contact the Native American Heritage Commission and they will assist with a referral.

Thank you for the opportunity to protect and preserve our cultural assets.

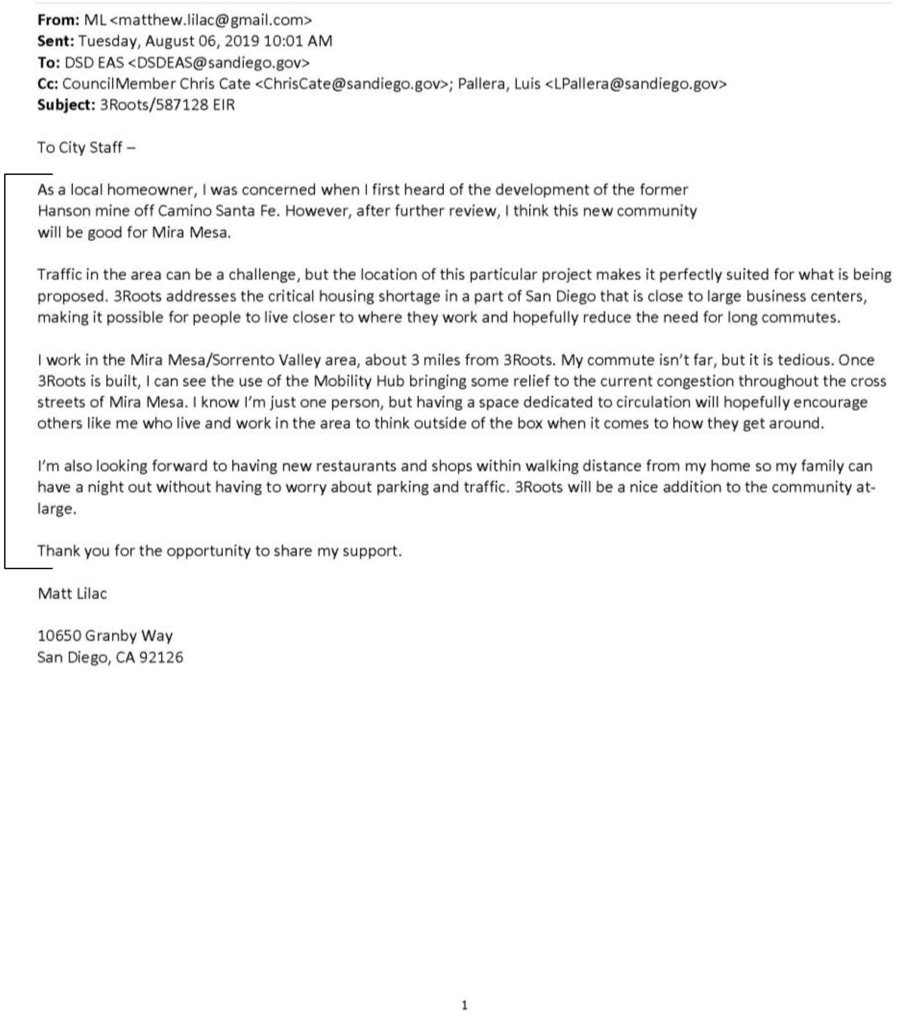
Sincerely,

Destiny Colocho, RPA
Tribal Historic Preservation Officer
Rincon Cultural Resources Department

SI2-1 Comments noted.

SI2-2 Consistent with your letter, it is noted that the Native American Heritage Commission was contacted for this Project, and provided a Sacred Land File search and list of Native American contacts.

Letters were sent to Native American representatives and interested parties identified by the NAHC. Groups responding were contacted, and consultation occurred on May 11, 2018. Native American representatives concurred with staff's determination and the consultation process was concluded. Additional information is provided in Sections 5.10 and 5.11 of the EIR.



From: ML <matthew.lilac@gmail.com>
Sent: Tuesday, August 06, 2019 10:01 AM
To: DSD EAS <DSDEAS@sandiego.gov>
Cc: CouncilMember Chris Cate <ChrisCate@sandiego.gov>; Pallera, Luis <LPallera@sandiego.gov>
Subject: 3Roots/587128 EIR

To City Staff –

SI3-1

As a local homeowner, I was concerned when I first heard of the development of the former Hanson mine off Camino Santa Fe. However, after further review, I think this new community will be good for Mira Mesa.

Traffic in the area can be a challenge, but the location of this particular project makes it perfectly suited for what is being proposed. 3Roots addresses the critical housing shortage in a part of San Diego that is close to large business centers, making it possible for people to live closer to where they work and hopefully reduce the need for long commutes.

I work in the Mira Mesa/Sorrento Valley area, about 3 miles from 3Roots. My commute isn't far, but it is tedious. Once 3Roots is built, I can see the use of the Mobility Hub bringing some relief to the current congestion throughout the cross streets of Mira Mesa. I know I'm just one person, but having a space dedicated to circulation will hopefully encourage others like me who live and work in the area to think outside of the box when it comes to how they get around.

I'm also looking forward to having new restaurants and shops within walking distance from my home so my family can have a night out without having to worry about parking and traffic. 3Roots will be a nice addition to the community at-large.

Thank you for the opportunity to share my support.

Matt Lilac

10650 Granby Way
San Diego, CA 92126

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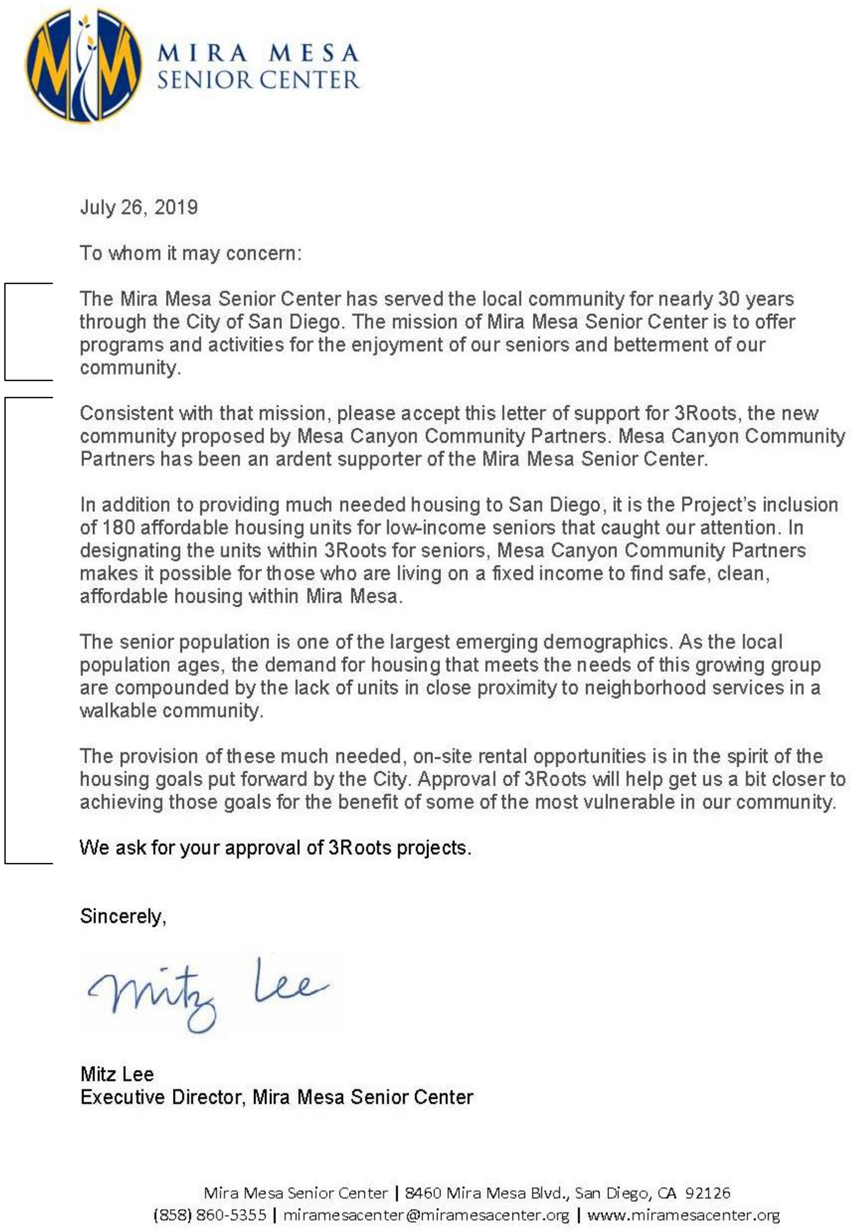
SI3-1 Comments noted. These comments do not address the adequacy or accuracy of the CEQA document and no response is required.

COMMENTS



MIRA MESA
SENIOR CENTER

July 26, 2019

To whom it may concern:

SI4-1 The Mira Mesa Senior Center has served the local community for nearly 30 years through the City of San Diego. The mission of Mira Mesa Senior Center is to offer programs and activities for the enjoyment of our seniors and betterment of our community.

SI4-2 Consistent with that mission, please accept this letter of support for 3Roots, the new community proposed by Mesa Canyon Community Partners. Mesa Canyon Community Partners has been an ardent supporter of the Mira Mesa Senior Center.

In addition to providing much needed housing to San Diego, it is the Project's inclusion of 180 affordable housing units for low-income seniors that caught our attention. In designating the units within 3Roots for seniors, Mesa Canyon Community Partners makes it possible for those who are living on a fixed income to find safe, clean, affordable housing within Mira Mesa.

The senior population is one of the largest emerging demographics. As the local population ages, the demand for housing that meets the needs of this growing group are compounded by the lack of units in close proximity to neighborhood services in a walkable community.

The provision of these much needed, on-site rental opportunities is in the spirit of the housing goals put forward by the City. Approval of 3Roots will help get us a bit closer to achieving those goals for the benefit of some of the most vulnerable in our community.

We ask for your approval of 3Roots projects.

Sincerely,

Mitz Lee

Mitz Lee
Executive Director, Mira Mesa Senior Center

Mira Mesa Senior Center | 8460 Mira Mesa Blvd., San Diego, CA 92126
(858) 860-5355 | miramesacenter@miramesacenter.org | www.miramesacenter.org

RESPONSES

SI4-1 The purpose of the Mira Mesa Senior Center is understood.

SI4-2 Comments noted. These comments do not address the adequacy or accuracy of the CEQA document and no response is required.

P: (626) 381-9248
F: (626) 389-5414
E: mitch@mitchtsailaw.com

Mitchell M. Tsai
Attorney At Law

155 South El Molino Avenue
Suite 104
Pasadena, California 91101

VIA U.S. MAIL & E-MAIL

August 12, 2019

E. Shearer-Nguyen
City of San Diego Development Services Center
1222 First Avenue
MS 501
San Diego, CA 92101
Em: DSDEAS@sandiego.gov

RE: 3Roots Project, Project No. 587128

Dear Ms. Nguyen,

SI5-1

On behalf of Southwest Regional Council of Carpenters as well as Michael Carmen LaBruno (collectively "**Commenters**" or "**Southwest Carpenters**"), my Office is submitting these comments on the City of San Diego's ("**City**" or "**Lead Agency**") Draft Environmental Impact Report ("**DEIR**") (SCH No. 2018041065) for the 3Roots Development Project ("**Project**").

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states, including in southern California, and has a strong interest in well-ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters include Michael Carmen LaBruno ("**Mr. Labruno**"). Mr. LaBruno lives, works, and recreates in the City of San Diego and surrounding communities and would be directly affected by the Project's environmental impacts. Commenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

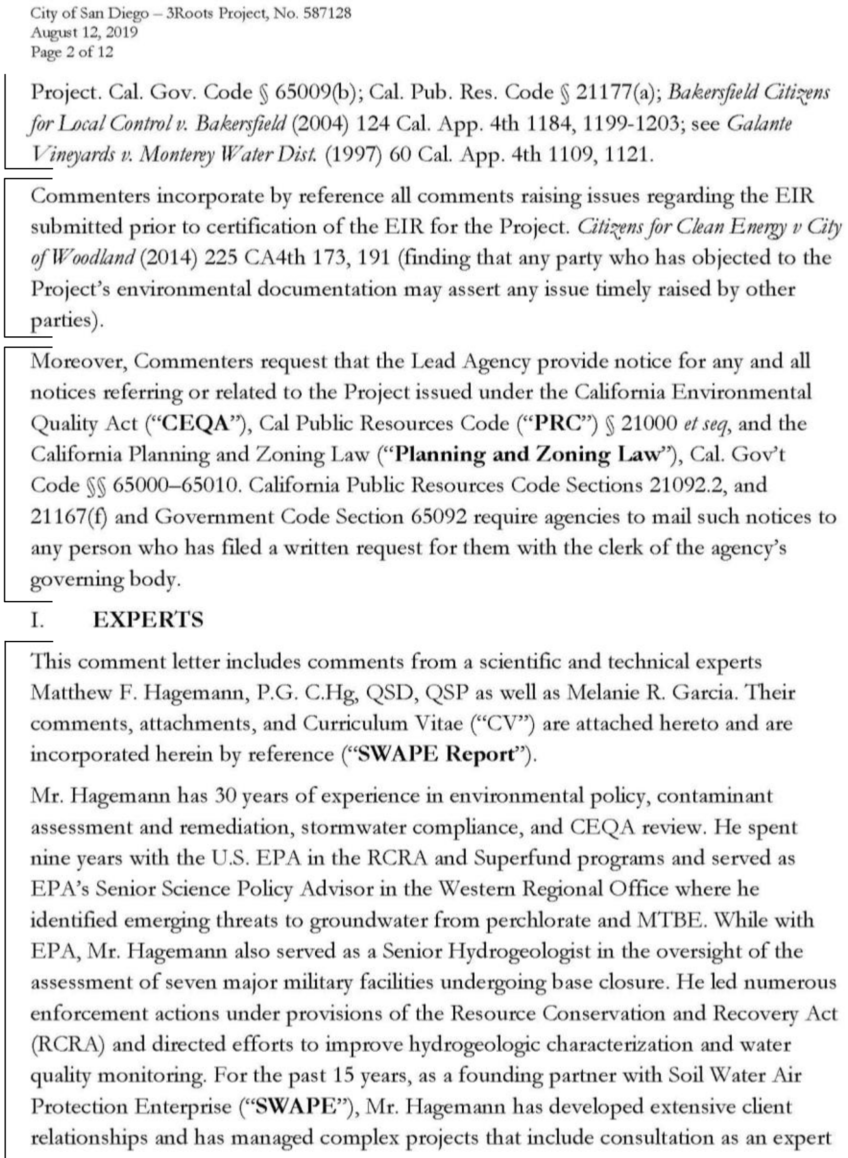
SI-52

Commenters expressly reserve the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this

SI5-1 The City acknowledges the constituency of the Southwest Carpenters, as well as the ability to supplement comments prior to final hearings on the Project.

SI5-2 This comment is a direct repetition of information provided as part of Comment 1. No additional response is required.

COMMENTS



SI5-2 cont.

Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

SI5-3

Commenters incorporate by reference all comments raising issues regarding the EIR submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 CA4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

SI5-4

Moreover, Commenters request that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

I. EXPERTS

SI5-5

This comment letter includes comments from a scientific and technical experts Matthew F. Hagemann, P.G. C.Hg, QSD, QSP as well as Melanie R. Garcia. Their comments, attachments, and Curriculum Vitae ("CV") are attached hereto and are incorporated herein by reference ("**SWAPE Report**").

Mr. Hagemann has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Mr. Hagemann also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with Soil Water Air Protection Enterprise ("**SWAPE**"), Mr. Hagemann has developed extensive client relationships and has managed complex projects that include consultation as an expert

RESPONSES

SI5-3 Comment noted.

SI5-4 As a commenter on the Draft EIR, Southwest Carpenters will receive future notices on the Project at the address noted on the comment letterhead (c/o Mitchell M. Tsai, 155 South El Molino Avenue, Suite 104, Pasadena, CA 91101).

SI-5 The City notes the cited qualifications of Mr. Hagemann and Ms. Garcia.

SI5-5 cont.

witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Melanie R. Garcia holds a B.S. in Environmental Science & Environmental Engineering from the University of California, Los Angeles. Ms. Garcia currently serves as a Senior Project Analyst, Project Manager and Air Quality Specialist with SWAPE, specializing in greenhouse gas modeling, toxic exposure assessment and human health exposure for CEQA analysis and monitoring.

II. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

SI5-6

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 California Code of Regulations (“**CCR**” or “**CEQA Guidelines**”) § 15002(a)(1). “Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR ‘protects not only the environment but also informed self-government.’ [Citation.]” (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.) The EIR has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.” (*Berkeley Keep Jets Over the Bay v. Bd. of Port Comm’rs.* (2001) 91 Cal. App. 4th 1344, 1354 (*“Berkeley Jets”*); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.)

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. (CEQA Guidelines § 15002(a)(2) and (3); *see also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Ass’n v. Regents of the University of California* (1988) 47 Cal.3d 376, 400.) The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to “identify ways that environmental damage can be avoided or significantly reduced.” (CEQA Guidelines § 15002(a)(2).) If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has “eliminated or substantially lessened

SI5-6 The comment provides general guidance regarding CEQA. The comment does not address the adequacy or accuracy of the Draft EIR. No further response is required.

SI5-6 cont. all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081. (CEQA Guidelines § 15092(b)(2)(A–B).)

SI5-7 While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position.' A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" (*Berkeley Jets, supra,* 91 Cal.App.4th 1344, 1355 [emphasis added, quoting *Laurel Heights,* 47 Cal.3d at 391, 409 fn. 12]. Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. (*Sierra Club v. Cnty. of Fresno* (2018) 6 Cal. 5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal.App.4th 48, 102, 131.) As the court stated in *Berkeley Jets*, *supra,* 91 Cal. App. 4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. (*Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80 [quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449–450].)

B. CEQA Requires Revision and Recirculation of an Environmental Impact Report When Substantial Changes or New Information Comes to Light The DEIR Severely Underestimates Emissions By Omitting Information

SI5-8 Section 21092.1 of the California Public Resources Code requires that "[w]hen significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 … but prior to certification, the public

SI5-7 The comment provides general guidance regarding CEQA. The comment does not address the adequacy or accuracy of the Draft EIR. No further response is required.

SI5-8 This comment provides general guidance regarding CEQA. The comment does not address the adequacy or accuracy of the Draft EIR. No further response is required.

SI5-8 cont.

agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report" in order to give the public a chance to review and comment upon the information. (CEQA Guidelines § 15088.5.)

Significant new information includes "changes in the project or environmental setting as well as additional data or other information" that "deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative)." (CEQA Guidelines § 15088.5(a).) Examples of significant new information requiring recirculation include "new significant environmental impacts from the project or from a new mitigation measure," "substantial increase in the severity of an environmental impact," "feasible project alternative or mitigation measure considerably different from others previously analyzed" as well as when "the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." (*Id.*)

An agency has an obligation to recirculate an environmental impact report for public notice and comment due to "significant new information" regardless of whether the agency opts to include it in a project's environmental impact report. (*Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 74, 95 [finding that in light of a new expert report disclosing potentially significant impacts to groundwater supply "the EIR should have been revised and recirculated for purposes of informing the public and governmental agencies of the volume of groundwater at risk and to allow the public and governmental agencies to respond to such information."].) If significant new information was brought to the attention of an agency prior to certification, an agency is required to revise and recirculate that information as part of the environmental impact report..

C. The DEIR Fails to Account for The Impact of Diesel Particulate Matter

SI5-9

The significance determination regarding diesel particulate matter is incorrect and unsubstantiated, as the City and Project Applicant cannot claim that the Project would result in a less than significant health risk impact without properly assessing the risk posed to sensitive receptors as a result of diesel particulate matter (DPM) emissions that will be emitted during Project activities. Until the Project's construction and

SI5-9 The analysis contained in the Draft EIR is appropriate and accurate. As detailed in Section 5.4.4.2 of the Draft EIR, impacts related to exposure to diesel particulate matter would be less than significant. Refer to Responses to Comments 35 and 36 of this letter for additional detail.

SI5-9 cont. operational health risk impacts are adequately quantified and compared to applicable thresholds, the DEIR and associated appendices cannot make any significance determination regarding the Project's health risk impacts. (SWAPE Report p. 6.)

SI5-10 Finally, by failing to prepare a construction or operational HRA for existing sensitive receptors, the DEIR is inconsistent with recommendations set forth by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations for health risk assessments in California. (SWAPE Report p. 6) In February of 2015, OEHHA released its most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, which was formally adopted in March of 2015. This guidance document describes the types of projects that warrant the preparation of a health risk assessment (HRA). Construction of the Project will produce emissions of DPM, a human carcinogen, through the exhaust stacks of construction equipment over an approximately 48-month construction schedule (p. 5.4-14). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. Therefore, per OEHHA guidelines, health risk impacts from Project construction should have been evaluated by the DEIR.

SI5-11 Furthermore, once construction of the Project is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to toxic air contaminant (TAC) emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR). Although the expected lifetime of the Project was not provided, one can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, health risks from Project operation should have also been evaluated by the Project applicant, as a 30-year exposure duration vastly exceeds the 2-month and 6-month requirements set forth by OEHHA. These recommendations reflect the most recent health risk policy, and as such, an updated assessment of health risks to nearby sensitive receptors from Project construction and operation should be included in an updated and recirculated DEIR.

SI5-10 This comment suggests that a Health Risk Assessment (HRA) is required based upon data included as Exhibit C of the comment letter. The City disagrees with the assertion that the Draft EIR is inconsistent with OEHHA recommendations. The Project would only be inconsistent with recommendations if screening or proposed uses indicated that potentially significant impacts could occur. Refer to Responses to Comments 35 and 36 for additional detail regarding the potential for significant impacts.

SI5-11 As detailed on page 5.4-23 of the Draft EIR, the Project would not include any land use identified by the California Air Resources Board (CARB) in their Air Quality and Land Use Handbook as one that may emit substantial quantities of TACs and therefore potentially conflict with sensitive land uses. Refer to Responses to Comments 35 and 36 of this letter for additional detail.

D. The DEIR Does Not Adequately Evaluate the Project's Impacts On Air Quality and Should Be Revised and Recirculated

SI5-12 An agency is required to revise and recirculate an EIR for public comment for information disclosures showing "[a] significant new environmental impact," "[a] substantial increase in the severity of an environmental impact," "[a] feasible project alternative or mitigation measure" or when [t]he draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." (*See also* CEQA Guidelines § 15088.5.) Revisions to environmental analysis in an environmental impact report requires recirculation of the environmental impact report to give the public a meaningful opportunity to comment. (*Gray v. Cty. of Madera* (2008)167 Cal. App. 4th 1099, 1121 – 22.)

As discussed above, due to omitted information and incorrect input parameters in the CalEEMod models, the DEIR significantly underestimates Project emissions and air quality impacts. Additionally, health risk impacts from the Project's diesel emissions should have been evaluated in the DEIR. A revised DEIR addressing these significant omissions and impacts should be recirculated for public review and comment according to CEQA standards.

E. CEQA Bars the Deferred Development of Environmental Mitigation Measures

SI5-13 CEQA mitigation measures proposed and adopted into an environmental impact report are required to describe what actions that will be taken to reduce or avoid an environmental impact. (CEQA Guidelines § 15126.4(a)(1)(B) [providing "[f]ormulation of mitigation measures should not be deferred until some future time."].) While the same Guidelines section 15126.5(a)(1)(B) acknowledges an exception to the rule against deferrals, but such exception is narrowly proscribed to situations where "measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." (Id.) Courts have also recognized a similar exception to the general rule against deferral of mitigation measures where the performance criteria for each mitigation measure is identified and described in the EIR. (Sacramento Old City Ass'n v. City Council (1991) 229 Cal.App.3d 1011.)

Impermissible deferral can occur when an EIR calls for mitigation measures to be created based on future studies or describes mitigation measures in general terms but

SI5-12 This comment references CEQA Guidelines Section 15088.5. The statement that "Revisions to environmental analysis in an environmental impact report requires recirculation of the environmental impact report…" is incorrect. Section 15088.5 provides that such recirculation is necessary if the revisions result in "significant new information:" Section 15088.5 states that such significant new information could be:

> *(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
>
> *(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
>
> *(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
>
> *(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043).*

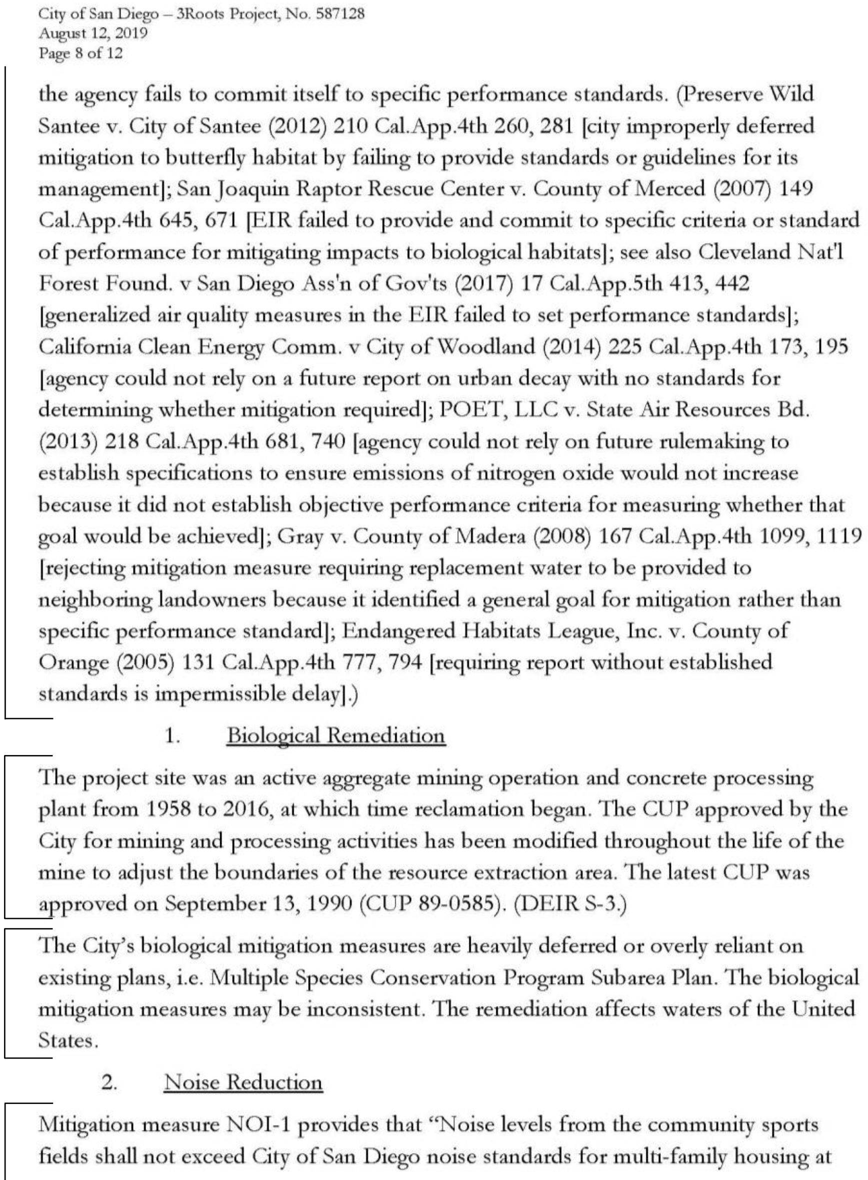
For this project, although some limited clarification and updates have been provided in the Final EIR, there is no new significant environmental impact associated with the project that was not already addressed in the Draft EIR. Where, for example, increases or decreases to assessed acreages (e.g. in biology), or a revision to a retaining wall discussion west of Camino Santa Fe is provided in the Final EIR, these changes did not result in a "substantial increase in the severity of an environmental impact," and in fact, the inclusion of the incremental changes are folded into the mitigation measures that would reduce the impact to "a level of insignificance." No project alternative or mitigation measure "considerably different from others previously analyzed" was proposed which the project proponents declined to adopt. In fact, no project alternative or mitigation measure of any type proposed for consideration.

SI5-12 (cont.)

Finally, the EIR contained approximately 800 pages of text, figures and tables, to explain CEQA significance conclusion and to provide the public with information adequate to support meaningful public review and comment. This was supported by detailed and thorough technical analyses. In fact, the detail pulled from the studies and presented in this comment supports the amount of detail available for review. Certainly, it did not preclude meaningful comment, even if, ultimately, the City disagrees with the comment's conclusions.

After consideration of the modeling assumptions and conclusions provided by the commenter, the City finds that relevant information relevant to CalEEMod inputs parameters, omission of parking lot land use, and failure to include all hauling truck trips, was not omitted from the CalEEMod model (see Responses to Comments 31 through 33 of this letter). The Draft EIR's air quality analysis complied with CAPCOA and CARB guidelines, as well as publicly adopted City thresholds, and therefore did not significantly underestimate Project diesel emissions or health risks, and is adequate under CEQA (see Responses to Comments 35 and 36 which respond to the detailed queries provided by the commenter). No recirculation is required.

COMMENTS



SI5-13 cont. the agency fails to commit itself to specific performance standards. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260, 281 [city improperly deferred mitigation to butterfly habitat by failing to provide standards or guidelines for its management]; San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App.4th 645, 671 [EIR failed to provide and commit to specific criteria or standard of performance for mitigating impacts to biological habitats]; see also Cleveland Nat'l Forest Found. v San Diego Ass'n of Gov'ts (2017) 17 Cal.App.5th 413, 442 [generalized air quality measures in the EIR failed to set performance standards]; California Clean Energy Comm. v City of Woodland (2014) 225 Cal.App.4th 173, 195 [agency could not rely on a future report on urban decay with no standards for determining whether mitigation required]; POET, LLC v. State Air Resources Bd. (2013) 218 Cal.App.4th 681, 740 [agency could not rely on future rulemaking to establish specifications to ensure emissions of nitrogen oxide would not increase because it did not establish objective performance criteria for measuring whether that goal would be achieved]; Gray v. County of Madera (2008) 167 Cal.App.4th 1099, 1119 [rejecting mitigation measure requiring replacement water to be provided to neighboring landowners because it identified a general goal for mitigation rather than specific performance standard]; Endangered Habitats League, Inc. v. County of Orange (2005) 131 Cal.App.4th 777, 794 [requiring report without established standards is impermissible delay].)

1. Biological Remediation

SI5-14 The project site was an active aggregate mining operation and concrete processing plant from 1958 to 2016, at which time reclamation began. The CUP approved by the City for mining and processing activities has been modified throughout the life of the mine to adjust the boundaries of the resource extraction area. The latest CUP was approved on September 13, 1990 (CUP 89-0585). (DEIR S-3.)

SI5-15
SI5-16
SI5-17
SI5-18 The City's biological mitigation measures are heavily deferred or overly reliant on existing plans, i.e. Multiple Species Conservation Program Subarea Plan. The biological mitigation measures may be inconsistent. The remediation affects waters of the United States.

2. Noise Reduction

SI5-19 Mitigation measure NOI-1 provides that "Noise levels from the community sports fields shall not exceed City of San Diego noise standards for multi-family housing at

RESPONSES

SI5-13 The comment provides general guidance regarding CEQA and is an introduction to specific comments below on biology and noise (see Responses to Comments 15 and 19).

SI5-14 This comment accurately summarizes the timing of on-site mining and the prior CUP. No further response is required.

SI5-15 There is no deferral of mitigation. 3Roots would be implemented in two phases, as described in Chapter 3.0, including Table 3-4, which details residential, commercial, park, roadway etc. components of each phase, with the location on site of these phases shown in Figure 3-27. Mitigation is tied appropriately to each phase.

Review of the biological mitigation measures as specified in EIR Section 5.9 and Chapter 11.0 shows the following. BIO-1 shows that covenants of easement (COEs)/irrevocable offers of dedication (IODs) of MHPA lands are expressly tied to "prior to the first grading permit" for the COEs, with the initial IOD moving forward at that same time and the IOD associated with MHPA lands along Carroll Canyon Creek being tied to Phase 2 and "prior to impacts to jurisdictional wetlands/waters…" This is because the land cannot be conveyed as MHPA with inappropriate encumbrances. Removal of some above- and below-ground utilities/mining structures, as well as initial reclamation grading, is part of the base Reclamation Plan obligations. This will all be completed following approval of the permits, and therefore is characterized as Phase 2 in the EIR. Mitigation Measure BIO-2 addresses construction activities. Timing is expressly specified as prior to, during, and post construction. There is no way to make this happen sooner.

BIO-3 addresses revegetation and restoration of Carroll Canyon Creek – currently in a degraded (and in some areas piped underground) condition. The measure has elements called out for prior to permit issuance, prior to start of construction, during construction and post construction, with the measure elements impossible to implement prior to their appropriate time. it is noted that landscape construction drawings are part of the prior to permit time period. This is standard timing for detailed construction drawings, which the resource agencies review relative to precise planting palette, temporary irrigation specifications etc. It should not be confused with the substantial information already provided in the EIR and supporting technical studies circulated with the EIR (including the Habitat Reclamation and Revegetation Plan) which clearly laid out preliminary plant palette choices, express elimination of identified invasive non-natives, types of on-site soils (critical to success of restored habitats), acreages of revegetation and

SI5-15 (cont.)

restoration activities, assessment of the locational suitability for these actions, target functions and services, specific requirements to include qualified personnel (biologists, and licensed engineer, landscape architect, and installation/ maintenance contractor), oversight and coordination between the City and permitting agencies, removal of invasives, installation of container stock/cuttings/ hydroseed, specific plant palettes identification for riparian/coastal sage scrub/ southern mixed chaparral/coastal sage and chaparral transition habitats, the 120-day establishment period and identification of success criteria, with additional detail relative to the five-year maintenance program required to ensure mitigation with documenting reports. There is no deferral.

BIO-4 addresses least Bell's vireo (LBV) habitat, which would be subject to potential impact only in the Phase 2 Carroll Canyon Creek area. The measure expressly calls out timing as "prior to the first Phase 2 grading permit." BIO-5 addresses potential effects to LBV habitat and birds during nesting season (including indirect impacts). The measure requires preparation actions prior to issuance of any grading permit to include documentation of lack of bird presence in the relevant areas and the potential for complete avoidance by restricting activities outside the nesting season (dates specified). If construction must occur with birds present, the measure requires City oversight and monitoring by a qualified acoustician (defined in the measure) to specific hourly averaged decibel maxima (60 dBA), as well as potential implementation of sound barriers, with numbers of times and locations of monitoring to occur specified in the measure.

BIO-6 requires a property analysis record (PAR; cost estimate for the amount to be endowed to support the Long-Term Habitat Management Plan in perpetuity) to be completed prior to any construction permits, including the first grading permit. While BIO-6 requires documentation as a very early action, in fact, this cost estimate (called the Estimate of Long-term Management in the Long-Term Habitat Management Plan) was prepared during public review by the San Diego Habitat Conservancy (SDHC). The SDHC will be the long-term habitat manager for Carroll Canyon Creek. Similarly, the routine City requirement noted in BIO-7 is to confirm identification of the long-term habitat manager. As noted, that has occurred, and it will be the SDHC. BIO-8 requires City confirmation of the long-term management areas and confirmation that an appropriate reference to the Habitat Reclamation and Mitigation Plan be placed on the construction plans. The City has approved the mitigation location, as demonstrated in the approved biological technical reports detailing their implementation (see BIO-3 discussion overall).

SI5-15 (cont.)

BIO-9 requires that all jurisdictional waters permits will be obtained from the specified agencies prior to any grading permit issued for Phase 2. This is timely relative to that grading. There is no impermissible deferral relative to biological mitigation measures.

SI5-16 The meaning of this comment is unclear and no specifics are provided relative to the assertion that "mitigation measures are overly reliant on existing plans.". No further response is required.

For purposes of clarification, however, it is noted that the MSCP is referenced three times in the mitigation measures – once each in BIO-2, BIO-3 and BIO 8. The first reference is associated with other relevant documents with which construction shall be required to comply: City Biology Guidelines, ESL [City Environmentally Sensitive Lands Ordinance] and MSCP, State CEQA, and other applicable local, state and federal law. The MSCP in particular is relevant because this is a plan designed in concert by the City, USFWS, CDFW (then) California Department of Fish and Game, and County of San Diego in accordance with the State's Natural Community Conservation Planning Act of 1991 (NCCP Act). This Plan specifically addresses areas identified for preservation of habitat quantities and qualities sufficient to maintain sensitive species and its importance cannot be overstated. The second reference addresses situations in which unanticipated potential impacts could occur to sensitive species that are not covered by the MSCP or federal or state lists and allows for addressing those species. The third reference explicitly requires MSCP staff to be part of the team responsible for ensuring that areas identified for long-term management have correctly been identified on construction plans.

SI5-17 The meaning of this comment is unclear and no specifics are provided relative to the assertion that "biological mitigation measures may be inconsistent."

SI5-18 Comment noted. No additional response is required.

COMMENTS	RESPONSES
SI5-19 cont. City of San Diego – 3Roots Project, No. 587128 August 12, 2019 Page 9 of 12 the property line." Two "potential noise reduction measures include the following two options: Option 1: Prohibit public address systems. Option 2: Provide an installation plan to show noise reduction measures such as multiple speakers mounted on and in the bleachers with directional speakers pointing into the field area away from the residential areas with a programmable (lockable) system volume level limit. A final layout analysis shall be required to show compliance with the area for the planned hours of operations, sufficient to comply with noise ordinance and as approved by City Development Services Department review. This is a deferred mitigation measure, and the city must show why this is adequate to mitigate the potential significant impact.	SI5-19 Presentation of two potential options does not constitute deferral of mitigation. There is no conflict between the City choosing between a simple removal of the noise source or allowing for attendee ease of hearing though proposal of a sound system with locational restrictions. One or the other of them must be implemented, and mitigation is assured. Identification of future actions based on specific design, so long as criteria area specified, is not deferral. In this case, final mapping for the park will show the exact layout of the field in the northwest corner, closest to future on site residential uses constructed as part of Phase 2 (residential property line approximately 350 feet distant). The equipment to be installed will have the advantage of being identified at that time, so it may be the most up to date. The efficacy of the measure would be confirmed against the City noise ordinance thresholds, which controls noise to varying decibel requirements based on time of day. There is no improper deferral of specific mitigation.
SI5-20 Similarly, mitigation measure NOI-2 provides that prior to issuance of building permits, a noise analysis shall be completed to assess operational noise sources from the commercial area within PA-19 and PA-20 and their noise impacts to the nearby mutli-family residences in PA-12, PA-13, and PA-14. Noise attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the City Noise Ordinance limits between this commercial zone and multi-family residential zone. A number of *potential* methods for ensuring interior noise levels are provided. These measures are inappropriately deferred , as they are to be created based on future studies, and describe only potential mitigation measures without committing to specific performance standards.	SI5-20 The listed potential mitigation noise attenuating elements are all appropriate for implementation following construction. The issue addressed is total decibel level reaching the sensitive receptors which may exceed City standards. Relative to performance standards, the City refers the commenter to the first paragraph of NOI-2, which directly precedes the element list. That text identifies the specific time of day and the specific decibel levels that must not be exceeded. Those are the performance standards. The entire mitigation measure addresses actions for Planning Areas (PAs)19 and 20 (in Phase 2) relative to then existing residential uses in PAs 12, 13, and 14 and specifies such. The potential need for mitigation for PA 19 and 20 uses relative to those previously constructed residential uses cannot be confirmed until those units and built and in operation. The timing of the mitigation implementation is appropriate. The restriction to "prior to issuance of building permits," however, has been clarified to read "prior to issuance of building permits for Phase 2" in the Final EIR. There is no improper deferral of specific mitigation and recirculation is not required. The commenter is referred to Response to Comment 12 of this letter for types of actions supporting recirculation under CEQA Guidelines Section 15088.5. No such actions have occurred.
3. <u>Hydrology and Water Quality</u> SI5-21 The DEIR acknowledges that the Project will have significant and unmitigated impacts to hydrology and water quality, but fails to adopt any mitigation measures for the Project. The DEIR states that there will be no mitigation for this impact pending the release of FEMA's verification of the hydrology analysis. However, the release of FEMA's verification of the Project's hydrology analysis and subsequently proposed mitigation measures for the Project "significant and unmitigated impacts as acknowledged by the DEIR require revision and recirculation of the DEIR. (DEIR at 5-50.)	SI5-21 FEMA staff have reviewed hydrological modeling and analyses relevant to the CLOMR. There are no remaining questions regarding flow or containment. Issuance of the CLOMR, however, requires issuance of resource agency permits addressing impacts to jurisdictional waters. The Section 401 permit issued by the RWQCB requires a certified EIR prior to issuance. The USACE 404 permit cannot be issued until the 401 is received.

III. THE PROJECT VIOLATES STATE PLANNING AND ZONING LAW BY BEING INCONSISTENT WITH THE CITY'S GENERAL PLAN HOUSING ELEMENT

A. Background Concerning The State Planning and Zoning Law

SI5-22

Each California city and county must adopt a comprehensive, long-term general plan governing development. *Napa Citizens for Honest Gov. v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 352, citing Gov. Code §§ 65030, 65300. The general plan sits at the top of the land use planning hierarchy (*see DeVita v. County of Napa* (1995) 9 Cal.4th 763, 773), and serves as a "constitution" or "charter" for all future development. *Lesher Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal.3d 531, 540.

General plan consistency is "the linchpin of California's land use and development laws; it is the principle which infused the concept of planned growth with the force of law." *See Debottari v. Norco City Council* (1985) 171 Cal.App.3d 1204, 1213.

State law mandates two levels of consistency. First, a general plan must be internally or "horizontally" consistent: its elements must "comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." See Gov. Code § 65300.5; *Sierra Club v. Bd. of Supervisors* (1981) 126 Cal.App.3d 698, 704. A general plan amendment thus may not be internally inconsistent, nor may it cause the general plan as a whole to become internally inconsistent. *See DeVita*, 9 Cal.4th at 796 fn. 12.

Second, state law requires "vertical" consistency, meaning that zoning ordinances and other land use decisions also must be consistent with the general plan. See Gov. Code § 65860(a)(2) [land uses authorized by zoning ordinance must be "compatible with the objectives, policies, general land uses, and programs specified in the [general] plan."]; *see also Neighborhood Action Group v. County of Calaveras* (1984) 156 Cal.App.3d 1176, 1184. A zoning ordinance that conflicts with the general plan or impedes achievement of its policies is invalid and cannot be given effect. *See Lesher*, 52 Cal.3d at 544.

State law requires that all subordinate land use decisions, including conditional use permits, be consistent with the general plan. See Gov. Code § 65860(a)(2); *Neighborhood Action Group*, 156 Cal.App.3d at 1184.

A project cannot be found consistent with a general plan if it conflicts with a general

SI5-21 (cont.)

This is described in Chapter 3.0 of the EIR, which also states that Phase 2 construction of elements located within the floodplain is conditioned upon receipt of all agency permits. As noted in Section 5.15, "the CLOMR will be obtained prior to release of any grading permits for areas within on-site FEMA-floodway/ floodplain jurisdiction." The discussion identifies the issues, notes the lack of the CLOMR, and conservatively identifies the lack of a CLOMR as a significant and unmitigated impact. No "subsequent mitigation measures" are anticipated and none of the recirculation triggering events has occurred (please refer to Response to Comment 12 of this letter. The discussion provided on page S-50 of the Draft EIR has been amended to clarify this. There is no need for revision or recirculation as none of the triggering events has occurred.

SI5-22 This comment provides a general overview of the need for California cities to adopt a General Plan, as well as summary statements regarding consistency with such plans. The comment does not address the adequacy or accuracy of the Draft EIR. No further response is required.

SI5-22 cont. plan policy that is "fundamental, mandatory, and clear," regardless of whether it is consistent with other general plan policies. *See Endangered Habitats League v. County of Orange* (2005) 131 Cal.App.4th 777, 782-83; *Families Unafraid to Uphold Rural El Dorado County v. Bd. of Supervisors* (1998) 62 Cal.App.4th 1332, 1341-42 ("*FUTURE*"). Moreover, even in the absence of such a direct conflict, an ordinance or development project may not be approved if it interferes with or frustrates the general plan's policies and objectives. *See Napa Citizens*, 91 Cal.App.4th at 378-79; *see also Lesher*, 52 Cal.3d at 544 (zoning ordinance restricting development conflicted with growth-oriented policies of general plan).

B. The Project Is Inconsistent With the City's General Plan Affordable Housing Requirement

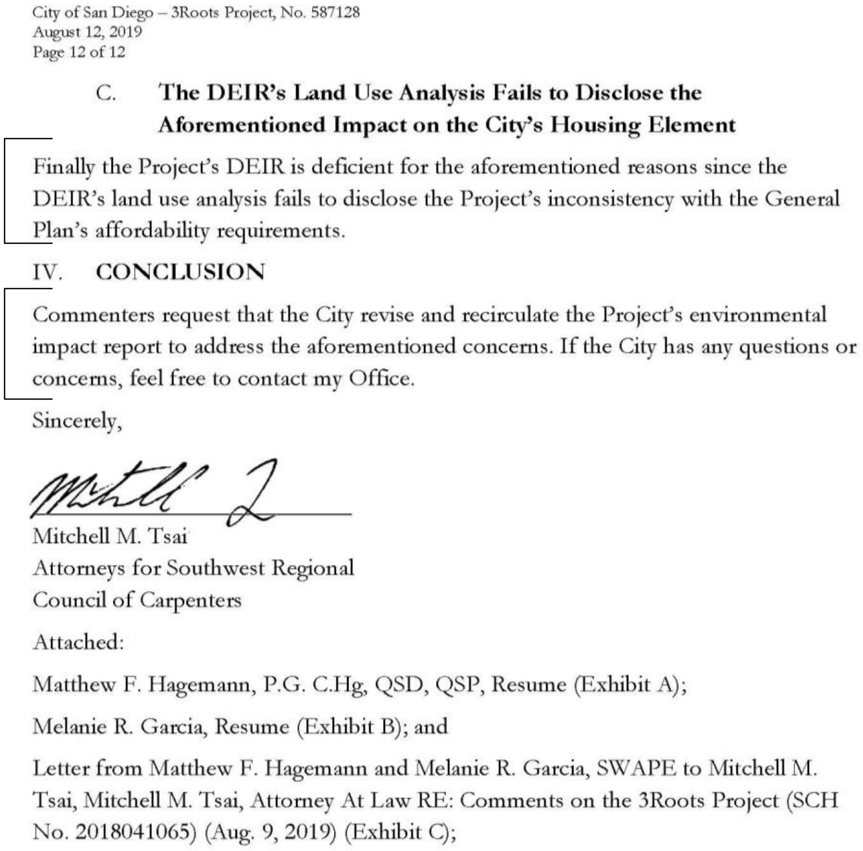
SI5-23 The Housing Element of the City's General Plan requires that the City produce at least 700 additional units for moderate-income households, 3,600 additional units for low income households, 3,000 additional units of housing for very low-income households and 3,000 additional units for extremely low-income households by December 31, 2020. (City of San Diego Housing Element at p. HE-48.) Objective I Community Balance of the Housing Element of the City's General Plan implements a policy intended towards meeting that requirement by requiring that "a minimum of ten percent of all new units . . . be affordable to low- and very low- income residents or for moderate income homebuyers." (City of San Diego Housing Element at p. HE-122.)

SI5-24 The Project blatantly violates that requirement by setting aside 10 percent of the Project's total proposed residential units for market rate senior housing, and setting aside no units for moderate, low and very low income residents. By failing to set aside any units towards affordable housing in this Project, the Project undermines the City's goal of providing at least 700 additional units for moderate-income households, 3,600 additional units for low income households, 3,000 additional units of housing for very low-income households and 3,000 additional units for extremely low-income households by December 31, 2020. (City of San Diego Housing Element at p. HE-48.) The most recent data from the City regarding the City's affordable housing production indicates that the City is woefully behind in producing affordable housing for all affordable categories (City of San Diego 2019 Annual Element Progress Report at p.15.) The Project violates the City's mandatory affordable housing requirements.

SI5-23 This comment provides a quote from the City's Housing Element. The comment does not address the adequacy or accuracy of the Draft EIR. No further response is required.

SI5-24 This comment is incorrect. As described in Chapter 3.0 of the EIR, an element of Goals and Objectives 3 is to provide "for rent, age-restricted, affordable (10 percent of total units)" housing. This is referenced throughout relevant discussions in Chapter 3.0. It is also specifically alluded to in Section 5.1 under the heading "Consistency with the Environmental Goals and/or Objectives of the General Plan and MMCP," to wit: "Residences would include 180 units of on-site affordable housing (i.e., 10 percent of total proposed units) to meet the City's affordable housing requirements and Environmental Justice goals (GP policies LU-C.4, LU-H.1.e, LU-H.2, LU-H.3, HE-A.5, HE-B.4, HE-B.5, HE-B.16, and HE-I.6)." Contrary to the comment, the Project neither undermines the City's housing goals, nor violates the City's mandatory affordable housing requirements.

COMMENTS



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August 12, 2019
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C. The DEIR's Land Use Analysis Fails to Disclose the Aforementioned Impact on the City's Housing Element

SI5-25 Finally the Project's DEIR is deficient for the aforementioned reasons since the DEIR's land use analysis fails to disclose the Project's inconsistency with the General Plan's affordability requirements.

IV. CONCLUSION

SI5-26 Commenters request that the City revise and recirculate the Project's environmental impact report to address the aforementioned concerns. If the City has any questions or concerns, feel free to contact my Office.

Sincerely,

Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

Attached:

Matthew F. Hagemann, P.G. C.Hg, QSD, QSP, Resume (Exhibit A);

Melanie R. Garcia, Resume (Exhibit B); and

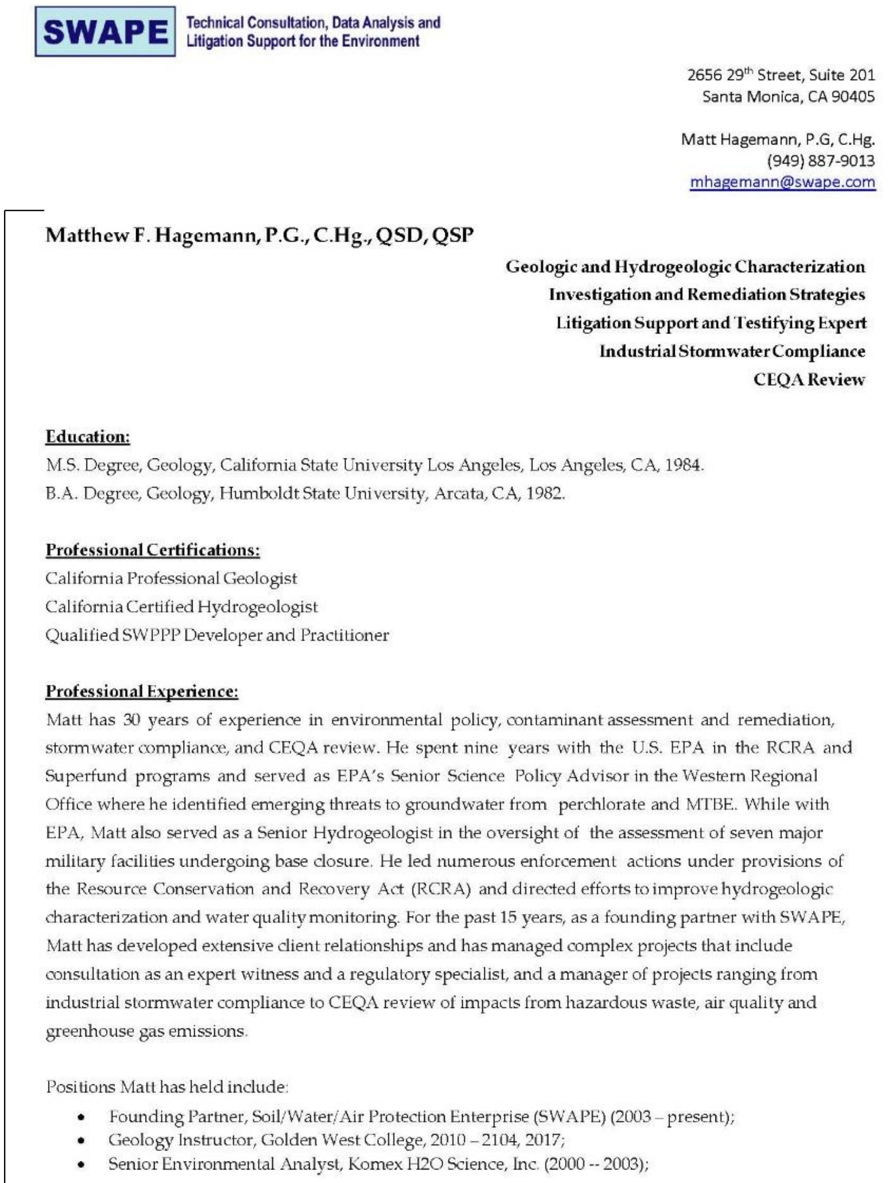
Letter from Matthew F. Hagemann and Melanie R. Garcia, SWAPE to Mitchell M. Tsai, Mitchell M. Tsai, Attorney At Law RE: Comments on the 3Roots Project (SCH No. 2018041065) (Aug. 9, 2019) (Exhibit C);

RESPONSES

SI5-25 This is a summary comment stating that the Draft EIR was deficient for the "above-stated reasons" relative to failure to disclose the Project's inconsistency with General Plan affordability requirements. Refer to Response to Comment 12.

SI5-26 As shown in each of the above responses, and disclosed though the Draft EIR, the Draft EIR requires neither revision nor recirculation.

EXHIBIT A



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SI5-27

Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

SI5-27 This is a resume for Matthew F. Hagemann, P.G., C.Hg., QSD, SSP. The resume provides qualifications information for Mr. Hagemann, which are noted. The resume is not a comment on the CEQA adequacy of the EIR, however, and does not require further response.

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

SI5-27 cont.

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 150 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

SI5-27 cont.

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

SI5-27 cont.

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:
- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:
- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

SI5-27 cont.

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:
- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

SI5-27 cont.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

SI5-27 cont.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

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Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

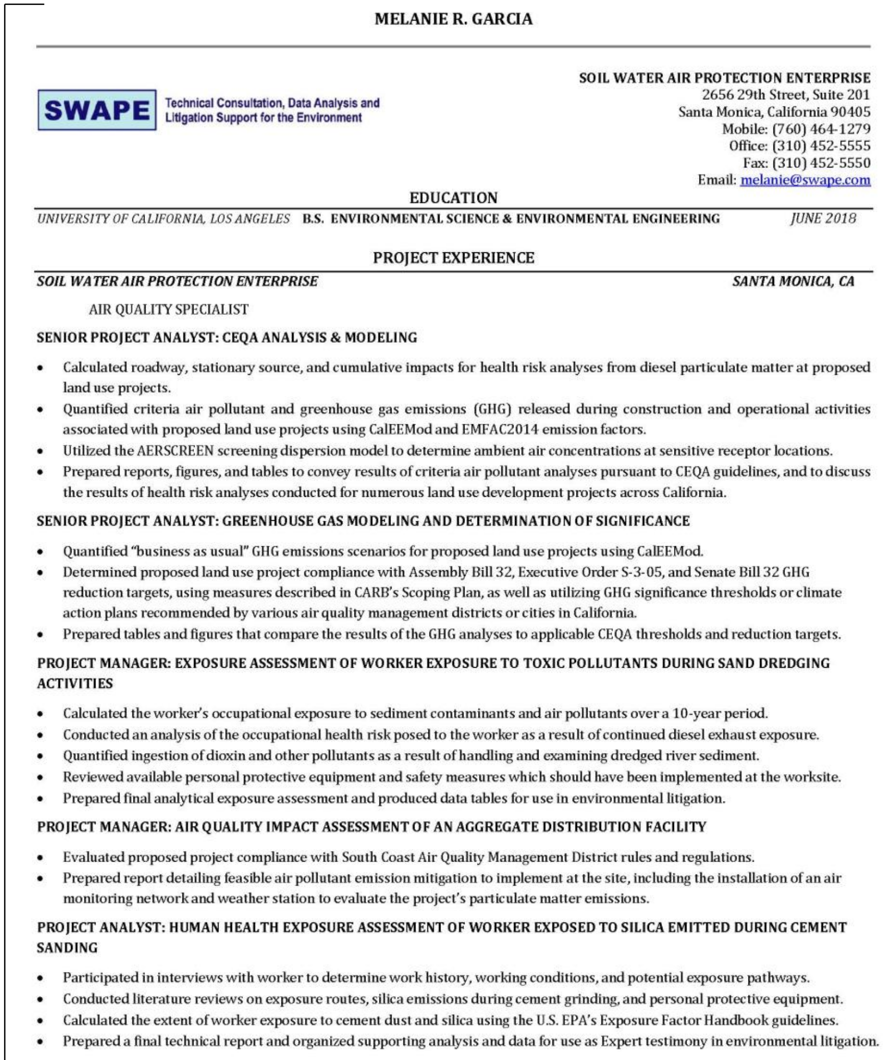
SI5-27 cont.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

EXHIBIT B

SI5-28



MELANIE R. GARCIA

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES **B.S. ENVIRONMENTAL SCIENCE & ENVIRONMENTAL ENGINEERING** *JUNE 2018*

PROJECT EXPERIENCE

SOIL WATER AIR PROTECTION ENTERPRISE ***SANTA MONICA, CA***

AIR QUALITY SPECIALIST

SENIOR PROJECT ANALYST: CEQA ANALYSIS & MODELING

- Calculated roadway, stationary source, and cumulative impacts for health risk analyses from diesel particulate matter at proposed land use projects.
- Quantified criteria air pollutant and greenhouse gas emissions (GHG) released during construction and operational activities associated with proposed land use projects using CalEEMod and EMFAC2014 emission factors.
- Utilized the AERSCREEN screening dispersion model to determine ambient air concentrations at sensitive receptor locations.
- Prepared reports, figures, and tables to convey results of criteria air pollutant analyses pursuant to CEQA guidelines, and to discuss the results of health risk analyses conducted for numerous land use development projects across California.

SENIOR PROJECT ANALYST: GREENHOUSE GAS MODELING AND DETERMINATION OF SIGNIFICANCE

- Quantified "business as usual" GHG emissions scenarios for proposed land use projects using CalEEMod.
- Determined proposed land use project compliance with Assembly Bill 32, Executive Order S-3-05, and Senate Bill 32 GHG reduction targets, using measures described in CARB's Scoping Plan, as well as utilizing GHG significance thresholds or climate action plans recommended by various air quality management districts or cities in California.
- Prepared tables and figures that compare the results of the GHG analyses to applicable CEQA thresholds and reduction targets.

PROJECT MANAGER: EXPOSURE ASSESSMENT OF WORKER EXPOSURE TO TOXIC POLLUTANTS DURING SAND DREDGING ACTIVITIES

- Calculated the worker's occupational exposure to sediment contaminants and air pollutants over a 10-year period.
- Conducted an analysis of the occupational health risk posed to the worker as a result of continued diesel exhaust exposure.
- Quantified ingestion of dioxin and other pollutants as a result of handling and examining dredged river sediment.
- Reviewed available personal protective equipment and safety measures which should have been implemented at the worksite.
- Prepared final analytical exposure assessment and produced data tables for use in environmental litigation.

PROJECT MANAGER: AIR QUALITY IMPACT ASSESSMENT OF AN AGGREGATE DISTRIBUTION FACILITY

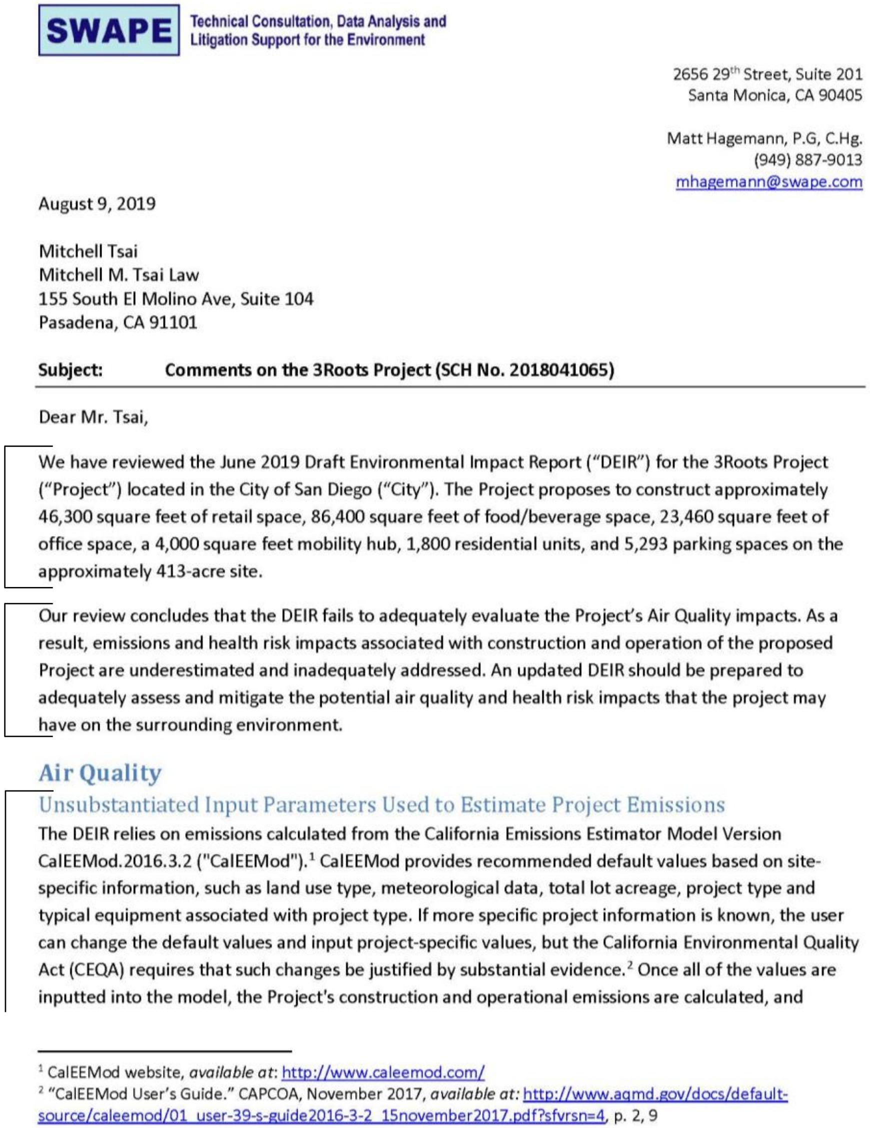
- Evaluated proposed project compliance with South Coast Air Quality Management District rules and regulations.
- Prepared report detailing feasible air pollutant emission mitigation to implement at the site, including the installation of an air monitoring network and weather station to evaluate the project's particulate matter emissions.

PROJECT ANALYST: HUMAN HEALTH EXPOSURE ASSESSMENT OF WORKER EXPOSED TO SILICA EMITTED DURING CEMENT SANDING

- Participated in interviews with worker to determine work history, working conditions, and potential exposure pathways.
- Conducted literature reviews on exposure routes, silica emissions during cement grinding, and personal protective equipment.
- Calculated the extent of worker exposure to cement dust and silica using the U.S. EPA's Exposure Factor Handbook guidelines.
- Prepared a final technical report and organized supporting analysis and data for use as Expert testimony in environmental litigation.

SI5-28 This is a resume for Melanie R. Garcia. The resume provides qualifications information for Ms. Garcia which are noted. The resume is not a comment on the CEQA adequacy of the EIR, however, and does not require further response.

EXHIBIT C



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August 9, 2019

Mitchell Tsai
Mitchell M. Tsai Law
155 South El Molino Ave, Suite 104
Pasadena, CA 91101

Subject: **Comments on the 3Roots Project (SCH No. 2018041065)**

Dear Mr. Tsai,

SI5-29 We have reviewed the June 2019 Draft Environmental Impact Report ("DEIR") for the 3Roots Project ("Project") located in the City of San Diego ("City"). The Project proposes to construct approximately 46,300 square feet of retail space, 86,400 square feet of food/beverage space, 23,460 square feet of office space, a 4,000 square feet mobility hub, 1,800 residential units, and 5,293 parking spaces on the approximately 413-acre site.

SI5-30 Our review concludes that the DEIR fails to adequately evaluate the Project's Air Quality impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated DEIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

SI5-31 The DEIR relies on emissions calculated from the California Emissions Estimator Model Version CalEEMod.2016.3.2 ("CalEEMod").[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and

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[1] CalEEMod website, *available at*: http://www.caleemod.com/

[2] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9

SI5-29 This comment provides some summary information on the Project. No response is required.

SI5-30 This comment asserts that the Draft EIR underestimated and inadequately addressed air quality impacts and requests an "updated EIR" to assess and mitigate for potential air quality and health risk impacts associated with the Project. It is an introductory broad statement. Refer to Responses to Comments 31 through 36 of this letter, which address the detailed comments provided for air quality issues.

SI5-31 The City agrees with the characterization of CalEEMod in this comment. Deviation from the default values can occur when different specifications are known to be part of a project, and adjustment of the model will result in more accurate results relative to project specifications. As noted, the CalEEMod output files highlight each parameter changed in the modeling. This supports potential for peer review, as has occurred here. Relative to justifying deviation from CalEEMod default values, the substantial evidence was provided in the Project Description, in CalEEMod remarks, in other technical reports used in the analysis, and in the Air Quality Technical Report (AQTR, EIR Appendix C). For example, as cited on page 5.4-14 of Section 5.4, Air Quality, of the Draft EIR, and referenced on Draft EIR page 12-7 of Chapter 12.0, References, and pages 16, 17, and 18 of the AQTR, and in the remarks section of the CalEEMod outputs included as Appendix A to the AQTR, the construction schedule and equipment mix was provided by JT Kruer & Company.

SI5-31 cont. "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions, and make known which default values were changed as well as provide justification for the values selected.[3]

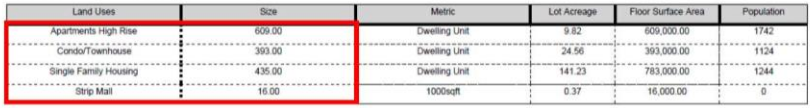
SI5-32 When we reviewed the Project's CalEEMod output files, provided as Appendix C to the DEIR, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR and associated appendices. As a result, the Project's construction and operational emissions are underestimated. An updated DEIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Failure to Include All Proposed Land Uses

Review of the Project's CalEEMod output files demonstrates that not all of the land uses proposed by the DEIR and associated appendices were included in the Project's CalEEMod model. As a result, the Project's construction and operational emissions are underestimated.

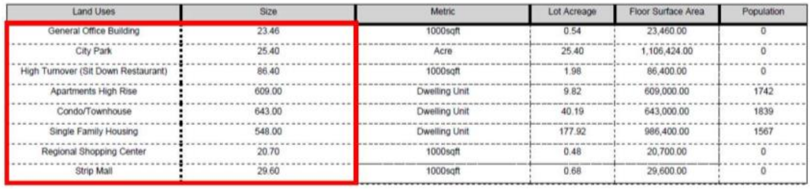
According to the Transportation Impact Analysis (TIA), located in Appendix B to the DEIR, "the proposed project will provide a total of 5,293 parking spaces" (Appendix B, p. 230). The DEIR proposes to construct the Project in two phases (p. 3-18). However, review of the Project's CalEEMod output files demonstrates that the proposed 5,293-space parking land use was entirely omitted from the air models for both Phase I and Phase II of the Project (see excerpts below) (Appendix C, pp. 52, pp. 108).

Phase I CalEEMod Output



Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	609.00	Dwelling Unit	9.82	609,000.00	1742
Condo/Townhouse	393.00	Dwelling Unit	24.56	393,000.00	1124
Single Family Housing	435.00	Dwelling Unit	141.23	783,000.00	1244
Strip Mall	16.00	1000sqft	0.37	16,000.00	0

Phase II CalEEMod Output



Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	23.46	1000sqft	0.54	23,460.00	0
City Park	25.40	Acre	25.40	1,106,424.00	0
High Turnover (Sit Down Restaurant)	86.40	1000sqft	1.98	86,400.00	0
Apartments High Rise	609.00	Dwelling Unit	9.82	609,000.00	1742
Condo/Townhouse	643.00	Dwelling Unit	40.19	643,000.00	1839
Single Family Housing	548.00	Dwelling Unit	177.92	986,400.00	1567
Regional Shopping Center	20.70	1000sqft	0.48	20,700.00	0
Strip Mall	29.60	1000sqft	0.68	29,600.00	0

As you can see in the above excerpts, the Project Applicant failed to include the proposed 5,293-space parking land use in either of the air models. The land use type and size features are used throughout

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[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13 (A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.)

SI5-32 The City agrees that parking spaces were not independently analyzed in the modeling. The City disagrees, however, that such analysis is required. Such analysis may apply, for example, if the project itself was a large parking lot that would draw users, such as at a park and ride facility. That is not the case here, where parking would be provided in private garages, along some project streets, and associated with apartment dwellings and office/retail uses. Vehicular trips associated with the parking structure would not be generated independently from the trips generated from the land uses already included in the model.

Regarding construction of the parking structure, is worth noting that the construction assumptions were provided by the construction management firm JT Kruer & Company as detailed in Response to Comments 31, above. Any construction activity associated with development of parking is included in the assumptions on which the modeling is based even if the specific land use is not included separately in the model. The comment also highlights some specific topics for discussion. These include wall space to be painted (VOC emissions from architectural coatings) and area heated or cooled. Open parking lots are not enclosed by walls, and therefore would not have walls that could be painted. Attached garages would have walls to be painted, and/but those are accounted for in the CalEEMod defaults. As addressed in Chapter 3.0 of the EIR in Table 3-5, although they are by no means certain, there is potential for consideration of two parking structures; one each in PA 13 and 14. Also as noted, a number of materials are proposed to treat the parking structures if used (perforated metal, mesh, vanes, shading devices, silkscreened-printed materials, and murals), and there production on or off site is unknown. This renders VOC modeling speculative. Another stated concern is "volume that is heated or cooled (i.e., energy impacts)." Neither parking lots nor structures would be heated or cooled.

SI5-32 cont. CalEEMod to determine default variable and emission factors that go into the model's calculations.[4] For example, the square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Furthermore, CalEEMod assigns each land use type with its own set of energy usage emission factors.[5] By completely omitting the proposed parking land use, the DEIR fails to account for all of the emissions that would be produced during construction and operation of the Project. As a result, the Project's emissions, including but not limited to VOC emisisons, are underestimated.

Failure to Account for All Hauling Truck Trips During Construction

SI5-33 Review of the Project's CalEEMod output files reveals that the Applicant failed to model the total number of hauling truck trips anticipated to occur during Project construction. According to the TIA, demolition will require 1,340 truckloads of material hauling, Phase I clearing/grubbing will require 377 truckloads of material hauling, and Phase II clearing/grubbing will require 349 truckloads of material hauling (see excerpt below) (Table 10-1, Appendix B, p. 234).

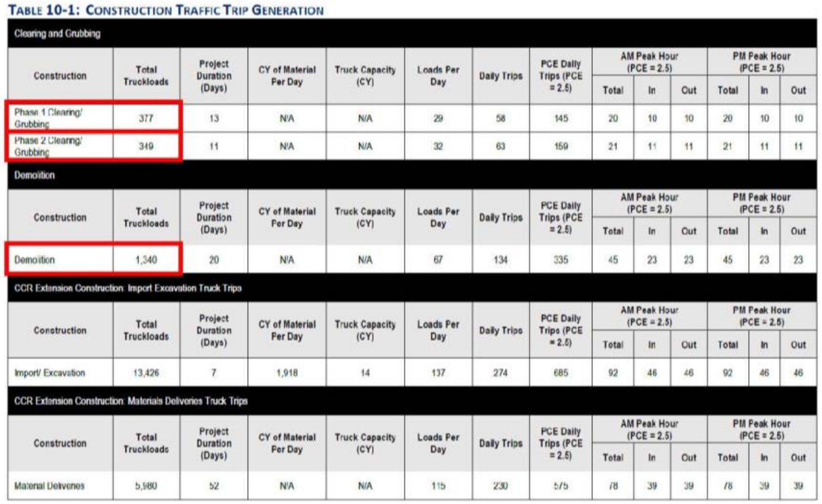

TABLE 10-1: CONSTRUCTION TRAFFIC TRIP GENERATION

Clearing and Grubbing

Construction	Total Truckloads	Project Duration (Days)	CY of Material Per Day	Truck Capacity (CY)	Loads Per Day	Daily Trips	PCE Daily Trips (PCE = 2.5)	AM Peak Hour (PCE = 2.5)			PM Peak Hour (PCE = 2.5)		
								Total	In	Out	Total	In	Out
Phase 1 Clearing/ Grubbing	377	13	N/A	N/A	29	58	145	20	10	10	20	10	10
Phase 2 Clearing/ Grubbing	349	11	N/A	N/A	32	63	159	21	11	11	21	11	11

Demolition

Construction	Total Truckloads	Project Duration (Days)	CY of Material Per Day	Truck Capacity (CY)	Loads Per Day	Daily Trips	PCE Daily Trips (PCE = 2.5)	AM Peak Hour (PCE = 2.5)			PM Peak Hour (PCE = 2.5)		
								Total	In	Out	Total	In	Out
Demolition	1,340	20	N/A	N/A	67	134	335	45	23	23	45	23	23

CCR Extension Construction: Import Excavation Truck Trips

Construction	Total Truckloads	Project Duration (Days)	CY of Material Per Day	Truck Capacity (CY)	Loads Per Day	Daily Trips	PCE Daily Trips (PCE = 2.5)	AM Peak Hour (PCE = 2.5)			PM Peak Hour (PCE = 2.5)		
								Total	In	Out	Total	In	Out
Import/ Excavation	13,426	7	1,918	14	137	274	685	92	46	46	92	46	46

CCR Extension Construction: Materials Deliveries Truck Trips

Construction	Total Truckloads	Project Duration (Days)	CY of Material Per Day	Truck Capacity (CY)	Loads Per Day	Daily Trips	PCE Daily Trips (PCE = 2.5)	AM Peak Hour (PCE = 2.5)			PM Peak Hour (PCE = 2.5)		
								Total	In	Out	Total	In	Out
Material Deliveries	5,980	52	N/A	N/A	115	230	575	78	39	39	78	39	39

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[4] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2, p. 17

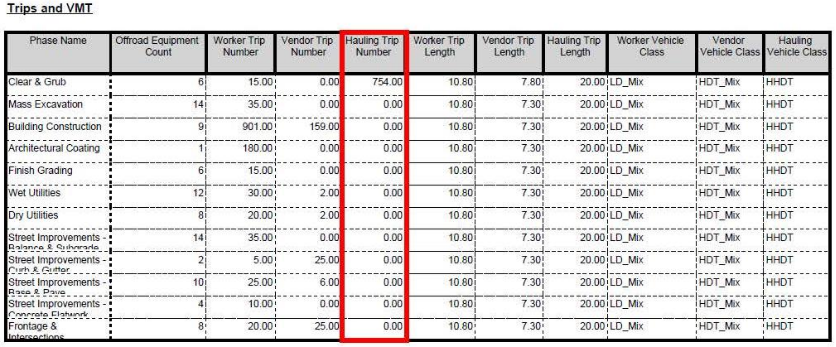
[5] "CalEEMod User's Guide, Appendix D." CAPCOA, September 2016, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2

SI5-33 The comment states that there is failure to address all construction haul trips, focused on reclamation demolition. Demolition is authorized as part of the approved and ongoing mine reclamation activities, separate from the Project. The Transportation Impact Analysis is conservative and details all activities that might occur that vary from the ongoing reclamation grading activities in the northern part of the project site, where demolition was unnecessary. Reclamation activities were largely completed prior to December 2018 for the northern part of the site. The completed approved and ongoing reclamation program will result in a clean site with rough pads and initial Carroll Canyon Road grading (as well as the reconstructed creek) so that only refinement and finish grading is necessary as part of Project implementation. These are actions anticipated in approved Reclamation Plan documents. As detailed on Draft EIR page 5.13-10 and EIR Appendix P, the Project Waste Management Plan: "In this case, demolition, mass grading, and the majority of on-site clearing/grubbing have already occurred as part of the baseline condition." Please refer to Draft EIR Section 2.2.4, Reclamation Plan – Project Baseline, and Section 3.3.5, Grading Plan, as well as pages 5.9-1 through 5.9-4, which specifically describe the existing vegetated condition (i.e., post creek re-establishment and habitat installation) assumed as baseline.

SI5-33 cont.

As the table above demonstrates, the TIA determines the total truckloads of material hauling required during the Phase I clearing/grubbing, Phase II clearing/grubbing, and demolition phases of Project construction. The TIA states that the total number of hauling truck trips required is calculated by multiplying the number of truckloads by two to account for the inbound and outbound trip for each truckload (TIA, p. 232). Therefore, the Applicant should have input 2,680 one-way trips during demolition (1,340 round trips x 2-way trip = 2,680 trips), 754 one-way trips during Phase I clearing/grubbing (377 round trips x 2-way trip = 754 trips), and 698 one-way trips during Phase II clearing/grubbing (349 round trips x 2-way trip = 698 trips) into CalEEMod. Review of the CalEEMod output files, however, demonstrates that the Project Applicant failed to model the hauling truck trips anticipated to occur during demolition (see excerpts below) (Appendix C, pp. 66, pp. 125).

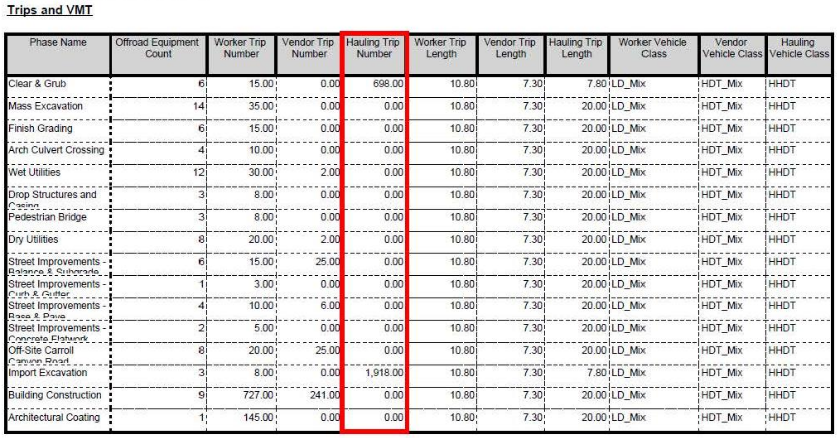
Phase I CalEEMod Output



Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear & Grub	6	15.00	0.00	754.00	10.80	7.80	20.00	LD_Mix	HDT_Mix	HHDT
Mass Excavation	14	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	901.00	159.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	180.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finish Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Wet Utilities	12	30.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dry Utilities	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Balance & Subgrade	14	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Curb & Gutter	2	5.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Base & Pave	10	25.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Concrete Flatwork	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Frontage & Intersections	8	20.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Phase II CalEEMod Output



Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear & Grub	6	15.00	0.00	698.00	10.80	7.30	7.80	LD_Mix	HDT_Mix	HHDT
Mass Excavation	14	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finish Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Arch Culvert Crossing	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Wet Utilities	12	30.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Drop Structures and Casing	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pedestrian Bridge	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dry Utilities	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Balance & Subgrade	6	15.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Curb & Gutter	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Base & Pave	4	10.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Street Improvements - Concrete Flatwork	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Off-Site Carroll Canyon Road	8	20.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Import Excavation	3	8.00	0.00	1,918.00	10.80	7.30	7.80	LD_Mix	HDT_Mix	HHDT
Building Construction	9	727.00	241.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	145.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

SI5-33 cont.

As you can see in the above excerpts from the Project's Phase I and Phase II CalEEMod output files, the Project Applicant modeled 754 hauling truck trips for Phase I clearing/grubbing and 698 truck trips for Phase II clearing/grubbing, yet failed to model the 2,680 hauling truck trips associated with demolition (Appendix C, pp. 66, pp. 125). By failing to input the correct number of hauling trips into the model, the Project's mobile-source and fugitive dust emissions are greatly underestimated. This underestimation presents a significant issue, as the use of the correct hauling trip numbers within the model is necessary to properly calculate emissions produced from material movement, including truck loading and unloading, and hauling truck trips.[6] Fugitive dust is generated by various activities that occur during Project construction, including loading and unloading of material from trucks and on-road vehicles driving over paved and unpaved roads; and this dust contributes to the Project's PM_{10} and $PM_{2.5}$ emissions.[7] Furthermore, CalEEMod uses the number of hauling trips associated with material transport activities, in combination with the hauling truck trip length, to determine the Project's construction-related mobile source emissions.[8] Therefore, by failing to use the correct, Project-specific number of hauling trips during demolition, the Project's fugitive PM_{10} and $PM_{2.5}$ emissions and mobile-source exhaust emissions are greatly underestimated.

SI-34

As a result of the air modeling issues discussed above, we find the Project's air quality impacts to be inadequately evaluated and require that an updated DEIR be prepared that adequately evaluates and mitigates the Project's air quality impacts to a less-than-significant level.

SI5-35

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR determines that the proposed Project would have a less than significant health risk impact without conducting a quantitative analysis of construction or operational health risks (p. 5.4-23). The DEIR attempts to justify this determination by stating,

> "As shown in Table 5.4-8, maximum daily particulate matter (i.e., PM_{10} or $PM_{2.5}$) emissions generated by construction equipment operation and haul-truck trips during construction (exhaust particulate matter, or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, would be well below the City's screening-level thresholds. Moreover, total construction of the Project would last approximately 26 months, after which project-related TAC emissions would cease. Thus, the Project would not result in a long-term source of TAC emissions" (p. 5.4-21).[9]

The DEIR goes on to assert,

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[6] CalEEMod User's Guide, *available at:* http://www.caleemod.com/, p. 3, 26.

[7] CalEEMod User's Guide, Appendix A, *available at:* http://www.caleemod.com/, p. 7.

[8] CalEEMod User's Guide, *available at:* http://www.caleemod.com/, p. 33, 34.

[9] The 26-month construction duration presented here is inconsistent with the construction schedule provided in other sections of the DEIR, associated appendices, and CalEEMod output files, which all indicate an approximately 48-month (4-year) construction duration (DEIR, p. 5.4-14; Appendix C, pp. 63, pp. 121).

SI5-34 Air quality impacts were adequately and appropriately evaluated as disclosed in the Draft EIR and outlined in the responses provide. The Draft EIR concluded that the project would result in less than significant impacts related to air quality following incorporation of identified mitigation.

SI5-35 The assessment of health risk impacts was adequately and appropriately evaluated, as disclosed in the Draft EIR that concluded that the Project would result in less than significant impacts related to air quality. The comment contends that there needs to be a "proper" assessment of risk, requiring quantification and comparison to applicable thresholds, and that no significance determination can be reached until this is done. The Project air quality analysis complied with CAPCOA (the association comprised of all air pollution control districts in California), as well as publicly adopted City thresholds, and are fully adequate under CEQA. Specifics are addressed in Response to Comment 36, below.

SI5-35 cont.

> "No residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the Project. Therefore, the exposure of project-related TAC emission impacts to sensitive receptors would be less than significant." (p. 5.4-23).

This significance determination is incorrect and unsubstantiated, as the Project Applicant cannot claim that the Project would result in a less than significant health risk impact without properly assessing the risk posed to sensitive receptors as a result of diesel particulate matter (DPM) emissions that will be emitted during Project activities. As a result, until the Project's construction and operational health risk impacts are adequately quantified and compared to applicable thresholds, the DEIR and associated appendices cannot make any significance determination regarding the Project's health risk impacts.

SI5-36

By failing to prepare a construction or operational HRA for existing sensitive receptors, the DEIR is inconsistent with recommendations set forth by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations for health risk assessments in California. In February of 2015, OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015.[10] This guidance document describes the types of projects that warrant the preparation of a health risk assessment (HRA). Construction of the Project will produce emissions of DPM, a human carcinogen, through the exhaust stacks of construction equipment over an approximately 48-month construction schedule (p. 5.4-14). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[11] Therefore, per OEHHA guidelines, health risk impacts from Project construction should have been evaluated by the DEIR. Furthermore, once construction of the Project is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to toxic air contaminant (TAC) emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[12] Although we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, health risks from Project operation should have also been evaluated by the Project applicant, as a 30-year exposure duration vastly exceeds the 2-month and 6-month requirements set forth by OEHHA. These recommendations reflect the most recent health risk policy, and as such, an updated assessment of health risks to nearby sensitive receptors from Project construction and operation should be included in an updated DEIR.

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[10] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[11] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18

[12] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6, 8-15

6

SI5-36 This comment suggests that the air quality analyses are inconsistent with OEHHA recommendations for technical review of both construction and operations. It is noted that the commenter's concern over potential impacts is based on an AERSCREEN model. The purpose of the AERSCREEN model is to screen for the possibility of a potential impact. A number of points need to be made regarding such a modeling approach.

First, there are issues regarding the conservative nature of the model itself. The AERSCREEN model is widely acknowledged (including by the USEPA) as being overly conservative. AERSCREEN does not account for spatial relation, geography, or local meteorology. It looks at a hypothetical sensitive receptor located within 100 meters and assesses impact as if that receptor is downwind of the source. Rather than being precise about source and receptor locations (both of which are critical in assessing real potential impact), it simply takes the worst-case emissions information (regardless of where it would be generated on site and whether it would move over time)– and assume that there is a receptor within 100 meters, regardless of whether of whether airflow actually goes in that direction. AERSCREEN, therefore, may be helpful as an initial screening exercise. In this case, there are sensitive receptors within 100 meters of the project site, but they are not downwind. As shown in windrose data available on CARB's website (https://ww3.arb.ca.gov/toxics/harp/met/WindRoses.ppt) wind in the area primarily blows from the northwest to the southeast. The nearest sensitive receptors are north-north-east of the project site and at a higher elevation. For these reasons, the AERSCREEN run completed in support of the comment overestimates the potential concentration of TACs and, therefore, the corresponding health risk values.

In an effort to demonstrate the potential risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. Our analysis uses the Applicant's Phase II CalEEMod model, which is underestimated, as was discussed in previous sections. Furthermore, this model only includes Phase II of the Project, and thus fails to include the other phases of Project construction and operation that were included in other CalEEMod models. As a result, this model only represents a portion of the total construction schedule and thus, emissions are significantly underestimated. Finally, the Applicant failed to include the annual CalEEMod output files that estimate emissions in tons per year, which is required for AERSCREEN. Thus, we converted the emissions from pounds per day from the winter CalEEMod model for use in the HRA. The results of our assessment, as described below, demonstrate that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact that was not previously identified or evaluated by the DEIR.

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model. [13] The model replaced SCREEN3, and is included in OEHHA[14] and California Air Pollution Control Officers Associated (CAPCOA)[15] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, it is suggested that a more refined air model be conducted to analyze the link between air emissions and the health risk.

SI5-36 cont.

We prepared a preliminary health risk screening assessment of the Project's construction and operational health-related impacts to sensitive receptors using the annual PM_{10} exhaust estimates from the Applicant's Phase II CalEEMod output files. It should be noted that our analysis utilizes PM_{10} exhaust estimates from the Applicant's Phase II CalEEMod model. The Phase II CalEEMod model contains all of the proposed Project land uses. However, this model only contains construction and operational emissions estimates for Phase II of the Project, and thus fails to include Phase I of Project construction. As a result, the model represents only a portion of the total construction activities and thus underestimates the total PM_{10} exhaust emissions resulting from the full project. Furthermore, as previously discussed, the Applicant's CalEEMod models contain incorrect input parameters and therefore underestimate Project emissions. Finally, the Applicant failed to provide annual CalEEMod output files. As a result, we relied upon the maximum daily PM_{10} exhaust emissions from the Applicant's winter CalEEMod output file to conduct a screening-level assessment.

According to the DEIR, "[e]xisting sensitive receptors within the Project vicinity include single-family residences to the north" (p. 5.4-6). Review of the site in Google Earth demonstrates that the nearest

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[13] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

[14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf

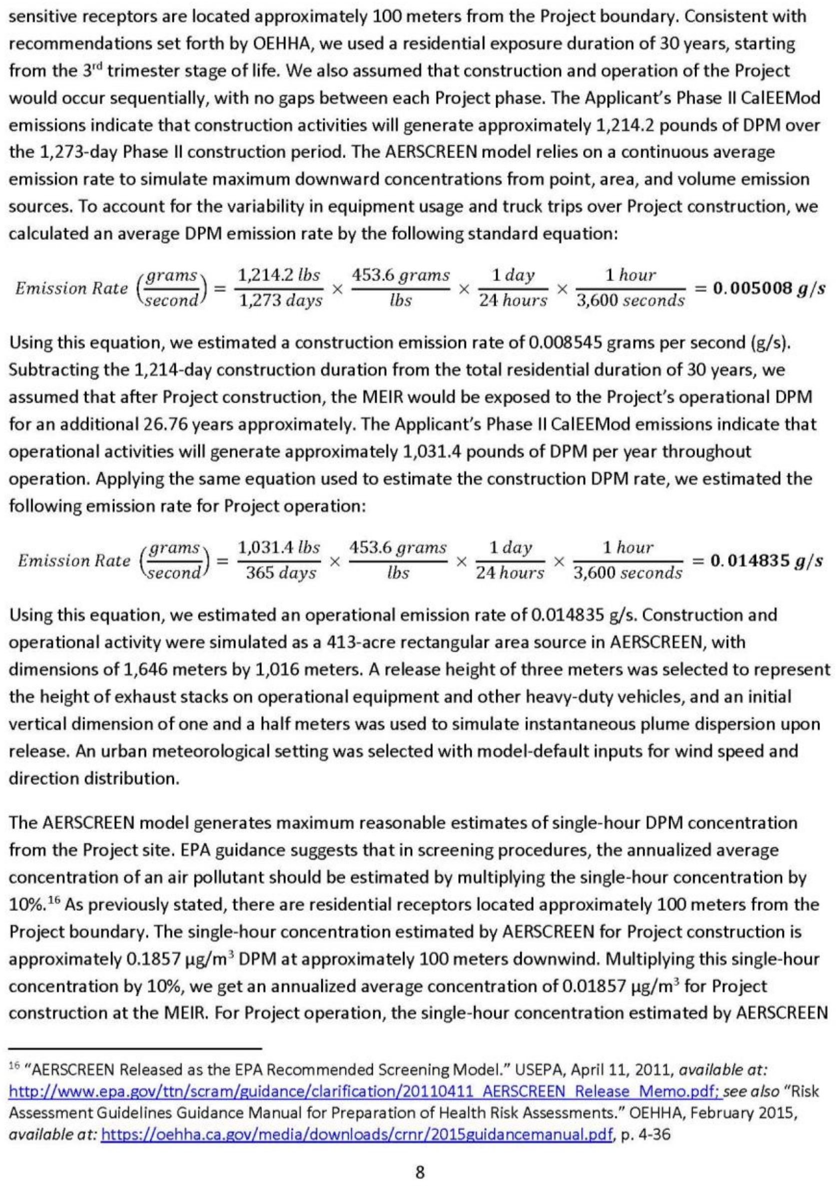
[15] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

SI5-36 (cont.)

Furthermore, though OEHHA's guidance recommends evaluation of short-term projects, that guidance supports HRAs written for the purpose of AB2588 inventories and focuses on stationary sources associated with facilities such as automobile body shops, gasoline service stations, power plants, or treatment facilities. Any given construction activity resulting in emissions would occur on a given portion of the over 200-acre site for a relatively short duration. For instance, a grader may be operating within 100 meters to the closest receptor on a given day, but the next it could very well be on the other side of the site nearly a mile away. This is not a stationary source. OEHHA's guidance recognizes that "The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste remediation." The analysis contained within the Draft EIR and Air Quality Technical Report are not intended to support permitting decisions by the local air district.

There are also issues associated with the information entered into the AERSCREEN model by the commenter. For instance, AERSCREEN uses annual average emissions as base data. In this case, because the commenter pulled data from the more specific CalEEMod data sheets completed as part of Project modeling, peak daily (rather than annual average) emissions were entered. This additionally increases the conservative nature of modeled findings. Also, the screening modeling undertaken by the commenter appears to have modeled both on- and off-site exhaust PM_{10} emissions as occurring on site. This has the effect of overestimating emissions that would occur on site and would therefore result in increased concentrations at the downwind sensitive receptor. Not only would the off-site PM_{10} exhaust emissions occur farther away from the site itself, and therefore the receptors in question, the analysis also characterizes all exhaust PM_{10} emissions as being emitted from diesel vehicles. This is inaccurate in terms of vehicular mix as all of the construction-period PM_{10} would not stem from diesel fuel burning sources. This has resulted in an overestimation of DPM emissions. The commenter further asserts the analysis must incorporate demolition/hauling trips that are not part of the Project (c.f., Response to Comment 33 of this letter). These input errors result in model output that is not accurate and is inapplicable to the Project.

SI5-36 cont.



sensitive receptors are located approximately 100 meters from the Project boundary. Consistent with recommendations set forth by OEHHA, we used a residential exposure duration of 30 years, starting from the 3rd trimester stage of life. We also assumed that construction and operation of the Project would occur sequentially, with no gaps between each Project phase. The Applicant's Phase II CalEEMod emissions indicate that construction activities will generate approximately 1,214.2 pounds of DPM over the 1,273-day Phase II construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following standard equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{1{,}214.2\ lbs}{1{,}273\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.005008\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.008545 grams per second (g/s). Subtracting the 1,214-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DPM for an additional 26.76 years approximately. The Applicant's Phase II CalEEMod emissions indicate that operational activities will generate approximately 1,031.4 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{1{,}031.4\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.014835\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.014835 g/s. Construction and operational activity were simulated as a 413-acre rectangular area source in AERSCREEN, with dimensions of 1,646 meters by 1,016 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentration from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant should be estimated by multiplying the single-hour concentration by 10%.[16] As previously stated, there are residential receptors located approximately 100 meters from the Project boundary. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 0.1857 µg/m³ DPM at approximately 100 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.01857 µg/m³ for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN

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[16] "AERSCREEN Released as the EPA Recommended Screening Model." USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 4-36

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SI5-36 (cont.)

Regardless, even when all these overly conservative and inaccurate inputs are included into the screening model, they do not meet the threshold that would require further, more detailed, construction-period HRA modeling. This is not immediately apparent in the comment as the data need to be taken from the table titled "Maximum Exposed Individual at an Existing Residential Receptor." Looking at each of the items identified as occurring during construction and moving the number of decimal places indicated (E-6 or E-7), a total is reached (0.00000695). This is then multiplied by 1,000,000 to get the risk per million. Based on the comment letter, this would equate to a 6.95 in a million cancer risk. Also as stated in the letter, the threshold for requiring more detailed analysis is 10 in a million cancer risk. In other words, even assuming:

- that every PM_{10} emission is a *DPM* emission,
- that off-site emissions are occurring on site,
- that construction emission are aligned along the site border and remain there as stationary sources, and
- that airflow moves from the Project toward off-site sensitive receptors as opposed to being a crosswind.

The commenter's construction modeling does not support need for additional modeling. As such, the EIR concludes that construction-related health risks (here specifically cancer health risks) would be less than significant.

Relative to operations, the City agrees that Project operations would exceed six months, and understands the OEHHA recommendation that an exposure duration of 30 years be evaluated. As an introduction to this discussion, it is necessary to point out that the Project does not propose any major sources of TACs.

The same caveats apply relative to the screening modeling assumptions completed by the commenter.

SI5-36 cont.

is approximately 0.5500 µg/m³ DPM at approximately 100 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.0550 µg/m³ for operation.

We calculated the excess cancer risk to the residential receptors located closest to the Project site using applicable HRA methodologies prescribed by OEHHA and the San Diego Air Pollution Control District (SDAPCD). Consistent with the Phase II construction schedule proposed by the DEIR, the annualized average concentration for construction was used for the entire 3rd trimester of pregnancy (0.25 years) and the first 1.79 years of the infantile stage of life (0-2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder of the infantile stage of life (0-2 years), child stages of life (2 to 16 years) and adult stages of life (16 to 30 years). Consistent with OEHHA guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[17] According to the updated guidance, quantified cancer risk should be multiplied by a factor of ten during the 3rd trimester of pregnancy and the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with guidance set forth by OEHHA, we used 95th percentile breathing rates for infants.[18] We used a cancer potency factor of 1.1 $(mg/kg\text{-}day)^{-1}$ and an averaging time of 25,550 days. Finally, according to SDAPCD and OEHHA guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the 3rd trimester, infant, and child receptors, and 0.73 for the adult receptor.[19] The results of our calculations are shown below.

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[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[18] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act." SCAQMD, June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[19] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-5
"Supplemental Guidelines for Submission of Rule 1200 Health Risk Assessments (HRAs)." SDAPCD, July 2019, *available at:* https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Toxics_Program/APCD_1200_Supplemental_Guidelines.pdf, p. 3

9

SI5-36 (cont.)

In this instance, the overestimation of DPM emissions is even more glaring as vehicular mix for operational PM_{10} contains a relatively small percentage of diesel vehicles (4.2 percent based on EMFAC's vehicle populations for the County). This has resulted in a notable overestimation of DPM emissions. Finally, it is noted that the primary source of exhaust PM_{10} would be mobile in nature. Most of these emissions would occur during off-site travel and therefore, should not be included in an HRA analyzing on-site emissions exposure to off-site receptors. Specific to the Project, other source locations would include residential stoves, potential fireplaces, water heaters and furnaces; but those sources are not considered substantial by CARB, CAPCOA, or OEHHA (and are also likely to be present at much closer locations in the homes of the receptors). Even area sources such as landscape maintenance equipment is ordinarily gasoline (rather than diesel) fired, but in this project is also required by mitigation measure AQ-1 to be largely electric in nature. As such, there is no need for additional modeling.

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk
Construction	0.25	0.01857	361	10	2.5E-07
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***2.5E-07***
Construction	2.00	0.01857	1090	10	6.1E-06
Infant Exposure Duration	***2.00***			***Infant Exposure***	***6.1E-06***
Construction	1.24	0.01857	572	3	6.0E-07
Operation	12.76	0.0550	572	3	1.8E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***1.9E-05***
Operation	14.00	0.0550	261	1	2.2E-06
Adult Exposure Duration	***14.00***			***Adult Exposure***	***2.2E-06***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**2.7E-05**

SI5-36 cont.

The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the MEIR located approximately 100 meters away, over the course of Project construction and operation, are approximately 2.2, 19, 6.1, and 0.25, respectively. Furthermore, the excess cancer risk over the course of a residential lifetime (30 years) at the MEIR is approximately 27 in one million. Consistent with OEHHA guidance, exposure was assumed to begin in the third trimester of pregnancy to provide the most conservative estimates of air quality hazards. The child and lifetime cancer risks exceed the CAPCOA threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the SDAPCD.[20] As previously discussed, this screening-level risk assessment only relies upon the Project's Phase II CalEEMod emissions estimates. Therefore, the actual health risk impact associated with both Phase I and Phase II of the proposed Project is likely greater than that presented in this letter. Furthermore, as discussed above, the Project's CalEEMod air modeling underestimates construction-related exhaust emissions. Thus, the health risks associated with those emissions are likely greater than is stated here.

An agency must prepare an analysis of health risks that connects the Project's air pollutant emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be more conservative, and tends to err on the side of health protection.[21] The purpose of the screening-level HRA shown above is to demonstrate this link between the proposed Project's emissions and the resulting health risk potential. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Additionally, review of the DEIR demonstrates that there are numerous residences located along the northern Project boundary (Figure 2-2, pp. 96). Therefore, because our screening-level HRA demonstrates a potentially significant impact

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[20] "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf, p. 11

[21] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

SI5-36 cont. and because of the significant number of residential receptors located near the site, the Project Applicant should put forth a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. This may include the preparation of a refined HRA using site-specific meteorology. Based on the results of this assessment and the air modeling issues discussed above, an updated DEIR must be prepared to include air modeling with correct input parameters as well as an adequate evaluation of the Project's health risk impacts, and should include additional mitigation measures to reduce impacts to a less-than-significant level.

SI5-37 SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

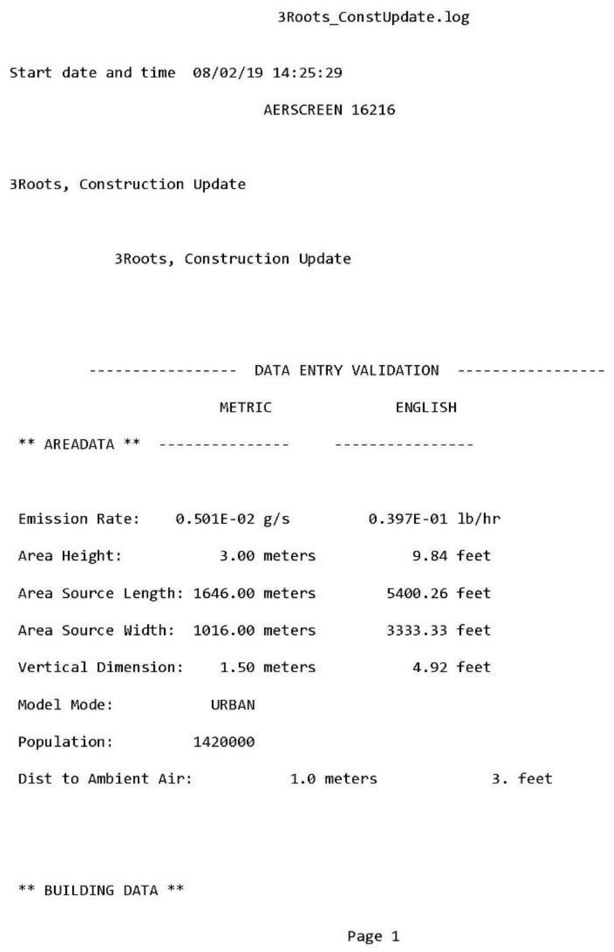
Sincerely,

Matt Hagemann, P.G., C.Hg.

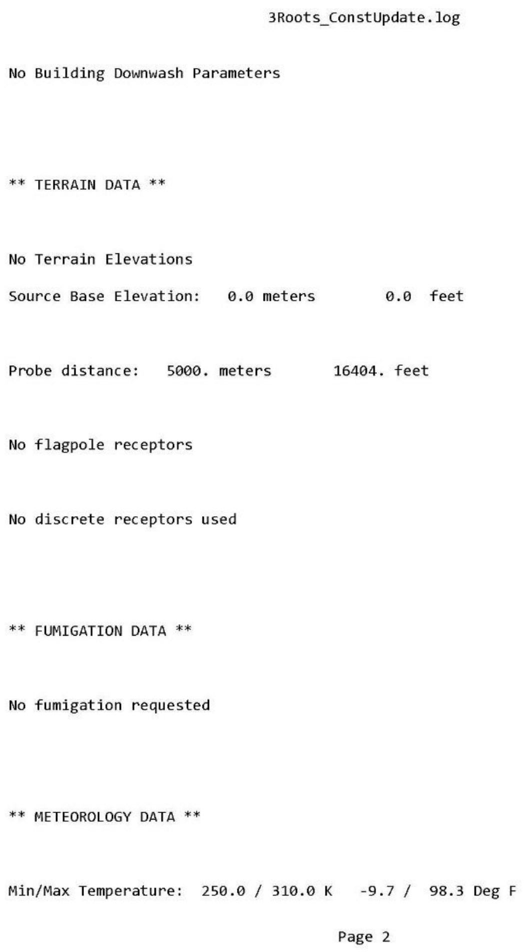
Melanie Garcia

SI5-37 Comments noted. These statements address the work done by the commenter rather than the Draft EIR, and as such, require no further response.

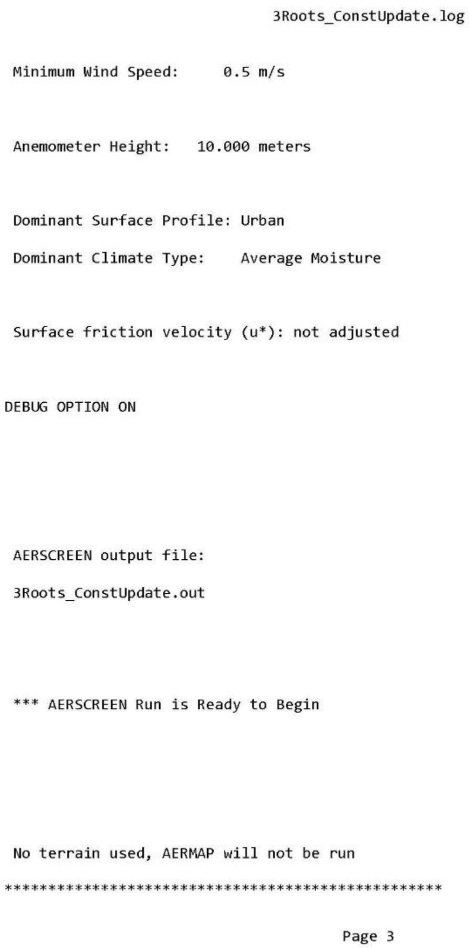
SI5-38 The remainder of this comment letter consists of 59 pages of modeling information used by the commenter. As appropriate, the modeling results are addressed in the above comments. No changes are suggested based on the attached comment models.



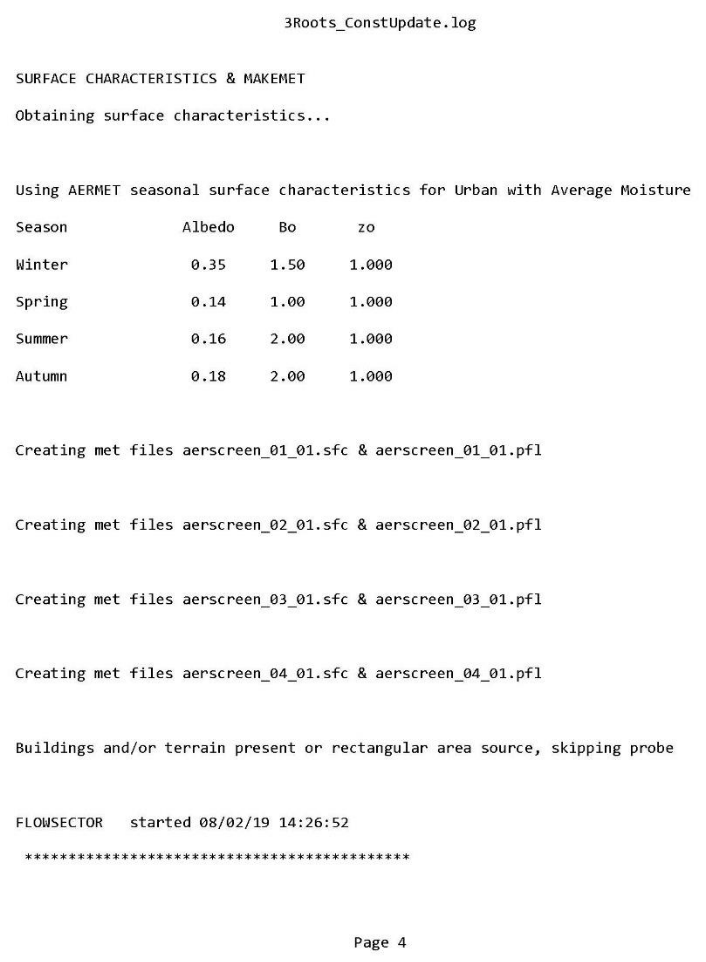
```
                             3Roots_ConstUpdate.log

Start date and time  08/02/19 14:25:29
                             AERSCREEN 16216


3Roots, Construction Update


            3Roots, Construction Update



         -----------------  DATA ENTRY VALIDATION  -----------------
                     METRIC              ENGLISH
 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.501E-02 g/s         0.397E-01 lb/hr
 Area Height:           3.00 meters           9.84 feet
 Area Source Length: 1646.00 meters        5400.26 feet
 Area Source Width:  1016.00 meters        3333.33 feet
 Vertical Dimension:    1.50 meters           4.92 feet
 Model Mode:           URBAN
 Population:         1420000
 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **
                                       Page 1
```



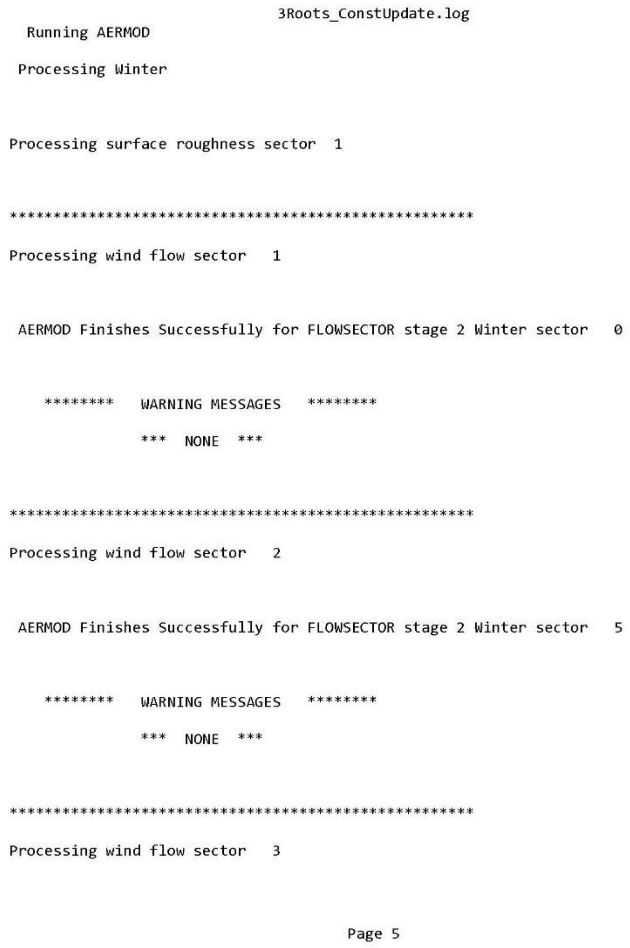
```
                              3Roots_ConstUpdate.log

No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F
                                        Page 2
```



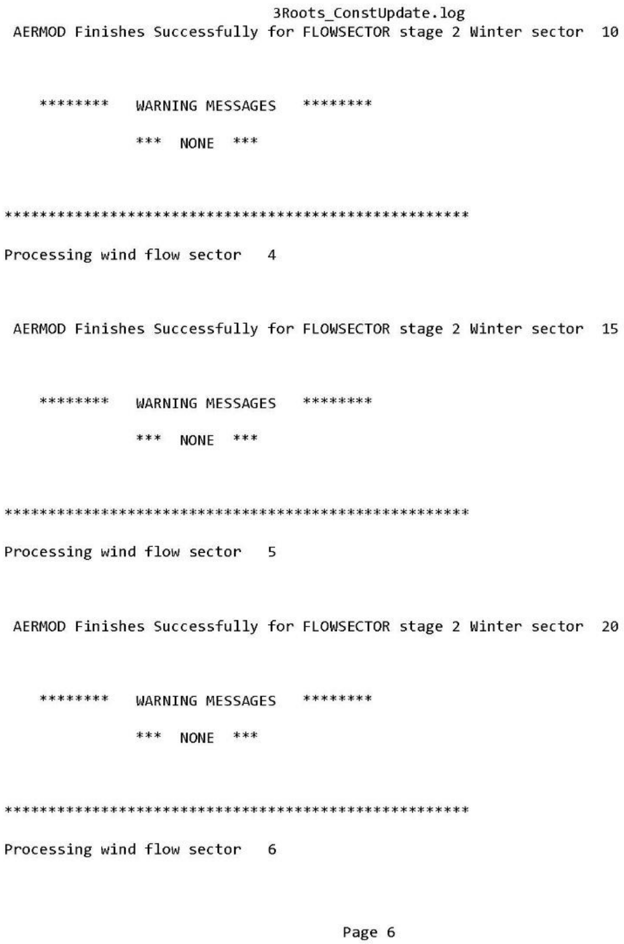
```
                               3Roots_ConstUpdate.log

 Minimum Wind Speed:     0.5 m/s


 Anemometer Height:   10.000 meters


 Dominant Surface Profile: Urban

 Dominant Climate Type:    Average Moisture


 Surface friction velocity (u*): not adjusted


DEBUG OPTION ON




 AERSCREEN output file:

 3Roots_ConstUpdate.out



 *** AERSCREEN Run is Ready to Begin




 No terrain used, AERMAP will not be run
**************************************************

                                       Page 3
```



```
                              3Roots_ConstUpdate.log

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...


Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season             Albedo     Bo       zo

Winter              0.35     1.50     1.000

Spring              0.14     1.00     1.000

Summer              0.16     2.00     1.000

Autumn              0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 08/02/19 14:26:52
 ********************************************


                                      Page 4
```

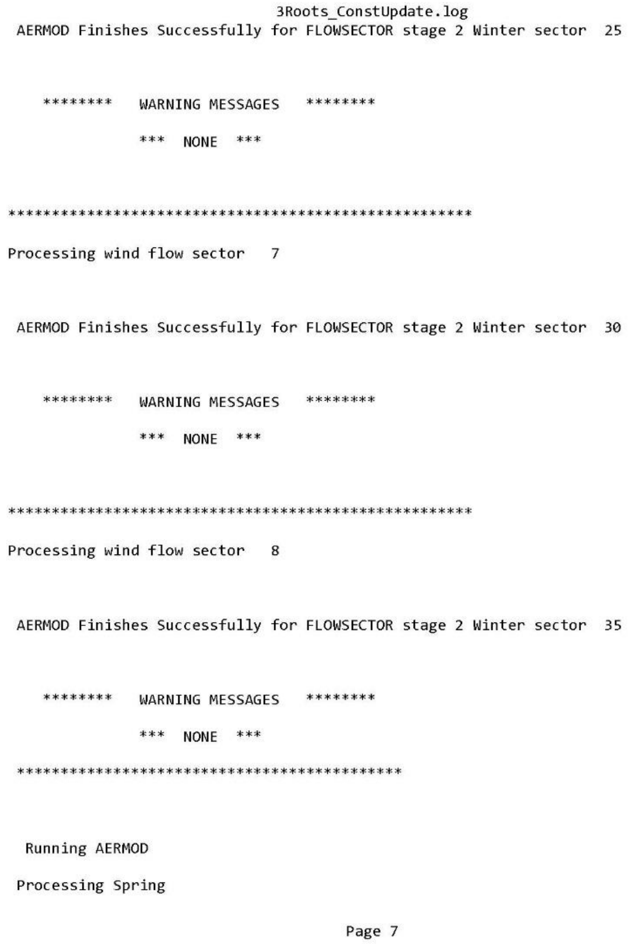


```
                              3Roots_ConstUpdate.log
  Running AERMOD

 Processing Winter


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


                                      Page 5
```

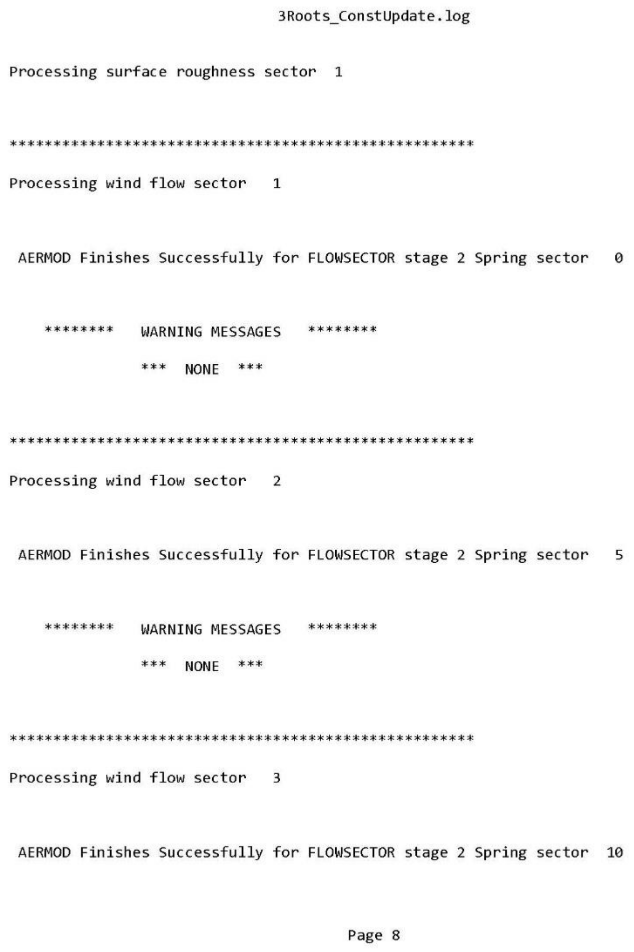


```
                              3Roots_ConstUpdate.log
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


                                      Page 6
```

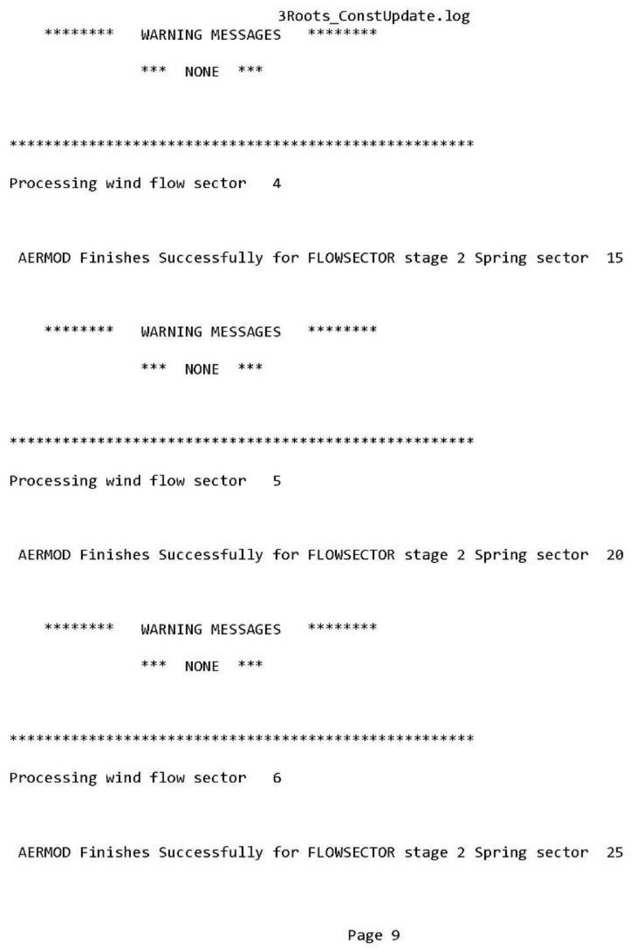
COMMENTS | RESPONSES



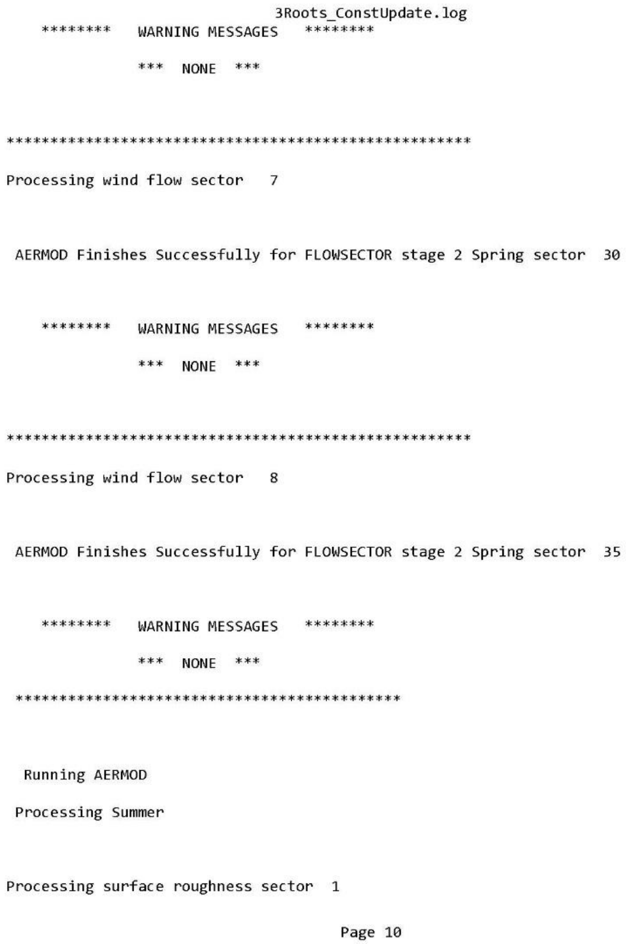
```
                               3Roots_ConstUpdate.log
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  35


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************


  Running AERMOD

 Processing Spring

                                       Page 7
```



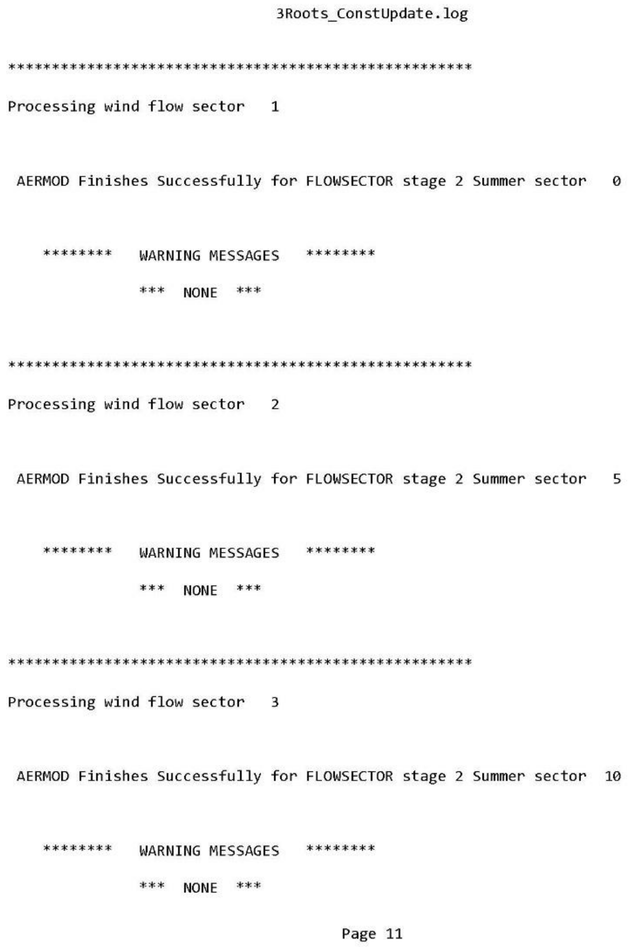
```
                              3Roots_ConstUpdate.log

Processing surface roughness sector  1


****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


                                      Page 8
```



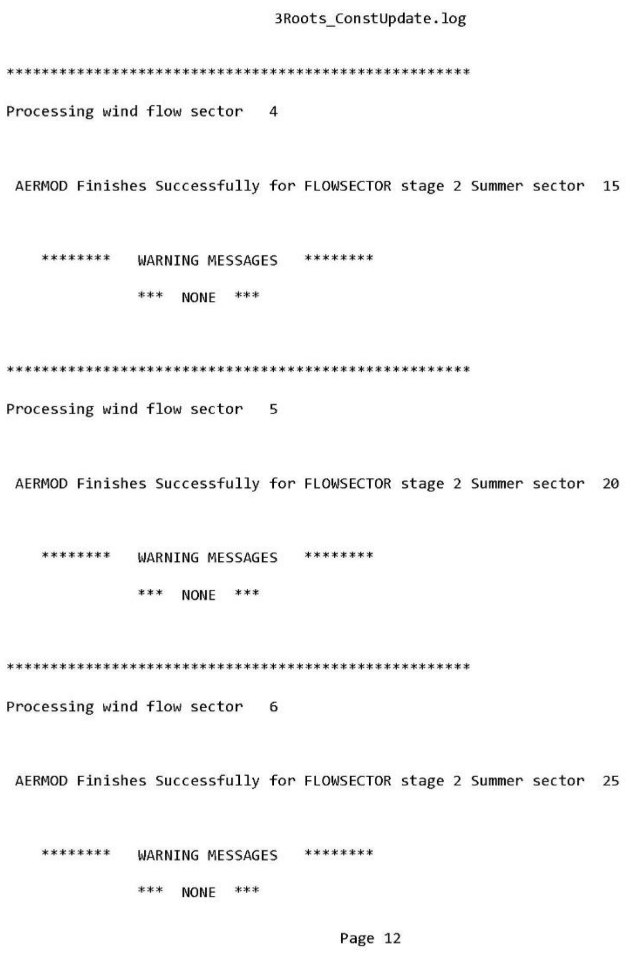
```
                              3Roots_ConstUpdate.log
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


                                      Page 9
```



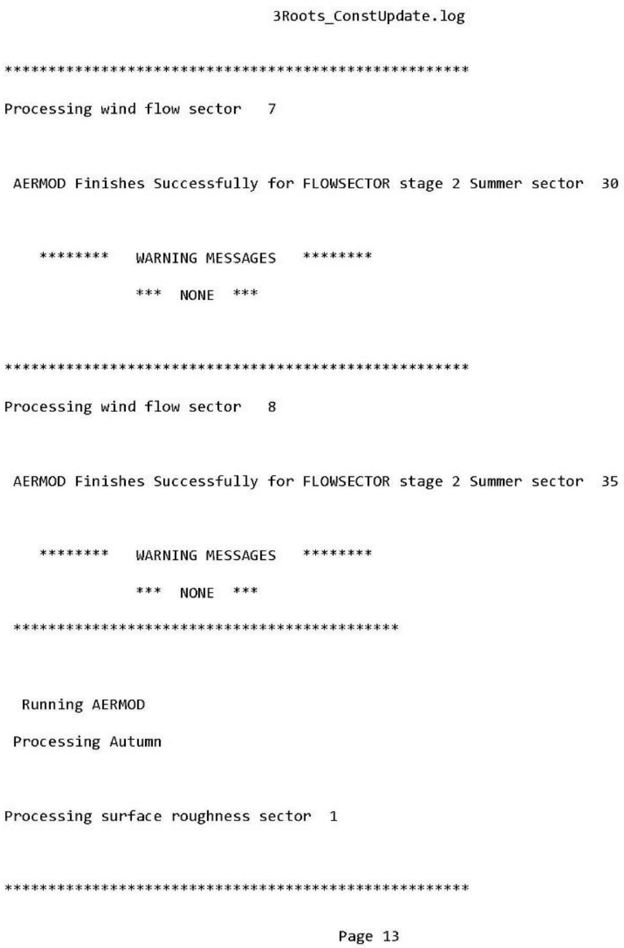
```
                              3Roots_ConstUpdate.log
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


 ****************************************************

 Processing wind flow sector   7


  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


 ****************************************************

 Processing wind flow sector   8


  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
  ********************************************


   Running AERMOD

  Processing Summer


 Processing surface roughness sector  1

                                      Page 10
```



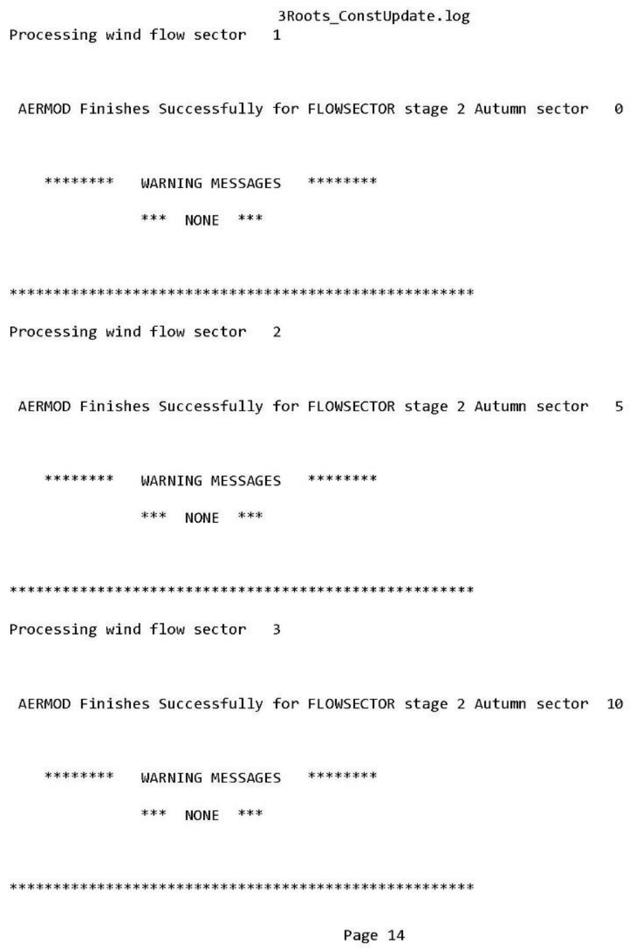
```
                              3Roots_ConstUpdate.log

*****************************************************
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
                                     Page 11
```



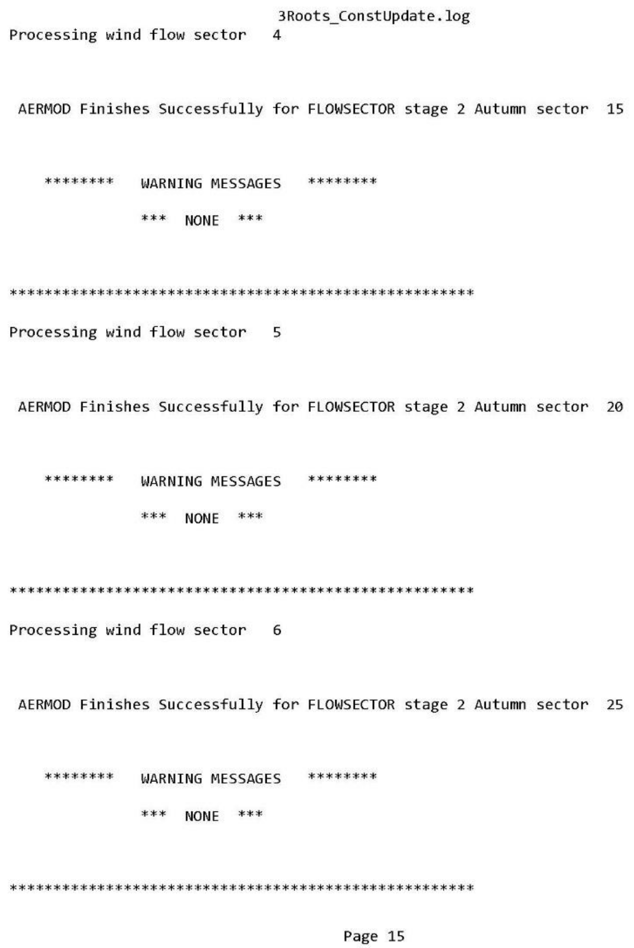
```
                              3Roots_ConstUpdate.log

*****************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
                                      Page 12
```



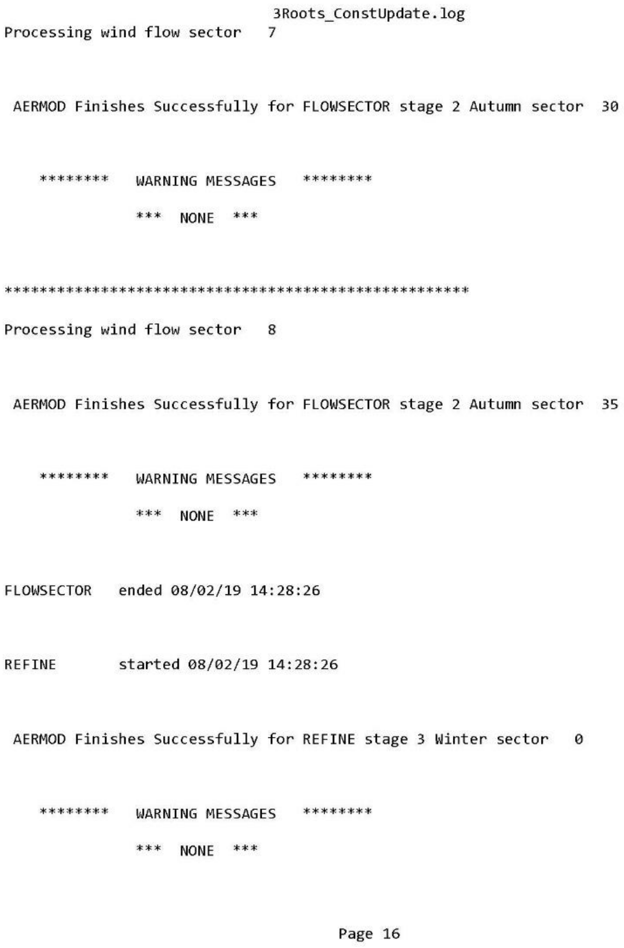
```
                              3Roots_ConstUpdate.log

*****************************************************
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  35


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************


  Running AERMOD
 Processing Autumn


Processing surface roughness sector  1


*****************************************************
                                      Page 13
```



```
                              3Roots_ConstUpdate.log
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

                                      Page 14
```



```
                               3Roots_ConstUpdate.log
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

                                      Page 15
```

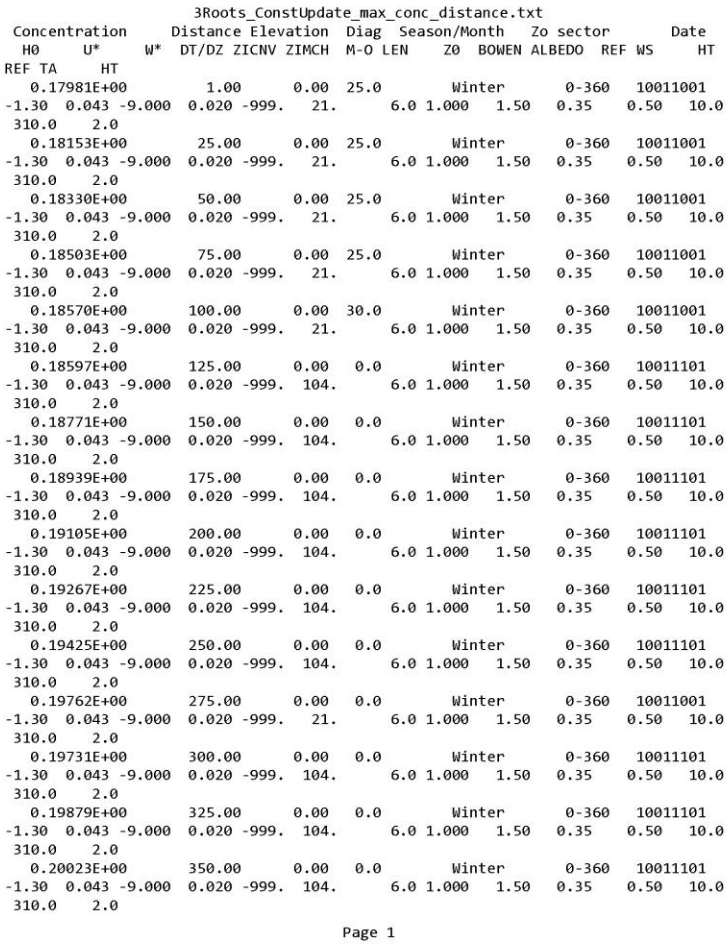


```
                              3Roots_ConstUpdate.log
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  35


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


FLOWSECTOR   ended 08/02/19 14:28:26


REFINE       started 08/02/19 14:28:26


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


                                      Page 16
```

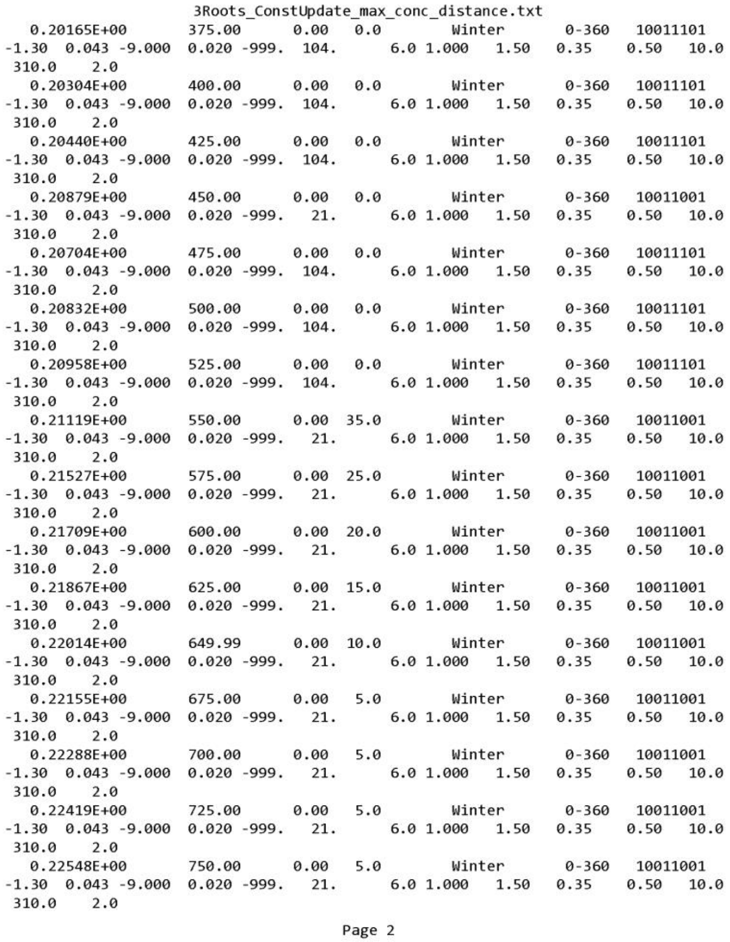
```
                              3Roots_ConstUpdate.log
REFINE       ended 08/02/19 14:28:36


 **********************************************

 AERSCREEN Finished Successfully

 With no errors or warnings

 Check log file for details

 ***********************************************


 Ending date and time  08/02/19 14:28:38
```

Page 17

COMMENTS	RESPONSES



```
                     3Roots_ConstUpdate_max_conc_distance.txt
 Concentration      Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.17981E+00         1.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18153E+00        25.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18330E+00        50.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18503E+00        75.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18570E+00       100.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18597E+00       125.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18771E+00       150.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18939E+00       175.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19105E+00       200.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19267E+00       225.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19425E+00       250.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19762E+00       275.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19731E+00       300.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19879E+00       325.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20023E+00       350.00      0.00   0.0        Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                  Page 1
```



```
                3Roots_ConstUpdate_max_conc_distance.txt
   0.20165E+00       375.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20304E+00       400.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20440E+00       425.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20879E+00       450.00      0.00   0.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20704E+00       475.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20832E+00       500.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20958E+00       525.00      0.00   0.0       Winter      0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21119E+00       550.00      0.00  35.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21527E+00       575.00      0.00  25.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21709E+00       600.00      0.00  20.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21867E+00       625.00      0.00  15.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22014E+00       649.99      0.00  10.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22155E+00       675.00      0.00   5.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22288E+00       700.00      0.00   5.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22419E+00       725.00      0.00   5.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22548E+00       750.00      0.00   5.0       Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                  Page 2
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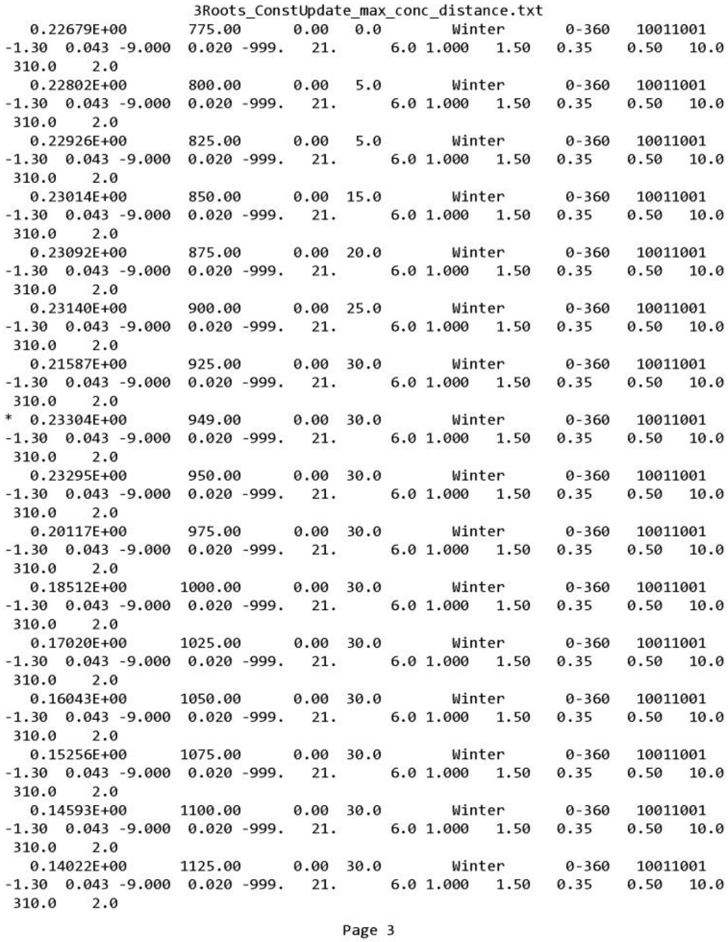
COMMENTS	RESPONSES
	

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                     3Roots_ConstUpdate_max_conc_distance.txt
   0.22679E+00       775.00       0.00   0.0        Winter       0-360   10011001
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 310.0    2.0
   0.22802E+00       800.00       0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22926E+00       825.00       0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23014E+00       850.00       0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23092E+00       875.00       0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23140E+00       900.00       0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21587E+00       925.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.23304E+00       949.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23295E+00       950.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20117E+00       975.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18512E+00      1000.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17020E+00      1025.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16043E+00      1050.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15256E+00      1075.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14593E+00      1100.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14022E+00      1125.00       0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                      Page 3
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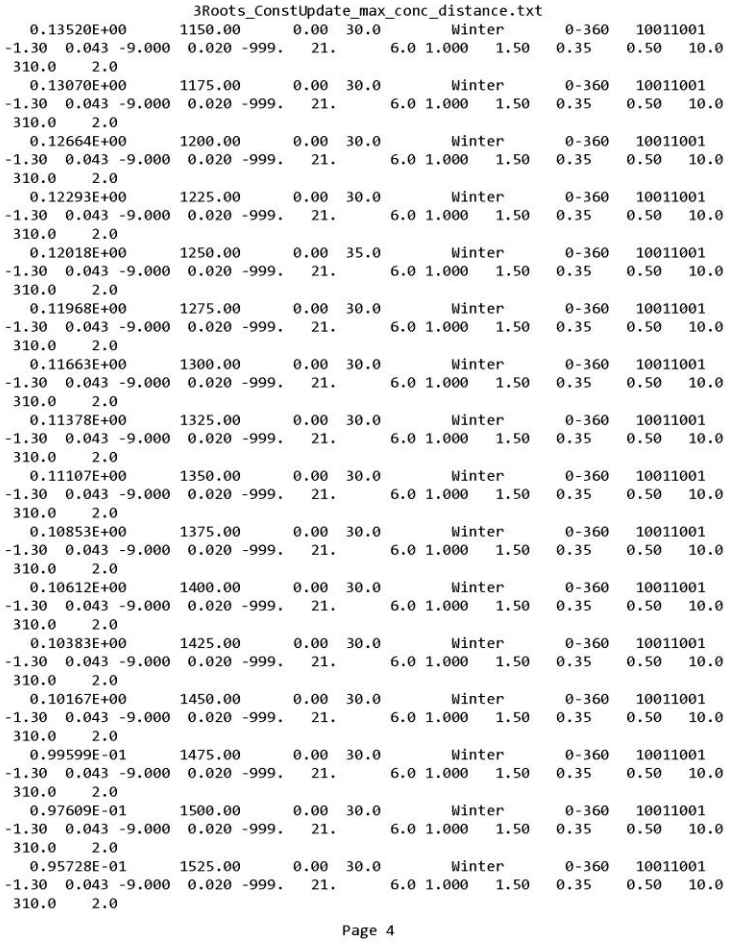

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                     3Roots_ConstUpdate_max_conc_distance.txt
   0.13520E+00      1150.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13070E+00      1175.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12664E+00      1200.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12293E+00      1225.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12018E+00      1250.00      0.00  35.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11968E+00      1275.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11663E+00      1300.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11378E+00      1325.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11107E+00      1350.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10853E+00      1375.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10612E+00      1400.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10383E+00      1425.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10167E+00      1450.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99599E-01      1475.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97609E-01      1500.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95728E-01      1525.00      0.00  30.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                      Page 4
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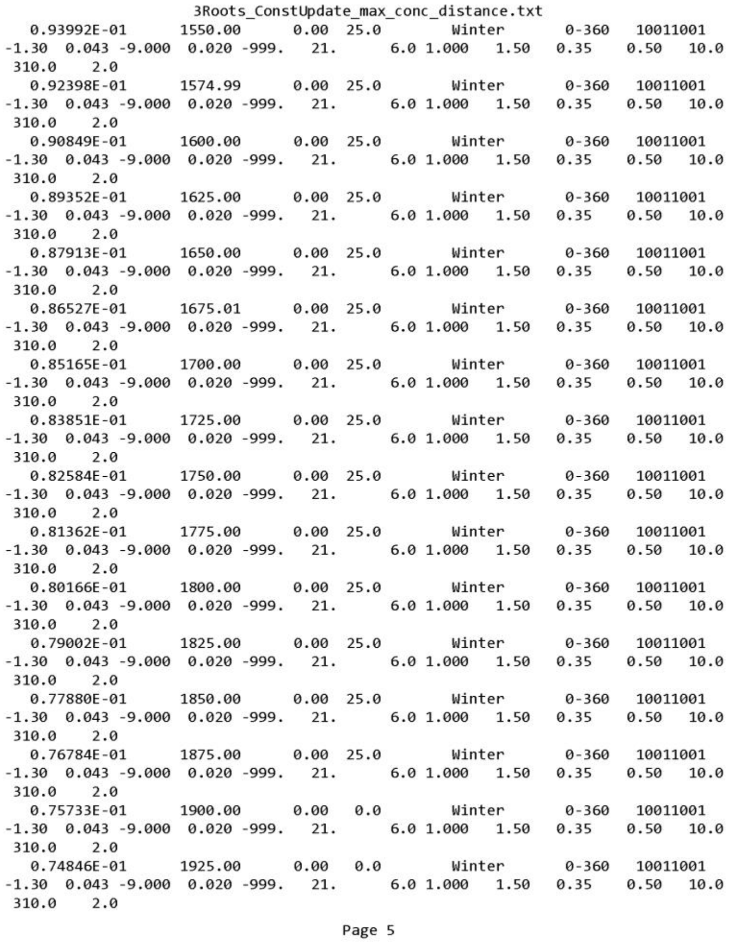
COMMENTS

RESPONSES



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                    3Roots_ConstUpdate_max_conc_distance.txt
   0.93992E-01      1550.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92398E-01      1574.99      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.90849E-01      1600.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.89352E-01      1625.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87913E-01      1650.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86527E-01      1675.01      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.85165E-01      1700.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83851E-01      1725.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82584E-01      1750.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81362E-01      1775.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80166E-01      1800.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79002E-01      1825.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77880E-01      1850.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76784E-01      1875.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75733E-01      1900.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74846E-01      1925.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                   Page 5
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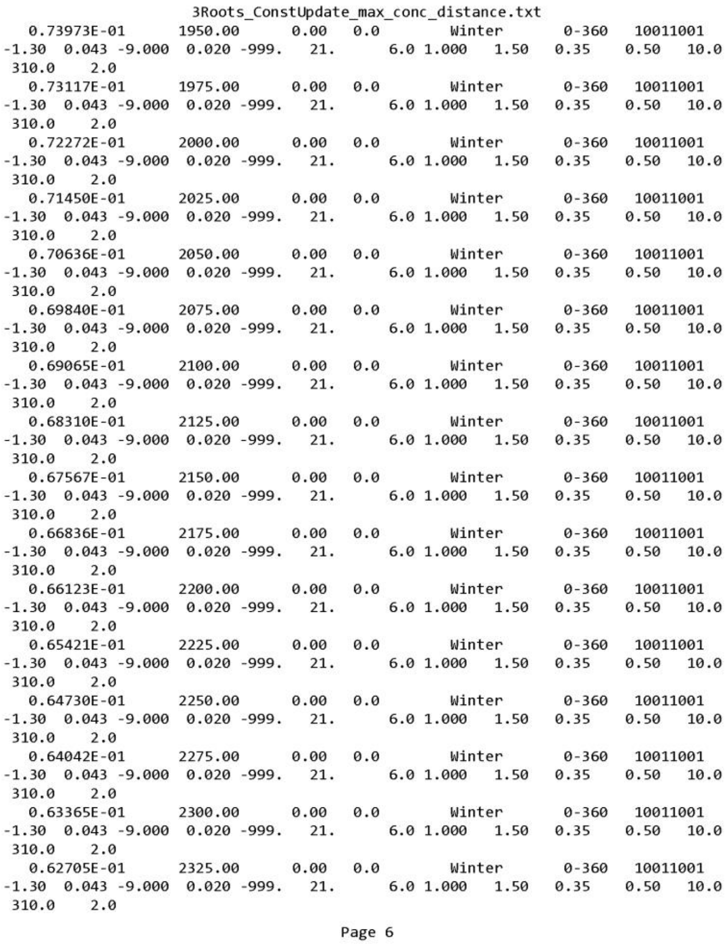
COMMENTS

RESPONSES



3Roots_ConstUpdate_max_conc_distance.txt

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 310.0    2.0
  0.73117E-01      1975.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.72272E-01      2000.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.71450E-01      2025.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.70636E-01      2050.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.69840E-01      2075.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.69065E-01      2100.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.68310E-01      2125.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.67567E-01      2150.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.66836E-01      2175.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.66123E-01      2200.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.65421E-01      2225.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.64730E-01      2250.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.64042E-01      2275.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.63365E-01      2300.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.62705E-01      2325.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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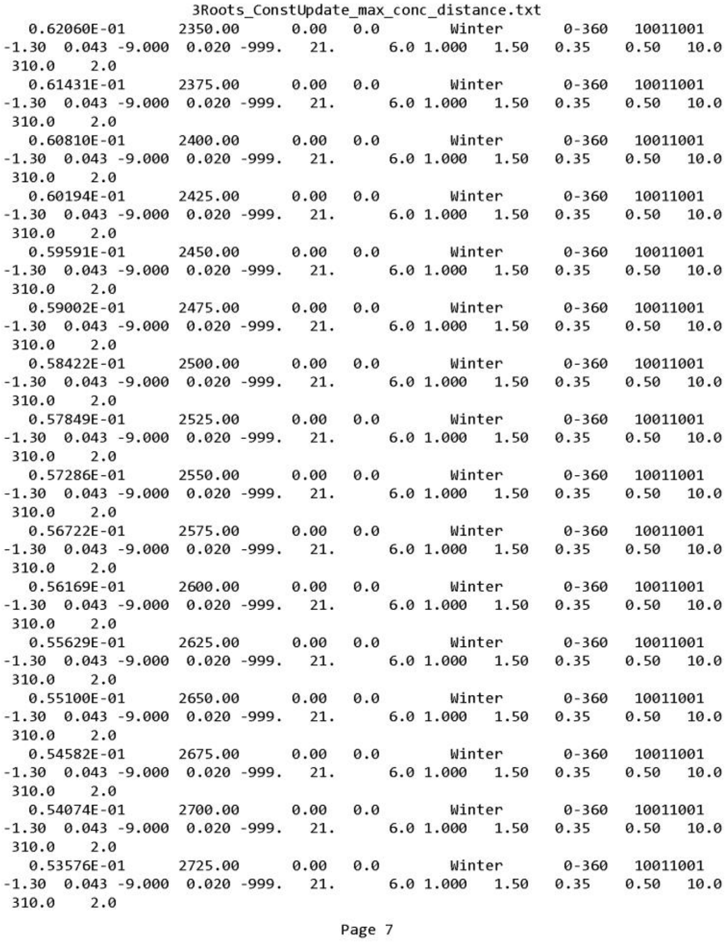

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  310.0    2.0
   0.61431E-01      2375.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.60810E-01      2400.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.60194E-01      2425.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.59591E-01      2450.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.59002E-01      2475.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.58422E-01      2500.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.57849E-01      2525.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.57286E-01      2550.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.56722E-01      2575.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.56169E-01      2600.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
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  310.0    2.0
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 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.54582E-01      2675.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.54074E-01      2700.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.53576E-01      2725.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                     Page 7
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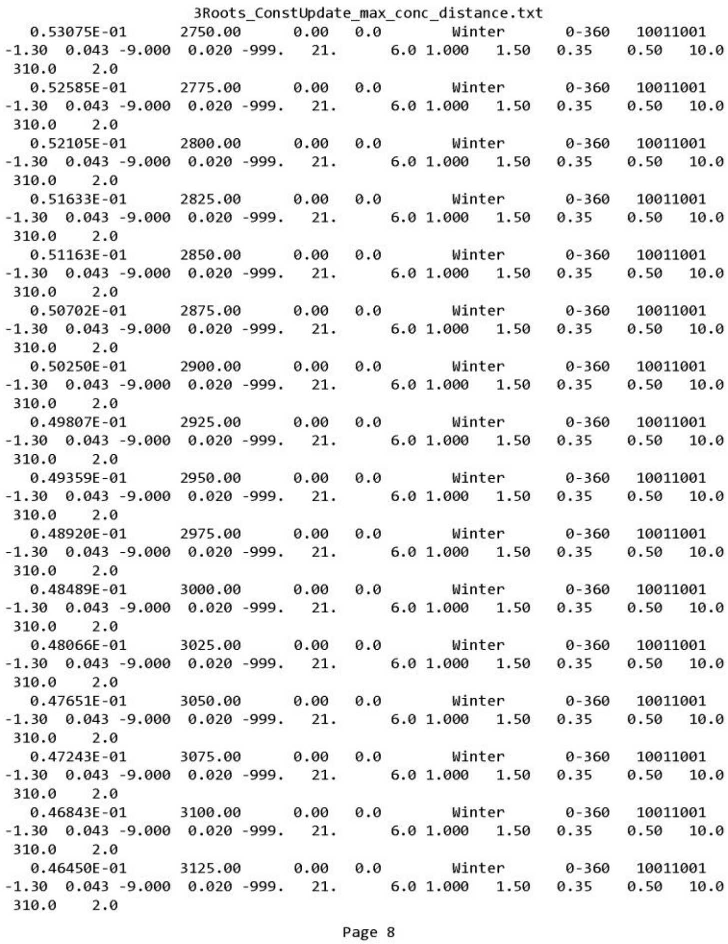

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                      3Roots_ConstUpdate_max_conc_distance.txt
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  310.0    2.0
   0.52585E-01      2775.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.52105E-01      2800.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.51633E-01      2825.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.51163E-01      2850.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.50702E-01      2875.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.50250E-01      2900.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.49807E-01      2925.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.49359E-01      2950.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.48920E-01      2975.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.48489E-01      3000.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
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  310.0    2.0
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 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.47243E-01      3075.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.46843E-01      3100.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.46450E-01      3125.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0

                                     Page 8
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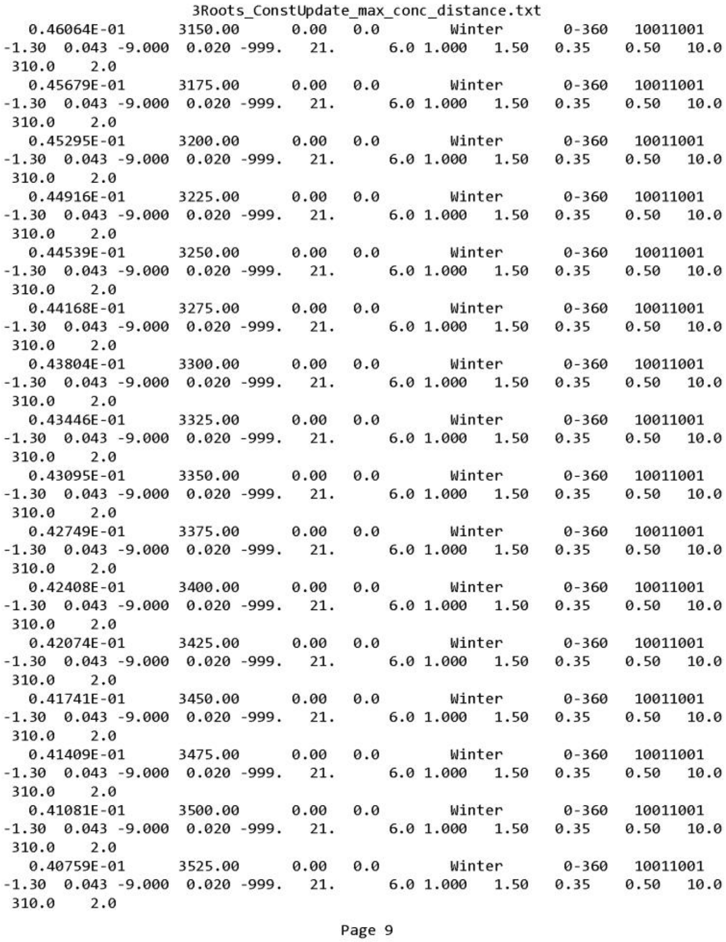

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                    3Roots_ConstUpdate_max_conc_distance.txt
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  310.0    2.0
   0.45679E-01      3175.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.45295E-01      3200.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.44916E-01      3225.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.44539E-01      3250.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.44168E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.43804E-01      3300.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.43446E-01      3325.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.43095E-01      3350.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.42749E-01      3375.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.42408E-01      3400.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.42074E-01      3425.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.41741E-01      3450.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.41409E-01      3475.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.41081E-01      3500.00      0.00   0.0        Winter       0-360   10011001
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  310.0    2.0
   0.40759E-01      3525.00      0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                  Page 9
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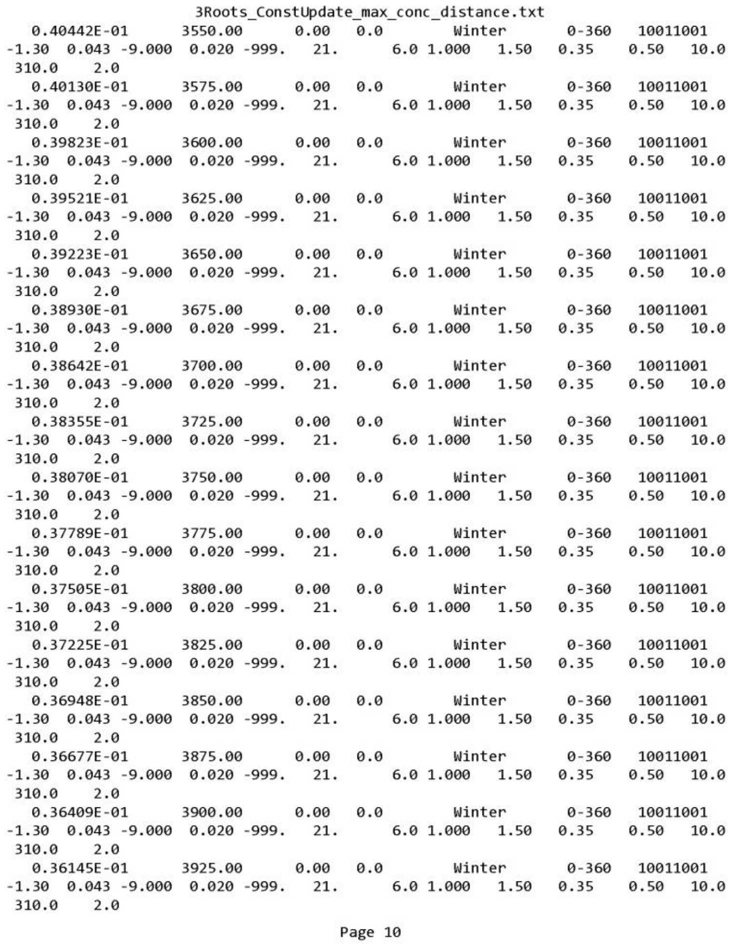

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  310.0    2.0
   0.40130E-01      3575.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.39823E-01      3600.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.39521E-01      3625.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.39223E-01      3650.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.38930E-01      3675.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.38642E-01      3700.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.38355E-01      3725.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.38070E-01      3750.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.37789E-01      3775.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.37505E-01      3800.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.37225E-01      3825.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
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  310.0    2.0
   0.36677E-01      3875.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.36409E-01      3900.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.36145E-01      3925.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                   Page 10
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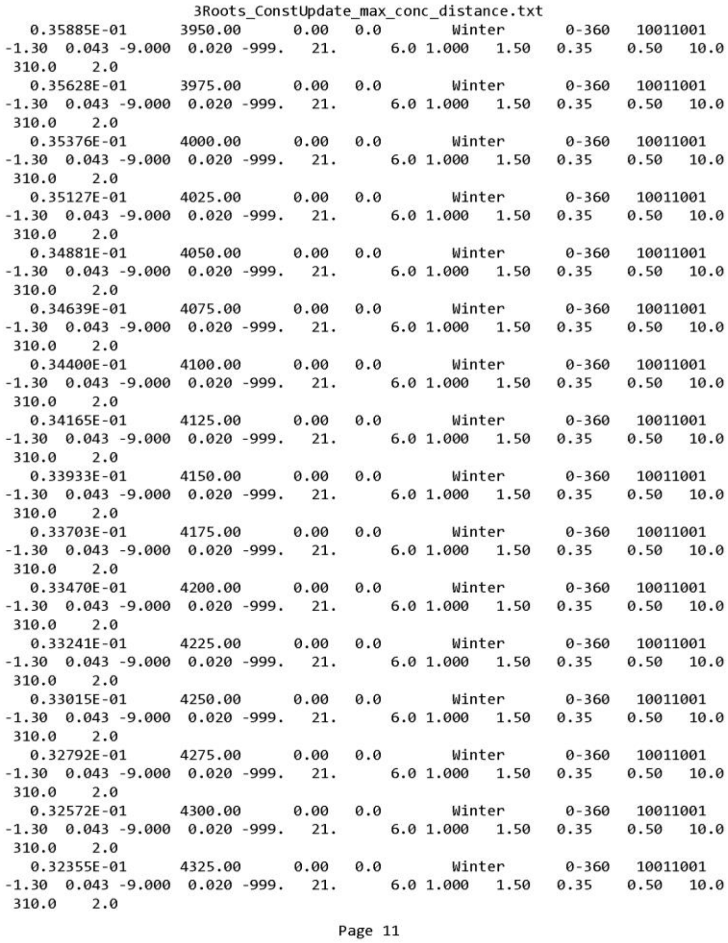

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  310.0    2.0
   0.35628E-01      3975.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.35376E-01      4000.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.35127E-01      4025.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.34881E-01      4050.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.34639E-01      4075.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.34400E-01      4100.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.34165E-01      4125.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.33933E-01      4150.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.33703E-01      4175.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.33470E-01      4200.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
   0.33241E-01      4225.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.33015E-01      4250.00      0.00   0.0       Winter      0-360   10011001
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  310.0    2.0
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  310.0    2.0
   0.32572E-01      4300.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.32355E-01      4325.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                  Page 11
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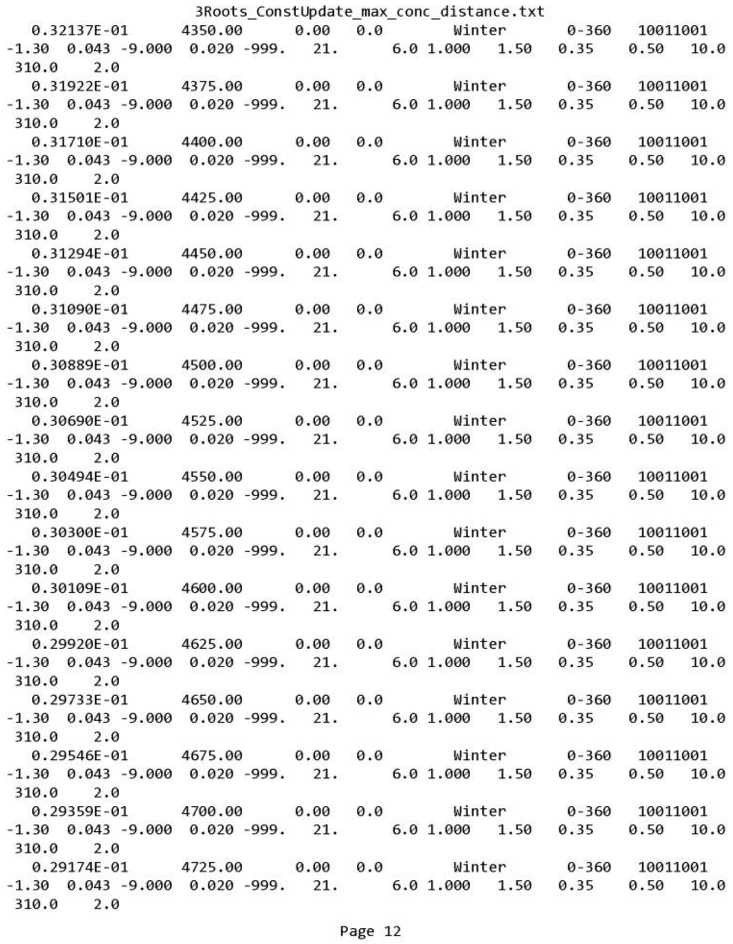

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  310.0    2.0
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  310.0    2.0
   0.31710E-01      4400.00      0.00   0.0       Winter       0-360   10011001
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  310.0    2.0
   0.31501E-01      4425.00      0.00   0.0       Winter       0-360   10011001
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  310.0    2.0
   0.31294E-01      4450.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.31090E-01      4475.00      0.00   0.0       Winter       0-360   10011001
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  310.0    2.0
   0.30889E-01      4500.00      0.00   0.0       Winter       0-360   10011001
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  310.0    2.0
   0.30690E-01      4525.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.30494E-01      4550.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.30300E-01      4575.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.30109E-01      4600.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.29920E-01      4625.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.29733E-01      4650.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.29546E-01      4675.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.29359E-01      4700.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.29174E-01      4725.00      0.00   0.0       Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                   Page 12
```
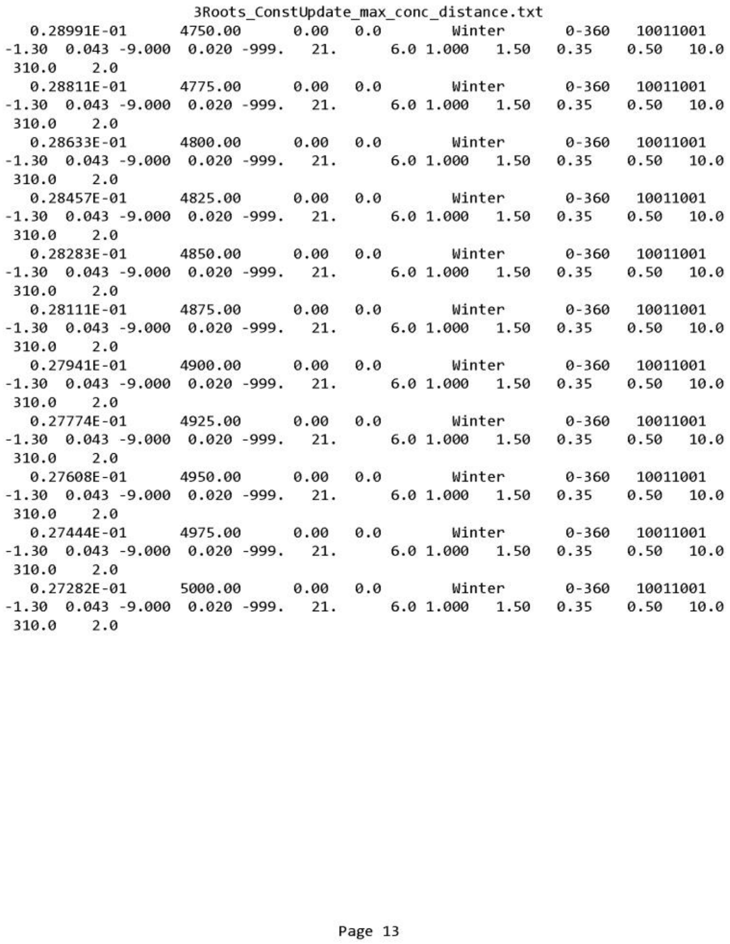
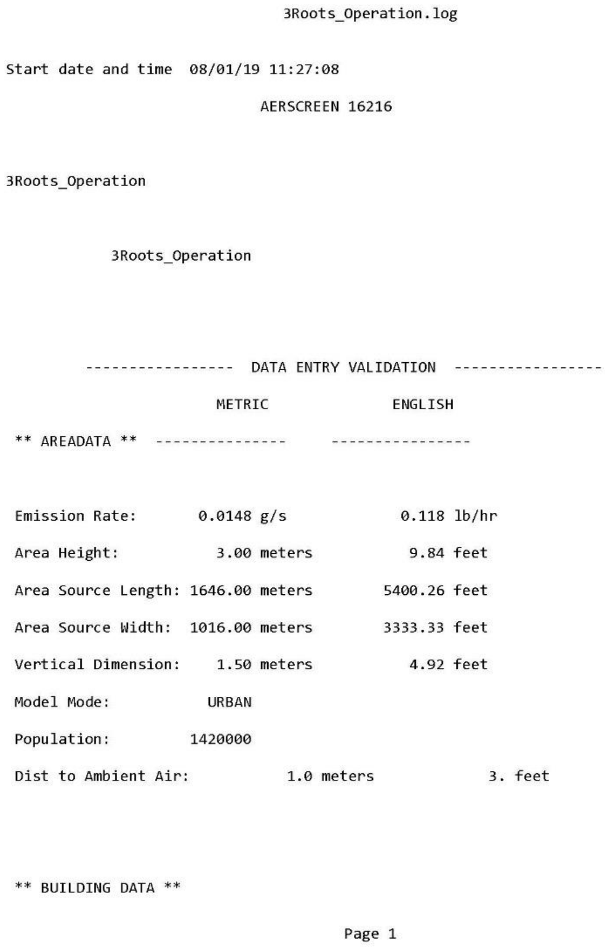



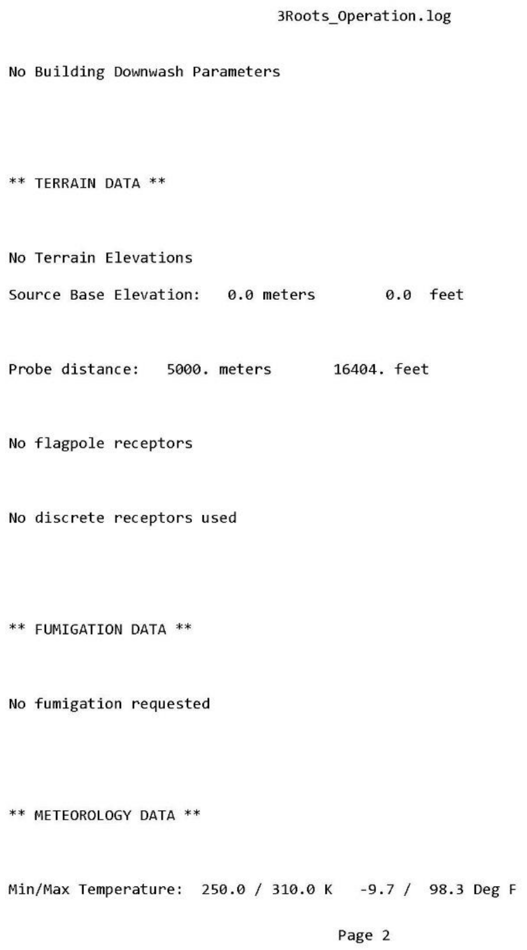
```
                    3Roots_ConstUpdate_max_conc_distance.txt
  0.28991E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.28811E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.28633E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.28457E-01      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.28283E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.28111E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.27941E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.27774E-01      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.27608E-01      4950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.27444E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.27282E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

Page 13

COMMENTS	RESPONSES

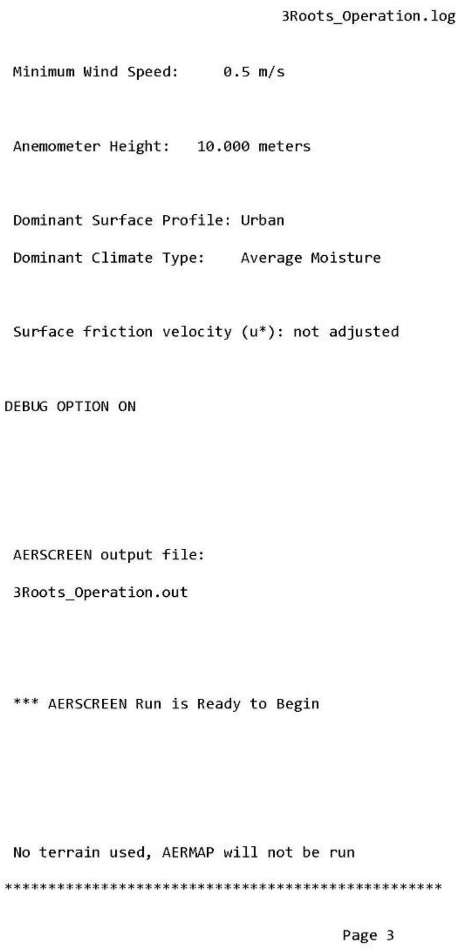


```
                              3Roots_Operation.log

Start date and time  08/01/19 11:27:08
                             AERSCREEN 16216


3Roots_Operation


            3Roots_Operation



         -----------------  DATA ENTRY VALIDATION  -----------------
                        METRIC              ENGLISH
 ** AREADATA **  ---------------     ----------------


 Emission Rate:       0.0148 g/s            0.118 lb/hr
 Area Height:           3.00 meters          9.84 feet
 Area Source Length: 1646.00 meters       5400.26 feet
 Area Source Width:  1016.00 meters       3333.33 feet
 Vertical Dimension:    1.50 meters          4.92 feet
 Model Mode:           URBAN
 Population:         1420000
 Dist to Ambient Air:           1.0 meters            3. feet



 ** BUILDING DATA **
                                     Page 1
```

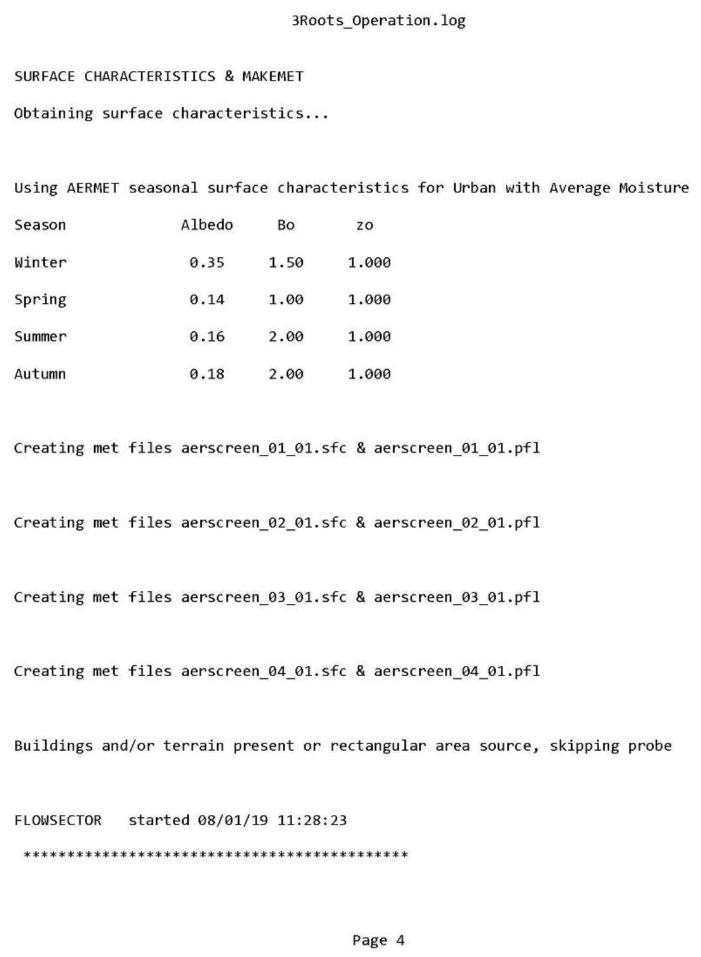


```
                              3Roots_Operation.log

No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F
                                     Page 2
```

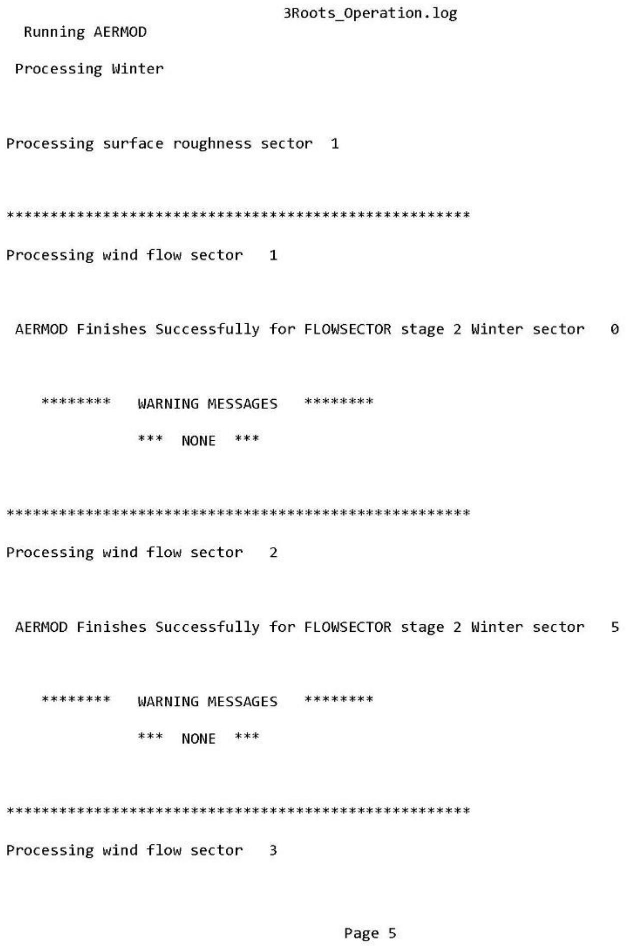
COMMENTS RESPONSES



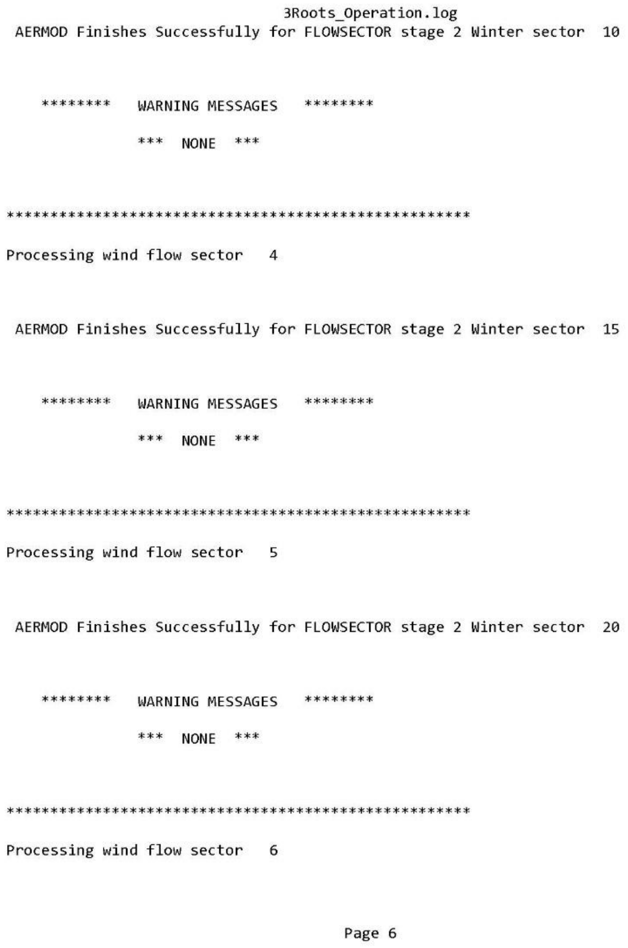
```
                              3Roots_Operation.log

 Minimum Wind Speed:     0.5 m/s


 Anemometer Height:   10.000 meters


 Dominant Surface Profile: Urban

 Dominant Climate Type:    Average Moisture


 Surface friction velocity (u*): not adjusted


DEBUG OPTION ON




 AERSCREEN output file:

 3Roots_Operation.out



 *** AERSCREEN Run is Ready to Begin




 No terrain used, AERMAP will not be run
**************************************************

                                     Page 3
```



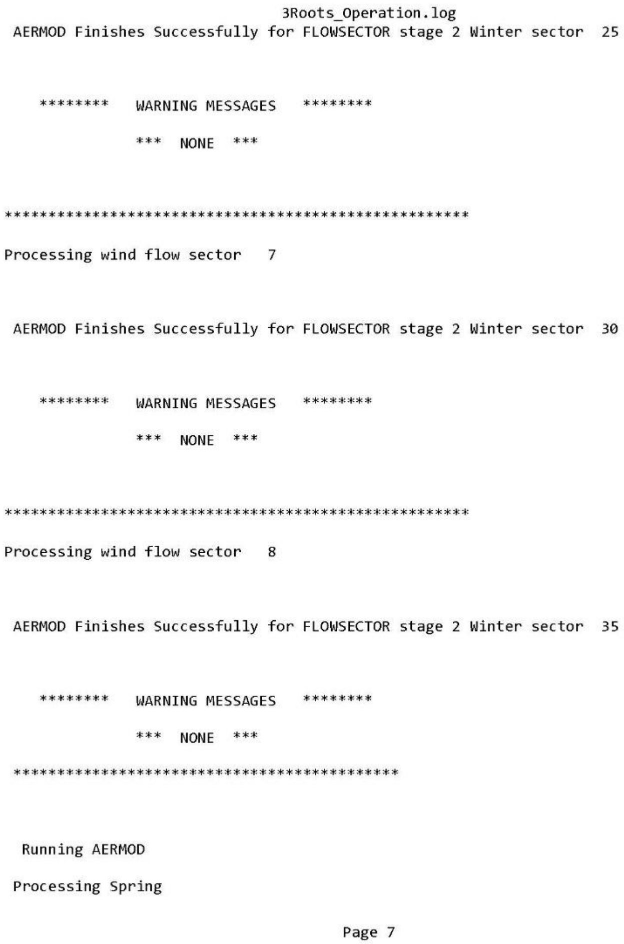
```
                              3Roots_Operation.log

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...


Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season            Albedo     Bo       zo

Winter             0.35     1.50     1.000

Spring             0.14     1.00     1.000

Summer             0.16     2.00     1.000

Autumn             0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 08/01/19 11:28:23
 ********************************************


                                     Page 4
```



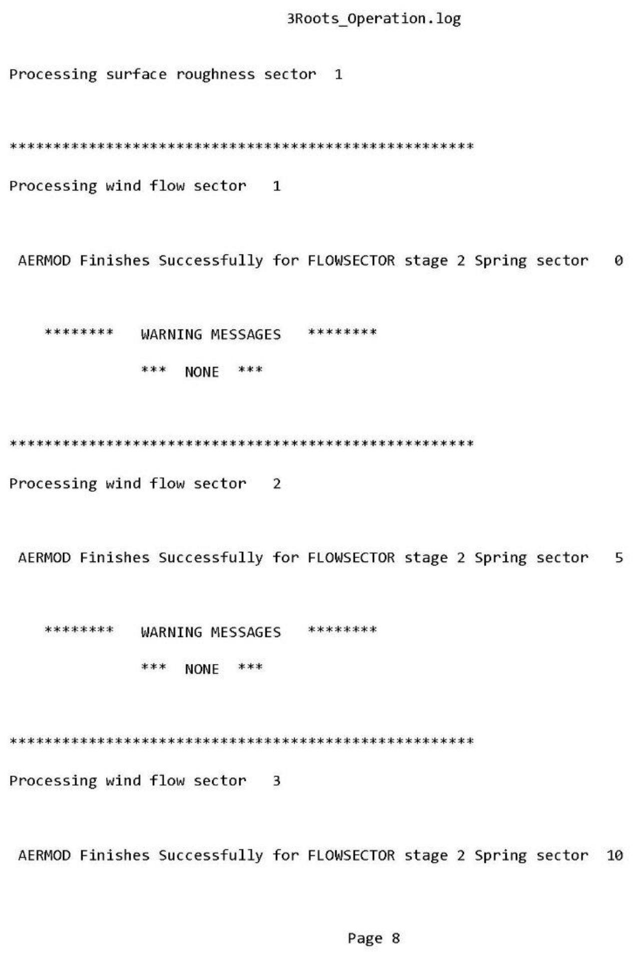
```
                              3Roots_Operation.log
  Running AERMOD

 Processing Winter


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


                                     Page 5
```



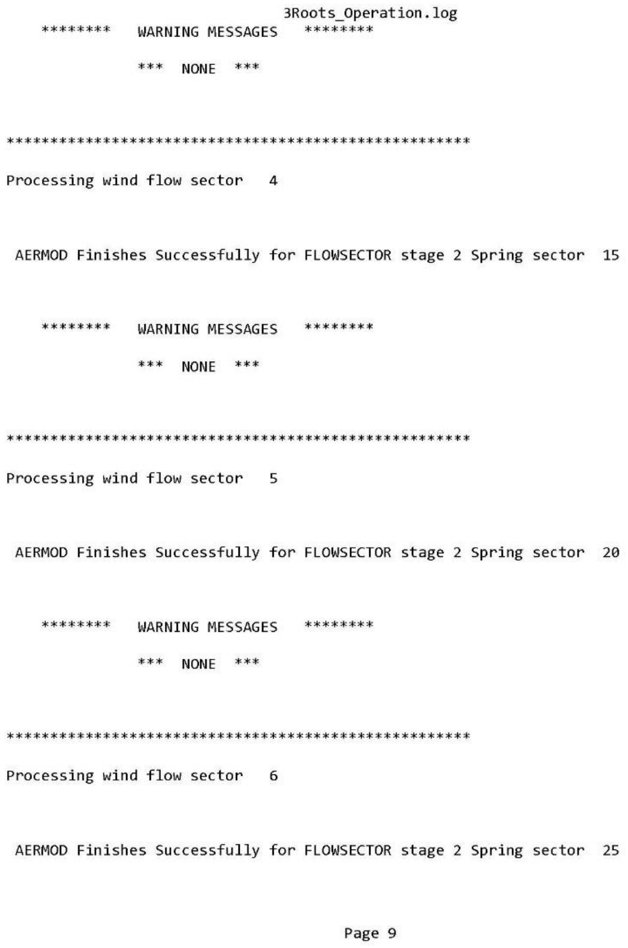
```
                              3Roots_Operation.log
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


******************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


******************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


******************************************************

Processing wind flow sector   6


                                     Page 6
```



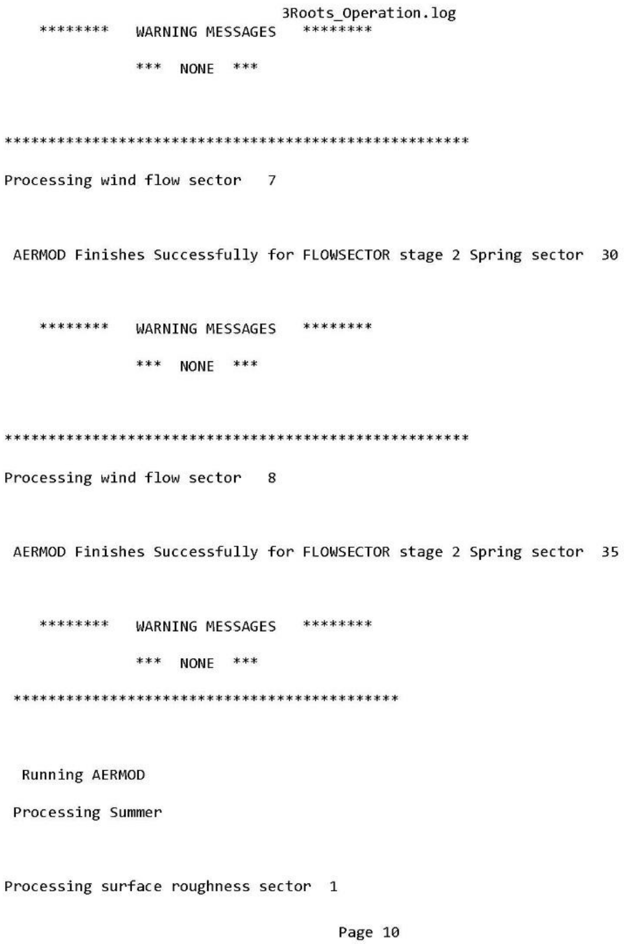
```
                                3Roots_Operation.log
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
 ********************************************


  Running AERMOD

 Processing Spring
                                       Page 7
```



```
                              3Roots_Operation.log

Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


                                     Page 8
```



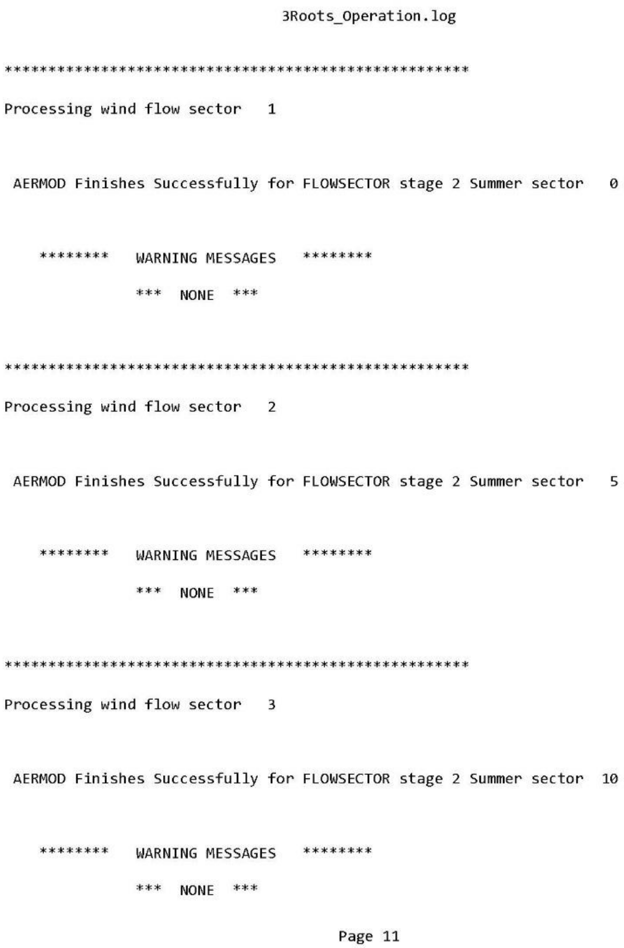
```
                              3Roots_Operation.log
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


************************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


************************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


************************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


                                     Page 9
```



```
                                3Roots_Operation.log
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
 ********************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
                                      Page 10
```

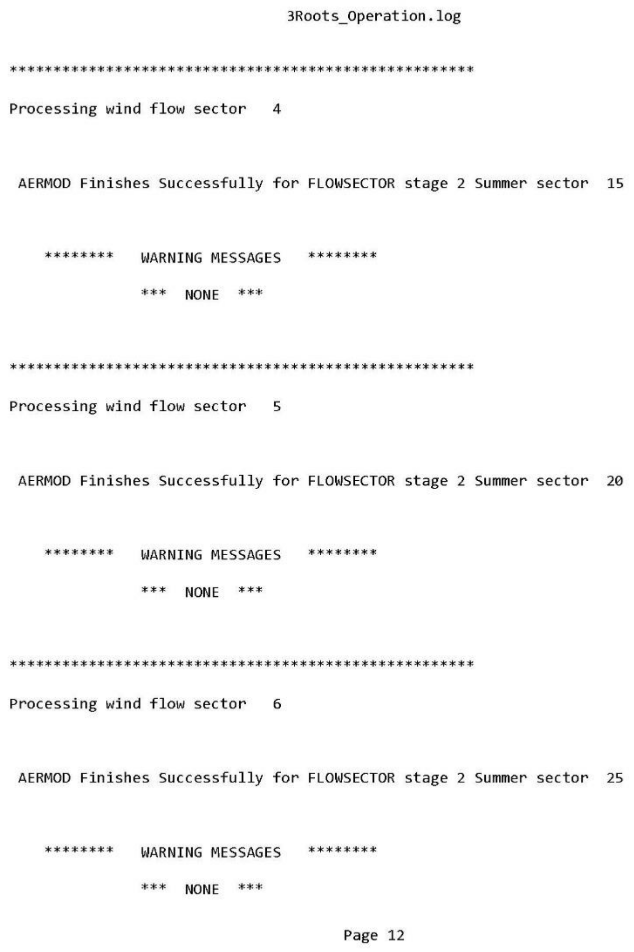
COMMENTS

RESPONSES

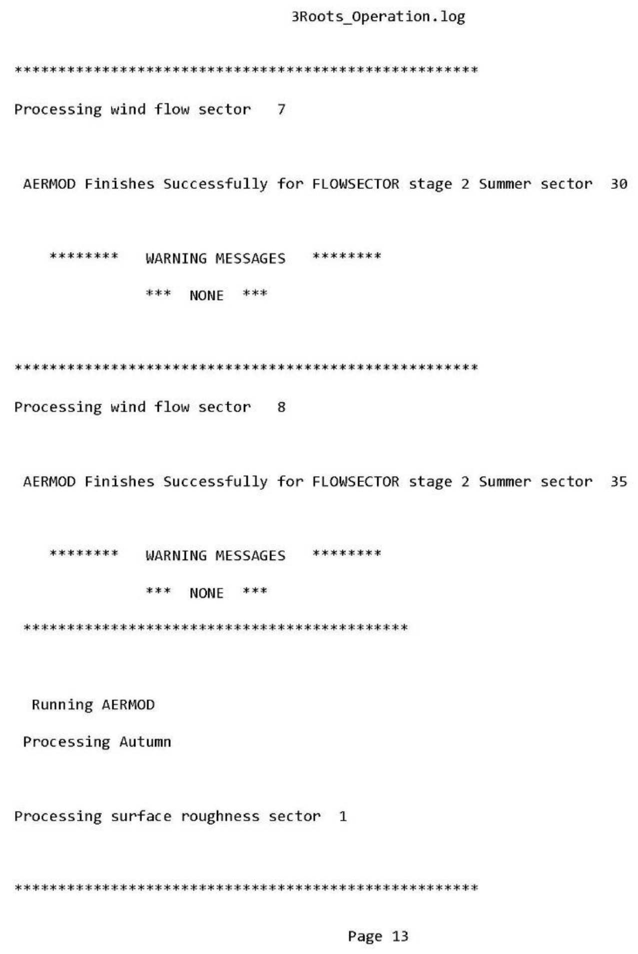


```
                            3Roots_Operation.log

*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
                                  Page 11
```

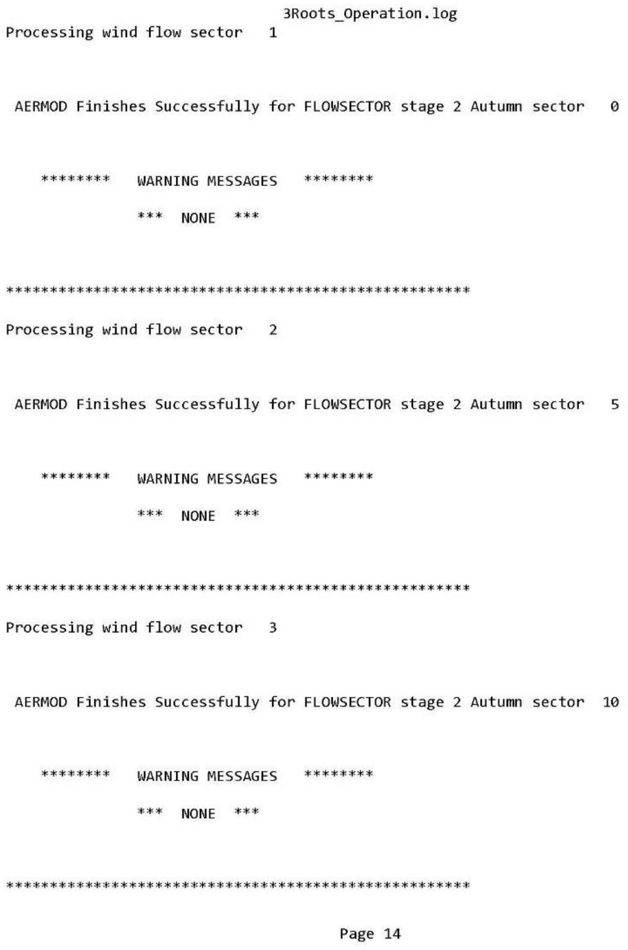
COMMENTS	RESPONSES
See log printout below.	



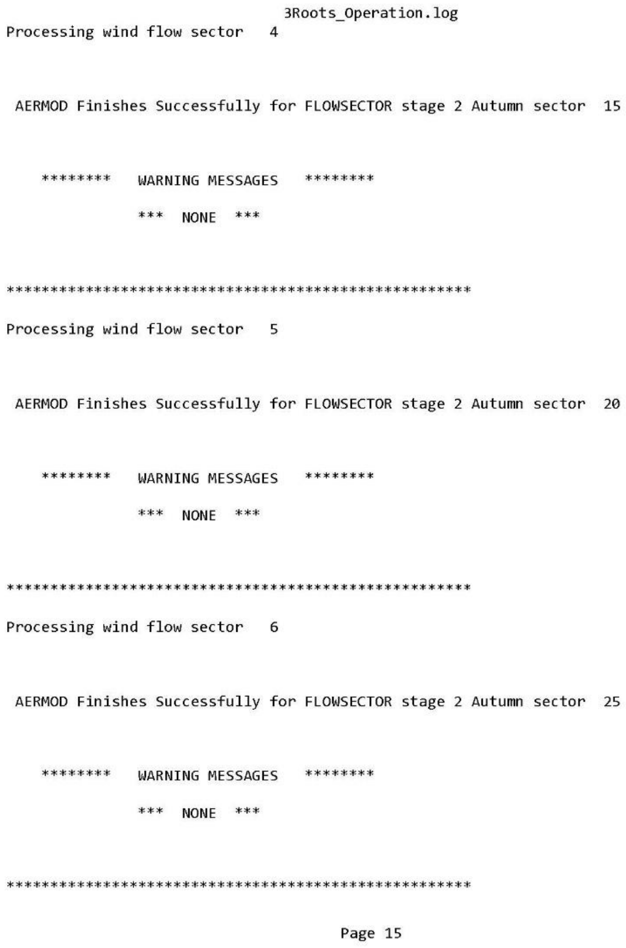
```
                              3Roots_Operation.log

****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
                                     Page 12
```



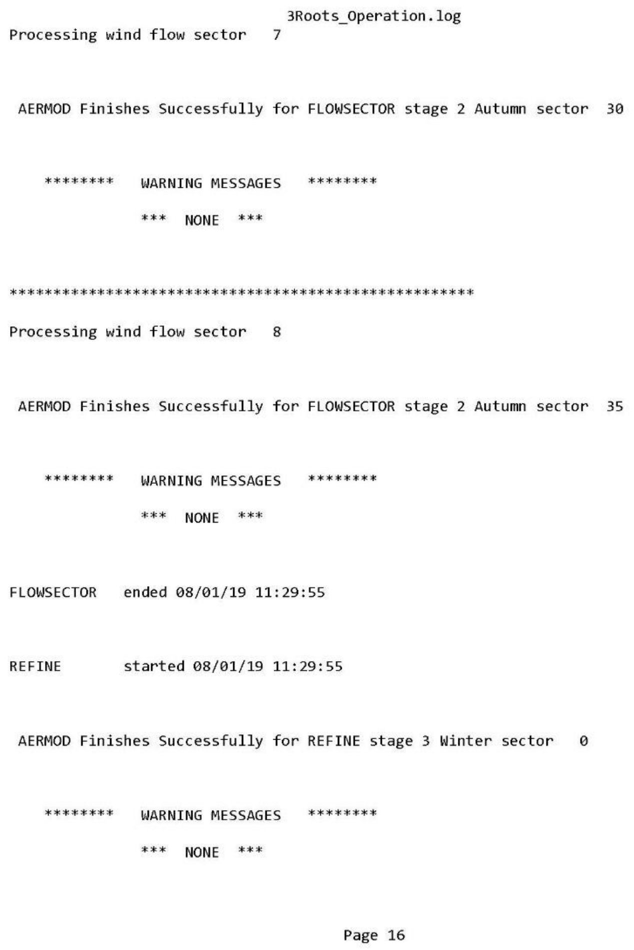
```
                              3Roots_Operation.log

*****************************************************
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  35


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************


  Running AERMOD
 Processing Autumn


Processing surface roughness sector  1


*****************************************************
                                    Page 13
```



```
                                3Roots_Operation.log
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

                                      Page 14
```



```
                                3Roots_Operation.log
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

                                      Page 15
```



```
                               3Roots_Operation.log
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 08/01/19 11:29:55


REFINE       started 08/01/19 11:29:55


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


                                      Page 16
```

COMMENTS

RESPONSES

```
                              3Roots_Operation.log
REFINE       ended 08/01/19 11:30:04


 **********************************************

 AERSCREEN Finished Successfully

 With no errors or warnings

 Check log file for details

 ***********************************************


 Ending date and time  08/01/19 11:30:07
```

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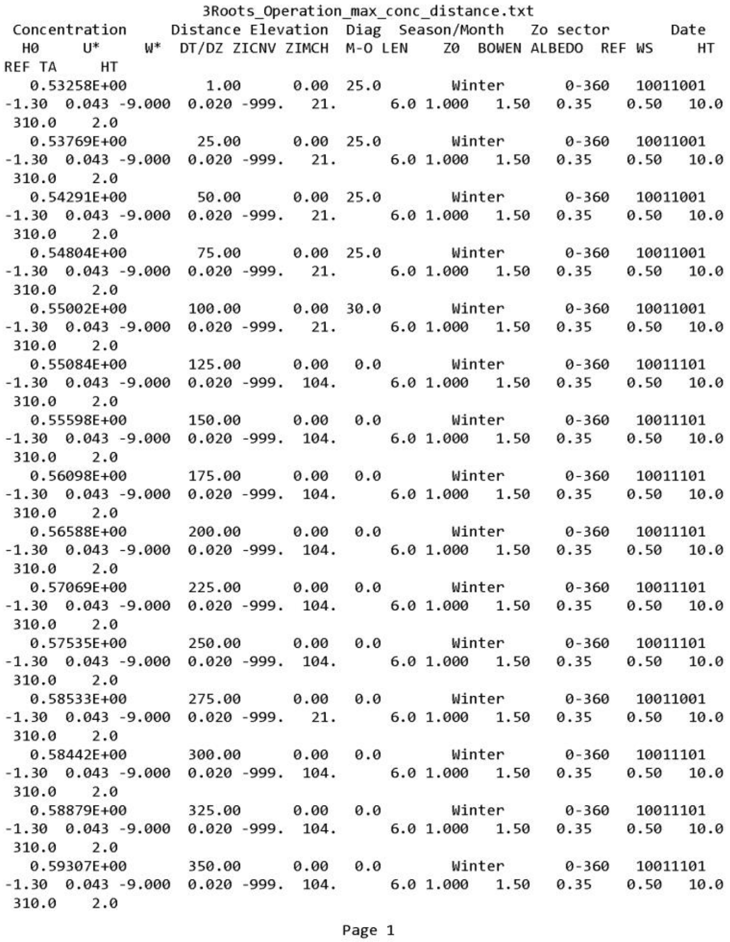
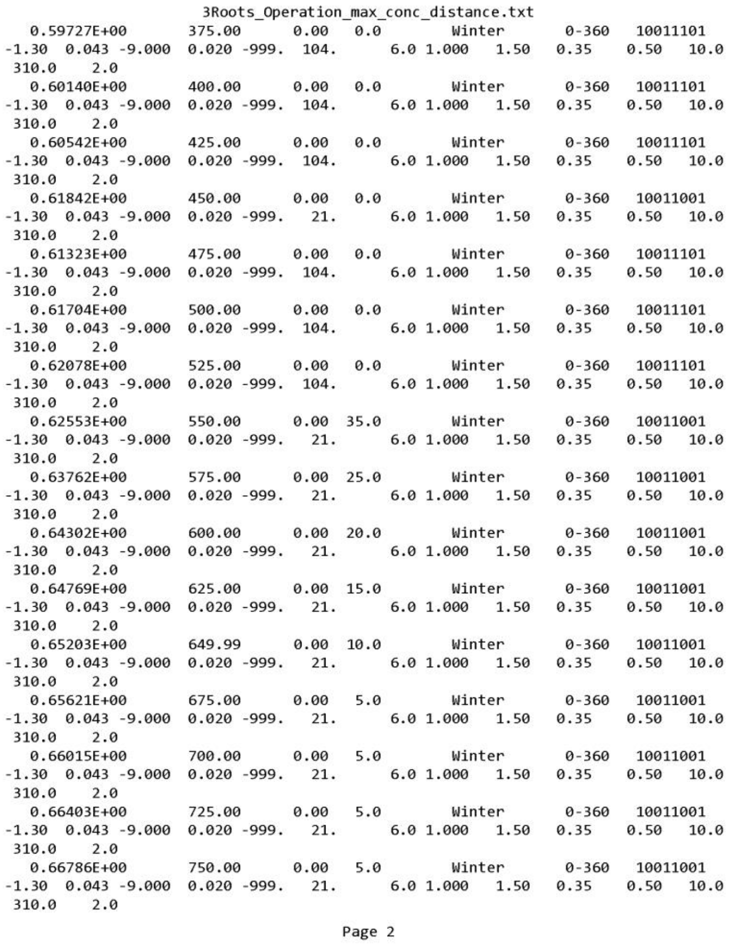
COMMENTS

RESPONSES



```
                       3Roots_Operation_max_conc_distance.txt
  Concentration      Distance Elevation  Diag  Season/Month   Zo sector       Date
   H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
    0.53258E+00         1.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.53769E+00        25.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.54291E+00        50.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.54804E+00        75.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.55002E+00       100.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.55084E+00       125.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.55598E+00       150.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.56098E+00       175.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.56588E+00       200.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.57069E+00       225.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.57535E+00       250.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.58533E+00       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.58442E+00       300.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.58879E+00       325.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
    0.59307E+00       350.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                      Page 1
```



```
                       3Roots_Operation_max_conc_distance.txt
   0.59727E+00       375.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60140E+00       400.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60542E+00       425.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61842E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61323E+00       475.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61704E+00       500.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62078E+00       525.00      0.00   0.0        Winter       0-360   10011101
-1.30  0.043 -9.000  0.020 -999.  104.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62553E+00       550.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63762E+00       575.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64302E+00       600.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64769E+00       625.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65203E+00       649.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65621E+00       675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66015E+00       700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66403E+00       725.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66786E+00       750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                     Page 2
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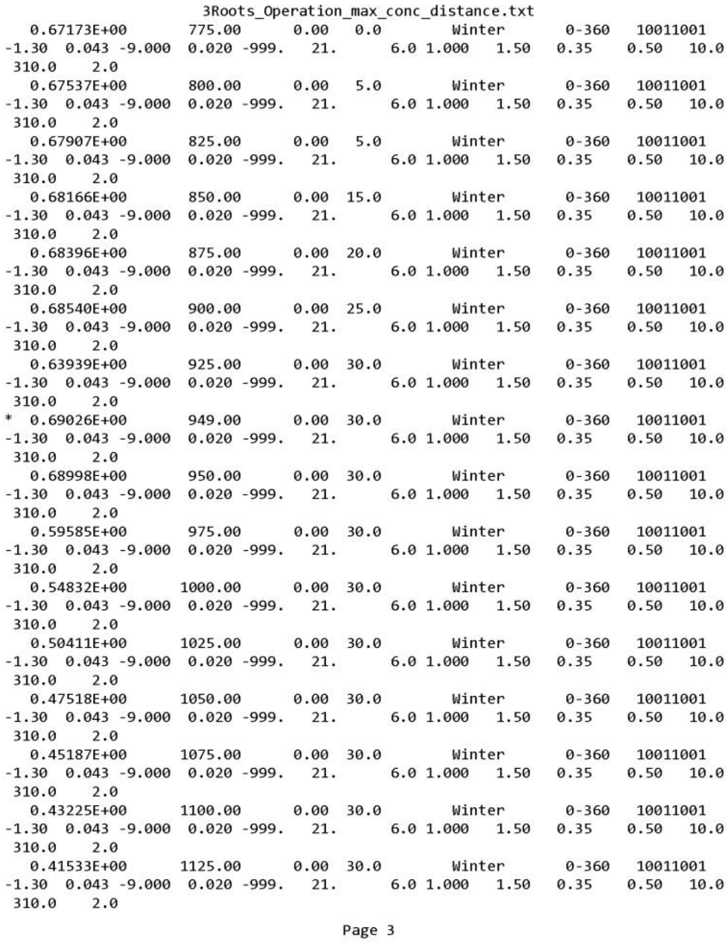
COMMENTS

RESPONSES



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                   3Roots_Operation_max_conc_distance.txt
   0.67173E+00       775.00      0.00   0.0        Winter       0-360   10011001
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 310.0    2.0
   0.67537E+00       800.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67907E+00       825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68166E+00       850.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68396E+00       875.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68540E+00       900.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63939E+00       925.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.69026E+00       949.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68998E+00       950.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59585E+00       975.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54832E+00      1000.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50411E+00      1025.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47518E+00      1050.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45187E+00      1075.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43225E+00      1100.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41533E+00      1125.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                   Page 3
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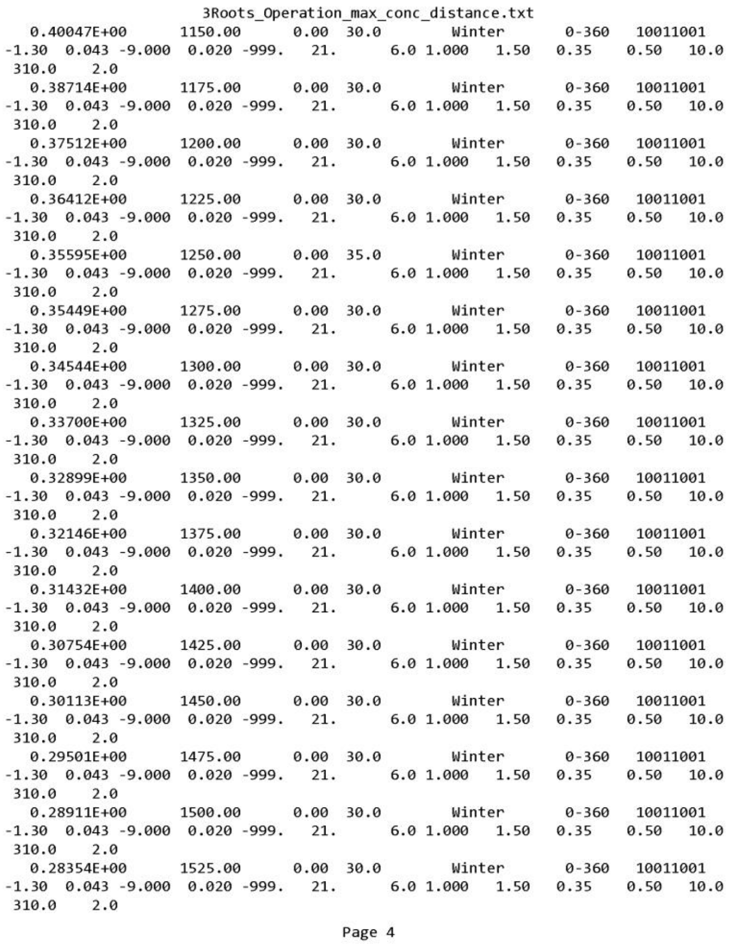
COMMENTS

RESPONSES



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                      3Roots_Operation_max_conc_distance.txt
   0.40047E+00      1150.00      0.00  30.0        Winter       0-360   10011001
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 310.0    2.0
   0.38714E+00      1175.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37512E+00      1200.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36412E+00      1225.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35595E+00      1250.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35449E+00      1275.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34544E+00      1300.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33700E+00      1325.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32899E+00      1350.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32146E+00      1375.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31432E+00      1400.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30754E+00      1425.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30113E+00      1450.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29501E+00      1475.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28911E+00      1500.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28354E+00      1525.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0

                                       Page 4
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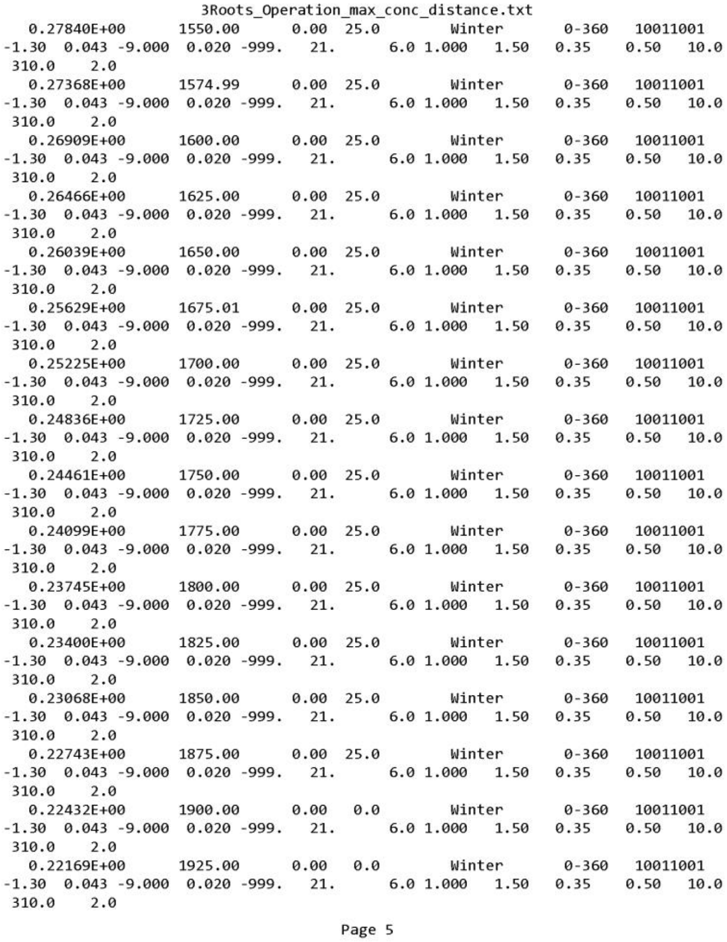

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                     3Roots_Operation_max_conc_distance.txt
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 310.0    2.0
   0.27368E+00      1574.99      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26909E+00      1600.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26466E+00      1625.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26039E+00      1650.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25629E+00      1675.01      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25225E+00      1700.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24836E+00      1725.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24461E+00      1750.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24099E+00      1775.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23745E+00      1800.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23400E+00      1825.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23068E+00      1850.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22743E+00      1875.00      0.00  25.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22432E+00      1900.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22169E+00      1925.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                     Page 5
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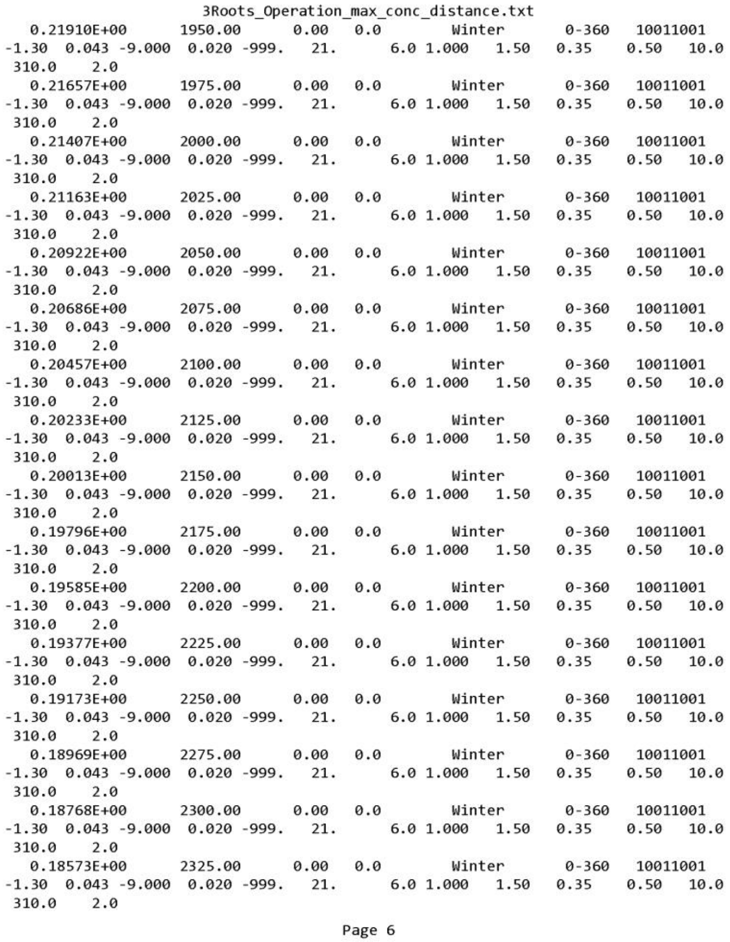
COMMENTS | RESPONSES



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  310.0    2.0
   0.21657E+00      1975.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.21407E+00      2000.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.21163E+00      2025.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.20922E+00      2050.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.20686E+00      2075.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.20457E+00      2100.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.20233E+00      2125.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.20013E+00      2150.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.19796E+00      2175.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.19585E+00      2200.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.19377E+00      2225.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.19173E+00      2250.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.18969E+00      2275.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.18768E+00      2300.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.18573E+00      2325.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
                                    Page 6
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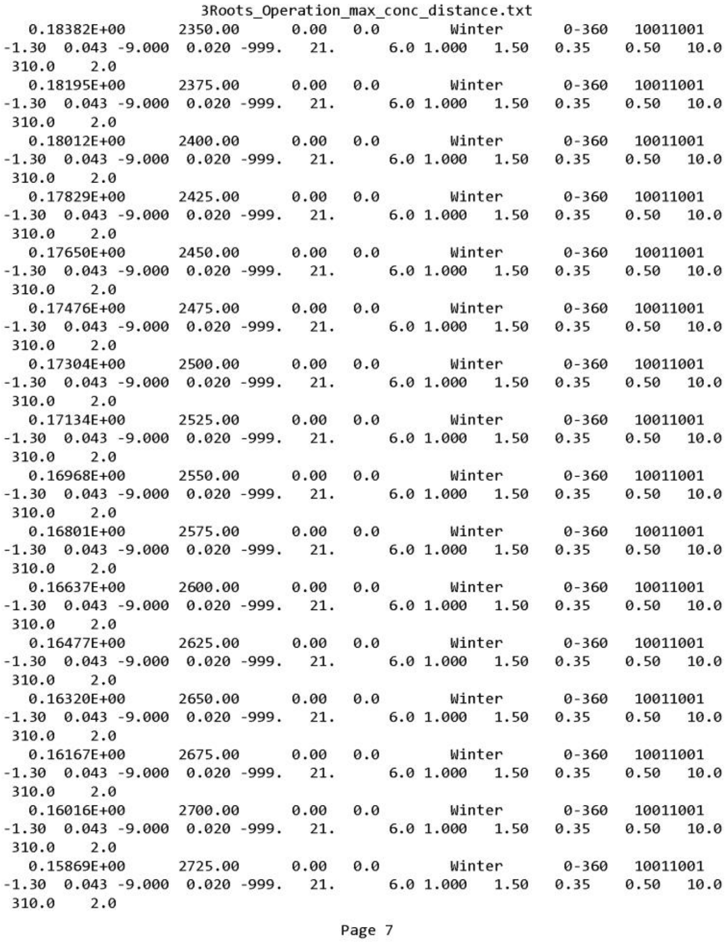

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  310.0    2.0
   0.18195E+00       2375.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.18012E+00       2400.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.17829E+00       2425.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.17650E+00       2450.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.17476E+00       2475.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.17304E+00       2500.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.17134E+00       2525.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16968E+00       2550.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16801E+00       2575.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16637E+00       2600.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16477E+00       2625.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16320E+00       2650.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16167E+00       2675.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.16016E+00       2700.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.15869E+00       2725.00       0.00   0.0        Winter       0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
                                       Page 7
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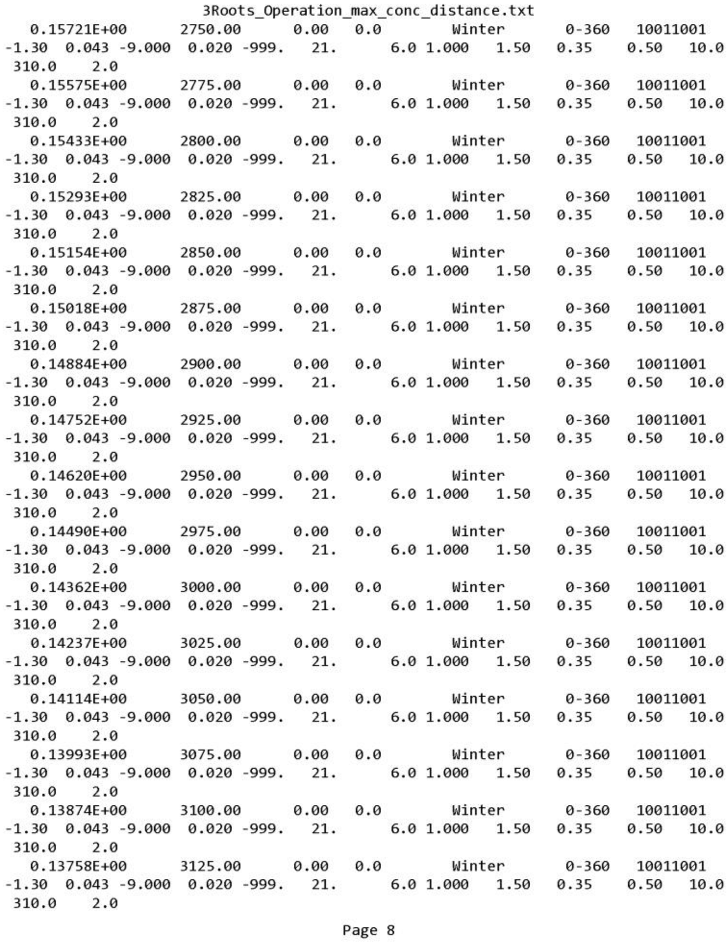
COMMENTS

RESPONSES



3Roots_Operation_max_conc_distance.txt

```
   0.15721E+00      2750.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.15575E+00      2775.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.15433E+00      2800.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.15293E+00      2825.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.15154E+00      2850.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.15018E+00      2875.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14884E+00      2900.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14752E+00      2925.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14620E+00      2950.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14490E+00      2975.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14362E+00      3000.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14237E+00      3025.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.14114E+00      3050.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.13993E+00      3075.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.13874E+00      3100.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.13758E+00      3125.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
```

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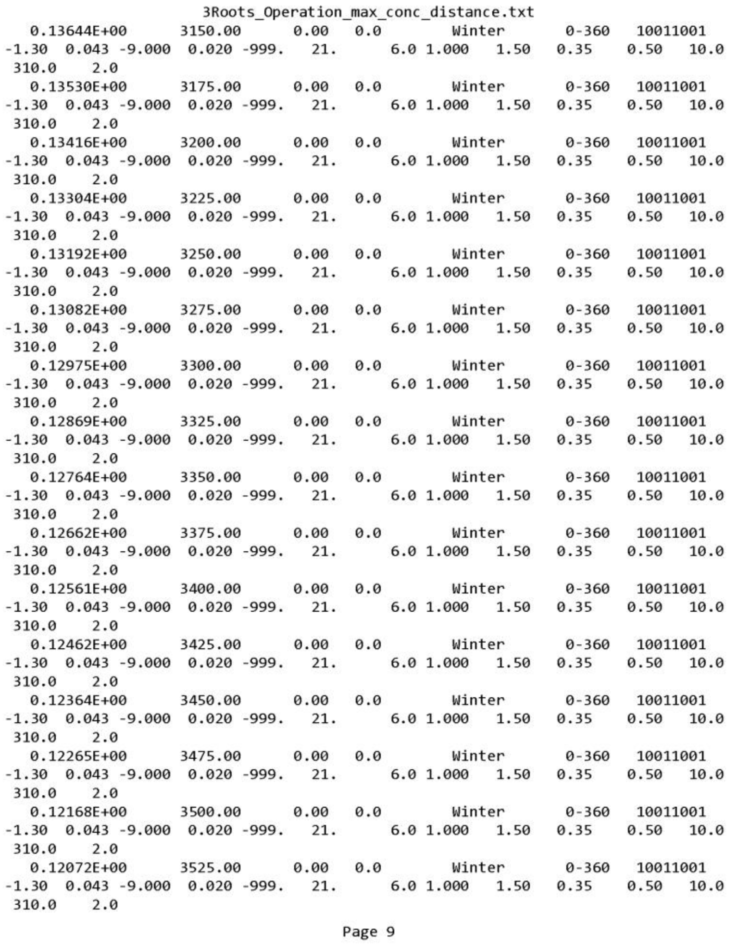

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                 3Roots_Operation_max_conc_distance.txt
  0.13644E+00      3150.00      0.00   0.0        Winter      0-360   10011001
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 310.0    2.0
  0.13530E+00      3175.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.13416E+00      3200.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.13304E+00      3225.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.13192E+00      3250.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.13082E+00      3275.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12975E+00      3300.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12869E+00      3325.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12764E+00      3350.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12662E+00      3375.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12561E+00      3400.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12462E+00      3425.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12364E+00      3450.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12265E+00      3475.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12168E+00      3500.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.12072E+00      3525.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                              Page 9
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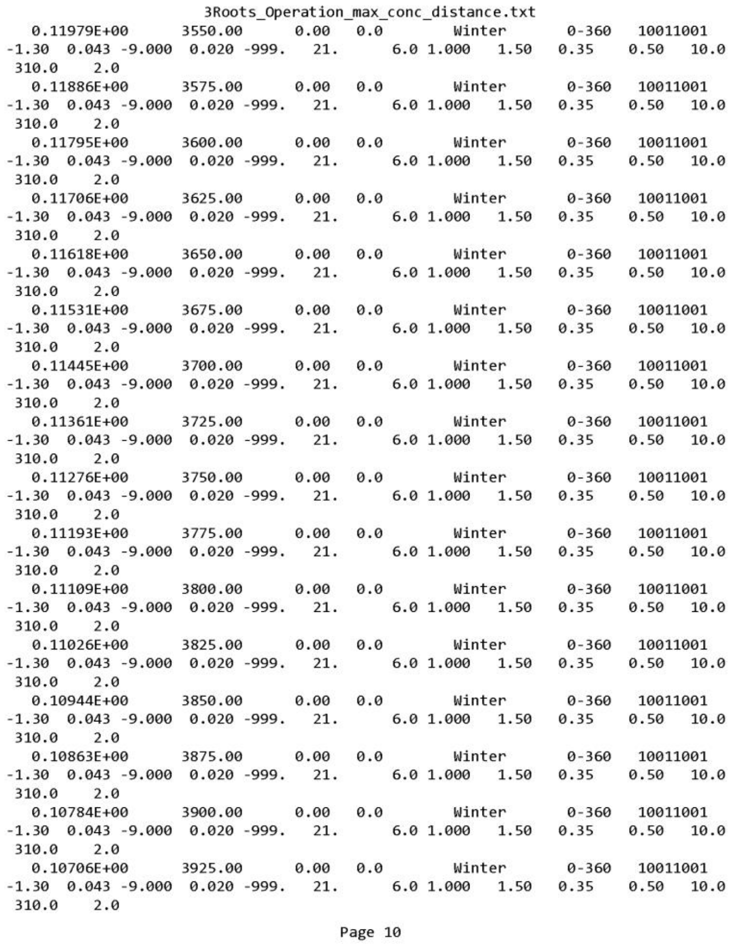

3Roots_Operation_max_conc_distance.txt

```
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 310.0    2.0
  0.11886E+00      3575.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11795E+00      3600.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11706E+00      3625.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11618E+00      3650.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11531E+00      3675.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11445E+00      3700.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11361E+00      3725.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11276E+00      3750.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11193E+00      3775.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11109E+00      3800.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.11026E+00      3825.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10944E+00      3850.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10863E+00      3875.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10784E+00      3900.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10706E+00      3925.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

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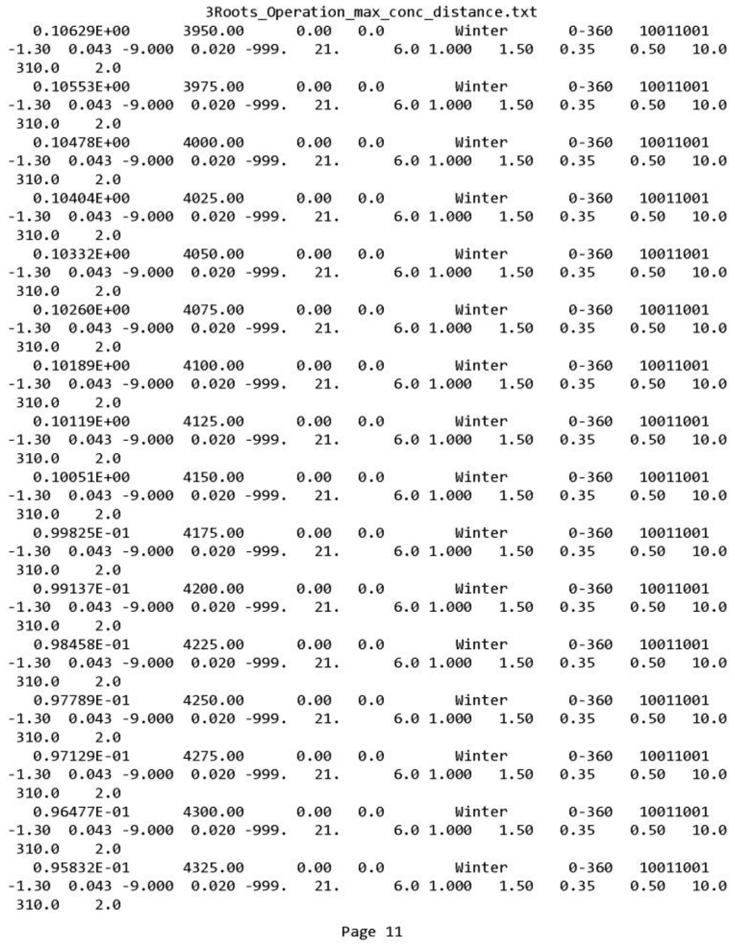

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                   3Roots_Operation_max_conc_distance.txt
  0.10629E+00      3950.00      0.00   0.0        Winter       0-360   10011001
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 310.0    2.0
  0.10553E+00      3975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10478E+00      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10404E+00      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10332E+00      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10260E+00      4075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10189E+00      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10119E+00      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.10051E+00      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.99825E-01      4175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.99137E-01      4200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.98458E-01      4225.00      0.00   0.0        Winter       0-360   10011001
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 310.0    2.0
  0.97789E-01      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.97129E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.96477E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
  0.95832E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                  Page 11
```
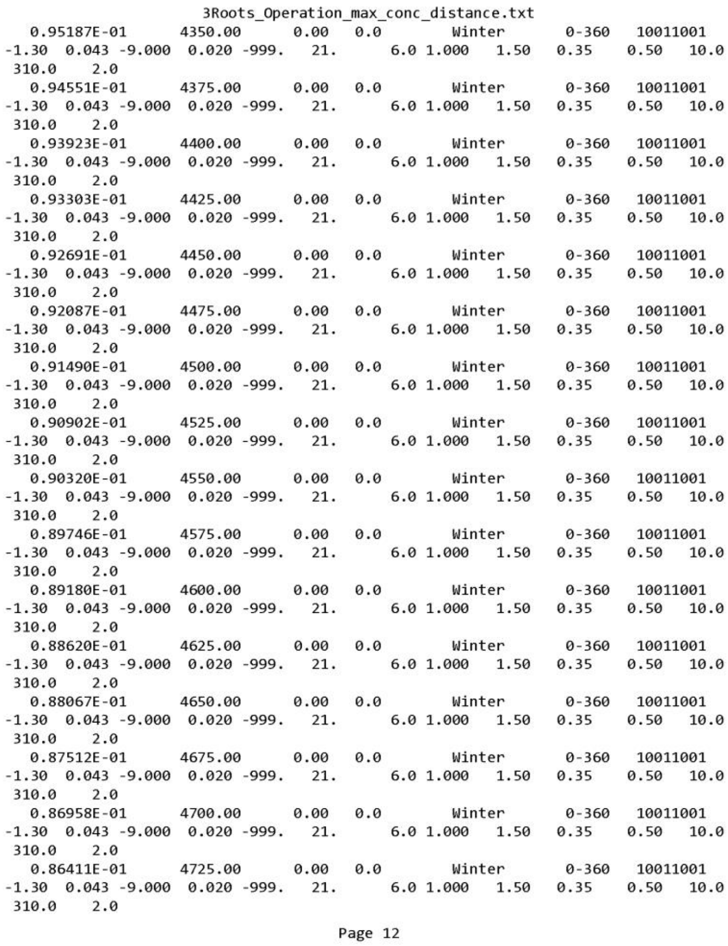

COMMENTS

RESPONSES



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                      3Roots_Operation_max_conc_distance.txt
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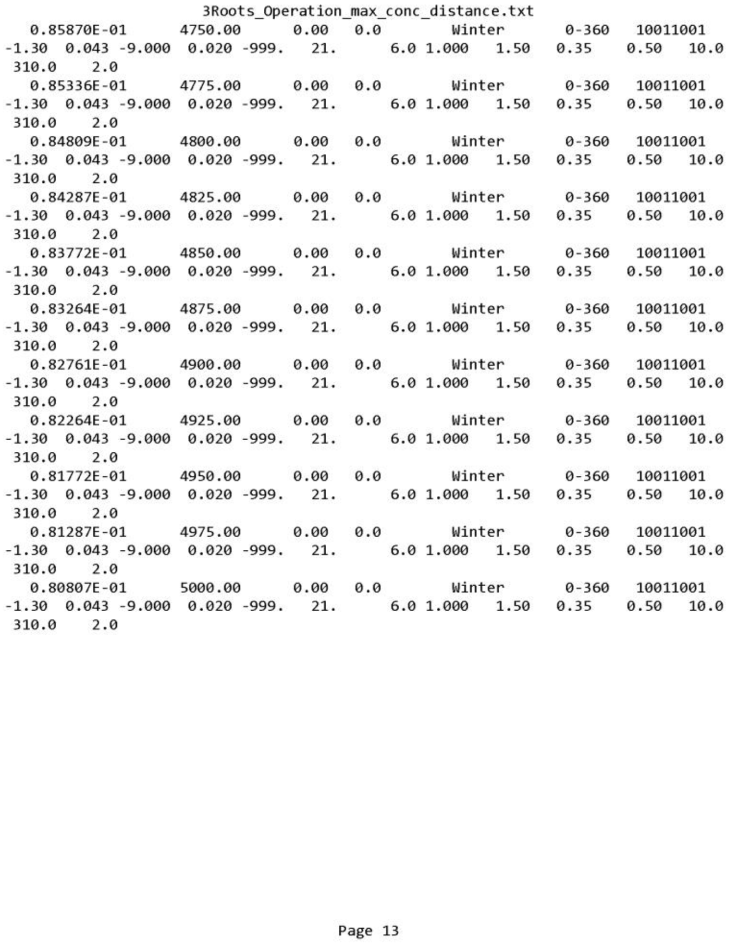
  310.0    2.0
   0.94551E-01     4375.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.93923E-01     4400.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.93303E-01     4425.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.92691E-01     4450.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.92087E-01     4475.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.91490E-01     4500.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.90902E-01     4525.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.90320E-01     4550.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.89746E-01     4575.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.89180E-01     4600.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.88620E-01     4625.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.88067E-01     4650.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.87512E-01     4675.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.86958E-01     4700.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
   0.86411E-01     4725.00      0.00   0.0       Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
  310.0    2.0
                                   Page 12
```



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                     3Roots_Operation_max_conc_distance.txt
   0.85870E-01      4750.00      0.00   0.0        Winter      0-360   10011001
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  310.0    2.0
   0.85336E-01      4775.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.84809E-01      4800.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
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 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.83772E-01      4850.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.83264E-01      4875.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.82761E-01      4900.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.82264E-01      4925.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.81772E-01      4950.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.81287E-01      4975.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0
   0.80807E-01      5000.00      0.00   0.0        Winter      0-360   10011001
 -1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
  310.0    2.0

                                   Page 13
```

COMMENTS

From: Oliver White [mailto:oliwhite@mac.com]
Sent: Thursday, July 25, 2019 12:08 PM
To: DSD EAS <DSDEAS@sandiego.gov>
Cc: CouncilMember Chris Cate <ChrisCate@sandiego.gov>; Pallera, Luis <LPallera@sandiego.gov>
Subject: Re: Support for 3Roots/Project No. 587128 / Attn. Ms. Shearer-Nguyen

RE: Support for 3Roots/Project No. 587128

Attn. Ms. Shearer-Nguyen:

SI6-1 I've been following the 3Roots development for a little over a year now and am excited for the increase in available housing options for buyers in the area. Speaking with clients in Mira Mesa, it seems there is a positive 'vibe' towards the project and the potential for the area. The demand for housing in this area, is quite apparent from living and working in Mira Mesa and following the housing market here

As a supporter of the project, what resonated with me was Chapter 7 of the Draft EIR, which evaluated the long-term effects of a project of this size, specifically the paragraph relating to the regional housing needs (Chapter 7. Page 784).

The statistic regarding population growth and the region's need for additional housing comes as no surprise, yet it is reassuring to see a developer that is taking community character into consideration, instead of building another homogenous community of single-family homes. I was pleased to read that 3Roots provides a mix of densities and housing types that will meet the needs of both renters and buyers of a variety of life stages.

3Roots is a creative and effective way to address San Diego's housing shortage and I'm optimistic that the thorough review by City staff and local decision makers will bring these new homes and community benefits online as soon as possible.

Sincerely,

Oliver White
REALTOR ®

If you need real estate help, anywhere in the world, I will find you a local expert.

Pacific | Sotheby's
INTERNATIONAL REALTY

BRE# 02049994
1111 Prospect Street. Suite 100, La Jolla, CA 92037
Cell **858.228.6639** | Fax 858.454.1533

RESPONSES

SI6-1 Comments noted. These comments do not address the adequacy or accuracy of the CEQA document and no response is required.

Email: oliwhite@mac.com
PacificSothebysRealty.com

2

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Attachments A through D to Letter S3 from the California Department of Transportation, District 11

Prepared by National Data & Surveying Services

I-805 SB On-Ramp & Nobel Dr

Peak Hour Turning Movement Count

ID: 19-04336-002
City: San Diego

Day: Wednesday
Date: 09/04/2019

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

I-805 SB On-Ramp

SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	

Nobel Dr

EASTBOUND

	AM	NOON	PM	
⇦	1269	0	1038	
↶	0	0	0	0
↱	0	0	0	0
→	323	0	599	2
↴	597	0	419	2

CONTROL

Signalized

	AM	NOON	PM
TEV	2346	0	2368
PHF	0.90		0.98

WESTBOUND

Nobel Dr

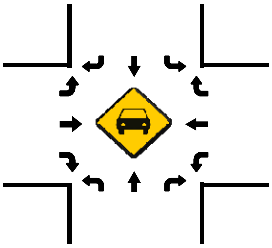
		PM	NOON	AM
0	↰	0	0	0
3	←	1038	0	1269
2	↲	312	0	157
0	↷	0	0	0
	⇨	599	0	323

NORTHBOUND

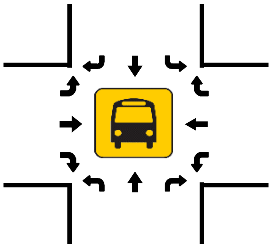
I-805 SB On-Ramp

		↶	↰	↑	↱
		0	0	0	0
	⇩				
PM	731	0	0	0	0
NOON	0	0	0	0	0
AM	754	0	0	0	0

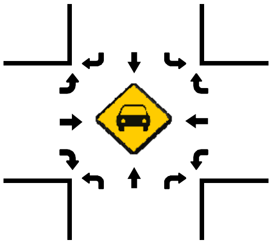
Total Vehicles (AM)



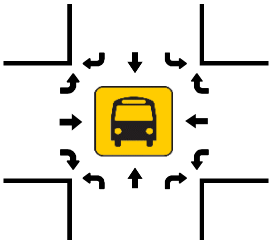
Total Vehicles (AM)



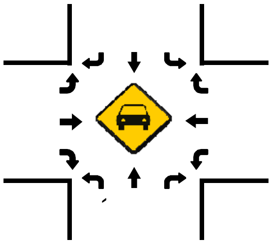
Total Vehicles (NOON)



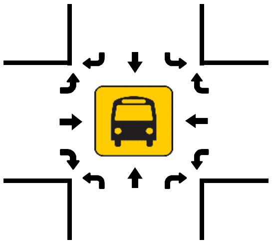
Total Vehicles (NOON)



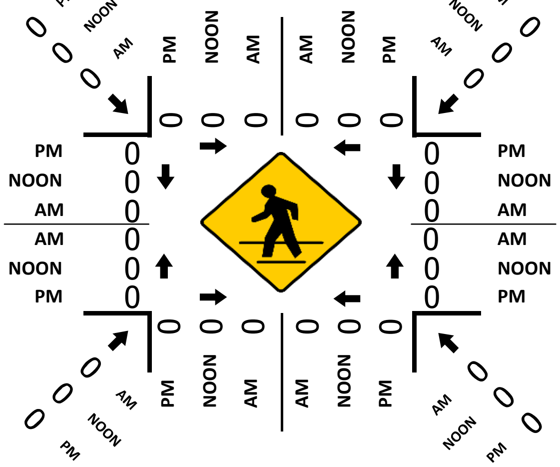
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



	PM	NOON	AM	AM	NOON	PM
North	0	0	0	0	0	0
South	0	0	0	0	0	0

	West	East
PM	0	0
NOON	0	0
AM	0	0
AM	0	0
NOON	0	0
PM	0	0

	PM	NOON	AM
NW	0	0	0
NE	0	0	0
SW	0	0	0
SE	0	0	0

Prepared by National Data & Surveying Services

I-805 SB On-Ramp & Nobel Dr

Peak Hour Turning Movement Count

ID: 19-04336-002
City: San Diego

Day: Thursday
Date: 09/05/2019

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

I-805 SB On-Ramp

SOUTHBOUND

	↲	↓	↳	U	⇧
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	

Nobel Dr

EASTBOUND

	AM	NOON	PM	
⇦	1304	0	1017	
U	0	0	0	0
↰	0	0	0	0
→	328	0	574	2
↴	561	0	483	2

CONTROL

Signalized

	AM	NOON	PM
TEV	2322	0	2281
PHF	0.98		0.92

Nobel Dr

WESTBOUND

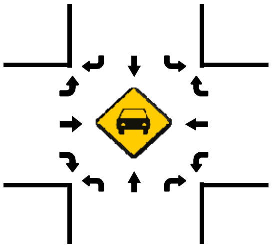
		PM	NOON	AM
0	↰	0	0	0
3	←	1017	0	1304
2	↙	207	0	129
0	U	0	0	0
	⇨	574	0	328

NORTHBOUND

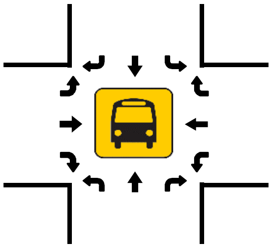
I-805 SB On-Ramp

		U	↰	↑	↱
		0	0	0	0
PM	690	0	0	0	0
NOON	0	0	0	0	0
AM	690	0	0	0	0

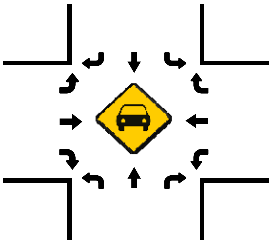
Total Vehicles (AM)



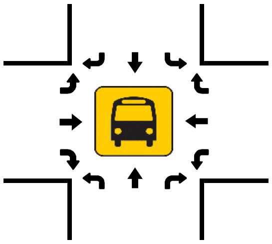
Total Vehicles (AM)



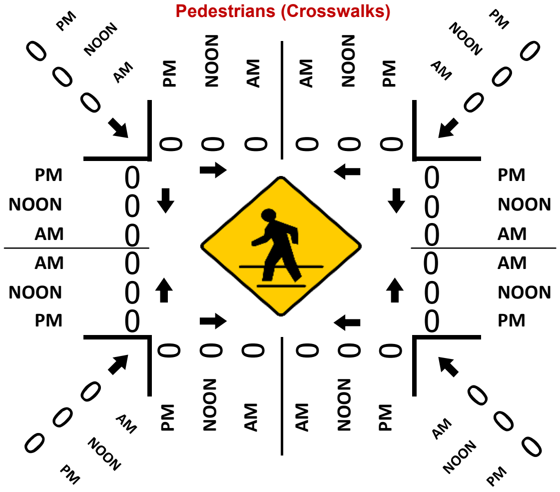
Total Vehicles (NOON)



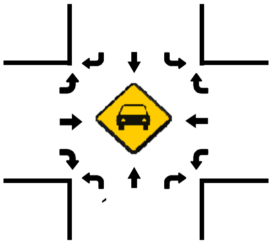
Total Vehicles (NOON)



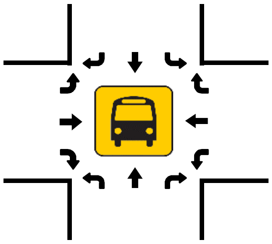
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

I-805 SB On-Ramp & La Jolla Village Dr

Peak Hour Turning Movement Count

ID: 19-04336-001
City: San Diego

Day: Wednesday
Date: 09/04/2019

PEAK HOURS		COUNT PERIODS
07:45 AM - 08:45 AM	AM	07:00 AM - 09:00 AM
NONE	NOON	NONE
05:00 PM - 06:00 PM	PM	04:00 PM - 06:00 PM

I-805 SB On-Ramp
SOUTHBOUND

	↲	↓	↳	⮌	⇧
AM	1626	0	591	0	403
NOON	0	0	0	0	0
PM	748	0	152	0	572
	2	0	2	0	

La Jolla Village Dr
EASTBOUND

	AM	NOON	PM	
⇦	3392	0	2171	
⮌	0	0	0	0
↱	0	0	0	0
→	889	0	1754	3
↴	467	0	814	2

La Jolla Village Dr
WESTBOUND

		PM	NOON	AM
↰	1	572	0	403
←	3	1423	0	1766
↲	0	0	0	0
⮌	0	0	0	0
⇨		1906	0	1480

CONTROL

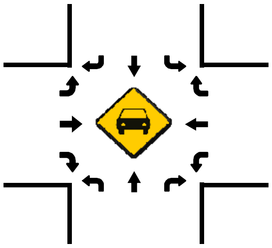
Signalized

	AM	NOON	PM
TEV	5742	0	5463
PHF	0.98		0.90

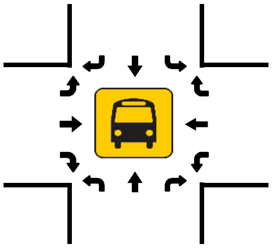
	⇩	⮌	↰	↑	↱
		0	0	0	0
PM	814	0	0	0	0
NOON	0	0	0	0	0
AM	467	0	0	0	0

NORTHBOUND
I-805 SB On-Ramp

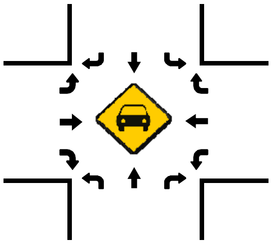
Total Vehicles (AM)



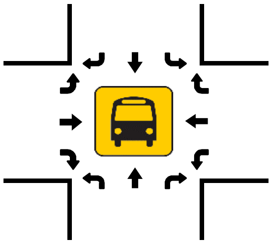
Total Vehicles (AM)



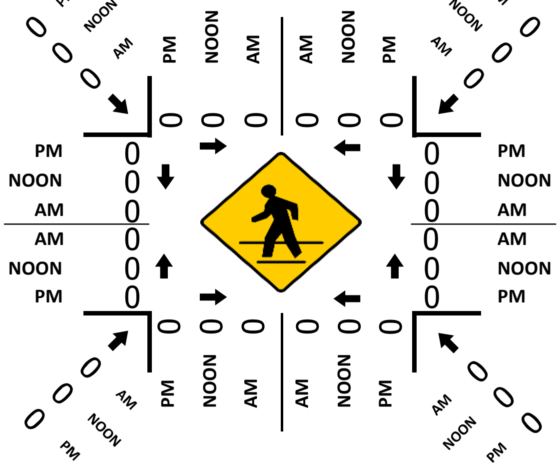
Total Vehicles (NOON)



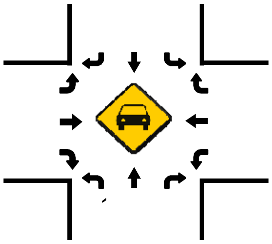
Total Vehicles (NOON)



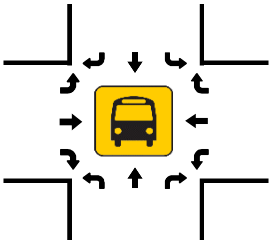
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

I-805 SB On-Ramp & La Jolla Village Dr

Peak Hour Turning Movement Count

ID: 19-04336-001
City: San Diego

Day: Thursday
Date: 09/05/2019

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

I-805 SB On-Ramp

SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	1553	0	599	0	429
NOON	0	0	0	0	0
PM	853	0	221	0	677
	2	0	2	0	

La Jolla Village Dr

EASTBOUND

		AM	NOON	PM
⇦		3323	0	1992
↶	0	0	0	0
↱	0	0	0	0
→	3	925	0	1709
↴	2	427	0	858

La Jolla Village Dr

WESTBOUND

		PM	NOON	AM
↰	1	677	0	429
←	3	1139	0	1770
↙	0	0	0	0
↶	0	0	0	0
⇨		1930	0	1524

CONTROL

Signalized

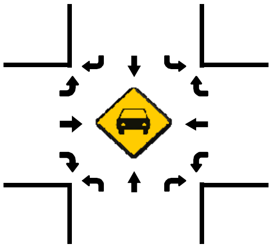
	AM	NOON	PM
TEV	5703	0	5457
PHF	0.97		0.97

NORTHBOUND

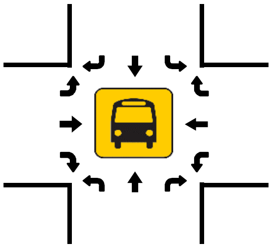
I-805 SB On-Ramp

	⇩	↶	↰	↑	↱
		0	0	0	0
PM	858	0	0	0	0
NOON	0	0	0	0	0
AM	427	0	0	0	0

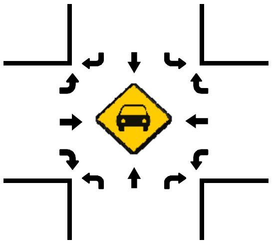
Total Vehicles (AM)



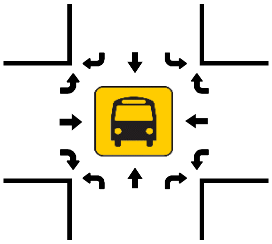
Total Vehicles (AM)



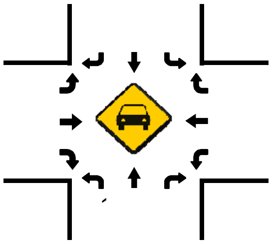
Total Vehicles (NOON)



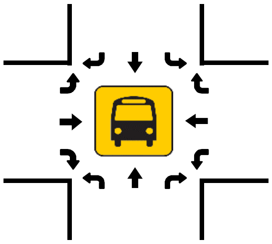
Total Vehicles (NOON)



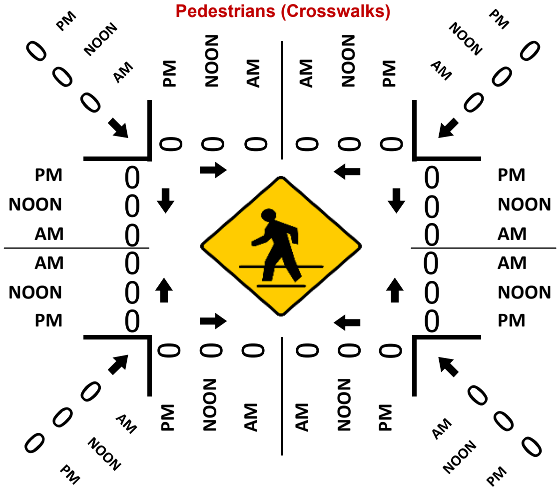
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



Existing Plus Phase 1 Freeway Segment Analysis

Freeway and Segment	Number of Lanes (a)		ADT	Capacity (vph)	Existing										Existing Plus Phase 1 Project						Change in V/C		Significant Impact ?	
					AM Peak					PM Peak					AM Peak			PM Peak						
					K	D	Peak Hour Volume	V/C Ratio	LOS	K	D	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM
I-805																								
I-805 South of Nobel Dr	NB	4M+1H+1A	206,000	12,280	6.37%	68.05%	8,922	0.727	C	7.85%	40.53%	6,549	0.533	B	8,949	0.729	C	6,661	0.542	B	0.002	0.009		
	SB	4M+1H+1A		12,280		31.96%	4,190	0.341	A		59.48%	9,612	0.783	C	4,290	0.349	A	9,663	0.787	C	0.008	0.004		
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M + 1H	186,000	11,080	6.37%	68.05%	8,056	0.727	C	7.85%	40.53%	5,913	0.534	B	8,063	0.728	C	5,944	0.536	B	0.001	0.003		
	SB	4M + 1H		11,080		31.96%	3,783	0.341	A		59.48%	8,678	0.783	C	3,811	0.344	A	8,693	0.785	C	0.003	0.001		
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	4M+1H+1A	185,000	12,280	6.37%	68.05%	8,012	0.652	C	7.85%	40.53%	5,881	0.479	B	8,024	0.653	C	5,887	0.479	B	0.001	0.000		
	SB	4M+1H+1A		12,280		31.96%	3,763	0.306	A		59.48%	8,632	0.703	C	3,766	0.307	A	8,644	0.704	C	0.000	0.001		
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	168,000	12,280	6.37%	68.05%	7,276	0.593	B	7.85%	40.53%	5,341	0.435	B	7,304	0.595	B	5,355	0.436	B	0.002	0.001		
	SB	3M+1H+2A		11,130		31.96%	3,417	0.307	A		59.48%	7,839	0.704	C	3,424	0.308	A	7,870	0.707	C	0.001	0.003		
I-15																								
Miramar Rd to Miramar Way	NB	6M+2H+1A	304,000	18,660	8.83%	31.96%	8,578	0.460	B	11.76%	66.40%	23,738	1.272	F	8,581	0.460	B	23,751	1.273	F	0.000	0.001		No
	SB	7M+2H		19,810		68.05%	18,265	0.922	E		33.60%	12,012	0.606	B	18,277	0.923	E	12,018	0.607	B	0.001	0.000	No	
Carroll Canyon Rd to Miramar Rd	NB	5M+2H+1A	287,000	16,310	8.83%	31.96%	8,098	0.497	B	11.76%	66.40%	22,411	1.374	F	8,098	0.497	B	22,411	1.374	F	0.000	0.000		No
	SB	6M+2H+1A		18,660		68.05%	17,244	0.924	E		33.60%	11,340	0.608	B	17,244	0.924	E	11,340	0.608	B	0.000	0.000	No	
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	277,000	18,660	8.83%	31.96%	7,816	0.419	B	11.76%	66.40%	21,630	1.159	F	7,816	0.419	B	21,630	1.159	F	0.000	0.000		No
	SB	6M+2H+1A		18,660		68.05%	16,643	0.892	D		33.60%	10,945	0.587	B	16,643	0.892	D	10,945	0.587	B	0.000	0.000		
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	268,000	16,310	8.83%	31.96%	7,562	0.464	B	11.76%	66.40%	20,927	1.283	F	7,590	0.465	B	20,941	1.284	F	0.002	0.001		No
	SB	5M+2H+1A		16,310		68.05%	16,102	0.987	E		33.60%	10,590	0.649	C	16,110	0.988	E	10,621	0.651	C	0.000	0.002	No	

Project AM	Project PM
27	112
100	51
7	31
28	14
11	6
3	12
28	14
7	31
3	12
11	6
0	0
0	0
0	0
0	0
28	14
7	31

Notes:

(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxillary Lane Capacity = 1,200 vphpl

M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1.00
F(0)	1.025
F(1)	1.35
F(2)	1.45
F(3)	>1.45

Existing Plus Project Buildout Freeway Segment Analysis

Freeway and Segment	Number of Lanes (a)		ADT	Capacity (vph)	Existing						Existing Plus Phase 2 Project						Change in V/C		Significant Impact ?			
					AM Peak			PM Peak			AM Peak			PM Peak								
					Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM	Project AM	Project PM
I-805																						
I-805 South of Nobel Dr	NB	4M+1H+1A	206,000	12,280	8,922	0.727	C	6,549	0.533	B	9,007	0.734	C	6,768	0.551	B	0.007	0.018			85	219
	SB	4M+1H+1A		12,280	4,190	0.341	A	9,612	0.783	C	4,382	0.357	A	9,731	0.792	C	0.016	0.010			192	120
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M + 1H	186,000	11,080	8,056	0.727	C	5,913	0.534	B	8,077	0.729	C	5,971	0.539	B	0.002	0.005			21	58
	SB	4M + 1H		11,080	3,783	0.341	A	8,678	0.783	C	3,834	0.346	A	8,709	0.786	C	0.005	0.003			51	31
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	4M+1H+1A	185,000	12,280	8,012	0.652	C	5,881	0.479	B	8,038	0.655	C	5,900	0.480	B	0.002	0.001			25	18
	SB	4M+1H+1A		12,280	3,763	0.306	A	8,632	0.703	C	3,777	0.308	A	8,662	0.705	C	0.001	0.002			14	30
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	168,000	12,280	7,276	0.593	B	5,341	0.435	B	7,336	0.597	B	5,406	0.440	B	0.005	0.005			59	65
	SB	3M+1H+2A		11,130	3,417	0.307	A	7,839	0.704	C	3,448	0.310	A	7,908	0.711	C	0.003	0.006			31	69
I-15																						
Miramar Rd to Miramar Way	NB	6M+2H+1A	304,000	18,660	8,578	0.460	B	23,738	1.272	F	8,616	0.462	B	23,797	1.275	F	0.002	0.003		No	38	59
	SB	7M+2H		19,810	18,265	0.922	E	12,012	0.606	B	18,311	0.924	E	12,054	0.608	B	0.002	0.002	No		45	42
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	287,000	18,660	8,098	0.434	B	22,411	1.201	F	8,110	0.435	B	22,425	1.202	F	0.001	0.001		No	12	14
	SB	6M+2H+1A		18,660	17,244	0.924	E	11,340	0.608	B	17,258	0.925	E	11,358	0.609	B	0.001	0.001	No		14	17
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	277,000	18,660	7,816	0.419	B	21,630	1.159	F	7,836	0.420	B	21,654	1.160	F	0.001	0.001		No	20	24
	SB	6M+2H+1A		18,660	16,643	0.892	D	10,945	0.587	B	16,667	0.893	D	10,974	0.588	B	0.001	0.002			24	29
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	268,000	16,310	7,562	0.464	B	20,927	1.283	F	7,625	0.468	B	20,972	1.286	F	0.004	0.003		No	63	45
	SB	5M+2H+1A		16,310	16,102	0.987	E	10,590	0.649	C	16,138	0.989	E	10,665	0.654	C	0.002	0.005	No		36	75

Notes:

(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxillary Lane Capacity = 1,200 vphpl

M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

V/C Ratio = Volume/Capacity Ratio

LOS = Level of Service

ADT = Average Daily Traffic

Segments with LOS E or worse are shown in **bold**

Significant Impact: LOS D or better to LOS E or worse

Incremental V/C ratio ≥ 0.01 for LOS E

Incremental V/C ratio ≥ 0.005 for LOS F

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1.00
F(0)	1.025
F(1)	1.35
F(2)	1.45
F(3)	>1.45

2021 Conditions - Freeway Segment Analysis

Freeway and Segment	Number of Lanes (a)		Growth Rate (ADT)	Growth Rate (Peak Hour)	ADT	Capacity (vph)	2021 No Project						2021 With Project						Change in V/C		Significant Impact ?			
							AM Peak			PM Peak			AM Peak			PM Peak								
							Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM	Project AM	Project PM
I-805																								
I-805 South of Nobel Dr	NB	4M+1H+1A	**1.068**	**1.071**	221,000	12,280	9,527	0.776	C	6,993	0.569	B	9,554	0.778	C	7,105	0.579	B	0.002	0.009			27	112
	SB	4M+1H+1A	**1.074**			12,280	4,498	0.366	A	10,318	0.840	D	4,598	0.374	A	10,369	0.844	D	0.008	0.004			100	51
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M + 1H	**1.044**	**1.047**	188,400	11,080	8,409	0.759	C	6,172	0.557	B	8,416	0.760	C	6,203	0.560	B	0.001	0.003			7	31
	SB	4M + 1H	**1.049**			11,080	3,969	0.358	A	9,105	0.822	D	3,997	0.361	A	9,120	0.823	D	0.003	0.001			28	14
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	4M+1H+1A	**1.067**	**1.058**	189,400	12,280	8,550	0.696	C	6,276	0.511	B	8,561	0.697	C	6,282	0.512	B	0.001	0.000			11	6
	SB	4M+1H+1A	**1.050**			12,280	3,949	0.322	A	9,059	0.738	C	3,952	0.322	A	9,072	0.739	C	0.000	0.001			3	12
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	**1.053**	**1.042**	169,800	12,280	7,663	0.624	C	5,625	0.458	B	7,691	0.626	C	5,639	0.459	B	0.002	0.001			28	14
	SB	3M+1H+2A	**1.031**			11,130	3,522	0.316	A	8,080	0.726	C	3,530	0.317	A	8,111	0.729	B	0.001	0.003			7	31
I-15																								
Miramar Rd to Miramar Way	NB	6M+2H+1A	**1.031**	**1.042**	317,000	18,660	8,848	0.474	B	24,486	1.312	F	8,851	0.474	B	24,498	1.313	F	0.000	0.001		No	3	12
	SB	7M+2H+1A	**1.053**			19,810	19,236	0.971	E	12,651	0.639	C	19,247	0.972	E	12,656	0.639	C	0.001	0.000	No		11	6
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	**1.042**	**1.052**	302,000	18,660	8,434	0.452	B	23,341	1.251	F	8,434	0.452	B	23,341	1.251	F	0.000	0.000		No	0	0
	SB	6M+2H+1A	**1.063**			18,660	18,323	0.982	E	12,050	0.646	C	18,323	0.982	E	12,050	0.646	C	0.000	0.000	No		0	0
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	**1.042**	**1.053**	292,000	18,660	8,145	0.436	B	22,540	1.208	F	8,145	0.436	B	22,540	1.208	F	0.000	0.000		No	0	0
	SB	6M+2H+1A	**1.065**			18,660	17,717	0.949	E	11,652	0.624	C	17,717	0.949	E	11,652	0.624	C	0.000	0.000	No		0	0
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	**1.051**	**1.058**	284,000	16,310	7,950	0.487	B	22,002	1.349	F	7,978	0.489	B	22,016	1.350	F	0.002	0.001		No	28	14
	SB	5M+2H+1A	**1.065**			16,310	17,153	1.052	F	11,280	0.692	C	17,160	1.052	F	11,311	0.694	C	0.000	0.002	No		7	31

Notes:

(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxillary Lane Capacity = 1,200 vphpl

M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

V/C Ratio = Volume/Capacity Ratio

LOS = Level of Service

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Significant Impact: LOS D or better to LOS E or worse

Incremental V/C ratio ≥ 0.01 for LOS E

Incremental V/C ratio ≥ 0.005 for LOS F

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1.00
F(0)	1.025
F(1)	1.35
F(2)	1.45
F(3)	>1.45

2025 Conditions - Freeway Segment Analysis

Freeway and Segment	Number of Lanes (a)		Growth Rate (ADT)	Growth Rate (Peak Hour)	ADT	Capacity (vph)	2025 No Project						2025 With Project						Change in V/C		Significant Impact ?		Project AM	Project PM
							AM Peak			PM Peak			AM Peak			PM Peak								
							Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM		
I-805																								
I-805 South of Nobel Dr	NB	4M+1H+1A	**1.045**	**1.071**	237,000	12,280	9,957	0.811	D	7,309	0.595	B	10,029	0.817	D	7,472	0.608	B	0.006	0.013			71	163
	SB	4M+1H+1A	**1.049**			12,280	4,718	0.384	A	10,824	0.881	D	4,859	0.396	A	10,918	0.889	D	0.011	0.008			140	94
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M + 1H	**1.029**	**1.047**	197,000	12,280	8,654	0.705	C	6,353	0.517	B	8,671	0.706	C	6,392	0.521	B	0.001	0.003			17	39
	SB	4M + 1H	**1.033**			12,280	4,100	0.334	A	9,404	0.766	C	4,134	0.337	A	9,427	0.768	C	0.003	0.002			34	22
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	4M+1H+1A	**1.045**	**1.058**	200,000	12,280	8,932	0.727	C	6,557	0.534	B	8,958	0.729	C	6,575	0.535	B	0.002	0.001			25	18
	SB	4M+1H+1A	**1.033**			12,280	4,080	0.332	A	9,358	0.762	C	4,094	0.333	A	9,388	0.765	C	0.001	0.002			14	30
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	**1.035**	**1.042**	177,000	12,280	7,935	0.646	C	5,825	0.474	B	7,995	0.651	C	5,890	0.480	B	0.005	0.005			59	65
	SB	3M+1H+2A	**1.021**			11,130	3,594	0.323	A	8,245	0.741	C	3,625	0.326	A	8,315	0.747	C	0.003	0.006			31	69
I-15																								
Miramar Rd to Miramar Way	NB	6M+2H+1A	**1.021**	**1.042**	324,700	18,660	9,034	0.484	B	25,000	1.340	F	9,076	0.486	B	25,077	1.344	F	0.002	0.004		No	43	77
	SB	7M+2H+1A	**1.035**			19,810	19,918	1.005	F	13,099	0.661	C	19,981	1.009	F	13,149	0.664	C	0.003	0.003	No		63	50
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	**1.028**	**1.052**	311,300	18,660	8,668	0.465	B	23,987	1.285	F	8,706	0.467	B	24,014	1.287	F	0.002	0.001		No	38	27
	SB	6M+2H+1A	**1.042**			18,660	19,087	1.023	F	12,553	0.673	C	19,109	1.024	F	12,598	0.675	C	0.001	0.002	No		21	45
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	**1.028**	**1.053**	290,100	18,660	8,373	0.449	B	23,172	1.242	F	8,436	0.452	B	23,217	1.244	F	0.003	0.002		No	63	45
	SB	6M+2H+1A	**1.043**			18,660	18,479	0.990	E	12,153	0.651	C	18,515	0.992	E	12,228	0.655	C	0.002	0.004	No		36	75
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	**1.034**	**1.058**	282,500	16,310	8,222	0.504	B	22,755	1.395	F	8,286	0.508	B	22,800	1.398	F	0.004	0.003		No	63	45
	SB	5M+2H+1A	**1.043**			16,310	17,899	1.097	F	11,771	0.722	C	17,934	1.100	F	11,846	0.726	C	0.002	0.005	No		36	75

Notes:

(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxillary Lane Capacity = 1,200 vphpl

M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

V/C Ratio = Volume/Capacity Ratio

LOS = Level of Service

ADT = Average Daily Traffic

Segments with LOS E or worse are shown in **bold**

Significant Impact: LOS D or better to LOS E or worse

Incremental V/C ratio ≥ 0.01 for LOS E

Incremental V/C ratio ≥ 0.005 for LOS F

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1.00
F(0)	1.025
F(1)	1.35
F(2)	1.45
F(3)	>1.45
F(3)	>1.45

2050 Freeway Segment Analysis

Freeway and Segment	Number of Lanes (a)		Growth Rate (ADT)	Growth Rate (Peak Hour)	ADT	Capacity (vph)	2050 No Project						2050 With Project						Change in V/C		Significant Impact ?		Project AM	Project PM
							AM Peak			PM Peak			AM Peak			PM Peak								
							Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM		
I-805																								
I-805 South of Nobel Dr	NB	4M+1H+1A	**1.206**	**1.217**	288,000	12,280	12,005	0.978	E	8,812	0.718	C	12,058	0.982	E	8,919	0.726	C	0.004	0.009	No		53	107
	SB	4M+1H+1A	**1.229**			12,280	5,798	0.472	B	13,301	1.083	F	5,885	0.479	B	13,362	1.088	F	0.007	0.005		No	87	61
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M + 1H	**1.216**	**1.227**	242,000	11,080	10,523	0.950	E	7,724	0.697	C	10,548	0.952	E	7,773	0.702	C	0.002	0.004	No		25	49
	SB	4M + 1H	**1.238**			11,080	5,075	0.458	B	11,641	1.051	F	5,114	0.462	B	11,672	1.053	F	0.004	0.003		No	40	31
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	4M+1H+1A	**1.227**	**1.242**	248,000	12,280	10,958	0.892	D	8,044	0.655	C	10,970	0.893	D	8,053	0.656	C	0.001	0.001			12	9
	SB	4M+1H+1A	**1.258**			12,280	5,131	0.418	B	11,770	0.958	E	5,138	0.418	B	11,784	0.960	E	0.001	0.001		No	7	14
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	**1.282**	**1.268**	224,000	12,280	10,169	0.828	D	7,465	0.608	B	10,216	0.832	D	7,518	0.612	B	0.004	0.004			47	54
	SB	3M+1H+2A	**1.255**			11,130	4,511	0.405	A	10,348	0.930	E	4,539	0.408	A	10,406	0.935	E	0.002	0.005		No	28	58
I-15																								
Miramar Rd to Miramar Way	NB	6M+2H+1A	**1.211**	**1.208**	392,000	18,660	10,942	0.586	B	30,280	1.623	F	10,972	0.588	B	30,335	1.626	F	0.002	0.003		No	30	55
	SB	7M+2H+1A	**1.205**			15,110	24,007	1.589	F	15,788	1.045	F	24,051	1.592	F	15,824	1.047	F	0.003	0.002	No	No	44	36
Carroll Canyon Rd to Miramar Rd	NB	5M+2H+1A	**1.203**	**1.198**	373,000	16,310	10,427	0.639	C	28,856	1.769	F	10,427	0.639	C	28,856	1.769	F	0.000	0.000		No	0	0
	SB	6M+2H+1A	**1.194**			18,660	22,787	1.221	F	14,986	0.803	D	22,787	1.221	F	14,986	0.803	D	0.000	0.000	No		0	0
Mira Mesa Blvd to Carroll Canyon Rd	NB	5M+2H+1A	**1.210**	**1.209**	351,000	16,310	10,130	0.621	C	28,035	1.719	F	10,201	0.625	C	28,087	1.722	F	0.004	0.003		No	71	53
	SB	6M+2H+1A	**1.209**			18,660	22,341	1.197	F	14,692	0.787	C	22,382	1.199	F	14,779	0.792	C	0.002	0.005	No		41	87
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	**1.209**	**1.207**	341,000	16,310	9,938	0.609	B	27,504	1.686	F	10,010	0.614	B	27,557	1.690	F	0.004	0.003		No	71	53
	SB	5M+2H+1A	**1.206**			16,310	21,582	1.323	F	14,194	0.870	D	21,624	1.326	F	14,280	0.876	D	0.003	0.005	No		41	87

Notes:

(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxillary Lane Capacity = 1,200 vphpl

M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

V/C Ratio = Volume/Capacity Ratio

LOS = Level of Service

ADT = Average Daily Traffic

Segments with LOS E or worse are shown in **bold**

Significant Impact: LOS D or better to LOS E or worse

Incremental V/C ratio ≥ 0.01 for LOS E

Incremental V/C ratio ≥ 0.005 for LOS F

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1.00
F	1.025
F	1.35
F	1.45
F	>1.45

Summary of Freeway Segment V/C and LOS for All Study Scenarios

Freeway and Segment	Dir	Existing Conditions				xisting Plus Project Phase On				Existing Plus Project				Year 2021 No Project				Year 2021 with Phase 1				Year 2025 No Project				Year 2025 with Phase 2				Year 2050 No Project				Year 2050 with Project			
		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
I-805																																									
I-805 South of Nobel Dr	NB	**0.727**	**C**	**0.533**	**B**	**0.729**	**C**	**0.5424**	**B**	**0.734**	**C**	**0.551**	**B**	**0.776**	**C**	**0.569**	**B**	**0.778**	**C**	**0.579**	**B**	**0.811**	**D**	**0.595**	**B**	**0.817**	**D**	**0.608**	**B**	**0.978**	**E**	**0.718**	**C**	**0.982**	**E**	**0.726**	**C**
	SB	0.341	A	0.783	C	0.349	A	0.7868	C	0.357	A	0.792	C	0.366	A	0.840	D	0.374	A	0.844	D	0.384	A	0.881	D	0.396	A	0.889	D	0.472	B	1.083	F	0.479	B	1.088	F
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	**0.727**	**C**	**0.534**	**B**	**0.728**	**C**	**0.5365**	**B**	**0.729**	**C**	**0.539**	**B**	**0.759**	**C**	**0.557**	**B**	**0.760**	**C**	**0.560**	**B**	**0.705**	**C**	**0.517**	**B**	**0.706**	**C**	**0.521**	**B**	**0.950**	**E**	**0.697**	**C**	**0.952**	**E**	**0.702**	**C**
	SB	0.341	A	0.783	C	0.344	A	0.7845	C	0.346	A	0.786	C	0.358	A	0.822	D	0.361	A	0.823	D	0.334	A	0.766	C	0.337	A	0.768	C	0.458	B	1.051	F	0.462	B	1.053	F
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	**0.652**	**C**	**0.479**	**B**	**0.653**	**C**	**0.4794**	**B**	**0.655**	**C**	**0.480**	**B**	**0.696**	**C**	**0.511**	**B**	**0.697**	**C**	**0.512**	**B**	**0.727**	**C**	**0.534**	**B**	**0.729**	**C**	**0.535**	**B**	**0.892**	**D**	**0.655**	**C**	**0.893**	**D**	**0.656**	**C**
	SB	0.306	A	0.703	C	0.307	A	0.7039	C	0.308	A	0.705	C	0.322	A	0.738	C	0.322	A	0.739	C	0.332	A	0.762	C	0.333	A	0.765	C	0.418	B	0.958	E	0.418	B	0.960	E
Mira Mesa Blvd to I-805/I-5 Interchange	NB	0.593	B	0.435	B	0.595	B	0.4361	B	0.597	B	0.440	B	0.624	C	0.458	B	0.626	C	0.459	B	0.646	C	0.474	B	0.651	C	0.480	B	0.828	D	0.608	B	0.832	D	0.612	B
	SB	0.307	A	0.704	C	0.308	A	0.7071	C	0.310	A	0.711	C	0.316	A	0.726	C	0.317	A	0.729	B	0.323	A	0.741	C	0.326	A	0.747	C	0.405	A	0.930	E	0.408	A	0.935	E
I-15																																									
Miramar Rd to Miramar Way	NB	**0.460**	**B**	**1.272**	**F**	**0.46**	**B**	**1.2728**	**F**	**0.462**	**B**	**1.275**	**F**	**0.474**	**B**	**1.312**	**F**	**0.474**	**B**	**1.313**	**F**	**0.484**	**B**	**1.340**	**F**	**0.486**	**B**	**1.344**	**F**	**0.586**	**B**	**1.623**	**F**	**0.588**	**B**	**1.626**	**F**
	SB	0.922	E	0.606	**B**	**0.923**	**E**	**0.6067**	**B**	0.924	E	0.608	**B**	0.971	E	0.639	**C**	0.972	E	0.639	**C**	1.005	F	0.661	**C**	1.009	F	0.664	**C**	1.589	F	1.045	**F**	1.592	F	1.047	**F**
Carroll Canyon Rd to Miramar Rd	NB	**0.497**	**B**	**1.374**	**F**	**0.497**	**B**	**1.3741**	**F**	**0.435**	**B**	**1.202**	**F**	**0.452**	**B**	**1.251**	**F**	**0.452**	**B**	**1.251**	**F**	**0.465**	**B**	**1.285**	**F**	**0.467**	**B**	**1.287**	**F**	**0.639**	**C**	**1.769**	**F**	**0.639**	**C**	**1.769**	**F**
	SB	0.924	E	0.608	B	0.924	E	0.6077	B	0.925	E	0.609	B	0.982	E	0.646	C	0.982	E	0.646	C	1.023	F	0.673	C	1.024	F	0.675	C	1.221	F	0.803	D	1.221	F	0.803	D
Mira Mesa Blvd to Carroll Canyon Rd	NB	**0.419**	**B**	**1.159**	**F**	**0.419**	**B**	**1.1592**	**F**	**0.420**	**B**	**1.160**	**F**	**0.436**	**B**	**1.208**	**F**	**0.436**	**B**	**1.208**	**F**	**0.449**	**B**	**1.242**	**F**	**0.452**	**B**	**1.244**	**F**	**0.621**	**C**	**1.719**	**F**	**0.625**	**C**	**1.722**	**F**
	SB	0.892	D	0.587	B	0.892	D	0.5866	B	0.893	D	0.588	B	0.949	E	0.624	C	0.949	E	0.624	C	0.990	E	0.651	C	0.992	E	0.655	C	1.197	F	0.787	C	1.199	F	0.792	C
Mira Mesa Blvd to Mercy Rd	NB	**0.464**	**B**	**1.283**	**F**	**0.465**	**B**	**1.284**	**F**	**0.468**	**B**	**1.286**	**F**	**0.487**	**B**	**1.349**	**F**	**0.489**	**B**	**1.350**	**F**	**0.504**	**B**	**1.395**	**F**	**0.508**	**B**	**1.398**	**F**	**0.609**	**B**	**1.686**	**F**	**0.614**	**B**	**1.690**	**F**
	SB	0.987	E	0.649	C	0.988	E	0.6512	C	0.989	E	0.654	C	1.052	F	0.692	C	1.052	F	0.694	C	1.097	F	0.722	C	1.100	F	0.726	C	1.323	F	0.870	D	1.326	F	0.876	D

Capacity for mainline assumed to be 2,350 vehicles per hour per lane based on 2000 HCM

V/C Ratio = Volume/Capacity Ratio

LOS = Level of Service

ADT = Average Daily Traffic

Segments with LOS E or worse are shown in **bold**

Significant Impact: LOS D or better to LOS E or worse

Incremental V/C ratio ≥ 0.01 for LOS E

Incremental V/C ratio ≥ 0.005 for LOS F

1 Auxillary Lane - Capacity = 1,800 vehicles per hour per lane

					AM PEAK							**PM PEAK**					
2017					**K**	**D**						**K**	**D**				
11	15 SD	11.89 A	17 S	1282	8.88	71.1	6.32	8 MON	OCT	S	1372	11.1	60.9	6.76	16 FRI	DEC	
11	15 SD	15 X	17 S	3113	8.83	79.62	7.03	8 WED	OCT	N	3459	11.76	66.4	7.81	16 TUE	DEC	
					8.83	79.62						11.76	66.40				

						AM PEAK							**PM PEAK**				
2017					**K**	**D**							**K**	**D**			
11	805 SD	23.65 B	17 N	7754	5.75	70.64	4.06	6 WED	MAY	S	8756	7.94	57.8	4.59	14 FRI	JUN	SEP
11	805 SD	24.44 X	17 N	8892	6.98	65.45	4.57	6 WED	JUL	S	9221	7.75	61.15	4.74	14 FRI	MAY	JUN
					6.37	68.05						7.85	59.48	4.67			

TIA Data

Freeway and Segment	Dir	Existing Conditions				Existing Plus Project Phase One				Existing Plus Project				Year 2021 No Project				Year 2021 with Phase 1				Year 2025 No Project				Year 2025 with Phase 2				Year 2050 No Project				Year 2050 with Project			
		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
I-805 South of Nobel Dr	NB	0.778	C	0.714	C	0.778	C	0.714	C	0.785	C	0.732	C	0.831	D	0.772	C	0.877	D	0.772	C	0.871	D	0.806	D	0.877	D	0.819	D	1.047	F	0.961	E	1.052	F	0.969	E
	SB	0.314	A	0.472	B	0.314	A	0.472	B	0.33	A	0.481	B	0.338	A	0.51	B	0.374	D	0.51	C	0.362	D	0.535	D	0.374	A	0.543	B	0.435	B	0.653	C	0.442	B	0.658	C
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	0.776	C	0.712	C	0.776	C	0.712	C	0.778	C	0.717	C	0.81	D	0.746	C	0.836	D	0.746	C	0.835	D	0.768	D	0.836	D	0.771	C	1.014	F	0.93	E	1.017	F	0.935	E
	SB	0.314	A	0.47	B	0.314	A	0.47	B	0.318	A	0.473	B	0.329	A	0.495	B	0.345	D	0.495	C	0.342	D	0.511	D	0.345	A	0.513	B	0.421	B	0.631	C	0.424	B	0.634	C
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	0.697	C	0.639	C	0.697	C	0.639	C	0.699	C	0.641	C	0.743	C	0.682	C	0.78	D	0.682	C	0.778	D	0.713	D	0.78	C	0.714	C	0.953	E	0.874	D	0.954	E	0.875	D
	SB	0.281	A	0.422	B	0.281	A	0.422	B	0.283	A	0.425	B	0.295	A	0.444	B	0.306	D	0.444	C	0.305	D	0.459	D	0.306	A	0.461	B	0.384	A	0.576	B	0.384	A	0.577	B
Mira Mesa Blvd to I-805/I-5 Interchange	NB	0.634	C	0.582	B	0.634	C	0.582	B	0.639	C	0.587	B	0.668	C	0.614	B	0.699	D	0.614	C	0.694	D	0.636	D	0.699	C	0.641	C	0.887	D	0.813	D	0.891	D	0.818	D
	SB	0.283	A	0.424	B	0.283	A	0.424	B	0.285	A	0.43	B	0.291	A	0.44	B	0.301	D	0.44	C	0.298	D	0.449	D	0.301	A	0.455	B	0.373	A	0.56	B	0.376	A	0.565	B
I-15																																					
Miramar Rd to Miramar Way	NB	0.762	C	0.685	C	0.762	C	0.685	C	0.764	C	0.688	C	0.786	C	0.707	C	0.804	D	0.707	C	0.802	D	0.722	D	0.804	D	0.726	C	0.971	E	0.873	D	0.973	E	0.876	D
	SB	0.519	B	0.535	B	0.519	B	0.535	B	0.521	B	0.537	B	0.547	B	0.564	B	0.57	D	0.564	C	0.567	D	0.584	D	0.57	B	0.586	B	0.682	C	0.703	C	0.684	C	0.705	C
Carroll Canyon Rd to Miramar Rd	NB	0.719	C	0.646	C	0.719	C	0.646	C	0.719	C	0.647	C	0.749	C	0.673	C	0.771	D	0.673	C	0.769	D	0.691	D	0.771	C	0.693	C	0.925	E	0.832	D	0.925	E	0.832	D
	SB	0.52	B	0.536	B	0.52	B	0.536	B	0.521	B	0.537	B	0.553	B	0.57	B	0.577	D	0.57	C	0.576	D	0.593	D	0.577	B	0.596	B	0.687	C	0.708	C	0.687	C	0.708	C
Mira Mesa Blvd to Carroll Canyon Rd	NB	0.681	C	0.612	B	0.681	C	0.612	B	0.682	C	0.613	B	0.709	C	0.638	C	0.733	D	0.638	C	0.729	D	0.656	D	0.733	C	0.658	C	0.882	D	0.793	C	0.886	D	0.796	C
	SB	0.493	B	0.508	B	0.493	B	0.508	B	0.494	B	0.509	B	0.524	B	0.541	B	0.549	D	0.541	C	0.547	D	0.564	D	0.549	B	0.568	B	0.661	C	0.682	C	0.663	C	0.686	C
Mira Mesa Blvd to Mercy Rd	NB	0.761	C	0.685	C	0.761	C	0.685	C	0.765	C	0.688	C	0.8	D	0.721	C	0.833	D	0.721	C	0.829	D	0.746	D	0.833	D	0.749	C	1	F	0.901	D	1.005	F	0.904	D
	SB	0.54	B	0.55	B	0.54	B	0.55	B	0.542	B	0.555	B	0.575	B	0.588	B	0.603	D	0.588	C	0.6	D	0.613	D	0.603	B	0.618	B	0.723	C	0.737	C	0.726	C	0.743	C

August 2019 Update / Response to Caltrans Comments

Freeway and Segment	Dir	Existing Conditions				Existing Plus Project Phase One				Existing Plus Project				Year 2021 No Project				Year 2021 with Phase 1				Year 2025 No Project				Year 2025 with Phase 2				Year 2050 No Project				Year 2050 with Project			
		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak		AM PEAK		PM Peak	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
I-805																																					
I-805 South of Nobel Dr	NB	0.727	C	0.533	B	0.729	C	0.542	B	0.734	C	0.551	B	0.776	C	0.569	B	0.778	C	0.579	B	0.811	D	0.595	B	0.817	D	0.608	B	0.978	E	0.718	C	0.982	E	0.726	C
	SB	0.341	A	0.783	C	0.349	A	0.787	C	0.357	A	0.792	C	0.366	A	0.840	D	0.374	A	0.844	D	0.384	A	0.881	D	0.396	A	0.889	D	0.472	B	1.083	F	0.479	B	1.088	F
Miramar Rd/La Jolla Village Dr	NB	0.727	C	0.534	B	0.728	C	0.536	B	0.729	C	0.539	B	0.759	C	0.557	B	0.760	C	0.560	B	0.705	C	0.517	B	0.706	C	0.521	B	0.950	E	0.697	C	0.952	E	0.702	C
	SB	0.341	A	0.783	C	0.344	A	0.785	C	0.346	A	0.786	C	0.358	A	0.822	D	0.361	A	0.823	D	0.334	A	0.766	C	0.337	A	0.768	C	0.458	B	1.051	F	0.462	B	1.053	F
Mira Mesa Blvd to Miramar R	NB	0.652	C	0.479	B	0.653	C	0.479	B	0.655	C	0.480	B	0.696	C	0.511	B	0.697	C	0.512	B	0.727	C	0.534	B	0.729	C	0.535	B	0.892	D	0.655	C	0.893	D	0.656	C
	SB	0.306	A	0.703	C	0.307	A	0.704	C	0.308	A	0.705	C	0.322	A	0.738	C	0.322	A	0.739	C	0.332	A	0.762	C	0.333	A	0.765	C	0.418	B	0.958	E	0.418	B	0.960	E
Mira Mesa Blvd to I-805/I-5 In	NB	0.593	B	0.435	B	0.595	B	0.436	B	0.597	B	0.440	B	0.624	C	0.458	B	0.626	C	0.459	B	0.646	C	0.474	B	0.651	C	0.480	B	0.828	D	0.608	B	0.832	D	0.612	B
	SB	0.307	A	0.704	C	0.308	A	0.707	C	0.310	A	0.711	C	0.316	A	0.726	C	0.317	A	0.729	B	0.323	A	0.741	C	0.326	A	0.747	C	0.405	A	0.930	E	0.408	A	0.935	E
I-15																																					
Miramar Rd to Miramar Way	NB	0.460	B	1.272	F	0.460	B	1.273	F	0.462	B	1.275	F	0.474	B	1.312	F	0.474	B	1.313	F	0.484	B	1.340	F	0.486	B	1.344	F	0.586	B	1.623	F	0.588	B	1.626	F
	SB	0.922	E	0.606	B	0.923	E	0.607	B	0.924	E	0.608	B	0.971	E	0.639	C	0.972	E	0.639	C	1.005	F	0.661	C	1.009	F	0.664	C	1.589	F	1.045	F	1.592	F	1.047	F
Carroll Canyon Rd to Miramar	NB	0.497	B	1.374	F	0.497	B	1.374	F	0.435	B	1.202	F	0.452	B	1.251	F	0.452	B	1.251	F	0.465	B	1.285	F	0.467	B	1.287	F	0.639	C	1.769	F	0.639	C	1.769	F
	SB	0.924	E	0.608	B	0.924	E	0.608	B	0.925	E	0.609	B	0.982	E	0.646	C	0.982	E	0.646	C	1.023	F	0.673	C	1.024	F	0.675	C	1.221	F	0.803	D	1.221	F	0.803	D
Mira Mesa Blvd to Carroll Can	NB	0.419	B	1.159	F	0.419	B	1.159	F	0.420	B	1.160	F	0.436	B	1.208	F	0.436	B	1.208	F	0.449	B	1.242	F	0.452	B	1.244	F	0.621	C	1.719	F	0.625	C	1.722	F
	SB	0.892	D	0.587	B	0.892	D	0.587	B	0.893	D	0.588	B	0.949	E	0.624	C	0.949	E	0.624	C	0.990	E	0.651	C	0.992	E	0.655	C	1.197	F	0.787	C	1.199	F	0.792	C
Mira Mesa Blvd to Mercy Rd	NB	0.464	B	1.283	F	0.465	B	1.284	F	0.468	B	1.286	F	0.487	B	1.349	F	0.489	B	1.350	F	0.504	B	1.395	F	0.508	B	1.398	F	0.609	B	1.686	F	0.614	B	1.690	F
	SB	0.987	E	0.649	C	0.988	E	0.651	C	0.989	E	0.654	C	1.052	F	0.692	C	1.052	F	0.694	C	1.097	F	0.722	C	1.100	F	0.726	C	1.323	F	0.870	D	1.326	F	0.876	D

Analysis from TIA

Freeway and Segment	Dir	Existing Conditions						Existing Plus Project Phase One						Existing Plus Project					
		AM PEAK			PM Peak			AM PEAK			PM Peak			AM PEAK			PM Peak		
		Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	NB	9,559	0.778	C	8,768	0.714	C	9,586	0.778	C	8,880	0.714	C	9,644	0.785	C	8,987	0.732	C
	SB	3,861	0.314	A	5,792	0.472	B	3,961	0.314	A	5,843	0.472	B	4,053	0.33	A	5,912	0.481	B
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	8,603	0.776	C	7,891	0.712	C	8,611	0.776	C	7,922	0.712	C	8,624	0.778	C	7,949	0.717	C
	SB	3,475	0.314	A	5,213	0.47	B	3,503	0.314	A	5,227	0.47	B	3,526	0.318	A	5,244	0.473	B
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	8,555	0.697	C	7,847	0.639	C	8,566	0.697	C	7,853	0.639	C	8,581	0.699	C	7,865	0.641	C
	SB	3,456	0.281	A	5,184	0.422	B	3,459	0.281	A	5,196	0.422	B	3,470	0.283	A	5,214	0.425	B
Mira Mesa Blvd to I-805/I-5 Interchange	NB	7,791	0.634	C	7,146	0.582	B	7,818	0.634	C	7,160	0.582	B	7,850	0.639	C	7,211	0.587	B
	SB	3,147	0.283	A	4,720	0.424	B	3,154	0.283	A	4,752	0.424	B	3,178	0.285	A	4,790	0.43	B
Miramar Rd to Miramar Way	NB	14,210	0.762	C	12,774	0.685	C	14,213	0.762	C	12,787	0.685	C	14,248	0.764	C	12,833	0.688	C
	SB	10,282	0.519	B	10,600	0.535	B	10,293	0.519	B	10,606	0.535	B	10,327	0.521	B	10,642	0.537	B
Carroll Canyon Rd to Miramar Rd	NB	13,410	0.719	C	12,055	0.646	C	13,410	0.719	C	12,055	0.646	C	13,423	0.719	C	12,070	0.647	C
	SB	9,703	0.52	B	10,004	0.536	B	9,703	0.52	B	10,004	0.536	B	9,717	0.521	B	10,021	0.537	B
Mira Mesa Blvd to Carroll Canyon Rd	NB	12,705	0.681	C	11,421	0.612	B	12,705	0.681	C	11,421	0.612	B	12,725	0.682	C	11,445	0.613	B
	SB	9,192	0.493	B	9,477	0.508	B	9,192	0.493	B	9,477	0.508	B	9,216	0.494	B	9,506	0.509	B
Mira Mesa Blvd to Mercy Rd	NB	12,415	0.761	C	11,177	0.685	C	12,443	0.761	C	11,191	0.685	C	12,479	0.765	C	11,222	0.688	C
	SB	8,804	0.54	B	8,972	0.55	B	8,811	0.54	B	9,003	0.55	B	8,840	0.542	B	9,048	0.555	B

August 2019 Update / Response to Caltrans Comments

Freeway and Segment	Dir	Existing Conditions						Existing Plus Project Phase One						Existing Plus Project					
		AM PEAK			PM Peak			AM PEAK			PM Peak			AM PEAK			PM Peak		
		Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	NB	8,922	0.727	C	6,549	0.533	B	8,949	0.729	C	6,661	0.542	B	9,007	0.734	C	6,768	0.551	B
	SB	4,190	0.341	A	9,612	0.783	C	4,290	0.349	A	9,663	0.787	C	4,382	0.357	A	9,731	0.792	C
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	8,056	0.727	C	5,913	0.534	B	8,063	0.728	C	5,944	0.536	B	8,077	0.729	C	5,971	0.539	B
	SB	3,783	0.341	A	8,678	0.783	C	3,811	0.344	A	8,693	0.785	C	3,834	0.346	A	8,709	0.786	C
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	NB	8,012	0.652	C	5,881	0.479	B	8,024	0.653	C	5,887	0.479	B	8,038	0.655	C	5,900	0.480	B
	SB	3,763	0.306	A	8,632	0.703	C	3,766	0.307	A	8,644	0.704	C	3,777	0.308	A	8,662	0.705	C
Mira Mesa Blvd to I-805/I-5 Interchange	NB	7,276	0.593	B	5,341	0.435	B	7,304	0.595	B	5,355	0.436	B	7,336	0.597	B	5,406	0.440	B
	SB	3,417	0.307	A	7,839	0.704	C	3,424	0.308	A	7,870	0.707	C	3,448	0.310	A	7,908	0.711	C
I-15																			
Miramar Rd to Miramar Way	NB	8,578	0.460	B	23,738	1.272	F	8,581	0.460	B	23,751	1.273	F	8,616	0.462	B	23,797	1.275	F
	SB	18,265	0.922	E	12,012	0.606	B	18,277	0.923	E	12,018	0.607	B	18,311	0.924	E	12,054	0.608	B
Carroll Canyon Rd to Miramar Rd	NB	8,098	0.497	B	22,411	1.374	F	8,098	0.497	B	22,411	1.374	F	8,110	0.435	B	22,425	1.202	F
	SB	17,244	0.924	E	11,340	0.608	B	17,244	0.924	E	11,340	0.608	B	17,258	0.925	E	11,358	0.609	B
Mira Mesa Blvd to Carroll Canyon Rd	NB	7,816	0.419	B	21,630	1.159	F	7,816	0.419	B	21,630	1.159	F	7,836	0.420	B	21,654	1.160	F
	SB	16,643	0.892	D	10,945	0.587	B	16,643	0.892	D	10,945	0.587	B	16,667	0.893	D	10,974	0.588	B
Mira Mesa Blvd to Mercy Rd	NB	7,562	0.464	B	20,927	1.283	F	7,590	0.465	B	20,941	1.284	F	7,625	0.468	B	20,972	1.286	F
	SB	16,102	0.987	E	10,590	0.649	C	16,110	0.988	E	10,621	0.651	C	16,138	0.989	E	10,665	0.654	C

Analysis from TIA

Freeway and Segment	Year 2021 No Project						Year 2021 with Phase 1					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	10,207	0.831	D	9,362	0.772	C	10,234	0.877	D	`	0.772	C
	4,145	0.338	A	6,218	0.51	B	4,245	0.374	D	6,269	0.51	C
Miramar Rd/La Jolla Village Dr to Nobel Dr	8,980	0.81	D	8,237	0.746	C	8,988	0.836	D	8,268	0.746	C
	3,646	0.329	A	5,469	0.495	B	3,674	0.345	D	5,483	0.495	C
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	9,129	0.743	C	8,374	0.682	C	9,140	0.78	D	8,379	0.682	C
	3,627	0.295	A	5,441	0.444	B	3,630	0.306	D	5,453	0.444	C
Mira Mesa Blvd to I-805/I-5 Interchange	8,205	0.668	C	7,526	0.614	B	8,233	0.699	D	7,540	0.614	C
	3,243	0.291	A	4,866	0.44	B	3,251	0.301	D	4,897	0.44	C
I-15												
Miramar Rd to Miramar Way	14,658	0.786	C	13,177	0.707	C	14,661	0.804	D	13,189	0.707	C
	10,828	0.547	B	11,164	0.564	B	10,839	0.57	D	11,170	0.564	C
Carroll Canyon Rd to Miramar Rd	13,967	0.749	C	12,556	0.673	C	13,967	0.771	D	12,556	0.673	C
	10,310	0.553	B	10,630	0.57	B	10,310	0.577	D	10,630	0.57	C
Mira Mesa Blvd to Carroll Canyon Rd	13,239	0.709	C	11,901	0.638	C	13,239	0.733	D	11,901	0.638	C
	9,786	0.524	B	10,089	0.541	B	9,786	0.549	D	10,089	0.541	C
Mira Mesa Blvd to Mercy Rd	13,053	0.8	D	11,751	0.721	C	13,081	0.833	D	11,765	0.721	C
	9,378	0.575	B	9,558	0.588	B	9,386	0.603	D	9,589	0.588	C

August 2019 Update / Resp

Freeway and Segment	Year 2021 No Project						Year 2021 with Phase 1					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805												
I-805 South of Nobel Dr	9,527	0.776	C	6,993	0.569	B	9,554	0.778	C	7,105	0.579	B
	4,498	0.366	A	10,318	0.840	D	4,598	0.374	A	10,369	0.844	D
Miramar Rd/La Jolla Village Dr to Nobel Dr	8,409	0.759	C	6,172	0.557	B	8,416	0.760	C	6,203	0.560	B
	3,969	0.358	A	9,105	0.822	D	3,997	0.361	A	9,120	0.823	D
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	8,550	0.696	C	6,276	0.511	B	8,561	0.697	C	6,282	0.512	B
	3,949	0.322	A	9,059	0.738	C	3,952	0.322	A	9,072	0.739	C
Mira Mesa Blvd to I-805/I-5 Interchange	7,663	0.624	C	5,625	0.458	B	7,691	0.626	C	5,639	0.459	B
	3,522	0.316	A	8,080	0.726	C	3,530	0.317	A	8,111	0.729	B
I-15												
Miramar Rd to Miramar Way	8,848	0.474	B	24,486	1.312	F	8,851	0.474	B	24,498	1.313	F
	19,236	0.971	E	12,651	0.639	C	19,247	0.972	E	12,656	0.639	C
Carroll Canyon Rd to Miramar Rd	8,434	0.452	B	23,341	1.251	F	8,434	0.452	B	23,341	1.251	F
	18,323	0.982	E	12,050	0.646	C	18,323	0.982	E	12,050	0.646	C
Mira Mesa Blvd to Carroll Canyon Rd	8,145	0.436	B	22,540	1.208	F	8,145	0.436	B	22,540	1.208	F
	17,717	0.949	E	11,652	0.624	C	17,717	0.949	E	11,652	0.624	C
Mira Mesa Blvd to Mercy Rd	7,950	0.487	B	22,002	1.349	F	7,978	0.489	B	22,016	1.350	F
	17,153	1.052	F	11,280	0.692	C	17,160	1.052	F	11,311	0.694	C

Analysis from TIA

Freeway and Segment	Year 2025 No Project						Year 2025 with Phase 2					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	10,695	0.871	D	9,897	0.806	D	10,767	0.877	D	10,060	0.819	D
	4,448	0.362	D	6,574	0.535	D	4,588	0.374	A	6,668	0.543	B
Miramar Rd/La Jolla Village Dr to Nobel Dr	9,250	0.835	D	8,509	0.768	D	9,267	0.836	D	8,548	0.771	C
	3,793	0.342	D	5,663	0.511	D	3,827	0.345	A	5,685	0.513	B
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	9,549	0.778	D	8,754	0.713	D	9,574	0.78	C	8,772	0.714	C
	3,749	0.305	D	5,633	0.459	D	3,764	0.306	A	5,663	0.461	B
Mira Mesa Blvd to I-805/I-5 Interchange	8,524	0.694	D	7,807	0.636	D	8,583	0.699	C	7,873	0.641	C
	3,317	0.298	D	4,996	0.449	D	3,348	0.301	A	5,066	0.455	B
Miramar Rd to Miramar Way	14,968	0.802	D	13,465	0.722	D	15,011	0.804	D	13,543	0.726	C
	11,223	0.567	D	11,565	0.584	D	11,286	0.57	B	11,616	0.586	B
Carroll Canyon Rd to Miramar Rd	14,354	0.769	D	12,903	0.691	D	14,392	0.771	C	12,930	0.693	C
	10,740	0.576	D	11,073	0.593	D	10,762	0.577	B	11,118	0.596	B
Mira Mesa Blvd to Carroll Canyon Rd	13,610	0.729	D	12,235	0.656	D	13,674	0.733	C	12,280	0.658	C
	10,207	0.547	D	10,523	0.564	D	10,242	0.549	B	10,598	0.568	B
Mira Mesa Blvd to Mercy Rd	13,527	0.829	D	12,167	0.746	D	13,591	0.833	D	12,212	0.749	C
	9,793	0.6	D	10,004	0.613	D	9,829	0.603	B	10,079	0.618	B

August 2019 Update / Resp

Freeway and Segment	Year 2025 No Project						Year 2025 with Phase 2					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	9,957	0.811	D	7,309	0.595	B	10,029	0.817	D	7,472	0.608	B
	4,718	0.384	A	10,824	0.881	D	4,859	0.396	A	10,918	0.889	D
Miramar Rd/La Jolla Village Dr to Nobel Dr	8,654	0.705	C	6,353	0.517	B	8,671	0.706	C	6,392	0.521	B
	4,100	0.334	A	9,404	0.766	C	4,134	0.337	A	9,427	0.768	C
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	8,932	0.727	C	6,557	0.534	B	8,958	0.729	C	6,575	0.535	B
	4,080	0.332	A	9,358	0.762	C	4,094	0.333	A	9,388	0.765	C
Mira Mesa Blvd to I-805/I-5 Interchange	7,935	0.646	C	5,825	0.474	B	7,995	0.651	C	5,890	0.480	B
	3,594	0.323	A	8,245	0.741	C	3,625	0.326	A	8,315	0.747	C
I-15												
Miramar Rd to Miramar Way	9,034	0.484	B	25,000	1.340	F	9,076	0.486	B	25,077	1.344	F
	19,918	1.005	F	13,099	0.661	C	19,981	1.009	F	13,149	0.664	C
Carroll Canyon Rd to Miramar Rd	8,668	0.465	B	23,987	1.285	F	8,706	0.467	B	24,014	1.287	F
	19,087	1.023	F	12,553	0.673	C	19,109	1.024	F	12,598	0.675	C
Mira Mesa Blvd to Carroll Canyon Rd	8,373	0.449	B	23,172	1.242	F	8,436	0.452	B	23,217	1.244	F
	18,479	0.990	E	12,153	0.651	C	18,515	0.992	E	12,228	0.655	C
Mira Mesa Blvd to Mercy Rd	8,222	0.504	B	22,755	1.395	F	8,286	0.508	B	22,800	1.398	F
	17,899	1.097	F	11,771	0.722	C	17,934	1.100	F	11,846	0.726	C

Analysis from TIA

Freeway and Segment	Year 2050 No Project						Year 2050 with Project					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	12,862	1.047	F	11,798	0.961	E	12,915	1.052	F	11,905	0.969	E
	5,343	0.435	B	8,015	0.653	C	5,430	0.442	B	8,082	0.658	C
Miramar Rd/La Jolla Village Dr to Nobel Dr	11,238	1.014	F	10,308	0.93	E	11,263	1.017	F	10,357	0.935	E
	4,661	0.421	B	6,992	0.631	C	4,701	0.424	B	7,023	0.634	C
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	11,701	0.953	E	10,733	0.874	D	11,713	0.954	E	10,741	0.875	D
	4,712	0.384	A	7,068	0.576	B	4,719	0.384	A	7,083	0.577	B
Mira Mesa Blvd to I-805/I-5 Interchange	10,888	0.887	D	9,987	0.813	D	10,935	0.891	D	10,041	0.818	D
	4,154	0.373	A	6,232	0.56	B	4,182	0.376	A	6,290	0.565	B
Miramar Rd to Miramar Way	18,126	0.971	E	16,295	0.873	D	18,157	0.973	E	16,349	0.876	D
	13,514	0.682	C	13,933	0.703	C	13,558	0.684	C	13,969	0.705	C
Carroll Canyon Rd to Miramar Rd	17,267	0.925	E	15,522	0.832	D	17,267	0.925	E	15,522	0.832	D
	12,822	0.687	C	13,219	0.708	C	12,822	0.687	C	13,219	0.708	C
Mira Mesa Blvd to Carroll Canyon Rd	16,467	0.882	D	14,803	0.793	C	16,538	0.886	D	14,855	0.796	C
	12,339	0.661	C	12,722	0.682	C	12,381	0.663	C	12,808	0.686	C
Mira Mesa Blvd to Mercy Rd	16,317	1	F	14,689	0.901	D	16,388	1.005	F	14,742	0.904	D
	11,800	0.723	C	12,026	0.737	C	11,841	0.726	C	12,113	0.743	C

August 2019 Update / Resp

Freeway and Segment	Year 2050 No Project						Year 2050 with Project					
	AM PEAK			PM Peak			AM PEAK			PM Peak		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
I-805 South of Nobel Dr	12,005	0.978	E	8,812	0.718	C	12,058	0.982	E	8,919	0.726	C
	5,798	0.472	B	13,301	1.083	F	5,885	0.479	B	13,362	1.088	F
Miramar Rd/La Jolla Village Dr to Nobel Dr	10,523	0.950	E	7,724	0.697	C	10,548	0.952	E	7,773	0.702	C
	5,075	0.458	B	11,641	1.051	F	5,114	0.462	B	11,672	1.053	F
Mira Mesa Blvd to Miramar Rd/La Jolla Village Dr	10,958	0.892	D	8,044	0.655	C	10,970	0.893	D	8,053	0.656	C
	5,131	0.418	B	11,770	0.958	E	5,138	0.418	B	11,784	0.960	E
Mira Mesa Blvd to I-805/I-5 Interchange	10,169	0.828	D	7,465	0.608	B	10,216	0.832	D	7,518	0.612	B
	4,511	0.405	A	10,348	0.930	E	4,539	0.408	A	10,406	0.935	E
I-15												
Miramar Rd to Miramar Way	10,942	0.586	B	30,280	1.623	F	10,972	0.588	B	30,335	1.626	F
	24,007	1.589	F	15,788	1.045	F	24,051	1.592	F	15,824	1.047	F
Carroll Canyon Rd to Miramar Rd	10,427	0.639	C	28,856	1.769	F	10,427	0.639	C	28,856	1.769	F
	22,787	1.221	F	14,986	0.803	D	22,787	1.221	F	14,986	0.803	D
Mira Mesa Blvd to Carroll Canyon Rd	10,130	0.621	C	28,035	1.719	F	10,201	0.625	C	28,087	1.722	F
	22,341	1.197	F	14,692	0.787	C	22,382	1.199	F	14,779	0.792	C
Mira Mesa Blvd to Mercy Rd	9,938	0.609	B	27,504	1.686	F	10,010	0.614	B	27,557	1.690	F
	21,582	1.323	F	14,194	0.870	D	21,624	1.326	F	14,280	0.876	D

	Results from TIA								Updated Results with Refined Geometrics							
#	36				37				36				37			
Intersection	I-15 SB On/Off Ramp & Miramar Rd				Pomerado Rd-Miramar Way & I-15 NB On/Off Ramp				I-15 SB On/Off Ramp & Miramar Rd				Pomerado Rd-Miramar Way & I-15 NB On/Off Ramp			
Peak Hour	AM		PM		AM		PM		AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Existing Conditions	18.5	B	11.9	B	24.1	C	23.3	C	18.5	B	11.9	B	24.1	C	23.3	C
Existing Plus Phase 1 Project	18.5	B	11.9	B	24.1	C	23.4	C	18.7	B	11.9	B	23.9	C	23.4	C
Existing Plus Project Buildout	18.9	B	12.2	B	24.5	C	23.4	C	18.9	B	12.2	B	24.5	C	23.4	C
Year 2021 No Project	18.7	B	12.3	B	24	C	23.5	C	18.7	B	12.3	B	24	C	23.5	C
Year 2021 with Phase 1 Project	18.7	B	12.3	B	24	C	23.6	C	18.7	B	12.3	B	24	C	23.6	C
Year 2025 Baseline No Project	19.1	B	12.7	B	23.8	C	23.6	C	19	B	12.7	B	23.8	C	23.7	C
Year 2025 with Project Buildout	19.7	B	13.1	B	23.8	C	23.7	C	19.7	B	13.1	B	23.8	C	23.8	C
Year 2050 No Project	19.2	B	13	B	23.8	C	24.4	C	19.2	B	13	B	23.8	C	24.5	C
Year 2050 with Project Buildout	19.3	B	13.2	B	23.9	C	24.7	C	19.3	B	13.2	B	23.9	C	24.8	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1001	400	0	1587	502	0	0	0	722	0	1544
Future Volume (vph)	0	1001	400	0	1587	502	0	0	0	722	0	1544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1065	426	0	1688	534	0	0	0	768	0	1643
v/c Ratio		0.56	0.15		0.89	0.34				0.43		1.11
Control Delay		31.3	0.1		45.9	0.6				18.3		86.4
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.3	0.1		45.9	0.6				18.3		86.4
Queue Length 50th (ft)		237	0		480	0				180		~818
Queue Length 95th (ft)		283	0		540	4				227		#970
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1894	2787		1894	1583				1805		1484
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.56	0.15		0.89	0.34				0.43		1.11

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1824	1040	0	1213	779	0	0	0	209	0	756
Future Volume (vph)	0	1824	1040	0	1213	779	0	0	0	209	0	756
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			30			30	
Link Distance (ft)		2025			1082			1029			1412	
Travel Time (s)		27.6			24.6			23.4			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1940	1106	0	1290	829	0	0	0	222	0	804
v/c Ratio		0.63	0.40		0.42	0.52				0.21		0.89
Control Delay		19.6	0.4		13.8	2.6				34.7		53.6
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		19.6	0.4		13.8	2.6				34.7		53.6
Queue Length 50th (ft)		391	0		170	97				75		360
Queue Length 95th (ft)		513	0		351	137				99		414
Internal Link Dist (ft)		1945			1002			949			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		3072	2787		3072	1569				1325		1119
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.63	0.40		0.42	0.53				0.17		0.72

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1044	678	0	1255	542	837	0	297	0	0	0
Future Volume (vph)	0	1044	678	0	1255	542	837	0	297	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1099	714	0	1321	571	881	0	313	0	0	0
v/c Ratio		0.38	0.45		0.36	0.36	0.79		0.33			
Control Delay		12.2	2.2		14.7	0.6	42.3		23.5			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		12.2	2.2		14.7	0.6	42.3		23.5			
Queue Length 50th (ft)		134	52		151	0	318		79			
Queue Length 95th (ft)		203	133		208	0	352		108			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2923	1582		3683	1583	1553		1298			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.38	0.45		0.36	0.36	0.57		0.24			

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	958	1164	0	1478	772	450	0	142	0	0	0
Future Volume (vph)	0	958	1164	0	1478	772	450	0	142	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	988	1200	0	1524	796	464	0	146	0	0	0
v/c Ratio		0.27	0.76		0.33	0.50	0.75		0.23			
Control Delay		4.4	17.7		7.0	1.1	61.4		7.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.4	17.7		7.0	1.1	61.4		7.8			
Queue Length 50th (ft)		62	656		136	0	200		0			
Queue Length 95th (ft)		68	717		153	0	261		32			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3717	1574		4684	1583	684		672			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.27	0.76		0.33	0.50	0.68		0.22			

Intersection Summary	
Area Type:	Other

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⮌	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	2	287	0	0	559	875	834
Future Volume (vph)	2	287	0	0	559	875	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	2	299	0	0	582	911	869
v/c Ratio	0.02	0.16			0.23	0.76	0.61
Control Delay	68.5	9.5			14.7	30.2	6.3
Queue Delay	0.0	0.0			0.0	0.0	0.0
Total Delay	68.5	9.5			14.7	30.2	6.3
Queue Length 50th (ft)	1	27			61	234	39
Queue Length 95th (ft)	m9	39			121	263	79
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)	110					675	
Base Capacity (vph)	143	1849			2545	1689	1722
Starvation Cap Reductn	0	0			0	0	0
Spillback Cap Reductn	0	0			0	0	0
Storage Cap Reductn	0	0			0	0	0
Reduced v/c Ratio	0.01	0.16			0.23	0.54	0.50

Intersection Summary

Area Type: Other

m Volume for 95th percentile queue is metered by upstream signal.

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	453	0	0	634	562	557
Future Volume (vph)	0	453	0	0	634	562	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	498	0	0	697	618	612
v/c Ratio		0.22			0.22	0.74	0.60
Control Delay		8.3			8.0	36.8	9.4
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		8.3			8.0	36.8	9.4
Queue Length 50th (ft)		58			56	167	38
Queue Length 95th (ft)		100			90	205	82
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2220			3189	1422	1426
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.22			0.22	0.43	0.43

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	495	512	0	534	835	0	0	0	133	0	1061
Future Volume (vph)	0	495	512	0	534	835	0	0	0	133	0	1061
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	556	575	0	600	938	0	0	0	149	0	1192
v/c Ratio		0.38	0.36		0.41	0.34				0.08		0.79
Control Delay		32.0	3.7		28.4	0.7				16.9		29.7
Queue Delay		0.5	0.0		0.1	0.0				0.0		15.8
Total Delay		32.5	3.7		28.5	0.7				16.9		45.5
Queue Length 50th (ft)		287	88		153	11				37		480
Queue Length 95th (ft)		356	255		292	23				41		428
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1461	1583		1461	2787				2158		1801
Starvation Cap Reductn		494	0		0	0				0		0
Spillback Cap Reductn		0	0		95	0				0		619
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.57	0.36		0.44	0.34				0.07		1.01

Intersection Summary	
Area Type:	Other

Queues EX PM
36: I-15 SB Ramps & Miramar Rd 02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1334	1175	0	806	800	0	0	0	25	0	527
Future Volume (vph)	0	1334	1175	0	806	800	0	0	0	25	0	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1375	1211	0	831	825	0	0	0	26	0	543
v/c Ratio		0.47	0.77		0.28	0.30				0.08		0.89
Control Delay		5.6	15.8		2.2	0.4				62.0		39.0
Queue Delay		0.5	0.0		0.0	0.0				0.0		0.0
Total Delay		6.0	15.8		2.2	0.4				62.0		39.0
Queue Length 50th (ft)		172	799		48	5				12		105
Queue Length 95th (ft)		248	902		83	9				27		175
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2943	1583		2943	2787				920		1019
Starvation Cap Reductn		974	0		0	0				0		0
Spillback Cap Reductn		0	0		155	0				0		16
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.70	0.77		0.30	0.30				0.03		0.54

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	186	401	0	1152	109	402	0	588	0	0	0
Future Volume (vph)	0	186	401	0	1152	109	402	0	588	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	196	422	0	1213	115	423	0	619	0	0	0
v/c Ratio		0.07	0.27		0.25	0.07	0.81		0.65			
Control Delay		4.1	2.8		5.7	0.1	74.1		7.3			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.1	2.8		5.7	0.1	74.1		7.3			
Queue Length 50th (ft)		38	71		90	0	209		0			
Queue Length 95th (ft)		7	106		123	0	258		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2693	1583		4876	1583	1554		1600			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.07	0.27		0.25	0.07	0.27		0.39			

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	383	975	0	1036	143	562	0	636	0	0	0
Future Volume (vph)	0	383	975	0	1036	143	562	0	636	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			38.2			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	391	995	0	1057	146	573	0	649	0	0	0
v/c Ratio		0.15	0.63		0.23	0.09	0.83		0.64			
Control Delay		8.9	5.7		8.1	0.1	72.3		10.4			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		8.9	5.7		8.1	0.1	72.3		10.4			
Queue Length 50th (ft)		62	528		100	0	300		38			
Queue Length 95th (ft)		95	530		137	0	349		100			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2540	1583		4600	1583	1714		1678			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.15	0.63		0.23	0.09	0.33		0.39			

Intersection Summary	
Area Type:	Other

Queues

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1056	418	0	1695	561	0	0	0	758	0	1613
Future Volume (vph)	0	1056	418	0	1695	561	0	0	0	758	0	1613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1123	445	0	1803	597	0	0	0	806	0	1716
v/c Ratio		0.59	0.16		0.95	0.38				0.45		1.16
Control Delay		31.9	0.1		50.3	0.8				18.6		106.1
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.9	0.1		50.3	0.8				18.6		106.1
Queue Length 50th (ft)		254	0		520	1				192		~885
Queue Length 95th (ft)		302	0		#610	10				241		#1038
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1894	2787		1894	1583				1805		1484
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.59	0.16		0.95	0.38				0.45		1.16

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues EXPhase 1_PM

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr 02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1863	1040	0	1231	797	0	0	0	225	0	756
Future Volume (vph)	0	1863	1040	0	1231	797	0	0	0	225	0	756
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1982	1106	0	1310	848	0	0	0	239	0	804
v/c Ratio		0.65	0.40		0.43	0.54				0.23		0.89
Control Delay		20.0	0.4		16.0	2.7				34.9		53.7
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		20.0	0.4		16.0	2.7				34.9		53.7
Queue Length 50th (ft)		406	0		284	104				81		361
Queue Length 95th (ft)		532	0		356	148				106		415
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		3068	2787		3068	1568				1325		1117
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.65	0.40		0.43	0.54				0.18		0.72

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1104	708	0	1384	581	874	0	320	0	0	0
Future Volume (vph)	0	1104	708	0	1384	581	874	0	320	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1162	745	0	1457	612	920	0	337	0	0	0
v/c Ratio		0.41	0.47		0.41	0.39	0.79		0.34			
Control Delay		14.0	2.3		16.1	0.7	41.0		24.5			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		14.0	2.3		16.1	0.7	41.0		24.5			
Queue Length 50th (ft)		153	49		177	0	330		90			
Queue Length 95th (ft)		226	153		242	0	362		119			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2849	1577		3590	1583	1553		1292			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.41	0.47		0.41	0.39	0.59		0.26			

Intersection Summary	
Area Type:	Other

Queues
EXPhase 1_PM

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1013	1164	0	1513	779	450	0	181	0	0	0
Future Volume (vph)	0	1013	1164	0	1513	779	450	0	181	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1044	1200	0	1560	803	464	0	187	0	0	0
v/c Ratio		0.28	0.76		0.33	0.51	0.75		0.29			
Control Delay		4.5	17.3		7.0	1.2	61.4		7.3			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.5	17.3		7.0	1.2	61.4		7.3			
Queue Length 50th (ft)		67	636		140	0	200		0			
Queue Length 95th (ft)		73	695		157	0	261		36			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3717	1574		4684	1583	684		705			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.28	0.76		0.33	0.51	0.68		0.27			

Intersection Summary

Area Type:	Other

Queues
24: I-805 Off Ramp & Nobel Dr

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	306	0	0	694	927	908
Future Volume (vph)	0	306	0	0	694	927	908
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	319	0	0	723	966	946
v/c Ratio		0.18			0.29	0.79	0.68
Control Delay		10.5			14.8	31.0	9.9
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		10.5			14.8	31.0	9.9
Queue Length 50th (ft)		30			86	248	77
Queue Length 95th (ft)		43			130	281	130
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1745			2508	1651	1664
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.18			0.29	0.59	0.57

Intersection Summary	
Area Type:	Other

24: I-805 Off Ramp & Nobel Dr

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	461	0	0	683	562	659
Future Volume (vph)	0	461	0	0	683	562	659
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	507	0	0	751	618	724
v/c Ratio		0.23			0.24	0.74	0.71
Control Delay		8.4			8.2	36.5	14.8
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		8.4			8.2	36.5	14.8
Queue Length 50th (ft)		60			61	167	76
Queue Length 95th (ft)		101			98	205	132
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2214			3182	1422	1419
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.23			0.24	0.43	0.51

Intersection Summary

Area Type: Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	524	550	0	564	872	0	0	0	139	0	1108
Future Volume (vph)	0	524	550	0	564	872	0	0	0	139	0	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	589	618	0	634	980	0	0	0	156	0	1245
v/c Ratio		0.44	0.39		0.47	0.35				0.08		0.79
Control Delay		34.7	4.4		33.6	0.8				15.3		27.7
Queue Delay		0.7	0.0		0.1	0.0				0.0		49.2
Total Delay		35.4	4.4		33.6	0.8				15.3		76.9
Queue Length 50th (ft)		307	106		171	15				37		497
Queue Length 95th (ft)		346	208		330	26				44		475
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1342	1583		1342	2787				2128		1789
Starvation Cap Reductn		418	0		0	0				0		0
Spillback Cap Reductn		0	0		60	0				0		686
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.64	0.39		0.49	0.35				0.07		1.13

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1338	1182	0	830	800	0	0	0	25	0	527
Future Volume (vph)	0	1338	1182	0	830	800	0	0	0	25	0	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1379	1219	0	856	825	0	0	0	26	0	543
v/c Ratio		0.47	0.77		0.29	0.30				0.07		0.89
Control Delay		5.9	16.1		2.4	0.4				60.9		41.0
Queue Delay		0.5	0.0		0.0	0.0				0.0		0.0
Total Delay		6.3	16.1		2.4	0.4				60.9		41.0
Queue Length 50th (ft)		180	810		53	5				12		116
Queue Length 95th (ft)		250	902		88	8				27		185
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2918	1583		2918	2787				920		1006
Starvation Cap Reductn		957	0		0	0				0		0
Spillback Cap Reductn		0	0		173	0				0		17
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.70	0.77		0.31	0.30				0.03		0.55

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

EXPhase 1_AM
02/06/2020

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	201	419	0	1205	114	424	0	614	0	0	0
Future Volume (vph)	0	201	419	0	1205	114	424	0	614	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	441	0	1268	120	446	0	646	0	0	0
v/c Ratio		0.08	0.28		0.26	0.08	0.82		0.66			
Control Delay		2.9	3.1		6.1	0.1	73.2		7.0			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		2.9	3.1		6.1	0.1	73.2		7.0			
Queue Length 50th (ft)		22	76		98	0	220		0			
Queue Length 95th (ft)		7	107		134	0	269		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2667	1583		4829	1583	1554		1615			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.08	0.28		0.26	0.08	0.29		0.40			

Intersection Summary	
Area Type:	Other

Queues
EXPhase 1_PM

37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	387	975	0	1044	143	578	0	636	0	0	0
Future Volume (vph)	0	387	975	0	1044	143	578	0	636	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	395	995	0	1065	146	590	0	649	0	0	0
v/c Ratio		0.16	0.63		0.23	0.09	0.84		0.64			
Control Delay		9.4	5.6		8.5	0.1	71.7		10.7			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		9.4	5.6		8.5	0.1	71.7		10.7			
Queue Length 50th (ft)		72	526		103	0	308		41			
Queue Length 95th (ft)		100	528		141	0	357		103			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2521	1583		4564	1583	1714		1674			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.16	0.63		0.23	0.09	0.34		0.39			

Intersection Summary	
Area Type:	Other

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1042	400	0	1654	561	0	0	0	737	0	1544
Future Volume (vph)	0	1042	400	0	1654	561	0	0	0	737	0	1544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1109	426	0	1760	597	0	0	0	784	0	1643
v/c Ratio		0.59	0.15		0.93	0.38				0.43		1.11
Control Delay		31.8	0.1		48.0	0.8				18.4		86.4
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.8	0.1		48.0	0.8				18.4		86.4
Queue Length 50th (ft)		250	0		504	3				185		~818
Queue Length 95th (ft)		297	0		#584	14				233		#970
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1894	2787		1894	1583				1805		1484
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.59	0.15		0.93	0.38				0.43		1.11

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
Existing Plus Project Buildout PM
21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr
02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1905	1040	0	1263	819	0	0	0	240	0	756
Future Volume (vph)	0	1905	1040	0	1263	819	0	0	0	240	0	756
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2027	1106	0	1344	871	0	0	0	255	0	804
v/c Ratio		0.66	0.40		0.44	0.55				0.24		0.89
Control Delay		20.5	0.4		16.1	2.9				35.0		53.9
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		20.5	0.4		16.1	2.9				35.0		53.9
Queue Length 50th (ft)		424	0		294	113				87		364
Queue Length 95th (ft)		553	0		366	160				112		418
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		3059	2787		3059	1567				1325		1113
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.66	0.40		0.44	0.56				0.19		0.72

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1099	678	0	1382	567	837	0	328	0	0	0
Future Volume (vph)	0	1099	678	0	1382	567	837	0	328	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1157	714	0	1455	597	881	0	345	0	0	0
v/c Ratio		0.40	0.45		0.40	0.38	0.79		0.37			
Control Delay		13.0	2.1		15.2	0.7	42.3		25.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		13.0	2.1		15.2	0.7	42.3		25.8			
Queue Length 50th (ft)		148	41		172	0	318		95			
Queue Length 95th (ft)		219	40		234	0	352		125			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2923	1582		3683	1583	1553		1292			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.40	0.45		0.40	0.38	0.57		0.27			

Intersection Summary	
Area Type:	Other

Queues | Existing Plus Project Buildout PM

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd | 02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1069	1164	0	1569	791	450	0	211	0	0	0
Future Volume (vph)	0	1069	1164	0	1569	791	450	0	211	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1102	1200	0	1618	815	464	0	218	0	0	0
v/c Ratio		0.30	0.76		0.35	0.51	0.75		0.32			
Control Delay		4.5	16.8		7.1	1.2	61.4		7.0			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.5	16.8		7.1	1.2	61.4		7.0			
Queue Length 50th (ft)		72	615		147	0	200		0			
Queue Length 95th (ft)		78	671		165	0	261		38			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3717	1574		4684	1583	684		729			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.30	0.76		0.35	0.51	0.68		0.30			

Intersection Summary	
Area Type:	Other

Existing Plus Project Buildout AM
02/06/2020

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	294	0	0	724	875	913
Future Volume (vph)	0	294	0	0	724	875	913
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	306	0	0	754	911	951
v/c Ratio		0.17			0.29	0.79	0.68
Control Delay		11.5			14.1	32.0	8.8
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		11.5			14.1	32.0	8.8
Queue Length 50th (ft)		38			87	236	63
Queue Length 95th (ft)		47			132	271	117
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1795			2579	1598	1680
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.17			0.29	0.57	0.57

Intersection Summary

Area Type: Other

Queues

24: I-805 Off Ramp & Nobel Dr

Existing Plus Project Buildout PM

02/06/2020

	⮌	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⮌	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	468	0	0	746	562	736
Future Volume (vph)	0	468	0	0	746	562	736
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	514	0	0	820	618	809
v/c Ratio		0.23			0.26	0.73	0.79
Control Delay		8.6			8.6	35.9	19.6
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		8.6			8.6	35.9	19.6
Queue Length 50th (ft)		61			68	167	111
Queue Length 95th (ft)		107			112	200	168
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2202			3165	1422	1413
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.23			0.26	0.43	0.57

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	520	537	0	560	835	0	0	0	133	0	1071
Future Volume (vph)	0	520	537	0	560	835	0	0	0	133	0	1071
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	584	603	0	629	938	0	0	0	149	0	1203
v/c Ratio		0.41	0.38		0.44	0.34				0.08		0.79
Control Delay		32.6	4.1		31.9	0.7				16.4		29.6
Queue Delay		0.6	0.0		0.0	0.0				0.0		25.3
Total Delay		33.1	4.1		31.9	0.7				16.4		54.9
Queue Length 50th (ft)		304	101		267	12				36		486
Queue Length 95th (ft)		373	291		359	22				41		443
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1432	1583		1432	2787				2158		1795
Starvation Cap Reductn		460	0		0	0				0		0
Spillback Cap Reductn		0	0		69	0				0		637
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.60	0.38		0.46	0.34				0.07		1.04

Intersection Summary

Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1357	1194	0	857	800	0	0	0	25	0	539
Future Volume (vph)	0	1357	1194	0	857	800	0	0	0	25	0	539
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		570
Storage Lanes	0		1	0		2	0		0	2		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			598			1180	
Travel Time (s)		4.9			18.7			13.6			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1399	1231	0	884	825	0	0	0	26	0	556
v/c Ratio		0.49	0.78		0.31	0.30				0.06		0.89
Control Delay		6.5	16.3		2.7	0.4				59.1		43.9
Queue Delay		0.5	0.0		0.0	0.0				0.0		0.0
Total Delay		7.0	16.3		2.7	0.4				59.1		44.0
Queue Length 50th (ft)		194	827		60	5				12		138
Queue Length 95th (ft)		253	901		97	7				26		205
Internal Link Dist (ft)		243			1152			518			1100	
Turn Bay Length (ft)										505		570
Base Capacity (vph)		2873	1583		2873	2787				920		991
Starvation Cap Reductn		919	0		0	0				0		0
Spillback Cap Reductn		0	0		212	0				0		20
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.72	0.78		0.33	0.30				0.03		0.57

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	203	409	0	1164	109	417	0	588	0	0	0
Future Volume (vph)	0	203	409	0	1164	109	417	0	588	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	214	431	0	1225	115	439	0	619	0	0	0
v/c Ratio		0.08	0.27		0.25	0.07	0.85		0.65			
Control Delay		1.1	2.8		6.0	0.1	77.8		7.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		1.1	2.8		6.0	0.1	77.8		7.1			
Queue Length 50th (ft)		5	70		93	0	219		0			
Queue Length 95th (ft)		8	103		128	0	268		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2672	1583		4839	1583	1528		1598			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.08	0.27		0.25	0.07	0.29		0.39			

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

Existing Plus Project Buildout PM
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	397	985	0	1057	143	593	0	636	0	0	0
Future Volume (vph)	0	397	985	0	1057	143	593	0	636	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			1240			1680			96	
Travel Time (s)		18.7			18.8			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	1005	0	1079	146	605	0	649	0	0	0
v/c Ratio		0.16	0.63		0.24	0.09	0.84		0.64			
Control Delay		10.0	5.7		8.8	0.1	71.0		11.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		10.0	5.7		8.8	0.1	71.0		11.8			
Queue Length 50th (ft)		88	524		106	0	316		50			
Queue Length 95th (ft)		105	527		145	0	364		114			
Internal Link Dist (ft)		1152			1160			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2502	1583		4532	1583	1714		1665			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.16	0.63		0.24	0.09	0.35		0.39			

Intersection Summary	
Area Type:	Other

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1046	418	0	1658	524	0	0	0	754	0	1613
Future Volume (vph)	0	1046	418	0	1658	524	0	0	0	754	0	1613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			22			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			28.7			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1113	445	0	1764	557	0	0	0	802	0	1716
v/c Ratio		0.58	0.16		0.91	0.35				0.45		1.17
Control Delay		31.1	0.1		46.3	0.6				19.1		112.3
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.1	0.1		46.3	0.6				19.1		112.3
Queue Length 50th (ft)		247	0		505	0				193		~894
Queue Length 95th (ft)		295	0		565	4				243		#1047
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1928	2787		1928	1583				1782		1466
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.58	0.16		0.91	0.35				0.45		1.17

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1905	1086	0	1267	814	0	0	0	218	0	790
Future Volume (vph)	0	1905	1086	0	1267	814	0	0	0	218	0	790
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2027	1155	0	1348	866	0	0	0	232	0	840
v/c Ratio		0.68	0.41		0.45	0.55				0.21		0.90
Control Delay		21.7	0.5		17.4	2.8				33.4		53.7
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		21.7	0.5		17.4	2.8				33.4		53.7
Queue Length 50th (ft)		439	0		303	106				77		381
Queue Length 95th (ft)		568	0		375	150				101		436
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2998	2787		2998	1560				1325		1113
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.68	0.41		0.45	0.56				0.18		0.75

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1090	708	0	1311	566	874	0	310	0	0	0
Future Volume (vph)	0	1090	708	0	1311	566	874	0	310	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1147	745	0	1380	596	920	0	326	0	0	0
v/c Ratio		0.40	0.47		0.38	0.38	0.79		0.33			
Control Delay		13.2	2.3		15.9	0.7	41.0		24.3			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		13.2	2.3		15.9	0.7	41.0		24.3			
Queue Length 50th (ft)		144	55		165	0	330		87			
Queue Length 95th (ft)		216	139		227	0	361		115			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2850	1579		3591	1583	1582		1313			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.40	0.47		0.38	0.38	0.58		0.25			

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1001	1216	0	1544	806	470	0	148	0	0	0
Future Volume (vph)	0	1001	1216	0	1544	806	470	0	148	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1032	1254	0	1592	831	485	0	153	0	0	0
v/c Ratio		0.28	0.79		0.34	0.52	0.76		0.24			
Control Delay		4.6	20.3		7.3	1.2	61.2		7.7			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.6	20.3		7.3	1.2	61.2		7.7			
Queue Length 50th (ft)		64	752		143	0	211		0			
Queue Length 95th (ft)		71	715		160	0	274		32			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3684	1566		4643	1583	679		674			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.28	0.80		0.34	0.52	0.71		0.23			

Intersection Summary	
Area Type:	Other

Queues

24: I-805 Off Ramp & Nobel Dr

2021 NP AM
02/06/2020

	⮌	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⮌	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	304	0	0	592	927	883
Future Volume (vph)	0	304	0	0	592	927	883
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	317	0	0	617	966	920
v/c Ratio		0.18			0.24	0.77	0.65
Control Delay		9.7			13.9	29.0	8.6
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		9.7			13.9	29.0	8.6
Queue Length 50th (ft)		27			69	243	65
Queue Length 95th (ft)		39			109	273	114
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1778			2556	1727	1714
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.18			0.24	0.56	0.54

Intersection Summary

Area Type:	Other

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	480	0	0	671	595	590
Future Volume (vph)	0	480	0	0	671	595	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	527	0	0	737	654	648
v/c Ratio		0.24			0.24	0.75	0.64
Control Delay		8.9			8.6	36.3	13.0
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		8.9			8.6	36.3	13.0
Queue Length 50th (ft)		65			62	176	63
Queue Length 95th (ft)		110			99	214	113
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2179			3131	1460	1420
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.24			0.24	0.45	0.46

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	517	535	0	558	872	0	0	0	139	0	1108
Future Volume (vph)	0	517	535	0	558	872	0	0	0	139	0	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	581	601	0	627	980	0	0	0	156	0	1245
v/c Ratio		0.43	0.38		0.47	0.35				0.08		0.79
Control Delay		35.6	4.1		33.1	0.8				14.8		27.5
Queue Delay		0.7	0.0		0.1	0.0				0.0		49.1
Total Delay		36.3	4.1		33.2	0.8				14.8		76.6
Queue Length 50th (ft)		303	98		168	15				36		494
Queue Length 95th (ft)		371	197		322	26				43		471
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1347	1583		1347	2787				2158		1795
Starvation Cap Reductn		431	0		0	0				0		0
Spillback Cap Reductn		0	0		60	0				0		676
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.63	0.38		0.49	0.35				0.07		1.11

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1393	1227	0	842	836	0	0	0	26	0	550
Future Volume (vph)	0	1393	1227	0	842	836	0	0	0	26	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1436	1265	0	868	862	0	0	0	27	0	567
v/c Ratio		0.50	0.80		0.30	0.31				0.06		0.89
Control Delay		6.7	17.2		2.8	0.5				58.7		44.1
Queue Delay		0.6	0.0		0.0	0.0				0.0		0.1
Total Delay		7.3	17.2		2.8	0.5				58.7		44.1
Queue Length 50th (ft)		208	855		61	7				12		142
Queue Length 95th (ft)		253	901		98	10				27		210
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2864	1583		2864	2787				941		1010
Starvation Cap Reductn		929	0		0	0				0		0
Spillback Cap Reductn		0	0		232	0				0		22
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.74	0.80		0.33	0.31				0.03		0.57

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

2021 NP AM
02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	194	419	0	1203	114	420	0	614	0	0	0
Future Volume (vph)	0	194	419	0	1203	114	420	0	614	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	204	441	0	1266	120	442	0	646	0	0	0
v/c Ratio		0.08	0.28		0.26	0.08	0.82		0.66			
Control Delay		3.0	3.1		6.0	0.1	73.6		7.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		3.0	3.1		6.0	0.1	73.6		7.1			
Queue Length 50th (ft)		22	78		97	0	218		0			
Queue Length 95th (ft)		7	112		133	0	267		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2672	1583		4839	1583	1531		1600			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.08	0.28		0.26	0.08	0.29		0.40			

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

2021 NP PM
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	400	1018	0	1082	149	587	0	664	0	0	0
Future Volume (vph)	0	400	1018	0	1082	149	587	0	664	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	1039	0	1104	152	599	0	678	0	0	0
v/c Ratio		0.16	0.66		0.24	0.10	0.84		0.67			
Control Delay		9.8	6.1		8.7	0.1	71.2		14.3			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		9.8	6.1		8.7	0.1	71.2		14.3			
Queue Length 50th (ft)		86	530		109	0	313		68			
Queue Length 95th (ft)		97	529		148	0	361		138			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2510	1583		4544	1583	1714		1663			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.16	0.66		0.24	0.10	0.35		0.41			

Intersection Summary	
Area Type:	Other

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1056	418	0	1695	561	0	0	0	758	0	1613
Future Volume (vph)	0	1056	418	0	1695	561	0	0	0	758	0	1613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		2025			1082			1029			1412	
Travel Time (s)		27.6			14.8			23.4			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1123	445	0	1803	597	0	0	0	806	0	1716
v/c Ratio		0.58	0.16		0.94	0.38				0.46		1.17
Control Delay		31.2	0.1		47.6	0.8				19.8		112.3
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.2	0.1		47.6	0.8				19.8		112.3
Queue Length 50th (ft)		251	0		518	1				198		~894
Queue Length 95th (ft)		299	0		#600	10				250		#1047
Internal Link Dist (ft)		1945			1002			949			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1928	2787		1928	1583				1753		1466
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.58	0.16		0.94	0.38				0.46		1.17

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2021 WP 1 PM

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1945	1086	0	1285	832	0	0	0	234	0	790
Future Volume (vph)	0	1945	1086	0	1285	832	0	0	0	234	0	790
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2069	1155	0	1367	885	0	0	0	249	0	840
v/c Ratio		0.69	0.41		0.46	0.56				0.22		0.90
Control Delay		22.2	0.5		17.4	3.0				33.5		53.8
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		22.2	0.5		17.4	3.0				33.5		53.8
Queue Length 50th (ft)		455	0		308	113				83		382
Queue Length 95th (ft)		587	0		382	162				107		438
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2993	2787		2993	1560				1325		1111
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.69	0.41		0.46	0.57				0.19		0.76

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1104	708	0	1384	581	874	0	320	0	0	0
Future Volume (vph)	0	1104	708	0	1384	581	874	0	320	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1162	745	0	1457	612	920	0	337	0	0	0
v/c Ratio		0.41	0.47		0.41	0.39	0.79		0.34			
Control Delay		13.5	2.3		16.2	0.7	40.8		24.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		13.5	2.3		16.2	0.7	40.8		24.8			
Queue Length 50th (ft)		149	52		178	0	330		92			
Queue Length 95th (ft)		222	140		243	0	361		119			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2844	1579		3584	1583	1582		1312			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.41	0.47		0.41	0.39	0.58		0.26			

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1057	1216	0	1580	813	470	0	188	0	0	0
Future Volume (vph)	0	1057	1216	0	1580	813	470	0	188	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1090	1254	0	1629	838	485	0	194	0	0	0
v/c Ratio		0.30	0.79		0.35	0.53	0.76		0.29			
Control Delay		4.6	19.7		7.4	1.3	61.2		7.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.6	19.7		7.4	1.3	61.2		7.1			
Queue Length 50th (ft)		69	736		147	0	211		0			
Queue Length 95th (ft)		76	692		165	0	274		36			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3684	1566		4643	1583	679		706			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.30	0.80		0.35	0.53	0.71		0.27			

Intersection Summary	
Area Type:	Other

	⤺	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⤺	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	306	0	0	694	927	908
Future Volume (vph)	0	306	0	0	694	927	908
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	319	0	0	723	966	946
v/c Ratio		0.18			0.28	0.77	0.67
Control Delay		9.7			14.3	29.0	9.4
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		9.7			14.3	29.0	9.4
Queue Length 50th (ft)		27			83	243	75
Queue Length 95th (ft)		39			128	273	125
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1778			2556	1727	1712
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.18			0.28	0.56	0.55

Intersection Summary	
Area Type:	Other

24: I-805 Off Ramp & Nobel Dr

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	488	0	0	721	595	693
Future Volume (vph)	0	488	0	0	721	595	693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	536	0	0	792	654	762
v/c Ratio		0.25			0.25	0.75	0.76
Control Delay		9.0			8.8	36.0	19.0
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		9.0			8.8	36.0	19.0
Queue Length 50th (ft)		66			68	176	107
Queue Length 95th (ft)		111			107	214	164
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2173			3123	1460	1414
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.25			0.25	0.45	0.54

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	524	550	0	564	872	0	0	0	139	0	1108
Future Volume (vph)	0	524	550	0	564	872	0	0	0	139	0	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	589	618	0	634	980	0	0	0	156	0	1245
v/c Ratio		0.44	0.39		0.47	0.35				0.08		0.79
Control Delay		35.3	4.4		33.7	0.8				14.8		27.5
Queue Delay		0.7	0.0		0.0	0.0				0.0		49.1
Total Delay		36.1	4.4		33.8	0.8				14.8		76.7
Queue Length 50th (ft)		307	107		172	15				36		495
Queue Length 95th (ft)		367	206		331	26				43		473
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1345	1583		1345	2787				2158		1794
Starvation Cap Reductn		424	0		0	0				0		0
Spillback Cap Reductn		0	0		57	0				0		676
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.64	0.39		0.49	0.35				0.07		1.11

Intersection Summary	
Area Type:	Other

Queues

2021 WP 1 PM

36: I-15 SB Ramps & Miramar Rd

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1397	1234	0	866	836	0	0	0	26	0	550
Future Volume (vph)	0	1397	1234	0	866	836	0	0	0	26	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1440	1272	0	893	862	0	0	0	27	0	567
v/c Ratio		0.51	0.80		0.31	0.31				0.06		0.89
Control Delay		7.0	17.5		3.0	0.5				57.8		45.7
Queue Delay		0.6	0.0		0.0	0.0				0.0		0.1
Total Delay		7.6	17.5		3.0	0.5				57.8		45.8
Queue Length 50th (ft)		214	863		65	6				12		152
Queue Length 95th (ft)		254	1334		103	9				27		220
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2840	1583		2840	2787				941		998
Starvation Cap Reductn		913	0		0	0				0		0
Spillback Cap Reductn		0	0		249	0				0		22
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.75	0.80		0.34	0.31				0.03		0.58

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	201	419	0	1205	114	424	0	614	0	0	0
Future Volume (vph)	0	201	419	0	1205	114	424	0	614	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	441	0	1268	120	446	0	646	0	0	0
v/c Ratio		0.08	0.28		0.26	0.08	0.82		0.66			
Control Delay		3.0	3.1		6.2	0.1	73.4		7.0			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		3.0	3.1		6.2	0.1	73.4		7.0			
Queue Length 50th (ft)		23	76		99	0	220		0			
Queue Length 95th (ft)		7	107		135	0	269		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2665	1583		4822	1583	1528		1599			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.08	0.28		0.26	0.08	0.29		0.40			

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	404	1018	0	1090	149	603	0	664	0	0	0
Future Volume (vph)	0	404	1018	0	1090	149	603	0	664	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	412	1039	0	1112	152	615	0	678	0	0	0
v/c Ratio		0.17	0.66		0.25	0.10	0.84		0.67			
Control Delay		10.1	6.0		9.0	0.1	70.7		14.5			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		10.1	6.0		9.0	0.1	70.7		14.5			
Queue Length 50th (ft)		91	527		112	0	321		72			
Queue Length 95th (ft)		101	528		152	0	369		141			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2491	1583		4512	1583	1714		1659			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.17	0.66		0.25	0.10	0.36		0.41			

Intersection Summary	
Area Type:	Other

Queues

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

2025 NP AM

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1102	437	0	1768	583	0	0	0	792	0	1685
Future Volume (vph)	0	1102	437	0	1768	583	0	0	0	792	0	1685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1172	465	0	1881	620	0	0	0	843	0	1793
v/c Ratio		0.61	0.17		0.98	0.39				0.47		1.22
Control Delay		31.7	0.1		52.6	0.8				19.5		134.4
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		31.7	0.1		52.6	0.8				19.5		134.4
Queue Length 50th (ft)		265	0		547	1				206		~966
Queue Length 95th (ft)		314	0		#647	10				259		#1119
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1928	2787		1928	1583				1782		1466
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.61	0.17		0.98	0.39				0.47		1.22

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	2029	1134	0	1341	868	0	0	0	244	0	825
Future Volume (vph)	0	2029	1134	0	1341	868	0	0	0	244	0	825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2159	1206	0	1427	923	0	0	0	260	0	878
v/c Ratio		0.74	0.43		0.49	0.58				0.23		0.91
Control Delay		24.5	0.5		18.8	3.3				32.4		54.6
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		24.5	0.5		18.8	3.3				32.4		54.6
Queue Length 50th (ft)		509	0		333	126				85		404
Queue Length 95th (ft)		636	0		404	177				111		467
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2925	2787		2925	1570				1335		1113
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.74	0.43		0.49	0.59				0.19		0.79

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1151	740	0	1441	605	913	0	333	0	0	0
Future Volume (vph)	0	1151	740	0	1441	605	913	0	333	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1212	779	0	1517	637	961	0	351	0	0	0
v/c Ratio		0.44	0.49		0.43	0.40	0.80		0.35			
Control Delay		15.0	2.5		17.4	0.8	40.1		24.6			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		15.0	2.5		17.4	0.8	40.1		24.6			
Queue Length 50th (ft)		166	52		195	0	341		96			
Queue Length 95th (ft)		239	161		260	0	376		125			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2780	1573		3504	1583	1553		1287			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.44	0.50		0.43	0.40	0.62		0.27			

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1101	1270	0	1648	849	491	0	194	0	0	0
Future Volume (vph)	0	1101	1270	0	1648	849	491	0	194	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1135	1309	0	1699	875	506	0	200	0	0	0
v/c Ratio		0.31	0.83		0.37	0.55	0.77		0.29			
Control Delay		5.0	22.3		7.7	1.4	61.8		7.0			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		5.0	22.3		7.7	1.4	61.8		7.0			
Queue Length 50th (ft)		72	743		156	0	222		0			
Queue Length 95th (ft)		93	745		175	0	287		36			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3667	1577		4620	1583	679		711			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.31	0.83		0.37	0.55	0.75		0.28			

Intersection Summary

Area Type: Other

Queues
24: I-805 Off Ramp & Nobel Dr

2025 NP AM
02/06/2020

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	324	0	0	728	982	960
Future Volume (vph)	0	324	0	0	728	982	960
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	338	0	0	758	1023	1000
v/c Ratio		0.20			0.31	0.77	0.70
Control Delay		10.5			15.5	27.9	11.2
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		10.5			15.5	27.9	11.2
Queue Length 50th (ft)		30			92	255	105
Queue Length 95th (ft)		43			140	282	153
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1708			2455	1727	1691
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.20			0.31	0.59	0.59

Intersection Summary

Area Type: Other

Queues
24: I-805 Off Ramp & Nobel Dr

2025 NP PM
02/06/2020

	⮌	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⮌	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	516	0	0	760	630	727
Future Volume (vph)	0	516	0	0	760	630	727
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	567	0	0	835	692	799
v/c Ratio		0.27			0.27	0.74	0.78
Control Delay		9.9			9.7	34.5	21.5
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		9.9			9.7	34.5	21.5
Queue Length 50th (ft)		73			75	186	132
Queue Length 95th (ft)		127			122	217	184
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2114			3038	1460	1393
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.27			0.27	0.47	0.57

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	547	573	0	589	911	0	0	0	145	0	1157
Future Volume (vph)	0	547	573	0	589	911	0	0	0	145	0	1157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	615	644	0	662	1024	0	0	0	163	0	1300
v/c Ratio		0.50	0.41		0.53	0.37				0.08		0.79
Control Delay		37.1	5.0		38.1	0.8				13.1		25.8
Queue Delay		0.6	0.0		0.1	0.0				0.0		48.8
Total Delay		37.7	5.0		38.2	0.8				13.1		74.7
Queue Length 50th (ft)		330	216		213	19				30		436
Queue Length 95th (ft)		286	224		361	30				45		519
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1242	1583		1242	2787				2158		1789
Starvation Cap Reductn		299	0		0	0				0		0
Spillback Cap Reductn		0	0		43	0				0		629
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.65	0.41		0.55	0.37				0.08		1.12

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1459	1289	0	903	873	0	0	0	27	0	574
Future Volume (vph)	0	1459	1289	0	903	873	0	0	0	27	0	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1504	1329	0	931	900	0	0	0	28	0	592
v/c Ratio		0.54	0.84		0.34	0.32				0.06		0.89
Control Delay		7.9	19.6		3.5	0.5				55.3		49.1
Queue Delay		0.8	0.0		0.0	0.0				0.0		0.1
Total Delay		8.8	19.6		3.6	0.5				55.3		49.2
Queue Length 50th (ft)		248	919		76	8				13		183
Queue Length 95th (ft)		258	1365		118	10				27		250
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2774	1583		2774	2787				941		980
Starvation Cap Reductn		870	0		0	0				0		0
Spillback Cap Reductn		0	0		311	0				0		25
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.79	0.84		0.38	0.32				0.03		0.62

Intersection Summary	
Area Type:	Other

Queues

37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

2025 NP AM

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	210	438	0	1259	119	443	0	641	0	0	0
Future Volume (vph)	0	210	438	0	1259	119	443	0	641	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	461	0	1325	125	466	0	675	0	0	0
v/c Ratio		0.08	0.29		0.28	0.08	0.82		0.66			
Control Delay		2.2	3.4		6.5	0.1	72.7		6.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		2.2	3.4		6.5	0.1	72.7		6.8			
Queue Length 50th (ft)		5	88		107	0	230		0			
Queue Length 95th (ft)		8	114		146	0	279		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2645	1583		4790	1583	1531		1616			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.08	0.29		0.28	0.08	0.30		0.42			

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	422	1063	0	1138	156	629	0	694	0	0	0
Future Volume (vph)	0	422	1063	0	1138	156	629	0	694	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	431	1085	0	1161	159	642	0	708	0	0	0
v/c Ratio		0.18	0.69		0.26	0.10	0.84		0.70			
Control Delay		10.5	6.6		9.7	0.1	69.4		20.0			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		10.5	6.6		9.7	0.1	69.4		20.0			
Queue Length 50th (ft)		102	531		122	0	334		118			
Queue Length 95th (ft)		108	703		165	0	381		187			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2458	1583		4451	1583	1735		1652			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.18	0.69		0.26	0.10	0.37		0.43			

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1137	438	0	1808	593	0	0	0	791	0	1661
Future Volume (vph)	0	1137	438	0	1808	593	0	0	0	791	0	1661
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1210	466	0	1923	631	0	0	0	841	0	1767
v/c Ratio		0.63	0.17		1.00	0.40				0.49		1.21
Control Delay		32.1	0.1		57.5	0.9				21.2		130.2
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		32.1	0.1		57.5	0.9				21.2		130.2
Queue Length 50th (ft)		276	0		562	2				215		~946
Queue Length 95th (ft)		327	0		#672	11				270		#1098
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		1928	2787		1928	1583				1713		1457
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.63	0.17		1.00	0.40				0.49		1.21

Intersection Summary

Area Type:	Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2025 WP PM

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	2078	1138	0	1381	882	0	0	0	255	0	813
Future Volume (vph)	0	2078	1138	0	1381	882	0	0	0	255	0	813
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.92	0.92	0.92	0.94	0.92	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2211	1211	0	1469	938	0	0	0	271	0	865
v/c Ratio		0.75	0.43		0.50	0.59				0.24		0.90
Control Delay		24.8	0.5		18.7	3.5				32.8		54.6
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		24.8	0.5		18.7	3.5				32.8		54.6
Queue Length 50th (ft)		527	0		341	130				89		400
Queue Length 95th (ft)		663	0		416	188				115		460
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2937	2787		2937	1572				1335		1110
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.75	0.43		0.50	0.60				0.20		0.78

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1200	743	0	1469	604	892	0	333	0	0	0
Future Volume (vph)	0	1200	743	0	1469	604	892	0	333	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1263	782	0	1546	636	939	0	351	0	0	0
v/c Ratio		0.45	0.49		0.44	0.40	0.81		0.36			
Control Delay		15.4	2.4		17.0	0.8	42.2		25.9			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		15.4	2.4		17.0	0.8	42.2		25.9			
Queue Length 50th (ft)		180	48		197	0	339		100			
Queue Length 95th (ft)		255	173		263	0	375		128			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2815	1575		3548	1583	1524		1283			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.45	0.50		0.44	0.40	0.62		0.27			

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1162	1277	0	1677	850	480	0	191	0	0	0
Future Volume (vph)	0	1162	1277	0	1677	850	480	0	191	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1198	1316	0	1729	876	495	0	197	0	0	0
v/c Ratio		0.33	0.83		0.37	0.55	0.79		0.29			
Control Delay		5.2	22.0		7.7	1.4	63.4		7.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		5.2	22.0		7.7	1.4	63.4		7.1			
Queue Length 50th (ft)		76	733		160	0	219		0			
Queue Length 95th (ft)		106	752		178	0	282		36			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3664	1577		4618	1583	654		709			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.33	0.83		0.37	0.55	0.76		0.28			

Intersection Summary

Area Type: Other

Queues
24: I-805 Off Ramp & Nobel Dr

2025 WP AM
02/06/2020

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	334	0	0	768	1022	1027
Future Volume (vph)	0	334	0	0	768	1022	1027
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.96
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	348	0	0	800	1065	1070
v/c Ratio		0.21			0.34	0.77	0.74
Control Delay		11.1			16.5	27.2	13.0
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		11.1			16.5	27.2	13.0
Queue Length 50th (ft)		31			101	264	135
Queue Length 95th (ft)		44			153	290	184
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1659			2384	1727	1680
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.21			0.34	0.62	0.64

Intersection Summary	
Area Type:	Other

	⮌	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⮌	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	532	0	0	816	656	773
Future Volume (vph)	0	532	0	0	816	656	773
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	585	0	0	897	721	849
v/c Ratio		0.28			0.30	0.73	0.81
Control Delay		10.9			10.7	32.9	23.5
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		10.9			10.7	32.9	23.5
Queue Length 50th (ft)		80			86	191	156
Queue Length 95th (ft)		140			141	217	204
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2058			2957	1460	1382
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.28			0.30	0.49	0.61

Intersection Summary	
Area Type:	Other

Queues
36: I-15 SB Ramps & Miramar Rd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	600	627	0	646	912	0	0	0	142	0	1149
Future Volume (vph)	0	600	627	0	646	912	0	0	0	142	0	1149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	674	704	0	726	1025	0	0	0	160	0	1291
v/c Ratio		0.54	0.44		0.59	0.37				0.08		0.79
Control Delay		36.2	6.1		42.4	0.8				13.0		26.2
Queue Delay		0.7	0.0		0.1	0.0				0.0		49.0
Total Delay		36.9	6.1		42.5	0.8				13.0		75.2
Queue Length 50th (ft)		362	212		270	19				29		442
Queue Length 95th (ft)		273	254		428	21				44		525
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1238	1583		1238	2787				2158		1779
Starvation Cap Reductn		257	0		0	0				0		0
Spillback Cap Reductn		0	0		44	0				0		657
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.69	0.44		0.61	0.37				0.07		1.15

Intersection Summary	
Area Type:	Other

Queues
36: I-15 SB Ramps & Miramar Rd

2025 WP PM
02/06/2020

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1509	1343	0	995	875	0	0	0	27	0	594
Future Volume (vph)	0	1509	1343	0	995	875	0	0	0	27	0	594
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1556	1385	0	1026	902	0	0	0	28	0	612
v/c Ratio		0.58	0.87		0.38	0.32				0.05		0.89
Control Delay		9.0	21.7		4.3	0.5				51.7		54.5
Queue Delay		1.0	0.0		0.1	0.0				0.0		0.2
Total Delay		10.0	21.7		4.5	0.5				51.7		54.6
Queue Length 50th (ft)		260	936		95	5				12		227
Queue Length 95th (ft)		264	1390		141	2				26		292
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2680	1583		2680	2787				941		941
Starvation Cap Reductn		780	0		0	0				0		0
Spillback Cap Reductn		0	0		540	0				0		37
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.82	0.87		0.48	0.32				0.03		0.68

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

2025 WP AM
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	220	476	0	1258	118	486	0	637	0	0	0
Future Volume (vph)	0	220	476	0	1258	118	486	0	637	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	232	501	0	1324	124	512	0	671	0	0	0
v/c Ratio		0.09	0.32		0.28	0.08	0.83		0.64			
Control Delay		2.6	4.1		7.2	0.1	71.1		6.3			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		2.6	4.1		7.2	0.1	71.1		6.3			
Queue Length 50th (ft)		5	105		114	0	252		0			
Queue Length 95th (ft)		18	135		155	0	301		55			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2593	1583		4696	1583	1531		1614			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.09	0.32		0.28	0.08	0.33		0.42			

Intersection Summary	
Area Type:	Other

Queues
2025 WP PM

37: I-15 NB Ramps & Miramar Rd/Pomerado Rd
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	432	1092	0	1142	154	701	0	689	0	0	0
Future Volume (vph)	0	432	1092	0	1142	154	701	0	689	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	441	1114	0	1165	157	715	0	703	0	0	0
v/c Ratio		0.19	0.70		0.27	0.10	0.84		0.67			
Control Delay		11.5	7.3		11.3	0.1	66.5		19.2			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		11.5	7.3		11.3	0.1	66.5		19.2			
Queue Length 50th (ft)		112	525		134	0	369		121			
Queue Length 95th (ft)		124	700		180	0	414		185			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2371	1583		4294	1583	1735		1644			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.19	0.70		0.27	0.10	0.41		0.43			

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1214	485	0	1880	594	0	0	0	838	0	1793
Future Volume (vph)	0	1214	485	0	1880	594	0	0	0	838	0	1793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1278	511	0	1979	625	0	0	0	882	0	1887
v/c Ratio		0.62	0.18		0.96	0.39				0.52		1.35
Control Delay		30.1	0.1		39.4	0.8				22.0		190.3
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		30.1	0.1		39.4	0.8				22.0		190.3
Queue Length 50th (ft)		284	0		570	0				232		~1085
Queue Length 95th (ft)		334	0		#666	6				289		#1237
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2055	2787		2055	1583				1696		1397
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.62	0.18		0.96	0.39				0.52		1.35

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	2212	1260	0	1437	923	0	0	0	242	0	877
Future Volume (vph)	0	2212	1260	0	1437	923	0	0	0	242	0	877
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2328	1326	0	1513	972	0	0	0	255	0	923
v/c Ratio		0.80	0.48		0.52	0.61				0.21		0.93
Control Delay		17.8	0.1		22.0	3.6				34.2		60.1
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		17.8	0.1		22.0	3.6				34.2		60.1
Queue Length 50th (ft)		409	0		389	146				89		469
Queue Length 95th (ft)		m330	m0		453	203				119		552
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2903	2787		2903	1561				1311		1090
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.80	0.48		0.52	0.62				0.19		0.85

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1236	792	0	1537	664	858	0	304	0	0	0
Future Volume (vph)	0	1236	792	0	1537	664	858	0	304	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1301	834	0	1618	699	903	0	320	0	0	0
v/c Ratio		0.45	0.53		0.44	0.44	0.80		0.34			
Control Delay		13.7	2.7		16.0	0.9	42.2		25.7			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		13.7	2.7		16.0	0.9	42.2		25.7			
Queue Length 50th (ft)		150	63		198	0	327		89			
Queue Length 95th (ft)		182	83		268	0	363		118			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2897	1570		3651	1583	1438		1196			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.45	0.53		0.44	0.44	0.63		0.27			

Intersection Summary	
Area Type:	Other

Queues

2050 NP PM

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1135	1364	0	1811	945	462	0	145	0	0	0
Future Volume (vph)	0	1135	1364	0	1811	945	462	0	145	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1170	1406	0	1867	974	476	0	149	0	0	0
v/c Ratio		0.31	0.89		0.39	0.62	0.82		0.25			
Control Delay		5.5	27.7		7.0	1.8	72.2		8.7			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		5.5	27.7		7.0	1.8	72.2		8.7			
Queue Length 50th (ft)		87	898		168	0	234		0			
Queue Length 95th (ft)		104	872		185	0	#302		35			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3806	1583		4797	1583	583		597			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.31	0.89		0.39	0.62	0.82		0.25			

Intersection Summary

Area Type: Other

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
24: I-805 Off Ramp & Nobel Dr

2050 NP AM
02/06/2020

	↶	→	↘	↙	←	↖	↗
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	384	0	0	744	1080	1029
Future Volume (vph)	0	384	0	0	744	1080	1029
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	404	0	0	783	1137	1083
v/c Ratio		0.25			0.34	0.79	0.75
Control Delay		11.5			17.5	26.8	14.8
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		11.5			17.5	26.8	14.8
Queue Length 50th (ft)		35			103	278	160
Queue Length 95th (ft)		47			152	312	213
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1595			2293	1689	1614
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.25			0.34	0.67	0.67

Intersection Summary	
Area Type:	Other

Queues
24: I-805 Off Ramp & Nobel Dr

2050 NP PM
02/06/2020

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	607	0	0	843	693	687
Future Volume (vph)	0	607	0	0	843	693	687
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	639	0	0	887	729	723
v/c Ratio		0.31			0.30	0.76	0.73
Control Delay		11.5			10.1	34.7	21.3
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		11.5			10.1	34.7	21.3
Queue Length 50th (ft)		87			83	195	126
Queue Length 95th (ft)		168			131	230	176
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2089			3002	1460	1352
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.31			0.30	0.50	0.53

Intersection Summary

Area Type: Other

Queues
36: I-15 SB Ramps & Miramar Rd

2050 NP AM
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	580	605	0	667	1041	0	0	0	150	0	1200
Future Volume (vph)	0	580	605	0	667	1041	0	0	0	150	0	1200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	637	0	702	1096	0	0	0	158	0	1263
v/c Ratio		0.45	0.40		0.51	0.39				0.08		0.81
Control Delay		28.9	5.6		40.0	0.9				15.4		29.6
Queue Delay		0.5	0.0		0.0	0.0				0.0		50.8
Total Delay		29.4	5.6		40.0	0.9				15.4		80.5
Queue Length 50th (ft)		317	168		226	23				36		515
Queue Length 95th (ft)		339	218		405	34				47		532
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1367	1583		1367	2787				2089		1736
Starvation Cap Reductn		349	0		0	0				0		0
Spillback Cap Reductn		0	0		25	0				0		961
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.60	0.40		0.52	0.39				0.08		1.63

Intersection Summary	
Area Type:	Other

Queues
36: I-15 SB Ramps & Miramar Rd

2050 NP PM
02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1562	1381	0	1006	999	0	0	0	29	0	596
Future Volume (vph)	0	1562	1381	0	1006	999	0	0	0	29	0	596
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1610	1424	0	1037	1030	0	0	0	30	0	614
v/c Ratio		0.60	0.90		0.39	0.37				0.05		0.89
Control Delay		9.8	21.7		4.8	0.7				51.2		55.1
Queue Delay		2.4	0.0		0.2	0.0				0.0		0.2
Total Delay		12.2	21.7		4.9	0.7				51.2		55.3
Queue Length 50th (ft)		268	906		105	15				13		234
Queue Length 95th (ft)		285	1392		154	7				27		297
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2664	1583		2664	2787				963		950
Starvation Cap Reductn		886	0		0	0				0		0
Spillback Cap Reductn		0	0		665	0				0		43
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.91	0.90		0.52	0.37				0.03		0.68

Intersection Summary	
Area Type:	Other

Queues
37: I-15 NB Ramps & Miramar Rd/Pomerado Rd

2050 NP AM
02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	232	500	0	1408	133	490	0	716	0	0	0
Future Volume (vph)	0	232	500	0	1408	133	490	0	716	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	526	0	1482	140	516	0	754	0	0	0
v/c Ratio		0.09	0.33		0.32	0.09	0.83		0.67			
Control Delay		4.9	5.3		7.6	0.1	71.1		6.4			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.9	5.3		7.6	0.1	71.1		6.4			
Queue Length 50th (ft)		47	142		132	0	254		0			
Queue Length 95th (ft)		42	378		179	0	303		56			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2589	1583		4689	1583	1508		1647			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.09	0.33		0.32	0.09	0.34		0.46			

Intersection Summary	
Area Type:	Other

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	477	1216	0	1267	174	684	0	774	0	0	0
Future Volume (vph)	0	477	1216	0	1267	174	684	0	774	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	487	1241	0	1293	178	698	0	790	0	0	0
v/c Ratio		0.20	0.78		0.30	0.11	0.84		0.80			
Control Delay		11.3	11.0		11.2	0.1	67.1		32.8			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		11.3	11.0		11.2	0.1	67.1		32.8			
Queue Length 50th (ft)		94	535		149	0	361		227			
Queue Length 95th (ft)		139	1237		200	0	407		295			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2392	1583		4331	1583	1735		1612			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.20	0.78		0.30	0.11	0.40		0.49			

Intersection Summary	
Area Type:	Other

Queues
2050 WP AM

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr
02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	1249	485	0	1939	622	0	0	0	838	0	1793
Future Volume (vph)	0	1249	485	0	1939	622	0	0	0	838	0	1793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1315	511	0	2041	655	0	0	0	882	0	1887
v/c Ratio		0.64	0.18		0.99	0.41				0.52		1.35
Control Delay		30.5	0.1		45.0	0.9				22.0		190.3
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		30.5	0.1		45.0	0.9				22.0		190.3
Queue Length 50th (ft)		295	0		593	0				232		~1085
Queue Length 95th (ft)		347	0		#690	9				289		#1237
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2055	2787		2055	1583				1696		1397
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.64	0.18		0.99	0.41				0.52		1.35

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

21: I-805 SB On Ramp/I-805 SB Off Ramp & La Jolla Village Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱		↑↑↑	↱				↰↰		↱↱
Traffic Volume (vph)	0	2284	1260	0	1481	945	0	0	0	242	0	877
Future Volume (vph)	0	2284	1260	0	1481	945	0	0	0	242	0	877
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		750	0		0	0		0	460		1000
Storage Lanes	0		1	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			30	
Link Distance (ft)		2025			1082			925			1412	
Travel Time (s)		27.6			14.8			11.5			32.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2404	1326	0	1559	995	0	0	0	255	0	923
v/c Ratio		0.83	0.48		0.54	0.63				0.21		0.93
Control Delay		18.4	0.1		22.2	3.9				34.1		60.3
Queue Delay		0.0	0.0		0.0	0.0				0.0		0.0
Total Delay		18.4	0.1		22.2	3.9				34.1		60.3
Queue Length 50th (ft)		479	0		404	189				89		471
Queue Length 95th (ft)		m343	m0		469	252				119		555
Internal Link Dist (ft)		1945			1002			845			1332	
Turn Bay Length (ft)			750							460		1000
Base Capacity (vph)		2896	2787		2896	1559				1311		1087
Starvation Cap Reductn		0	0		0	0				0		0
Spillback Cap Reductn		0	0		0	0				0		0
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.83	0.48		0.54	0.64				0.19		0.85

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2050 WP AM

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1271	792	0	1624	664	858	0	322	0	0	0
Future Volume (vph)	0	1271	792	0	1624	664	858	0	322	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1338	834	0	1709	699	903	0	339	0	0	0
v/c Ratio		0.46	0.53		0.47	0.44	0.80		0.36			
Control Delay		13.6	2.6		16.5	0.9	42.0		26.6			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		13.6	2.6		16.5	0.9	42.0		26.6			
Queue Length 50th (ft)		153	59		217	0	324		97			
Queue Length 95th (ft)		184	77		287	0	363		127			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		2891	1570		3644	1583	1438		1193			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.46	0.53		0.47	0.44	0.63		0.28			

Intersection Summary	
Area Type:	Other

22: I-805 NB Off Ramp/I-805 NB On Ramp & La Jolla Village Dr/Miramar Rd

02/06/2020

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	1207	1364	0	1877	945	462	0	179	0	0	0
Future Volume (vph)	0	1207	1364	0	1877	945	462	0	179	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		720	0		500	0		300	0		0
Storage Lanes	0		1	0		1	2		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1082			2031			1329			1532	
Travel Time (s)		14.8			27.7			30.2			34.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1244	1406	0	1935	974	476	0	185	0	0	0
v/c Ratio		0.33	0.89		0.40	0.62	0.82		0.30			
Control Delay		5.6	27.2		7.1	1.8	72.2		8.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		5.6	27.2		7.1	1.8	72.2		8.1			
Queue Length 50th (ft)		90	834		177	0	234		0			
Queue Length 95th (ft)		122	728		194	0	#302		39			
Internal Link Dist (ft)		1002			1951			1249			1452	
Turn Bay Length (ft)			720			500			300			
Base Capacity (vph)		3806	1583		4797	1583	583		627			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.33	0.89		0.40	0.62	0.82		0.30			

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

24: I-805 Off Ramp & Nobel Dr

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	395	0	0	807	1080	1057
Future Volume (vph)	0	395	0	0	807	1080	1057
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	416	0	0	849	1137	1113
v/c Ratio		0.26			0.37	0.79	0.78
Control Delay		11.6			17.8	26.8	16.4
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		11.6			17.8	26.8	16.4
Queue Length 50th (ft)		35			114	278	179
Queue Length 95th (ft)		48			165	312	233
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		1595			2293	1689	1603
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.26			0.37	0.67	0.69

Intersection Summary	
Area Type:	Other

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶	↑↑			↑↑↑	↰↰	↱↱
Traffic Volume (vph)	0	628	0	0	892	693	745
Future Volume (vph)	0	628	0	0	892	693	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		675	0
Storage Lanes	1		0	0		2	2
Taper Length (ft)	25			25		25	
Right Turn on Red			Yes				Yes
Link Speed (mph)		50			50	35	
Link Distance (ft)		796			2473	1101	
Travel Time (s)		10.9			33.7	21.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	661	0	0	939	729	784
v/c Ratio		0.32			0.32	0.74	0.79
Control Delay		12.8			10.7	33.5	24.8
Queue Delay		0.0			0.0	0.0	0.0
Total Delay		12.8			10.7	33.5	24.8
Queue Length 50th (ft)		93			91	193	155
Queue Length 95th (ft)		200			145	223	202
Internal Link Dist (ft)		716			2393	1021	
Turn Bay Length (ft)						675	
Base Capacity (vph)		2064			2966	1460	1341
Starvation Cap Reductn		0			0	0	0
Spillback Cap Reductn		0			0	0	0
Storage Cap Reductn		0			0	0	0
Reduced v/c Ratio		0.32			0.32	0.50	0.58

Intersection Summary	
Area Type:	Other

36: I-15 SB Ramps & Miramar Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	592	649	0	704	1041	0	0	0	150	0	1200
Future Volume (vph)	0	592	649	0	704	1041	0	0	0	150	0	1200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	623	683	0	741	1096	0	0	0	158	0	1263
v/c Ratio		0.47	0.43		0.56	0.39				0.09		0.82
Control Delay		20.7	6.8		44.1	0.9				15.9		31.6
Queue Delay		0.5	0.0		1.5	0.0				0.0		49.6
Total Delay		21.2	6.8		45.6	0.9				15.9		81.2
Queue Length 50th (ft)		91	199		257	22				37		531
Queue Length 95th (ft)		92	254		428	14				48		560
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		1324	1583		1324	2787				2050		1696
Starvation Cap Reductn		317	0		0	0				0		0
Spillback Cap Reductn		0	0		376	0				0		745
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.62	0.43		0.78	0.39				0.08		1.33

Intersection Summary	
Area Type:	Other

Queues
36: I-15 SB Ramps & Miramar Rd

2050 WP PM
02/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↱				↰↰		↱↱
Traffic Volume (vph)	0	1571	1417	0	1076	999	0	0	0	29	0	596
Future Volume (vph)	0	1571	1417	0	1076	999	0	0	0	29	0	596
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	170		0	0		0	505		0
Storage Lanes	0		1	0		2	0		0	2		2
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		323			1232			170			1180	
Travel Time (s)		4.9			18.7			3.9			14.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1620	1461	0	1109	1030	0	0	0	30	0	614
v/c Ratio		0.62	0.92		0.42	0.37				0.05		0.89
Control Delay		10.3	24.2		5.1	0.6				49.9		57.8
Queue Delay		2.9	0.0		0.3	0.0				0.0		0.2
Total Delay		13.2	24.2		5.4	0.6				49.9		58.0
Queue Length 50th (ft)		268	1360		116	12				13		252
Queue Length 95th (ft)		285	#667		167	12				27		314
Internal Link Dist (ft)		243			1152			90			1100	
Turn Bay Length (ft)										505		
Base Capacity (vph)		2626	1583		2626	2787				963		926
Starvation Cap Reductn		866	0		0	0				0		0
Spillback Cap Reductn		0	0		747	0				0		42
Storage Cap Reductn		0	0		0	0				0		0
Reduced v/c Ratio		0.92	0.92		0.59	0.37				0.03		0.69

Intersection Summary	
Area Type:	Other

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	244	500	0	1415	133	520	0	716	0	0	0
Future Volume (vph)	0	244	500	0	1415	133	520	0	716	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			295			1680			96	
Travel Time (s)		18.7			4.5			20.8			2.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	257	526	0	1489	140	547	0	754	0	0	0
v/c Ratio		0.10	0.33		0.32	0.09	0.84		0.66			
Control Delay		4.8	4.2		8.1	0.1	69.9		6.1			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		4.8	4.2		8.1	0.1	69.9		6.1			
Queue Length 50th (ft)		52	210		139	0	269		0			
Queue Length 95th (ft)		55	59		187	0	318		55			
Internal Link Dist (ft)		1152			215			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2554	1583		4625	1583	1508		1647			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.10	0.33		0.32	0.09	0.36		0.46			

Intersection Summary	
Area Type:	Other

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑↑	↱	↰↰		↱↱			
Traffic Volume (vph)	0	486	1216	0	1282	174	739	0	774	0	0	0
Future Volume (vph)	0	486	1216	0	1282	174	739	0	774	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	575		575	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			30	
Link Distance (ft)		1232			669			1680			96	
Travel Time (s)		18.7			10.1			20.8			2.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	496	1241	0	1308	178	754	0	790	0	0	0
v/c Ratio		0.21	0.78		0.31	0.11	0.86		0.77			
Control Delay		12.3	11.2		12.6	0.1	67.3		31.2			
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0			
Total Delay		12.3	11.2		12.6	0.1	67.3		31.2			
Queue Length 50th (ft)		106	152		162	0	391		228			
Queue Length 95th (ft)		155	1237		215	0	435		293			
Internal Link Dist (ft)		1152			589			1600			16	
Turn Bay Length (ft)						220	575		575			
Base Capacity (vph)		2325	1583		4210	1583	1714		1606			
Starvation Cap Reductn		0	0		0	0	0		0			
Spillback Cap Reductn		0	0		0	0	0		0			
Storage Cap Reductn		0	0		0	0	0		0			
Reduced v/c Ratio		0.21	0.78		0.31	0.11	0.44		0.49			

Intersection Summary	
Area Type:	Other

Summary

S.0 SUMMARY

S.1 Project Synopsis

This summary provides a brief synopsis of the Draft Environmental Impact Report (EIR) for the 3Roots San Diego Project, prepared in compliance with the California Environmental Quality Act (CEQA), and includes (1) a description of the Project and its components; (2) the results of the environmental analysis contained within this EIR; (3) the major areas of controversy and issues to be resolved by the decision-makers; and (4) the alternatives to the Project that were considered. This summary does not contain the extensive background and analysis found in the EIR. Therefore, the reader should review the entire EIR to fully understand the Project and its related environmental consequences.

As the CEQA Lead Agency, the City of San Diego (City) has the primary responsibility for evaluating the environmental effects of the Project and is considering approval or disapproval of the Project in light of these effects. As required by CEQA, this EIR: (1) describes the Project, including its location, objectives, and features; (2) describes the existing conditions at the project site and surrounding areas; (3) analyzes the direct, indirect, and cumulative adverse physical effects that would occur to the existing conditions if the Project is implemented; (4) identifies feasible means of avoiding or substantially lessening the significant adverse effects, if available; (5) provides a determination of significance for each impact after mitigation is incorporated; and (6) evaluates a reasonable range of feasible alternatives to the Project that would obtain most of the basic project objectives and avoid or substantially lessen a significant project-related impact.

S.1.1 Project Location and Setting

The project site occupies approximately 413 acres in the central portion of the Mira Mesa Community Plan (MMCP) area in the City. The project site is located east of Camino Santa Fe, approximately halfway between Mira Mesa Boulevard and Miramar Road.

The site has been an active aggregate mining and processing quarry since 1958. Of the approximately 413-acre site, approximately 218 acres have been subject to mining activities and exhibit substantial changes from natural conditions. This mining operation, owned and operated by Hanson Aggregates, was part of a larger mining operation operated by Fenton Materials. Throughout the decades, mining activities were approved under a series of conditional use permits (CUPs), CUP amendments, and affiliated environmental analysis for these CUPs at both the City and State levels. The CUPs not only studied and approved mining activities, but also contemplated "reclamation," or the re-contouring of the site at the conclusion of extraction and processing activities. The latest CUP, amended and approved on September 13, 1990, set a boundary of mining activities, and contemplated all reclamation activities to be implemented at the termination of mining activity. In 2016, the mining operations on the project site ceased. Aggregate processing activities remained until 2018, and reclamation activities are ongoing.

In 1994, the Carroll Canyon Master Plan (CCMP) was developed and approved by the City of San Diego; annexed into the current (at the time) MMCP; and incorporated into the City's General Plan. The Master Plan contemplated a 554-acre, mixed-use development following the completion of mining activities. The Project would implement the final phases of the approved 1994 Carroll Canyon Master Plan.

S.1.2 Project Objectives

The following are the primary objectives of the Project:

1. Provide for the reuse and redevelopment of the former mining site into a vibrant and active infill neighborhood within the Mira Mesa community.

2. Provide for a mix of land uses that promote the City's vision for smart growth by reducing vehicle miles travelled.

3. Address the City's housing supply needs by providing an expanded residential footprint in order to provide 1,800 residential units and allow for a broader range of housing, with a variety of sizes and ownership options that cater to a variety of life stages and include both market rate and for rent, ~~age-restricted,~~ affordable housing consistent with the City's Inclusionary Affordable Housing Regulations ~~(10 percent of total units) options~~.

4. Provide a variety of residential options, including multi-family, detached condos, and single-family detached homes, in close proximity to University Towne Center, Sorrento Valley, and Marine Corps Air Station Miramar, contributing to an improved jobs-housing balance in the area and catering to a diverse set of life stages.

5. Provide a new public community park and other publicly accessible parks, trails, and spaces for a total of approximately 38 acres of new park space.

6. Dedicate over 40 percent of the project site as open space, increasing the City's Multi-Habitat Planning Area (MHPA) and implementing the adopted CUP/Reclamation Plan mandated restoration and enhancement of the degraded Carroll Canyon Creek, which traverses the project site from east to west.

7. Implement a "mobility focused" development with a centralized Mobility Hub for public and private multimodal transportation options.

S.1.3 Project Description

The scope of the Project includes three major elements: a proposed Master Planned Development Permit (MPDP), an amendment to the existing mining CUP/Reclamation Plan, and the relocation/removal of San Diego Gas & Electric (SDG&E) facilities.

MPDP Development

The CCMP calls for the area to be developed with Planned Development Permits (PDPs), consistent with the planning principles in the CCMP. The Project would, therefore, be entitled with a MPDP. The Project is a comprehensively planned community that blends innovative design concepts and new home product types to react to the desires of existing and new demographic groups. The MPDP encompasses multiple parks, plazas, conservation, and public areas that would be comprehensively planned to create a consistent design theme throughout the Project. It contains project-specific standards regarding circulation and mobility, infrastructure, land use regulations, and design guidelines for development, landscaping, parks and open space, and walls and fences. The MPDP Design Guidelines, in concert with the development regulations of the underlying zone, would guide future development within the project site.

The Project would include residential land uses, designed at varying densities to cater to a variety of life stages: uses would include 28.1 acres of single-family residential, and 66.2 acres of single- and multi-family residential, all connected by 44.96 acres of on-site roads and parkways. The Project also would include a mixed-use district defined in the MPDP as the “Community” or “Root Collective.” The Community Collective would include 12.6 acres of commercial uses, including the proposed Mobility Hub; 12.8 acres of multi-family residential; and parks, open space, and roadways. The 1,800 proposed residential units throughout the project site would vary from a minimum of 5 units/acre up to 73 units/acre, with residential densities decreasing along the edges of the project site. As part of the Community Collective multi-family residential component, the Project would provide ~~180 units (10 percent of the Project's total proposed residential units) as~~ for rent, affordable housing consistent with ~~senior housing to meet~~ the City’s Inclusionary ~~a~~Affordable H~~h~~ousing Regulations~~requirements~~. The Project would also set aside nearly 250 acres of open space, made up of approximately 181.3 acres of natural open space, 38.3 acres (less bus rapid transit irrevocable offer of dedication [BRT IOD]), and approximately 28.6 acres of slopes, enhanced landscape, dedicated brush management zones, and water quality/retention.

Conditional Use Permit/Reclamation Plan Amendment

The project site was an active aggregate mining operation and concrete processing plant from 1958 to 2016, at which time reclamation began. The CUP approved by the City for mining and processing activities has been modified throughout the life of the mine to adjust the boundaries of the resource extraction area. The latest CUP was approved on September 13, 1990 (CUP 89-0585).

Although active mining operations have ceased, an amended Reclamation Plan and CUP are necessary to address changes in the site conditions and the redevelopment plans since 1990, and to complete regulatory closure of the mined lands. The Project proposes an amendment to the existing Reclamation Plan and CUP to modify the Reclamation Plan boundary, adjust grade elevations to align with the proposed development, revise the originally proposed road network to match existing infrastructure, and protect sensitive habitat.

SDG&E Facility Modifications

There are three SDG&E Facility Modifications required for completion of the adopted Reclamation Plan or as a result of the Project:

1. A series of single- and double-circuit overhead east-west 69 kilovolt (kV) system lines would be slightly realigned/replaced and/or converted to underground and relocated within portions of Carroll Canyon Road;
2. The existing overhead north-south double circuit 69kV system along the west side of Camino Santa Fe would remain overhead with some potential pole removal and replacement and an approximately 500-foot realignment to remove the pole near the creek; and

3. The existing SDG&E 69kV/12kV Fenton Substation located within the project site would be decommissioned, taken out of service and removed by SDG&E.

S.2 Summary of Significant Effects and Mitigation Measures that Reduce or Avoid the Significant Effects

Table S-1, *Summary of Significant Impacts and Mitigation*, located at the end of this section, summarizes the results of the environmental analysis completed for the Project. Table S-1 identifies the significant impacts associated with the Project, includes mitigation measures to reduce and/or avoid significant environmental effects, and concludes if the impact would be mitigated to a level below significance with implementation of mitigation measures. The mitigation measures listed in Table S-1 are also discussed within each relevant topic area, and fully contained in Section 11.0, *Mitigation, Monitoring, and Reporting Program* (MMRP).

Based on the evaluations in Chapter 5.0, *Environmental Analysis*, the Project was determined to result in significant or potentially significant impacts related to the environmental resources areas discussed below.

The Project would result in significant direct and/or cumulative transportation/circulation impacts at up to 14 intersections and 16 roadway segments. Some of these impacts would be reduced to below a level of significance through restriping, traffic signal modifications, and other roadway improvements; or the payment of fair share contributions toward these planned roadway improvements. However, after mitigation, the impacts would remain significant and unavoidable or unmitigated/partially mitigated for 6~~5~~ out of 14 intersections as well as all 16 of the roadway segments.

Project operational emissions of carbon monoxide (CO) and respirable particulate matter (PM_{10}) would exceed the daily thresholds set by the City. Operation of the Project could therefore cause potentially significant direct and cumulative regional impacts on air quality. Mitigation would lower CO emissions to a less than significant level, with a small associated reduction in PM_{10}. Additional (more detailed) dispersion modeling of PM_{10} following identification of screening threshold exceedance demonstrates that the impact would fall (substantially) below thresholds set for health effects. Impacts following mitigation would be less than significant.

Project-generated operational noise from the commercial uses (PAs 19 and 20) may result in the exposure of future on-site residents of the multi-family areas of PAs 12, 13, and 14 to noise levels created by the Project that would exceed the City's adopted noise ordinance. In addition, noise from loudspeakers in the northwestern corner of the community park sports fields could also exceed these standards. These impacts would be potentially significant and would require mitigation (NOI-1 and NOI-2) to reduce the impacts to below a level of significance.

Although some areas within the project boundary have been previously impacted and reclaimed under the existing CUP, the Project would result in direct impacts to sensitive upland and wetland habitats that would require on-site mitigation. The Project would also result in impacts to sensitive plant and wildlife species. Impacts would be reduced to below a level of significance through compliance with the City's Multiple Species Conservation Program (MSCP) Subarea Plan and Biology Guidelines and/or species-specific mitigation requirements.

Both the reclamation restoration obligations and the Project would result in direct impacts to jurisdictional resources (i.e., wetlands, waters, and riparian vegetation), which are considered significant. Indirect impacts to jurisdictional resources are not expected through project conformance with the MSCP and adherence with Land Use Adjacency Guidelines requirements. Impacts to jurisdictional wetlands are subject to state and federal permitting and associated mitigation requirements, which would reduce impacts to below a level of significance.

Where grading occurs outside of the previously mined areas (e.g., in focused alluvial areas), impacts to unanticipated cultural resources could occur. Consequently, impacts to historical resources would be potentially significant requiring mitigation (archaeological monitoring). Similarly, impacts to previously unknown Tribal cultural resources would also require monitoring where grading or ground disturbing activities occur outside of the previously mined areas.

Project modeling documents that up- and downstream off-site flood hazards would not be significant (identified levels of rise would be consistent with both City and Federal Emergency Management Agency [FEMA] regulations because the road fill would be outside the regulatory floodway). Nonetheless, due to coordination in progress at the time of public review (specified property owner notifications and endangered species act (ESA) coordination), a conservative assessment of a significant impact was made. Specifically, at the time of public circulation in June 2019, required specified property owner notices had not been approved and sent. These coordination letters required by FEMA were sent to 10 upstream and downstream property owners on July 24, 2019 by certified mail, which documentation was submitted to FEMA and satisfied that requirement. Also, coordination continued with the USFWS and CDFW. As a result, the procedural and technical efforts that must be completed by the City prior to Final EIR review have now been accomplished. FEMA will make a ~~Relative to FEMA regulations, however, this~~ formal finding ~~must be made by FEMA staff, which is documented~~ through a Conditional Letter of Map Revision (CLOMR), which will be received following EIR certification and receipt of the supporting 404 permit, 401 certification, and 1602 streambed alteration agreement, as appropriate. Because modeling demonstrates compliance with technical design requirements, and because required coordination appropriate prior to the Final EIR has now been completed, this impact has been changed to less than significant.~~At the time of Draft EIR distribution, the CLOMR had not yet been received. Because upstream and downstream impacts have not been fully verified by FEMA, a significant unmitigated impact is identified.~~

S.3 Areas of Controversy

The Project's Notice of Preparation (NOP) was originally distributed on April 26, 2018 for a 30-day public review and comment period. The original notice was rescinded due to a change in the date of the Scoping Meeting, with a revised notice issued on May 4, 2018. The public scoping meeting was held on May 23, 2018. Public comments were received on the NOP that reflect controversy related to several environmental issues. The NOP, public scoping meeting transcript, and comment letters are included in this EIR as Appendix A.

A total of 14 letters were received during the NOP period, including 1 letter from a federal agency (U.S. Department of Fish and Wildlife [USFWS]), 5 letters from state agencies (California Department of Transportation [Caltrans], State Clearinghouse [2 letters], California Department of Fish and Wildlife [CDFW], and Native American Heritage Commission [NAHC]), 1 letter from a regional agency (San Diego Association of Governments [SANDAG]), 1 letter from a special interest group (San Diego County Archaeological Society), 2 letters from Native American tribes (Rincon Band of Luiseño Indians and the Viejas Band of Kumeyaay Indians), and 4 communications from members of the public. In addition, two people spoke at the public scoping meeting, but did not leave written comments.

Issues raised in response to the NOP include concerns related to sufficiency of park acreage, biological resources (Carroll Canyon Creek proximity), traffic volumes, cultural resources, Tribal cultural resources, Transportation Demand Management (TDM) programs, the potential for Bus Rapid Transit (BRT), and other multi-modal and transportation related comments. Each of these issues is analyzed as appropriate within this EIR.

S.4 Issues to be Resolved by the Decision-Making Body

The City Council must review the Project and this EIR and determine if the Project or one of the alternatives presented in Chapter 10.0, *Project Alternatives*, should be approved and implemented. If the Project is selected for adoption, the City Council will be required to certify the Final EIR, determine whether and how to mitigate significant impacts, and adopt associated Findings pursuant to CEQA Guidelines Section 15091 for the following significant impacts identified in the EIR:

- Transportation and Circulation
- Air Quality
- Noise
- Biological Resources
- Historical Resources
- Tribal Cultural Resources
- ~~Hydrology and Water Quality (Hydrology only)~~

Furthermore, a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093 would be required for transportation/circulation and hydrological significant and unmitigated impacts.

S.5 Project Alternatives

Section 15126.6 of the CEQA Guidelines requires the discussion of “a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” and evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to “focus on alternatives to the project or its location, which are capable of avoiding or substantially lessening any significant effects of the project,” even if these alternatives would impede to some degree the attainment of the project objectives.

In addition to the Project, the EIR addresses in detail the following three alternatives per the above-noted CEQA requirements: the No Project (Adopted Reclamation Plan) Alternative; the No Project (Carroll Canyon Master Plan) Alternative; and the Increased Employment Alternative. These alternatives are summarized below, and evaluated in full in Chapter 10.0, *Project Alternatives*, of this document. A summary of the alternative impacts compared with those of the Project is included in Table S-2, *Comparison of Project and Alternative Impacts*.

S.5.1 No Project (Adopted Reclamation Plan) Alternative

Section 15126.6(e) of the CEQA Guidelines provides that the "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if a project were not approved, based on current plans and consistent with available infrastructure and community services. A conventional "No Project (No Development) Alternative" is not feasible in this case due to ongoing reclamation grading required under the adopted Reclamation Plan associated with CUP No. 89-0585. Instead, this alternative assumes that reclamation and the other requirements of CUP No. 89-0585 have been completed and fulfilled. This alternative assumes that no further development occurs after the Reclamation Plan has been fully implemented. This alternative thus represents the environmental baseline against which the Project is analyzed elsewhere in the EIR. A full discussion of the project's baseline (which would constitute the No Project condition) is included within Section 2.2.4 of this EIR, with the Adopted Reclamation Plan shown on Figure 2-5b.

Site reclamation according to the CUP includes the following: dedication of approximately 181 acres of open space (including revegetated areas), general re-grading and re-contouring the areas previously mined, planting/hydroseeding the site with a native species palette, riparian enhancement and riparian revegetation of Carroll Canyon Creek, enhancement of disturbed portions of Rattlesnake Creek, and monitoring and maintenance of the site for two years to ensure plant growth establishment and success.

It should be noted that the existing Reclamation Plan and CUP do not specify acreages, vegetation-type classifications, or specific actions of enhancement or revegetation of Carroll Canyon Creek. The underground pipe that exists between the eastern and central segments of the Carroll Canyon Creek would be removed and replaced with a pipe to convey a 100-year storm event and the site would be graded to allow for future development. The existing on-site MHPA boundaries would remain the same (i.e., no net increase) and the MHPA would cover less than 10 percent of the stream corridor (i.e., approximately 600 linear feet of the roughly 6,500 linear feet on site). Additionally, disturbed habitats and non-native habitats within the existing MHPA that were not impacted under the CUP and are not addressed through existing CUP obligations would remain in their current state, without restoration.

In conclusion, under this alternative CUP No. 89-0585-focused existing obligations to reclaim (regrade and restore) habitats on site would be completed; however, no residential or commercial development would be constructed, and the SDG&E infrastructure upgrades would not be completed. Grading for the extension of on-site Carroll Canyon Road would occur but the road would not be completed, and the existing Carroll Canyon Road east of the project (built subsequent to the Reclamation Plan mapping) would not connect with on-site right-of-way (ROW), which would result in a future lack connectivity with other arterial roads and freeways. Ultimately, the implementation of site development as envisioned by the approved community planning documents would not be achieved.

The No Project (Adopted Reclamation Plan) Alternative would avoid significant and unmitigated traffic impacts; as well as significant but mitigated impacts to air quality, historical resources, Tribal cultural resources, and noise. Less than significant impacts would be further lessened under this alternative for public utilities and public services and facilities. Less than significant ~~W~~wildfire hazards and hydrology could potentially be slightly increased over Project implementation~~; and hydrology impacts related to receipt of a CLOMR would be significant and unmitigated, similar to the Project~~. Water quality impacts would be less than significant due to regulatory requirements, ~~also~~ similar to the Project. This alternative would not require plan amendments, but would be less preferred than the Project with regard to implementing the environmental goals and objectives of applicable land use plans. With regard to air quality, GHG, and energy, this alternative would result in reduced impacts on a localized, site-specific basis. It would not, however, implement strategies designed to reduce these impacts on a regional, long-term basis.

As a result, the No Project (Adopted Reclamation Plan) Alternative would not provide for the reuse and redevelopment of the former mining site with a mix of land uses and a variety of residential options that promote smart growth while addressing the City's housing supply needs ~~with an expanded residential footprint by providing up to 1,800 residential units, including 10 percent affordable units~~ (Objectives 1 through 4). In addition, this alternative would not provide a new public community park (Objective 5); nor would it implement a mobility focused development with a centralized mobility hub (Objective 7). Ultimately, the implementation of site development as envisioned by the approved community planning documents would not be achieved. Although the existing Reclamation Plan would preserve a large area of Rattlesnake Canyon and other open space areas; and, thus, meet Objective 6, it is noted that because a portion of Carroll Canyon Creek would still be carried by pipe rather than being a surface, open flowing feature, as proposed by the Project, subsequent growth of riparian species and provision of wildlife habitat benefits through increased variety/forage in that area would not occur.

S.5.2 No Project (Carroll Canyon Master Plan) Alternative

This alternative would implement the project envisioned by the 1994 CCMP (Figure 10-1, *1994 Approved Master Plan*). The CCMP is the governing planning document for the project site, and as such, is discussed in the Project Description (Chapter 3.0). Table 3-3 compares the 1994 CCMP to the Project. As shown therein, both scenarios would include a maximum of 1,800 residential units, a transit stop or station, and a minimum of approximately 250 acres of open space, parks, and trails (including slopes, basins, and brush management areas). Both plans include a large percentage of the housing as medium density residential, but the Project includes approximately 28 acres (185 units) of low-density residential, allowing for a range of housing options.

The 1994 Carroll Canyon alternative would not build a community sports park; rather, 52 acres of industrial would be built. The industrial land use in the CCMP being replaced by the community park in the Project is not designated as Prime Industrial Lands in the City of San Diego's General Plan. The CCMP includes a 40-acre mixed-use core with less than 100 units in the core, a much lower density alternative in the center of the site, whereas the Project includes 12.8 acres of residential mixed-use and 12.6 acres of non-residential mixed-use. The parks land use of the 1994 Master Plan would be

20 acres in total while the multiple parks spread throughout the site under the Project would offer a total of approximately 38 acres (less the BRT IOD) of active and passive parkland, almost doubling the park space provided in the approved 1994 CCMP for the same number of residents.

This alternative would have a generally similar (e.g., number of homes as well as commercial uses) intensity of land uses as the Project. It is noted, however, that the alternative includes industrial uses within the alternative that would be converted to park uses under the Project. Those industrial uses would result in increased traffic and related vehicular emissions over the Project. The Project assessment of significant and unmitigated direct and cumulative transportation/circulation impacts would remain, and the magnitude of the effects addressed under that significance assessment would be incrementally increased. ~~The significant unmitigated hydrology impact related to CLOMR receipt also would be similar to the Project.~~ While Project impacts related to air quality would be reduced to below a level of significance, it is anticipated that this alternative would result in significant and unmitigable impacts related to emissions of CO. Potentially significant, but mitigable, impacts related to noise, and historical and tribal cultural resources would be similar to the Project. Impacts that are concluded to be less than significant for the Project, such as energy use and GHG emissions, also would be less than significant, but (again) would be incrementally increased over project effects because of the inclusion of industrial uses rather than a community park. This alternative would have ~~a~~ similar less than significant impacts with regard to geology and soils, health and safety, public services and facilities, public utilities, and hydrology and water quality.

The No Project (Carroll Canyon Master Plan) Alternative would provide for the reuse and redevelopment of the former mining site with a mix of land uses and a variety of residential options that promote smart growth while addressing the City's housing supply needs with an expanded residential footprint by providing up to 1,800 residential units (Objectives 1 through 4). This alternative would not provide single-family detached housing or a variety of housing types to accommodate all the life stages. Although the CCMP did not specify, City requirements regarding affordable housing make it likely that such housing also would be provided under implementation of this alternative ~~implementation~~. Thus, it would meet O~~o~~bjectives 1 through 4 similar to the Project. While this alternative would provide two passive parks and a 10-acre neighborhood park, it would not include the additional Project-proposed community park, so O~~o~~bjective 5 would also be met to a lesser degree. The Project and this alternative would both dedicate over 181 acres of natural open space and implement a mobility hub (Objectives 6 and 7 respectively).

S.5.3 Increased Employment Alternative

The Increased Employment Alternative proposes a reduced intensity which maintains industrial lands. This alternative was designed to generate less traffic in order to reduce the Project's off-site traffic impacts as well as related pre-mitigation significant air quality impacts (CO and PM_{10}) to below a level of significance. This results from reducing driveway trips by 38 percent (the projections of trip numbers when detailed assessment of potential reductions relating to pass-by/shared trip reductions accruing to the Project are not included).

The Increased Employment Alternative therefore addresses both a "reduced project" alternative and the Project's replacement of the industrial lands south of Carroll Canyon Road with a community park. As shown on Figure 8-3, *Increased Employment Alternative*, this alternative would retain the Project's alignment of Carroll Canyon Road, but would provide industrial land both north and south of the roadway. In total, the industrial land would include up to 622,000 square feet on 69.3 acres. In addition to the industrial uses, this alternative would provide fewer acres of parkland (32.8 versus project-proposed 38.3 gross acres of parkland), and in a different location as compared to the Project. There would also be 85.3 acres of residential uses (312 units), up to 33,174 square feet of commercial uses on 3.6 acres, over 181 acres of natural open space, and a 1.5-acre Mobility Hub. Creek restoration would be similar to that proposed for the Project, including assuming engineered design allowing surface flow with associated habitats.

Due to the reduction in intensity and trip generation, the Increased Employment Alternative would reduce significant transportation/circulation (traffic congestion) impacts, although traffic impacts would remain significant and unmitigated/unavoidable. Potentially significant, but mitigable, impacts related to air quality, noise, historical resources, and Tribal cultural resources would be similar to the Project. Impacts that are concluded to be less than significant for the Project, such as energy use, GHG emissions, and public services, would be reduced as compared to the Project because of the 38 percent reduction in driveway trips and change in development specifics. Public utilities effects would be greater than the Project, but still less than significant overall. The alternative would be similar to the Project with regard to ~~significant and unmitigated hydrology impacts related to CLOMR receipt, and~~ less than significant impacts related to geology and soils, health and safety, and hydrology and water quality.

The Increased Employment Alternative would provide for the reuse and redevelopment of the former mining site with a mix of land uses that promote smart growth while addressing the City's housing supply needs by providing up to 312 residential units (Objectives 1 through 4). However, by providing only 312 units instead of 1,800, ~~and with only 31 affordable units instead of 180,~~and providing proportionally fewer affordable housing units, it would meet Objectives 1 through 4 to a lesser extent as compared to the Project. This alternative would provide a community park (32.8 acres), so Objective 5 would be met almost to the same degree as the Project. The Project and this alternative would both implement over 181 acres of natural open space (Objective 6) and both would provide a mobility hub (Objective 7).

S.5.4 Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, another environmentally superior alternative must be identified.

Based on a comparison of the overall environmental impacts for the described alternatives, the No Project (Adopted Reclamation Plan) Alternative is identified as the environmentally superior alternative. This alternative would not result in any contribution to significant and unmitigated impacts related to transportation/circulation which would occur with the Project, as well as reduce impacts for a number of other issues (refer to Table S-2, *Comparison of Project and Alternative Impacts*). The No Project (Adopted Reclamation Plan) Alternative does not meet any objectives of the Project (except for Objective 6), however.

Of the remaining alternatives, the Environmentally Superior Alternative is the Increased Employment Alternative as it could reduce transportation, air quality, GHG, energy, noise, and public services and facilities impacts compared to the Project, while meeting all of the objectives, although some would be met to a lesser degree. The Increased Employment Alternative would meet Objectives 1 through 4 but to a lesser extent as compared to the Project and would meet Objective 5 to almost the same degree as the Project. Both the Project and the Increased Employment Alternative would implement over 181 acres of natural open space (Objective 6) and provide a mobility hub (Objective 7).

Table S-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
TRANSPORTATION/CIRCULATION		
Transportation/Circulation Standards: *Issue 1: Would the Project result in traffic generation in excess of specific community plan allocation?* *Issue 2: Would the Project result in an increase in projected traffic which is substantial in relation to the existing traffic load and capacity of the street system?* *Issue 3: Would the Project result in the addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp?* *Issue 4: Would the Project have a substantial impact upon existing or planned transportation systems?*		
Near-Term (2021) Significant direct impacts would occur at 6 intersections and 12 roadway segments with implementation of Phase 1 of the Project.	***TRA-1 Pacific Heights Boulevard and Mira Mesa Boulevard (TIA #3, MM 1.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide three left-turn lanes and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee shall convert northbound and southbound signal phasing from protected left turns to split phasing and remove the pedestrian crosswalk on the east leg of the intersection satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy. ***TRA-2 Camino Santa Fe and Carroll Road (TIA #16, MM 2.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of Carroll Road and the construction of a second eastbound left turn lane, a dedicated westbound right turn lane, and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee must convert eastbound and westbound signal phasing from split to protected left turns satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 266th Equivalent Dwelling Unit (EDU) for total Project completion.	Intersection impacts would be less than significant or significant and unmitigated with 2021 mitigation.[1]

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[1] TRA-1 through TRA-4 would reduce significant impacts at 4 of the 6 impacted intersections to less than significant in 2021; however, impacts at the remaining 2 intersections would remain significant and unavoidable. Because implementation of TRA-2, TRA-3, and TRA-4 requires acquisition of real property interests from third parties, and that acquisition is beyond the ability of the applicant to ensure in a timely manner the impact is identified as significant and unmitigated. Also, pending construction of on-site Carroll Canyon Road and connection to the built segment to the east, impacts to the intersection Camino Santa Fe/Mira Mesa Boulevard would be significant and unmitigated in the short-term. Upon implementation of the on-site portion of Carroll Canyon Road, impacts to the Camino Santa Fe/Mira Mesa Boulevard intersection would be less than significant until 2050 build out.

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	TRANSPORTATION/CIRCULATION (cont.)	
	TRA-3 Camino Santa Fe and Miramar Road (TIA #29, MM 2.0) Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one shared left-turn/through lane and three right-turn lanes, and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy. ***TRA-4 Flanders Drive and Camino Santa Fe (TIA #38, MM 8.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of the northbound approach to construct a dedicated right-turn lane with a Class II bicycle lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 57th EDU. ***TRA-5 Carroll Road from Rehco Road to Camino Santa Fe (TIA Segment Q, MM 5.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond improvements to address the existing signal communications gap at the Carroll Road/Rehco Road intersection by installing signal communications equipment to connect to the Carroll Road/Camino Santa Fe intersection. The needed improvements will include trenching and installing conduit and cable along Carroll Road between Rehco Road and Camino Santa Fe satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy. ***TRA-6 Miramar Road from Nobel Drive to Eastgate Mall (TIA Segment Y, MM 6.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Nobel Drive and Eastgate Mall. Additionally, the owner/permittee shall install one closed circuit television (CCTV) camera, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.	All roadway segment impacts would remain significant and unavoidable with 2021 mitigation.

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	TRANSPORTATION/CIRCULATION (cont.)	
	TRA-7 Miramar Road from Eastgate Mall to Camino Santa Fe (TIA Segment Z, MMs 7.A, 7.B and 7.C) Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the construction of a raised median where existing gaps in the median currently exist. All median improvements shall be completed and operational prior to occupancy of the 145th EDU. Additionally, prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the for the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Eastgate Mall and Camino Santa Fe. Two CCTV cameras shall be installed as well. Furthermore, the owner/permittee shall install Ethernet convert cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Santa Fe and Carroll Road to complete the communication network to Camino Ruiz. An additional two CCTV cameras also shall be installed. Improvements shall be completed satisfactory to the City Engineer. All Ethernet, camera and communications upgrades shall be completed and operational prior to first occupancy. ***TRA-8 Miramar Road from Carroll Road to Camino Ruiz (TIA Segment AA, MMs 8.A and 8.B)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Carroll Road and Camino Ruiz. Two CCTV cameras shall be installed as well. All Ethernet, camera and communication upgrades shall be completed and operational prior to first occupancy. Additionally, the owner/permittee shall assure by permit and bond the construction of a 205-foot long, 4-foot wide raised median approximately 115 feet east of Cabot Drive and 300-foot long, 16-foot wide raised median approximately 685 feet west of Camino Ruiz. All improvements shall be completed satisfactory to the City Engineer. All median improvements shall be completed and operational prior to occupancy of the 375th EDU.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	TRANSPORTATION/CIRCULATION (cont.)	
	TRA-9 Miramar Road from Camino Ruiz to Clayton Drive-Mitscher Way (TIA Segment AB, MM 9.0) Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Ruiz and Mitscher Way, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy. ***TRA-10 Miramar Road from Clayton Drive-Mitscher Way to Black Mountain Road (TIA Segment AC, MM 10.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Mitscher Way and Black Mountain Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy. ***TRA-11 Miramar Road from Black Mountain Road to Kearny Villa Road (TIA Segment AD, MM 11.0)*** Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Black Mountain Road and Kearny Villa Road, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	TRANSPORTATION/CIRCULATION (cont.)	
Near-Term (2025) Significant direct impacts would occur at 11 intersections and 12 roadway segments with implementation of both phases of the Project.	***TRA-12 Eastgate Mall and Miramar Road (TIA #26, MM 12.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the north leg of the intersection to provide a dedicated southbound right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,756th EDU. ***TRA-13 Camino Santa Fe and Miramar Road (TIA #29, MM 13.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the widening of the east leg of Camino Santa Fe and Miramar Road to construct a westbound right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,232nd EDU. ***TRA-14 Camino Ruiz and Miramar Road (TIA #31, MM 14.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to convert the shared through/right turn lane to an exclusive through lane, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,562nd EDU. ***TRA-15 Mitscher Way-Clayton Drive and Miramar Road (TIA #32, MM 15.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one left turn lane and one shared through/right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,652nd EDU.	Intersection impacts would be less than significant or significant and unmitigated with 2025 mitigation.[2]

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[2] TRA-2, TRA-12 through TRA-16, and TRA-17 through TRA-19 would reduce significant impacts at 8 of the 11 impacted intersections to less than significant in 2025; but impacts at the remaining 3 intersections would remain significant and unavoidable. TRA-13 and -18, when implemented, would result in less than significant impacts for the Camino Santa Fe intersection with Miramar Road and Miralani Drive intersection with Camino Ruiz. Due to need for acquisition of real property interests from third parties, the impact is identified as significant and unmitigated as described for 2021.

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
TRANSPORTATION/CIRCULATION (cont.)		
	TRA-16 Kearny Villa Road and Miramar Road (TIA #34, MM 16.0) Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to provide a dedicated right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,460th EDU. ***TRA-17 Carroll Canyon Road and Camino Ruiz (TIA #48, MM 17.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of a second northbound left turn lane on northbound Camino Ruiz and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,922nd EDU. ***TRA-18 Miralani Drive and Camino Ruiz (TIA #49, MM 18.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the northbound approach to provide a second left-turn lane. The owner/permittee shall also widen the west leg of the intersection to provide two westbound receiving lanes and install the necessary associated traffic signal modifications. All improvements shall be completed satisfactory to the City Engineer. Widening improvements shall be completed and operational prior to occupancy of the 1,214th EDU. ***TRA-19 Activity Road and Camino Ruiz (TIA #50 MM 19.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the construction of a right-turn lane on the northbound approach of the intersection and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,212nd EDU.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
TRANSPORTATION/CIRCULATION (cont.)		
	TRA-20 Miramar Road from Kearny Villa Road to Kearny Mesa Road Prior to the issuance of the first building permit for Phase 2, the owner/permitted shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Kearny Villa Road and Kearny Mesa Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,547th EDU.	All roadway segment impacts would remain significant and unavoidable with 2025 mitigation.
Cumulative (2050) Significant cumulative impacts would occur at 11 intersections and 13 roadway segments with implementation of both phases of the Project.	In addition to mitigation listed previously for the near-term 2021 and near-term 2025 scenarios (TRA-1 through TRA-20), the following mitigation would be required. ***TRA-21 Camino Santa Fe and Mira Mesa Boulevard (TIA #8, MM 21.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a fair share contribution of 27.6 percent toward the construction of a second westbound left turn lane, which would include widening of the west left leg of the intersection, restriping the eastbound lanes to align lanes with proposed improvement, and installation of associated traffic signal modifications, satisfactory to the City Engineer. ***TRA-22 Kearny Villa Road and Miramar Road (TIA #34, MM 22.0)*** Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a 12.1 percent fair share contribution toward PFFP Project T-89 to widen the east and west legs to construct a second eastbound right turn lane, satisfactory to the City Engineer.	Intersection impacts would be less than significant or significant and unmitigated with prior and 2050 mitigation.[3] All roadway segment impacts would remain significant and unavoidable with prior mitigation.

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[3] Mitigation measures TRA-1, TRA-4, TRA-12, TRA-14, TRA-15, and TRA-22 would reduce significant impacts at ~~6~~ 5 intersections to less than significant in 2050; however, impacts at ~~5~~ 6 intersections would remain cumulatively significant and unavoidable. ~~As noted above~~Mitigation measure, TRA-4, ~~and -13,~~ when implemented, would result in less than significant impacts for the ~~Miramar Road~~ intersection~~s with~~ of Camino Santa Fe and ~~Miralani~~ Flanders Drive. This is also true for the intersection of Camino Santa Fe and Miramar Road. In addition, physical constraints restrict any further widening. Because mitigation implementation requires acquisition of real property interests from third parties, the impact is identified as significant and unmitigated, as described above for 2021.

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
AIR QUALITY		
Air Quality Standards: *Would the Project result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?*		
Project emissions of CO and PM_{10} during operation would exceed initial daily thresholds set by the City.	***AQ-1 Use of Electrically Powered Landscape Equipment*** Electric receptacles/outlets shall be installed at the exterior of all single-family units, all multi-family buildings (including those with affordable units), and all common area buildings, so that homeowners and landscape contractors hired by the homeowners' association may utilize electrically powered lawnmowers, leaf blowers, and chainsaws. Project plans shall include: (1) all necessary receptacles/outlets; and (2) a note that states "All landscape maintenance contracts provided by the applicable homeowners' association must require that landscape contractors use electrically powered lawn mowers, leaf blowers, and chain saws." City staff must verify both requirements prior to approval of the final plans.	Less than significant
NOISE		
Potential Increase in Ambient Noise *Would the proposed Project result in or create a significant increase in the existing ambient noise levels?*		
Project-generated noise from public address systems associated with sports fields would potentially exceed the allowable ordinance levels and impacts are considered potentially significant.	***NOI-1 Community Park Sports Field Noise Reduction*** Noise levels from the community sports fields shall not exceed City of San Diego noise standards for multi-family housing at the property line. Prior to approval of the final plans, potential noise reduction measures include the following two options: • Option 1: Prohibit public address systems. • Option 2: Provide an installation plan to show noise reduction measures such as multiple speakers mounted on and in the bleachers with directional speakers pointing into the field area away from the residential areas with a programmable (lockable) system volume level limit. A final layout analysis shall be required to show compliance with the area for the planned hours of operations, sufficient to comply with the noise ordinance and as approved by City Development Services Department review.	Less than significant

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
NOISE (cont.)		
Operational Noise: *Would the Project result in exposure of people to noise levels created by the Project which exceed the City's adopted noise ordinance and/or the City's Significance Determination Thresholds?*		
Project-generated operational noise from the commercial uses (PA-19 and PA-20) may result in the exposure of future on-site residents of the multi-family areas of PA-12, PA-13, and PA-14 to noise levels created by the Project that would exceed the City's adopted noise ordinance.	***NOI-2 Commercial Area Noise Analysis*** Prior to issuance of building permits for Phase 2, a noise analysis shall be completed to assess operational noise sources from the commercial area within PA-19 and PA-20 (including, but not limited to, HVAC units, loading docks [back up alarms], trash compactors, music [e.g., from outdoor dining areas and breweries], public address system noise [e.g., from food trucks], vehicular traffic, and conversational crowd noise [e.g., from outdoor dining areas, pop-up retail, and food trucks]) and their noise impacts to the nearby multi-family residences in PA-12, PA-13, and PA-14. Appropriate noise attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the City Noise Ordinance limits between a commercial zone (PA-19 and PA-20) and a multi-family residential zone (PA-12, PA-13, and PA-14) of 60 dBA from 7:00 a.m. to 7:00 p.m., 55 dBA from 7:00 p.m. to 10:00 p.m., and 52.5 dBA from 10:00 p.m. to 7:00 a.m. Methods for ensuring compliant interior noise levels may include, but not be limited to, the following: • Install parapet walls around rooftop commercial HVAC units that are of a height above the top of the equipment or surround ground-mounted HVAC units with a commercial absorptive noise barrier system to break the line-of-sight; • Orient loading docks and trash compactors so that they do not have a line-of-sight to the multi-family residences; • Orient outdoor performance areas or exterior doors for venues playing amplified music so that they do not have a line-of-sight to residential areas; • Prohibit loudspeakers and horns on food trucks; and • Prohibit the use of portable generators or continuously idling engines by food vendor trucks.	Less than significant

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
BIOLOGICAL RESOURCES		
Biological Resources: *Issue 1: Would the project result in a substantial adverse impact, either directly or through habitat modification, on any species identified as a candidate, sensitive or special status species in the MSCP or other local or regional plans, policies or regulations, or by CDFW or USFWS?* *Issue 2: Would the project result in a substantial adverse impact on any Tier I, Tier II, Tier IIIA, or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development Code or other sensitive natural community identified in local or regional plans, policies or regulations, or by CDFW or USFWS?* *Issue 3: Would the project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pools, riparian areas, etc.) through direct removal, filling, hydrological interruption, or other means?*		
Impacts to, 7.~~5~~ 6 acres of Tier II, IIIA, and IIIB habitats, and 0.18 acre of wetlands, would be significant. Impacts to sensitive habitats could also result in significant impacts to sensitive wildlife species within that habitat. A total of 0.18 acre of direct impacts to wetlands jurisdictional to the City, Regional Water Quality Control Board, and California Department of Fish and Wildlife, as well as 0.01 acre of impacts to U.S. Army Corps jurisdictional unvegetated channel, would occur as a result of MPDP implementation and would be significant.	***BIO-1*** Prior to issuance of the first grading permit within ease phase of development, the Project shall provide a Temporary Covenant of Easement/Irrevocable Offer~~s~~ of Dedication (IOD~~s~~) for MHPA land to be dedicated in fee title to the City and an IOD ~~Covenant of Easement (COE)~~ for MHPA land remaining in private ownership. The first IOD shall be set over 125.65 acres addressing adopted CUP and Reclamation Plan open space at the time of the Phase 1 Final Map. The second IOD shall be placed over 24.45 acres at the time of the Phase 2 Final Map prior to impacts to jurisdictional wetlands/waters (grading of Phase 2), addressing the remaining MHPA lands along Carroll Canyon Creek. The combined COE (150.1 acres of open space, including mitigation of ~~6.86~~7.77 acres for project-related impacts and 143.24 acres of adopted CUP and Reclamation Plan Area)~~. This mitigation~~ is depicted as "MHPA Conserved Lands" in Figure 24 of the Biological Technical Report (EIR Appendix G). The remaining adopted CUP and Reclamation Plan open space and project-related open space along Carroll Canyon Road (1.58 acres) and along the southern property boundary (29.32 acres) will be owned and maintained by the HOA. Impacts to ~~4.84~~4.93 acres of Tier II habitat (i.e., Diegan coastal sage scrub, baccharis scrub, coastal sage scrub–chaparral transition, and upland restoration), and 2.66 acres of Tier III habitat (i.e., chamise chaparral, southern mixed chaparral, and non-native grassland) shall be mitigated in accordance with ratios provided in Table 3 of the City's Biology Guidelines. Tier II and Tier III mitigation shall be accomplished through on-site preservation comprising a minimum of ~~6.32~~6.41 acres of upland habitats (i.e., Tier II and Tier III) within the MHPA. This will be accomplished in Rattlesnake Canyon as part of the larger 212.45 acres of open space dedication. (Note that the project will dedicate acres in excess of what is required for mitigation, which will constitute "surplus").	Less than significant

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	Project impacts to 0.18 acre of City wetland habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre; as prescribed by ratios in Table 2A of the City's Biology Guidelines. City wetland mitigation shall be accomplished on site within the MHPA (i.e., Carroll Canyon Creek) through in-kind wetland habitat restoration and shall incorporate a minimum of 0.18 acre of wetland habitat re-establishment for a no-net loss of City wetland habitat. This City wetland mitigation shall be implemented in accordance with the Habitat Reclamation and Mitigation Plan. ***BIO-2 Resource Protection During Construction*** (To be applied in all project biological open space edge locations) **I. Prior to Construction** A. Biologist Verification: The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project. B. Preconstruction Meeting: The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage. C. Biological Documents: The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	D. BCME: The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocols), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents. E. Avian Protection Requirements: To avoid any direct impacts to raptors and/or any native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/ buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	F. Resource Delineation: Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site. G. Education: Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.). **II. During Construction** A. Monitoring: All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on “Exhibit A” and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	B. Subsequent Resource Identification: The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species-specific local, state or federal regulations have been determined and applied by the Qualified Biologist. **III. Post Construction Measures** A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion. ***BIO-3 Revegetation/Restoration Mitigation Plan*** (To be implemented within Carroll Creek) **I. Prior to Permit Issuance** A. Land Development Review (LDR) Plan Check 1. Prior to Phase 2 NTP or issuance for any construction permits associated with Phase 2, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to 0.18 acre of City Wetlands habitat (i.e., 3:1 ratio totaling 0.54 acre of City wetlands mitigation [riparian scrub] within the MHPA) has been shown and noted on the appropriate landscape construction documents. The Landscape Construction Documents (LCDs) and specifications must be found to be in conformance with the (Habitat Reclamation and Mitigation Plan) prepared by HELIX Environmental Planning (~~May~~ July 2019), the requirements of which are summarized below.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	B. Revegetation/Restoration Plan(s) and Specifications 1. LCDs shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation and erosion control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below. 2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2012). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City). 3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable, shall be responsible to ensure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120-day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
BIOLOGICAL RESOURCES (cont.)		
	a. The RMC shall be responsible for the maintenance of the wetland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a monthly basis throughout the plant establishment period. b. At the end of the 120-day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC. c. MMC shall provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program. d. Existing indigenous/native species shall not be pruned, thinned or cleared in the revegetation/mitigation area. e. The revegetation site shall not be fertilized unless otherwise approved by MMC and at the direction of the PQB. For example, slow release fertilizer application is typically acceptable to container plantings if the planting area is sterile, exposed subsoil, or fill. f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB. g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible. h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off site in a legally acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	C. Letters of Qualification Have Been Submitted to ADD 1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet shall be updated annually. 2. MMC shall provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project. 3. Prior to the start of work and throughout implementation, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project. 4. PBQ shall also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training. **II. Prior to Start of Construction** A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings 1. Prior to beginning any work that requires monitoring: a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC. c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the project, including site grading preparation. 2. Where Revegetation/Restoration Work Will Occur a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11”x 17” format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation. b. PQB shall coordinate with the construction superintendent to identify appropriate Best Management Practices (BMPs) on the RRME. 3. When Biological Monitoring Will Occur a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur. 4. PQB Shall Contact MMC to Request Modification a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	III. During Construction A. PQB or QBM Present During Construction/Grading/Planting 1. The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with work-limits demarcation, clearing/grubbing, and grading which could result in impacts to sensitive biological resources as identified in the LCD and on the RRME. The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes. 2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVRs shall be faxed or emailed by the CM, PQB, or QBM to the RE the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC. 3. The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology). 4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD. 5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats (i.e., southern riparian woodland, southern willow scrub, Diegan coastal sage scrub, baccharis scrub, coastal sage-chaparral transition, chamise chaparral, southern mixed chaparral, non-native grassland), as shown on the approved LCD.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	6. The PBQ shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly. 7. The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR. 8. PQB shall verify in writing on the CSVRs that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area. 9. The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release. B. Disturbance/Discovery Notification Process 1. If unauthorized disturbances occur or sensitive biological resources are discovered that were not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate. 2. The PQB shall also immediately notify MMC by telephone or email of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	3. The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation). C. Determination of Significance 1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs. 2. MMC shall review this letter report and provide the RE with MMC's recommendations and procedures. **IV. Post Construction** A. Mitigation Monitoring and Reporting Period 1. Five-Year Mitigation Establishment/Maintenance Period a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period. b. Maintenance visits will be conducted at minimum monthly intervals for the first 120-days (i.e., Establishment Period). Subsequently during Year 1 through Year 3, maintenance visits will occur once per month between January to June and two visits between July to December. Quarterly visits will be conducted during Years 4 and 5. c. Maintenance activities will include all items described in the LCD. d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	2. Five-Year Biological Monitoring a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD. b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems. c. After plant installation is complete, qualitative monitoring surveys will occur monthly during the 120-day establishment period. During Years 1 through 3, monthly visit will occur between January to June and two visits between July to December. Quarterly monitoring will occur during Years 4 and 5. Annual monitoring assessments during all 5 Years will occur in August or September. d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years of the five-year monitoring period. e. Quantitative monitoring shall include the use of relevé method and photo points to determine the vegetative cover within the revegetated habitat. Collection of plot data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non-invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth-year criteria and the irrigation has been terminated for a period of the last two years. g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible to verify the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR. B. Submittal of Draft Monitoring Report 1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120-day period to determine mortality of individuals. 2. The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	3. Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within ~~30~~ 60 days following the completion of monitoring. 4. MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report. 5. The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days. 6. MMC shall provide written acceptance of the PQB and RE of the approved report. C. Final Monitoring Reports(s) 1. PQB shall prepare a Final Monitoring upon achievement of the fifth-year performance/success criteria and completion of the five-year maintenance period. a. This report may occur before the end of the fifth year if the revegetation meets the fifth-year performance /success criteria and the irrigation has been terminated for a period of the last two years. b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, MMC will schedule after review of report. c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/ restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
BIOLOGICAL RESOURCES (cont.)		
	BIO-4 Prior to issuance of the first Phase 2 grading permit, consultation with USFWS through the ESA Section 7 process and CDFW through Section 2020.1 of CESA, shall occur for impacts to least Bell's vireo habitat, including jurisdictional habitats. Impact authorization and corresponding mitigation measures prescribed by USFWS and CDFW shall be implemented by the Project. ***BIO-5 Least Bell's Vireo*** (State Endangered/Federally Endangered) This measure applies to potential work in Carroll Canyon Creek and Rattlesnake Creek. If construction activities occur between March 15 and September 15 and within 500 feet of riparian habitat, the following measures shall be implemented to protect least Bell's vireo during construction. Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the following project requirements regarding the least Bell's vireo are shown on the construction plans: No clearing, grubbing, grading, or other construction activities shall occur between March 15 and September 15, the breeding season of the Least Bell's Vireo, until the following requirements have been met to the satisfaction of the City Manager: A. A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the least B~~b~~ell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of construction. if the least Bell's vireo is present, then the following conditions must be met: 1. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; AND	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	2. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least B~~b~~ell's vireo or habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the City Manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of any of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; OR 3. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16). * Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	B. If least Bell's vireo are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the City Manager and applicable Resource Agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows: 1. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above. 2. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary. ***BIO-6*** Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall submit a Property Analysis Record (PAR) or equivalent for the establishment of endowment to generate in-perpetuity habitat management funds for implementation of "3Roots San Diego Project Long-Term Habitat Management Plan" HELIX (~~May~~ September 2019). Long-term funding mechanism is subject to City and Wildlife Agencies approval. ***BIO-7*** Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall identify a Qualified Long-Term Habitat Resource Manager as outlined in "3Roots San Diego Project Long-Term Habitat Management Plan" HELIX (~~May~~ September 2019) subject to City, and Wildlife Agency approval.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	BIOLOGICAL RESOURCES (cont.)	
	BIO-8 Long-Term Habitat Management Plan Prior to the issuance of any grading permit, DSD/ LDR, and/or MSCP staff shall verify the Applicant has accurately represented the areas prescribed for long-term management on the construction plans. A note on the construction plans shall be provided to state: "Perpetual management shall conform to the specifications detailed in the Long-Term Habitat Management Plan for the 3Roots San Diego Project (HELIX Environmental Planning, ~~May~~ September 2019)". Implementation of the long-term management responsibilities shall commence immediately following completion and sign-off of the project's mitigation plan (i.e., Habitat Reclamation and Mitigation Plan prepared by HELIX, ~~May~~ July 2019). ***BIO-9 Other Agency Requirements*** Prior to the issuance of any grading permit for Phase 2, the DSD/Environmental Designee and/or MMC staff shall verify evidence that any other agency requirements or permits have been obtained prior to the preconstruction meeting for Phase 2. The Permit Holder shall submit documentation of those permits or requirements (e.g., include copies of permits, or letters of resolution or other documentation issued by the responsible agency). California Department of Fish and Wildlife (CDFW) - Streambed Alteration Permit, Regional Water Quality Control Board (RWQCB)- 401 Water Quality Certificate, and U.S. Army Corps of Engineers (USACE) – 404 Individual Permit. Project impacts to 0.01 acre of USACE jurisdictional habitat (i.e., unvegetated channel) shall be mitigated at a 3:1 ratio, totaling 0.03 acre. Project impacts to 0.18 acre of CDFW jurisdictional habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre, consistent with the HELIX HRMP (~~May~~ July 2019).	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
HISTORICAL RESOURCES		
Historical Resources: *Issue 1: Would the Project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, or object or site?* *Issue 2: Would the Project result in an impact to existing religious or sacred uses within the potential impact area?* *Issue 3: Would the Project result in the disturbance of any human remains, including those interred outside of formal cemeteries?*		
Implementation of the Project could result in impacts to unanticipated surface or subsurface cultural resources during ground-disturbing activities.	***HIS-1:*** The following measures shall be implemented. **I. Prior to Permit Issuance** A. Entitlements Plan Check 1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process. B. Letters of Qualification have been submitted to ADD 1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation. 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG. 3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.	Less than significant

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	HISTORICAL RESOURCES (cont.)	
	II. Prior to Start of Construction A. Verification of Records Search 1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed. 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. 3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4-mile radius. B. PI Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor. a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	HISTORICAL RESOURCES (cont.)	
	2. Identify Areas to be Monitored a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. b. The AME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation). See EIR Figure 5.10-1, *Monitoring Locations*. 3. When Monitoring Will Occur a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur. b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present. **III. During Construction** A. Monitor Shall be Present During Grading/Excavation/Trenching 1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	HISTORICAL RESOURCES (cont.)	
	2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence. 3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present. 4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC. B. Discovery Notification Process 1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate. 2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery. 3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible. 4. No soil shall be exported off site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	HISTORICAL RESOURCES (cont.)	
	C. Determination of Significance 1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below. a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply. c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required. **IV. Discovery of Human Remains** If human remains are discovered, work shall halt in that area and no soil shall be exported off site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
HISTORICAL RESOURCES (cont.)		
	A. Notification 1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process. 2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone. B. Isolate Discovery Site 1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains. 2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience. 3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin. C. If Human Remains ARE determined to be Native American 1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, ONLY the Medical Examiner can make this call. 2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information. 3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
HISTORICAL RESOURCES (cont.)		
	4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods. 5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if: a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being granted access to the site, OR; b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN c. To protect these sites, the landowner shall do one or more of the following: (1) Record the site with the NAHC; (2) Record an open space or conservation easement; or (3) Record a document with the County. The document shall be titled “Notice of Reinterment of Native American Remains” and shall include a legal description of the property, the name of the property owner, and the owner’s acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
HISTORICAL RESOURCES (cont.)		
	V. Night and/or Weekend Work A. If night and/or weekend work is included in the contract 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting. 2. The following procedures shall be followed. a. No Discoveries. In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day. b. Discoveries. All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery. c. Potentially Significant Discoveries. If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV - Discovery of Human Remains shall be followed. d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made. B. If night and/or weekend work becomes necessary during the course of construction 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin. 2. The RE, or BI, as appropriate, shall notify MMC immediately. C. All other procedures described above shall apply, as appropriate.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
HISTORICAL RESOURCES (cont.)		
	VI. Post Construction A. Preparation and Submittal of Draft Monitoring Report 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the HRG (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met. a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report. b. Recording Sites with State of California Department of Parks and Recreation: The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's HRG, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report. 2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report. 3. The PI shall submit revised Draft Monitoring Report to MMC for approval. 4. MMC shall provide written verification to the PI of the approved report. 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
	HISTORICAL RESOURCES (cont.)	
	B. Handling of Artifacts 1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate. 3. The cost for curation is the responsibility of the property owner. C. Curation of artifacts: Accession Agreement and Acceptance Verification 1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable. 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC. 3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5. D. Final Monitoring Report(s) 1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved. 2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.	

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
TRIBAL CULTURAL RESOURCES		
Issue 1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: *I. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or* *II. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*		
The area is considered sensitive for potential Tribal cultural resources (buried cultural resources and/or subsurface deposits). Therefore, there is the potential for inadvertent discovery of a resource that could be impacted by project implementation.	***TCR-1:*** This mitigation measure requires implementation of all elements of Mitigation Measure *HIS-1*, presented in Section 5.10 of this EIR and immediately above.	Less than significant

Table S-1 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION

Impact	Mitigation	Significance After Mitigation
~~HYDROLOGY AND WATER QUALITY~~		
~~Issue 3: Would the Project develop wholly or partially within the 100-year floodplain identified in the FEMA maps or impose flood hazards on other properties?~~		
~~Project modeling indicates that off-site flood hazards would not be significant under City and FEMA regulations. Relative to FEMA regulations, however, this finding must be made by FEMA staff and documented through the CLOMR. At the time of distribution of this draft EIR, the CLOMR verifying FEMA acceptance has not been received.~~	~~Pending receipt of the CLOMR documenting acceptance of the Project's hydraulic analyses, there is no mitigation for this impact.~~	~~Significant and unmitigated~~

Table S-2
COMPARISON OF PROJECT AND ALTERNATIVE IMPACTS

Environmental Topic	**Proposed Project**	**No Project (Reclamation Plan) Alternative**	**No Project (Carroll Canyon Master Plan) Alternative**	**Increased Employment Alternative**
Land Use	LTS	N	LTS-	LTS
Transportation/Circulation	SU	N	SU= or+	SU= or -
Visual Effects/ Neighborhood Character	LTS	N	LTS-	LTS
Air Quality	SU	N	SU+	LTS-
Greenhouse Gas Emissions	LTS	N	LTS+	LTS-
Energy	LTS	N	LTS+	LTS-
Noise	SM	N	SM	SM-
Geology and Soils	LTS	N	LTS	LTS
Biological Resources	SM	SM	SM	SM
Historical Resources	SM	N	SM	SM
Tribal Cultural Resources	SM	N	SM	SM
Health and Safety	LTS	N	LTS	LTS
Public Utilities	LTS	N	LTS	LTS+
Public Services and Facilities	LTS	N	LTS	LTS-
Hydrology and Water Quality	~~SU Hydro/~~ LTS ~~WQ*~~	~~SU Hydro/~~ LTS ~~WQ~~	~~SU Hydro/~~ LTS ~~WQ~~	~~SU Hydro/~~ LTS ~~WQ~~

SM = significant but mitigable impacts; SU = significant and unmitigated impacts; N = no significant impacts;
LTS = less than significant impacts
- = reduced impact level(s) relative to the Project
+= increased impact level(s) relative to the Project
~~*= A SU is conservatively assessed to the Project as the CLOMR has not yet been issued by FEMA. All other hydrology/ water quality impacts are assessed as less than significant.~~

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADD	Assistant Deputy Director
ADRP	Archaeological Data Recovery Program
ADT	average daily traffic / average daily trips
AEOZ	Airport Environs Overlay Zone
AFG	Accelerated Forecasted Growth
AIA	Airport Influence Area
AICUZ	Air Installation Compatible Use Zone
ALUC	Airport Land Use Commission / airport land use compatibility
ALUCP	Airport Land Use Compatibility Plan
AME	Archaeological Monitoring Exhibit
AMSL	above mean sea level
APCD	Air Pollution Control District
APE	area of potential effect
APZ	Accident Potential Zone
ARRA	American Recovery and Reinvestment Act of 2009
AQTR	Air Quality Technical Report
ASCE	American Society of Civil Engineers
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ATS	advanced treatment systems
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
BI	Building Inspector
BLA	Boundary Line Adjustment
BMP	best management practice
BMZ	brush management zone
BRT	Bus Rapid Transit
BSO	Biologically Superior Option
BTU	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAGN	Coastal California gnatcatcher
CalARP	California Accidental Release Prevention Program
CalEPA	California Environmental Protection Agency
CALGreen	California Green
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan

CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CBC	California Building Code
CCAA	California Clean Air Act
CCMP	Carroll Canyon Master Plan
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CED	California Energy Demand
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFG	California Fish and Game
CESA	California Endangered Species Act
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historic Resources Information System
CHSC	California Health and Safety Code
City	City of San Diego
CLOMR	Conditional Letter of Map Revision
CM	Construction Manager
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COC	constituent of concern
COE	Covenant of Easement
COHA	Cooper’s hawk
COMM	commercial and sport fishing
COWH	coastal whiptail
CPA	Community Plan Amendment
CPIOZ	Community Plan Implementation Overlay Zone
CPUC	California Public Utilities Commission
CSMP	Construction Site Monitoring Program
CRC	California Residential Code
CRHR	California Register of Historical Resources
CSVR	Consultant Site Visit Record
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yard

dB	decibel
dBA	A-weighted decibel
DEH	Department of Environmental Health
DIA	Deferred Improvement Agreement
DMA	Drainage Management Area
DPM	diesel particulate matter
DTCS	Department of Toxic Substances Control
DU	dwelling unit
DWR	California Department of Water Resources

EDU	equivalent dwelling unit
EIR	Environmental Impact Report
EMFAC	Emission Factor Model
EMS	emergency medical services
EMT	emergency medical technician
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPIC	Energy Policy Initiatives Center
ESD	Environmental Services Department
ESL	Environmentally Sensitive Land
EST	estuarine habitat
EV	electric vehicle

F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor area ratio
FBA	Facilities Benefit Assessment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map

GDP	General Development Plan
GHG	greenhouse gas
gpd	gallons per day
GWh	gigawatt hour
GWP	global warming potential

H_2S	hydrogen sulfide
HA	hydrologic area
HAP	hazardous air pollutant
HAZPOWER	Hazardous Waste Operations and Emergency Response
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
HFCs	hydrofluorocarbons
HMBEP	Hazardous Materials Business Emergency Plan

HMD	Hazardous Materials Division
HOA	homeowners' association
HOV	high-occupancy vehicle
HRA	health risk assessment
HRS	Hazard Ranking System
HU	hydrologic unit
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
I-	Interstate
IBC	International Building Code
IEM	Iowa Environmental Mesonet
IID	Imperial Irrigation District
IOD	Irrevocable Offer of Dedication
IPCC	United Nations Intergovernmental Panel on Climate Change
IWMP	Integrated Waste Management Plan
kHz	kilohertz
kWh	kilowatt hours
kV	kilovolt
LDC	Land Development Code
LCFS	Low Carbon Fuel Standard
LED	light-emitting diode
L_{EQ}	one-hour average sound level
LID	low impact development
LOS	level of service
LRT	light rail transit
LTPP	Long Term Procurement Plan
LUAG	Land Use Adjacency Guidelines
LUST	leaking underground storage tank
MAR	marine habitat
MBAS	methylene blue active substances
MBI	Michael Baker International
MBTA	Migratory Bird Treaty Act
MCAS	Marine Corps Air Station
MEI	maximally exposed individual
MEP	maximum extent practicable
MGal	million gallons
mgd	million gallons per day
MGRA	Master Geographic Reference Area
MHMP	Multi-Jurisdictional Hazard Mitigation Plan
MHPA	Multi-Habitat Planning Area
MIGR	migration of aquatic organisms
MMC	Mitigation Monitoring Coordination
MMCP	Mira Mesa Community Plan

MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MMth	million therms
Model Ordinance	Model Water Efficient Landscaping Ordinance
MPDP	Master Planned Development Permit
mph	miles per hour
mpg	miles per gallon
MPOs	Metropolitan Planning Organizations
MS4	Municipal Separate Storm Sewer Systems
MSCP	Multiple Species Conservation Program
MT	metric tons
MTS	Metropolitan Transit System
MW	Megawatts
MWD	Metropolitan Water District of Southern California
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NDP	Neighborhood Development Permit
NFPA	National Fire Protection Agency
NHTSA	National Highway Traffic Safety Administration (USDOT)
NO	nitrogen oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NSLU	noise-sensitive land use
NTP	Notice to Proceed
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHWM	ordinary high water mark
OSHA	Occupational Safety and Health Administration
PA	Planning Area
Pb	lead
PCB	polychlorinated biphenyls
PCE	passenger car equivalent
PDP	Planned Development Permit
PFCs	perfluorocarbons
PFFP	Public Facilities Financing Plan
PG&E	Pacific Gas & Electric
PGA	peak ground acceleration

PI	Principal Investigator
PLWTP	Point Loma Wastewater Treatment Plant
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
POC	Point of Compliance
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
precon	preconstruction
PUD	Public Utilities Department
QISP	Qualified Industrial Storm Water Practitioners
Qpf	recent previously placed fill
RAQS	Regional Air Quality Strategy
RARE	rare, threatened or endangered species
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RE	Resident Engineer
REAP	Rain Event Action Plan
REC	Recognized Environmental Condition
REC 1	contact water recreation
REC 2	non-contact water recreation
RES	Regional Energy Strategy
RHNA	Regional Housing Needs Assessment
RMP	Risk Management Plan
ROG	reactive organic gas
ROW	right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill / southbound
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCH	State Clearinghouse
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCRAA	San Diego County Regional Airport Authority
SDCWA	San Diego County Water Authority
SDFD	San Diego Fire-Rescue Department
SDG&E	San Diego Gas & Electric
SDHC	San Diego Housing Commission

SDMC	San Diego Municipal Code
SDP	Site Development Permit
SDPD	San Diego Police Department
SDREO	San Diego Regional Energy Office
SDUSD	San Diego Unified School District
SDWR	San Diego desert woodrat
SEIR	Supplemental Environmental Impact Report
SF	square feet
SF_6	sulfur hexafluoride
SFP	School Facilities Program
SHELL	shellfish harvesting
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SOV	single-occupancy vehicle
SPL	sound pressure level
SPWN	spawning, reproduction and/or early development
SR	State Route
SRRE	Source Reduction and Recycling Element
SSC	Species of Special Concern
STC	Sound Transmission Class
SWIS	Solid Waste Information System
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
TDM	Transportation Demand Management
TDS	total dissolved solids
TIA	Traffic Impact Analysis
TMDL	total maximum daily load
TOD	transit-oriented district
TPA	Transit Priority Area
TSS	total suspended solids
UCSD	University of California, San Diego
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Department of Fish and Wildlife Service
USGS	U.S. Geological Survey
UTC	University Town Center
UST	underground storage tank

V/C	volume to capacity ratio
VMT	vehicle miles traveled
VOC	volatile organic compound
VTM	vesting tentative map
VUA	vehicular use area
WARM	warm freshwater habitat
WDM	waste diversion measure
Weston	Weston Solutions, Inc.
WILD	wildlife habitat
WLA	waste load allocation
WMP	Waste Management Plan
WQBEL	water quality based effluent limitation
WQCP	Water Quality Control Plan
WRCC	Western Regional Climate Center
WSA	Water Supply Assessment

1.0 INTRODUCTION

This chapter provides a brief description of the background and scope of the 3Roots San Diego Project (Project), the purpose and legal authority for this Environmental Impact Report (EIR), the EIR scope and process, and an explanation of how the EIR is organized.

1.1 Project Background

The project site is located on is located on 413 acres in the central portion of the Mira Mesa Community Plan (MMCP) area in the City of San Diego (City). Specifically, it is located east of Camino Santa Fe, approximately halfway between Mira Mesa Boulevard and Miramar Road. The project site was formerly owned and operated by Hanson Aggregates Pacific Southwest as part of a larger sand and gravel mining operation by Fenton Materials. The Project is an element of a multi-phased plan to convert reclaimed quarry land to planned mixed-use development.

Initial mining operations on the site occurred between 1958 and 1975 under County of San Diego Conditional Use Permit (CUP) P57-22. The mine was inactive for three years, but mining was re-activated in 1979 under CUP 571-PC and associated EIR EQD No. 78-12-34 seeking to modify the allowed uses. In 1987, the Carroll Canyon Specific Plan and associated MMCP Community Plan Amendment (CPA) to re-designate the site from extractive to industrial uses were proposed in conjunction with a CUP amendment. Impacts were analyzed in EIR No. 87-1063/State Clearinghouse (SCH) No. 85121814. Only the CPA was approved, with the Specific Plan and CUP amendment withdrawn by the applicant.

The most recent mining operations were authorized under CUP 89-0585 and analyzed in Supplemental EIR (DEP No. 89-0585/SCH No. 85121814) approved by the City on September 13, 1990. The Supplemental EIR is tiered from EIR No. 87-1063. In conjunction with CUP approval, the City adopted a Reclamation Plan for the site. Site reclamation was ongoing at the time of EIR preparation and involves the rehabilitation of the site by backfilling or re-contouring mined areas for slope stability and drainage as well as providing ground cover vegetation at the conclusion of extraction and processing activities, in anticipation of future development.

In 1994, while mining activities were still underway, the project site and adjacent lands, totaling 554 acres, were the subject of a Master Plan, which was approved by the City as part of the MMCP and the General Plan. The Carroll Canyon Master Plan (CCMP) defined suitable land uses, design guidelines, development standards, and an implementation program for the development of the project site upon completion of mining operations. The CCMP established a framework that the City and property owners could use to anticipate subsequent industrial, commercial, and residential uses for the Master Plan area. An EIR (DEP No. 91-0738/ SCH No. 92121061) was prepared for the CCMP and MMCP CPA. The 1994 CCMP anticipated that it would be implemented in phases by individual development permits and vesting tentative maps (VTMs).[1]

Phase I of the CCMP, Fenton-Carroll Canyon Technology Center, included the development of office/industrial uses on 130.9 acres west of Camino Santa Fe. A project-level EIR was prepared and

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[1] The acreage summary in the 1994 CCMP has been updated in the Master Planned Development Permit (MPDP), VTM, and Master Plan Amendment using updated technology and information to match current site survey conditions.

certified in 2001 (LDR No. 40-0870/SCH No. 2000041010), resulting in issuance of Site Development Permit 98-1199. As contemplated in the CCMP, this project encompassed industrial uses, open space, and affiliated public and private infrastructure (in the form of roadways and utilities). The Fenton Technology Park land development is complete and approximately 600,000 of the 900,000 square feet (SF) approved for that project has been completed and occupied to date; the remainder could be developed at any time. In 2003, the roadway segment of Camino Santa Fe from Mira Mesa Boulevard to Trade Street was built. The Fenton-Carroll Canyon Technology Center and the affiliated Camino Santa Fe extension were removed from CUP 89-0585 as all reclamation and mining obligations in this area were deemed complete.

Hanson Aggregates continued mining activities to the east of Camino Santa Fe (the approximately 413-acre 3Roots project site) under the original CUP 89-0585 with no changes. Impacts associated with the previously approved CUP/Reclamation Plan have been fully mitigated, including impacts to existing on-site habitats associated with the remaining components of the Reclamation Plan. Although the CUP/Reclamation Plan allowed 301 acres to be impacted by mining and reclamation activities, only 256 acres have been impacted and are currently undergoing reclamation. In 2016, the mining operation ceased in the project area, although aggregate processing activities continued. The completion of mining activities made the land available for both mining reclamation and subsequent development in accordance with subsequent phases of the 1994 CCMP.

The Project represents the remaining and final phases of the approved 1994 CCMP. The CCMP envisioned that this area would be developed with 52 acres of industrial park; up to 1,800 medium and medium-high density residential units; a mixed-use transit-oriented district (TOD) area; 20 acres of neighborhood park; and a comprehensive open space system including Carroll Canyon Creek, Rattlesnake Canyon, vegetated slopes, and landscaped areas.

1.2 Project Scope

The scope of the Project can be broken into three major elements, as summarized below and further detailed in Chapter 3.0, *Project Description.*

The first project element is an amendment to the Reclamation Plan. Through this amendment, boundaries and grades of the approved reclamation plan, previously analyzed under certified 1990 EIR, would be adjusted in order to align with the proposed 3Roots development and connections to existing infrastructure.

The second project element is the Master Planned Development Permit (MPDP), which addresses the planned land uses and tailored development regulations for the site. The Project would maintain the following elements anticipated in the CCMP: a maximum of 1,800 residential units, a transit/mobility component, local-serving retail and office uses, and approximately 210 acres of (non-park) open space. It would modify the adopted CCMP by replacing the 52 acres of forecasted industrial land use with a community park and residential uses, and would incorporate lower residential densities toward the periphery of the project site. Specifically, the Project would include:

- A mixed-use district also referred to as the “Community” or “Root Collective,” which includes 12.8 acres of multi-family residential (8.7 acres of medium-high, and 4.1 acres of high density) and 12.6 acres of commercial uses, including a Mobility Hub, parks, roadways, and open space;

- 66.2 acres of low-medium or medium density residential (35.6 acres low-medium, and 30.6 acres medium density);
- 28.1 acres of low density residential;
- 248.2 acres of open space (comprised of approximately 181.3 acres of natural open space; 38.3 acres of parks and trails [including the 25.8-acre community park][2]; and approximately 28.6 acres of slopes, brush management zones, enhanced landscape, and water quality/retention basins);
- 44.96 acres of on-site roads and parkways; and
- Implementation of the CUP/Reclamation Plan-mandated restoration and enhancement of Carroll Canyon Creek, which traverses the project site.

The third project element addresses San Diego Gas & Electric (SDG&E) facilities, which would be relocated or removed from the site as a result of the above-noted project elements.

A number of project entitlements are also associated with these three actions. These are also described in Chapter 3.0.

1.3 Purpose and Legal Authority

An EIR provides public agencies and the public in general with detailed information about the effect a proposed project is likely to have on the environment; lists ways in which the significant effects of such a project might be minimized; and identifies alternatives to such a project. The City is the Lead Agency, as defined by Section 15051(b)(1) of the California Environmental Quality Act (CEQA) Guidelines, for the Project evaluated in this EIR. Under CEQA, the public agency with the greatest responsibility for supervising or approving the project or the first public agency to take discretionary action to proceed with a proposed project should ordinarily act as the "Lead Agency." This EIR is an informational document for use by the City, decision makers, and members of the general public to evaluate the environmental effects of the Project. This document complies with all criteria, standards, and procedures of CEQA (California Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14 Section 15000 et seq.); the City's EIR Guidelines (2005); and the City's CEQA Determination Thresholds (2016a). This document has been prepared as a project-level EIR pursuant to Section 15161 of the State CEQA Guidelines, and it represents the independent judgment of the City as Lead Agency (State CEQA Guidelines Section 15050).

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[2] Less the future Bus Rapid Transit Irrevocable Offer of Dedication (BRT IOD) of 2.2 acres.

1.4 Environmental Impact Report Scope

This EIR contains analysis of the Project, as described in Chapter 3.0. A project-level EIR should "focus primarily on the changes in the environment that would result from the development project." According to Section 15161 of the State CEQA Guidelines, a project EIR should "examine all phases of the project including planning, construction and operation."

1.5 Notice of Preparation/Scoping Meeting

In reviewing the application for the Project, the City concluded that the Project could result in potentially significant environmental impacts. As Lead Agency, the City prepared a Scoping Letter, which was distributed with the Notice of Preparation (NOP) on April 26, 2018 and May 4, 2018 to all responsible and trustee agencies, as well as various other governmental agencies, including the Office of Planning and Research's SCH, and interested individuals. The City also conducted a public scoping meeting, in accordance with Section 21083.9 of CEQA, on May 23, 2018. The EIR addresses in detail the following potentially significant environmental impacts:

- Land Use
- Transportation / Circulation
- Visual Effects / Neighborhood Character
- Air Quality
- Greenhouse Gas Emissions
- Energy
- Noise
- Geology and Soils
- Biological Resources
- Historical Resources
- Tribal Cultural Resources
- Health and Safety
- Public Utilities
- Public Services and Facilities
- Hydrology and Water Quality

The Project would not result in potentially significant impacts with respect to Agriculture and Forestry Resources, Mineral Resources, Paleontological Resources, or Population and Housing, as described in Chapter 9.0, *Effects Found Not to Be Significant*, of this EIR.

A copy of the Scoping Letter, NOP, scoping meeting notice, scoping meeting sign-in sheet, scoping meeting transcript, and written comments received during the NOP review period are contained in Appendix A. Verbal and written comments received during the scoping process have been taken into consideration during the preparation of this EIR. An outline of the issues noted during the scoping process is contained in the *Areas of Controversy/Issues to be Resolved* discussion in the Executive Summary section.

1.6 Public Review Process

This EIR and the associated technical analyses ~~are~~ were available for review by the public and public agencies for over 45 days to provide comments "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated" (State CEQA Guidelines Section 15204). The public review period ~~will be~~was from June 28, 2019 through August ~~12~~16, 2019. The EIR and all supporting technical studies and documents are available for review at the City of San Diego, Development Services Department, 1222 First Avenue, Fifth Floor, San Diego, 92101-4153, as well as at the Mira

Mesa Branch Library located at 8403 New Salem Street, and the Downtown San Diego Library, located at 330 Park Boulevard. An electronic copy of the EIR and the technical analyses is posted on the City Clerk's website at https://www.sandiego.gov/city-clerk/officialdocs/public-notices.

The City, as Lead Agency, will consider the written comments received on the Draft EIR and at the public hearing in making its decision whether to certify the EIR as complete and in compliance with CEQA, and whether to approve or deny the Project, or take action on a project alternative. Subsequent to certification of the EIR, agencies with permitting authority over all or portions of the Project may use the EIR to evaluate environmental effects of the Project, as they pertain to the approval or denial of applicable permits.

1.7 Content and Organization of the EIR

As stated above, the content and format of this EIR are in accordance with the most recent guidelines and amendments to CEQA and the State CEQA Guidelines. Technical studies have been summarized within individual environmental issue sections, and the full technical studies have been included in the appendices.

This EIR has been organized in the following manner:

- Executive Summary provides a summary of the Project description, EIR analysis, the alternatives that would reduce or avoid significant impacts, and the conclusions of the environmental analysis. The conclusions focus on those impacts that have been determined to be significant but mitigated as well as those that are significant and unmitigated or unavoidable. Impacts and mitigation measures are provided in tabular format. In addition, the Executive Summary includes a discussion of areas of controversy known to the City, including those issues identified by other agencies and the public.

- Chapter 1.0, *Introduction*, provides a brief description of the Project, the purpose of the EIR, and an explanation of the document format.

- Chapter 2.0, *Environmental Setting*, provides an overview of the regional and local setting, as well as the physical characteristics of the project site. The discussion also addresses the relevant planning documents and existing land use designations.

- Chapter 3.0, *Project Description*, provides a detailed description of the Project, including the purpose and main objectives, building characteristics, infrastructure improvements, landscape plan, summary of design guidelines, proposed deviations, grading, and construction. In addition, the intended and required uses of the EIR, and a discussion of discretionary actions required for Project implementation, are included in this chapter.

- Chapter 4.0, *History of Project Changes*, chronicles the physical changes made to the Project in response to environmental concerns raised during the City's review of the Project.

- Chapter 5.0, *Environmental Analysis*, constitutes the main body of the EIR and includes the detailed impact analyses for each environmental issue identified in the NOP as potentially resulting in significant environmental impacts. The topics analyzed in this section include: land use, transportation/circulation, visual effects/neighborhood character, air quality, greenhouse gas (GHG) emissions, energy, noise, geology and soils, biological resources, historical resources, tribal cultural resources, health and safety, public utilities, public services and facilities, and hydrology and water quality. Under each topic, Chapter 5.0 includes a discussion of environmental baseline, the applicable significance thresholds, and an evaluation of the impacts associated with implementation of the Project. Where the impact analysis demonstrates the potential for the Project to have a significant adverse impact on the environment, mitigation measures are provided that would minimize the significant impact. The EIR indicates whether the proposed mitigation measures would reduce impacts to below a level of significance.

- Chapter 6.0, *Significant Irreversible Environmental Changes*, addresses significant and irreversible environmental changes that would occur should the Project be implemented.
- Chapter 7.0, *Growth Inducement*, includes a discussion of growth inducing impacts.
- Chapter 8.0, *Cumulative Impacts*, addresses the cumulative impacts caused by implementation of the Project in combination with other past, present, and reasonably foreseeable future development in the area.
- Chapter 9.0, *Effects Found Not to Be Significant*, addresses topics for which impacts were determined to be less than significant.
- Chapter 10.0, *Project Alternatives*, provides a description and evaluation of alternatives to the Project. This chapter addresses the mandatory "no project" alternatives, as well as a development alternative~~s~~ that would potentially reduce or avoid the Project's significant impacts.

The Mitigation Monitoring and Reporting Program (MMRP), References, and Individuals Consulted/ Preparers are provided in Chapters 11.0, 12.0, and 13.0, respectively.

2.0 ENVIRONMENTAL SETTING

This chapter provides a description of existing site conditions for the 3Roots San Diego Project (Project). The existing setting addresses the project site as well as the off-site components; and provides an overview of the local and regional environmental setting pursuant to Section 15152 of the State CEQA Guidelines.

2.1 Project Location

The project site occupies approximately 413 acres in the central portion of the Mira Mesa Community Plan (MMCP) area in the City (Figure 2-1, *Regional Location*). The project site is located east of Camino Santa Fe, approximately halfway between Mira Mesa Boulevard and Miramar Road (Figure 2-2, *Project Location*). Specifically, the site is located in Section 35 of Township 14 South, Range 3 West; and Sections 1, 2, 3, and 11 of Township 15 South, Range 3 West on the Del Mar U.S. Geological Survey (USGS) 7.5-minute quadrangle map (Figure 2-3, *Site Topography*). The site, which occupies San Diego County Assessor's Parcel Numbers 341-050-380, 341-050-400, 341-050-410, 341-050-420, 341-051-170, 341-051-180, and 341-060-820, was formerly operated as a sand and gravel mine.

2.2 Site Conditions

2.2.1 Existing Site Conditions

The project site historically was used as a sand and gravel quarry. Of the approximately 413-acre site, approximately 218 acres have been subject to mining activities and exhibit substantial changes from natural topography; with approximately 195 acres not subject to substantial disturbance (see Figure 2-4, *Project Site Aerial Photo*). All mining-related excavation activities concluded in 2016, and all aggregate processing and other industrial lease activities concluded at the end of 2018.

The prior mining and related uses were authorized by CUP 89-0585, which was approved by the City on September 13, 1990, in association with a Supplemental EIR (SEIR; DEP No. 89-0585/SCH No. 85121814). The SEIR analyzed mining operations, included mitigation measures for mining and reclamation activities and analyzed potential impacts associated with the rehabilitation of the mined areas. The mining boundary and associated impact area analyzed in the previously certified SEIR, are shown in Figures 2-5a, *Adopted Reclamation Plan Phasing*, and 2-5b, *Adopted Reclamation Plan*.

Pursuant to the Surface Mining and Reclamation Act (SMARA), and in conjunction with CUP approval, the City adopted a Reclamation Plan for the CCMP area and project site (Figure 2-5b). Reclamation is the process by which steep slopes created by mining activities are re-contoured and stabilized to allow for a safe post-mining condition. The Reclamation Plan also required landscaping to revegetate graded pads and slopes. Implementation of the Reclamation Plan is ongoing as part of a multi-phased process.

The project site is topographically complex because of a natural canyon, several watercourses and manmade features resulting from the mining activities (Figure 2-3). Overall, the project site slopes to the south and west. Rattlesnake Canyon Creek, in the northern portion of the project site, originates at an elevation of approximately 340 to 365 feet above mean sea level (AMSL) and flows off-site at the western project boundary at 270 feet AMSL. The southern portion of the project site is lower in elevation and is bisected by Carroll Canyon Creek, which is approximately 297 feet AMSL at the eastern project boundary and approximately 214 feet AMSL at the west. Carroll Canyon Creek traverses the site and is degraded with impacted vegetation and invasive species, and a portion of the hydraulic flow line is being conveyed through an underground pipe. The land between the drainages, where the quarry operations occurred, is characterized by variable topography.

The project site is mapped as having 10 soil types (U.S. Department of Agriculture [USDA] 2018): Altamont clay, 15 to 30 percent slopes; Gravel pits; Olivenhain cobbly loam, 2 to 9 percent slopes; Olivenhain cobbly loam, 9 to 30 percent slopes; Olivenhain cobbly loam, 30 to 50 percent slopes; Redding cobbly loam, dissected, 15 to 50 percent slopes; Redding cobbly loam, 9 to 30 percent slopes; Redding gravelly loam, 2 to 9 percent slopes; Riverwash; and Terrace escarpments. Native soils, however, have been removed by mining operations across most of the area of proposed development. Surficial and underlying materials include Alluvium, Colluvium, Compacted Fill, and Undocumented Fill. Most of the undocumented fill was removed with implementation of the Reclamation Plan process. The underlying geologic formation is Stadium Conglomerate.

Existing SDG&E facilities include 230 kilovolt (kV) overhead power line on metal towers in a right-of-way located west of Camino Santa Fe, that crosses the road to enter the Project with two tower footings located on site east of Camino Santa Fe in the northwest portion of the project site. On site, these towers are located on supporting earth pedestals created and retained during prior mining. In addition, dual-circuit and single-circuit 69kV overhead power lines are also located in right-of-way west of Camino Santa Fe, crossing the road to enter the project site in the vicinity of Carroll Canyon Road, and then spanning approximately 6,500 feet east-west through the project site. An existing small substation is also located on site.

2.2.2 Existing Circulation

Currently, there are no public roads through the site. However, a future Circulation Element roadway, Carroll Canyon Road, is planned to traverse the site in an east-west direction.

Directly to the west of the site is Camino Santa Fe. This major north-south connection between Mira Mesa Boulevard and Miramar Road was completed as part of the Fenton Technology Park in 2007. In its current condition, Camino Santa Fe is a 6-lane Major between Mira Mesa Boulevard and Flanders Drive, and a 6-lane Primary Arterial between Flanders Drive and Carroll Canyon Road. Camino Santa Fe was recently restriped from 6 lanes to 4 lanes with buffered Class II bike lanes from Carroll Canyon Road to Carroll Road, and currently functions as a 4-lane Major. The change was implemented based on the Series 12 2035 forecast average daily traffic (ADT) volumes on Camino Santa Fe between Trade Street and Carroll Road, which showed that the segment would operate at an acceptable LOS D in 2035 with reduction to 4 lanes. At the southwestern project boundary, there is an existing signal at the intersection of Carroll Canyon Road and Camino Santa Fe.

From the eastern edge of the site to Camino Ruiz, Carroll Canyon Road is built to the required 6-lane Prime Arterial standards; it does not provide access to the project site and is currently striped with 4 lanes.

2.2.3 Surrounding Land Uses

The lands surrounding the project site are mostly built-out to the north, west and south as summarized below. An exception is the adjacent Vulcan Materials quarry, located directly east of the project site. Figure 2-4 depicts the site's relationship to surrounding nearby land uses.

The Fenton Technology Park is directly west of the project site. To the east and south of the project site are the Carroll Canyon Business Park and other light industrial and business uses.[1]

A City-owned, vernal pool preserve with a 100-foot setback from residential development to the preserve boundary is immediately north of the project site. Primarily single-family residential uses lie north of that preserve. Multi-family residential uses, which are located north and east of the Camino Santa Fe/Flanders Drive intersection, are immediately adjacent to the project site.[2]

Marine Corps Air Station (MCAS) Miramar is situated approximately 1 mile south of the project site along Miramar Road.

2.2.4 Reclamation Plan – Project Baseline

Typically, the environmental baseline under CEQA is the environmental condition present within the project site at the time that the NOP is circulated. CEQA allows modification to the baseline condition when the typical condition would be misleading or without informational value. In this case, the "existing" condition on the project site was shifting on a daily basis during preparation of the technical studies and EIR, in accordance with the approved CUP and Reclamation Plan. For instance, the Reclamation Plan permits grading in the northwest portion of the site to allow for the extension of Miratech Way onto the project site. The Reclamation Plan also requires revegetation of mined areas and the monitoring of native habitats.

Artificially "freezing" the environmental baseline at any given day prior to the completion of the grading and biological requirements of the Reclamation Plan would not provide a reasonable snapshot of the existing condition. Due to the site's rapidly changing condition, if full disclosure of the site as reclaimed was not included as an existing condition, the baseline would be misleading or without informational value because it would retain description of a past condition. In fact, if the setting reflected the existing condition on the date of NOP issuance, it would have been outdated immediately after NOP issuance—and would provide an artificial image of the existing condition as the basis for project analysis. This would not best define the baseline against which analysis should be completed.

Therefore, for purposes of this EIR, the baseline condition generally assumes full implementation and completion of the Reclamation Plan on the project site, and being undertaken in phases as contemplated in the adopted CUP/Reclamation Plan. That will result in baseline grading having been completed for future lot uses, rough connection to off-site existing Carroll Canyon Road, and

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[1] The industrial and business uses south of the site are approximately 80 feet above the baseline for the project site (adopted Reclamation Plan).

[2] The multi-family residential uses are approximately 60-100 feet above the baseline grade (adopted Reclamation Plan) of the project site.

hydroseeding of raw soils to minimize dust production, erosion, etc. In the southerly portion of the Project, the baseline also includes realignment, revegetation, and other improvements to Carroll Canyon Creek, to provide for a drainage traversing the site in an east-west direction that functions both hydrologically and as a potential biological resource.

2.3 Planning Context

The following plans contain policies, goals, and objectives that are applicable to the Project. A detailed discussion of these plans is provided in Section 5.1, *Land Use*.

2.3.1 San Diego Forward: The Regional Plan

San Diego Forward: The Regional Plan (San Diego Association of Governments [SANDAG] 2015) is an update of the Regional Comprehensive Plan (RCP) for the San Diego Region and the 2050 Regional Transportation Plan/Sustainable Communities Strategy (2050 RTP/SCS) combined into one document. The Regional Plan provides a blueprint for San Diego's regional transportation system in order to effectively serve existing and projected workers and residents within the San Diego region. In addition to the RTP, the Regional Plan includes the SCS in compliance with Senate Bill (SB) 375. The SCS aims to create sustainable, mixed-use communities conducive to public transit, walking, and biking by focusing future growth in the previously developed, western portion of the region along the major existing transit and transportation corridors. The purpose of the SCS is to help the San Diego region meet the GHG emissions reductions set by the California Air Resources Board (CARB). The Regional Plan has a horizon year of 2050, and projects regional growth and the construction of transportation projects over this time period.

Appendix C of the Regional Plan identifies the northernmost edge of the site as within a Transit Priority Area (TPA; refer to Figure 2-6, *Transit Priority Areas*). The portion of the site that is designated as a TPA contains sensitive biological resources within the City's Multi-Habitat Planning Area (MHPA) and would be dedicated as Open Space to protect these sensitive resources in accordance with Multiple Species Conservation Program (MSCP) requirements. There is no developable area. Because a portion of the site is within the TPA, however, the City considers the entire site to be within the TPA for its planning purposes.

2.3.2 City of San Diego General Plan

The General Plan is a comprehensive document that sets out a long-range vision and policy framework for how the City will grow and develop, provide public services, and maintain the qualities that define San Diego. The General Plan is comprised of a Strategic Framework Element and 10 additional elements covering topics such as housing, transportation, and conservation. The General Plan's Land Use Element includes the City of Villages land use strategy, which focuses growth into mixed-use activity centers that are pedestrian-friendly, centrally located, and linked to the regional transit system. The City of Villages strategy identifies the project site as being in an area with a medium village propensity. Portions of the project site are identified as “Residential,” “Multiple Use,” and “Park, Open Space, & Recreation” in the General Plan (City 2016b).

2.3.3 Mira Mesa Community Plan

The Mira Mesa Community Plan (MMCP) is the City's statement of policy regarding the growth and development of Mira Mesa. The plan identifies goals, policies, and strategies for land uses and public facilities. It also designates areas for residential, commercial, industrial, business park, and public uses, as well as areas that are to remain undeveloped.

The MMCP area encompasses approximately 10,500 acres. The community plan area is bounded on the north by Los Peñasquitos Canyon, on the west by Interstate (I-) 805, on the east by I-15, and on the south by Miramar Road. The community plan was originally adopted in 1992, but has been amended several times over the years, most recently to add policy language for the MCAS Miramar Airport Land Use Compatibility Plan (ALUCP) in 2011.

The MMCP indicates that the project site and the surrounding area should be developed with a mix of uses that are predominantly industrial or business park in nature, or—in the alternative—an intensive, transit-oriented mix of land uses that rely on the future light rail transit to reduce automobile use.

2.3.4 Carroll Canyon Master Plan

The Carroll Canyon Master Plan (CCMP) encompasses 554 acres and fulfills the objectives of the Carroll Canyon Master Plan Area of the MMCP. The CCMP defines suitable land uses, design guidelines, development standards, and an implementation program for the development of the Master Plan area, which includes the project site, upon the completion of mining operations (Figure 2-7, *Carroll Canyon Master Plan*). The CCMP established a framework that the City and property owners could use to convert reclaimed quarry land to a planned mixed-use development with: medium and medium-high residential, mixed-use, office/industrial, parks, open space, and a transit station/transit stop. The CCMP also anticipated a public transportation easement to be provided along the north side of Carroll Canyon Road right-of-way. The Fenton-Carroll Canyon Technology Center, which was evaluated in a 2001-certified EIR, did not analyze potential future impacts, but did identify the future Bus Rapid Transit Irrevocable Offer of Dedication (BRT IOD) along future Carroll Canyon Road west of Camino Santa Fe within open space area on the property.

As indicated, the CCMP anticipated that future development of the Master Plan area would be implemented in phases by individual development permits and VTMs. The Project is part of a multi-phased plan to convert reclaimed quarry land to planned mixed-use development. The initial phase of the CCMP included the development of office/industrial uses on 130.9 acres west of Camino Santa Fe. The Fenton Technology Park, which represents approximately 600,000 SF of the 900,000 SF approved for development, has been completed and occupied.

2.3.5 Zoning

The underlying base zoning[3] for the project site is AR-1-1 “Agriculture” (409.1 acres) and IL-2-1 “Industrial” (4.2 acres) as shown in Figure 2-8, *Zoning Classifications*. The project also site is located in the Residential Tandem Parking Overlay Zone. Although not a City “base zone~~,~~” addressing land use type and density, because reduced parking requirements may be proposed, it is ~~also~~ noted that the Project contains TPA acreage and is considered to be located within a TPA, as described in Chapter 1.0.

The project site is subject to Airport Land Use Compatibility Overlay Zones (ALUCOZs). The site is located within the MCAS-Miramar Airport Influence Area (Review Area 1). It also falls within Federal Aviation Administration (FAA) Part 77 Notification Area (MCAS – Miramar) and is subject to review regarding airport noise as described in Section 2.3.6 immediately below.

2.3.6 Airport Land Use Compatibility Plans

The project site is within the Airport Influence Area (AIA) and FAA Part 77 Noticing Area for MCAS Miramar. The San Diego County Regional Airport Authority (SDCRAA) serves as the Airport Land Use Commission (ALUC) for MCAS Miramar, located approximately one mile to the south of the project site.[4]

The ALUCP was adopted to establish land use compatibility policies and development criteria for new development within the AIAs to protect the base from incompatible land uses and provide the City with development criteria that will allow for the orderly growth of the area surrounding the airports.

The AIA for MCAS Miramar serves as the planning boundary for the MCAS Miramar ALUCP. The majority of the project site falls within Review Area 1, with a small area in the northeastern-most portion of the site in Review Area 2. Most of the project site also falls within the 60 to 65 community noise equivalent level (CNEL) contour; within which residential buildings must be designed to attenuate interior noise to 45 CNEL (Figure 2-9, *MCAS Miramar Airport Noise Contours and Project Planning Areas*). Because the southernmost portion of the project site falls within the 65 to 70 CNEL noise contour, retail and commercial buildings must be designed to attenuate interior noise to 50 CNEL. The policies and criteria contained in the ALUCP are addressed in Section 5.1, *Land Use*, of this EIR.

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[3] As stated in SDMC 131.0101, City-identified base zones help ensure that land uses within the City are properly located and that adequate space is provided for each type of development identified. Base zones are intended to regulate uses; to minimize the adverse impacts of these uses; to regulate the zone density and intensity; to regulate the size of buildings; and to classify, regulate, and address the relationships of uses of land and buildings.

[4] The ALUC is an agency that is required by state law to exist in counties with a commercial and/or a general aviation airport. The purpose of the ALUC is to protect public health, safety, and welfare by ensuring the orderly development of airports and the adoption of land use measures that minimize the public’s exposure to excessive noise and safety hazards in areas around public airports, to the extent that these areas are not already devoted to incompatible uses.

2.3.7 Environmentally Sensitive Lands

The City's Environmentally Sensitive Lands (ESL) include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains. The project site does not contain coastal beaches or sensitive coastal bluffs. It does contain a small portion of steep hillsides in the southeast corner and Carroll Canyon Creek floodplain, as well as City wetlands associated with the creek, which are considered ESL-protected resources.

Encroachment into ESL steep hillsides is given some latitude per Section 143.0111(a) of the San Diego Municipal Code (SDMC), which allows greater encroachment into steep slopes when related to mining and extractive industries. It is noted, however, that the exemption requires a Conditional Use Permit and restoration of the on-site landform to a "natural-appearing" condition. The reader is referred to Sections 5.1, *Land Use*, and 5.*3, Visual Effects/Neighborhood Character*, for discussion of encroachment percentage and restoration efforts.

The ESL regulations require that development minimize impacts to certain sensitive biological resources including but not limited to MHPA lands; wetlands and vernal pools in naturally occurring complexes; federal and State listed, non-MSCP Covered Species; and MSCP Narrow Endemic species. Specifically, the ESL Regulations state that wetlands impacts should be avoided, and unavoidable impacts should be minimized to the maximum extent practicable. Where impacts are unavoidable, deviation findings must be made in accordance with Section 143.0150 of the SDMC. In this instance, the on-site wetlands remaining following mining activities would be displaced by Carroll Canyon Road extension and associated drainage improvements; elements that qualify for a deviation associated with Essential Public Projects under Land Development Code (LDC) Section 143.0510 (d). The reader is referred to Section 5.9, *Biological Resources*, for detailed discussion.

With regard to flood hazard areas, the ESL regulations contain restrictions relative to the floodway and flood fringe, intended to provide reasonable flood protection for regulatory purposes. Within the floodway, no structures may be attached to a foundation, development must be offset by other improvements to enable the passage of the base flood, and channelization is subject to a number of requirements. Within the flood fringe, permanent structures, roads, and other development may be allowed, provided that they meet applicable conditions. The reader is referred to Section 5.15, *Hydrology and Water Quality*, for discussion of project compliance with applicable drainage requirements.

2.3.8 Multiple Species Conservation Program

The MSCP is a comprehensive biological habitat conservation planning program developed by the City in coordination with state and federal resource agencies. A key goal of the MSCP is to preserve a network of habitat and open space, protecting biodiversity. Local jurisdictions, including the City, implement their portions of the MSCP through subarea plans. The City has adopted Biology Guidelines that, together with the City's ESL Regulations and the MSCP Subarea Plan, are used to evaluate project-related biological impacts and required mitigation. MHPA is the City's planned habitat preserve system. The project site contains approximately 139.8 acres of MHPA, as shown on Figure 2-10, *Existing MHPA Area*.

2.3.9 Regional Air Quality Strategy

The San Diego Air Pollution Control District (SDAPCD) and SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin (SDAB). The San Diego County Regional Air Quality Strategy (RAQS) was most recently updated by the SDAPCD in 2016. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone. The SDAPCD also develops the air basin's input to the State Implementation Plan (SIP), which is required under the Federal Clean Air Act (CAA) for areas that are out of attainment of air quality standards. The SIP, approved by the U.S. Environmental Protection Agency (USEPA), includes the SDAPCD's plans and control measures for attaining the ozone national standard and is updated on a triennial basis.

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the county, to project future emissions and then determine from that the strategies necessary to reduce emissions through regulatory controls**.** The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin**.** The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the national air quality standard for ozone.

2.3.10 Water Quality Control Plan for the San Diego Basin

The Regional Water Quality Control Board (RWQCB) adopted a Water Quality Control Plan for the San Diego Basin (Basin Plan) that recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems (RWQCB 1994). Water quality objectives identified in the Basin Plan are based on established beneficial uses, and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." These objectives are incorporated into related regulatory requirements, such as the National Pollutant Discharge Elimination System (NPDES) permitting process, that guide project design.

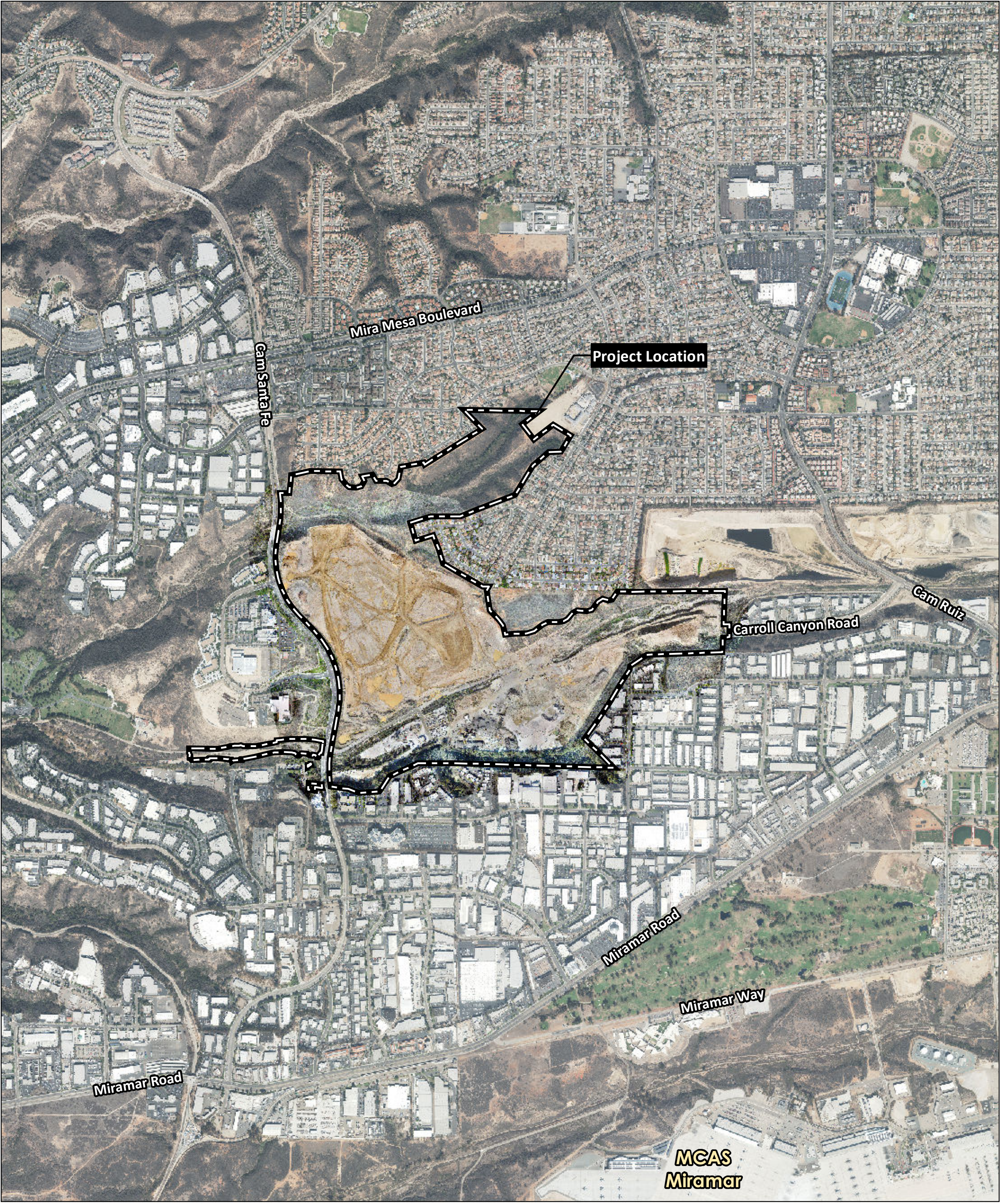
I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2_1_Regional.mxd CAH-02.01 6/5/2019 - SAB

Source: Base Map Layers (SanGIS, 2016)

HELIX
Environmental Planning

Regional Location

Figure 2-1



I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-2_ProjectLocation.mxd CAH-02.01 6/5/2019- SAB

Source: Aerial (SanGIS 2014, Enviromine 2018)

0 2,000 Feet

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Environmental Planning

Project Location

Figure 2-2

Source: Aerial (SanGIS 2014; Enviromine, Inc. 2017); Topo (PDC 3/2017).

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-3_SiteTopography.mxd CAH-02.01 8/8/2018 -CL

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Environmental Planning

Site Topography

Figure 2-3

Source: Aerial (SanGIS 2014; Enviromine, Inc. 2017).

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-4_ProjectAerial.mxd CAH-02.01 1/15/2019 -CL

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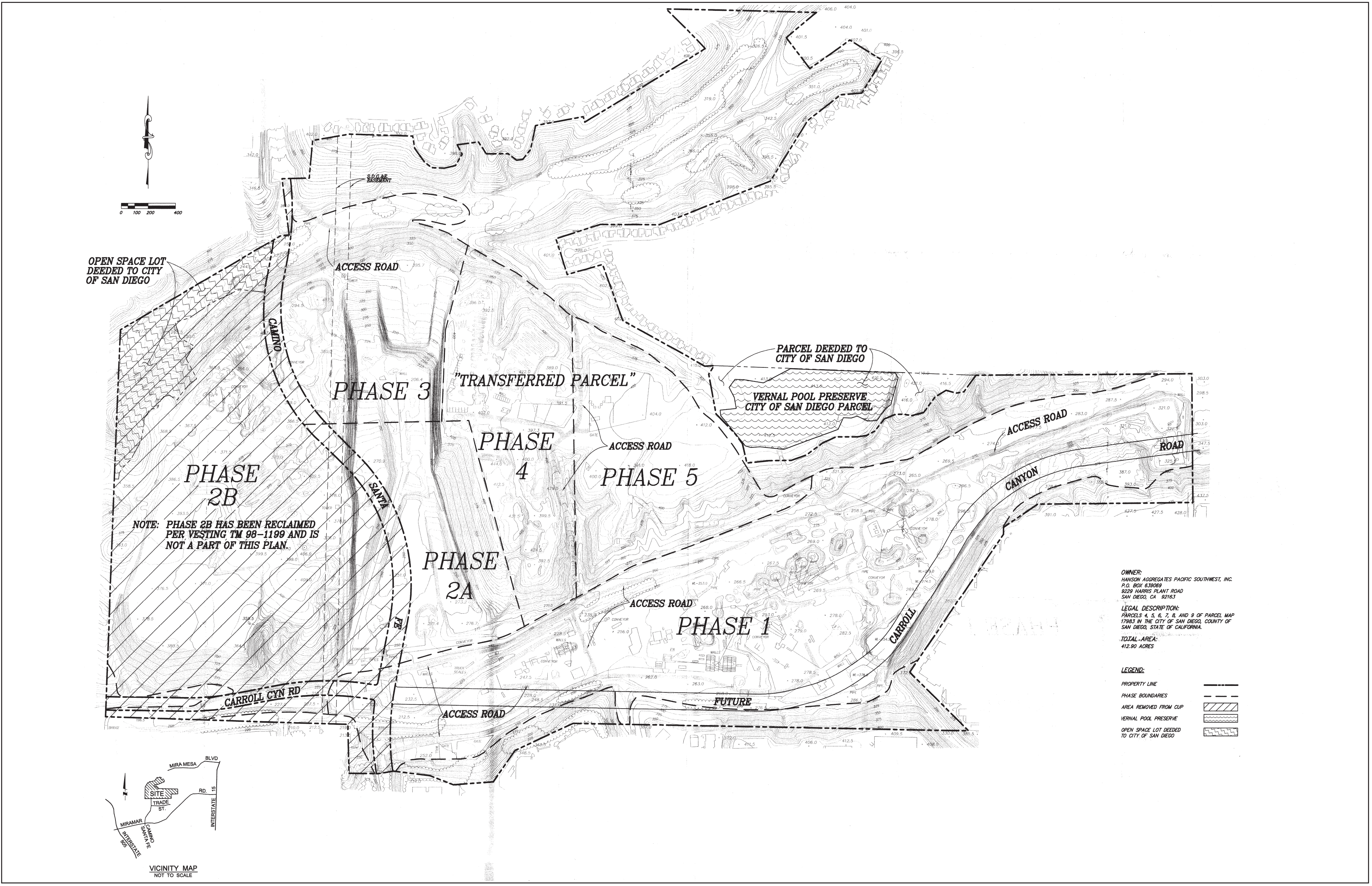
Environmental Planning

Project Site Aerial Photo

Figure 2-4



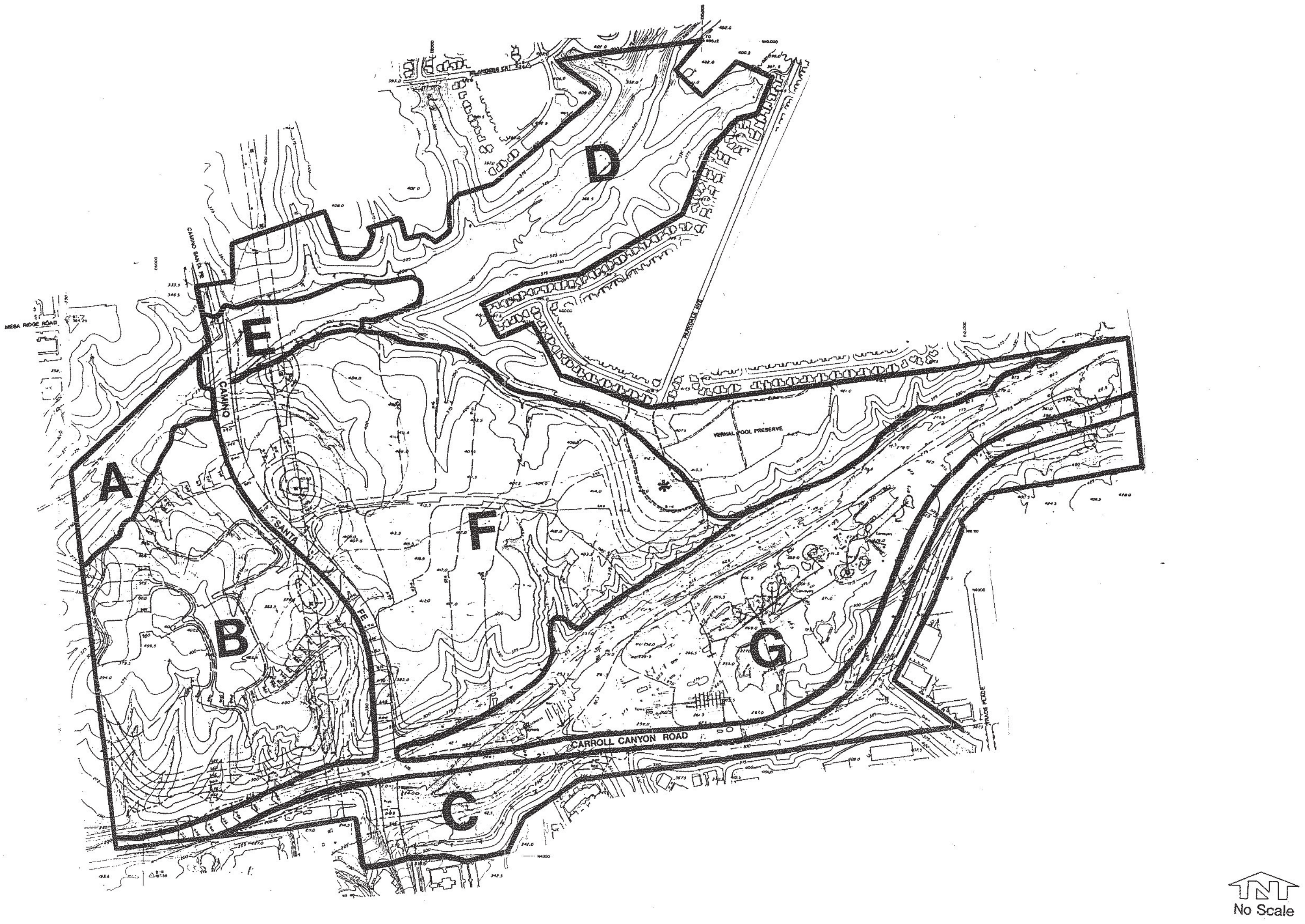
I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-5a_RecPhasePlan.indd CAH-02.01 4/25/19 - SAB

Source: CUP 89-0585

HELIX
Environmental Planning

Adopted Reclamation Plan Phasing

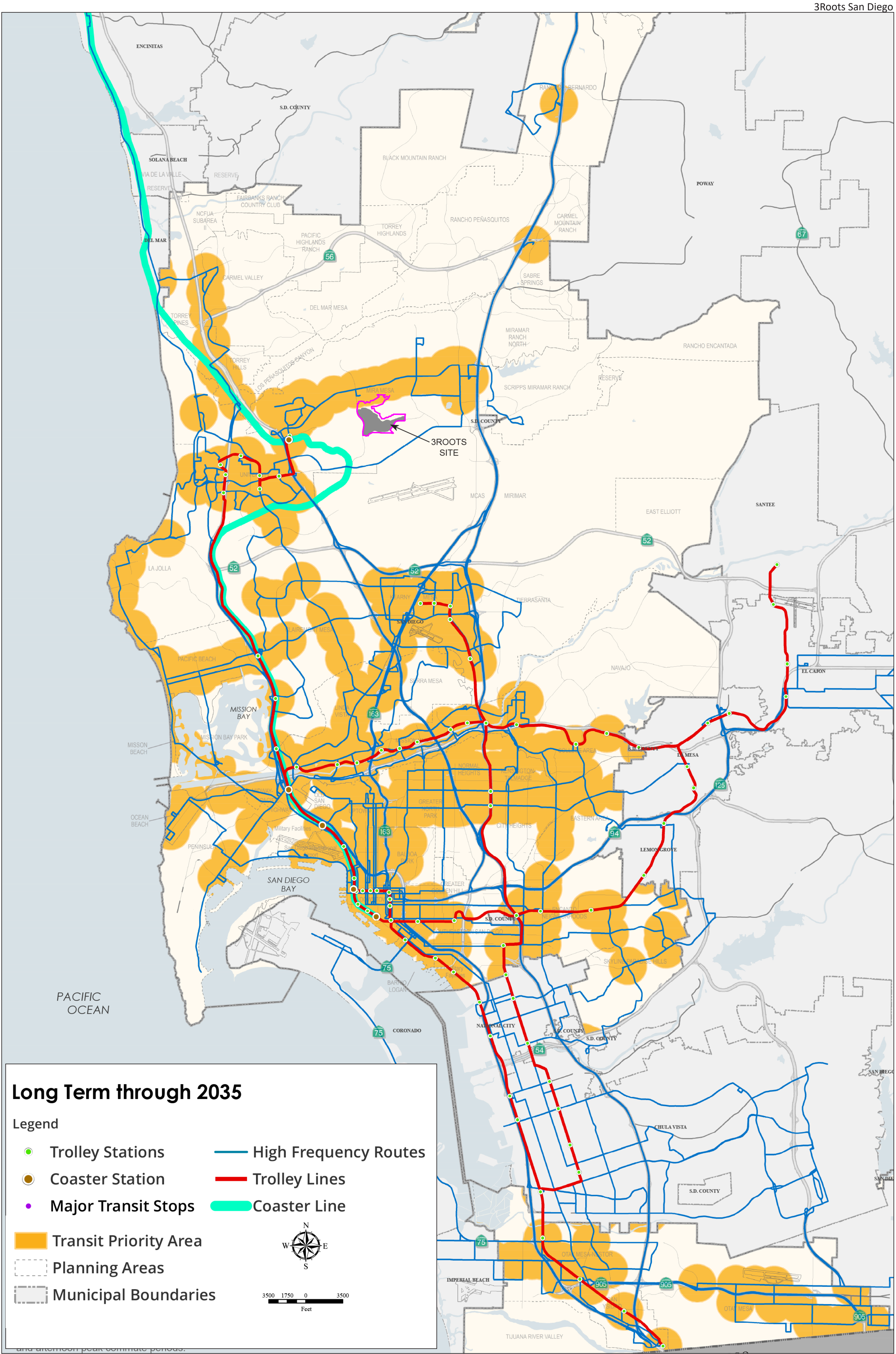
Figure 2-5a



Source: CUP 89-0585

Adopted Reclamation Plan

Figure 2-5b



Source: City of San Diego Planning Department 3/2017

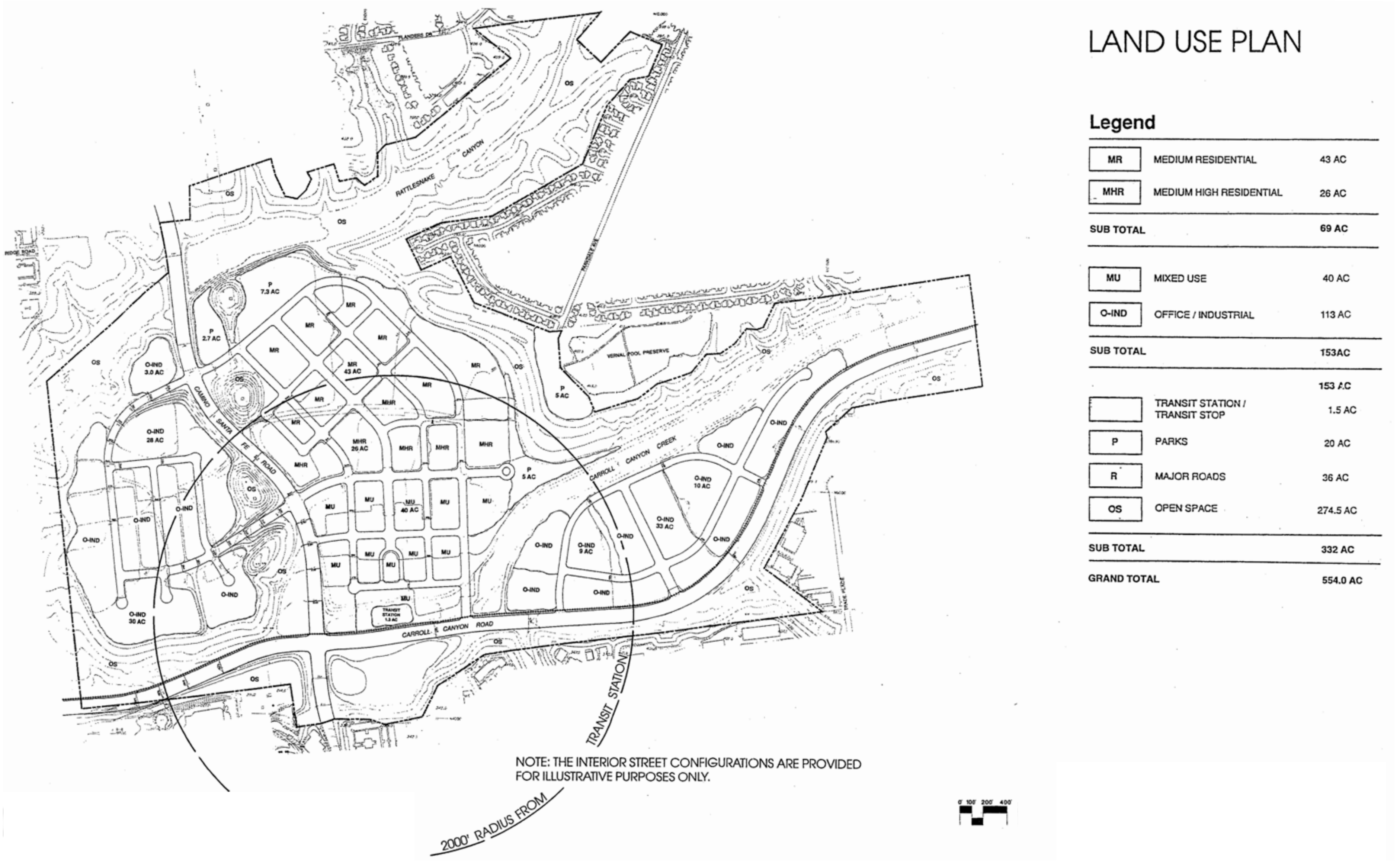
I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-6_TransitPriorityAreas.indd CAH-02.01 01/15/19 -CL

HELIX
Environmental Planning

Transit Priority Areas

Figure 2-6

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-7_CarrollCanyonMP.indd CAH-02.01 08/08/18 -CL



Legend

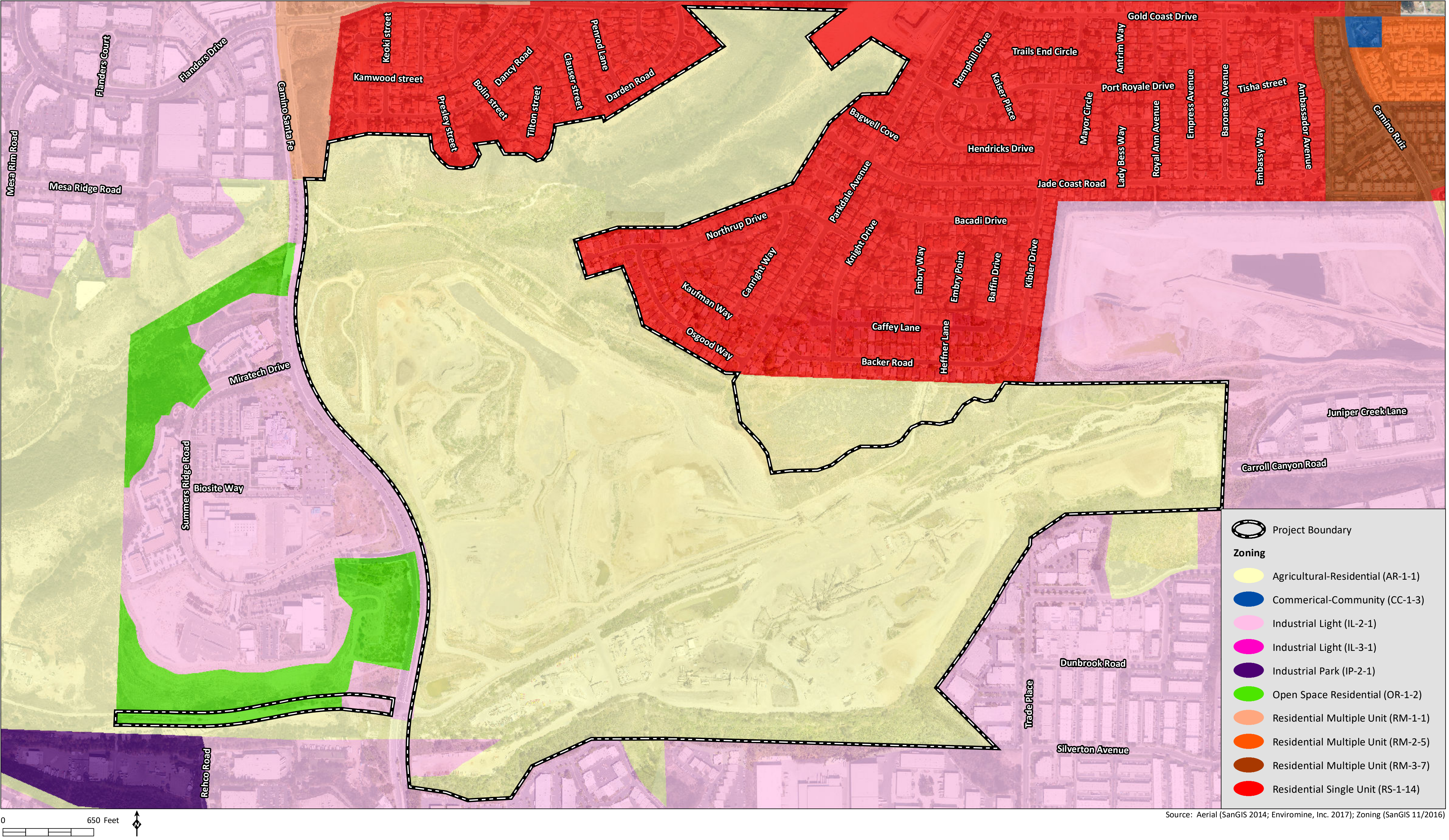
MR	MEDIUM RESIDENTIAL	43 AC
MHR	MEDIUM HIGH RESIDENTIAL	26 AC
SUB TOTAL		69 AC
MU	MIXED USE	40 AC
O-IND	OFFICE / INDUSTRIAL	113 AC
SUB TOTAL		153AC
		153 AC
	TRANSIT STATION / TRANSIT STOP	1.5 AC
P	PARKS	20 AC
R	MAJOR ROADS	36 AC
OS	OPEN SPACE	274.5 AC
SUB TOTAL		332 AC
GRAND TOTAL		554.0 AC

NOTE: THE INTERIOR STREET CONFIGURATIONS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY.

Source: T&B Planning Consultants

Carroll Canyon Master Plan

Figure 2-7



Source: Aerial (SanGIS 2014; Enviromine, Inc. 2017); Zoning (SanGIS 11/2016)

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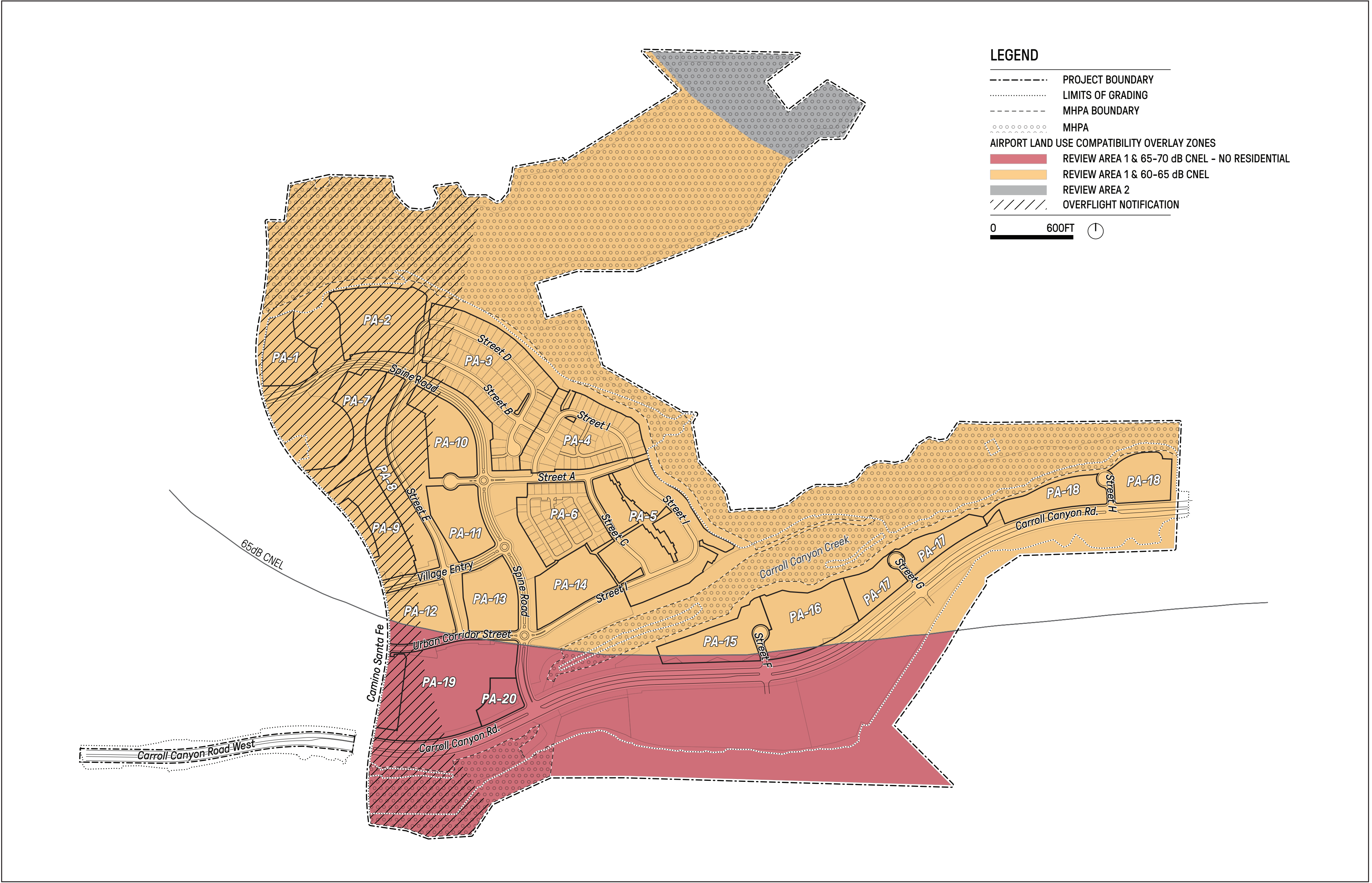
HELIX
Environmental Planning

Zoning Classifications

Figure 2-8

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-9_MiramarNoiseContours.indd CAH-02.01 6/19/19 - SAB



Source: Placeworks 2/19

MCAS Miramar Airport Noise Contours and Project Planning Areas

Figure 2-9

HELIX
Environmental Planning

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018); MHPA (SanGIS 2015)

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig2-10_ExistingMHPA.mxd CAH-02.01 4/26/2019 -EV, SAB

HELIX
Environmental Planning

Existing MHPA Area

Figure 2-10

3.0 PROJECT DESCRIPTION

This section of the EIR provides a statement of the project goals and objectives, describes the specific characteristics of the Project, discusses project phasing and construction, and identifies the discretionary actions required to implement the Project. This section has been prepared pursuant to Section 15124 of the State CEQA Guidelines.

3.1 Project Goals and Objectives

The following are the goals and objectives of the Project:

1. Provide for the reuse and redevelopment of the former mining site into a vibrant and active infill neighborhood within the Mira Mesa community.

2. Provide for a mix of land uses that promotes the City's vision for smart growth by reducing vehicle miles travelled.

3. Address the City's housing supply needs by providing an expanded residential footprint, in order to provide 1,800 residential units and allow for a broader range of housing, with a variety of sizes and ownership options that cater to a variety of life stages and include both market rate residences and for rent, ~~age-restricted,~~ affordable housing consistent with the City's Inclusionary Affordable Housing Regulations.~~(10 percent of total units) option.~~

4. Provide a variety of residential options, including multi-family, detached condos, and single-family detached homes in close proximity to UTC, Sorrento Valley, and MCAS Miramar, contributing to an improved jobs-housing balance in the area and catering to a diverse set of life stages.

5. Provide a new public community park and other publicly accessible parks, trails, and spaces for a total of approximately 38 acres of new park space.

6. Dedicate over 40 percent of the project site as natural open space, increasing the City's Multi-Habitat Planning Area (MHPA) and implementing the adopted CUP/Reclamation Plan mandated restoration and enhancement of the degraded Carroll Canyon Creek, which traverses the project site from east to west.

7. Implement a "mobility focused" development with a centralized Mobility Hub for public and private multi-modal transportation options.

3.2 Project Background

The following summarizes key elements of the background leading to the currently proposed Project, as addressed in further detail in Section 1.1, *Project Background*:

- Since 1958, the site has been an active aggregate mining and processing quarry. Throughout the decades, mining activities were approved under a series of CUPs, which not only approved mining activities, but also contemplated the "reclamation," or the re-contouring of the site, at the conclusion of extraction and processing activities.

- In 1994, the CCMP was developed and approved by the City as part of the MMCP (and the General Plan). The CCMP contemplated a 554-acre, mixed-use development, designed to be implemented in phases when mining activity was completed.
- In 2001, the City approved development of the Fenton-Carroll Canyon Technology Center, a project that represented the first phase of the 1994 CCMP. As contemplated in the CCMP, this project encompassed industrial uses, open space, and all affiliated public and private infrastructure (in the form of roadways and utilities) over 130-acres of the former Fenton Materials mining operation. Currently, 600,000 SF of the approved 900,000 SF are operating as an active employment center for Mira Mesa and the region. In 2003, the roadway segment of Camino Santa Fe from Mira Mesa Boulevard to Trade Street was built. The Fenton-Carroll Canyon Technology Center and the affiliated Camino Santa Fe extension were removed from CUP 89-0585 as all reclamation and mining obligations in this area were deemed complete.
- In 2016, the mining operations on the project site ceased, although aggregate processing activities continued through 2018. Reclamation activities started in 2016 (and are ongoing).
- The current Project represents the second and final phases of the approved 1994 CCMP.

3.3 Project Characteristics

The scope of the Project includes three major elements, as detailed below: a proposed Master Planned Development Permit (MPDP), ~~which triggers~~ an amendment to the existing mining Conditional Use Permit/Reclamation Plan (CUP/Reclamation Plan), and the relocation/removal of SDG&E facilities.

3.3.1 Master Planned Development Permit

The CCMP calls for the area to be developed with Planned Development Permits (PDPs), consistent with the planning principles in the CCMP. Per the City's Land Development Code (LDC) (Section 143.0401 et seq.), the purpose of a PDP is to provide flexibility in the application of development regulations for projects where strict application of the base zone development regulations would restrict design options and result in a less desirable project. The intent of the PDP regulations is to accommodate, to the greatest extent possible, an equitable balance of development types, intensities, styles, site constraints, project amenities, public improvements, and community and City benefits.

The Project would be entitled with a Master PDP (MPDP; Appendix T to this EIR). The Project is a comprehensively planned community that blends innovative design concepts and new home product types to react to the desires of existing and new demographic groups. The MPDP encompasses multiple parks, plazas, and conservation and public areas comprehensively planned to create a consistent design theme throughout the Project. It contains project-specific standards regarding circulation and mobility, infrastructure, land use regulations, and design guidelines for development, landscaping, parks and open space, and walls and fences. The MPDP Design Guidelines (additionally addressed in Table 3-5, *Summary of MPDP Design Guidelines,* later in this section), in concert with the development regulations of the underlying zone, would guide future development within the project site.

3.3.1.1 Development Summary

The Project would include residential land uses, designed at varying densities to cater to a variety of life stages; residential uses would include: 28.1 acres of single-family residential (RX-1-2) and 66.2 acres of detached (single-family on multi-family lotting) and multi-family residential (RM-2-6), all connected by 44.96 acres of on-site roads and parkways. The Project also would include a mixed-use district defined in the MPDP as the "Root Collective" which serves as a mixed-use Community Collective district (Figure 3-1, *Proposed Site Plan*). The Root Collective would include 12.6 acres of commercial uses (CC-2-4), including the proposed Mobility Hub, and 12.8 acres of higher density multi-family residential (RM-3-9), as well as parks, open space, and roadways. The Project would also set aside nearly 250 acres of open space, consisting of approximately 181.3 acres of natural open space, 38.3 ~~(less BRT IOD)~~ acres of parks (less the 2.2-acre BRT IOD) and trails, and approximately 28.6 acres of slopes, enhanced landscape, dedicated brush management zones (BMZs), and water quality/retention basins (Figure 3-2, *Proposed Land Use*, and Table 3-1, *Land Use and Zoning Summary*).

Table 3-1
LAND USE AND ZONING SUMMARY

Land Use	Project (acres)
Residential (RM-2-6)	66.2
Residential (RX-1-2)	28.1
Root Collective Residential (RM-3-9)	12.8
Root Collective Commercial (CC-2-4) (includes mobility hub)	12.6
Roads and Parkways	44.96
Open Space (including Rattlesnake Creek BMZs)	181.3
Slopes, Basins, In-development BMZs and Enhanced Landscape	28.6
Parks	38.3
(Approximate) TOTAL	**412.9***

*The Carroll Canyon Road extension west of Camino Santa Fe (through the Fenton Technology Park), which is a project component, mapped as part of the prior Fenton Technology Park project, includes 8.2 acres of disturbance and approximately 4.6 acres of right-of-way (ROW) dedication. These acres are not included in the above total as this area is already set aside via an IOD affiliated with approved VTM 14555.

The Root Collective, described above, would include a mix of non-residential and residential uses, all within 0.25 mile of the proposed Mobility Hub. The Mobility Hub is an approximately 1.35-acre area designed to provide a centralized space for on-demand, regularly scheduled, and multi-modal transportation services near to the intersection of Camino Santa Fe and Carroll Canyon Road. This area also includes approximately 12.6 acres of office, food and beverage, and retail (CC-2-4) uses; 12.8 acres of multi-family residential (RM-3-9) uses; and ancillary uses as noted above. As part of the Root Collective's multi-family residential component, the Project would provide ~~180 units (10 percent of the Project's total proposed residential units) as~~ for-rent, ~~senior~~ housing, to meet the City's Inclusionary ~~a~~Affordable H~~h~~ousing ~~requirements.~~Regulations

The balance of the Project would provide a mix of multi-family and single-family homes consistent with the applicable base zones, for a project-wide maximum total of up to 1,800 units, regardless of base zone densities. The proposed residential units throughout the Project vary from a minimum of 5 units/acre up to 73 units/acre, depending on the minimum and maximum densities of the applicable base zones, with residential densities decreasing along the edges of the project site.

Table 3-2, *Residential and Commercial Uses*, summarizes the maximum number of residential units and total commercial square footage of the Project.

Table 3-2
RESIDENTIAL AND COMMERCIAL USES

Base Zone	Number of Units or Square Feet (SF)
Residential (RM-2-6)	1,006 units
Residential (RX-1-2)	185 units
Root Collective Residential (RM-3-9)	609 units [1]
Total Residential Units	***1,800 units***
Root Collective Non-Residential: Retail	46,300 SF [2]
Root Collective Non-Residential: Food/Beverage	86,400 SF
Root Collective Non-Residential: Office/Co-Working	23,460 SF
Mobility Hub Commercial	4,000 SF
Total Commercial Square Footage	***160,160 SF*** [3]

[1] RM-3-9, including 609 units, would include the Project's~~s 180~~ affordable units ~~(10 percent of Total Residential Units)~~. Commercial uses within this zone are incorporated into the non-residential square footage in the rows that follow.

[2] The Root Collective Retail includes approximately. 16,000 SF of ground floor retail in RM-3-9 residential Planning Area (PA) 13, with the balance occurring in PA 19, a strictly non-residential parcel.

[3] Root Collective non – residential uses include a variety of retail, food and beverage, and office/ coworking uses.

3.3.1.2 Comparison to 1994 Carroll Canyon Master Plan (CCMP)

The Project would be similar to the uses envisioned under the CCMP, as shown in Table 3-3, *Comparison of 1994 CCMP and Project Land Uses*. Consistent with the CCMP, the Project would include a maximum of 1,800 residential units, an on-site Mobility Hub (referenced as a 'Transit Station' in the CCMP), local-serving retail, office use, parks and open space. The Project does not propose industrial uses envisioned by the CCMP.

The Project proposes 609 units within a developable 25.4-acre net mixed-use core (the Root Collective) that includes a retail center with an office component, higher density housing, and a mix of residential and ground floor shopkeeper units adjacent to a public plaza. As noted in Section 3.3.1.1, an additional 14.6 acres (equaling gross 40 acres) includes infrastructure, the 1.35-acre Mobility Hub, roads, water quality features, mini parks and the like, which serve the entire 3Roots community. The CCMP identifies a 40-acre mixed-use core for a mix of employment, retail and residential uses and specifies that a minimum of 100 of the total CCMP-allowed units and 10,000 square feet of retail would be built within the core. CCMP ground floor commercial uses are to occupy up to 10 percent of the core area.

The Project proposes a broader range of residential densities than the CCMP. While the residential uses proposed in the CCMP are limited to medium and medium-high density; by expanding the residential footprint, the Project would reduce densities along the periphery of the development area, allowing for a variety of product types intended to provide diverse housing opportunities to accommodate different life stages. The Project also adds some high-density residential to the mixed-use core. The locations of residential uses within the project area have also been revised to reflect changes in the regulations of the Airport Land Use Compatibility Plan (ALUCP) for MCAS Miramar.

The Project would replace the industrial areas planned in the CCMP for the southern portion of the project site with a 25.8-acre (less BRT IOD) community park and expanded land area for residential uses. The industrial land use being replaced by the community park and residential land uses are identified as 'Other Industrial Lands' by the General Plan and are not specifically identified for protection unlike 'Prime Industrial Lands' (refer to Figure 5.1-1, *City Prime Industrial Lands in the Vicinity of 3Roots*). The community park and the multiple parks spread throughout the site would offer a total of approximately 38.3 gross acres of active and passive parkland, nearly doubling the park space proposed in the approved 1994 CCMP.

Table 3-3
COMPARISON OF 1994 CCMP AND PROJECT LAND USES (acres)

Land Use Type (Per General Plan) [1]	1994 CCMP Uses Post Completion of Master Plan Phase I [2,3]	Project
Low Residential	N/A	28.1
Low-Medium Residential	N/A	35.6
Medium Residential	43	30.6
Medium-High Residential	26	8.7
High Residential	N/A	4.1
Subtotal Residential	***69 acres/1,800 units***	***107.1 acres/1,800 units***
Mixed-Use (Core Area)	8 of 40	25.4 [4]
Transit Stop or Station	1.5	1.35 (Mobility Hub)
Office Industrial	52	N/A
Parks	20	38.3 [5]
Open Space/Slopes, Basins, Brush Management Zones and Enhanced Landscape	238.6 [6]	209.9 [5,7]

Source: Figure 8 of the 1994 Carroll Canyon Master Plan, see Figure 2-7 of this EIR.

[1] The Land Use Definitions, originally established in the 1994 CCMP, do not match the City's current General Plan and Zoning designations. Comparison analysis ties the City's General Plan and base zones to CCMP land use types to the greatest extent feasible.

[2] Phase I of the CCMP was approved in 2001 as the Fenton-Carroll Canyon Technology Center, analyzed in certified EIR LDR No 40-0870 (SCH No. 89-2000041010 and VTM 14555). For purposes of this table, the acres affiliated with this phase have been removed from the 1994 Land Uses as they have been previously analyzed.

[3] Gross acreage of 1994 CCMP land uses were not based on surveyed footprints currently available and may differ slightly from proposed Project footprint.

[4] The 25.4 acres of mixed-use core area include 12.6 acres of non-residential areas, with the rest being a combination of high and medium high residential and or circulation areas, open space uses, etc.

[5] The Project increases the amount of active park use and decreases CCMP-proposed open space uses.

[6] 274.5 acres less the 35.9 acres dedicated through the Fenton Technology Park VTM 14555. Please also see footnote 3, above.

[7] Pursuant to Reclamation Plan obligations, Phase II of the CCMP is required to provide 180 acres of open space. Subtracting the 35.9 acres of Fenton Technology Park opens space equals approximately 144 acres. The Project exceeds this.

3.3.2 Conditional Use Permit/Reclamation Plan Amendment

The project site was an active aggregate mining operation and concrete processing plant from 1958 to 2016, at which time the reclamation began. The CUP approved by the City for mining and processing activities has been modified throughout the life of the mine to adjust the boundaries of the resource extraction area. The latest CUP was approved on September 13, 1990 (CUP 89-0585).

As described in Section 2.2.4, *Reclamation Plan – Project Baseline*, the City adopted a Reclamation Plan for the CCMP area in 1990, in conjunction with the approval of CUP 89-0585 and certified a Supplemental EIR (1990 EIR; DEP No. 89-0585; SCH No. 85121814) at that time. These adopted and certified documents addressed impacts of on-site mining and reclamation, including on surrounding land uses. These documents identified required re-contouring to stabilize the slopes and prepare land for future development, and required the restoration and enhancement of native habitat, including Carroll Canyon Creek. The 1990 CUP included a variety of conditions and mitigation measures. The current Project would ensure that those conditions and mitigation measures, not already satisfied, would be completed. This includes protection of fish and wildlife habitat using all reasonable measures, and the requirement that wetlands shall be avoided or mitigated at 1:1 minimum for both acreage and habitat value (current plans show avoidance/replacement/ enhancement at a 3:1 ratio).

Although active mining operations have ceased, an amended CUP/Reclamation Plan~~ and CUP~~ are necessary to address changes in the site conditions and the redevelopment plans since 1990, and to complete regulatory closure of the mined lands. The Project proposes an amendment to the existing CUP/Reclamation Plan~~ and CUP~~ to modify the Reclamation Plan boundary, adjust grade elevations to align with the proposed development, revise the originally proposed road networks to match existing infrastructure, and protect sensitive habitat. Reclamation Plan Amendment activities would be completed in accordance with PRC Division 2, Chapter 9, Section 2710 et seq; as well as CCR Title 14, Division 2, Chapter 8, Subchapter 1 Article 1 Section 3500 and Article 9 Section 3700, as applicable.

Proposed modifications to the Reclamation Plan boundary are illustrated on Figure 3-3a, *Proposed Reclamation Plan Amendment*. The Reclamation Plan boundary would be reduced along Rattlesnake Creek and Carroll Canyon Creek and adjacent to existing development along the southern and southeastern edges of the site. Specifically, the areas to the south of the site have already been reclaimed and revegetated and the areas along Rattlesnake Creek and Carroll Canyon Creek, which were originally contemplated in CUP 89-0585 as proposed fill sites for mining byproduct, were not disturbed as part of the mining process (Figure 3-3b, *Reclamation Plan Amendment-Revegetation Plan*). Conversely, the CUP/Reclamation Plan boundary would be expanded to establish reasonable connections to the existing grades along Parkdale Avenue in the northern portion of the site and Carroll Canyon Road in the eastern portion of the site.

Specific to the proposed amendment, criteria also require that wildlife habitat shall be established on disturbed land at least as good as pre-project conditions, unless end use precludes its use as wildlife habitat; and sensitive species shall be conserved or mitigated as prescribed by the federal and California Endangered Species Acts. Native plant species comprise the plant palette for the amendment areas and would be monitored for success, and noxious weeds would be monitored and abated.

In addition, the project's geotechnical consultant anticipates that the compacted fill placed during the reclamation grading may settle over time. The Project proposes that surface settlement monuments are installed and monitored until the readings indicate settlement has ceased, which is expected to take three to six months post installation of said monitors. The project's geotechnical consultant also recommends surcharge fill and settlement monitoring be performed in areas where undocumented fill would be left below the groundwater. The surcharge fill should remain in place until settlement readings indicate settlement has essentially ceased.

3.3.3 SDG&E Facility Modifications

SDG&E Facility Modifications (east-west modifications, north-south modifications, and substation removal); are required as a result of the Project and are analyzed as part of the Project (see Figure 3-4, *SDG&E Facility Modifications*).

3.3.3.1 East-West Facilities

The existing overhead east-west double circuit 69kV system would be converted to an underground facility and relocated along the north side of Carroll Canyon Road. The proposed conversion would tie in on the west to the existing north-south transmission alignment in the current SDG&E easement approximately 400 feet west of Camino Santa Fe via a steel cable~~ pole on the northeast corner of the Camino Santa Fe and Carroll Canyon Road intersection~~. On site, the proposed conversion would rise overhead via two steel cable poles south of the creek (east of the existing Fenton substation site), extend north overhead within the open space, and tie in to the existing east-west transmission alignment on new terminal dead-end steel poles to continue overhead east in the current SDG&E easement. This configuration could require the removal and or replacement of poles. Potential removal and replacement may require access improvements and focused retaining wall features in ornamental and disturbed vegetated areas adjacent to the Carroll Canyon Road West extension/west of Camino Santa Fe (ornamental landscaping along Camino Santa Fe and open space area associated with Fenton Technology Park). The reader is referred to Chapter 5.0 for pertinent discussion.

A parallel ~~nearby additional~~existing overhead east-west single circuit 69kV system also would be converted to underground and relocated along the north~~ern~~ side ~~edge~~ of Carroll Canyon Road alongside the path of the double circuit 69kV system configuration. Western and eastern tie-in points to existing facilities would be as described~~ for TL906 and TL677,~~ above.

Finally, a third existing overhead east-west single circuit 69kV system would be relocated to the south for approximately 900 feet and would be converted to underground along the south side of Carroll Canyon Road for approximately 400 feet. The proposed relocation would tie in~~to~~ on the west to an existing north-south transmission alignment along Rehco Road (approximately 0.25 mile west of the existing 230kV north-south corridor) ~~in close proximity to the current SDG&E transmission easement~~ and tie in~~to~~ a north-south transmission alignment, as described below, along the west side of Camino Santa Fe in the current SDG&E easement. ~~This configuration could require the removal and or replacement of poles. Potential removal and replacement may require access improvements and focused retaining wall features in ornamental and disturbed vegetated areas adjacent to the Carroll Canyon Road West extension/west of Camino Santa Fe (ornamental~~

~~landscaping along Camino Santa Fe and open space area associated with Fenton Technology Park). The reader is referred to Chapter 5.0 for pertinent discussion.~~

3.3.3.2 North-South Facilities

The existing overhead north-south double circuit 69kV system along the west side of Camino Santa Fe in the vicinity of Carroll Canyon Road would remain overhead with an approximately 500-foot realignment to remove the pole near the creek. The proposed realignment northern tie-in would be at the aforementioned east-west proposed steel cable pole on the southwest corner of the Camino Santa Fe and Carroll Canyon Road intersection; the southern tie-in would occur with a pole replacement on the off-site hillside in the current SDG&E transmission easement. Removal and new installation levels of disturbance would be similar to those noted in Section 3.3.3.1.

3.3.3.3 Fenton Substation

The existing SDG&E 69kV/12kV Fenton Substation located within the project site would be decommissioned, taken out of service, and removed by SDG&E. This would occur after current SDG&E customers that obtain electric service from this substation have been transferred to alternative service by SDG&E. The decommissioning would include removal of all equipment such as: three-phase transformer, regulator, steel structures, circuit breakers, capacitors, fencing, oil containment structures, pads, pylons/piers, conduit packages, cable, etc. The decommissioning and demolition of this substation is an SDG&E action that is not part of the CUP/Reclamation Plan Amendment and a replacement substation is not proposed as part of the Project.

3.3.3.4 Additional Smaller Facilities

To distribute electric service to the Project, SDG&E would convert and relocate the existing overhead 12kV system that is attached to the 69kV pole line described above in Section 3.3.3.2, including conversion to underground within the Carroll Canyon Road right-of-way (ROW). Electric distribution lines ultimately would be located underground within the future project ROWs and designated electricity corridors.

3.3.4 Project Details

3.3.4.1 Residential Zoning

RX-1-2 (Planning Areas 3, 4, and 6)

The Project would include a total of 185 single-family lots zoned as RX-1-2, with a density of 5 to 10 units/acre (an average 6.6 dwelling units per acre). These single-family detached homes would range between two and three stories, with a maximum height of 42 feet. Figures 3-5a-c, *Typical Architecture – Single-Family Detached*, provides typical architectural elevations for the single-family units within Planning Areas (PA) -3, -4, and -6, respectively.

RM-2-6 (Planning Areas 1, 2, 5, 7-11, 15-18)

A total of 1,006 residential units are planned within the RM-2-6 zone with a target density of 15.3 dwelling units per acre as part of the Project. Units would include a mix of single-family detached (on multi-family lotting) and multi-family attached condos built on a common lot, that are two and three stories with a maximum height of 40 and 45 feet respectively. Many of the detached homes would be located on the periphery of the proposed community and the area to the north of Carroll Canyon Road across from the proposed community park. Most of the attached homes would be located in the central portion of the project site along the western edge of the development footprint adjacent to Camino Santa Fe. Typical elevations for homes in the RM-2-6 zone are shown in Figures 3-6a-b, *Typical Architecture - 2 Story Rowtowns (PA-1 & PA-7)* and *- 2 Story Flats (PA-9 & PA-16)*, respectively; Figure 3-7, *Typical Architecture – Alley Load Condo (PA-2 & PA-18)*; Figures 3-8a-b, *Typical Architecture – 3 Story Detached Condo (PA-5)* and *- 3 Story Detached Cluster (PA-10)*, respectively; and Figures 3-9a-b, *Typical Architecture -3 Story Rowtowns (PA-8 & PA-15)* and *-Trio (PA-11 & PA-17)*, respectively.

RM-3-9 (Root/Community Collective) (Planning Areas 12-14)

The Root Collective would include 609 multi-family units in areas designated as RM-3-9 with a target density of 47.6 dwelling units per acre, which allows for maximum densities up to 73 units/acre. The contemplated product would range between 25 and 65 units/acre. Buildings would range from three to five stories high, with a maximum height of 65 feet. Parking would be included as surface lots on grade or in a structure within the residential parcel. PA-13 would include approximately 16,000 SF of live-work (e.g., shop keeper) and retail uses in the RM-3-9 product at the ground floor to render the street more vibrant and active by introducing a commercial element. Typical elevations for the affordable ~~senior~~ apartments, proposed for PA-12, are shown in Figure 3-10, *Typical Architecture – Affordable ~~Senior~~ Apartments (PA-12)*.

3.3.4.2 Commercial Zone CC-2-4 (Commercial Community)

Mobility Hub (Planning Area 20)

The Mobility Hub is proposed to be a centralized multi-modal node within the Project. It would provide centralized pick-up and drop-off staging areas for both public transportation systems (which also could be located immediately adjacent) as well as private multi-modal transportation options such as employer shuttles and rideshare services. A bike repair, rental, and maintenance shop would also be included. Solar or non-solar electric vehicle (EV) charging stations would be provided in the Mobility Hub.

Commercial and Office Uses (Planning Areas 19 and 13)

Adjacent to the Mobility Hub, the commercial uses would provide services and entertainment options connecting with the residential neighborhoods via a pedestrian pathway and trail system. The commercial area would include approximately 160,160 SF of retail and office (including the 16,000 SF of live-work and retail uses described above in the RM-3-9 zone). Of that total, the Project includes 136,000 SF of retail. Food and beverage offerings may include fast casual restaurants, quality dining, breweries, cafes, and on-site craft foods. Health and wellness components may include such options as pharmacy, on-site medical clinic, sports performance training, and boutique fitness studios. The approximately 23,000-SF office component may include a co-working concept and offer services such as shipping, printing, conference rooms, and tele-meeting options.

Placemaking/Pop-up Retail (Planning Area 19)

Pop-up retail uses, which are planned along the northern portion of PA-19 (lots KK-1 [0.15 acre]), KK-2 [0.27 acre], and KK-3 [0.13 acre] of the VTM), may be approved through a Temporary Use Permit (SDMC Section 123.0401). Figure 3-11, *Locations and Examples of Pop-up Retail*, depicts these lots and illustrates examples of the proposed uses. Potential pop-up commercial and retail uses permitted in the CC-2-4 zone include food, beverages, and groceries; sundries, pharmaceutical, and convenience sales; wearing apparel and accessories; and eating and drinking establishments. Pop-up retail is generally identified as temporary or permanent retail structures under 800 SF, including shipping containers, retrofitted vehicles for commerce, open air market kiosks, and other similar structures. Pop-Up Retail uses qualify as "placemaking" as defined in the SDMC and are regulated in accordance with Section 141.0421. PA-19 may also host farmers markets and food trucks, each of which would be subject to any necessary permits.

3.3.4.3 Parking

Project parking would be provided in residential garages, at public park areas, and in commercial/retail zones. In the latter areas, parking may be provided in surface lots and/or in structures. The Project shall be subject to the requirements of the Land Development Code. Parking per se is not a CEQA issue, but review for conformance with City development guidelines is a relevant land use issue.

3.3.4.4 Parks and Trails

The Project would include a 25.8-acre (less BRT IOD) community sports park, as well as a collection of neighborhood parks between 3 and 6 acres, mini parks totaling approximately 4 acres, and pocket park areas of over 1 acre; and a series of trails connecting the neighborhoods to the recreation additional trails (Figures 3-12, *Proposed Parks*, 3-13a, *Proposed Trail Types*, and 3-13b, *Proposed Trail Materials*). Immediately adjacent to the existing neighborhood to the north, the Parkdale Trailhead Overlook (a pocket park) would provide bike racks, interpretive signs, seating and trail access. The community sports park would be located immediately south of Carroll Canyon Road and would be used as a sports complex for the community of Mira Mesa. The community park was designed with community input through the General Development Plan (GDP) process pursuant to Council Policy 600-33. Among other more passive uses, the park is proposed to include soccer fields, baseball fields, basketball courts, dog park facilities, restrooms, and a site for a future recreation center, adhering to the City Park and Recreation Design Guidelines (Figure 3-14, *Community Sports Park*), as well as parking. There would be night lighting associated with the use of the sports fields. A presentation area/potential bandshell location would have use restrictions for sound control, as described in Section 5.7, *Noise*.

The community sports park would be public and dedicated to the City for future maintenance once built. Excluding 1.1 acre, neighborhood parks and pocket parks (including the overlook), etc. would be homeowners' association (HOA) owned and maintained, but also would be subject to public use recreation easements.

3.3.4.5 Open Space

Approximately 181.3 acres would be retained as natural open space (excluding parks and trails) and approximately 146.4 acres (an approximately 6.7-acre net increase) would be dedicated to the MSCP preserve (Figure 3-15, *Proposed Open Space*). This open space acreage does not include parks, trails, water quality basins, BMZs, or enhanced landscape areas adjacent to public ROW.

3.3.4.6 Carroll Canyon Creek Enhancements

As shown in Figure 3-16, *Carroll Canyon Creek Enhancements*, adopted CUP/Reclamation Plan requirements will be implemented concurrently with some elements of Project implementation. The adopted CUP/Reclamation Plan mandates restoration, widening, and enhancement of the riparian areas and waterways, as shown, along the length of on-site Carroll Canyon Creek. In addition, the Carroll Canyon Road connection through the site requires an under-crossing to allow water to flow under the road.

3.3.4.7 Circulation/Access

Proposed roadway designs would generally follow the standards in the City of San Diego Street Design Manual; however, on-site modifications are proposed to increase areas within the ROW for landscaping and pedestrian walkways, and reduce the overall pavement width.

Carroll Canyon Road Extension (On Site)

The Project would construct the on-site extension of Carroll Canyon Road, a main arterial facilitating a connection between I-805 and I-15. The future on-site segment of Carroll Canyon Road would be a 6-lane Prime Arterial with ROW widths ranging from 126 feet to 136 feet (Figure 3-17, *Project Circulation*). Outside the ROW there is an IOD for a future BRT along the south edge of the road that would allow for an ultimate center alignment of a dedicated BRT line. Additionally, adjacent to the mobility hub are two IODs on north and south sides of the road to accommodate a potential future BRT stop along this center alignment, as additionally described below.

Carroll Canyon Road Extension (West)

In addition to the portion of Carroll Canyon Road that would be constructed within the project site, the Project includes the completion of a segment of Carroll Canyon Road to the west of Camino Santa Fe (Figure 3-18, *Carroll Canyon Road Extension [West]*). This road segment is designed as a 4-lane Major facility within a 98-foot wide ROW, and extends for approximately 2,017 linear feet, directly south of the existing Fenton Technology Park. This road was planned in the 1994 CCMP and is referenced as T-5A in the 2016 Mira Mesa Public Facilities Financing Plan. This off-site segment of Carroll Canyon Road (West), was mapped as part of the previously approved Fenton Technology Park project. Because this improvement is not a Mobility Element roadway that the Project is dependent upon in the near term, it would be subject to bonding and a Deferred Improvement Agreement (DIA). This alignment would be confirmed when study for the roadway extension further to the west is completed by the City.

Project Site Access

The main entry points to the project site would be from Camino Santa Fe and Carroll Canyon Road. A collector roadway (Spine Road) would intersect with both Carroll Canyon Road and Camino Santa Fe and would trend through the project site from north to south. Two streets, which would intersect with Camino Santa Fe, would primarily be used for access to the Root Collective and intersect with Spine Road to create a modified grid system of roadways through the Project. Several other public streets would extend into the on-site surrounding residential neighborhoods (Figure 3-17).

Bus Rapid Transit

In the existing condition, Route 237, San Diego Metropolitan Transit System (MTS) Rapid Service, operates along Mira Mesa Boulevard and provides east-west connectivity to the north of the project site. The MMCP contemplated light rail transit (LRT) along the future Carroll Canyon Road and the CCMP also notes that such use is possible, although time frame was noted as uncertain. Potential for extended bus service along Carroll Canyon Road also was noted in the CCMP, together with acknowledgement of potential project reduction in vehicle trips based on alternative transportation elements. SANDAG removed the LRT line as part of San Diego Forward: The Regional Plan in 2015. In removing the LRT, a BRT alignment was never studied or documented by SANDAG. However, in consultation with the City of San Diego, MTS, and SANDAG, the applicant was requested to include an area that could be used as ROW for a potential BRT route along Carroll Canyon Road, so as not to preclude a potential BRT route in the future.

ROW for a future BRT route within the on-site portion of future Carroll Canyon Road has been reserved with an IOD outside the City of San Diego ROW, consistent with IODs for potential BRT expansion adjacent to the site, both directly east (Carroll Canyon Business Park) and west (Fenton Technology Park). The exact alignment of this future route has not been identified in approved SANDAG planning documents, but SANDAG has stated that the route will be addressed in the 2019 update. SANDAG/MTS have stated preference for a center alignment; the BRT IOD proposed for this Project would allow such alignment on site. SANDAG also has indicated that there is currently no funding identified for expanded service or any other potential transit (such as BRT along Carroll Canyon Road); nor is there any funding to relocate the Mira Mesa Boulevard bus route southward to Carroll Canyon Road. They will require justification (anticipated high ridership) along the route overall. Based on guidance from SANDAG, however, the preferred alignment would be in the center of Carroll Canyon Road within the raised median area; as stated above the IOD offered would allow for this within the project site.

In response to the above, the Project would provide IODs along the on-site Carroll Canyon Road corridor to accommodate both a dedicated transit area as well as a combined stop that would accommodate both east- and west-bound buses. Carroll Canyon road would be six lanes in width with an up to 26-foot raised, landscaped, median inclusive of left turn lanes at signalized intersections and both east- and west-bound 10-foot-wide Class I multi-purpose trails. The bus stop IODs have been included to provide enough ROW within the Carroll Canyon Road corridor to accommodate either a southern route or a center median alignment for future BRT and have been designed so as not to preclude either potential route. The future transit stop location has been sited directly south of the Root Collective on the west side of the future signalized intersection of Carroll Canyon Road/Spine Road. The IOD proposed for the stop is designed to accommodate a 55 foot by 135 foot BRT platform per dimensions set forth by SANDAG. As noted, based on guidance from

SANDAG, a preferred alignment would be in the center of Carroll Canyon Road, within the center median area. Any development of a BRT along Carroll Canyon Road would require future alignment studies and considerable capital expenditure by SANDAG to construct the route, and is likely a minimum of 10 years in the future due to the need for the prior completion of Carroll Canyon Road to the east and west of the project site. The Project dedications and design features ensure that Carroll Canyon Road could accommodate a future BRT within the available ROW and respective IODs.

Pedestrian Circulation

Pedestrian circulation would be provided throughout the site by a network of sidewalks, pathways, plazas, and public spaces. These pedestrian facilities would provide connections between the proposed uses within the Project, to existing sidewalks along Camino Santa Fe, and to the adjacent Fenton Technology Park. There would be a direct connection from the Root Collective (commercial) area, including Mobility Hub areas where residents would be able to pick up a ride on a bus, employee shuttle, Uber/Lyft, or rideshare. Carroll Canyon Road within the project site would be constructed with pedestrian facilities through the entire length of the project site east to west.

As noted in Section 3.3.4.6 above, the Carroll Canyon Road connection through the project site would require an under-crossing to allow water to flow under the road. The under-crossing, which would be designed to allow pedestrians and bicyclists to cross under Carroll Canyon Road along the creek-side trail, would be a primarily soft bottom pipe arch approximately 330 feet long, 66 feet wide, and over 19 feet high (Figure 3-19a, *Carroll Canyon Road Under-Crossing*). Pedestrians and wildlife would be separated within the undercrossing, with the softer bottom being for animals and a slightly elevated (approximately 2 feet) walkway for pedestrians along one side of the undercrossing, which also serves as a City of San Diego maintenance access path. The Project also proposes new trails to connect the project site to existing open space trail systems and residential communities, and a pedestrian-only bridge across Carroll Canyon Creek connecting PA-15 with PA-5 (Figure 3-19b, *Pedestrian Bridge*).

Bicycle Circulation

The Mobility Hub would serve as a primary connection point for community and regional bicycle facilities, sidewalks, trails, and paseos would also connect with the project neighborhoods, parks, and open space. The Mobility Hub would include a public bike station, a facility with bike repair services; bike sales; and secure, covered, and publicly accessible bike storage. The primary bicycle circulation element through the project site, a Class I multi-purpose trail, would be adjacent to both sides of the proposed Carroll Canyon Road extension through the site. Figure 3-20, *Bicycle Circulation Plan*, illustrates proposed bicycle circulation for the Project.

As shown in Figure 3-20, the Project would also provide Class II bike lanes (on-street, striped) along both sides of Spine Road and the Village Entry, which are extensions of Miratech Drive and Summers Ridge Road, respectively. The Urban Corridor Street, Street A, and Street I would include Class III bike routes (shared ROW), providing additional bicycle circulation options. In addition, up to three bike stations with racks and fix-it gear would be provided throughout the project site, along with the aforementioned bike shop in the Mobility Hub (for a total of four). There would also be up to up to seven bike racks at key activity centers throughout the site.

3.3.4.8 Off-site Traffic Improvements

As described in greater detail within Section 5.2, *Transportation/Circulation*, there are a number of mitigation measures that require physical improvements to study area intersections or roadway segments. The majority of those improvements would involve restriping within existing ROW. Because these improvements can be accomplished without a need for acquiring additional ROW, there would be no associated environmental impacts. A total of four intersections would require property acquisition outside of project impact areas to accommodate the required improvements. These include:

1. Camino Santa Fe and Carroll Road – Additional ROW required for a right-turn lane headed eastbound along the south side of Carroll Road, west of Camino Santa Fe.

2. Camino Santa Fe and Miramar Road – ROW required for a right-turn lane headed westbound on Miramar Road, east of Camino Santa Fe.

3. Camino Santa Fe and Flanders Road – Additional ROW required for a right-turn lane headed northbound on Camino Santa Fe, south of Flanders Drive.

4. Miralani Drive and Camino Ruiz – Additional ROW required along the north side of Miralani Drive in order to provide two left-turn lanes.

These intersections were reviewed for their potential to result in environmental impacts, such as, but not limited to, effects upon historical resources/tribal cultural resources, biological resources, air quality and noise (due to proximity to sensitive receptors). The intersection of Camino Santa Fe and Flanders Road is adjacent to disturbed coastal sage scrub; thus, improvements at this intersection would be required to either: (a) occur outside of the California gnatcatcher breeding season; or (b) comply with mitigation requiring pre-construction surveys. It is also noted that a small extension of right-of-way north of Carroll Canyon Road West at its east end, west of Camino Santa Fe, would be required for future roadway implementation once final road planning is completed for extension of that roadway to Carroll Road. This additional right-of-way is a maximum of 10 feet in width (tapering to zero), and totals less than 0.1 acre overall. Because this area is already incorporated within identified and evaluated project impact area, it is not additionally separately addressed in Chapter 5.0 of this EIR.

3.3.4.9 Landscape and Hardscape Treatments

The Project would include landscaping throughout the community (see Figures 3-21a-f, *Landscape Plan*). Proposed plantings include a variety of trees, shrubs, ornamental grasses, groundcovers, and wildflowers, many of which are native species. A landscape palette (Figure 3-21g, *Plant Palette*) is proposed for each component of the Project. For example, plantings around the village entry could include tulip trees, California sycamore, coast live oak, and coral tree. Residential streets could be planted with species such as jacaranda, holly oak, Australian willow, pear tree, and silk trees. Street trees would be planted in parkways between the curb and sidewalk to create a barrier between the sidewalk and the street. Spine Road would include trees within the landscaped median. Each neighborhood would have variation in its landscape palette, but elements of the overall landscape design throughout the site would be cohesive and consider best practice drought-tolerant design concepts. In designated BMZs 1 and 2, there would be a modified plant palette to comply with City brush management standards.

Proposed hardscape treatments would include concrete pavers set within gravel bands, distressed paint, cinderblock walls, granite boulders, textured and colored concrete, concrete with exposed or special aggregate, or other similar finish treatments. Pedestrian seating/benches and bike racks would be placed throughout the project site (see Table 3-5, below).

3.3.4.10 Brush Management

Brush management is an important fire safety and prevention strategy for new and existing development. Setback buffers would be provided between the project-related new development and open space to meet all City brush management requirements. Brush management for the proposed 3Roots development would occur within designated open space lots to be maintained by the Project's HOA and would be located wholly within project developed areas and outside the MHPA. Brush management zones have been designed to blend the proposed site elements into natural hillsides and canyons; provide a logical and defensive perimeter for fire, erosion, and other naturally occurring hazards; and rehabilitate the disturbed transition from the natural environment to the built environment. Zone 1 is closest to structures and contains the least flammable materials. Zone 2 is the area between Zone 1 and any area of native or naturalized vegetation, and consists of thinned, non-irrigated vegetation, with fuel volume reduced through such methods as trimming 50 percent of the plants over 24 inches in height to 6 inches while maintaining intact roots. In some cases, and consistent with Brush Management Regulation Section 142.0412(i), the width of these zones would be reduced through alternative compliance measures such as dual-paned and dual tempered windows and/or fire-rated walls. Some lots also would have expanded Zone 1 area, as allowed under Section 142.0412(f). Other fire-related design elements incorporated into the Project would include fire-resistant building materials, fire/ember/smoke barriers, automatic alarm and sprinkler systems, and provision of adequate fire flow and emergency access.

It is noted that some existing brush management zones would be maintained as BMZ 2 along existing homes rimming Rattlesnake Canyon to the north and northeast of the site (see Figure 3-15). The Rattlesnake Canyon area would be designated as HOA-maintained open space with a covenant of easement/IOD for the MHPA.

3.3.4.11 Signage

Signage would include a hierarchy of sign~~age~~ types placed throughout the Project to provide a unified signage program in accordance with SDMC requirements. Highly visible entry monuments, with special emphasis landscaping or other features to improve visibility, would be provided at all of the vehicular entries into the project site. These would include a total of three locations along Camino Santa Fe and four locations along Carroll Canyon Road (Figure 3-22, *Gateways*). Monuments would be used to identify the community sports park and different neighborhoods within the project site. Signage would be provided for wayfinding and traffic control purposes, and to identify trails, paseos, and addresses. Finally, pedestrian directories would be provided in select locations within the neighborhoods and commercial areas. All on-site signage would comply with a Comprehensive Sign Plan (CSP) that would be processed as part of the Neighborhood Use Permit (NUP). Per Section 141.1103, the NUP would be submitted during the building permit and site infrastructure process in order to address any signs which exceed City-wide sign regulations but are necessary for improved function or aesthetics as part of the Project.

3.3.4.12 Lighting

Lighting would be installed in outdoor areas to illuminate common areas, streets, paths, entryways, landscaping, vehicle and bicycle parking areas, transit stops, public art, sports parks, and architectural elements. Lighting would be consistent with City requirements for safety and would be shielded and directed away from residential uses and sensitive biological areas.

3.3.4.13 Utilities

Wet Utilities

Utility services would be provided through the construction of pipelines/extensions from existing utility infrastructure on site and within surrounding roadways. The Project would connect to existing potable pipelines located within Camino Santa Fe and Carroll Canyon Road. Proposed water pipelines within the project site would be looped to provide redundancy and ensure adequate water pressure (Figure 3-23, *Proposed Public Water System*). Connection also would be made to a recycled water pipeline in Camino Santa Fe, bring recycled water on site for use at the Community Park. Existing sewer lines within Camino Santa Fe and Carroll Canyon Road would connect to proposed sewer lines throughout the project site (Figure 3-24, *Proposed Sewer System*). An existing sewer line within the Carroll Canyon Creek area would be relocated to be within the proposed extension of Carroll Canyon Road. Sewer service through the project site to the Mira Mesa community, north of the Project, would be rerouted through new sewer lines within the project site.

Dry Utilities

Dry utilities, including electricity, natural gas, telephone, cable, and other services, would be connected from off-site main grid systems near the Camino Santa Fe and Carroll Canyon Road intersection with both on-site and off-site components. When possible, dry utility infrastructure would be located along roadways and within SDG&E ROW, to reduce impacts associated with installing new transmission lines and cables. Please refer to Section 3.3.3, *SDG&E Facility Modifications*, with regard to planned changes to major electrical components, including demolition of the Fenton Substation.

Natural gas services would be provided to the proposed Project by SDG&E via an extension of the high-pressure natural gas distribution line located at Camino Santa Fe and Carroll Canyon Road. This main distribution line would follow Carroll Canyon Road eastward through the site. Distribution lines would extend service from the main distribution pipeline to locations throughout the project site.

Telephone, cable television, and internet service may be provided by several companies including AT&T, Cox Communications, and Spectrum. The utilities would be extended underground within street ROW and other public easements. Although no wireless communication towers or facilities are proposed, they are permitted within the Project.

3.3.4.14 Sustainable Design Features

The Project has been designed to promote sustainability. Buildings would feature cool roofs, energy-efficient appliances, low-flow plumbing fixtures, energy-efficient light-emitting diode (LED) lighting, and drought-tolerant plantings. All single-family and multi-family residential units would include conduits to promote solar energy generation and battery storage (base connections would be provided so that hook up could easily occur; this also would support electric vehicle charging within garages). All new residential structures for which applications are submitted in 2020 or after would comply with requirements of the 2019 Building Energy Efficiency Standards, which require solar photovoltaic systems for new homes, to be provided through rooftop solar panels. Where implemented, parking structures would incorporate solar-mounted shade structures on the roof deck.

The prior mining site resulted in lack of vegetation on 256 acres. The Project includes substantial landscaping throughout the project site. The palette includes a variety of canopy and accent trees, as well as preservation of over 180 acres of MHPA and creek restoration. Per MPDP Appendix A, Tree Canopy Coverage Calculations, 73 acres of site would contain trees with minimum 12-foot-diameter canopy. This would exceed a goal of 15 percent coverage, and would increase on-site urban street canopy.

Homes would be situated on the site to maximize opportunities to walk and bike through the trail system. The Root Collective would be located within close proximity (across Camino Santa Fe) to the Phase I Fenton Technology Park to reduce vehicle miles travelled (VMT) by providing jobs and commercial uses near residential uses. Changing/shower facilities would be provided in commercial buildings to facilitate bicycle commuting. The majority of the project site would be located within 0.5 mile of the Mobility Hub.

The Mobility Hub would place public transportation as well as private mobility options in an accessible area for project residents, and would be staffed by a full-time mobility concierge/Transportation Demand Management (TDM) coordinator. The on-site concierge/TDM coordinator will coordinate ride-share opportunities; develop, implement and coordinate an Employment Center Shuttle Service; manage the on-site kiosk for scheduling and paying for on-line car sharing programs; coordination of bike education events (to encourage use of bicycles with the community and into surrounding neighborhoods); and work with the community ~~of~~ on implementation and integration of bike-share services should that program evolve.

Additional sustainable design features for the Project include:

- Approximately 8 miles of on-site trails that connect to existing off-site pathways;
- Over 5 miles of on-site Green Streets;[1]
- Over 180 acres of dedicated open space;
- Traffic-calming roundabouts;

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[1] Green streets give priority to pedestrian circulation and open space over other transportation uses, while incorporating stormwater drainage options through tree wells, permeable pavement, etc. Treatments may include sidewalk widening, landscaping, traffic calming, and other pedestrian-oriented features.

- On-site community EV charging stations with an array of charging speeds and electric sources in PA-19 and at the Mobility Hub in PA-20;
- IOD of ROW for a BRT bus lane and a future BRT stop;
- LED street lights;
- Access to clean air vehicles, buses, and shuttles;
- Solar-powered art;
- A Revegetation and Enhancement Planting Program;
- Increased land use diversity (mixed-use);
- On-site affordable housing; and
- ~~Mining Equipment and~~ Construction Debris Recycle Programs.

3.3.5 Grading Plan

Implementation of ~~T~~the approved 1990 CUP/~~ and 1990~~ Reclamation Plan serves as the baseline for project grading. The proposed CUP/Reclamation Plan Amendment, studied as part of this Project, proposes changes in grading from the approved and implemented Reclamation Plan condition. In addition to some amended reclamation grading, the Project would require finish grading for public streets, residential/commercial lots, and public and private in-tract improvements. In select locations, the grading of the Project would require the construction of retaining walls. The grading required to implement the Project is shown by phase in Figure 3-25, *Phase 1 Grading*, and Figure 3-26, *Phase 2 Grading*. Grading would be balanced on site with no export.

3.3.6 Construction Phasing

The Project would be constructed in two phases, as shown in Figure 3-27, *Phasing*, and summarized in Table 3-4, *Construction Phasing Components*. Pending project approvals, Phase 1, does not require resource agency permits for development or its related mitigation; it could begin in December 2019 (and be completed in 2022) at the northern portion of the project site and would include the construction of residential development eastward from Camino Santa Fe (PA-1 through PA-14). Phase 1 is expected to include 393 attached condominiums, 609 apartments, 250 detached condominiums, 185 single-family detached units, and 16,000 SF of ground floor retail. As indicated, this phase and these uses are not dependent on adopted CUP/Reclamation Plan implementation of creek improvements.

Table 3-4
CONSTRUCTION PHASING COMPONENTS

Phase 1	Phase 2
Reclamation Phase 1	Reclamation Phase 2
Phase 1 grading and installation of backbone infrastructure	Remaining grading and infrastructure
185 Single-family Detached Units	Carroll Canyon Road
609 Apartments	Carroll Canyon Road West*
250 Detached Condominiums	113 Detached Condominiums
393 Attached Condominiums	250 Attached Condominiums
16,000 SF Retail/Live Work (shop keeper) Commercial	Adopted CUP/Reclamation Plan Creek Restoration
11 acres of Parks (Pocket parks and neighborhood parks)	144,000 SF Commercial
	Mobility Hub
	SDG&E Realignment
	Community Park

*The section of road proposed as part of the Project is a segment that independently would not provide through connection or access to any existing uses. It would be bonded for as a DIA, and would be constructed commensurate with the rest of the road providing through connection, following completion of City plans for its westward extent.

Phase 2 is contingent upon a Clean Water Act Section 404 authorization from the U.S. Army Corps of Engineers (USACE), Clean Water Act Section 401 waiver/certification from the RWQCB, and California Fish and Game Code Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW). It is estimated to begin in December 2020 (and, excluding Carroll Canyon Road West), be completed by 2025~~)~~, and would include the construction of residential development through the center of the project site and the commercial development in the Root Collective, including the completion of residential development to the proposed extension of Carroll Canyon Road (PA-15 through PA-20). Phase 2 would construct the remaining 113 detached condominium units, 250 attached condominiums, 144,000 SF of commercial/retail/office, and the Community Park. Grading and installation of infrastructure would occur as-needed throughout the construction schedule.

As noted above in Section 3.3.4.7, the extension of Carroll Canyon Road west of Camino Santa Fe would be completed when the alignment study for the roadway extension farther to the west is completed by the City, and would be subject to a DIA.

3.4 Discretionary Actions

This EIR is intended to provide documentation pursuant to CEQA to cover all local, regional, and state permits and/or approvals that may be needed to implement the Project. Implementation of the Project would require the following discretionary approvals from the City:

- CUP/Reclamation Plan Amendment
- Carroll Canyon Master Plan (CCMP)/General Plan Amendment/Mira Mesa Community Plan (MMCP) Amendment
- Re-zone and associated Community Plan Implementation Overlay Zone (CPIOZ)

- Master Planned Development Permit (MPDP)
- Site Development Permit (SDP)
- Neighborhood Development Permit (NDP)
- Easement Vacations
- Vesting Tentative Map
- MHPA Boundary Line Adjustment
- Water Supply Verification Report

3.4.1 Mira Mesa Community Plan/General Plan Amendment

The MMCP would be amended to add the land uses in the 3Roots Project area to the Land Use Map in the CCMP section of the MMCP and add background and relevant policies from the CCMP which is proposed to be rescinded by the project. Because community plan land uses are a component of the General Plan, the amendment to the MMCP would also comprise an amendment to the General Plan. The General Plan amendment would also revise the Land Use and Street System Map due to the size of the project site with respect to proposed changes to MMCP land use. The Park and Recreation Facilities section of MMCP would be amended to remove the 5-acre Parkdale Park site from the list of Neighborhood Parks and add the much larger 3Roots Community Park to the list of population-based park sites. A discussion section would be added to the CCMP Area chapter of the MMCP to provide background on the Project, incorporate relevant policies and references, and update this section to reflect other projects that have developed in the CCMP Area.

3.4.2 Carroll Canyon Master Plan

As part of the amendment to the MMCP, the project would rescind the CCMP and place relevant content within applicable sections of the MMCP, including content relevant to Phase I, the Fenton Technology Park. The MMCP would be amended as described above. The CCMP required that PDPs be approved by the City Council for development of the H.G. Fenton Materials area consistent with the development criteria in the CCMP. Phase I of the CCMP, also known as the Fenton-Carroll Canyon Technology Center, was approved by the San Diego City Council in December of 2001 as PDP 98-1199. Final phases of the CCMP, also known as 3Roots San Diego, would also be approved as a MPDP.

3.4.3 Conditional Use Permit/Reclamation Plan Amendment

The Project proposes a CUP/Reclamation Plan Amendment to modify the Reclamation Plan boundary, and adjust grade elevations to align and tie in with the proposed post-mining land use and development, including modifying the originally proposed road network to match existing infrastructure and protect sensitive habitat. Figure 3-28, *Reclamation Plan Amendment Grading*, illustrates the differences between the approved CUP/Reclamation Plan and the proposed CUP/Reclamation Plan Amendment.

3.4.4 Rezone

The Project proposes to rezone the site from the existing AR-1-1 and IL-2-1 zones to RX-1-2, RM-2-6, RM-3-9, CC-2-4, OP-1-1, OR-1-1, and OC-1-1.

The purpose of City RX zones is to provide for both attached and detached single-family dwelling units on smaller lots than are required in the RS zones. The RX-1-2 zone requires a minimum of 3,000-SF lots. The purpose of the RM zones is to provide for multiple dwelling unit development at varying densities. The RM-2-6 zone allows for 6,000-SF minimum lot sizes and a maximum of up to 34.8 units/acre while the RM-3-9 zone allows up to 72.6 units/acre.

The purpose of the CC zones is to accommodate community-serving commercial services, retail uses, and limited industrial uses of moderate intensity and small to medium scale. The CC-2-4 zone is intended to accommodate development with a pedestrian orientation.

The OP (Open Space – Park) zones apply to public parks and facilities in order to promote recreation and facilitate the implementation of land use plans. The project proposes to utilize the OP-1-1 zone which is intended for developed, active parks; as opposed to the OP-2-1 zone which is primarily for passive uses. The proposed pocket parks, neighborhood parks, and community park would be zoned OP-1-1.

The OC (Open Space – Conservation) zoning is intended to protect natural and cultural resources and environmentally sensitive lands. This zoning would apply to the natural open space, including the creek restoration areas and MHPA.

The OR zoning is intended to preserve privately owned property that is designated as open space for such purposes as preservation of public health and safety, visual quality, steep hillsides, and control of urban form. Within the Project, the landscaped open space and slopes, as well as retention basins, would be zoned OR-1-1.

The Project also proposes a CPIOZ. This is intended to ensure that any future development of the site (not analyzed herein) is consistent with the MMCP, the adopted Community Plan. Per SDMC Chapter 13, Article 2, Division 14, Section 132.1401, a CPIOZ B ensures that development proposals are reviewed for consistency with the use and development criteria that have been adopted for specific sites as part of the community plan update process. They therefore require discretionary review under CEQA for what otherwise might proceed as purely ministerial actions under approved zoning.

3.4.5 Master Planned Development Permit

A MPDP (EIR Appendix T) is being requested. In accordance with SDMC Section 143.0401 et seq., the City's PDP regulations provide flexibility in the application of development regulations for projects where strict application of the base zone development regulations would restrict design options and result in a less desirable project. The regulations are intended to accommodate, to the greatest extent possible, an equitable balance of development types, intensities, styles, site constraints, project amenities, public improvements, and community and City benefits. Specifically, in accordance with SDMC Section 143.0480, an MPDP may be processed for a proposed development that proposes to incorporate conceptual development criteria for future or phased development.

Consistent with these regulations, the MPDP would be the regulatory document that would govern development of the project site. The MPDP sets land use policy, building standards, landscaping standards, and architectural character and design standards for the project site, and it provides guidance for mobility, circulation, and infrastructure (water, wastewater, and drainage system) improvements. Specifically, Sections 1.0, 2.0 and 3.0 of the MPDP provide the Project context and vision, regulations, and design guidelines, respectively. ~~Chapter 7 of Section 3.0 details the design guidelines for the interface between the public and private realm, including the landscaping schemes for the slopes and other areas that lie between the streetscaping and the planning areas, as well as transition zones between residences and other public areas such as the trails, parks, and water quality basins~~.

3.4.5.1 Design Guidelines

Chapter 7 of Section 3.0 details the design guidelines for the interface between the public and private realm, including the landscaping schemes for the slopes and other areas that lie between the streetscaping and the planning areas, as well as transition zones between residences and other public areas such as the trails, parks, and water quality basins. MPDP Section 3.0, Chapter 8, provides design guidelines for the “Root Collective” areas (PA-13, PA-14, PA-19, and PA-20). This area is intended to be the community anchor with a more urban character and would also serve a variety of residential districts as well as the Fenton Technology Park, the industrial park to the south, and the regional recreation areas and trails. Accordingly, the design guidelines included with Chapter 8 are intended to increase the compatibility of the multitude of uses and users and to make the “root collective” accessible and visually attractive. Chapter 8 also addresses the design and appearance of circulation elements such as the mobility hub, bicycle/pedestrian paths, passenger loading areas, bicycle facilities, future transit, parking areas, urban art, lighting, streetscapes, food truck locations, and retail pop-up areas.

MPDP Section 3.0, Chapter 9, details the landscaping design guidelines for the various planning areas and gateways while Chapter 10 provides design guidelines and concepts for the parks, open spaces, and HOA maintained areas, including the Carroll Canyon Creek enhancements. There are vignettes provided for the urban plazas, neighborhood parks, mini-parks, and pocket parks. Lastly, Chapter 11 of the MPDP provides the design guidelines and strategies for the proposed walls and fences. These include the sound walls, public walls, semi-public walls, private fences, and view fences. The design guidelines included within the MPDP are summarized in Table 3-5, *Summary of MPDP Design Guidelines*.

3.4.5.2 Deviations

The Project is generally consistent with the 1994 CCMP in that it includes up to 1,800 residential units, a mixed-use district, a Mobility Hub, approximately 250 acres of open space and would accommodate contemporaneous restoration and realignment of Carroll Canyon Creek, required as part of the adopted CUP/Reclamation Plan. However, the Project requires some flexibility in the application of development regulations since strict application of the base zone development regulations would restrict design options and result in a less desirable development. Therefore, the

Applicant seeks a MPDP to allow the Project to deviate from applicable base zone development regulations as described below in Table~~s~~ 3-6~~a~~, *~~Proposed~~ Deviations Summary~~ – Residential Zones Comparison Chart~~*~~, and 3-6b,~~ *~~Proposed Deviation – CC-2-4 Commercial Zone Comparison Chart~~*. The Project would require limited deviations to the proposed RX-1-2, RM-2-6, RM-3-9, and CC-2-4 zones with respect to design elements such as architectural projections and encroachments, focused setbacks, structure heights, and private exterior open space. The MPDP would supersede the City's LDC - where the MPDP is silent, applicable provisions of the LDC would still apply; where a conflict exists, the MPDP would apply.

3.4.6 Site Development Permit

An SDP would be required because the site is located within the Airport Land Use Compatibility Overlay Zone (ALUCOZ) and due to the presence of Environmentally Sensitive Lands (ESL) on site in the form of sensitive biological resources (e.g., wetlands and sensitive species), as well as Special Flood Hazard Area (100-year floodway and floodplain). Deviation discussion and findings are provided in Section 5.1, *Land Use*.

3.4.7 Neighborhood Permit

An NDP is being processed to provide a variance to the amount of landscaped planting area required in the parking lot for PA-12. PA-12 is encumbered by restrictions related to the Airport Land Use Compatibility Plan (ALUCP) for Marine Corps Air Station Miramar, which limits the development potential of the site to a surface parking lot for the adjacent residential development. Parking needs to be maximized in this area (over landscaped area), to achieve the residential density necessary on the other portion of PA-12 located outside of the restrictive area.

3.4.8 Easement Vacations

As described in Section 3.3.4.7, the Project would construct Carroll Canyon Road through the project site. This facility is generally consistent with the CCMP, but the alignment has changed slightly in order to accommodate the project design, as well as to allow connection to existing off-site Carroll Canyon Road at the eastern project boundary. Accordingly, the public road easement that corresponds with the 1994 alignment of Carroll Canyon Road would be vacated. Other easement vacations proposed as part of the VTM, include:

- An easement associated with a temporary water line that was used to supply water for the mining operations would be vacated as it is no longer needed.

- Three north/south sewer easements that connect to Parkdale Avenue would be vacated because the existing Parkdale sewer would be realigned into the proposed public streets. Therefore, these previously recorded sewer easements would be vacated so that they do not impact development.

- An easement associated with an east/west connection to the existing sewer that extends off site to the east would be vacated. The Project's proposed alignment would extend south to follow Carroll Canyon Road instead of continuing to the southwest. Therefore, this easement would be vacated in order to avoid impacting proposed development.

- Two easements associated with isolated sewer segments would be vacated because these segments would no longer be necessary. The existing sewer coming from the south would be tied into the proposed sewer within Carroll Canyon Road.

3.4.9 Vesting Tentative Map

A VTM would be processed concurrent with the MPDP to create new legal lots (see Figures 3-29a-e, *Vesting Tentative Map*). The VTM details land development, grading, parcel configuration, and necessary infrastructure. The VTM has been prepared in accordance with the guidelines and development intensities presented in the MPDP, the State Subdivision Map Act, and City requirements.

3.4.10 MHPA Boundary Line Adjustment

Adjustment to an MHPA boundary is allowable where the new MHPA boundary results in an area of equivalent or higher biological value. The determination of the biological value of a proposed Boundary Line Adjustment is made by the City in accordance with the MSCP Plan and with the concurrence of the resource agencies. After concurrence from the resource agencies is obtained, the MHPA Boundary Line Adjustment must ultimately be approved through a City hearing body. As illustrated in Figure 3-30, the MSCP Boundary Line Adjustment would entail the removal of 29.43 acres from the MHPA and the addition of 36.11 acres on site (currently outside the MHPA) for a net increase of 6.68 acres. The MHPA Boundary Line Adjustment proposed in conjunction with the Project is detailed in Section 5.9, *Biological Resources,* of this document.

3.4.11 Water Supply Verification

The City will complete a Water Supply Verification (WSV) based on the approved Water Supply Assessment prepared by the City in February 2019 during preparation of the Final Map.

3.5 Other Agency Approvals

Permits by other Responsible and/or Trustee Agencies include:

- National Pollutant Discharge Elimination System (NPDES) General Construction Permit from the Regional Water Quality Control Board (RWQCB) to ensure consistency with water quality protection requirements during construction;

- Section 404 authorization from the USACE to authorize impacts to Waters of the United States (this permit relies upon the Section 401 certification);

- Section 401 waiver/certification from the RWQCB to authorize impacts to Waters of the United States (this waiver/certification requires a certified EIR before files can be closed and 401 issued);

- Section 1602 streambed alteration agreement from the CDFW to authorize impacts to Waters of the State;

- MCAS Miramar ~~Airport Land Use Compatibility Plan (~~ALUCP~~)~~ Consistency Review to confirm consistency with the ALUCP by the ALUC (Project has been found consistent); and

- Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) from the Federal Emergency Management Agency (FEMA) to modify the Flood Insurance Rate Map (FIRM) for Carroll Canyon Creek. Per February 2019 coordination with FEMA, issuance of the CLOMR requires completion of the USACE Section 404 permit. As noted above, the 404 requires RWQCB Section 401 waiver/certification, which in turn requires a certified EIR; therefore, CLOMR issuance is currently anticipated to follow Project approval and EIR certification. Phase 2 construction of the Project with elements located within the floodplain is conditioned upon receipt of all agency permits.

Table 3-5
SUMMARY OF MPDP DESIGN GUIDELINES

Interface Between Public and Private Realm (Planning Areas 1-11 and 15-18)	**Parks and Open Space**
• Incorporate appropriate setbacks, fences, walls, and landscaping in the areas between future private development and major streets and public realm in 3Roots San Diego.	• Provide recreation, open space, and conservation areas to create a network of outdoor space within the community for people to enjoy passive and active recreation activities. • Integrate parks, greens, and open space into the design of, and constructed concurrently with, residential development. • Integrate open space areas along the paseo and trail system by orienting buildings to front on the paseo and by providing access to trails. • Include bicycle parking in all parks.
Landscape Design Guidelines	**Root Collective Design Guidelines (Planning Areas 13-14 and 19-20)**
• Provide landscape architecture that is similar throughout 3Roots San Diego to create a unified sense of place. • Provide landscaping along public streets that is consistent and composed of signature planting from the Recommended Plant Palette in Table 9-1 of the MPDP to create an attractive and cohesive community. • Provide street trees in parkways between the curb and sidewalk to create a buffer between the sidewalk and the travel lane. • Incorporate landscape architecture elements such as gateways, fountains, and other public amenities within entry spaces, transitional spaces, and gathering spaces to depict a sense of community.	• Create the Root Collective to serve as the epicenter for daily life and social interaction. • Make the Root Collective easily attainable and easily accessible by integrating trails, transportation routes, walking routes, event gathering spaces and other public realm areas. • Provide a casual atmosphere that encourages a lifestyle of outdoor social interaction and activity, such as playing, drinking and dining, shopping, and networking. • Create an urban character that is vibrant, artsy, and diverse and incorporates layered materials, textures, and colors. • Incorporate buildings and plazas with ground level retail or live/work areas to encourage pedestrian activity at the ground floor level. • Buildings should encourage pedestrian activity and interest at the ground floor level at the following locations:

Table 3-5 (cont.)
SUMMARY OF MPDP DESIGN GUIDELINES

Landscape Design Guidelines	Root Collective Design Guidelines (Planning Areas 13-14 and 19-20)
• Incorporate biofiltration and bioretention measures in parking lot design, edges of paved areas, and other landscaped areas to slow and treat stormwater runoff. • Arrange landscaping along parkways and landscape easements to provide a sense of rhythm and movement within the streetscape. • Incorporate rain gardens, open tree grates, and pockets of open space to slow stormwater flow rates, allow natural percolation of runoff, and reduce the heat island effect. • Use permeable pavement, such as porous asphalt, reinforced grass, semi-impervious concrete paving blocks, and reinforced gravel with grass, to capture and treat stormwater. • Provide trees and shrubs along internal circulation to maintain a cohesive community identity and strengthen sense of place. • Gateways and entry monuments should be incorporated to establish an overall design them and evoke a sense of arrival to the community.	o PA-13: along Spine Road, Urban Corridor Street, and Village Entry. o PA-14: along the park adjacent to Spine Road and along Street I. o PA-19: along Urban Corridor street and along Spine Road. o PA-20: Along Spine Road. • PA-13 should include ground level retail and or live/work along the adjacent plaza. • Create urban plazas that include multiple terraces and multi-level buildings. • Provide at-grade access, including Americans with Disabilities Act (ADA) access, to store fronts and terraces from the sidewalk and within the ROW. • Shade structures with solar panels may be used in lieu of tree canopy coverage to cover 50 percent of exposed parking spaces on parking structure roofs to meet the Vehicle Use Area standards. • Lettered lots should be located within planning areas to allow for additional space, outside of the public ROW for landscape and plaza space, and should be part of street yard, vehicle use area, and planting area calculations. • Create a circulation network that prioritizes pedestrian and bicycle travel. • Provide pedestrian arrival points that set the tone of the Root Collective through seasonally painted graphic art walls and associated overhead accent lighting and feature paving. • Develop pedestrian paths that provide linkage through the Root Collective and include enhanced paving, painted graphics, traffic calming measures, and zero-inch curbs. • Develop a bike friendly environment that includes bike lanes, bike racks that vary in color, material, and shape, a bike repair station, air stations, bike storage, and bike sharing.

Table 3-5 (cont.)
SUMMARY OF MPDP DESIGN GUIDELINES

Landscape Design Guidelines	Root Collective Design Guidelines (Planning Areas 13-14 and 19-20)
	• Develop a vehicular network that includes traffic calming measures, electric charging stations, and ride sharing. • Create parking structures that incorporate screening through the use of applied architectural components such as perforated metal, mesh, vanes, shading devices, and murals. Within the Root Collective, 50 percent (by area) of parking structure walls should have screening or graphics. • Design parking to either be structures wrapped with screening or other developed uses or design surface parking flanked by drop-off/pick-up zones that may provide future development pads if parking needs diminish in the future with decreases in need for individual vehicular travel. Consider provision of a four-level parking structure with an approximate capacity of 540 cars and wrapped by retail/residential use in PA-13 a four-level parking structure with an approximate capacity of 400 cars and wrapped by retail/residential use in PA-14w. • Incorporate plantings within sidewalks and roadway medians. • Utilize tabletop intersections with raised concrete portions, bold paint graphics, and brightly colored bollards to provide safe pedestrian use. • Create a Community Collective area with an urban agriculture style that provides a place to gather, socialize, eat, and drink, and that incorporates a variety of art forms, such as an art wall, urban art, and urban illumination. • Integrate and allow for pop-up retail and food trucks to activate the public realm. • Utilize urban hardscape and materials, such as concrete pavers set with gravel bands, cast-in-place concrete with paint graphics, metal slot drains, cinderblock walls, distressed yellow paint, corten steel, corrugated metal, granite boulders, sand and gravel, and asphalt with paint graphics. • Utilize plantings that include primarily native plants, soft grasses in swaths, specimen oak and sycamore trees, naturalistic arrangements, succulents in pots, yellow flowers, loose and informal planting edges, and drought tolerant species.

Table 3-5 (cont.)
SUMMARY OF MPDP DESIGN GUIDELINES

Landscape Design Guidelines	Root Collective Design Guidelines (Planning Areas 13-14 and 19-20)
	• Incorporate an eclectic assortment of public furniture that is bold and brightly colored and includes moveable tables and chairs, oil barrel pots, concrete pipe pots, granite boulder seatwalls, plastic and metal seating, and furniture that appears distressed. • Create buildings with accent material: 25 percent (by area) of rear retail walls and service walls should include graphics or colors and 20 percent (by area) of feature facades should have accent material. • Dedicate 20 percent (by area) of outdoor space between buildings to indoor/outdoor gathering space. • Provide a variety of pedestrian entry styles and way-finding elements at major pedestrian entries. • Develop retail store fronts that are unique and individually personalized. • Provide 20 percent (by area) variation in massing along feature façades at entries and active pedestrian areas. • Provide informal outdoor gathering spaces along public pathways. • Incorporate building articulation that includes pedestrian entries, setbacks, and breaks between buildings. • Incorporate building articulation that includes massing in the form of projected elements and balconies, especially on the façade facing the street. The required minimum projected elements (by area) include: ○ PA-13: 15-20 percent on façade facing the street ○ PA-14: 10-15 percent on façade facing the street ○ PA-14: 10-15 percent on façade north and east

Table 3-5 (cont.)
SUMMARY OF MPDP DESIGN GUIDELINES

Landscape Design Guidelines	Root Collective Design Guidelines (Planning Areas 13-14 and 19-20)
	• Incorporate building articulation that includes vertical massing in the form of raised projections or lower roof/deck projections. The required minimum vertical massing variations (based on length of façade) include: ○ PA-13: 5 percent on façade facing street, 3 stories or lower ○ PA-14: 5 percent on façade facing street, 3 stories or lower ○ PA-14: 5 percent on façade facing north and east, 3 stories or lower ○ PA-13: 15 percent on façade facing street, 4 stories ○ PA-14: 10 percent on façade facing street, 4 stories ○ PA-14: 10 percent on façade facing north and east, 4 stories • Incorporate accent materials and color to create variation on horizontal and vertical planes to help break down scale and add interest to the façade. The required minimum accent materials (by area) include: ○ PA-13: 15-20 percent on façade facing the street ○ PA-14: 15-20 percent on façade facing the street ○ PA-14: 10-15 percent on façade facing north and east The required minimum color variation (by area) includes: ○ PA-13: 20 percent on façade facing the street ○ PA-14: 15 percent on façade facing the street ○ PA-14: 10-15 percent on façade facing north and east • Incorporate architectural materials that provide layering and transparency.
Walls and Fences Strategy	
• Incorporate various wall and fence types to visually connect the various planning areas together.	

Table 3-6
DEVIATIONS SUMMARY

Deviation Description	Deviation from SDMC	Required	Proposed
1. Setbacks in the RX-1-2 zone	SDMC Section 131.0431, Table 131-04E	Front = 10 feet; Rear = 10 feet	Front = 6 feet; Rear = 5 feet
2. Angled building envelope plane in the RX-1-2 zone	SDMC Section SDMC Section 131. 0444(c)	Required	no angled building envelope plane is being incorporated
3. Setbacks in the RM-2-6 zone	SDMC Section 131.0431, Table 131-04G	Front = 15/20 feet; Rear = 15 feet; Side = 3 feet	Front = 5 feet; Rear = 5 feet Side = 0' for locations adjacent to common open space, park or landscaped H.O.A. lot
4. Maximum building height in the RM-2-6 zone	SDMC Section 131. 0431, Table 131-04G	40 feet is required	45 feet is being proposed for structures of three or more stories
5. 5.60-degree angled plane in the RM-2-6 zone	SDMC Section 131. 0444	60-degree angled plane above 30 feet is required	A 60-degree angled plane above 40 feet is provided or not incorporated
6. Private exterior open space in the RM-2-6 zone	SDMC Section 131.0455(b)	Minimum dimension of 6 feet is required; A dimension of 9 feet from private open space to front property line is required	Minimum dimension of 5 feet is being provided; 5-foot separation is provided to the front property line.
7. Vehicular Use Area (VUA) in the RM-2-6 zone	SDMC Section 142.0407(b)	VUA equal to or greater than 6,000 square feet, plant points are calculated within 10 feet of one side of the last parking stall in a row of parking	Providing planting area points within five feet of the edge of the VUA, consistent with the requirements for VUA areas less than 6000 square feet
8. Setbacks in the RM-3-9 zone	SDMC Section 131.0431, Table 131-04G	Front = 10/20 feet; Street Side = 10 feet	Front = 5 feet; Street Side = 5 feet
9. Maximum building height in the RM-3-9 zone	SDMC Section 131.0431, Table 131-04G	60 feet	65 feet
10. Private exterior open space in the RM-3-9 zone	SDMC Section 131.0455(c)	Nine feet from the private open space to the front property line	5 feet
11. Architectural projections and encroachments in the RM-3-9 zone	SDMC Section 131. 0461	Projection may extend a maximum of six feet into the required yard or 50 percent of the width of the required yard	Architectural projections and encroachments, including eaves and canopies, extending to the property line for up to 60 percent of the length of the street frontage

Table 3-6 (cont.)
DEVIATIONS SUMMARY

Deviation Description	Deviation from SDMC	Required	Proposed
12. Street yard planting area and point requirements in the RM-3-9 zone	SDMC Section 142.0404	In multifamily residential development, a street yard planting area of 50 percent is required	In Planning Area 12 only, a street yard planting area of 40 percent is being provided due to site constraints where the CNEL precludes residential development.
13. Minimum side, street yard, and rear yard setbacks in the CC-2-4 zone	SDMC Section 131.0531, Table 131-05E	Side = 10 feet St. side =10 feet Read = 10 feet	Side = 0 feet St. side =0 feet Read = 0 feet
14. Maximum building height in the CC-2-4 zone	SDMC Section 131.0531	45 feet	65 feet
15. Minimum lot coverage in the CC-2-4 zone	SDMC Section 131.0531, Table 131-05E	A minimum lot coverage of 35 percent	15- 35 percent is being proposed
16. Driveways in all residential zones	SDMC Section 142. 0560(j)(4)	A minimum 20-foot long driveway	18-foot long driveway is being proposed
17. Driveways in all residential zones where for multiple dwelling unit	SDMC Section 142. 0525	When the development does not provide a 20-foot-long driveway, an additional parking space is required	No additional parking space is proposed
18. Fence and wall height for art walls	SDMC Section 142.0301	Solid fences are limited to six feet	Art walls are proposed with a maximum height of 20 feet
19. Street Tree Requirements	SDMC Section 142.0409	Street trees are required to be planted between the curb and the abutting property line at a rate of one 24-inch box canopy tree for every 30 linear feet of street frontage excluding curb cuts, and in consideration of tree separation distances from required utilities.	The project will achieve the required rate of street trees through a combination of trees located in the public parkways and trees within 10-ft of the property line located on HOA open space lots or parks.
20. Private exterior open space in the RM-2-6 zone	SDMC Section 131.0455(c)	A dimension of 9 feet from private open space to front property line is required; minimum dimension of six feet	A 5-foot distance is proposed to the front property line; minimum dimension of five feet
21. Storage Requirements in the RM-3-9 zone	131.0454	240 cf with a minimum 7-foot horizontal dimension required	100 cf and no minimum horizontal dimension proposed.

~~Table 3-6a~~
~~PROPOSED DEVIATIONS – RESIDENTIAL ZONES COMPARISON CHART~~

~~Development Regulation~~	**~~RX-1-2~~**		**~~RM-2-6~~**		**~~RM-3-9~~**	
	~~Required~~	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**
~~Maximum Permitted Density~~	~~1 du/lot~~	~~1 du/lot~~	~~1,250 sf/du~~	~~1,250 sf/du~~	~~600 sf/du~~	~~600 sf/du~~
~~Minimum Lot Area (sf)~~	~~3,000~~	~~3,000~~	~~6,000~~	~~6,000~~	~~7,000~~	~~7,000~~
~~Minimum Lot Dimensions~~						
~~Lot Width (ft)~~	~~35~~	~~35~~	~~50~~	~~50~~	~~70~~	~~70~~
~~Street frontage (ft)~~	~~35~~	~~35~~	~~50~~	~~50~~	~~70~~	~~70~~
~~Lot Width - Corner (ft)~~	~~35~~	~~35~~	~~55~~	~~55~~	~~75~~	~~75~~
~~Lot Depth~~	~~50~~	~~50~~	~~90~~	~~90~~	~~100~~	~~100~~
~~Setback Requirements~~						
~~Min Front Setback (ft)~~	~~15~~	~~6*~~	~~15~~	~~5*~~	~~10~~	~~5*~~
~~Std Front Setback (ft)~~			~~20~~	~~5*~~	~~20~~	~~5*~~
~~Max Front Setback (ft)~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~
~~Minimum Side Setback (ft)~~	~~NA~~	~~NA~~	~~5~~	~~5~~	~~5~~	~~5~~
~~Std Side Setback (ft)~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~
~~Minimum Side Setback~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~
~~Detached (ft)~~	~~3~~	~~3~~				
~~Attached (ft)~~	~~0~~	~~0~~				
~~Min Street Side Setback (ft)~~	~~3~~	~~3~~	~~10~~	~~10~~	~~10~~	~~5*~~
~~Min Rear Setback (ft)~~	~~10~~	~~10 / 5*~~	~~15~~	~~5*~~	~~5~~	~~5~~
~~Max Structure Height (ft)~~	~~30~~	~~30*~~ ~~§131.0444(c): Does not apply; no angled building envelope plane is required.~~	~~40~~	~~40 – 2 story structures~~ ~~45 – 3 story structures*~~ ~~§131.0444(f): Does not apply. No angled building envelope plane is required.~~	~~60~~	~~65*~~
~~Max lot coverage~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~

~~Table 3-6a (cont.)~~
~~PROPOSED DEVIATIONS – RESIDENTIAL ZONES COMPARISON CHART~~

~~Development Regulation~~	***~~RX-1-2~~***		***~~RM-2-6~~***		***~~RM-3-9~~***	
	~~Required~~	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**
~~Max Floor Area Ratio~~	~~0.8~~	~~0.8~~	~~1.5~~	~~1.5~~	~~2.7~~	~~2.7~~
~~Accessory Use and Structures~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Ground Floor Height~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Lot Consolidation~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~	~~NA~~
~~Storage Req.~~	~~NA~~	~~NA~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~§131.0454 Storage requirements in the RM Zones. In all RM zones, each dwelling unit shall have a fully enclosed, personal storage area outside the unit that is at least 240 cubic feet with a minimum 7-foot horizontal dimension along one plane.~~	~~Storage Requirements - §131.0454*: Each dwelling unit shall have a fully enclosed, personal storage area outside the unit that is at least 100 cubic feet; no minimum horizontal dimension is required.~~
~~Private Exterior Open space~~	~~NA~~	~~NA~~	~~Private Exterior Open Space - 131.0455(b) In the RM-2-4, RM-2-5, and RM-2-6 zones, at least 75 percent of the dwelling units shall be provided with at least 60 square feet of usable, private, exterior open space abutting the unit with a minimum dimension of 6 feet. The open space may be located in required front and rear yards, but shall be~~	~~Private Exterior Open Space - §131.0455(b)*: At least 75 percent of the dwelling units shall be provided with at least 60 square feet of usable, private, exterior open space abutting the unit with a minimum dimension of 5 feet, including a porch or patio at ground level or balcony or roof deck on upper floors~~	~~Private Exterior Open Space -1331.0455(c) In the RM-3-7, RM-3-8, and RM-3-9 zones, at least 75 percent of the dwelling units shall be provided with at least 60 square feet of usable, private, exterior open space abutting the unit with a minimum dimension of 6 feet. The open space may be located in the required front yard, but shall be no closer than 9 feet to the front property line.~~	~~Private Exterior Open Space - §131.0455(c)*: At least 75 percent of the dwelling units shall be provided with at least 60 square feet of usable, private, exterior open space abutting the unit with a minimum dimension of 5 feet, including a porch or patio at ground level or balcony or roof deck on upper floors of the building. The open space may be located in~~

~~Table 3-6a (cont.)~~
~~PROPOSED DEVIATIONS – RESIDENTIAL ZONES COMPARISON CHART~~

~~Development Regulation~~	***~~RX-1-2~~***		***~~RM-2-6~~***		***~~RM-3-9~~***	
	~~Required~~	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**
			~~no closer than 9 feet to the front property line.~~	~~of the building. The open space may be located in required front and rear yards, but shall be no closer than 5 feet to the front property line.~~		~~required front and rear yards, but shall be no closer than 6 feet to the front property line.~~
~~Common open space~~	~~NA~~	~~NA~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Architectural projections and encroachments~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~ ~~Architectural projections may not conflict with the height of mature trees~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~ ~~Architectural projections may not conflict with the height of mature trees~~	~~Architectural Projections and Encroachments – 131.0461(c): (c) In the RM-2-4, RM-2-5, RM-2-6, RM-3-7, RM-3-8, RM-3-9, RM-4-10, RM4-11, and RM-5-12 zones, architectural projections and encroachments listed in Section 131.0461(a) are permitted with the following limitations. No permitted architectural projection or encroachment may be located in required yards within view corridors that are designated by land use plans in the Coastal Overlay Zone, in a required visibility area, a required turning radius, or vehicle back-up area except where development regulations may allow.~~	~~Architectural Projections and Encroachments - §131.0461(c)*: Architectural projections and encroachments, including eaves and canopies, may extend to the property line for up to 60% of the length of the street frontage. Architectural projections may not conflict with the height of mature trees.~~

~~Table 3-6a (cont.)~~

~~PROPOSED DEVIATIONS – RESIDENTIAL ZONES COMPARISON CHART~~

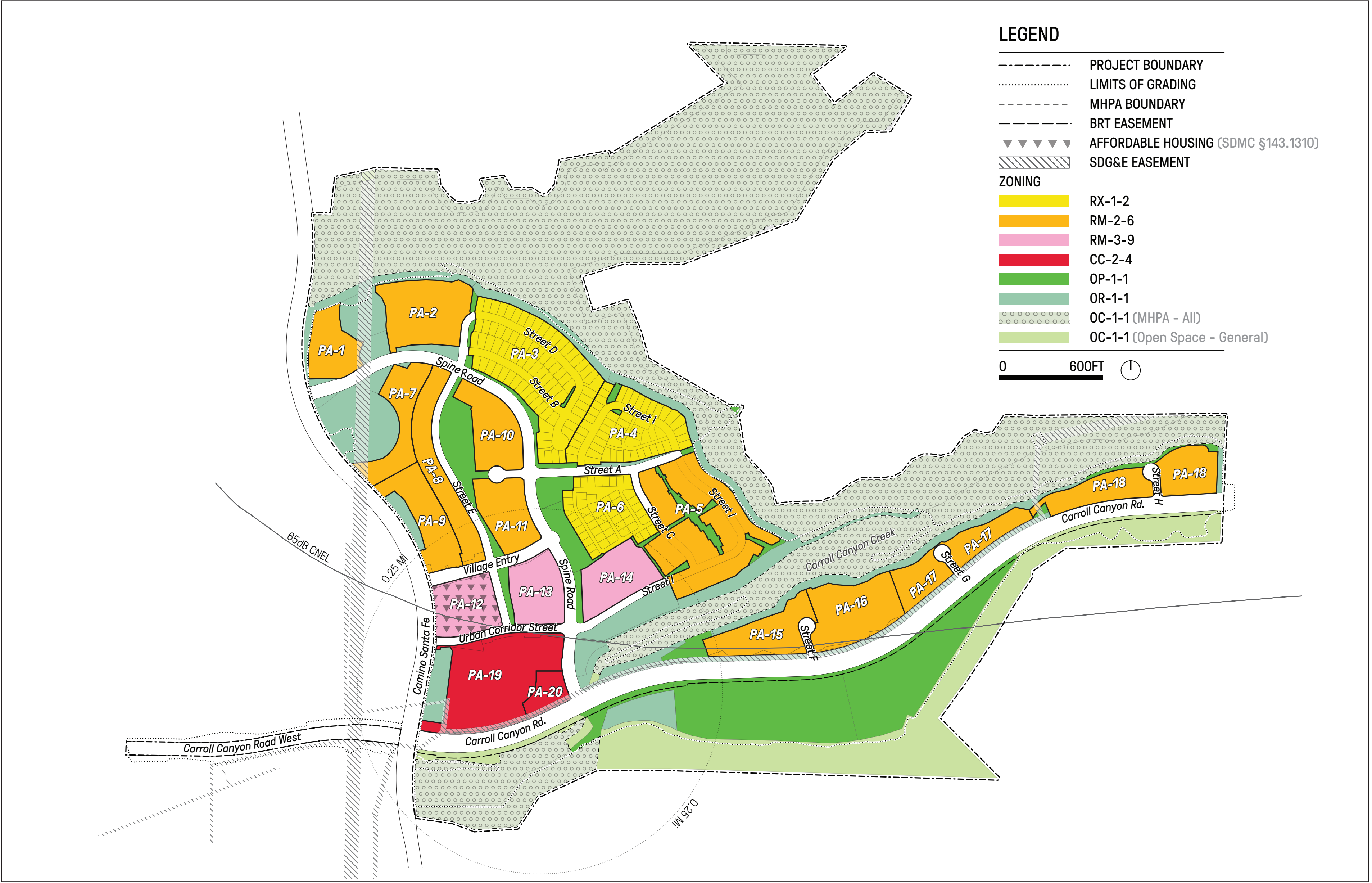
~~Development Regulation~~	***~~RX-1-2~~***		***~~RM-2-6~~***		***~~RM-3-9~~***	
	~~Required~~	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**	**~~Required~~**	**~~Proposed~~**
~~Supplemental req.~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~NA~~	~~NA~~
~~Refuse and Recyclable Material Storage~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Visibility Area~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Req. for attached units~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~

~~* = Deviation from base zone standard.~~
~~NA = Not Applicable~~

~~Table 3-6b~~
~~PROPOSED DEVIATIONS – CC-2-4 COMMERCIAL ZONE COMPARISON CHART~~

~~Development Regulations~~	~~Required~~	~~Proposed~~
~~Lot Area~~		
~~Minimum Lot Area (sf)~~	~~2,500~~	~~2,500~~
~~Maximum Lot Area (sf)~~	~~-~~	~~-~~
~~Lot Dimensions~~		
~~Minimum Lot Width (ft)~~	~~25~~	~~25~~
~~Minimum Street frontage (ft)~~	~~25~~	~~25~~
~~Minimum Lot Width (ft)~~	~~-~~	~~-~~
~~Maximum Lot Depth~~	~~-~~	~~-~~
~~Setback Requirements~~		
~~Minimum Front Setback (ft)~~	~~-~~	~~-~~
~~Maximum Front Setback (ft)~~	~~10~~	~~10~~
~~Minimum Side Setback (ft)~~	~~10~~	~~0 *~~
~~Optional Side Setback (ft)~~	~~0~~	~~0~~
~~Minimum Street Side Setback (ft)~~	~~-~~	~~-~~
~~Maximum Street Side Setback (ft)~~	~~10~~	~~§131.0543(a)(2) – The maximum setback requirement in Municipal Code Table 131-05B shall not apply. A maximum setback of 40 feet from the property line abutting Urban Corridor and Spine Road shall be allowed. Maximum setback intended to accommodate lettered lots. Street frontage shall substantially conform to the site plan shown in Figure 8-13 which illustrates an approximate street frontage of 64% along the Spine Road and the Urban Corridor streets. *~~
~~Minimum Rear Setback (ft)~~	~~10~~	~~0 *~~
~~Optional Rear Setback (ft)~~	~~0~~	~~0~~
~~Maximum Structure Height (ft)~~	~~45~~	~~45 *~~ ~~Parking structures shall have a maximum structure height of 65 feet to accommodate 4 levels with roof parking and solar panels overhead.~~
~~Ground Floor Height~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Minimum Lot Coverage (%)~~	~~35~~	~~35*~~ ~~A minimum lot coverage of less than 35% is acceptable on PA-20 (Mobility Hub) to the primary function of that parcel.~~
~~Maximum Floor Area Ratio~~	~~1.0~~	~~1.0~~
~~Additional Criteria~~		
~~Pedestrian Paths~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Transparency~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~
~~Building Articulation~~	~~Muni Code Standard Applies~~	~~Muni Code Standard Applies~~

~~* = Deviation from base zone standard.~~



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Source: Placeworks 4/19

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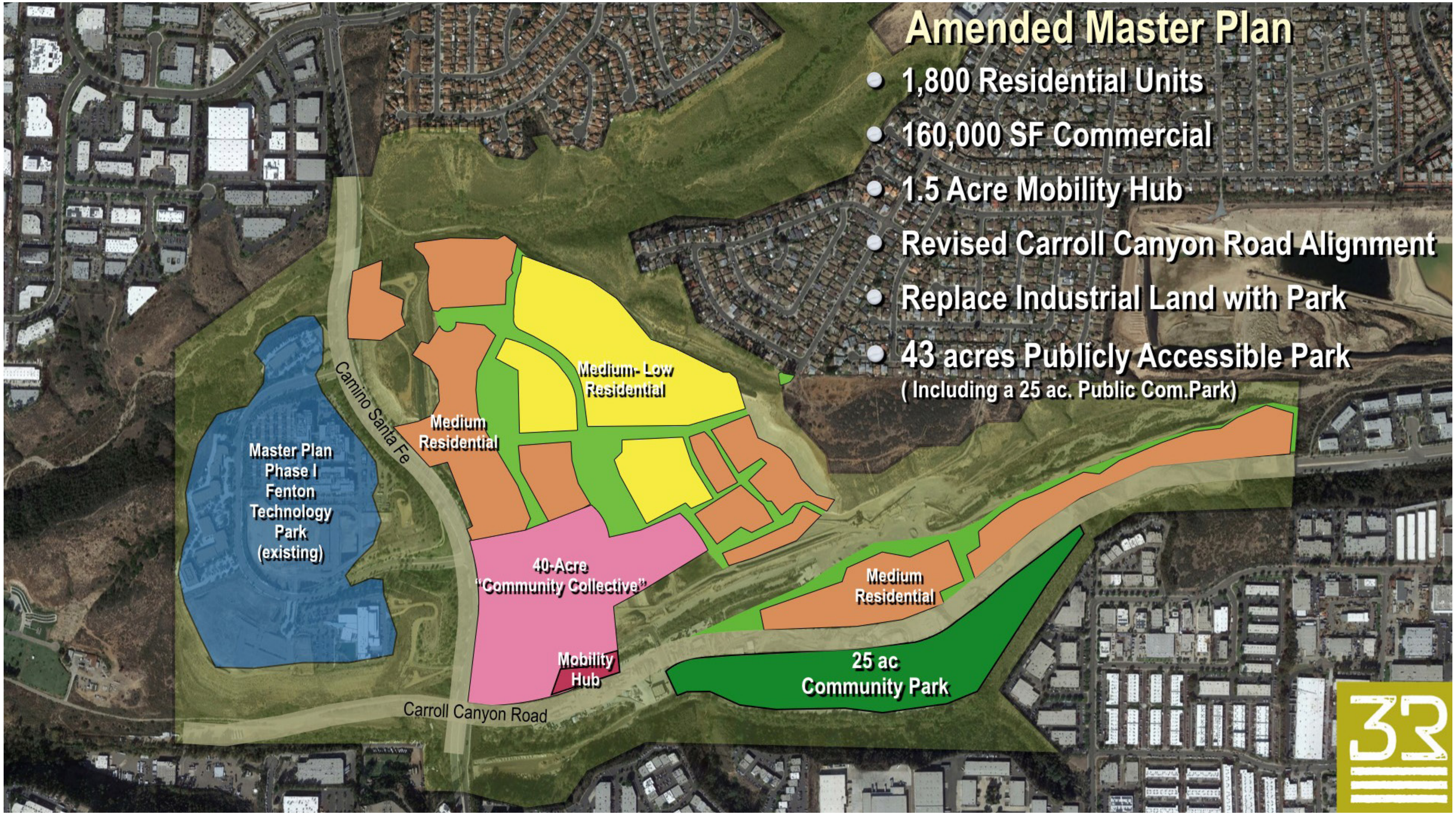
Environmental Planning

Proposed Site Plan

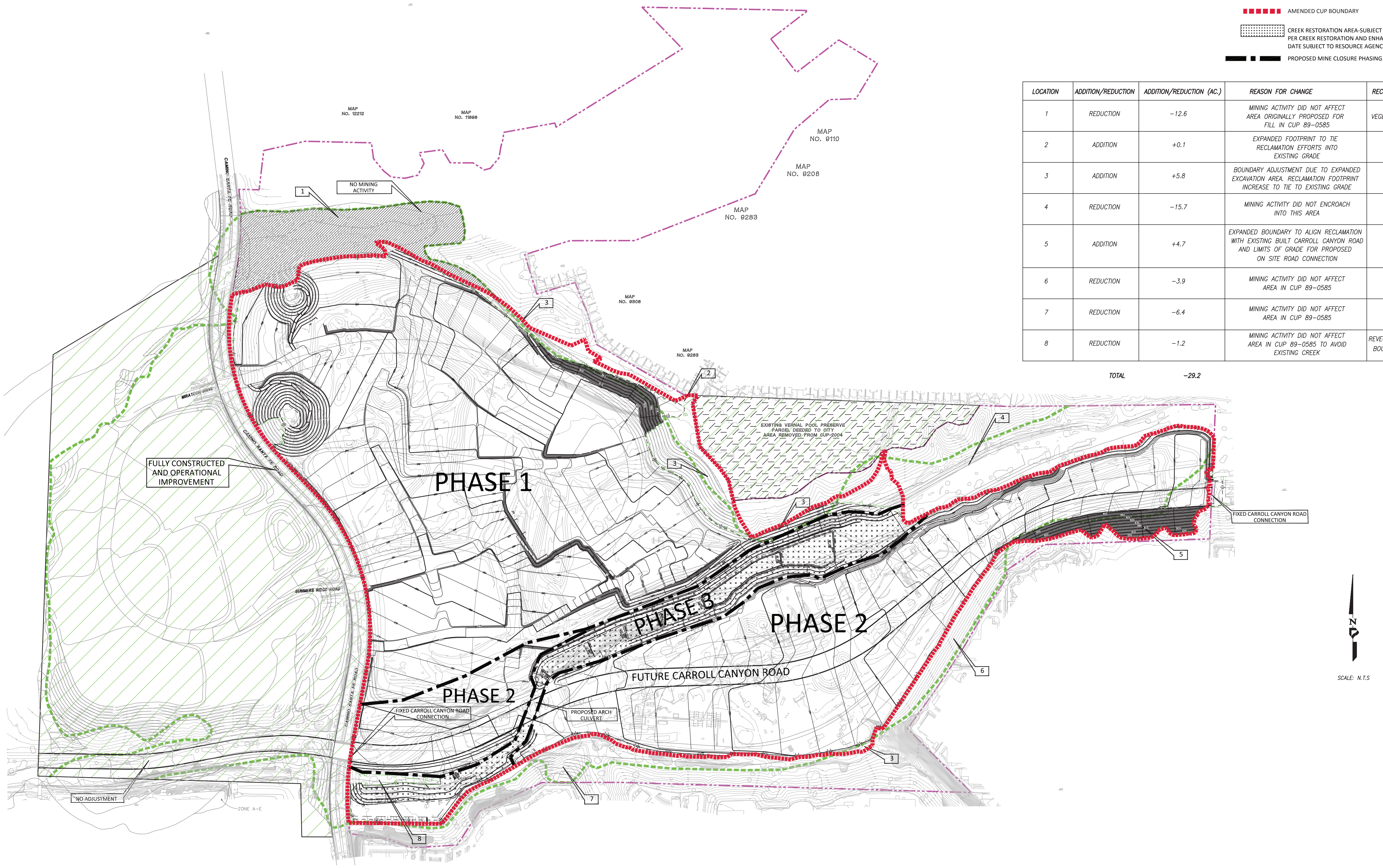
Figure 3-1



Source: PDC 8/2017

Proposed Land Use

Figure 3-2



LEGEND:

- PROJECT OWNERSHIP BOUNDARY
- EXISTING AND APPROVED CUP BOUNDARY PER CUP 89-0585 PER RESOLUTION R-294921 ON MAY 29, 2001
- AREA REMOVED FROM CUP AMENDMENT--MARCH 22, 2004
- EXISTING VERNAL POOL PRESERVE DEEDED TO CITY
- AMENDED CUP BOUNDARY
- CREEK RESTORATION AREA-SUBJECT TO JURISDICTIONAL PERMITS PER CREEK RESTORATION AND ENHANCEMENT PLAN. COMPLETION DATE SUBJECT TO RESOURCE AGENCY PERMIT APPROVAL.
- PROPOSED MINE CLOSURE PHASING

LOCATION	ADDITION/REDUCTION	ADDITION/REDUCTION (AC.)	REASON FOR CHANGE	RECLAMATION OBLIGATION
1	REDUCTION	−12.6	MINING ACTIVITY DID NOT AFFECT AREA ORIGINALLY PROPOSED FOR FILL IN CUP 89−0585	VEGETATION ENHANCEMENT
2	ADDITION	+0.1	EXPANDED FOOTPRINT TO TIE RECLAMATION EFFORTS INTO EXISTING GRADE	REVEGETATION
3	ADDITION	+5.8	BOUNDARY ADJUSTMENT DUE TO EXPANDED EXCAVATION AREA. RECLAMATION FOOTPRINT INCREASE TO TIE TO EXISTING GRADE	REVEGETATION
4	REDUCTION	−15.7	MINING ACTIVITY DID NOT ENCROACH INTO THIS AREA	NONE PROPOSED
5	ADDITION	+4.7	EXPANDED BOUNDARY TO ALIGN RECLAMATION WITH EXISTING BUILT CARROLL CANYON ROAD AND LIMITS OF GRADE FOR PROPOSED ON SITE ROAD CONNECTION	REVEGETATION
6	REDUCTION	−3.9	MINING ACTIVITY DID NOT AFFECT AREA IN CUP 89−0585	NONE PROPOSED
7	REDUCTION	−6.4	MINING ACTIVITY DID NOT AFFECT AREA IN CUP 89−0585	NONE PROPOSED
8	REDUCTION	−1.2	MINING ACTIVITY DID NOT AFFECT AREA IN CUP 89−0585 TO AVOID EXISTING CREEK	REVEGETATION WITHIN CREEK BOUNDARY ENHANCEMENT
	TOTAL	−29.2		

Source: PDC 4/2019

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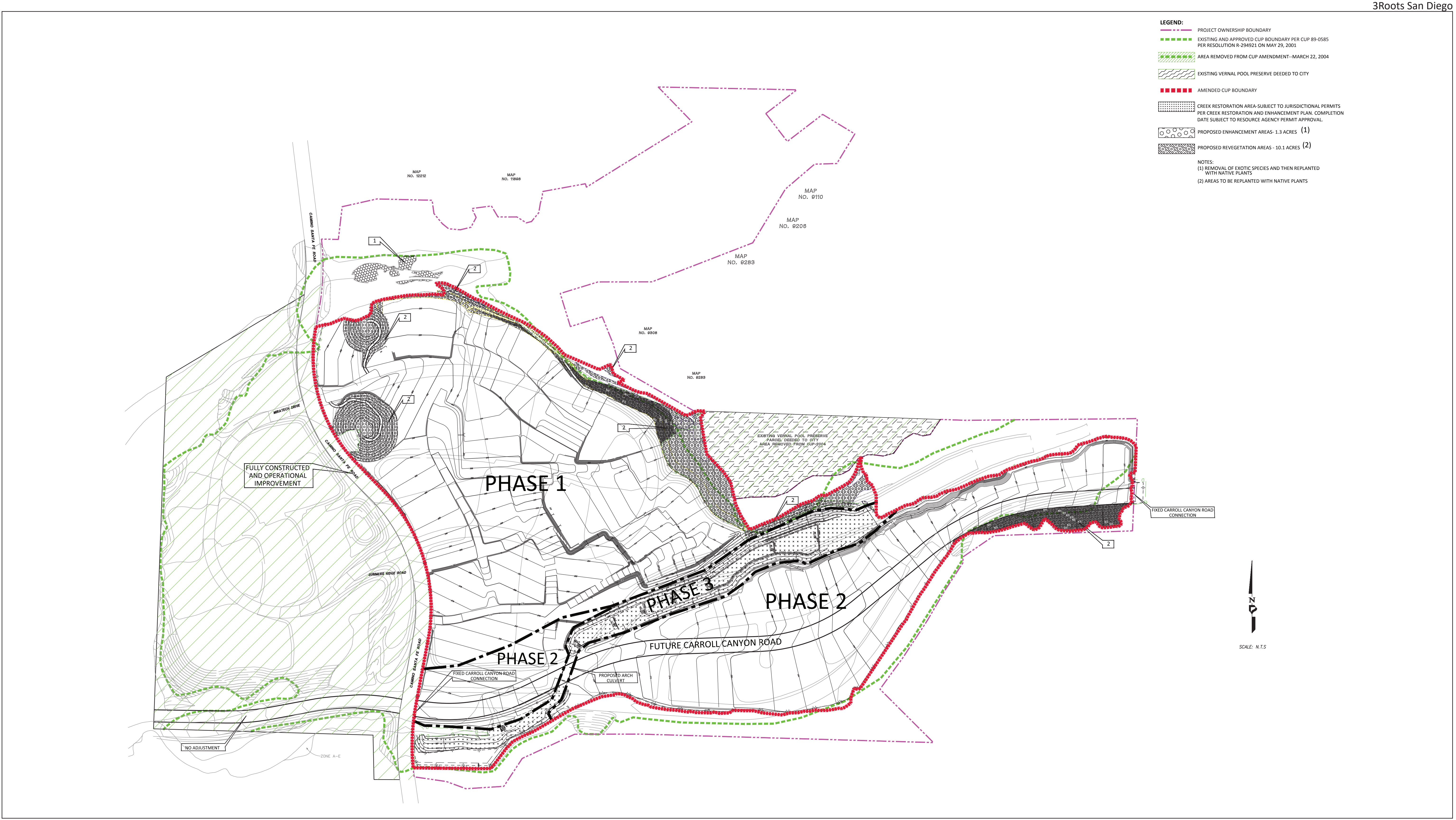
Environmental Planning

Proposed Reclamation Plan Amendment

Figure 3-3a



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Source: PDC 4/2019

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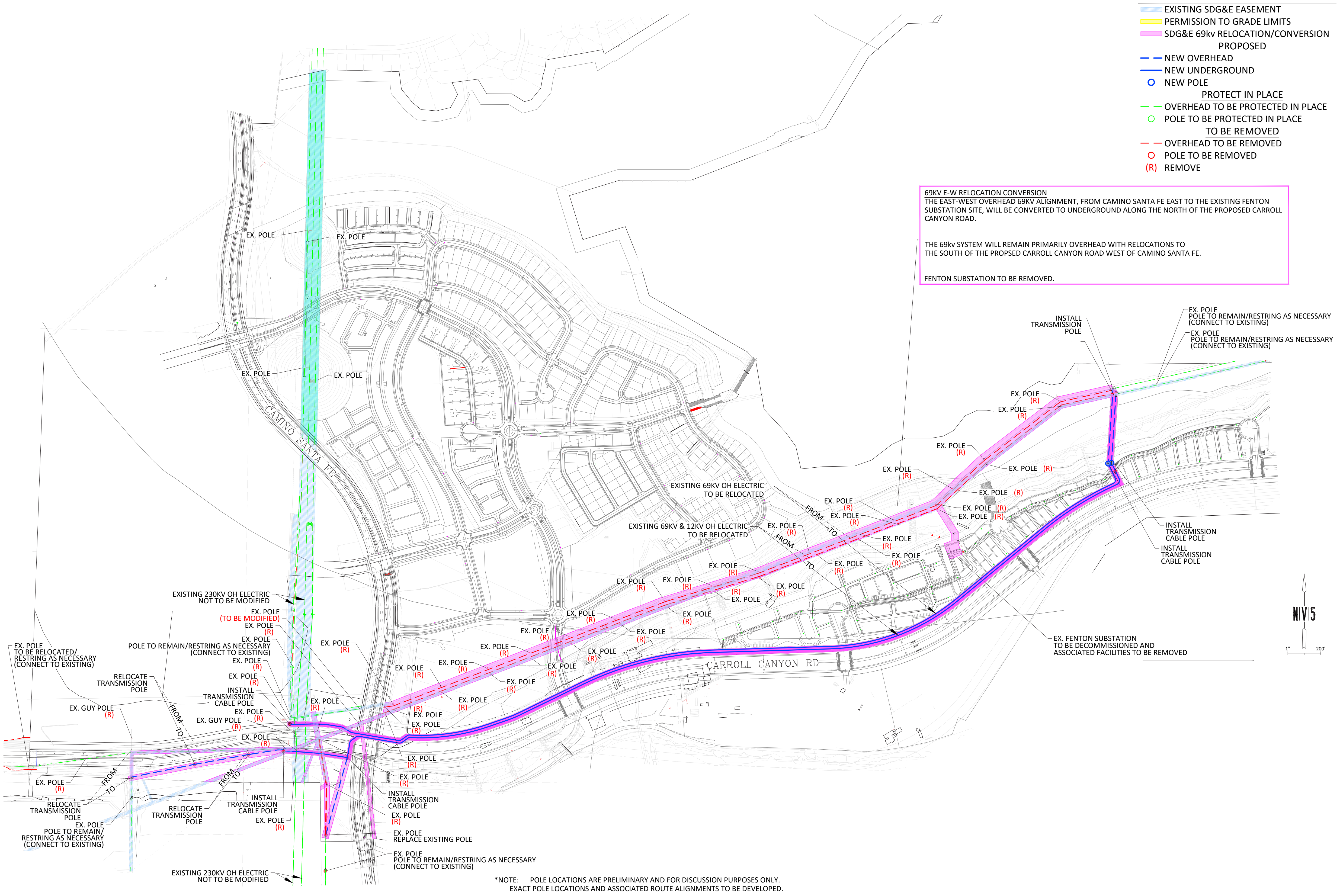
Reclamation Plan Amendment-Revegetation Plan

Figure 3-3b



69KV E-W RELOCATION CONVERSION
THE EAST-WEST OVERHEAD 69KV ALIGNMENT, FROM CAMINO SANTA FE EAST TO THE EXISTING FENTON SUBSTATION SITE, WILL BE CONVERTED TO UNDERGROUND ALONG THE NORTH OF THE PROPOSED CARROLL CANYON ROAD.

THE 69kv SYSTEM WILL REMAIN PRIMARILY OVERHEAD WITH RELOCATIONS TO THE SOUTH OF THE PROPSED CARROLL CANYON ROAD WEST OF CAMINO SANTA FE.

FENTON SUBSTATION TO BE REMOVED.

*NOTE: POLE LOCATIONS ARE PRELIMINARY AND FOR DISCUSSION PURPOSES ONLY.
EXACT POLE LOCATIONS AND ASSOCIATED ROUTE ALIGNMENTS TO BE DEVELOPED.

Source: NV5 2/2020

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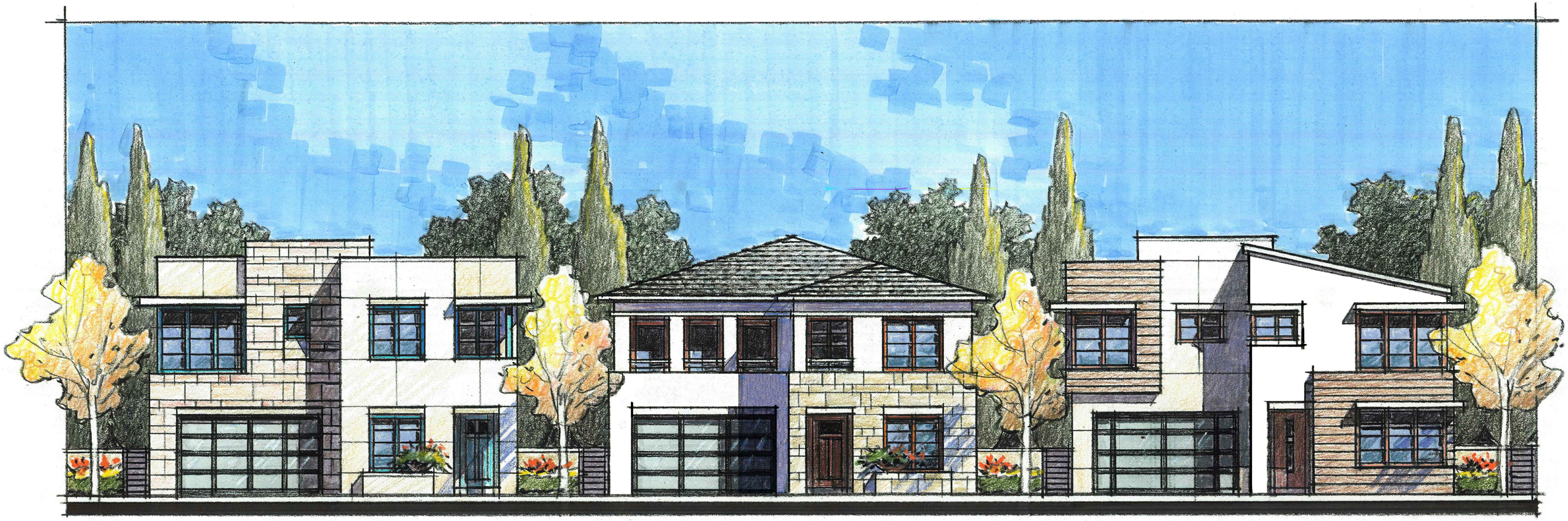
Environmental Planning

SDG&E Facility Modifications

Figure 3-4



Source: Bassenian-Lagoni 2/2019

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HELIX
Environmental Planning

Typical Architecture - Single-family Detached (PA-3)

Figure 3-5a

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\Noise \I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig3-5b_TypicalArch_SingleFamilyPA4.indd CAH-02.01 4/24/19-SAB

Source: Starck Architecture 4/2019

Typical Architecture - Single-family Detached (PA-4)

Figure 3-5b

Source: Bassenian-Lagoni 2/2019

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HELIX
Environmental Planning

Typical Architecture - Single-family Detached (PA-6)

Figure 3-5c

Source: Project Design Consultants (4/2019)

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HELIX
Environmental Planning

Typical Architecture - 2 Story Rowtowns (PA-1 & PA-7)

Figure 3-6a

Source: Project Design Consultants (4/2019)

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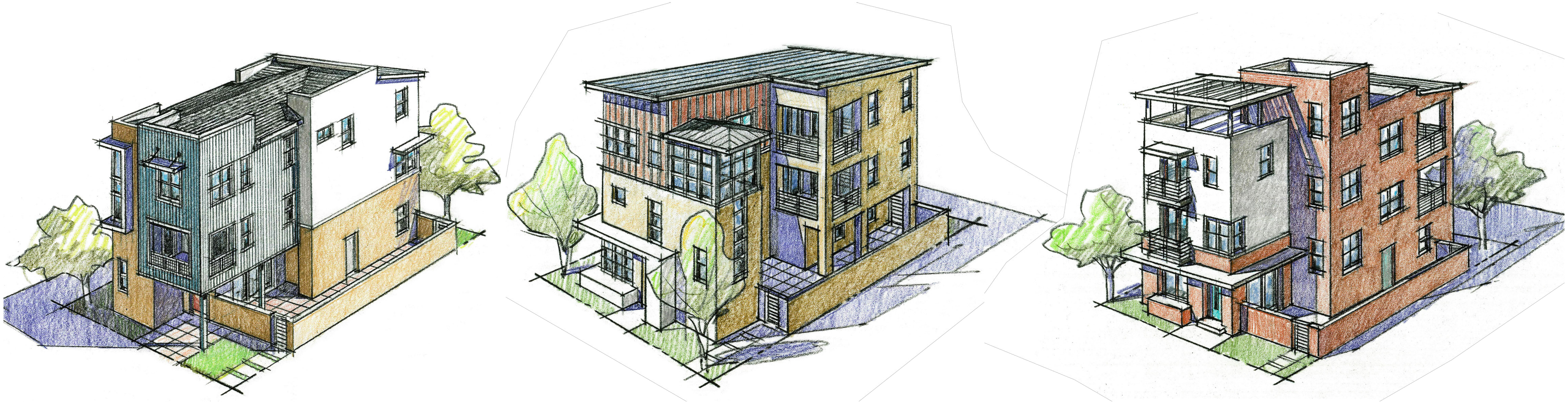
Typical Architecture - 2 Story Flats (PA-9 & PA-16)

Figure 3-6b



Source: Bassenian-Lagoni 4/2019

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Environmental Planning

Typical Architecture - Alley Load Condo (PA-2 & PA-18)

Figure 3-7

Source: Project Design Consultants 4/2019

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Typical Architecture - 3 Story Detached Condo (PA-5)

Figure 3-8a

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Source: Project Design Consultants 4/2019

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Typical Architecture - 3 Story Detached Cluster (PA-10)

Figure 3-8b

Source: Project Design Consultants 4/2019

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Typical Architecture - 3 Story Rowtowns (PA-8 & PA-15)

Figure 3-9a

Source: Bassenian-Lagoni 4/2019

HELIX
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Typical Architecture - Trio (PA-11 & PA-17)

Figure 3-9b

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